

PLAN OF OPERATIONS RECLAMATION AND CLOSURE PLAN

Donlin Gold Project

July 2017 Revision 1



4720 Business Park Blvd. Suite G-25
Anchorage, Alaska 99503

Prepared By:

SRK Consulting (U.S.), Inc.
4700 Business Park Blvd. Suite E-12
Anchorage, Alaska 99503

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ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish & Game
ADNR	Alaska Department of Natural Resources
ANCSA	Alaska Native Claims Settlement Act
AS	Alaska Statute
BLM	Bureau Land Management
BMPs	best management practices
Calista	Calista Native Corporation
CIL	carbon-in-leach
CSIA	Closure Social Impact Assessment
CWD	Contact Water Dam
HDPE	high density polyethylene
HDS	high density sludge
LLDPE	linear low-density polyethylene
LOM	life of mine
ML/ARD	metal leaching/acid rock drainage
MOU	Memorandum of Understanding
NAG	non-acid generating
PAG	potentially acid generating
PLS	pure live seed
PMP	probable maximum precipitation
RC	reverse circulation
RO	reverse osmosis
SRCE	Standard Reclamation Cost Estimator Model
SRS	seepage recovery system
SWPPP	Storm Water Pollution Prevention Plan
TKC	The Kuskokwim Corporation
TSF	tailings storage facility
WRF	waste rock facility
WTP	water treatment plant

UNITS OF MEASURE

acre-ft	43,560 cubic feet or 325,851 gallons
amsl	above mean sea level
bmsl	below mean sea level
cfs	cubic feet per second
cm	centimeter
ft	foot/feet
ha	hectares
kg	kilogram
km	kilometers
lbs	pounds
m	meter
m ³	cubic meters
m ³ /s	cubic meters per second
Mgal	million gallon
ML	million liters
mm	millimeters
Mm ³	million cubic meters
Mst	million short tons
Mt	million tonnes
Myd ³	million cubic yards
st	short tons
t	tonne
yd ³	cubic yards

1.0 INTRODUCTION

Donlin Gold LLC¹ (Donlin Gold) is proposing the development of an open pit, hardrock gold mine in southwestern Alaska, about 277 miles (446 km) west of Anchorage, 145 miles (233 km) northeast of Bethel, and 10 miles (16 km) north of the village of Crooked Creek (Figure 1-1). This document was prepared in accordance with state regulations governing the reclamation of mined lands and describes reclamation goals and techniques for the mine site and ancillary facilities. Reclamation and closure of the 315-mile long (507 km) 14-inch (35.6 cm) diameter natural gas pipeline that will provide a reliable source of energy to the mine is covered by the *Natural Gas Pipeline, Plan of Development*, SRK 2013, Amended 2017.

The purpose of this Reclamation and Closure Plan (Plan) is to provide guidelines for implementing stabilization and reclamation procedures for the various facilities associated with the proposed Donlin Gold project. These guidelines are based on the best available reclamation technologies. As Donlin Gold is committed to concurrent reclamation of portions of the site during operations, these guidelines may be modified as actual reclamation data are gathered during field reclamation of individual facilities or reclamation test plots. Revisions to this Plan would be made to address changes in the design, construction, operations, and concurrent stabilization and reclamation of the facility.

This approach will:

- allow the incorporation of new design information as subsequent phases of the project are developed
- reflect changes in the operating plans and mining schedule
- account for the stabilization and reclamation of previous phases or specific components of the facility
- incorporate information and actual operating experience developed during the initial phases of the project
- allow for the utilization of new, reasonable and practical reclamation techniques as they are developed.

Table 1-1 provides a record of changes to this Plan.

¹ Donlin Gold LLC is a limited liability company jointly owned by Barrick Gold U.S. Inc. and NovaGold Resources Alaska, Inc. on a 50/50 basis.

Table 1-1: Record of Changes and Amendments

Date	Section(s) Revised or Amended

1.1 Alaska Reclamation and Closure Requirements

Reclamation and closure of the proposed Donlin Gold project falls under the jurisdiction of the Alaska Department of Natural Resources (ADNR), Division of Mining, Land, and Water and the Alaska Department of Environmental Conservation (ADEC).

1.1.1 Alaska Department of Natural Resources

Alaska Statute (AS) 27.19, the Reclamation Act, applies to state, federal, municipal, and private land and water subject to mining operations. This statute is administered by the commissioner of ADNR. The Reclamation Act states that "a mining operation shall be conducted in a manner that prevents unnecessary and undue degradation of land and water resources and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition" and 11 AAC 97.240 further states "a miner shall reclaim a mined area that has potential to generate acid rock drainage (acid mine drainage) in a manner that prevents the generation of acid rock drainage or prevents the offsite discharge of acid rock drainage."

An approved reclamation plan is required by the State mining regulations (11 AAC 97.300 – 97.350). The reclamation plan does not become effective until a performance bond is in place, with the exception of certain small operations. The performance bond amount shall be set at a level not more than an amount reasonably necessary to ensure the faithful performance of the requirements of the reclamation plan. Alaska Administrative Code 11 AAC 97 Mining Reclamation applies to the approval of reclamation plans, reclamation bonding, and enforcement of reclamation requirements under AS 27.19 for locatable mineral, leasable mineral, and material mining operations on state, federal, municipal, and private land. Nothing in the Reclamation Act precludes a federal or state agency (including ADNR), acting under its own regulatory or proprietary authority, from establishing and enforcing additional requirements or higher standards for reclamation. The Reclamation Performance Standards are defined in 11 AAC 97.200.

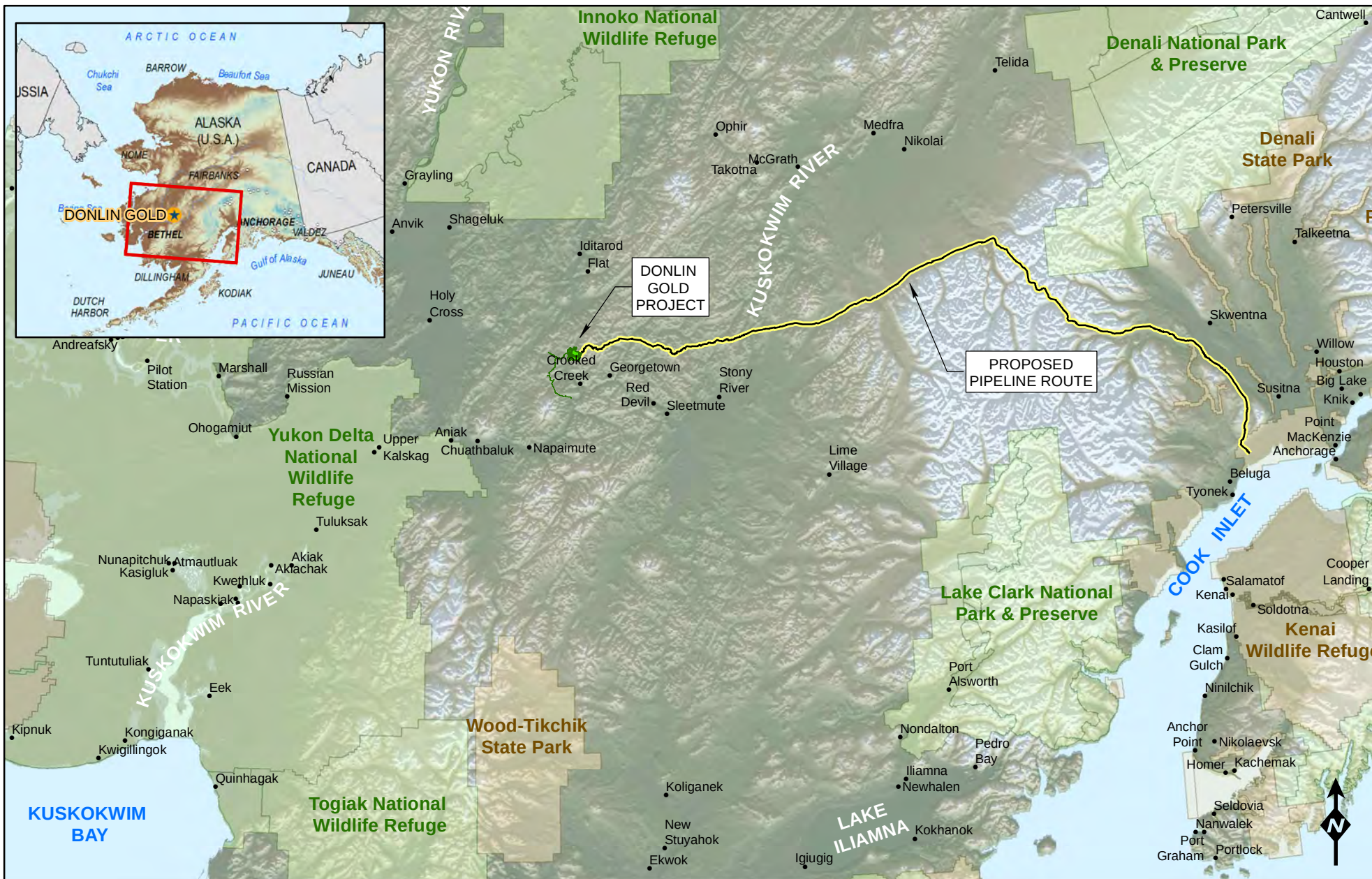
An amendment to the State Dam Safety Regulation (11 AAC 93) in 2004 also has a financial assurance requirement:

"... the owner must provide a performance bond or other financial assurance adequate to provide sufficient money to pay for the costs of safely breaching the dam at the end of the dam's service life and restoring the stream channel and reservoir land to natural conditions, or for the costs of performing reclamation and post-closure monitoring and maintenance".

1.1.2 Alaska Department of Environmental Conservation

ADEC Solid Waste Permit regulations (18 AAC 60.265) have comprehensive requirements for closure and reclamation planning, including provision for funding for long-term water treatment. Specifically, 18 AAC 60.265 states:

"...(ADEC) will require proof of financial responsibility to cover the cost of closing a landfill and, if monitoring is required, the cost of post closure monitoring, if the department determines proof of financial responsibility is necessary to protect the public health, safety, welfare, or the environment. Proof of financial responsibility under this section may be demonstrated by self-insurance, insurance, surety, or other guarantee approved by the department to assure compliance applicable closure standards and post closure monitoring requirements."



• Populated Place — Proposed Natural Gas Pipeline Alignment — Proposed Infrastructure Layout — Federal Administrative Boundaries — State Administrative Boundaries Seward Meridian, UTM Zone 5, NAD83	SCALE: 0 12.5 25 50 mi 0 20 40 80 km		PROJECT LOCATION MAP DONLIN GOLD PROJECT	FIGURE: 1-1

2.0 APPLICANT INFORMATION

2.1 Surface and Mineral Lease Information

Information on land status for the proposed Donlin Gold project is listed in Appendix A.

2.2 Corporation Officer Completing Application

Name: Andrew Cole
Title: General Manager
Telephone: (907) 273-0200
Date: December 2017

2.3 Designated Contact Person

Name: Andrew Cole
Title: General Manager
Telephone: (907) 273-0200

2.4 Corporate Information

Business Name: Donlin Gold LLC
Address: 4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503
Telephone: (907) 273-0200
General Manager: Andrew Cole

Donlin Gold is a Delaware Limited Liability Company jointly owned by Barrick Gold U.S. Inc. and NovaGold Resources Alaska, Inc. on a 50/50 basis.

2.5 Alaska Registered Agent

Name: Corporation Service Company
Address: 9360 Glacier Hwy, Suite 202
Juneau, Alaska 99801

3.0 PROJECT DESCRIPTION

The proposed Donlin Gold project would require approximately three to four years to construct, with the active mine life currently projected to be approximately 27 years. The mine is proposed to be a year-round, conventional “truck and shovel” operation using both bulk and selective mining methods. Currently there is no road or rail access to the site, and all personnel and supplies are transported by air. The project is completely isolated from existing power and other infrastructure. Figure 1-1 shows the project location. A detailed description of the project can be found in the *Project Description, Volume I*, SRK 2016a. Detailed management plans for the project have been prepared, including:

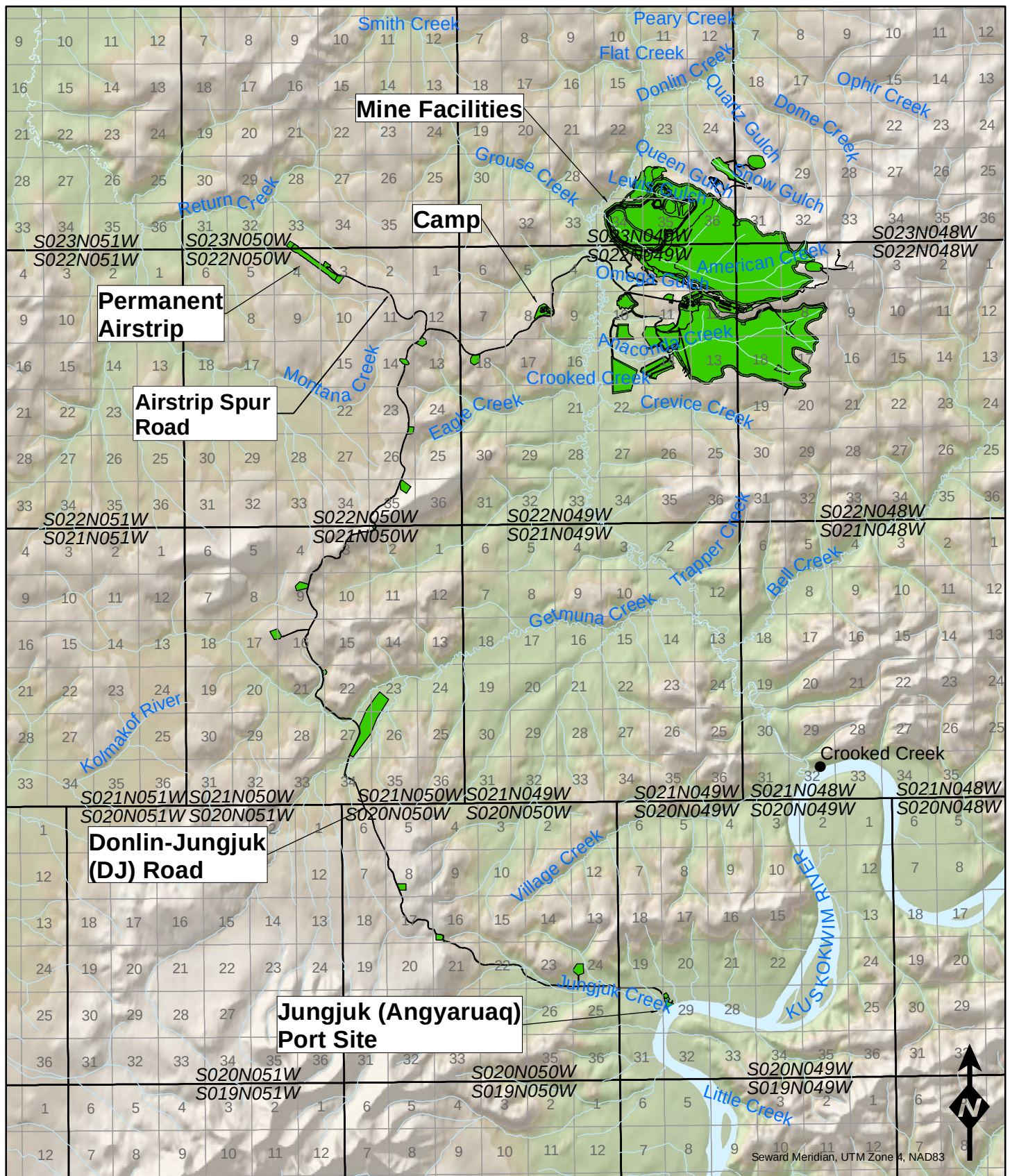
- Water Resources Management Plan (SRK 2017)
- Integrated Waste Management Plan (SRK 2016)
- Tailings Management Plan (SRK 2016)
- Waste Rock Management Plan (SRK 2016)

3.1 Location and Land Status

The proposed Donlin Gold project includes land leased from Calista Native Corporation (Calista), an Alaska Native Claims Settlement Act (ANCSA) regional corporation that holds the subsurface (mineral) estate for ANCSA lands in the region (Figures 3-1 and 3-2). All titled sections in the lease area have been conveyed to Calista. In addition to the subsurface estate, Calista owns some surface estate lands in the lease area. A surface use agreement with The Kuskokwim Corporation (TKC), an ANCSA village corporation, grants surface use rights to lands that TKC holds in the area. A 13 acre (5.26 ha) parcel of surface estate within the Snow Gulch area is owned by Lyman Resources in Alaska, Inc. et al. (“Lymans”). Donlin has lease agreements with Calista and the Lymans and a surface use agreement with TKC that provide Donlin with legal control and authority to exclude the public from the lands owned by these entities for regulatory, safety, or other operational needs.

The currently identified mineral resource, all mine facilities, and the Jungjuk Port site are located on the leased lands. Additional lands required for the road to the port site, material sites, natural gas pipeline, and pipeline-related infrastructure are located on a combination of Native-owned, State of Alaska, and federal lands managed by the Bureau of Land Management.

All exploration activities on leased lands are covered under the terms of the lease agreement with Calista and the surface use agreement with TKC. Activities on ANCSA-owned lands not currently within the agreement, or on state and federal lands, are permitted on an individual basis as required.



Proposed Infrastructure Layout



LOCATION OF MINE FOOTPRINT AND OFFSITE FACILITIES

DONLIN GOLD PROJECT

SCALE:

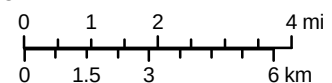
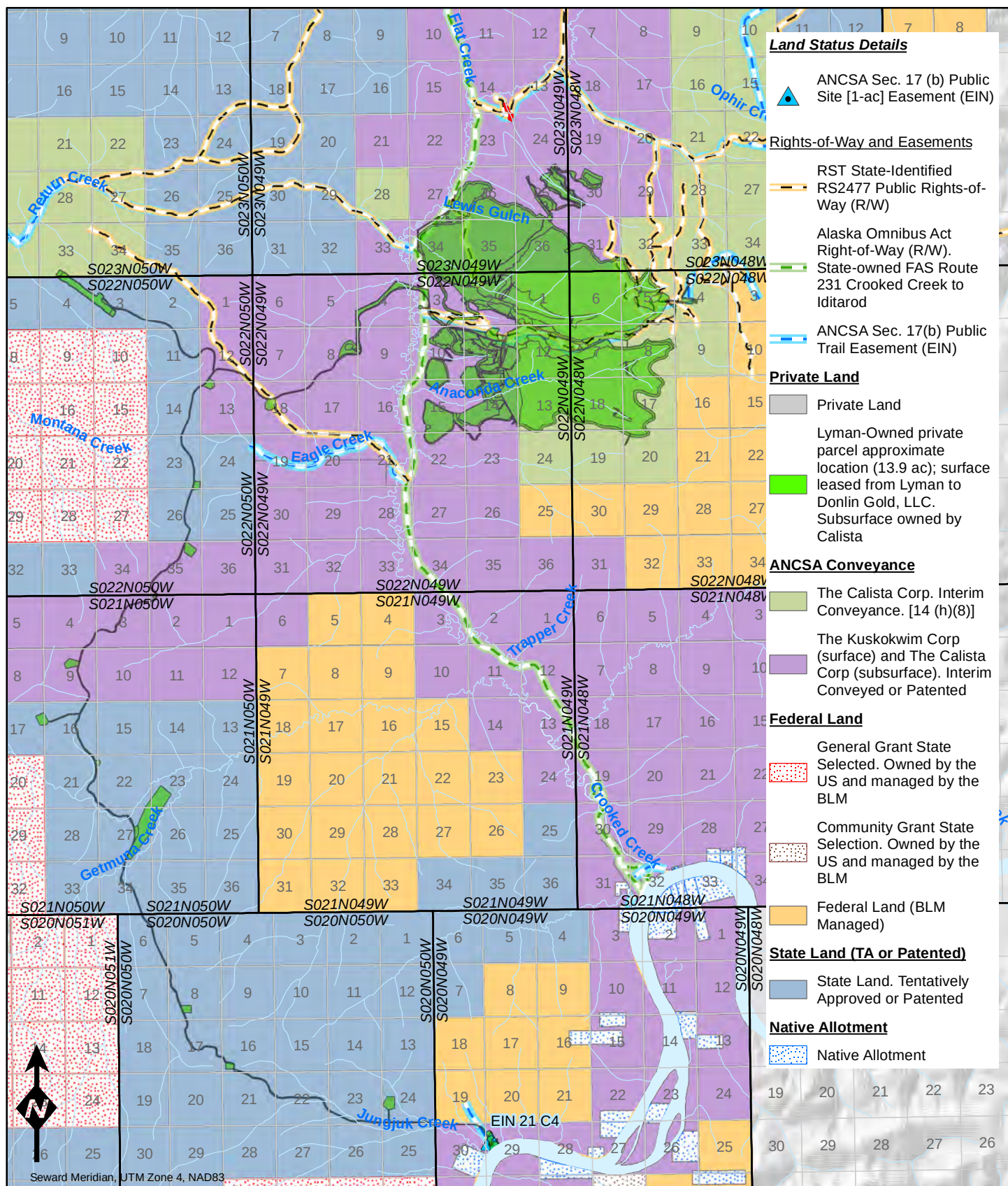


FIGURE:

3-1



Proposed Infrastructure Layout



REGIONAL LAND STATUS

DONLIN GOLD PROJECT

SCALE: 0 0.5 1 2 mi
0 0.751.5 3 km

FIGURE:
3-2

3.2 Proposed Project Disturbance

The acreage of surface disturbances associated with the proposed Donlin Gold project at premature closure and at the end of mine life are detailed by facility in Table 3-1 and Table 3-2 and depicted on Figure 3-3 and Figure 3-4.

Table 3-1: Proposed Surface Disturbances (Premature Closure)

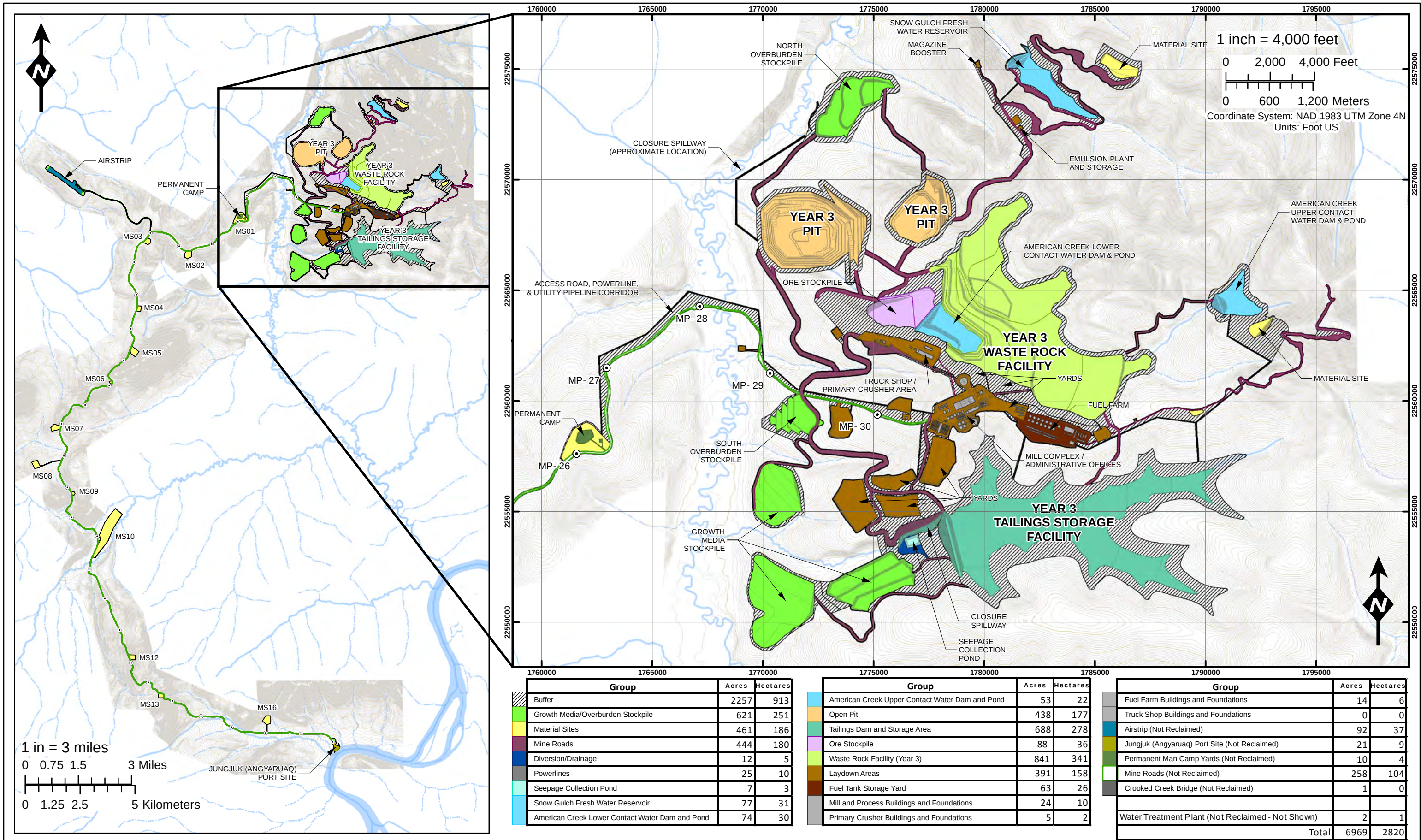
Group	Acres	Hectares
Buffer Areas	2,257	913
Growth Media/Overburden Stockpile	621	251
Material Sites	461	186
Mine Roads	444	180
Diversion/Drainage	12	5
Powerlines	25	10
Seepage Collection Pond	7	3
Snow Gulch Fresh Water Reservoir	77	31
American Creek Lower Contact Water Pond	74	30
American Creek Upper Contact Water Pond	53	22
Open Pit	438	177
Tailings Dam and Storage Area	688	278
Waste Rock Facility (Full Build-Out)	841	341
Ore Stockpile	88	36
Laydown Areas	391	158
Fuel Tank Storage Yard	63	26
Mill and Process Buildings and Foundations	24	10
Primary Crusher Buildings and Foundations	5	2
Fuel Farm Buildings and Foundations	14	6
Truck Shop Buildings and Foundations	0	0
Airstrip (Not Reclaimed)	92	37
Jungjuk (Angyaruaq) Port Site (Not Reclaimed)	21	9
Permanent Man Camp Yards (Not Reclaimed)	10	4
Mine Roads (Not Reclaimed)	258	104
Crooked Creek Bridge (Not Reclaimed)	1	0
Water Treatment Plant (Not Reclaimed, Not Shown)	2	1
Total	6,969	2,820

* Truck shop building is 0.09 ha. (All fractions of an acre and hectare are rounded up to the next whole number)

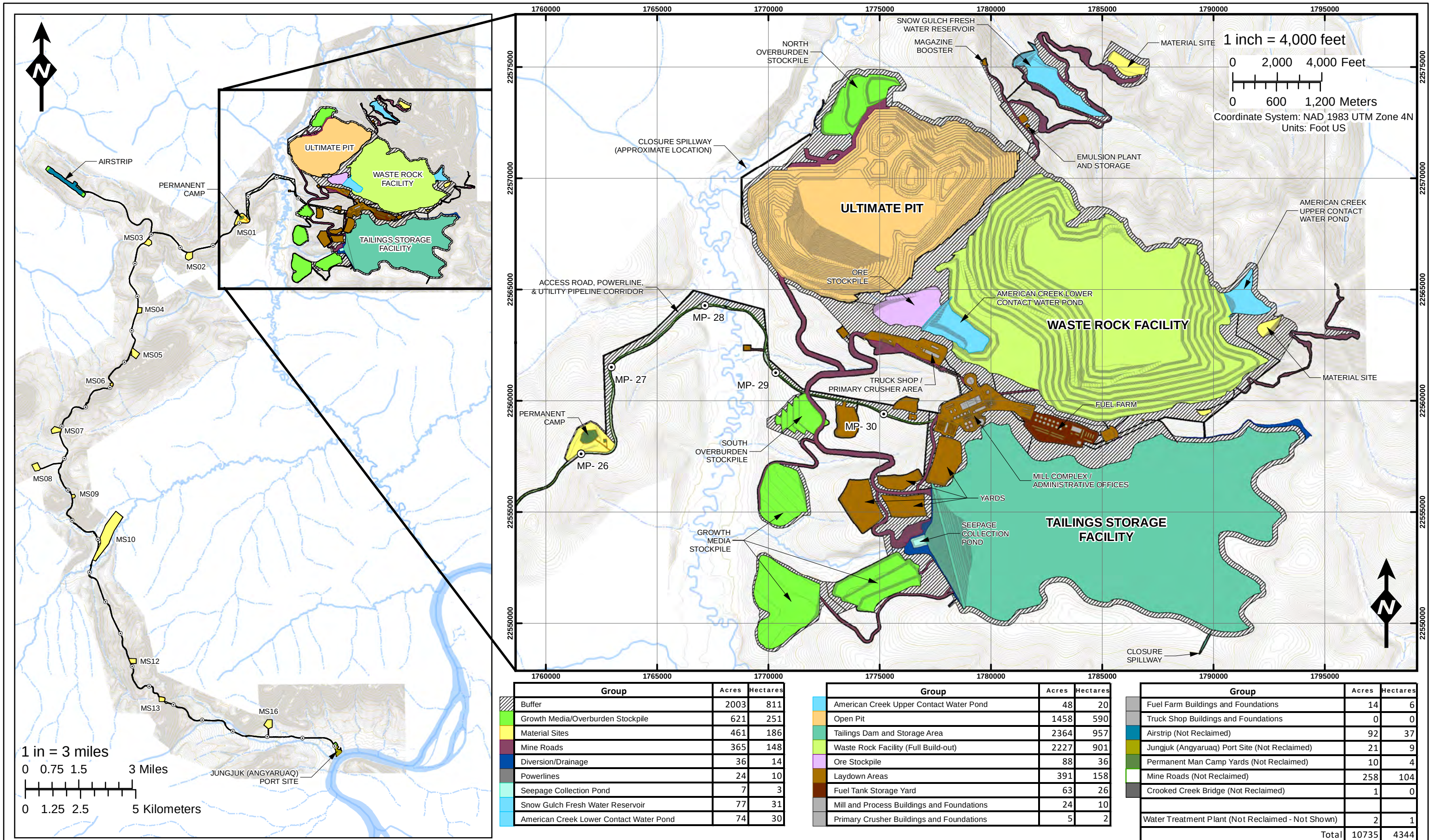
Table 3-2: Proposed Surface Disturbances (Life of Mine)

Group	Acres	Hectares
Buffer Areas	2,003	811
Growth Media/Overburden Stockpile	621	251
Material Sites	461	186
Mine Roads	365	148
Diversion/Drainage	36	14
Powerlines	24	10
Seepage Collection Pond	7	3
Snow Gulch Fresh Water Reservoir	77	31
American Creek Lower Contact Water Pond	74	30
American Creek Upper Contact Water Pond	48	20
Open Pit	1,458	590
Tailings Dam and Storage Area	2,364	957
Waste Rock Facility (Full Build-Out)	2,227	901
Ore Stockpile	88	36
Laydown Areas	391	158
Fuel Tank Storage Yard	63	26
Mill and Process Buildings and Foundations	24	10
Primary Crusher Buildings and Foundations	5	2
Fuel Farm Buildings and Foundations	14	6
Truck Shop Buildings and Foundations	0	0
Airstrip (Not Reclaimed)	92	37
Jungjuk (Angyaruaq) Port Site (Not Reclaimed)	21	9
Permanent Man Camp Yards (Not Reclaimed)	10	4
Mine Roads (Not Reclaimed)	258	104
Crooked Creek Bridge (Not Reclaimed)	1	0
Water Treatment Plant (Not Reclaimed, Not Shown)	2	1
Total	10,734	4,345

* Truck shop building is 0.09 ha. (All fractions of an acre and hectare are rounded up to the next whole number)



**PREMATURE CLOSURE
DISTURBANCE FOOTPRINT
DONLIN GOLD PROJECT**



**LIFE OF MINE
DISTURBANCE FOOTPRINT**
DONLIN GOLD PROJECT

4.0 IMPLEMENTATION PLAN

4.1 General

Donlin Gold and the landowners' long-term reclamation goals during and after mining and beneficiation process operations are to shape, revegetate, or otherwise stabilize the land to meet the objectives of the designated post-mining land use. The current designated post-mining uses for the proposed Donlin Gold project area are for wildlife habitat and dispersed recreation, as prescribed by:

AS 27.19.020 Reclamation Standard:

"A mining operation shall be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition."

AS 27.19.030 (b)

"In reviewing a reclamation plan for state, federal, or municipal land under (a) of this section, the commissioner may consider, after consultation with the commissioners of environmental conservation and fish and game and with the concurrence of the miner and landowner, uses to which the land may be put after mining has been completed, including trails, lakes, recreation sites, fish and wildlife enhancement, commercial, and agriculture uses." and,

11 AAC 97.200 (b)

"A miner shall reclaim an area disturbed by a mining operation so that the surface contours after reclamation is complete are conducive to natural revegetation or are consistent with an alternate post-mining land use approved under AS 27.19.030(b) on state, federal, or municipal land, or with the post-mining land use intended by the landowner on private land."

Donlin Gold will incorporate practices that include contouring and stabilizing disturbed areas using best engineering practices to create seedbeds that invite and promote early seral colonization, using commercially available native plant species and soil amendments with proven track records.

Donlin Gold would continue to adhere to the above goals in developing and implementing this Plan for the proposed Donlin Gold project. Therefore, the objectives of the Plan are:

- provide for public safety
- stabilize and protect surficial soil materials from wind and water erosion
- stabilize steep slopes through contouring and leveling to provide rounded land forms and suitable seedbeds
- establish a productive vegetative community based on the applicable land use plan, pertinent visual resources, and designated post-mining land uses
- implement water management to reduce contact with disturbed materials and adequate treatment of pit water

- design closure plans, to the extent feasible, that would address community concerns and be aligned with local community land use and development objectives.

Attainment of these objectives would be measured by the success of concurrent reclamation of disturbed areas and would include long-term mine revegetation research and evaluation (Czapla and Wright 2012). Donlin Gold would work with ADNR, Division of Agriculture/Plant Materials Center, and Alaska Department of Fish & Game (ADF&G) in the implementation and evaluation of both concurrent and long-term reclamation activities at the site.

The design and implementation of the mine reclamation and closure plans are important for the surrounding communities during mine closure. Measures to mitigate the potential socioeconomic effects associated with mine closure would be reviewed and discussed every five years during permit renewals throughout the mine life. To the extent feasible, the project's community development program would encourage development projects that are sustainable without ongoing support from the mine project. The goals would be to encourage development of local capacity from the start of the mine project and to engage the community throughout the mine life. Closure planning would also include regularly scheduled outreach to the communities within the area of mine influence to hear residents' concerns and objectives before and during the active closure period.

Donlin Gold considers reclamation to be a progressive process tied directly to the design, construction, operation, and closure of the project. Reclamation of the site would utilize best practicable, proven, and documented technology. The specifics of this technology are discussed in the following sections.

For the purposes of this Plan, the term "growth media" refers to all native (in-place) soil material with the physical and chemical properties capable of germinating and sustaining vegetation growth with or without amendments, and is interchangeable with the terms "topsoil" and "overburden"² in relation to the proposed Donlin Gold site. Overburden material suitable for use as growth media is unconsolidated material that may consist of terrace gravels, colluvium, loess, and other non-organic material that lies between the topsoil horizon (where present) and bedrock.

4.1.1 Land Use

Land Use Prior to Operations

The proposed Donlin Gold project area includes land leased from Calista and TKC that has historically been used to support a subsistence lifestyle by local residents and has been subject to prospecting, small-scale mining, and exploration since placer gold was first discovered in Snow Gulch in 1909.

Exploration drilling programs began in 1988 and continued intermittently until 1995, when Placer Dome U.S. began the current project in earnest. Intensive drilling in support of

² "topsoil" is the upper, outermost layer of soil, usually the top 2 inches (5.1 cm) to 8 inches (20 cm). It has the highest concentration of organic matter and microorganisms.

"overburden" is the material that lies above an area of economic or scientific interest. Overburden is also described as the soil and other material that lies above a specific geologic feature.

resource delineation, engineering studies, and environmental baseline work was conducted between 1995 and 2010.

Land Use during Operations

Land use during operations is summarized in this section. A detailed description can be found in the *Project Description, Volume I*, SRK 2016a. The Donlin Gold deposit would be mined with a combination of bulk and selective mining methods. Reverse circulation (RC) drilling would be the primary source of ore control samples, and blasthole sampling would be done for waste characterization. The open pit mine design and production schedule were developed for a nominal process plant throughput of 59,000 st (53,500 t) of ore per day. The estimated mine life is 27 years. A combination of 20 ft (6 m) and 40 ft (12 m) bench heights have been used in mine planning to allow a relatively high mining rate, while allowing for more selective mining in complex ore zones.

The resource is divided into two main areas, ACMA and Lewis. The pits have similar mineralization characteristics, with ore-grade gold hosted in both intrusive and sedimentary rock units. The initial phases of the two pits are independent, but they partially merge later in the mine life.

Waste rock from open pit mining would be placed in the Waste Rock Facility (WRF), located in the American Creek valley (east of the pit area). Material from the WRF would be used to partially backfill the ACMA Pit. Sufficient overburden would be stored separately for use in final site reclamation; the remainder would be placed into the WRF or used for construction.

Tailings consist of streams from flotation tailings, wash thickener overflow, and the detoxified cyanide slurry from the carbon-in-leach (CIL). The Tailings Storage Facility (TSF) constructed in the Anaconda Creek valley consists of a main lined embankment, a lined impoundment, a reclaim water system, and a seepage recovery system (SRS).

The tailings dam would be constructed of compacted rockfill using the downstream method, with a 60 mil (1.5 mm) single-side, textured (lower side), and linear low-density polyethylene (LLDPE) composite liner on the upstream face. The tailings impoundment footprint would be lined with a 60 mil (1.5 mm) textured LLDPE liner over a 3.3 ft (1.0 m) thick layer of broadly graded silty sand and gravel acting as low-permeability bedding material.

The TSF would be constructed in eight stages over the mine life. The TSF is designed to handle the 200-year return period snowmelt, 24-hour probable maximum precipitation (PMP) rainfall event, excess water accumulation under average conditions in the site water balance, and emergency freeboard.

A seepage recovery system (SRS) collection pond for water from the underdrain below the TSF, diversion ditches below the downstream face of the tailings dam, and four monitoring/seepage collection wells downslope of the pond (pumped as required) would be constructed. The collection pond would be immediately downstream of the footprint of the main tailings dam. The seepage rate from the lined TSF to the underdrain is anticipated to be *de minimis*. During operations, water from the collection pond would be pumped to the process plant or to the water treatment plant (WTP). A full description of the water

management strategy for the project is available in the *Water Resources Management Plan, Volume II*, SRK 2017.

Operating pond water would be reclaimed from the TSF impoundment using a floating barge. This reclaimed water would be recycled back to the process plant for use as make up water or sent to the WTP for treatment and discharge.

4.1.2 Schedule of Reclamation Activities

The proposed Donlin Gold operation would alter the landscape of the site for the long term, while creating opportunities for establishing more diverse wildlife habitat and dispersed recreation. The open pit will be reclaimed as a lake creating a source of open water where none existed previously, for use by avian and terrestrial wildlife. The potential to develop constructed wetlands, with their associated open water, formed from the material borrow sites (terrace gravel sites) along Crooked Creek, would alter, diversify, and enhance the use of these areas by humans and wildlife following reclamation. These constructed sites would be developed to receive storm water runoff and diverted flow from Omega Gulch, and have overall depths such that over-wintering of resident and anadromous fish would be supported. Donlin Gold would reclaim upland sites by establishing successive vegetation, leading to more productive post-mining land use as wildlife habitat.

Table 4-1 provides an overall timeline for reclamation and closure. Details are provided in the subsections below.

Table 4-1: Construction, Reclamation, and Closure Timeline

Period				
Construction (Current Reclamation)	Operation (Concurrent Reclamation)	Final Reclamation & Closure	Post-Closure (No Water Treatment)	Post-Closure (Water Treatment)
Year -4 to -1	Year 1-27	Year 28-33	Year 34-~80	Year ~80>

Reclamation During and Directly After Construction

During stripping operations for construction of the process components (tailings dam, freshwater dam, process plant site, crusher, maintenance shops, etc.), topsoil (growth media) including organic material would be selectively stockpiled. Topsoil and overburden stripping would continue as the ore body is fully developed, and suitable growth media would continue to be stockpiled throughout the mine life. Interim reclamation of the growth media stockpiles, which includes stripped vegetation/peat, terrace gavels, and colluvium, would proceed after placement to stabilize and maintain the viability of all stockpiled material for potential use in final reclamation.

Areas disturbed during construction that are not subject to re-disturbance during operations would be reclaimed. Construction access roads and material borrow sites along the access road and in the immediate area of the mine, WRF and TSF have been identified for final reclamation during or immediately after construction. The Jungjuk Port access road would require 13 borrow pits during construction; all but three would be reclaimed immediately after construction is completed.

Concurrent Reclamation

The WRF and overburden stockpiles would be constructed as side-hill and head-of-valley dumps in steps or terraced lifts to achieve the desired overall slope. Inactive portions of these dumps would be recontoured and reclaimed as contemporaneously as practicable during the mine life.

Material pits developed for construction of the TSF would be evaluated for potential additional ponds to provide resident and anadromous fish with rearing and overwintering habitat. Borrow pits in Alaska, at locations with adequate depth (>20 ft or 6 m) and a low gradient surface water connection to riverine systems, have provided excellent overwintering habitat for resident and anadromous fish (Jeffress and Ott 1997).

Other material pits when no longer needed for construction or road maintenance will be reclaimed as contemporaneously as possible.

Temporary Closure and Premature Closure

“Temporary Closure” means the cessation of the mining and process plant operations for a period of not more than three years. If conditions require temporary closure to extend beyond three years, final reclamation activities would be required to begin (“Premature Closure”), unless an extension of temporary closure is requested by Donlin Gold and approved by ADNR. Temporary closure scenarios, which could require modifications to the Plan of Operations management plans, Reclamation and Closure Plan, and/or state or federal permits, would be coordinated with the appropriate federal and state agencies for approval.

Temporary closure may include planned or unplanned cessation of the mining and beneficiation processes. Planned temporary closures, which have specific conditions defining their beginning and end include, but are not limited to, the following:

- interruptions in the active beneficiation processes to provide planned periods of quiescence for metallurgical or operating reasons
- any other planned condition, which would interrupt the active beneficiation process including modification to process components or suppressed gold prices
- change in ownership requiring the temporary cessation of operations while operating permits are transferred to the new owner/operator.

Unplanned temporary closures may include, but are not limited to, the following:

- closure because of unforeseen weather events
- a failure in a major system component or a process failure, which causes the fluid management system, or a portion thereof, to shut down
- the cessation of operations because of litigation
- bankruptcy of the mine operator.

Donlin Gold would notify the appropriate agencies within three days of the first day of the temporary closure or of any unanticipated suspension or cessation of operations that is

expected to last ninety days or more. The notice would state the nature and reason for the temporary closure, the anticipated duration of the temporary closure and any event that would reasonably be anticipated to result in either the resumption or abandonment of operations. Project operations must resume for not less than ninety consecutive days in order to terminate the temporary closure status. Donlin Gold would maintain the project area in a safe and secure condition during a temporary closure and not allow the project area to be degraded or eroded during, or as a result of, the temporary closure. All water collection and treatment, monitoring and reporting required by the reclamation plan for the temporary cessation of operations or pre-mature closure would continue unless otherwise agreed to by the agencies.

While the mine operation is inactive, environmental monitoring programs would continue to be implemented. The need for implementation of interim reclamation activities or final reclamation on components of the mine would be addressed on the basis of environmental monitoring results and consultation with the appropriate agencies.

Final Reclamation and Closure

After Donlin Gold has completed operations at the mine site, or at any individual facility or mine unit (e.g., WRF), final reclamation and closure can be initiated. When a facility is no longer needed for mine operations or when it has reached its design capacity, then reclamation will be initiated as soon as practical. It is assumed that at the final stage of operations, a significant amount of site-specific reclamation experience and performance data will have been incorporated into periodic reclamation plan updates. The final Plan will be submitted for approval two years prior to planned, final reclamation of the facility. Unlike the periodic updates, which make assumptions about the anticipated closure conditions (i.e., Basis of Cost Estimate); the final plan will be based on the actual conditions that exist at closure.

Post-Closure

Many reclamation goals would be expected to be completed over a five-year period after cessation of processing. Following final reclamation, the site will be inspected, monitored, and maintained in a fashion that helps achieve the long-term goals set out in this Plan. Donlin Gold has determined long-term post-closure water pumping during tailings consolidation and high density sludge (HDS) water treatment after the pit lake fills would be required. Specific water management practices are estimated based on current predictions of closure conditions. Monitoring data collected during operations (e.g., water quality, groundwater pumping) as well as operating experience and advances in treatment technology, among other relevant factors, will be used to develop a definitive closure water management plan prior to the completion of site reclamation. Water management practices may be further refined based on information obtained during post-closure monitoring.

4.2 Reclamation and Closure Plan Submission and Approval

Donlin Gold would continue to submit an updated Reclamation and Closure Plan as required to keep current with operations, regulatory changes, and issues identified during the regular five-year third-party Environmental Compliance Audits. Each updated and revised Plan will

contain sufficient detail to allow for calculation of estimated closure costs including post-closure maintenance and monitoring.

More frequent Plan revisions may be required by the agencies if substantial increases in the disturbed area have occurred since the last update, or if specific portions of the Plan are shown to be inconsistent with performance goals or changes to the designated post-mining land use. Updated Plans and revisions may be routinely submitted and authorized through Plan amendments. Updated financial assurance is only required if the reclamation cost estimate within any calendar year would be exceeded.

The Plan contains cost calculations and a tabulation of material quantities required to complete the end of Life of Mine (LOM) reclamation and cost calculations for premature closure based on a five to seven-year increment for the most recent Reclamation and Closure Plan authorization. The Annual Report required by ADNR and ADEC would contain a description of concurrent reclamation that has occurred and anticipated reclamation projects for the following year.

The Plan and other environmental management plans would be maintained in accordance with agency requirements. These documents describe the sites monitored, the data collected, and the monitoring frequency and duration during operations, closure, and post-closure.

4.3 Reclamation/Closure Cost Calculation and Bond Release

The regulatory agencies would coordinate their financial assurance authority through a Memorandum of Understanding (MOU) to require financial assurance for performance of reclamation and facility closure and post-closure monitoring activities at Donlin Gold. Proof of financial assurance, which may take any form mutually agreed upon by the agencies and Donlin Gold, is referred to as a “bond” in this section. Unless otherwise agreed between the agencies and Donlin Gold, the bond amount would be calculated based on the Reclamation Plan and use of the Standard Reclamation Cost Estimate Model (SRCE) Version 1.4.1 Build 16. The bond will address all costs that would be incurred by the agencies in taking over reclamation activities in the event of Operator **default** considering two separate closure scenarios as described below.

Two separate SRCE cost estimates are provided for:

1. Reclamation/closure estimate for the first seven years that include four years of construction and three years of operations (Premature Closure).
2. LOM reclamation/closure estimate that accounts for the full build out of facilities and final closure beginning at the end of in LOM Year 27. Physical reclamation would be completed in approximately five years prior to moving into the post-closure phase.

The SRCE cost estimates are based on third party implementation of the reclamation plan, with no recycle or salvage costs recovery, and on-site disposal of all equipment and facilities except for hazardous waste, which would be shipped off-site to an appropriate hazardous waste disposal facility.

4.3.1 Incremental Bond Release

A site or area would be eligible for release or partial release of the bond amount directly attributable to that site or area when all pertinent aspects of final reclamation activities are complete. This includes, but is not limited to removing any facility and necessary materials, grading the surface, applying cover-soils as necessary, applying the approved final seed mix, and the area exhibits vegetative cover meeting the specific plant community goals. Bond release can be sought for areas reclaimed concurrently (during operation) or after final reclamation.

For a site or area subject to overlapping jurisdiction of the agencies, concurrence from all agencies having jurisdiction over the site or area will be sought as to the completeness of the reclamation. Donlin Gold would apply for incremental bond release by submitting a letter to the appropriate agencies requesting release of the specific site or area(s). The letter will summarize the conducted reclamation activities, the reclamation activity schedule, and the final revegetation completion date.

The agencies will approve incremental bond release through a process upon which they have agreed. The agencies may require a joint agency site visit to confirm that Donlin Gold has completed pertinent reclamation activities at the site or area(s). These reclamation requirements would be described in the Plan and stipulated in the *Integrated Waste Management Permit (IWMP)*, Volume III, SRK 2016 and in other applicable permits.

4.3.2 Financial Assurance for Reclamation/Closure, and Post-Closure Obligations

As outlined in Table 4-1, physical reclamation and closure would occur over an approximately five year period following the cessation of operations. This would be followed by the post-closure period when all the physical reclamation is complete. Long-term post-closure monitoring and maintenance of the site would commence and, following the filling of the pit lake, water treatment would begin.

To address the need for financial assurance through construction and operations period Donlin will initially bond for the full cost of premature closure, including the immediate cost of physical closure, reclamation, and the long-term cost of water treatment, site monitoring, and maintenance.

Donlin Gold would update the Plan as required to keep current with operations, regulatory changes, and issues identified during the regular reclamation plan re-authorization, IWMP renewal cycle, and five year third party Environmental Compliance Audits. During the review and update the bonding for premature closure.

4.4 Public Safety

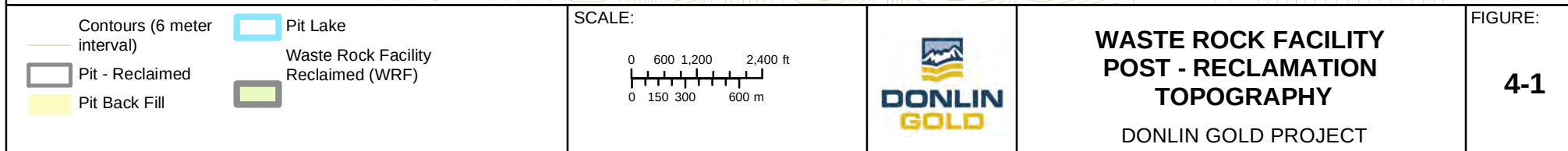
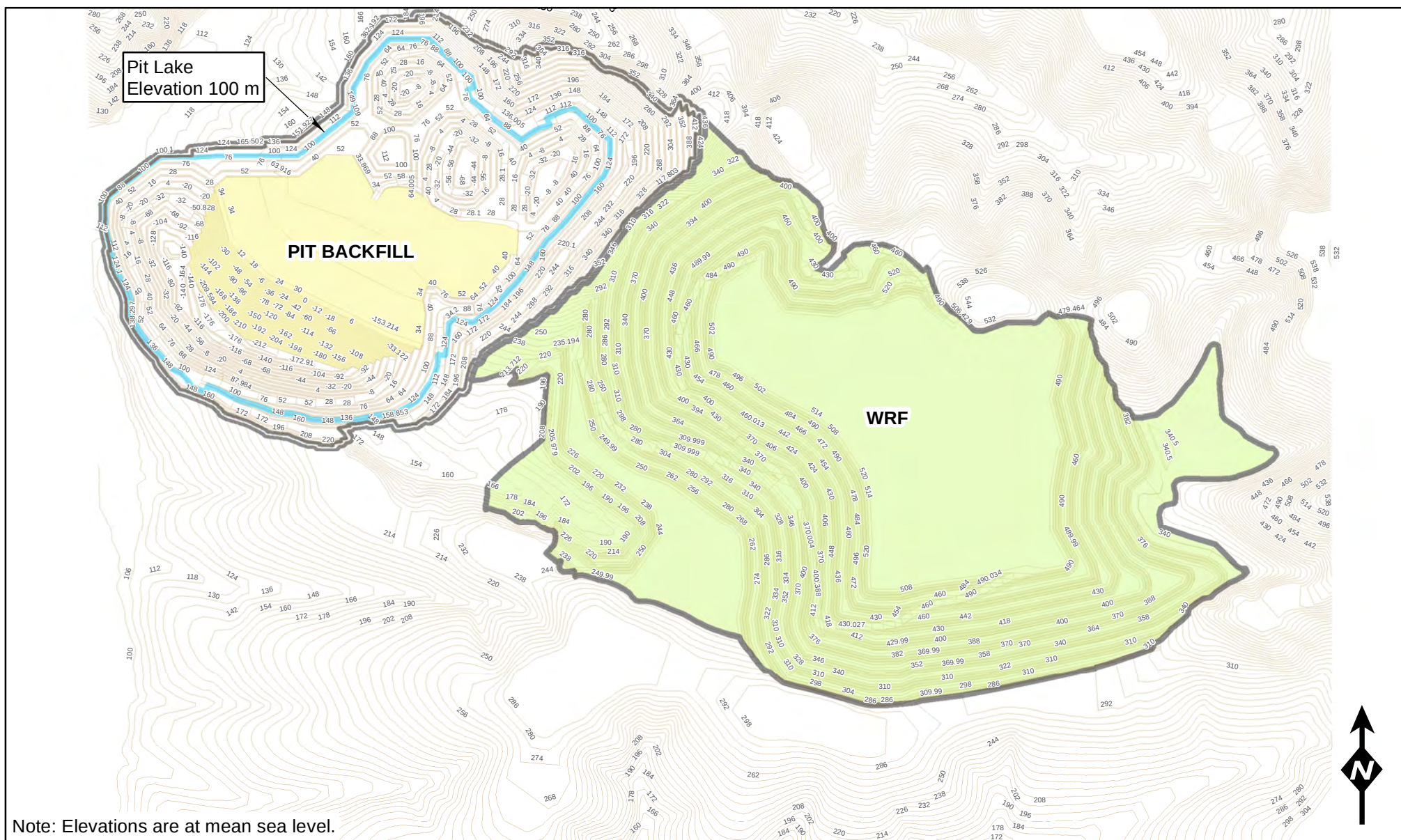
Public safety is a principal concern in closure and reclamation of mining operations. The ACMA and Lewis pits' highwall safety berms would remain in place to restrict access to the pit area along pit perimeters. Generally, 4 to 6 ft (1.2 to 1.8 m) vegetated berms would be used to restrict access to the steeper highwall sections of the pit. Signs would be posted to provide additional warning of potentially hazardous areas. Final signage and placement would be coordinated with the landowner.

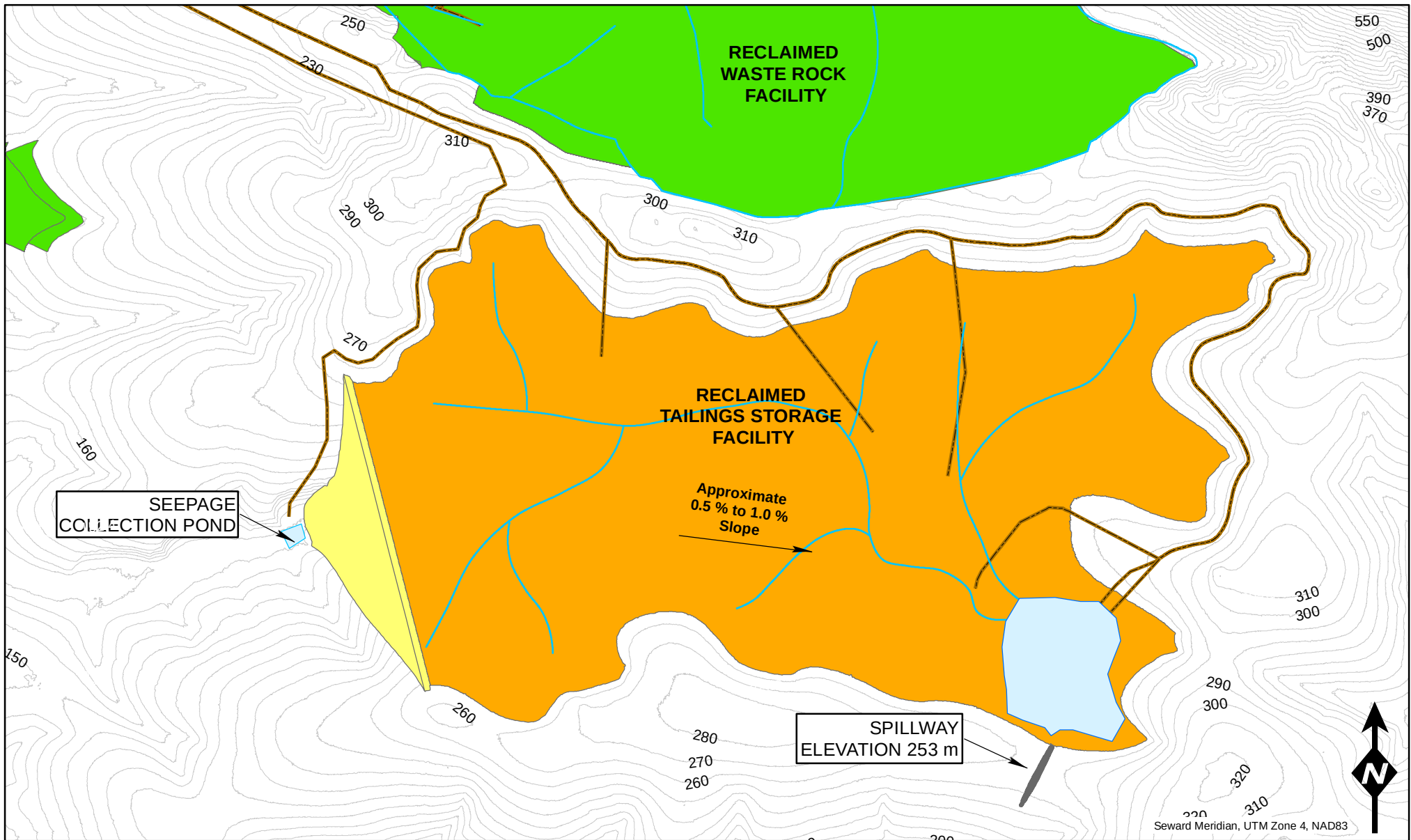
4.5 Post-Reclamation Topography

Figure 4-1 depicts the anticipated topography of the WRF and pit. Figure 4-2 shows a plan view of the TSF, respectively, once final re-contouring of surfaces has occurred.

4.6 Closure Social Impact Assessment

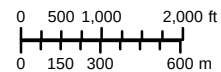
Prior to closure Donlin Gold would develop a Closure Social Impact Assessment (CSIA). The CSIA is not a regulatory requirement and is based, in part, on the International Council on Mining and Metals, *Financial Assurance for Mine Closure and Reclamation* (ICMM 2006). The CSIA would describe potential positive and negative social impacts as a result of mine closure and would provide information to assist in maintaining sustainable improvements in communities. While appropriate planning of sustainable community projects would support the long-term sustainability of the nearby communities, the CSIA would focus on positive benefits from the operation and identify alternative uses for the skills and infrastructure developed during operations.





— Contour (10 m)	— Closure Drainage	■ Closure Dam
— Closure Pipeline	■ Pond	■ Reclaimed Waste Rock Facility
— Spillway		■ Reclaimed Tailings Storage Facility

SCALE:



**TSF POST
RECLAMATION PLAN VIEW**

DONLIN GOLD PROJECT

FIGURE:

4-2

4.7 General Reclamation Procedures

Common measures to prevent unnecessary and undue degradation of land and water resources implemented by mining operations are well documented and proven. These time-tested techniques are incorporated throughout the proposed Donlin Gold management plans and would be used during project implementation (e.g., concurrent reclamation) as well as for final reclamation and closure. However, given the length of the mine life, Donlin Gold would evaluate new and innovative reclamation technologies as they are developed at the site, or around the world.

In preparation for interim, concurrent, and final reclamation, timber will be salvaged and unmerchantable organic materials will be stripped and stockpiled. Prior to initial growth media stripping for construction of facilities, timber that is greater than 6 inches (>15 cm) in diameter at breast height would be cut and decked. All other plant material would be hydro-axed³ and incorporated as a soil amendment in the growth media. In some cases, this hydro-axed material may be stockpiled for later use as mulch.

4.7.1 Earthwork

Reclamation would require considerable earthwork activities. The WRF and TSF, freshwater and process ponds, and those portions of the pit designed to allow human access, would require major grading, contouring, and possible growth media placement. Generally, slopes would be constructed to 3H:1V overall, or shallower where feasible. Top surface areas for the WRF would be regraded to promote run-off and minimize ponding and infiltration.

Industry-standard heavy equipment would be used to perform earthwork. The anticipated equipment list would include the following or their equivalents:

- Caterpillar D10N dozer
- Caterpillar D9N dozer
- Caterpillar D8L dozer
- rubber tired scraper
- rubber tired dozer
- front end loader
- track or tire mounted backhoe
- haul truck
- 20,000 gallons (75,700 L) water truck
- motor graders
- hydro-seeder
- Brillion cultipacker
- rangeland seed drill

³ The hydro-ax (or hydraulic ax) is a piece of machinery that can “mow” a tree up to 12 inches (31 cm) in diameter, creating course mulch.

- broadcast seeder
- straw blower
- disc harrow.

Other equipment may be substituted for, or included with, this general equipment list. Equipment needs and uses during implementation of the plan would remain dynamic, as specific conditions require.

4.7.2 Revegetation and Growth Media Placement

Growth media (topsoil and overburden) would be stockpiled in anticipation of future use in reclamation. From initial development to anticipated cessation of mining, an estimated 55.3 Myd³ (42.1 Mm³) of possible growth media would be available for use during reclamation. The total estimated volume required to meet reclamation cover quantities for the LOM closure would be approximately 21.25 Myd³ (16.25 Mm³). Table 4-2 and Table 4-3 provide the estimate of growth media volumes that would be stockpiled for premature closure and LOM closure.

Table 4-2: Estimated Premature Closure Growth Media Volumes

Growth Media Overburden Stockpile	Non-Organic (Overburden/Growth Media)		Organics (Peat & Woody Debris)	
	yd ³	m ³	yd ³	m ³
Northern - Overburden Stockpiles (from Lewis Pit and the northern portion of ACMA Pit)			12,105,000	9,255,900
South - Overburden Stockpile (from ACMA Pit)	12,150,000	9,289,100		
TSF – Stockpiles	3,680,835	2,814,200	1,263,900	1,653,119
Total All Stockpiles	15,830,835	12,103,300	13,368,900	10,909,019

Table 4-3: Estimated LOM Growth Media Volumes

Growth Media Overburden Stockpile	Non-Organic (Overburden/Growth Media)		Organics (Peat & Woody Debris)	
	yd ³	m ³	yd ³	m ³
Northern - Overburden Stockpiles (from Lewis Pit and the northern portion of ACMA Pit)			15,492,152	11,844,600
South - Overburden Stockpile (from ACMA Pit)	25,750,670	19,687,800		
TSF – Stockpiles	10,040,000	7,677,000	3,776,000	2,887,000
Total All Stockpiles	35,790,670	27,364,800	19,468,152	14,731,600

If the growth media becomes compacted while in the stockpile, it would be tilled prior to placement to regain pre-disturbance bulk densities. Before placement of the growth media, the subsoil surface would be roughened by ripping or disking to ensure good contact. The growth media would be dumped and spread using a minimum of passes to limit compaction. Controlled dozer tracking may be performed during placement of the growth media to roughen the surface, lightly compact the soil, increase water retention, and prevent erosion.

Experience with reclamation of exploration disturbances on the site, and at other mine sites in Alaska (Czapla and Wright 2012), a minimum of 6 inches (15 cm) of growth media would be applied to those sites requiring additional growth media to establish a vegetative cover by seeding or to promote natural re-invasion by native species. However, application depth may vary depending on the facility, existing growth media at the site, and if applicable, engineered cover design. For example, areas of the WRF that contain mixed overburden and high levels of fines would require less growth media than rockier areas. Roads and building sites may require little, if any, growth media; each site would be individually evaluated on a site-specific base. Growth media would be applied by scraper or dump truck and spread by a dozer or grader.

4.7.3 Seedbed Preparation

Mine and mine-related disturbances typically result in compacted surfaces unsuitable for revegetation. Thus, preparation of a seedbed suitable for plant germination and growth may be the most critical task in any successful land reclamation project. Growth media (whether applied or in situ) and the underlying subsurface must be prepared in such a manner as to retain moisture and allow adequate root development and penetration in those areas where infiltration and surface water retention are desired. Reclamation of the WRF will require only surficial scarification of the growth media cover to facilitate plant growth, but minimize infiltration.

The method of primary seedbed preparation at Donlin Gold would be ripping or scarifying (depending on the area) using a Caterpillar D10N (or equivalent). If necessary, ripping with two or three shanks would occur along contours of sloped areas. Highly compacted areas such as equipment lots and roads would be ripped in a linear fashion. If needed, the surface of growth media would be scarified after application just prior to seeding. A broken, roughened surface would serve to trap moisture, reduce wind shear, minimize surface erosion by increasing infiltration, and create micro habitats conducive to seed germination and development.

4.7.4 Soil Amendments

Past exploration reclamation sites, vegetation test plots and/or concurrent reclaimed sites would be evaluated to determine the revegetation potential of applied growth media. Donlin Gold may conduct nutrient analyses of the soil materials that would be used for growth media. It is not currently projected that fertilizer would be required or desirable for establishing a permanent perennial cover. However, for reclamation cost estimating purposes, it is assumed that some level of soil amendment would be required during reclamation. In the event future, nutrient testing indicates a need for soil amendments, the procedures described below would be employed.

Prepared seedbeds would be amended prior to, after, or during (when a hydro-seeder is used) the seeding operation. Specific soil amendment requirements would depend on the quality of growth media used for a particular area. Growth media would be tested for standard soil agricultural constituents, including organic matter, nitrogen (N), phosphorus (P), and potassium (K).

Application of soil amendments could produce mixed results and must be managed carefully. Although soil amendments may enhance the initial establishment of desirable species, the projected low nutrient retention capacity of waste rock and tailings may lead to nitrogen and potassium leaching from the materials or being tied up in the biomass within several years. Soil amendments may also increase the establishment and growth of undesirable colonizing species and dormant ruderals present in the growth media.

Based on results at other locations within Interior Alaska, the general recommended rate of fertilizer application would be on the order of 100 to 500 lbs (45 to 227 kg) per acre of 20N-20P-10K.

The selection of final products and their application rates would be determined from information acquired during concurrent reclamation and revegetation test plots. Mine revegetation research and monitoring would be conducted in cooperation with ADNR-Plant Material Center (A Revegetation Manual for Alaska, Wright 2008).

4.7.5 Seed and Seeding

The general reclamation seed mixes proposed for use are listed in Tables 4-4 and 4-5. The seed mixes consist of native species that have been used extensively in other Alaska reclamation activities.

Table 4-4: Proposed Reclamation Seed Mix – (Hydric) Wetland

Common Name	Scientific Name	Percentage of Mix
'Egan' American sloughgrass	<i>Beckmannia syzigachne</i>	45%
'Norcoast' Bering Hairgrass	<i>Deschampsia beringensis</i>	40%
'Arctared' Red Fescue	<i>Festuca rubra</i>	10%
'Alyeska' Polargrass	<i>Artagrostis latifolia</i>	5%

Table 4-5: Proposed Reclamation Seed Mix – (Mesic) Upland

Common Name	Scientific Name	Percentage of Mix
'Arctared' Red Fescue	<i>Festuca rubra</i>	40%
'Norcoast' Bering Hairgrass	<i>Deschampsia beringensis</i>	40%
'Wainwright' slender wheatgrass	<i>Elymus trachycaulus</i>	10%
'Gruening' Alpine Bluegrass	<i>Poa alpina</i>	10%
'Nortran' Tufted Hairgrass	<i>Deschampsia caespitosa</i>	0% unless substituted for Norcoast

As with any seed mix, a degree of flexibility is necessary depending on seed availability and site-specific conditions; the mix may be modified. The mix may change over time to include forbs and woody species, depending on factors such as internal and external research results, changes in technology, changes in land management philosophy, and commercial availability. Native species would be the preferred mix, unless information developed by the ADNR Plant Materials Center and onsite test plots indicates other, more desirable species meet the post-mining land use criteria. Seeding would be done via drill seeding, broadcast seeding via ground or aerial application, and hydro-seeding.

The preferred method for concurrent reclamation would be broadcast seeding. Broadcast seeding would be used on terrain considered too steep or rocky for seed drill equipment. Hydro-seeding may be employed around the edge of the pit where safety is a primary consideration. The application rate for hydric or wetlands seeding using the presently proposed seed mix would be 15 lbs (5 kg) of pure live seed (PLS) per acre. Approximately 15 to 30 lbs (5 to 14 kg) of PLS per acre would be applied for mesic or upland areas depending on surface contours, grade, aspect, and rockiness of the specific site.

In addition to seeding, upon completion of seedbed preparation, select areas would be left unseeded in order to evaluate the potential for natural recolonization of the site. If these areas do not meet the revegetation criteria discussed in the following sections, they would be seeded using the methods described above.

4.7.6 Mulch

In most instances of mined land reclamation in the Lower 48 states, mulches are necessary to protect the seed and help retain soil moisture during the critical germination process. Numerous types of materials have been used successfully as mulch in revegetation efforts. However, experience has proven that straw or grass hay at a rate of 12 st (11 t) per acre is most cost effective. Slopes too steep for equipment generally require an application of hydro-mulch via a hydro-seeder at an approximate rate of 1 st (0.9 t) per acre. Commercial hydro-mulch generally consists of wood fiber byproducts or other forms of cellulose.

If mulch application is necessary, it would be applied following seeding and soil amendment application with a standard straw (or hay)⁴ blower mounted behind a truck or tractor.

⁴ Certified Noxious Weed Free

If necessary, the mulch would then be crimped into the seedbed using a cultipacker or shallow set disk harrow to prevent wind blow and increase microhabitat for seed germination.

On those areas where a hydro-seeder may be used, hydro-mulch, if needed, would be incorporated into the seed and amendment mix for one-time application. The hydro-mulch would contain a tackifier, if necessary, to help hold the mulch mix in place.

4.7.7 Control of Invasive Species

During vegetation establishment, weed control practices would be implemented to limit the growth and spread of noxious weeds and benefit the revegetation process. The control program would include the use of weed-free mulch in the reclamation program, and all seeds would be tested and certified “weed-free” before planting. The primary method of control would be to seed disturbed areas as soon as practicable after the seedbed has been prepared.

4.7.8 Revegetation Timing

Generally, seeding would be implemented after spring break-up until mid-July to allow the seed to take advantage of the summer moisture period, seeding as soon as possible following seedbed preparation. Mine revegetation test plot research and experience with concurrent reclamation would be used to determine the most productive planting time, and evaluate the potential for dormant seeding of the same plant material used in spring/summer seeded plots.

4.7.9 Revegetation Cover Criterion

A vegetative cover criterion of at least 70% used at other interior Alaska hard rock mines since 1994 would be achieved prior to requesting bond release⁵. Experience in Alaska has shown this goal would likely be reached within the first 5 years. Concurrent reclamation areas also would be required to meet the criteria prior to Donlin Gold requesting bond release.

The reclamation goal of at least 30% vegetative cover over a three-year period is an interim action level criterion, which would indicate whether additional reclamation action would need to be taken to establish a viable vegetative cover and a continuing natural succession of plant species. Further action could include reseeding the area, additional application of soil amendments, and/or incorporation of additional growth media on a particular site or facility. Donlin Gold would be responsible for determining the cause and resolution of substandard revegetation cover.

ADNR, ADF&G, and Donlin Gold would determine performance criteria for vegetation success.

⁵ Alaska Reclamation Performance Standard (11 AAC 97.200) also defines successful re-vegetation as re-vegetation that occurs “within 5-years after reclamation is completed without the need for fertilization or re-seeding.”

4.8 Area-Specific Reclamation

4.8.1 Roads and Airstrip

Both Donlin Gold's corporate standards and state regulatory standards require most proposed mine site roads be reclaimed. However, the 30-mile (48 km) Jungjuk Port access road to the mine site would be required for annual delivery of bulk reagents for the WTP, replacement parts, and provisions for the crew, and for long-term monitoring of the project site. The road would remain into the foreseeable future following mine closure.

Although many of the mine roads (i.e., access roads, haul roads, construction roads, etc.) differ somewhat in width and construction; essentially, reclamation would be the same for all mine roads. Culverts would be removed, natural drainage areas restored or stabilized, and roadbeds would be graded where necessary to provide adequate drainage. Water bars to divert run-on and run-off, and control erosion and berms to restrict human access, would be incorporated where necessary and as approved by ADNR. Reclamation of these features would include development of a streambank stabilization protocol that would consider the variability of stream crossings, as well as more site-specific options as identified in the State of Alaska publication, *Streambank Revegetation and Protection – A Guide for Alaska* (Walter et al, 2005).

Onsite roads not required for long-term monitoring would be ripped, as necessary, to eliminate the effects of compaction, recontoured to blend with the original topography, covered with a layer of growth media, and reseeded to meet the general reclamation standards. Berms, side-cast material, and road drainage ditches would be reclaimed in this process. Blacktop road and parking surfaces would be ripped and buried in place in road ditches and depressions prior to regrading.

The airstrip would also remain as a long-term asset; therefore, it is not included in the reclamation cost estimate.

4.8.2 Open Pit(s)

During active mining, reclamation activity in and around the open pit(s) would be limited to controlling erosion on the haul roads to prevent undue degradation to adjacent undisturbed area. Upon final mine closure, haul roads in and around the pit would be smoothed of all berms except those necessary for erosion control and public safety. The safety berms would be far enough from the highwalls to prevent them from damage in the event of highwall failure. Road cuts and fills would be recontoured as much as feasible, and the roadbeds would be ripped and scarified where necessary.

Life of Mine (LOM) Closure

The ACMA Pit advances into the smaller Lewis pit area in the later years of mining, resulting in a single large pit upon closure. Approximately 467 Mst (424 Mt) of backfill (primarily overburden and waste rock from continued development of the Lewis Pit and stockpiled PAG 7 material) would be placed in this pit. Pit highwalls would be stabilized where practicable based on Donlin Gold engineering recommendations. Stable highwalls, which are suitable for raptor nesting, would be left in place. Upon closure, a pit lake would begin to form from groundwater and surface water inflows. It is estimated that it would take

approximately eight years for the void areas in the backfill material to fill prior to a pit lake forming and slowly increasing in size, to a maximum surface area of approximately 1,070 acres (433 ha).

Predictions of water quality in the pit lake, as reported in the pit lake modeling assessment (Lorax 2015), suggest that the overall pit lake water quality will not meet Alaska's most stringent water quality standards, as defined by 18 AAC 70, Water Quality Standards (amended February 2016) and the Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances (as amended through December 2008). Therefore, pit lake water will require water treatment with an HDS process to meet applicable water effluent limits prior to discharge into Crooked Creek. Incidental use by avian and terrestrial species will not be detrimental.

The closure WTP would begin to operate when the water reaches an elevation of approximately 33 ft. (10 m) below invert level of the spillway that would allow free flow into Crooked Creek. It is estimated that this will occur approximately 50 years after the cessation of processing plant operations. Prior to the lake reaching this level the closure HDS WTP would be constructed and seasonal water treatment would commence. An approximate lake level of 328 ft amsl (100 m amsl) would be maintained. This average water level provides sufficient freeboard for the design runoff event (100-year snowmelt plus 100-year, 24-hour rainfall event) and a sequence of years with above-average precipitation.

Premature Closure - End of Year 3 of Operations

The ACMA and Lewis pits at a Year 3 closure would have a much smaller area of disturbance and a smaller pit lake would form in the ACMA pit. Stormwater from the Lewis Pit would drain into the ACMA Pit lake. Prior to the pit lake forming stockpiled PAG 7 material would be backfilled into the deepest portion of the ACMA Pit. The pit lake would cover an area of approximately 400 acres (160 ha).

As with the LOM closure the pit will be allowed to fill to an approximate lake level of 328 ft amsl (100 m amsl) and it would then be maintained at that level through seasonal operation of the WTP. It is estimated that water treatment will commence approximately eleven years after site closure commences. Initial water treatment for pit lake discharge under the premature closure scenario would make use of repurposed process equipment for HDS treatment and the existing operations reverse osmosis (RO) would be retained as a contingency for further water treatment if needed. Long term replacement of the WTP would occur in the same way as under the LOM closure.

4.8.3 Waste Rock Facility

Life of Mine (LOM) Closure

Upon cessation of mining, the WRF, containing approximately 2.46 billion short tons (2.23 billion tonnes) of overburden and waste rock, would require reclamation. However, the WRF has been designed to maximize concurrent reclamation, minimize the effects of any potentially metal leaching or acid generating (ML/ARD) materials, and minimize the cost of closure. Concurrent reclamation of inactive portions of the WRF would improve the quality of the surface water runoff, minimize the overburden material stockpiled for final reclamation,

and establish a vegetative cover that would be monitored and augmented, if needed, during ongoing operations. The WRF would be constructed in lifts and would be reclaimed as soon as practical after each lift or portion of the facility is complete. After active dumping ceases on each lift, the slopes would be regraded to less than or equal to 3H:1V. Large (geochemically inert) boulders uncovered during grading would be left on the surface to provide topographic diversity and microhabitats for wildlife and vegetation, and to break the linear appearance of the final slope. Once the area is recontoured, a minimum of 1 ft (0.3 m) of terrace gravel and/or colluvium will be spread over the surface, and then a layer of growth media consisting of organics and fine grained materials 1.15 ft (0.35 m) thick will be placed on top. Further discussion of the proposed management of these materials is provided in the *Waste Rock Management Plan, Volume IIIB*, SRK 2016b.

When final grading, contouring, and application of growth media have been completed, the WRF would be ripped along contours. Intervals between contour ribs would be based on best engineering judgment and length of slope. The distance between drainage breaks would depend on the final slope angle of the WRF, and would be based on best management practices (BMPs) as specified in the stormwater pollution prevention plan (SWPPP) for closure.

The WRF would be seeded and mulched, as necessary, following physical preparation. It is anticipated that broadcast-seeding methods would be utilized for this facility.

WRF reclamation and water management conditions at LOM closure are projected to be as follows:

- Progressive or concurrent reclamation would be conducted during operations, but final cover materials would need to be placed in the remaining incomplete areas such as active haul roads.
- The Lower and Upper CWDs would be breached and the areas re-contoured.
- Surface runoff from the WRF would gravity flow to the ACMA Pit through constructed collection and drainage channels (Figure 4-3).
- The seepage flows from the WRF would be isolated by constructing concrete containment structures at the outlet of the rock drains for American Creek and Rob's Gulch. The seepage water then would be piped to the bottom of ACMA Pit to encourage pit lake stratification (Figure 4-4).

Premature Closure - End of Year 3 of Operations

The portion of the WRF constructed by the end of Year 3 of operations would be regraded and covered in the same manner as the LOM closure. Water from the undisturbed areas of the American Creek Valley would be directed to Crooked Creek, with the remainder of the surface runoff and the WRF seepage water directed to the pit lake. The seepage water would be directed to the bottom of the pit.

4.8.4 Tailings Storage Facility

LOM Closure

Several years before the end of operations, tailings deposition would be modified to direct the operating pond toward the southeast corner of the TSF. This would be done in anticipation of final closure of the TSF, when the tailings surface runoff would be directed to the closure spillway into Crevice Creek. At cessation of process plant operations, the TSF water would be pumped to the ACMA Pit through a reclaim pipeline.

The tailings impoundment will require a closure cover to minimize groundwater interaction and reduce salt mobilization. The cover would include coarse non-acid generating (NAG) waste rock overlain by colluvium/terrace gravel, overlain by a peat/mineral growth media mix. In addition, the soil cover would promote surface runoff and reduce the potential for meteoric waters to infiltrate through the consolidated tailings.

The closure spillway has been sized to pass the peak instantaneous flow associated with the 24-hour probable maximum precipitation (PMP) event, 9,959 cfs (282 m³/s). The closure spillway will be a 33 ft (10 m) wide, 26 ft (8 m) deep cut-in rock at 1H:1V side slopes, with excavation of the overlying overburden at 2.5H:1V slopes.

During the first year of closure, an estimated 8,190 acre-ft (10.1 Mm³) of tailings pond water will be pumped to the open pit using the tailings reclaim water pipeline. Pumping of the water to the pit will allow for the subsequent placement of cover material on the western quarter of the TSF. The resulting exposed tailings surface will be allowed to sit for one year to dry providing a suitable working surface for cover placement with low ground-pressure equipment. The operating pond would be controlled during the closure period to minimize dusting issues.

During year two of the closure period, the first quarter of the cover will be constructed along the western end of the facility. The pond will be further lowered to expose the second quarter of the tailings beach for the subsequent construction season. The tailings pore water that is released in response to loading the tailings with the closure cover will report to the remaining operating pond. Pumping to ACMA Pit would continue to prevent a large pond from redeveloping on the TSF.

During year three of closure, the pond will be drained to expose the third quarter of the impoundment and the second quarter of the closure cover will be completed. By year four, the pond will be substantially drained and the third quarter of the closure cover will be completed. The tailings pore water released in response to tailings loading by the closure cover will report to the low point adjacent to the closure spillway and will be pumped to the pit.

During the final (fifth) year of the closure period, the remaining quarter of the tailings closure cover will be completed. A small lined pond will be constructed in this area to allow for monitoring and control of the tailings cover surface runoff to verify that it is suitable for discharge. The pond will store 162 acre-ft (200,000 m³) and have approximate dimensions of 738 x 984 ft (225 x 300 m) and a depth of 9.8 ft (3.0 m). If this water is not suitable for discharge, it will be pumped to the pit lake.

It is expected that the tailings will consolidate with time over the closure period. Predicted near terminal density will be reached approximately 52 years after the end of operations. An allowance has been made in the quantity of rockfill placed as part of the closure cover to compensate for the expected settlement due to consolidation of the tailings.

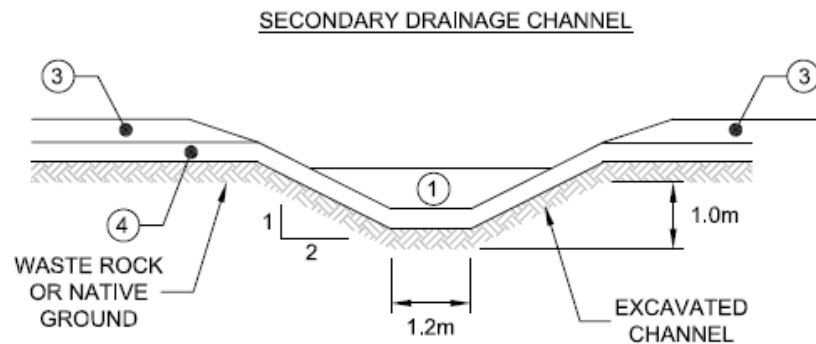
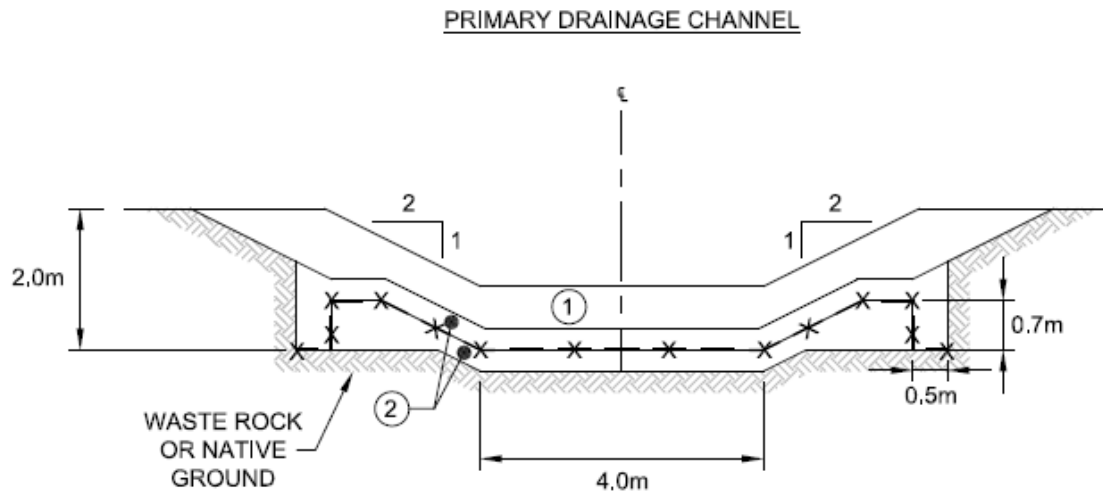
The tailings closure cover will be comprised of a minimum 3.3 ft (1.0 m) coarse NAG waste rock overlain by a minimum 1-foot (0.3 m) of colluvium/terrace gravel overlain by an approximately 1.15 ft (0.35 m) of peat/mineral mix. Stripped overburden material temporarily stored in the TSF stockpiles will be used for the closure cover. The resulting runoff from the constructed cover is expected to be suitable for discharge without treatment.

Pumping will occur out of the rockfill layer that provides a capillary break between the tailings and the cover. Pumping will be required out of this layer to capture void water generated by ongoing consolidation of the tailings and water infiltrating the TSF cover. Drain sumps installed in manholes would be used for this purpose. The consolidation water will mix with water that infiltrates the cover. This mixed water is assumed to be unacceptable for direct discharge and would be pumped to the ACMA Pit.

Surface runoff water will be held in the lined pond and tested to verify it meets Alaska Water Quality Standards for discharge through the closure spillway. It is anticipated that this water will be of suitable quality for discharge, and that runoff from the pond will drain to Crevice Creek from year six on.

Due to the metal leaching nature of all waste rock from the open pit, all runoff from downstream rockfill dam faces will flow into the seepage collection pond. The downstream face of the tailings dam will remain at an approximate 1.7H:1V slope. Placement of 1-foot (0.3 m) of colluvium beneath 1.15 ft (0.35 m) of organic growth medium on portions of the rockfill face will provide partial vegetative cover and a more diversified habitat for wildlife (e.g., raptors, rodents and burrowing mammals).

The SRS downstream of the TSF main dam, consisting of the collection pond and seepage monitoring/collection wells, would be maintained during closure and into post-closure. Downgradient compliance monitoring wells will be maintained indefinitely.



LEGEND	
* * *	40MIL LLDPE
①	CHANNEL ARMOR 600mm THICK
②	CUSHION LAYER 300mm THICK
③	PEAT MINERAL MIX 350mm THICK
④	TERRACE GRAVEL + COLLUVIUM 300mm THICK

SCALE:

N/A

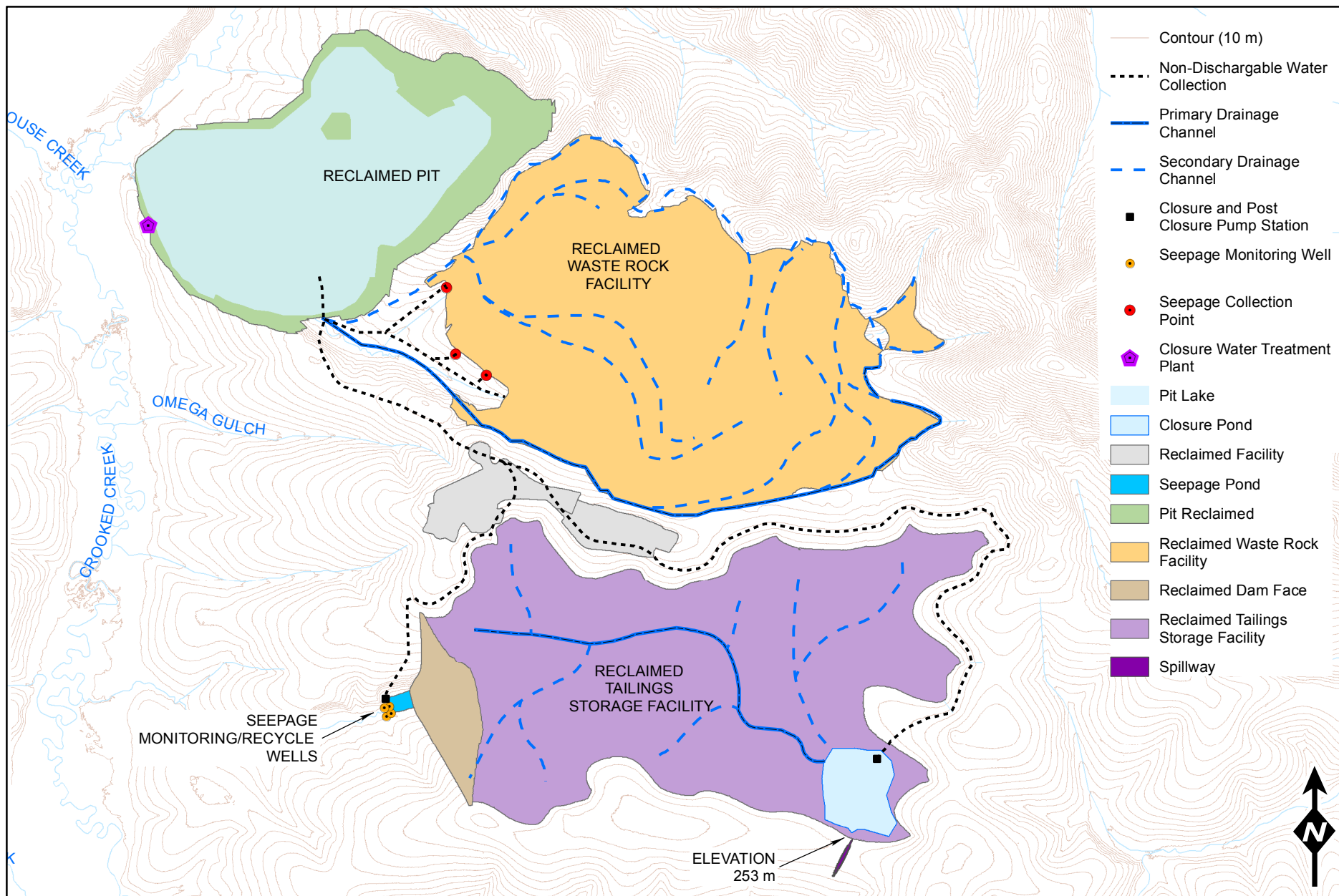


TYPICAL FACILITY DRAINAGE CHANNELS

DONLIN GOLD PROJECT

FIGURE:

4-3



**SURFACE WATER
AND SEEPAGE
COLLECTION SCHEMATIC**
DONLIN GOLD PROJECT

FIGURE:

4-4

Premature Closure – End of Year 3 of Operations

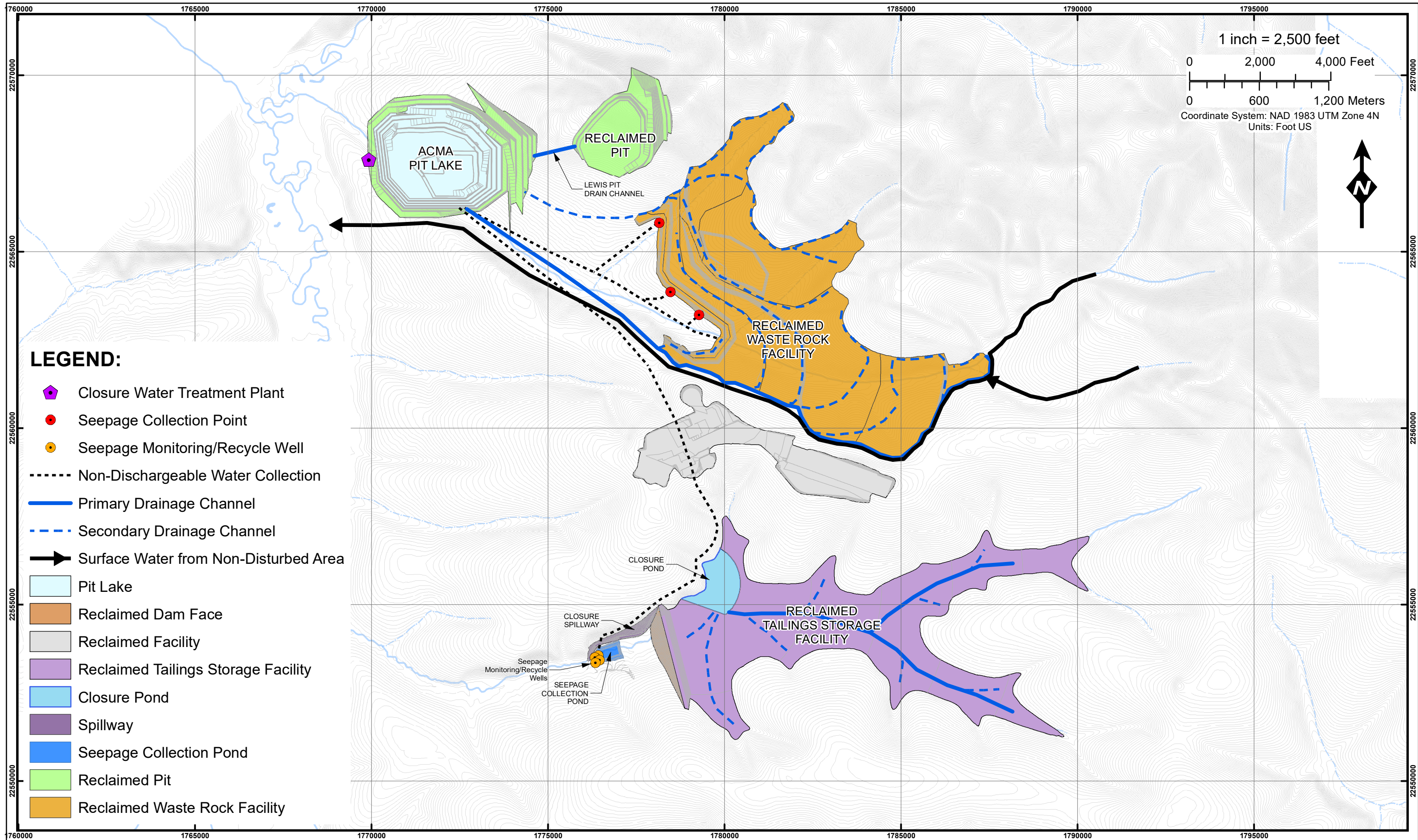
At the end of Year 3 Operations, the TSF pond will be located in the middle of the TSF impoundment. A spillway would be constructed in the tailings dam embankment to allow tailings surface runoff to be directed into Anaconda Creek. This differs from the LOM assumption that tailings deposition would be modified to direct the operating pond toward the southeast corner of the TSF with the tailings surface runoff being directed to the closure spillway into Crevice Creek (Figure 4-5).

A dredging operation would redeposit tailings to move the low point in the TSF from the middle of the impoundment to the northwest corner of the TSF near the constructed spillway. The tailings closure cover will be constructed in the same way as the LOM closure cover. The resulting runoff from the constructed cover is also expected to be suitable for discharge without treatment. The runoff water will be held in a lined pond in the northwest corner and tested to verify if it meets Alaska Water Quality Standards before discharge through the closure spillway into Anaconda Creek. After closure, the tailings consolidation water will be pumped to pit. Predicted near terminal density for the tailings will be reached approximately 38 years after the end of operations.

Once physical closure work begins an estimated 6,784 acre-ft (8.4 Mm³) of tailings pond water plus accumulated precipitation will be pumped over a four-year period to the WTP using the tailings decant reclaim pipeline. Water treatment would utilize repurposed process equipment for initial HDS treatment of the TSF water, followed by RO treatment utilizing the existing operations RO plant. Simultaneously the dredging operation would begin redepositing the tailings to move the remaining tailings water towards the northwest corner of the TSF. As the pond size is reduced the exposed tailings will begin to dry and, after one year, will provide a suitable working surface for cover placement with low ground-pressure equipment. Construction of the cover will proceed over four years as the working surface dries and becomes available for use. The tailings pore water that is released in response to loading the tailings with the closure cover will also report to the operating pond and be pumped to the WTP along with the rest of the water. During the final (fifth) year of the closure period, the tailings closure cover would be completed and the lined pond will be constructed at the low point to allow for the collection and monitoring of surface runoff water. The tailings cover surface runoff would be monitored to verify that it is suitable for discharge. The pond will store 162 acre-ft (200,000 m³) and have approximate dimensions of 738 x 984 ft (225 x 300 m) and a depth of 9.8 ft (3.0 m).

4.8.5 Buildings and Equipment Sites

Although the buildings are located on private land and the landowners can request the facilities remain, at this time, the land owners have directed that as facility components of the site are decommissioned, materials, equipment, and buildings would be removed. Equipment and piping not needed for the reclamation and post-closure monitoring activities under this plan would not be utilized at another mining site, sold or salvaged, but would be disposed of onsite in an approved manner. Process components (those that are in direct contact with process reagents) would be rinsed with fresh water during decommissioning. This rinsate would be collected and treated at the WTP.



LEGEND:

- Closure Water Treatment Plant
- Seepage Collection Point
- Seepage Monitoring/Recycle Well
- Non-Dischargeable Water Collection
- Primary Drainage Channel
- Secondary Drainage Channel
- Surface Water from Non-Disturbed Area
- Pit Lake
- Reclaimed Dam Face
- Reclaimed Facility
- Reclaimed Tailings Storage Facility
- Closure Pond
- Spillway
- Seepage Collection Pond
- Reclaimed Pit
- Reclaimed Waste Rock Facility



**PREMATURE CLOSURE
SURFACE WATER
AND SEEPAGE COLLECTION
SCHEMATIC
DONLIN GOLD PROJECT**

Remaining structures on the site and foundations would be reduced to rubble and disposed of in a manner approved by ADEC. Once the buildings have been demolished, the foundations would be broken up to prevent them from being an impermeable impediment to natural percolation of meteoric waters. Following equipment and structure removal, sites would be graded slightly for proper drainage, ripped and scarified, seeded, and mulched if necessary. Although it is not likely that growth media would be needed, each site would be evaluated following grading. A thickness of approximately 3.3 ft (1.0 m) of colluvium cover would be established over the debris to ensure it remains subsurface into the foreseeable future.

The primary intake for the primary crusher would be demolished to original grade, and the subsurface portion backfilled with inert construction debris or inert waste rock. During demolition of the rock crusher conveyor berm, approximately 464,300 yd³ (355,000 m³) of rock would be removed and placed in adjacent yard areas for final reclamation.

4.8.6 Yard Areas

Considering their large size, the stable yard areas (e.g., platforms created for buildings, laydown areas, and other disturbances) would be reclaimed in a manner similar to the WRF. In keeping with the reclamation plan for the property, each of the disturbed areas would be regraded to acceptable slopes.

Given the topographical relief at Donlin Gold, most of the working areas, including the process plant, crusher, shop, and fuel storage, are on large pads constructed primarily by balanced cut-and-fill techniques. Once internal structures and foundations have been appropriately demolished, removed, or buried, the next step in meeting reclamation criteria for large yard areas is to regrade the cut-and-fill sections to blend with the surrounding topography, where appropriate. The areas would then be ripped to mitigate the compaction effects of traffic and infrastructure, covered with growth media (as necessary) and seeded.

4.8.7 Miscellaneous Closure Items

Wells and Well Closure

Once monitoring of the TSF indicates component stability, the applicable monitoring wells for this facility would be abandoned by plugging the well and removing the surface casing. Pit dewatering wells also would be abandoned, when no longer required, as part of the mining operation.

Water well abandonment would be conducted in accordance with ADEC regulations (18 AAC 80.015) and would be in a manner to prevent the transmission of water from one vertical level within the well to another (e.g., cross-aquifer contamination). Abandonment procedures generally include removal and disposal of pumps and piping, removal of the casing where possible, plugging of the well with an approved sealing material at total depth, removal of the collar, minor grading around the well site, and seeding and mulching to re-vegetate the immediate area of the well and service road.

Bentonite or cement grout would be forced into the perforated screened interval and into the remainder of the well casing to decommission the well in a way that protects the groundwater resources.

After mining ceases, additional wells not needed for post-closure monitoring would require abandonment. This issue would be revisited on a periodic basis as additional operating data becomes available and during development of final process component closure plans. Final process component closure and monitoring plans would require approval from ADEC.

Fence Removal

The use of fences as a post-mining reclamation structures would be minimized in favor of more permanent structures, such as earthen berms, to restrict access to the open pits. The use of fencing during closure would be limited to reagent areas necessary for the security and safety at the WTP facilities. All other reagents and chemicals (including, but not limited to petroleum products) would be removed from the site.

Electrical Power Facilities

When the large electrical power requirements are no longer necessary, substations, overhead power lines, and associated facilities would be removed from the site, unless it is agreed upon by the landowner to keep them.

The main power generating facilities would no longer be necessary at the end of mining and process plant operations, and the generators would be removed from the site or demolished and buried on site, in keeping with regulatory and corporate requirements.

Donlin Gold currently assumes at LOM closure that only a small generator will be required to operate the post-closure WTP and associated pumps needed for the seasonal operations.

Fuel Storage Facility, Natural Gas Metering Station, Pipeline Distribution System

The fifteen 2.5 Mgal (9.5 ML) diesel fuel tanks would be drained, rinsed, dismantled, foundations demolished and materials disposed of in the on-site landfill. Rinsate water would be sent to an oil/water separator for treatment prior to discharge.

The 315-mile (507 km) proposed Donlin Gold natural gas pipeline reclamation and abandonment falls under the jurisdiction of the U.S. Department of Interior, Bureau of Land Management (BLM) and the State of Alaska Pipeline Coordinator's Office and will require Donlin Gold to comply with the applicable federal and state statutes and regulations for pipelines as described in a separate plan.

However, metering station and natural gas distribution systems at the Donlin Gold mine site would be covered by this Reclamation and Closure Plan. The metering facilities and aboveground piping will be removed, and salvaged or disposed of on the onsite inert landfill. Below ground piping will be abandoned in place, and any surface exposure would be cut below ground level and buried.

Waste Disposal

Non-hazardous demolition debris would be placed in the inert solid waste landfills located in the WRF or used to fill subsurface voids exposed during the demolition of surface facilities.

The resulting surface of any voids filled with construction debris would be shaped to reduce ponding, covered with approximately 1-foot (30.5 cm) of cover, and revegetated in the same manner as the WRF.

Hazardous and toxic materials, such as reagents, petroleum products, acids, and solvents, would be transferred off site by licensed transporters and either returned to the vendor or disposed of at licensed treatment, storage and disposal facilities (SRK 2016c). Hydrocarbon-contaminated soils would be treated onsite or removed from the site for offsite treatment and/or disposal.

Port Facilities and Access Road

The Jungjuk Port facilities also would be reclaimed. All mine support facilities would be removed and reclaimed, as described in previous sections. The sheet piles and fill would be removed, and the area recontoured (Wright and Czapla 2010). The 30-mile (48 km) Jungjuk Port access road to the mine site would be required to deliver annual WTP reagents, replacement parts, provisions for the WTP crews, and bulk fuel and support long-term monitoring. The access road would remain into the foreseeable future following mine closure.

Snow Gulch Fresh Water Reservoir

The Snow Gulch Fresh Water Reservoir will be drained, the dam breached, and the footprint recontoured and revegetated. Associated power lines and pipelines will be decommissioned and removed, and the access road reclaimed.

Mobile Equipment

LOM Closure

For the purposes of this Plan, no salvage value would be assigned to the mobile equipment. Therefore, this equipment would be buried in the WRF at closure. To prevent degradation of water resources or contaminant mobilization, all fluids would be drained and batteries removed from all mobile vehicles prior to burial in compliance with the applicable solid waste disposal regulations (18 AAC 60). The inert equipment would then be covered under reclaimed dump faces during regrading activities. The inert equipment burial locations within the WRF would be surveyed and reported to the ADEC in the final closure report for the site.

Premature Closure – End of Year 3 of Operations

For the purpose of this premature closure scenario, no salvage value would be assigned to the mobile equipment, however, the costs of draining fluids, removal of batteries, and burial are not included since the equipment would have residual value and not be disposed of at the site.

4.8.8 Sediment Control

Each of the reclaimed components would be able to withstand design storm events (e.g., 100-year, 24-hour storm event). As discussed previously, it is critical to successful closure of the WRF that runoff is directed away from any potential areas of erosion (e.g., cut banks) and that runoff is quickly conveyed from the facility without posing a risk to the long-term

stability of the cover and the structure itself. Similarly, drainage control from the tailings cover is critical to the long-term establishment of a vegetative cover and drainage channels of the closed TSF. The technical specifications for the management of storm water runoff following closure of the site would be developed as part of the updated SWPPP for closure.

4.8.9 Monitoring and Maintenance

Once physical reclamation has begun, temporary diversions and sedimentation control systems would be monitored on a routine basis (weekly when weather conditions allow) by Donlin Gold personnel. These systems would be cleaned, repaired, and modified as necessary.

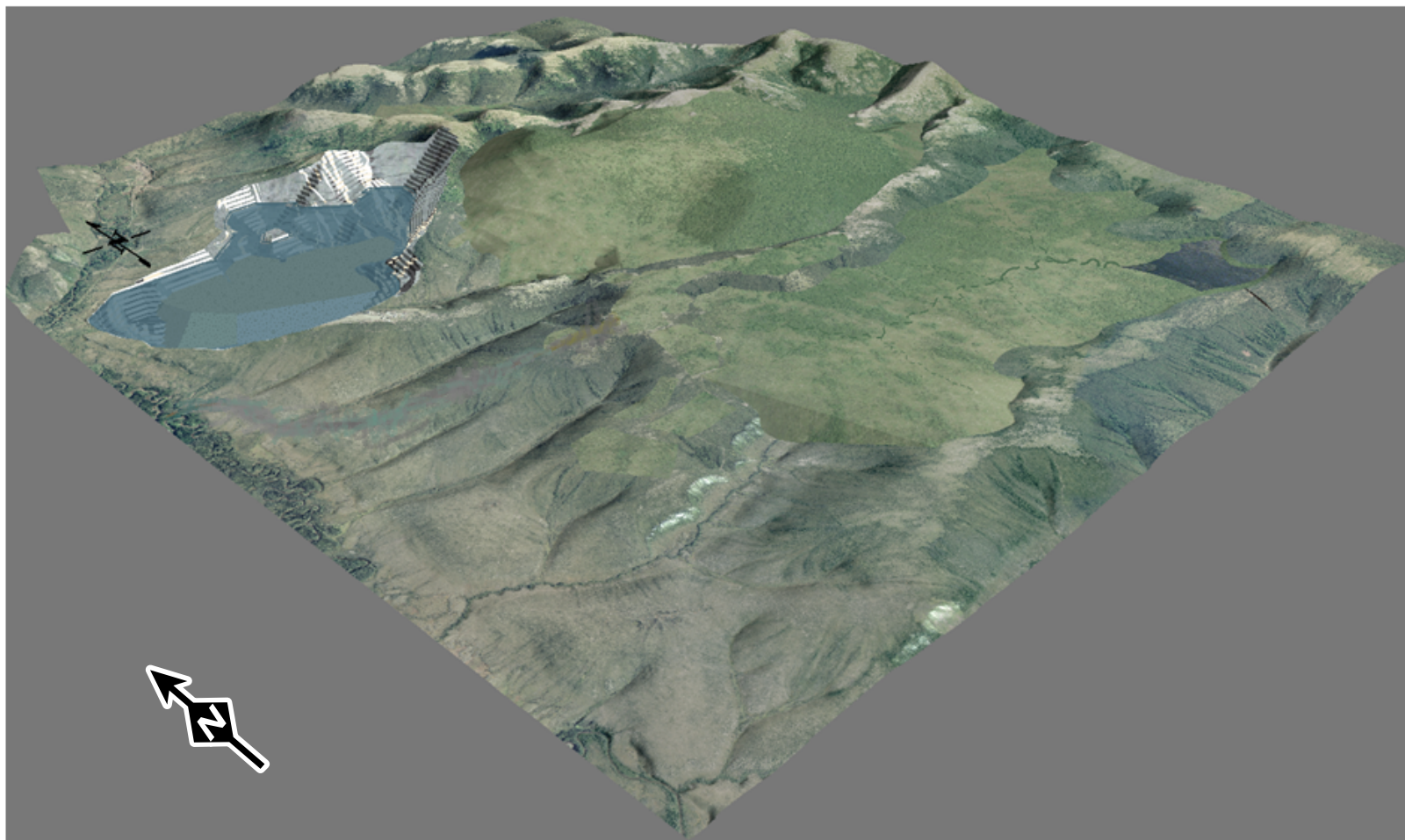
Long-term or permanent diversions and the safety fencing and signage would be monitored and maintained as needed until the reclamation bond has been released.

Success of reclamation (Figure 4-6) would be monitored in two ways:

1. Physical reclamation such as earthwork and growth media application would be checked for excess erosion problems periodically and immediately following major rain storms. Remedial action to correct instability would be taken as soon as feasible following detection of substantial erosion or loss of growth media.
2. Vegetation success would be monitored qualitatively by visual inspection on an ongoing basis by Donlin Gold and ADNR personnel, and quantitatively once per year. A consulting professional would conduct quantitative analysis at the end of the growing season (end of August).

ADNR, ADF&G, and Donlin Gold would determine performance criteria for vegetation success. Presently, revegetation cover criterion is outlined in Section 4.7.9. Donlin Gold would seek release of the reclamation surety on a facility-by-facility basis (as per 11 AAC 97.435) as quantitative data indicate the established criteria have been met.

Site-wide monitoring systems would remain in place until Donlin Gold demonstrates to ADNR and/or ADEC that they are no longer necessary. Details of reclamation and closure monitoring for the open pit, TSF, WRF, surface water, and groundwater are provided in the *Integrated Waste Management Monitoring Plan, Volume VII*, SRK 2016d.



SCALE:

NA



**CONCEPTUAL FINAL
RECLAMATION
AND CLOSURE VIEW**

DONLIN GOLD PROJECT

FIGURE:

4-6

5.0 ESTIMATE OF RECLAMATION COSTS

The estimated reclamation costs for the various components of the proposed Donlin Gold project as described in the Plan represent proven and conceptual reclamation and closure methods. The Standard Reclamation Cost Estimator (SRCE) Version 1.4.1.16 was used to prepare this cost estimate. Modifications to SRCE Version 1.4.1.16 included the addition of equipment needed for reclamation activities, as well as additional building demolition equipment.

5.1.1 Closure Cost Rates

Costs used to populate the SRCE model were based on the following sources:

- 2016 - 2017 costs from current vendors doing business in Alaska
- Alaska Davis Bacon Labor Rates - September 2016 (State of Alaska 2016)
- Material costs from the RS Means Heavy Construction Cost Data, Western Edition (2004, 2008, 2012)
- Caterpillar Performance Handbook, Edition 35 (2004)
- Cashman Equipment, Reno, Nevada – Equipment Rental Rates (2012)
- NC Machinery Equipment Rental Rates (2017)
- Construction Machinery, Inc. Equipment Rental Rates (2017)
- Backfill, Inc. Equipment Rental Rates (2017)
- Alaska Marine Lines – Tariff Rates (2016)

In determining the prevailing labor rates, the *Alaska Department of Labor and Workforces Development, Division of Labor Standards and Safety's Laborers' & Mechanics' Minimum Rates of Pay* (Pamphlet 600) (Alaska "Little Davis-Bacon") was used and will be updated as the Pamphlet is updated.

Material costs for fuel, concrete, etc., were provided by Alaska vendors. Information provided in 2012 RS Means Heavy Construction Cost Data, 26th Edition, was used where equipment, labor, or material rates were unavailable from other sources.

5.1.2 Closure Cost Productivities

Productivity data and calculations were based on:

- Caterpillar Performance Handbook, Edition 35, for productivity calculations as incorporated into the SRCE.
- RS Means Heavy Construction Cost Data (2004-2009) for productivities/crews for demolition. A large excavator with shears and a medium excavator with grapples were added to the building demolition fleet. Productivity for the shears was estimated based on shear cut depth and opening and closing times as provided by the manufacturer.
- Use of best estimates and available data to populate the SRCE cost model.

5.1.3 Key Cost Assumptions

The following closure cost assumptions were made:

- Mine mobile equipment on site will not be used for reclamation
- All structures and infrastructure will be removed
- Demolition shears are likely to be used to demolish buildings. Costs for building, foundation, and wall demolition were derived from RS Means Heavy Construction Cost Data
- Demolition shears are likely to be used to demolish large storage tanks. Since this is a cutting exercise only, productivity was estimated based on shear cut depth and opening and closing times as provided by the manufacturer
- No salvage value is assumed for scrap, equipment, or mobile fleet
- Waste rock is used for tailings cover.

5.1.4 Conclusions

Acknowledging the social and environmental responsibility associated with modern mining operations, Donlin Gold recognizes and commits to the comprehensive closure and reclamation of the proposed Donlin Gold site and ancillary facilities. All reclamation activities and post-closure maintenance of remaining structures (tailings dam, airstrip, Jungjuk Port barge landing, and access roads) are the responsibility of Donlin Gold, unless and until a subsequent landowner assumes responsibility. A modification to the designated post-mining land use may require further changes to the Plan, along with the timelines for implementing and finalizing closure.

The reclamation cost estimates were developed for both the LOM and for a seven-year premature closure (Appendix B).

Life of Mine (LOM) Closure

The cost for physical closure and reclamation of the site for the LOM closure is estimated at \$308 million over five years. Following this five-year period ongoing site monitoring would occur for approximately 45 years before the commencement of water treatment and discharge from the pit lake (SRK 2017). The requirement to treat with HDS and discharge water are predicted to continue indefinitely. Annual costs during the monitoring period average around \$1.0 million; while annual costs once water treatment commences in approximately 50 years after final reclamation average around \$3.6 million, excluding the replacement costs for the WTP.

Premature Closure - End of Year 3 of Operations

The cost for physical closure and reclamation of the site for the seven-year premature closure is estimated at \$237 million over five years including the cost of treating the TSF water. Annual post-closure costs for site monitoring, maintenance, and water treatment average \$3.7 million, excluding the replacement costs for the WTP.

6.0 APPLICANT STATEMENT OF RESPONSIBILITY

Donlin Gold recognizes its responsibility in the use of private and public (state) lands, and accepts that responsibility in agreeing to reclaim the proposed Donlin Gold project site. This acknowledgement includes, but is not necessarily limited to conformance with applicable statutes and regulations implemented by ADNR and ADEC (Section 1.1). Donlin Gold would meet the requirements of its reclamation plan and return the site to a safe and stable condition consistent with the approved post-mining land use. Donlin Gold would meet required local, state, and federal regulations regarding reclamation of any surface area affected by the mining and processing operations. Reclamation activities and post-reclamation maintenance of remaining structures are Donlin Gold's responsibility.

In the event a new operator/landowner assumes control of the proposed Donlin Gold project, at that time, the new operator or landowner would agree to assume responsibility for the reclamation and maintenance of any affected land and structures that are the subject of this Plan or existing permits. The new operator/landowner would request transfer of all applicable state and federal permits. The new operator/landowner would provide evidence that a surety is filed with ADNR that would cover reclamation of disturbed lands, including privately owned and state land, as well as post-reclamation maintenance of remaining structures.

7.0 ACKNOWLEDGEMENTS

- A. It is understood that should the nature of the operation change, a modified or supplemental plan of operations and reclamation may be required.
- B. It is understood that approval of this Plan does not constitute:
 - 1. Certification of ownership to any person named herein; and
 - 2. Recognition of the validity of any mining claim herein.
- C. It is understood that a bond equivalent to the estimated cost of performing the agreed upon reclamation measures would be required before this Plan can be approved. Bonding and any bond reduction amounts would be set on a site-specific basis by ADNR and ADEC in coordination with the cooperating agencies.
- D. It is understood that any information provided with this Plan or provided in the future, that is marked "Confidential" would be treated by the agency in accordance with that agency's laws, rules, and regulations.
- E. Donlin Gold would conduct an environmental closure audit to determine if any previously unknown environmental liabilities exist as a direct or indirect result of the Donlin Gold project.

Donlin Gold has reviewed and agrees to comply with all conditions in the Reclamation and Closure Plan. Donlin Gold understands the bond would not be released until ADNR and ADEC give written approval of the reclamation work.

Donlin Gold LLC

By: _____

Title: _____

Signature: _____

Date: _____

8.0 REFERENCES

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Appendix A

Reclamation Plan Land Status

**Reclamation Plan Land Status
Lands Required for Proposed Donlin Gold Project**

Calista Corporation, Surface and Subsurface Estates

The following real property is in the Kuskokwim and/or Mt. McKinley Recording Districts, Seward Meridian, Alaska.

LANDS FOR MINING AND MINING RELATED PURPOSES

Township 22 North, Range 48 West

Sections 4, 5, 6, 7, 8, 9, 17, 18, 19, 20

Township 22 North, Range 49 West

Sections 1, 12, 13, 24

Township 23 North, Range 48 West

Sections 3, 4, 5, 6, 9, 10, 15, 16, 21, 22, 27, 28, 32, 33, 34

Township 23 North, Range 49 West

Section 28

Township 23 North, Range 50 West

South 1/2 of Section 33

**LANDS FOR ACCESS. ROADWAY. MATERIAL SITES. PORT SITE. AND EQUIPMENT
LAYDOWN AREAS**

Township 22 North, Range 50 West

20-acre material site within Section 12, exact location to be determined after construction with a survey

20-acre material site within Section 13, exact location to be determined after construction with a survey

20-acre material site within Section 35, exact location to be determined after construction with a survey

Township 21 North, Range 50 West

20-acre material site within Section 2, exact location to be determined after construction with a survey

20-acre material site within Section 4, exact location to be determined after construction with a survey

20-acre material site within Section 9, exact location to be determined after construction with a survey

The Kuskokwim Corporation (TKC), Surface Estate

The following real property is in the Kuskokwim and/or Mt. McKinley Recording Districts, Seward Meridian, Alaska.

LANDS FOR MINING AND MINING RELATED PURPOSES

Township 22 North, Range 49 West

Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

Township 23 North, Range 48 West

Sections 5, 6, 7, 8, 17, 18, 19, 20, 29, 30, 31

Township 23 North, Range 49 West

Sections 1, 10, 11, 12, 13, 14*, 15, 21, 22, 23•, 24, 25, 26, 27, 33, 34, 35, 36

(*excluding from TKC's surface estate a 13.91- acre parcel located within unsurveyed Sections 14 and 23 as described in the Record of Survey recorded as Plat 96-1 in the Kuskokwim Recording District on January 17, 1996)

Township 22 North, Range 48 West

Sections 31

Township 22 North, Range 50 West

Sections 1, 12, 13

LANDS FOR ACCESS. ROADWAY. MATERIAL SITES. PORT SITE, AND EQUIPMENT LAYDOWN AREAS

Township 20 North, Range 49 West

Port site containing approximately 100 acres within Section 29, exact location to be determined after construction with a survey

Township 20 North, Range 49 West

400 ft wide roadway of approximately 48 acres within Section 29, exact location to be determined after construction with a survey
400 ft wide roadway of approximately 48 acres within Section 30, exact location to be determined after construction with a survey.

Township 21 North, Range 50 West

400 ft wide roadway of approximately 48 acres within Section 2, exact location to be determined after construction with a survey

400 ft wide roadway of approximately 48 acres within Section 3, exact location to be determined after construction with a survey

400 ft wide roadway of approximately 48 acres within Section 4, exact location to be determined after construction with a survey

400 ft wide roadway of approximately 48 acres within Section 9, exact location to be determined after construction with a survey

Township 21 North, Range 50 West

20-acre material site within Section 2, exact location to be determined after construction with a survey

20-acre material site within Section 4, exact location to be determined after construction with a survey

20-acre material site within Section 9, exact location to be determined after construction with a survey

Township 22 North, Range 50 West

400 ft wide roadway of approximately 48 acres within Section 34, exact location to be determined after construction with a survey

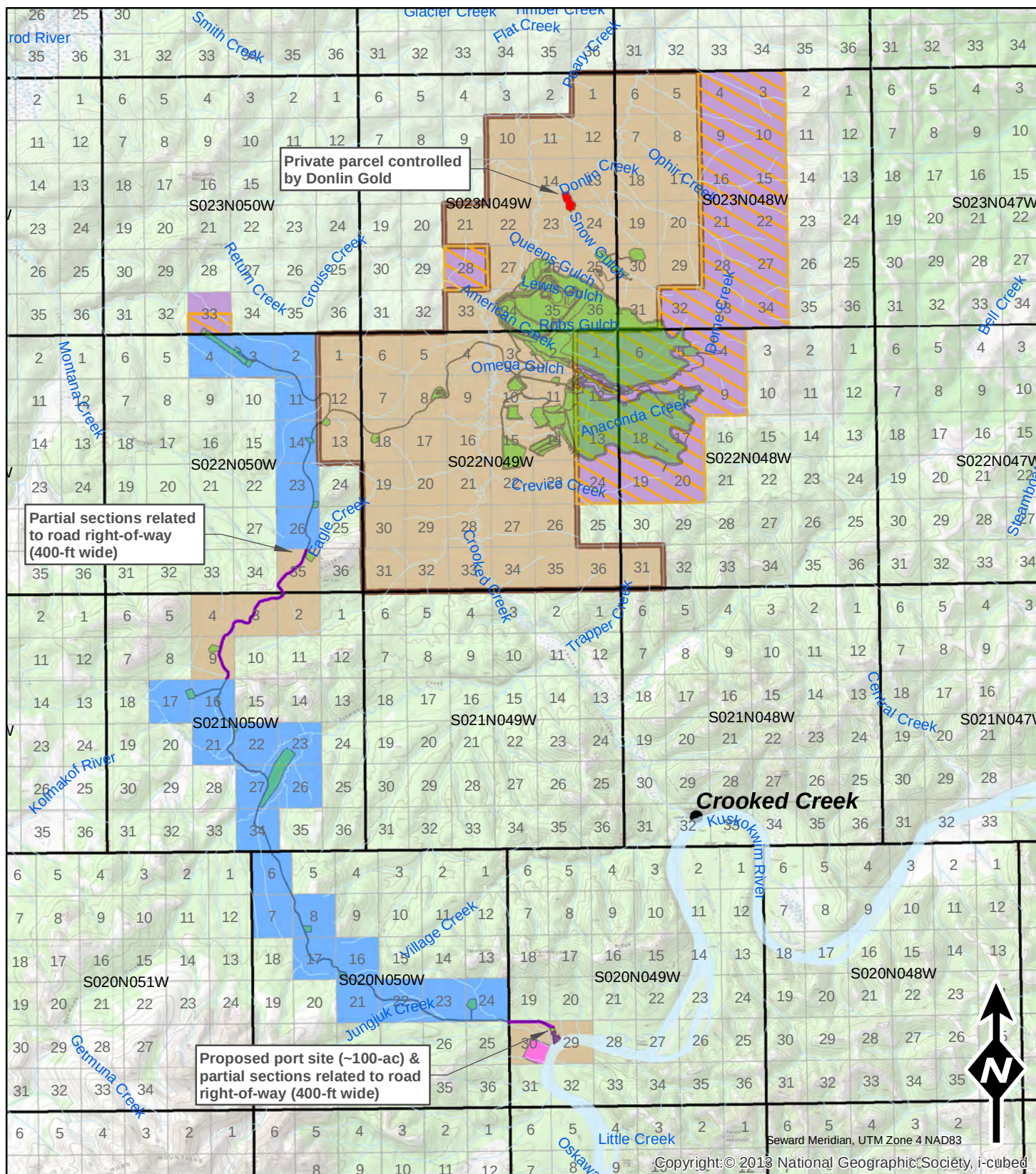
400 ft wide roadway of approximately 48 acres within Section 35, exact location to be determined after construction with a survey

400 ft wide roadway of approximately 48 acres within Section 36, exact location to be determined after construction with a survey

Township 22 North, Range 50 West

20- acre material site within Section 35, exact location to be determined after construction with a survey

20- acre material site within Section 36, exact location to be determined after construction with a survey



Proposed Infrastructure Layout

Land Status Details

ANCSA Selections and Conveyances

Native Allotments

State Land

The Kuskokwim Corp Village Selection Boundaries

Lands Conveyed Under Donlin Gold Agreements

The Kuskokwim Corporation (TKC)

Calista Corporation (Calista)

Road Corridors and Port Site

Private Land Controlled by Donlin Gold, LLC



**RECLAMATION PLAN
LAND STATUS**

DONLIN GOLD PROJECT

SCALE:

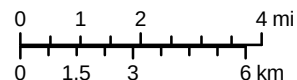


FIGURE:

A-1

Appendix B

Estimate Basis of Cost

Phased and Life of Mine Bond Cost Estimate - Basis of Costs

Report Prepared for

Donlin Gold LLC



Report Prepared by



181202.017

July 2017 (revised November 2017)

Phased and Life of Mine Bond Cost Estimate Basis of Costs

Prepared for:

Donlin Gold LLC
4720 Business Park Blvd. Suite G-25
Anchorage, Alaska 99503

Prepared by:

SRK Consulting (U.S.), Inc.
5250 Neil Road, Suite 300
Reno, Nevada 89502
e-mail: reno@srk.com
website: www.srk.com
Tel: (775) 828-6800
Fax: (775) 828-6820

SRK Project Number 181202.017

July 2017 (revised November 2017)

Author:

Patric Lassiter
Principal Consultant

Peer Reviewed by:

Bill Jeffress
Principal Consultant

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Attachments

Attachment A: Cost Data File

Attachment B: Documents in Support of SRCE Inputs

Attachment C: Premature Closure SRCE Cost Summary

Attachment D: Life-of-Mine SRCE Cost Summary

Attachment E: SRCE Figures

Figures

Figure E-1: Premature Closure Disturbance Footprint

Figure E-2: Premature Closure WRF Mid-Bench Lengths

Figure E-3: Premature Closure Road Disturbance ID and Lengths

Figure E-4: LOM Closure Disturbance Footprint

Figure E-5: LOM WRF Mid-Bench Lengths

Figure E-6: LOM Road Disturbance ID and Lengths

Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (U.S.), Inc. (SRK) by Donlin Gold LLC (DGLLC). These opinions are provided in response to a specific request from DGLLC to do so, and are subject to the contractual terms between SRK and DGLLC.

SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features, as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report.

List of Abbreviations

ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
DOLWD	Alaska Department of Labor and Workforce Development
BLM	Bureau of Land Management
BMRR	Bureau of Mining Regulation and Reclamation
CAT	Caterpillar Inc.
cm	Centimeter(s)
CMI	Construction Machinery Inc.
CWD	Contact water dam
DGLLC	Donlin Gold LLC
DOI	Department of the Interior
ED&C	Engineering, Design and Construction
ha	Hectare(s)
HDPE	High-density polyethylene
HDS	High density separation
km	Kilometer(s)
LCWD	Lower contact water dam
LLDPE	Linear low-density polyethylene
LOM	Life of mine
m	Meter(s)
m ³ /ha	Cubic meters per hectare
NDEP	Nevada Division of Environmental Protection
NMA	Nevada Mining Association
RO	Reverse Osmosis
SRCE	Standardized Reclamation Cost Estimator
SRS	Seepage recovery system
TCLP	Toxicity Characteristic Leaching Procedure
TSF	Tailings Storage Facility
UCWD	Upper contact water dam
WRF	Waste Rock Facility
WTP	Water Treatment Plant

1 Introduction and Scope of Report

SRK Consulting (U.S.), Inc. (SRK) has been retained by Donlin Gold LLC (DGLLC) to estimate the financial surety required to close the proposed Donlin Gold Project (Project) under two potential scenarios, a premature closure at Year 7 of the project that includes four years of construction and 3 years of operations (Premature Closure) and closure at Year 27 the end of life-of-mine (LOM). These closure estimates assume a default by the operator at the mine life identified above and that closure would be executed by the State of Alaska under direction of the Alaska Department of Natural Resources (ADNR).

The closure cost estimates have been prepared using the Standardized Reclamation Cost Estimator (SRCE) model. The basis for these costs are provided below and supporting documentation is provided in the attachments.

2 Reclamation Cost Estimate Methodology

2.1 General

The proposed Project consists of open pit surface mining and dumping of waste rock in multiple-bench lifts in the Waste Rock Facility (WRF). Ore is processed at the plant and tailings is disposed of in a tailings storage facility (TSF). For this estimate, the closure scenarios are for the Premature Closure consisting of the four-year construction period and the first three years of operations, as well as the LOM. No concurrent reclamation is assumed for this cost estimate and although concurrent reclamation will occur, the State of Alaska does not allow it to be included until completed and accepted by the agencies.

The following attachments accompany this report:

- Attachment A: Cost Data File
- Attachment B: Documents in Support of SRCE Inputs
- Attachment C: Premature Closure SRCE Cost Summary
- Attachment D: Life-of-Mine SRCE Cost Summary
- Attachment E: SRCE Figures

2.2 Choice of Reclamation Cost Estimating Model

Closure costs associated with the project were calculated using the SRCE version 1.4. The SRCE is a spreadsheet software that was developed as part of a cooperative effort between the Nevada Division of Environmental Protection, Bureau of Mining Regulation and Reclamation (NDEP), the U.S. Department of Interior (DOI), Bureau of Land Management (BLM) and the Nevada Mining Association (NMA) to facilitate accuracy, completeness and consistency in the calculation of costs for mine site reclamation. The model is available in the public domain and hosted on the web site: <http://www.nvbond.com>.

The SRCE combines first principle geometric and volume calculations with crew and equipment productivity to calculate time required for common mine closure tasks. Crew productivities have been collected for common closure tasks from the Heavy Construction Cost Data published by RS Means. Equipment productivities have been collected from the Caterpillar Performance Handbook edition 35. Productivity calculations are combined with the user geometric and/or volume inputs to calculate a time requirement for tasks. The time is combined with user defined unit costs to derive a cost for each closure task.

Closure tasks not included in the default worksheets in the SRCE are calculated in custom tables placed in the User worksheets provided in the SRCE. Unit costs (labor, equipment and materials) used for the reclamation cost estimate were collected and loaded into the SRCE.

The SRCE model was used to prepare the reclamation cost estimate for the following reasons:

- SRCE provides a standardized and systematic methodology for mine closure cost estimates
- The routines provided in the model cover common reclamation tasks required at most mining projects
- SRCE bases its estimates on accepted first principle calculations, i.e., facility measurements are used to derive areas, volumes or weights related to closure tasks. The measurements are then combined with fleet and crew productivities and unit costs to derive costs for specific tasks
- Equipment and crew productivities for common tasks are established through widely accepted published statistics. For instance, equipment productivities are taken from Caterpillar Performance Handbook (2004). Crew productivities are taken from RS Means Heavy Construction Cost Data (2004-2009)
- For specific tasks such as well plugging, which are not directly available in any publication, realistic values derived from field experiences in Nevada mine closure studies are utilized in the model
- SRCE is flexible in cost estimation, allowing utilization of local rates.

2.3 Assumptions used to Guide Preparation of the Reclamation Cost Estimate

Below are the basic assumptions used to guide the preparation of this reclamation cost estimate:

- Closure and reclamation activities will be performed by a third-party contractor hired by the State of Alaska
- Premature Closure (end of operating Year 3) represents the maximum closure and reclamation liabilities for the initial 5-year permitting case
- Equipment costs are based on rental equipment rates for new or nearly new equipment
- Equipment is mobilized to the site and Donlin Gold owned equipment is assumed to be unavailable
- Labor costs are assumed to be subject to prevailing wage laws
- The reclamation crew will work 12-hour daily shifts all year in 2-week rotations
- Reclamation and closure activities will commence after a 2-year holding period.

3 Cost Estimate

The cost estimate is based on 1) the SRCE file into which dimensions, quantities, and costs are input and 2) the cost data file (Attachment A) which provides labor, equipment, and material rates and/or unit costs, as applicable. An overview of the relationships as well as the contents of both the SRCE file and the cost data file is provided below.

3.1 SRCE File

3.1.1 Inputs

Dimensions

SRCE inputs were measured from AutoCAD drawings of the facilities for the Premature Closure scenario and the LOM scenario. Figures E-1 through E-3 present the mine facility footprints for Premature Closure and Figures E-4 through E-6 present the mine facility footprints for the LOM Closure.

List of Sources Referenced

Most inputs into the SRCE file are measurements from figures as discussed above. Some inputs are from other sources such as quotes or calculations performed by others. The sources for various SRCE inputs are compiled into a table included in Attachment B. The table identifies the SRCE worksheet, the reference to the input source and a filename. Copies of the referenced documents are also included in the attachments.

3.1.2 Crews and Fleets

Relevant files/sheets:

- SRCE "Fleets (Crews)" sheet
- SRCE "Productivity"

Fleet Productivities

The SRCE determines earthmoving activities' productivities through the user inputs (such as distance, haul road grade, choice of fleets, etc.) and published Caterpillar Inc. (CAT) equipment productivity data from the Caterpillar Performance Handbook Edition 35.

The SRCE file was set up to assume average equipment and operator job efficiencies. SRCE also provides the option to downgrade or upgrade job efficiencies to consider equipment condition. Given this estimate is for a default scenario where contractor/rental equipment will be mobilized, the equipment condition is considered average to new.

RS Means

Relevant files/sheets:

- SRCE "Fleets (Crews)" sheet
- SRCE "Misc. Unit Costs" sheet

SRCE utilizes fleet and crew composition and crew productivities data from the RS Means Heavy Construction Cost Data, 2005. These data are combined with the unit costs for labor, equipment, and materials that have been input in the cost data file described in Section 3.2 to calculate site-specific costs for select activities (for example, pipe installation, pipe removal, fence removal, etc.).

3.2 Cost Data File

Relevant files/sheets:

- Cost data file "Labor Rates" sheet

- *SRCE "Labor Rates" sheet*
- *Cost data file "Equipment Costs" sheet*
- *SRCE "Equipment Costs" sheet*
- *Cost data file "Reclamation Material Costs" sheet*
- *SRCE "Material Costs" sheet*
- *Cost data file "Misc. Unit Costs" sheet*
- *SRCE "Misc. Unit Costs" sheet*
- *SRCE "Fleets (Crews)" sheet.*

The cost data file is where the site-specific costs for labor, equipment, and material unit rates and unit costs are entered (Attachment A). The cost data file is then imported into the SRCE to populate the "Labor Rates", "Equipment Costs", "Material Costs", and "Misc. Unit Costs" sheets.

3.3 Indirects

Relevant files/sheets:

- *Cost data file "Indirect Costs" sheet*
- *SRCE "Cost Summary" sheet*

Indirect costs are those that are defined percentages of the direct cost or the subtotal labor, equipment, or materials components thereof.

The indirects used in this estimate are based on the "Draft Mine Closure and Reclamation Cost Estimation Guidelines: Indirect Cost Categories" (DOWL 2015) and are outlined below:

1. Engineering, Design and Construction (ED&C) Plan (4% of direct costs)
2. Contingency (4% of direct costs)
3. Insurance (1.5% of labor costs)
4. Performance Bond (3% of direct costs)
5. Contractor Profit (10% of direct costs)
6. Contract Administration (6% of direct costs).

4 Labor, Equipment, and Materials Rates and/or Costs

The labor rates are consistent with those reviewed by DGLLC, the Alaska Department of Environmental Conservation (ADEC), and ADNOR in January 2016 but have been updated using the Alaska Division Labor Standards and Safety Pamphlet 600 dated September 2017. For labor categories not included in Pamphlet 600 (management and technical), costs were estimated from Salary.com.

Equipment costs were updated with new quotes from equipment rental companies. Material unit costs were updated using the consumer price index for Alaska available from www.laborstats.alaska.gov. The final revision of this Phased Bond Estimate Basis of Cost and closure cost estimates for Premature Closure (Attachment C) and LOM (Attachment D) will utilize rates and unit costs updated for the year when the permits and authorizations are finalized.

4.1 Labor

Relevant files/sheets:

- *Cost data file "Labor Rates" sheet*
- *SRCE "Labor Rates" sheet*
- *SRCE "User 10" sheet - Long Term Monitoring Costs*
- *SRCE "User 17" sheet – RS Means Crews*
- *SRCE "User 5" sheet – Equipment Mobilization*

The cost estimate assumes default and the management of reclamation and closure by the State which is required to use prevailing wage employees. A prevailing wage is a rate of pay determined by government authorities to be the norm in a particular geographic area for a given class of labor and type of project. Prevailing wage determinations are made using local data and are equivalent to union rates in most areas.

Labor costs for laborers and equipment operators were obtained from the Laborers' & Mechanics' Minimum Rates of Pay in Pamphlet 600, September 2017 from the Alaska Department of Labor and Workforce Development Division of Labor Standards and Safety. Salaried personnel rates have been obtained from other public-domain publications, including, InfoMine USA, Inc. (InfoMine) and Salary.com web published surveys. The sources and buildup of labor costs are presented in Attachment B.

Given the site's remoteness, laborers will work rotating shifts to accomplish reclamation project targets. Equipment operators and laborers will work two-week rotations with 12-hour shifts. Overtime compensation will follow State and Federal overtime laws which states any work over 8 hours in a day and 40 hours in a week is paid at 1.5 times the normal rate of pay.

Weighted average hourly rates were built up by calculating a straight time rate including taxes and benefits plus an overtime rate with only applicable taxes and benefits included and multiplying these rates by the applicable hours for each rotation divided by the total hours per rotation.

The total hourly rate is comprised of the base hourly rate plus health and welfare, pension, training, labor/management fund, Legal and Safety and/or the industry advancement fund (benefits). The total hourly rate for straight time is the sum of the total hourly rate and the sum of benefits.

The total hourly rate for overtime work is the base hourly rate multiplied by 1.5 plus the sum of only the benefits that are applied to the overtime rate (Labor/Management Fund, Legal Fund and Safety Fund). Because of this calculation the total hourly rate for overtime work is less than the total hourly rate for straight time work.

To calculate the average hourly rate, the straight time calculated rate (hourly plus applicable fringe) is multiplied by the straight hours per shift and the overtime calculated rate (hourly plus applicable fringe) is multiplied by the overtime hours per shift. The sum of these is then divided by the total hours per shift.

The calculations for each labor category are shown in Donlin_LaborBuildup_181202_017_pl_rev01 (Attachment A).

The reclamation cost estimate also requires some salaried positions for management and technical staff for conduct of specialized tasks (engineering, sampling etc.). SRK assumed salaried staff will work 2080 hours per year. The salaried staff hourly costs were collected from Salary.com for

Anchorage, Alaska locations. Benefit amounts were collected from the 2016 InfoMine salary survey and applied to the Salary.com salaries. The results of the calculations and screenshots of data collected from Salary.com are provided in Attachment A.

4.2 Equipment

Relevant files/sheets:

- Cost data file "Equipment Rates" sheet
- SRCE "Equipment Rates" sheet

4.2.1 Monthly Rental Rates

Equipment monthly rental rates were obtained from 2017 quotes from Backfill Inc. and CMI Rental. The worksheet used to develop these rates is included in Attachment B. Where rental quotes were not available data was used from NDEP published quotes from CAT equipment in 2016. Nevada costs were adjusted to Anchorage Alaska using the location factors from RS Means 2017.

When the cost data file is loaded into the SRCE file, the program uses the monthly rental basis (operating hours per period), rental rate, fuel burn rates, maintenance costs, tire costs and Ground Engaging Tool (G.E.T) costs to derive an hourly rental cost for each piece of equipment ("Equipment Costs" sheet).

4.2.2 Preventative Maintenance Costs

Hourly preventative maintenance costs are input into the cost data file and the SRCE reflects these in the "PM Cost per Hour" column of the "Fuel, Lube and Wear Calculations" table in the "Equipment Costs" sheet. From there, it is included in the "Fuel/Lube/Wear" column of the "Equipment Rental Rate Table" (Attachment B).

Public domain data (Cashman Rental equipment rates from the standard cost data file published by the NDEP) are used for preventative maintenance costs. These costs were adjusted for Anchorage using the locations factors from RS Means 2017.

4.2.3 Ground Engaging Tools Consumption

Hourly ground engaging tools consumption costs are input into the cost data file and the SRCE reflects these in the "G.E.T. Consumption" column of the "Fuel, Lube and Wear Calculations" table in the "Equipment Costs" sheet. From there, it is included in the "Fuel/Lube/Wear" column of the "Equipment Rental Rate Table" (Attachment B).

Public domain data (Cashman Rental equipment rates from the standard cost data file published by the NDEP) are used for ground engaging tools consumption costs. These costs were adjusted for Anchorage using the locations factors from RS Means 2017.

4.2.4 Tire Costs

Costs per tire for each type of equipment are input in the cost data file. When the cost data file is loaded to the SRCE, these costs are reflected in the "Tire Cost" column of the "Tire Cost Table" in the "Equipment Costs" sheet. Each tire has a life expectancy (see "Life Expectancy Hours" column) per the Caterpillar Handbook Edition 35. When loaded into the SRCE from the cost data file, Tire cost per hour is calculated and carried over to the "Undercarriage or Tires" column of the "Fuel, Lube and Wear

Calculations” table in the “Equipment Costs” sheet. This is rolled into the “Fuel/Lube/Wear” column of the “Equipment Rental Rate Table” (Attachment B).

Public domain data (Cashman Rental equipment rates from the standard cost data file published by the NDEP) are used for tire costs. It is assumed tires will be purchased in Seattle. These costs were adjusted for Seattle using the location factors from RS Means 2017.

4.2.5 Fuel Consumption

The “Fuel, Lube and Wear Calculations” table in the SRCE includes fuel use rates per type of equipment as obtained from the CAT Handbook Edition 35. These utilize the fuel costs entered into the model to estimate the cost of fuel consumed per hour for each piece of equipment. These are then rolled into the “Fuel/Lube/Wear” column of the “Equipment Rental Rate Table” (Attachment B).

4.2.6 Total Equipment Hourly Rate

The total equipment hourly rate is a sum of monthly rental rates, preventative maintenance costs, ground engaging tools consumption costs, tire costs, and fuel consumption costs.

4.3 Materials

Relevant files/sheets:

- *Cost data file “Reclamation Material Costs” sheet*
- *SRCE “Material Costs” sheet*
- *Cost data file “Misc. Unit Costs” sheet*
- *SRCE “Misc. Unit Costs” sheet.*

4.3.1 Seed Mix

Separate seed mix quotes have been obtained for hydric and mesic. The seed mix used for most the site is mesic, while hydric is used on the TSF.

4.3.2 Fertilizer

DGLLC does not currently anticipate that fertilizer will be required or desirable for establishing a permanent perennial cover. However, for reclamation cost estimating purposes, DGLLC has assumed some level of soil amendment will be required during reclamation. A cost for chemical amendment is included in all seeding activities. The cost is based on the NDEP approved costs for chemical amendment used for reclamation bonding cost estimate purposes. This cost is adjusted for Anchorage using the location factors from RS Means 2017.

4.3.3 Fuel

Fuel costs are for off-road diesel delivered to site. Fuel costs are input in the “Reclamation Material Costs” sheet in the cost data file. Fuel costs were obtained by DGLLC in 2011 and were inflated to 2016 costs using Anchorage Consumer Price Indexes available on www.laborstats.alaska.gov. These calculations are provided in Attachment A.

4.3.4 Lab Analysis Costs

Alaska laboratory analysis rates were taken from Alpha Labs and SGS North America quotes collected in 2017.

5 Premature Closure (Mine Year 3) Reclamation and Closure Activities

Premature Closure assumes the mine has been operating for four years of construction and three years of mining/processing and all operations are halted. Following the cessation of mining there will be a 2-year holding period followed by physical reclamation activities. The closure estimate assumes a default by the operator at the mine and that closure will be executed by the State of Alaska under direction of ADNR.

5.1 Exploration Disturbance

Exploration disturbance is considered under separate cover.

5.2 Waste Rock Facility

Basis:

- *Reclamation Plan Section 4.8.3*

Relevant files/sheets:

- *SRCE "Waste Rock Dumps" sheet*

Waste rock will be dumped in multiple-bench lifts with sufficient setback on each bench to allow for regrading of each lift. The WRF will have an average angle of repose of 1.4H:1V at closure and will be regraded to an overall 3H:1V slope.

For this phase of the project, owing to material balances, cover and growth media will be sourced from the stockpiles near the TSF.

5.3 Ore Stockpile(s)

Relevant files/sheets:

- *SRCE "Waste Rock Dumps" sheet*

For this scenario, it is assumed that unprocessed ore will be present. Therefore, any ore stockpiles will be reclaimed using the methods as described in Section 5.2 for the WRF.

5.4 Tailings Storage Facility

Basis:

- *Reclamation Plan Section 4.8.4*

Relevant files/sheets:

- *SRCE "Tailings" sheet*
- *SRCE "Solution Mgmt" sheet*

- *SRCE "Other User" sheet*
- *SRCE "User 11" sheet – Tailings Geotextile*
- *SRCE "User 18" sheet – List of References*
- *SRCE "Haul Material" sheet*
- *SRCE "Misc. Costs" sheet.*

By Operational Year 3, the TSF pond (supernatant water collected on the tailings surface) will be located in the north-middle of the TSF. TSF closure activities will comprise the following activities:

- TSF ponded water will be pumped to the Water Treatment Plant (WTP).
- Over a period of two seasons, a dredging operation will create a channel from the low point of the TSF surface to the spillway location on the north end of the tailings embankment.
- Tailings surface will be covered coincident with pumping as exposed surface areas become available and consolidated.
- A spillway will be constructed by blasting through native rock adjacent to the north end of the embankment to direct non-contact tailings surface run-off to Anaconda Creek once the TSF cover is complete.

The TSF closure under the default Premature Closure scenario differs from the LOM assumption that tailings deposition will be modified late in the mine operating life to direct the operating pond toward the southeast corner of the TSF with the tailings surface runoff being directed to the closure spillway into Crevice Creek.

Dredging costs are included (*"Other User"* sheet) and detailed in *"User 11"* sheet. The costs include capital expenditures (Capex) and operational expenditures (Opex) of dredging equipment, piping, floats, and boosters.

After removal of the TSF pond, the following activities will be undertaken to complete the TSF cover:

1. Geogrid/geotextile will be placed on the TSF to create a series of "causeways" to facilitate construction of the closure cover" (*"Other User"* and *"User 11"* sheets).
2. One meter of Non-acid generating (NAG) rock will be placed as a trafficability later (*"Haul Material"* sheet).
3. One meter of NAG rock will be placed as a capillary break layer (*"Haul Material" sheet*).
4. One third meter of terrace gravel will be placed (*"Tailings."* Sheet).
5. One third meter of growth media to facilitate revegetation (*"Tailings."* sheet).

The Tailings Line and TSF Reclaim Water Line will be removed (*"Misc. Costs" sheet*). For further discussion on solution management related to the TSF, Section 5.5.

5.5 Solution Management

Basis:

- *Reclamation Plan Section 4.8.3*
- *Reclamation Plan Section 4.8.4*

Relevant files/sheets:

- *SRCE "Solution Mgmt" sheet*

- *SRCE "Other User" sheet*
- *SRCE "User 18" sheet – References.*
- *SRCE "Human Resources" sheet.*

For this phase of the project, the following are the two streams of water management:

- TSF pond water pumped to the WTP. Treatment is high density sludge (HDS) pretreatment using re-configured clarifiers in the process plant combined with the existing reverse osmosis (RO) plant. Brine is sent back to the TSF pond and sludge is sent to the bottom of the pit. Water treatment will be year-around during the physical closure phase.
- Water from the SRS and the part of the American Creek drainage is sent to the pit. It is assumed that approximately 75% of the runoff from un-impacted areas of the American Creek drainage can be diverted around the pit and discharged into Crooked Creek.

After physical closure is complete the pit will continue to act as a groundwater sink, collect surface water from impacted areas and approximately 25% of the un-impacted areas of the American Creek drainage, and water pumped from the SRS. Consolidation water that is collected in the TSF overdrain is also pumped to the pit. It is assumed surface water runoff from the TSF cover will meet water quality standards and can be discharged without treatment. No water treatment takes place while the pit lake is filling.

After the pit lake fills to the managed level, predicted to be the fourth year after physical closure is complete, the water from the pit will be pumped to the WTP plant during summer months. The pit lake will continue to act as a groundwater sink while maintained at the managed level. The pit lake is stratified and relatively clean near-surface water will be meet water quality standards using HDS treatment. The sludge from the water treatment plant will be sent to the bottom of the pit.

A solution management crew is provided for in the *"Human Resources" sheet*. Crews consist of three laborers and a supervisor. Four crews will work 12-hour shifts, one on night and one on day. The crew will provide 24/7 coverage 365 days per year by working for 2-weeks on and 2-weeks off rotating with the other two crews

5.6 Roads

Basis:

- *Reclamation Plan Section 4.8.1*

Relevant files/sheets:

- *SRCE "Roads" sheet*

Most of the proposed mine site roads will be reclaimed. The 30-mile (48 km) Jungjuk Port access road to the mine site will be required for annual WTP reagent deliveries, bulk fuel, provisions for the WTP crew, and long-term monitoring of the project site. The access road will remain into the foreseeable future following mine closure.

On-site roads not required for long-term monitoring will be ripped, as necessary, to eliminate the effects of compaction, recontoured to blend with the original topography, covered with a layer of growth media, and reseeded to meet the general reclamation standards. Berms, side-cast material, and road drainage ditches will be reclaimed in this process. Compacted road and parking surfaces will be ripped prior to regrading.

5.7 Pits

Basis:

- *Reclamation Plan Section 4.8.1*

Relevant files/sheets:

- *SRCE "Pits"*
- *SRCE "Solution Mgmt"*

Berms will be constructed around the pits. They will be located far enough from the highwalls to prevent damage in the event of highwall failure. Berms will be constructed by dozing nearby materials into a berm that will be 2 m high.

5.8 Building Demolition

Basis:

- *Reclamation Plan Section 4.8.5*
- *Reclamation Plan Section 4.8.7*

Relevant files/sheets:

- *SRCE "Foundations and Buildings" sheet*
- *SRCE "Solution Mgmt" sheet*

All surface facilities and structures will be removed, including all buildings and ancillary facilities that will no longer be used after operations cease. Any facilities or corridors that could serve a beneficial future use as identified in the designated post-mining land use may remain in place following mining, upon approval by the land owner.

For the purposes of this bond cost estimate, these facilities are assumed to be dismantled and removed. The foundations will be broken and buried. Non-hazardous demolition debris will be placed in the inert solid waste landfill located in the WRF or used to fill subsurface voids exposed during the demolition of surface facilities. The resulting surface of any voids filled with construction debris will be shaped to reduce ponding, covered with approximately 1 foot (30.5 cm) of cover, and revegetated in the same manner as the WRF.

5.9 Other Demolition and Equipment Removal

Relevant files/sheets:

- *SRCE "Other Demolition and Equipment Removal" sheet*
- *SRCE "Other User" sheet*
- *SRCE "User 2" sheet – Bulk Fuel Tank Demolition*
- *SRCE "User 4" sheet – Misc. Tank Demolition*
- *SRCE "User 7" sheet – Sheet Piling Demolition*

The estimate includes costs to demolish the bulk fuel storage tanks. Tanks will be rinsed prior to demolition and a shear used to cut them into manageable sized pieces. The cleaned and cut pieces will be hauled to the WRF for disposal and covered.

Vendor owned reagent tanks will be removed by the vendors. Other miscellaneous reagent storage tanks will be prepared and disposed in the same process described above for bulk fuel tanks.

Sheet piling used to construct the Jung Port facility will be removed with a crane and hauled to the WRF for burial.

The mining equipment fleet at the end of the first three years of operation will be nearly new and have significant value. No credit is taken for selling this equipment but it is assumed that there is sufficient remaining value to offset the cost to haul the equipment offsite. No additional costs associated with equipment removal are included in the SRCE.

5.10 Sediment and Drainage Control

Basis:

- *Reclamation Plan Section 4.8.8*

Relevant files/sheets:

- *SRCE "Sediment & Drainage Control" sheet*
- *SRCE "Other User" sheet*
- *SRCE "Haul Materials" sheet*

Diversion channels are required during the closure and post closure periods to collect and convey runoff from the surface of the reclaimed WRF to the LCWD or pit lake that will be developed in the open pit, and to collect and convey runoff from the reclaimed TSF cover to a central collection point (BGC 2011).

Costs to construct the channels are located in the Sediment and Drainage Control sheet. Liner and rip-rap haulage and installation costs are located in the Other User sheet and the Haul Materials sheet.

5.11 Ponds and Dams

Basis:

- *Reclamation Plan Section 4.8.7*

Relevant files/sheets:

- *SRCE "Process Ponds" sheet*
- *SRCE "Haul Materials" sheet*

The costs for breaching and backfilling the UCWD Pond and the Snow Gulch Fresh Water Dam are included in "*Haul Materials*."

The LCWD will remain during the post-closure period (Years 15-213) to collect WRF underdrain seepage water prior to being directed to the pit.

5.12 Yards

Basis:

- *Reclamation Plan Section 4.8.6*
- *Reclamation Plan Section 4.8.1*

Relevant files/sheets:

- *SRCE “Yards” sheet*

Most yard areas (plant site, administrative area, etc.) will be scarified (if required), covered with growth media, and revegetated.

Given the material in the growth media stockpiles will be spent, only their footprint will require reclamation.

This estimate assumes that some regrading of the building pads and flat yard areas will be required. It is assumed that 5,000 m³/ha, or moving volumes of earth at an average thickness of 0.5 m over an area of one hectare will be required.

The airstrip and Jungjuk port will remain as long-term assets; therefore, reclamation costs are not estimated.

5.13 Waste Disposal

Basis:

- *Reclamation Plan Section 4.8.7*

Relevant files/sheets:

- *SRCE “Waste Disposal” sheet*
- *SRCE “Other User” sheet*

Hazardous and toxic materials, such as reagents, petroleum products, acids, and solvents, will be transferred off site by licensed transporters and either returned to the vendor or disposed of at licensed treatment, storage and disposal facilities.

Hydrocarbon-contaminated soils will be treated onsite and disposed in the WRF. A depth of one meter is assumed for excavation of hydrocarbon-contaminated soils. For the purposes of this cost estimate, the areas of contamination are calculated as length of the facility with a width and a depth of up to one meter for area of potential contamination.

The areas with potential contamination include:

- Ready line
- Truck Shop
- Power Plant
- Fuel Storage
- Port Fuel Storage.

“User 3” includes the estimate for disposal of miscellaneous hazardous wastes such as mercury contaminated carbon, autoclave lead waste – bricks, mortar, safety gear, etc. – backing, and assay lab lead waste. It is assumed they will be transported from the mine to Jungjuk port, loaded on a barge and transported to Seattle, where it will be handled for disposal.

The “Other User” sheet includes an estimate of bag house dust disposal. The cost is estimated to be a one-time lump sum of \$20,000.

Removal of non-hazardous demolition debris is discussed in Section 5.8.

5.14 Well Abandonment

Basis:

- *Reclamation Plan Section 4.8.7*

Relevant files/sheets:

- *SRCE "Well Abandonment" sheet*

Production and monitoring well construction details are entered into the "Well Abandonment" sheet. The details of these wells are estimated/assumed at this time because they have not been installed yet. In summary, the SRCE contains cost provision for 20 production wells and 50 monitoring wells with an assumed average depth around 200 feet.

5.15 Other Linear Facilities

5.15.1 Surface Pipe Removal

Relevant files/sheets:

- *SRCE "Misc. Costs" sheet*
- *SRCE "Misc. Unit Costs" sheet*

At closure, the Tailings Line and TSF Reclaim Water Line will be removed.

5.15.2 Powerlines and Substations/Transformers

Basis:

- *Reclamation Plan Section 4.8.7*

Relevant files/sheets:

- *SRCE "Misc. Costs" sheet*
- *SRCE "Misc. Unit Costs" sheet*

For the purposes of this cost estimate, all powerlines are assumed removed.

5.16 Monitoring

Relevant files/sheets:

- *SRCE "Monitoring" sheet*
- *SRCE "User 10" – Long Term Monitoring*

Monitoring will include petroleum hydrocarbons in soils and full toxicity characteristic leaching procedure (TCLP) analysis on fifty samples each during closure. These will be used to characterize soils and verify cleanup of areas impacted by hydrocarbons.

Additionally, water samples will be collected and analyzed quarterly for the active closure period of 5 years. Following that water samples will be collected annually for the post closure period up to 200 years. The number of samples per event are estimated to be 7-10. The sampling schedule is shown in "User 10" and the "Monitoring" sheet.

5.17 Construction Management

Relevant files/sheets:

- SRCE “Construction Management” sheet
- SRCE “Human Resources” sheet

Construction management will consist of supervision of reclamation and road maintenance during active reclamation. It is estimated that active reclamation will be completed over five years. Supervisors will be present full-time to oversee activities and road maintenance will be carried out with a water truck and graders.

Also involved in the management of the reclamation and closure activities will be an environmental engineer and environmental technicians (“Human Resources” sheet).

Post-closure maintenance will include annual work on the main access road and the airport. Costs and assumptions for this activity are included in “User 1” sheet.

5.18 Mobilization-Demobilization

Relevant files/sheets:

- SRCE “Other User” sheet
- SRCE “User 5” sheet

“User 5” provides a summary of the types of equipment that will be used in reclamation activities and estimates the cost of assembly and disassembly, barging costs as well as equipment rental time during barging, and unloading and mobilization to site.

5.19 Human Resources, General and Administration

Relevant files/sheets:

- SRCE “Human Resources” sheet
- SRCE “Other User” sheet
- SRCE “User 8” sheet – Camp Costs
- SRCE “User 9” sheet – Manpower Estimate

Costs for an environmental engineer and environmental technicians are included in the “Human Resources” sheet. The work schedule is outlined in the referenced sheet.

A solution management crew is also included in the “Human Resources” sheet. This crew is responsible for maintaining the pumping and water treatment plans over the holding, closure and post-closure periods.

The closure crew size is estimated in “User 9” This sheet provides a summary of hours worked for all fleets in the earthmoving sheets of the SRCE (waste rock dumps, tailings, roads, pits, material haulage, buildings, yards, etc.) and estimates the total man-hours required to close the site. The total man-hours are then used to estimate the number of operators on site as well as other crews that would require camp and transportation services.

Costs related to camp and transportation for the crews are calculated in “User 8” and summarized in the “Other User”.

6 Life of Mine Closure Cost Estimate

The LOM closure cost estimate provides the estimated cost to close and reclaim the mine at the end of the planned mine life. This assumes all mine facilities are built out to their planned limits. The unit rates (equipment, labor and materials) are the same as those used for the Premature Closure described above.

The below headings address the differences between the two estimates.

6.1 Solution Management – Pumping Rates

Relevant files/sheets:

- SRCE “Solution Management” sheet
- SRCE “Human Resources”
- SRCE “User 12” – Water Treatment Schedule

The LOM pumping cost estimates are based on assumptions outlined in the “User 12” sheet and the “Solution Management” sheet. The basic assumptions for pumping include;

- Closure years 1-51, TSF and TSF-SRS are directed to the ACMA Pit.
- Closure years 52 to 220, ACMA Pit water is directed to the water treatment plant.

6.2 Solution Management – Treatment

Relevant files/sheets:

- SRCE “Other User” sheet
- SRCE “Solution Management” sheet
- SRCE “Human Resources”

At the end of operations in the LOM, long-term treatment will not be required until approximately 50 years after closure. The solution management crews required will be those to manage the various pumping activities on site during the physical closure period. Subsequently, water from the Pit will be directed to the water treatment plant where it will be treated for the long-term closure period to 220 years. Treatment costs are entered in the “Other User” sheet.

6.3 Other User – User 1 and User 6

Relevant files/sheets:

- LOM SRCE “User 1” sheet
- LOM SRCE “User 6” sheet

The mining fleet at LOM will have little useful life left and probably not retain enough value to offset the cost to transport to Anchorage for sale. The fleet will have all fluids drained and be disposed in the WRF. All fluids will be transported to Seattle for proper disposal. Costs to carry out this work are estimated in the “User 1” and “User 6” sheets.

6.4 Other User – Spillway

Relevant files/sheets:

- SRCE “Other User” sheet
- SRCE “Sediment & Drainage Control” sheet

A spillway will be constructed to the southeast of the covered TSF to allow for post-closure (non-contact) water flow from the TSF into the nearby Crevice Creek drainage. Costs to carry out this work are calculated in the sheets referenced above.

6.5 Other User – TSF Causeway Liner (Heavy biaxial geogrid)

Relevant files/sheets:

- SRCE “Other User” sheet
- SRCE “User 11” sheet – Geotextile Assumptions

Trafficking on the TSF surface with haul trucks to place cover will likely require the use of causeways constructed over a geotextile liner. Causeways will be constructed at intervals across the TSF surface and cover will be pushed between them with dozers. Areas between the causeways will not require liner. The assumptions and costs for this work are outlined in “User 11” and summarized costs are entered in the “Other User” sheet.

6.6 Other User – Closure Crew Camp and Transportation Costs

Relevant files/sheets:

- SRCE “User 8” sheet
- SRCE “User 9” sheet
- SRCE “Other User” sheet

The closure crew size is estimated in “User 9” This sheet provides a summary of hours worked for all fleets in the earthmoving sheets of the SRCE (waste rock dumps, tailings, roads, pits, material haulage, buildings, yards, etc.) and estimates the total man-hours required to close the site. The total man-hours are then used to estimate the number of operators on site as well as other crews that would require camp and transportation services.

Costs related to camp and transportation for the crews are calculated in “User 8” and summarized in the “Other User”.

6.7 Wells

Relevant files/sheets:

- SRCE “Well Abandonment” sheet

Production and monitoring well construction details are entered into the “Well Abandonment” sheet. The details of these wells are estimated/assumed at this time because they have not been installed yet. In summary, the SRCE contains cost provision for 20 production wells and 50 monitoring wells with an assumed average depth around 200 feet.

6.8 Monitoring

6.8.1 Revegetation Maintenance

Relevant files/sheets:

- *SRCE "Monitoring" sheet*

The Revegetation Maintenance entry in the sheet is a cost provision for re-applying the reclamation seed mix to disturbed areas where the initial seeding was not successful. The entry is a percentage. An assumed value of 10% was selected. The SRCE calculates the total area requiring seeding and calculates a cost to seed 10% of that a second time.

6.8.2 Erosion Maintenance

Relevant files/sheets:

- *SRCE "Monitoring" sheet*

The Erosion Maintenance entry in the sheet is a cost provision for re-applying growth media to disturbed areas where the initial cover may have been eroded away or otherwise need to be placed again. The entry is a percentage. An assumed value of 5% was selected. The SRCE calculates the total volume of growth media applied in the model and calculates a cost to place 5% of that a second time.

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

7 References

- Alaska Department of Labor and Workforce Development (DOLWD). 2017. Laborers' & Mechanics' Minimum Rates of Pay Title 36. Public Contracts AS 36.05 & AS 36.10 Wage & Hour Administration Pamphlet No. 600 Effective September 1, 2017 Issue 29 Department of Labor and Workforce. <http://labor.alaska.gov/lss/forms/pamp600-090117.pdf>
- BGC Engineering, Inc. 2011. Donlin Creek Gold Project, Feasibility Study Update 2, Waste Rock Facility Design-Final Report
- DOWL. 2015. Mine Closure and Reclamation Cost Estimation Guidelines: Indirect Cost Categories http://dnr.alaska.gov/mlw/mining/largemine/rcindirects_dowlreport20150407.pdf

Attachments

Attachment A: Cost Data File

Format Version:	SRCE Data File v1.12
File Name:	Attch A_Donlin_RecBond_Cost_data_v1_12_181202_017_20170606_pl_REV02.xlsm
Date:	May 10, 2017
Cost Type:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx

Units of Measure:	Metric

No. of Bases/Regions:	1

Basis/Region	Basis/Region Name	Basis/Region Description
Basis 1	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes
Basis 2		
Basis 3		
Basis 4		
Basis 5		
Basis 6		
Basis 7		
Basis 8		
Basis 9		
Basis 10		
Basis 11		
Basis 12		
Basis 13		
Basis 14		
Basis 15		

Equipment Costs

File Name:	Attch A_Donlin_RecBond_Cost_data_v1_
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1

Monthly Rental Basis (operating hrs/ period)	360				

MONTHLY EQUIPMENT RATE TABLE [Cost Per Month] ⁽¹⁾					
EQUIPMENT TYPE ⁽²⁾	Basis 1	Basis 2	Basis 3	Basis 4	Basis 5
	Alaska Davis Bacon 2016				
Bulldozers					
D6R	\$20,300				
D6R w/ Winch	\$20,300				
D7R	\$20,300				
D8R					
D9R	\$52,500				
D10R	\$52,500				
D11R	\$70,000				
Wheeled Dozers					
824G					
834G					
844					
854G					
Motor Graders					
120H					
14G/H					
16G/H	\$31,500				
24M					
Track Excavators					
312C					
320C					
325C	\$12,530				
330C					
345B	\$22,540				
365BL					
385BL	\$43,680				
Scrapers					
631G					
637G PP					
Wheeled Loaders					
924G					
928G	\$5,810				
950G					
966G	\$23,310				
972G					
980G	\$23,310				
988G					
990					
992G	\$80,500				
994D	\$183,606				
L-2350					
Shovels					
KOM PC2000					
KOM PC3000					
KOM PC4000					
KOM PC5500					
KOM PC8000					
Hydraulic Hammers					
H-120 (fits 325)					
H-160 (fits 345)	\$22,540				
H-180 (fits 365/385)	\$27,048				
Demolition Shears					
S340 (fits 322/325/330)					
S365 (fits 330/345)	\$22,500				
S390 (fits 365/385)					
Demolition Grapples					
G315 (fits 322/325)					
G320 (fits 325/330)					
G330 (fits 345/365)					
Other Equipment					
420D 4WD Backhoe	\$4,900				
428D 4WD Backhoe	\$4,900				
CS533E Vibratory Roller	\$14,844				
CS663E Vibratory Roller					

Equipment Costs

File Name:	Attch A_Donlin_RecBond_Cost_data_v1_
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1

Monthly Rental Basis (operating hrs/ period)	360				

CP533E Sheepsfoot Compactor	\$14,844				
CP663E Sheepsfoot Compactor	\$14,844				
Light Truck - 1.5 Ton	\$3,290				
Supervisor's Truck	\$3,290				
Flatbed Truck	\$3,290				
Air Compressor + tools	\$2,250				
Welding Equipment	\$5,951				
Heavy Duty Drill Rig	\$116,038				

Equipment Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1_</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1</i>

Monthly Rental Basis (operating hrs/ period)	360				

Pump (plugging) Drill Rig	\$116,038				
Concrete Pump	\$29,563				
Gas Engine Vibrator	\$1,279				
Generator 5KW	\$1,871				
HDEP Welder (pipe or liner)	\$15,280				
5 Ton Crane	\$11,349				
20 Ton Crane	\$13,300				
50 Ton Crane	\$20,440				
120 Ton Crane	\$39,340				

Trucks					
725 (articulated)	\$28,510				
730 (articulated)					
735 (articulated)					
740 (articulated)					
769D					
773E					
777D	\$58,100				
785C					
793C					
797B					
613E (5,000 gal) Water Wagon	\$5,523				
621E (8,000 gal) Water Wagon	\$20,907				
777D Water Truck	\$58,100				
785C Water Truck					
Dump Truck (10-12 yd ³) (5)	\$6,300				

NOTES:					
(1) Power Equipment Source:	various quotes. See Donlin_equipment Materials Cost Buildup_181202017_pl_REV01.xlsx				
(2) Power Equipment Type:	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels
(3) Drilling Equipment Source:	Nevada Costs				
(4) Other Equipment Source:	various quotes. See Donlin_equipment Materials Cost Buildup_181202017_pl_REV01.xlsx				

PREVENTATIVE MAINTENANCE COST [Cost Per Hour] ⁽¹⁾

EQUIPMENT TYPE	Basis 1	Basis 2	Basis 3	Basis 4	Basis 5
	<i>Bacon 2016</i>				
Bulldozers					
D6R	\$6.00				
D6R w/ Winch	\$6.00				
D7R	\$6.00				
D8R	\$6.00				
D9R	\$8.00				
D10R	\$11.00				
D11R	\$14.00				
Wheeled Dozers					
824G					
834G					
844					
854G					
Motor Graders					
120H	\$7.00				
14G/H	\$8.00				
16G/H	\$6.00				
24M					
Track Excavators					
312C	\$4.00				
320C	\$5.00				
325C	\$5.00				
330C	\$6.00				
345B	\$6.00				
365BL					
385BL	\$7.00				

Equipment Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1_</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1</i>

Monthly Rental Basis (operating hrs/ period)	360				

Scrapers					
631G					
637G PP					
Wheeled Loaders					
924G	\$4.00				
928G	\$5.00				
950G	\$5.00				
966G	\$7.00				
972G	\$6.00				
980G	\$6.00				
988G	\$11.00				
990					
992G	\$13.00				
994D					
L-2350					
Shovels					
KOM PC2000					
KOM PC3000					
KOM PC4000					
KOM PC5500					
KOM PC8000					
Hydraulic Hammers					
H-120 (fits 325)	N/A	N/A	N/A	N/A	N/A
H-160 (fits 345)	N/A	N/A	N/A	N/A	N/A
H-180 (fits 365/385)	N/A	N/A	N/A	N/A	N/A
Demolition Shears					
S340 (fits 322/325/330)	N/A	N/A	N/A	N/A	N/A
S365 (fits 330/345)	N/A	N/A	N/A	N/A	N/A
S390 (fits 365/385)	N/A	N/A	N/A	N/A	N/A
Demolition Grapples					
G315 (fits 322/325)	N/A	N/A	N/A	N/A	N/A
G320 (fits 325/330)	N/A	N/A	N/A	N/A	N/A
G330 (fits 345/365)	N/A	N/A	N/A	N/A	N/A
Other Equipment					
420D 4WD Backhoe	\$4.00				
428D 4WD Backhoe	\$4.00				
CS533E Vibratory Roller					
CS663E Vibratory Roller					
CP533E Sheepsfoot Compactor					
CP663E Sheepsfoot Compactor					
Light Truck - 1.5 Ton					
Supervisor's Truck					
Flatbed Truck					
Air Compressor + tools					
Welding Equipment					
Heavy Duty Drill Rig					
Pump (plugging) Drill Rig					
Concrete Pump					
Gas Engine Vibrator					
Generator 5KW					
HDEP Welder (pipe or liner)					
5 Ton Crane					
20 Ton Crane					
50 Ton Crane					
120 Ton Crane					
Trucks					
725 (articulated)	\$8.00				
730 (articulated)	\$8.00				
735 (articulated)	\$8.00				
740 (articulated)	\$8.00				
769D	\$9.00				
773E	\$8.00				
777D	\$11.00				
785C					

Equipment Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin Equipment Materials Cost Buildup 181202017 pl REV01.xlsx, Donlin LaborBuildup 1</i>

Monthly Rental Basis (operating hrs/ period)	360				

793C					
797B					
613E (5,000 gal) Water Wagon	\$7.00				
621E (8,000 gal) Water Wagon	\$8.00				
777D Water Truck	\$11.00				
785C Water Truck					
Dump Truck (10-12 yd3) (5)	\$8.00				

(1) PM Source:	July 2012 Cashman Equipment Rental Rate, Elko, NV (except as noted)				

G.E.T CONSUMPTION [Cost Per Hour] ⁽¹⁾ (Wear Items)

EQUIPMENT TYPE	Basis 1 <i>Alaska Davis</i>	Basis 2	Basis 3	Basis 4	Basis 5

Bulldozers

D6R	\$6.00				
D6R w/ Winch	\$6.00				
D7R	\$6.00				
D8R	\$11.00				
D9R	\$17.00				
D10R	\$23.00				
D11R	\$35.00				

Wheeled Dozers

824G					
834G					
844					
854G					

Motor Graders

120H	\$12.00				
14G/H	\$17.00				
16G/H	\$23.00				
24M					

Track Excavators

312C	\$4.00				
320C	\$5.00				
325C	\$6.00				
330C	\$7.00				
345B	\$7.00				
365BL					
385BL	\$15.00				

Scrapers

631G					
637G PP					

Wheeled Loaders

924G	\$5.00				
928G	\$5.00				
950G	\$9.00				
966G	\$12.00				
972G	\$15.00				
980G	\$15.00				
988G	\$16.00				
990					
992G	\$36.00				
994D					
L-2350					

Shovels

KOM PC2000					
KOM PC3000					
KOM PC4000					
KOM PC5500					
KOM PC8000					

Hydraulic Hammers

H-120 (fits 325)	\$6.00				
H-160 (fits 345)	\$12.00				
H-180 (fits 365/385)	\$14.00				

Demolition Shears

S340 (fits 322/325/330)					
S365 (fits 330/345)	\$12.00				

Equipment Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1</i>

Monthly Rental Basis (operating hrs/ period)	360				

S390 (fits 365/385)					
Demolition Grapples					
G315 (fits 322/325)					
G320 (fits 325/330)					
G330 (fits 345/365)	\$30.00				
Other Equipment					
420D 4WD Backhoe	\$4.00				
428D 4WD Backhoe	\$4.00				
CS533E Vibratory Roller					
CS663E Vibratory Roller					
CP533E Sheepsfoot Compactor					
CP663E Sheepsfoot Compactor					
Light Truck - 1.5 Ton					
Supervisor's Truck					
Flatbed Truck					
Air Compressor + tools	N/A	N/A	N/A	N/A	N/A
Welding Equipment	N/A	N/A	N/A	N/A	N/A
Heavy Duty Drill Rig					
Pump (plugging) Drill Rig					
Concrete Pump	N/A	N/A	N/A	N/A	N/A
Gas Engine Vibrator	N/A	N/A	N/A	N/A	N/A
Generator 5KW	N/A	N/A	N/A	N/A	N/A
HDEP Welder (pipe or liner)	N/A	N/A	N/A	N/A	N/A
5 Ton Crane					
20 Ton Crane					
50 Ton Crane					
120 Ton Crane					
Trucks					
725 (articulated)	\$3.00				
730 (articulated)	\$3.00				
735 (articulated)	\$3.00				
740 (articulated)	\$3.00				
769D	\$4.00				
773E	\$4.00				
777D	\$5.00				
785C					
793C					
797B					
613E (5,000 gal) Water Wagon					
621E (8,000 gal) Water Wagon					
777D Water Truck	\$5.00				
785C Water Truck					
Dump Truck (10-12 yd3) (5)	\$3.00				

Notes:					
(1) G.E.T. Source:	CAT Historical Data	CAT Historical Data	CAT Historical Data	CAT Historical Data	QLD rates

TIRE COST TABLE [Cost Per Tire^(1,2,3)]

EQUIPMENT TYPE	Basis 1	Basis 2	Basis 3	Basis 4	Basis 5
	<i>Alaska Davis</i>				
Bulldozers					
D6R	N/A	N/A	N/A	N/A	N/A
D6R w/ Winch	N/A	N/A	N/A	N/A	N/A
D7R	N/A	N/A	N/A	N/A	N/A
D8R	N/A	N/A	N/A	N/A	N/A
D9R	N/A	N/A	N/A	N/A	N/A
D10R	N/A	N/A	N/A	N/A	N/A
D11R	N/A	N/A	N/A	N/A	N/A
Wheeled Dozers					
824G					
834G					
844					
854G					
Motor Graders					
120H	\$1,884.00				
14G/H	\$2,959.00				
16G/H	\$4,003.00				
24M					
Track Excavators					
312C	N/A	N/A	N/A	N/A	N/A
320C	N/A	N/A	N/A	N/A	N/A

Equipment Costs

File Name:	Attch A_Donlin_RecBond_Cost_data_v1
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin Equipment Materials Cost Buildup 181202017 pl REV01.xlsx, Donlin LaborBuildup 1

Monthly Rental Basis (operating hrs/ period)	360				

325C	N/A	N/A	N/A	N/A	N/A
330C	N/A	N/A	N/A	N/A	N/A
345B	N/A	N/A	N/A	N/A	N/A
365BL	N/A	N/A	N/A	N/A	N/A
385BL	N/A	N/A	N/A	N/A	N/A
Scrapers					
631G	\$8,793.00				
637G PP	\$8,793.00				
Wheeled Loaders					
924G	\$2,982.00				
928G	\$2,982.00				
950G	\$4,493.00				
966G	\$7,153.00				
972G	\$7,153.00				
980G	\$7,531.00				
988G	\$11,827.00				
990					
992G	\$26,371.00				
994D					
L-2350					
Shovels					
KOM PC2000	N/A	N/A	N/A	N/A	N/A
KOM PC3000	N/A	N/A	N/A	N/A	N/A
KOM PC4000	N/A	N/A	N/A	N/A	N/A
KOM PC5500	N/A	N/A	N/A	N/A	N/A
KOM PC8000	N/A	N/A	N/A	N/A	N/A
Hydraulic Hammers					
H-120 (fits 325)	N/A	N/A	N/A	N/A	N/A
H-160 (fits 345)	N/A	N/A	N/A	N/A	N/A
H-180 (fits 365/385)	N/A	N/A	N/A	N/A	N/A
Demolition Shears					
S340 (fits 322/325/330)	N/A	N/A	N/A	N/A	N/A
S365 (fits 330/345)	N/A	N/A	N/A	N/A	N/A
S390 (fits 365/385)	N/A	N/A	N/A	N/A	N/A
Demolition Grapples					
G315 (fits 322/325)	N/A	N/A	N/A	N/A	N/A
G320 (fits 325/330)	N/A	N/A	N/A	N/A	N/A
G330 (fits 345/365)	N/A	N/A	N/A	N/A	N/A
Other Equipment					
420D 4WD Backhoe	\$1,023.00				
428D 4WD Backhoe	\$1,023.00				
CS533E Vibratory Roller	N/A	N/A	N/A	N/A	N/A
CS663E Vibratory Roller	N/A	N/A	N/A	N/A	N/A
CP533E Sheepsfoot Compactor	N/A	N/A	N/A	N/A	N/A
CP663E Sheepsfoot Compactor	N/A	N/A	N/A	N/A	N/A
Light Truck - 1.5 Ton	\$138.00				
Supervisor's Truck	\$138.00				
Flatbed Truck	\$138.00				
Air Compressor + tools	N/A	N/A	N/A	N/A	N/A
Welding Equipment	N/A	N/A	N/A	N/A	N/A
Heavy Duty Drill Rig					
Pump (plugging) Drill Rig					
Concrete Pump	N/A	N/A	N/A	N/A	N/A
Gas Engine Vibrator	N/A	N/A	N/A	N/A	N/A
Generator 5KW	N/A	N/A	N/A	N/A	N/A
HDEP Welder (pipe or liner)	N/A	N/A	N/A	N/A	N/A
5 Ton Crane					
20 Ton Crane					
50 Ton Crane					
120 Ton Crane					
Trucks					
725 (articulated)	\$4,493.00				
730 (articulated)	\$4,493.00				
735 (articulated)	\$7,153.00				
740 (articulated)	\$7,531.00				
769D	\$4,117.00				
773E	\$7,221.00				
777D	\$12,821.00				
785C					
793C					

Equipment Costs

File Name:	Attch A_Donlin_RecBond_Cost_data_v1_
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_1

Monthly Rental Basis (operating hrs/ period)	360				

797B					
613E (5,000 gal) Water Wagon	\$3,556.00				
621E (8,000 gal) Water Wagon	\$9,157.00				
777D Water Truck	\$12,821.00				
785C Water Truck					
Dump Truck (10-12 yd3) (5)	\$487.00				

Notes:					
(1) Unit Cost Basis:	Cost per tyre each	Cost per tyre each	Cost per tyre each	Cost per tyre each	Cost per tyre each
(2) Cost Basis:	Cashman Equipment Reno Nevada 2012				
(3) Tire Cost Source:	Cashman Equipment Reno Nevada 2012, 50% added for shipping and handling				
(4) Tire Wear Source (defined in model):	Caterpillar Handbook, Edition 37	Caterpillar Handbook, Edition 37	Caterpillar Handbook, Edition 37	Caterpillar Handbook, Edition 37	Caterpillar Handbook, Edition 37

Labor Rates

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xls</i>

[xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx](#)

HOURLY LABOR RATE TABLE

EQUIPMENT TYPE ⁽¹⁾ OR JOB DESCRIPTION	Basis 1		Basis 2		Basis 3		Basis 4		Basis 5		Basis 6	
	<i>Alaska Davis Bacon 2016</i>											
Range Scientist		\$48.42										
Senior Planning Engineer		\$88.63										
Project Engineer		\$79.30										
Mechanic/Fitter (A2103)		\$60.75										
Electrician (A0702)		\$66.23										
Bricklayer (A0201)		\$60.03										
Pipelayer Helper (S2201)		\$59.37										
Piperfitter (S1501)		\$62.13										
NOTES:												
(9) Project Manager:	Salary.com 3/2017											
(9) Foreman Source:	Salary.com 3/2017											
(9) Techical Labor Source:	Salary.com 3/2017											
INDIRECT COSTS												
SOCIAL SECURITY, WORKMAN'S COMP, INSURANCE, ETC.												
Unemployment (%)		0.00%				0.00%						
Retirement/SS/Medicare (%)		0.00%				0.00%						
Workman's Compensation (%)		0.00%				0.00%						
State Payroll Tax (13),(15),(17),(18)						0.00%						
NOTES:												
(10) Workman's Comp Source:	Included in DB wages											
(11) Social Security/Medicare	Included in DB wages											
(12) Workmans Compensation	Included in DB wages											
(13), (14) & (15) State Payol taxes	Included in DB wages											

File Name:	Attch A_Donlin_RecBond_Cost
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.

RECLAMATION MATERIAL COST TABLE

MATERIAL TYPE	Basis 1	Basis 2	Basis 3	Basis 4	Basis 5	Basis 6
	Alaska Davis Bacon 2016					

Revegetation Materials

Seed Mixes							
Seed Mix	Units						
None							
Mix 1	Cost/Ha	\$388.85					
Mix 2	Cost/Ha	\$238.80					
Mix 3	Cost/Ha						
Mix 4	Cost/Ha						
User Mix 1	Cost/Ha						
User Mix 2	Cost/Ha						
User Mix 3	Cost/Ha						
User Mix 4	Cost/Ha						
User Mix 5 (see Seed Mix sheet)	Cost/Ha						
Notes:		Donlin Gold Seed Information.docx" October 15, 2013, inflated to 2016					

Mulch							
Item	Units						
None							
Straw Mulch	Cost/kg						
Hydro Mulch	Cost/kg						
Timber Mulch	Cost/kg						
	Cost/kg						
	Cost/kg						
Notes:							

Amendments							
Item	Units						
None							
Organic Matter	Cost/kg						
Treated Sludge	Cost/kg						
Chemical	Cost/kg	\$1.46					
	Cost/kg						
	Cost/kg						
	Cost/kg						
Notes:		NDEP 2016 costs converted to metric units and adjusted for location.					

Well Abandonment Materials							
Description	Units						
Cement	20kg bag	\$6.79					
Grout (Low Grade Bentonite)	20kg bag	\$7.76					
Inert Material/Cuttings	m3						
Notes:		NDEP 2016 costs converted to metric units and adjusted for location.					

Monitoring Costs							
Description	Units	Cost/unit	Cost/unit	Cost/unit	Cost/unit	Cost/unit	Cost/unit
Monitor Well Pump	ea.	\$2,459.66					
Sampling Supplies	ea.	\$5.75					
Water Analysis (Complete) (1)	ea.	\$1,055.00					
ABA + S speciation	ea.						
Cyanide - WAD	ea.						
Cyanide - Free	ea.						
Cyanide - Total soils	ea.						
Cyanide - Total water	ea.						
TPH in soils	ea.	\$80.00					
Humidity Cell (20 wk) (2)	ea.						
Humidity Cell (40 wk)	ea.						
NAG	ea.						
TCLP w/ full analysis	ea.	\$185.00					
SPLP w/ full analysis	ea.	\$150.00					

AS4439 Leach test w/ full analysis	ea.						
Methy Hg	ea.						
	ea.						
	Notes:	Pump and consumable costs from Drillers World					
		AK Lab Rates from SRK Consulting based on similar projects					
Fuel, Etc.							
Description	Units	Cost/unit	Cost/unit	Cost/unit	Cost/unit	Cost/unit	Cost/unit
Off-road Diesel - delivered ⁽¹⁾	\$/litre	\$0.84					
Pickup Truck Travel	\$km	\$0.35					
Electical Power	\$/kWh	\$0.1287					
	Notes:	Donlin feasibility 2011 inflated to 2016					
		IRS allowance converted to metric					
		Donlin feasibility 2011 inflated to 2016					

Nevada Standardized Bond Calculation

Misc. Unit Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1_12_181202_017_20170606_pl_REV02.xlsm</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx</i>

MISCELLANEOUS COST TABLE

JOB DESCRIPTION		Basis 1		Basis 2		Basis 3		Basis 4		Basis 5		Basis 6	
		Alaska Davis Bacon 2016											
REVEGETATION													
Item	Units	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip
Seeding - Broadcast Manual ⁽¹⁾	\$/Ha	\$389.34	\$144.20										
Seeding - Broadcast Mechanical ⁽¹⁾	\$/Ha	\$269.16	\$77.87										
Seeding - Drill ⁽¹⁾	\$/Ha	\$403.76	\$288.40										
Seeding - Hydroseeding ⁽¹⁾	\$/Ha	\$721.00	\$360.50										
Item	Units	Materials		Materials		Materials		Materials		Materials		Materials	
Shrub Planting - bare root 6-10 in (150- 250mm) ⁽²⁾	ea.												
Tree Planting - bare root 11-16 in (270- 400mm) ⁽³⁾	ea.												
Cactus Planting ⁽⁴⁾	ea.												
NOTES:													
(1) Seeding Source:		Nevada 2016, NDEP costs converted to metric											
(2) Shrub Source:													
(3) Tree Source:													
(4) Cactus Source:													
BUILDING and WALL DEMOLITION													
Item	Units		Premium		Premium		Premium		Premium		Premium		Premium
Building Demolition													
Lg. steel	m3												
Lg. concrete	m3												
Lg. masonry	m3												
Lg. mixed	m3												
Sm. steel	m3												
Sm. concrete	m3												
Sm. masonry	m3												
Sm. wood	m3												
Wall Demolition													
Block 100 mm thick	m2		20%		20%		20%		20%		20%		20%
Block 150 mm thick	m2		20%		20%		20%		20%		20%		20%
Block 200 mm thick	m2		20%		20%		20%		20%		20%		20%
Block 300 mm thick	m2		20%		20%		20%		20%		20%		20%
Conc 150 mm thick	m2		10%		10%		10%		10%		10%		10%
Conc 200 mm thick	m2		10%		10%		10%		10%		10%		10%
Conc 250 mm thick	m2		10%		10%		10%		10%		10%		10%
Conc 300 mm thick	m2		10%		10%		10%		10%		10%		10%
WASTE DISPOSAL													
Item	Units	Materials		Materials		Materials		Materials		Materials		Materials	
Rubbish and Waste Handling													
Dumpster delivery (average for all sizes)	ea.	\$64.44											
Haul (average for all sizes)	ea.	\$201.83											
Rent per month (average for all sizes)	ea.	\$68.70											
Disposal fee per ton (tonne) (average for all sizes)	tonne	\$83.11											
NOTES:													
Dumpster Cost Source:		2016 Means Heavy Construction											
Disposal Fee Source:		2016 Means Heavy Construction											
Hazardous Material Handling - Solids													
Pickup fees 55 gal. drums	ea.	\$299.10											
Bulk material (average)	tonne	\$539.56											
Transport - truck load (80 drums, 25 cy (m3), 18 tons)	km	\$4.15											
Dump site disposal fee	tonne	\$381.38											
NOTES:													
Solid Handling Cost Source:		2016 Means Heavy Construction											
Solid Disposal Fee Source:		Construction, ave. 02 81 0300-6000, 6020											
Hazardous Material Handling - Liquids													
Vacuum Truck Pickup (2200 gal or 9,700 litres)	hr.	\$168.20											
Vacuum Truck Pickup (5000 gal or 2,000 litres)	hr.	\$244.12											
Dump site disposal fee	tonne	\$381.38											
NOTES:													
Liquid Handling Cost Source:		2012 Means Heavy Construction											
Liquid Disposal Fee Source:		Construction, ave. 02 11 0300-6000, 6020											
Hydrocarbon Contaminated Soils (HCS)													
Insitu Biotreatment	m3	\$29.29											
HCS disposal fee	m3	\$73.47											
NOTES:													
Insitu Treatement Cost Source:		Construction, ave. 02 65 1030-2020, 2021											
HCS Disposal Fee Source:		Construction, ave. 02 65 1030-2050, 2055 plus											

Nevada Standardized Bond Calculation

Misc. Unit Costs

File Name:	Attch A_Donlin_RecBond_Cost_data_v1_12_181202_017_20170606_pl_REV02.xlsm
Date:	May 10, 2017
Cost Basis:	User Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx

MISCELLANEOUS COST TABLE

JOB DESCRIPTION		Basis 1		Basis 2		Basis 3		Basis 4		Basis 5		Basis 6	
		Alaska Davis Bacon 2016											
UNDERGROUND OPENING CLOSURE													
Item	Units	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium
Reinforced Concrete Bulkheads and Shaft Covers													
Grade walls - 400 mm thick, 2.5 m high	m3	\$217.74											
Grade walls - 400 mm thick, 4.5 m high	m3	\$217.74											
Elevated conc, 1-way beam & slab - 4.5m span	m3	\$359.20											
Elevated conc, 1-way beam & slab - 7.5m span	m3	\$346.48											
Item	Units	Materials		Materials		Materials		Materials		Materials		Materials	
Small Adit Plugging													
Bat Gate ⁽⁵⁾	ea.												
Culvert Gate ⁽⁵⁾	m3												
Adit Foam Plug ⁽⁶⁾	m3												
Production Opening Foam Plug ⁽⁶⁾	m3												
NOTES:													
(5) Bat Gate Source:		Not used											
(6) Foam Plug Source:		Not used											
MISC. LINEAR PROJECTS													
Item	Units	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium
Fencing Installation													
Barbed 3-strand	m	\$0.18											
Barbed 4-strand	m	\$0.24											
Barbed 5-strand	m	\$0.30											
Chain link 2.5 m - 3.0 m Install	m	\$14.28											
Wood stockade fence 2 m high - Install	m	\$5.93											
	m												
	m												
Fencing Removal													
Barbed 3-strand Removal	m												
Barbed 4-strand Removal	m												
Barbed 5-strand Removal	m												
Chain link 2.5 m - 3.0 m Removal	m												
Wood, all types 1.5 m - 2.0 m Removal	m												
	m												
	m												
Culvert Removal													
12 in (300 mm) Diameter	m												
18 in (450 mm) Diameter	m												
24 in (600 mm) Diameter	m												
36 in (1m) Diameter	m												
Pipeline Removal													
Plastic Pipe 3/4 in (mm) - 4 in (100 mm) diameter	m												
6 in (150 mm) - 8 in (200 mm)	m												
10 in (250 mm) - 18 in (450 mm)	m												
20 in (500 mm) - 36 in (1 m)	m												
Pipe and Drainpipe Installation													
Water 4in (100mm) 40ft (12m) length, welded HDPE	m	\$0.84											
Water 6in (150mm) 40ft (12m) length, welded HDPE	m	\$2.34											
Water 12in (300mm) 40ft (12m) length, welded HDPE	m												
Drain 4in (100mm) perforated PVC	m	\$0.48											
Drain 6in (150mm) perforated PVC	m	\$1.05											
Drain 4in (100mm) corrugated, per or plain	m	\$0.22											
Drain 6in (150mm) corrugated., perf or plain	m	\$0.51											
Drain Rock Preparation													
Item	Units		Total		Total		Total		Total		Total		Total
Crushing	m3		\$0.79										
Screening	m3		\$0.79										
Misc.													
Item	Units		Premium		Premium		Premium		Premium		Premium		Premium
Backhoe work	m3												
Powerline and Transformer Removal													
			Total		Total		Total		Total		Total		Total
Single Pole Powerlines ⁽⁷⁾	km		\$30,630										
Double Pole Powerlines ⁽⁸⁾	km		\$35,006										
Substation ⁽⁹⁾	unit		\$35,342										
NOTES:													
(7) Single Pole Source:		NVEnergy estimate (2009) Adjusted to 2016											
(8) Double Pole Source:		NVEnergy estimate (2009) Adjusted to 2016											
(9) Transformer Source:		Sierra Pacific Power Company estimate (2004)											

Nevada Standardized Bond Calculation

Misc. Unit Costs

File Name:	<i>Attch A_Donlin_RecBond_Cost_data_v1_12_181202_017_20170606_pl_REV02.xlsm</i>
Date:	<i>May 10, 2017</i>
Cost Basis:	<i>User Data</i>
Author/Source:	<i>plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx</i>

MISCELLANEOUS COST TABLE

JOB DESCRIPTION		Basis 1		Basis 2		Basis 3		Basis 4		Basis 5		Basis 6	
		Alaska Davis Bacon 2016											
EROSION, EVAPORATION and SEDIMENTATION CONTROL													
Item	Units	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium
Rip-Rap & Rock Lining													
Rip-Rap 3/8 to 1/4 m3 pieces, grouted	m2	\$39.27											
Rip-Rap 450 mm min thick, no grout	m2												
Gabions, 150 mm deep	m2	\$11.20											
Gabions, 230 mm deep	m2	\$14.03											
Gabions, 300 mm deep	m2	\$18.62											
Gabions, 450 mm deep	m2	\$26.18											
Gabions, 1 m deep	m2	\$44.36											
Liner Installation													
Item	Units	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium	Materials	Premium
Site grading	m2												
Compaction	m2												
Item	Units		Materials		Materials		Materials		Materials		Materials		Materials
1.5mm HDEP Liner	m2		\$0.80										
Construction Management Support													
Item	Units		Materials		Materials		Materials		Materials		Materials		Materials
Office Trailer, Furnished, no hook-ups	month		\$235.88										
Toilet Portable, chemical	month		\$251.44										
PRODUCTION OR DEWATERING WELL PUMP REMOVAL													
Item	Units	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip	Labor	Equip
Pump Type													
Submersible ⁽¹⁰⁾	m to pump	\$10.17	\$22.08										
Line Shaft ⁽¹⁰⁾	m to pump	\$23.72	\$51.58										
NOTES:													
(10) Pump Removal Source:		Nevada 2016, NDEP costs converted to metric											

File Name:	CostData STD 3.xls
Date:	December 1, 2005
Cost Basis:	Standardized Data
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_LaborBuildup_181202_017_pl_rev01.xlsx

Administrative Cost Rates (%)					
	Cost Ranges for Indirect Cost Percentages				
	<=	<=	<=	>	
1. Engineering, Design and Construction (ED&C) Plan (7)	\$500,000	\$2,500,000	\$25,000,000	\$25,000,000	Small Plan
Variable Rate	8%	6%		4%	
	<=	<=	<=	>	
2. Contingency (8)	\$500,000	\$5,000,000	\$50,000,000	\$50,000,000	Small Plan
Variable Rate	10%	8%	6%	4%	
3. Insurance (9)	1.5%	of labor costs			
4. Bond (10)	3.0%	of the O&M costs if O&M costs are >\$100,000			
5. Contractor Profit (11)	10.0%	of the O&M costs			
	<=	<=	<=	>	
6. Contract Administration (12)	\$1,000,000	\$25,000,000		\$25,000,000	
Variable Rate	10%	8%		6%	
		of contract administration			

RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES

NOTE :



Attachment B: Documents in Support of SRCE Inputs
(Provided Electronically)

2017 Equipment Rental Rates

		Monthly Rate	OT Rate per hour	Standard Rate	Addl OT Charge	Total Monthly Charge for 360 Hours
Monthly Hours		200			360	
D7	\$	14,500.00	36.25	\$ 14,500.00	\$ 5,800.00	\$ 20,300.00
D10	\$	37,500.00	93.75	\$ 37,500.00	\$ 15,000.00	\$ 52,500.00
D11	\$	50,000.00	125	\$ 50,000.00	\$ 20,000.00	\$ 70,000.00
16 Grader	\$	22,500.00	56.25	\$ 22,500.00	\$ 9,000.00	\$ 31,500.00
345 Excavator	\$	16,100.00	40.25	\$ 16,100.00	\$ 6,440.00	\$ 22,540.00
385 Excavator	\$	31,200.00	78	\$ 31,200.00	\$ 12,480.00	\$ 43,680.00
928 Loader	\$	4,150.00	10.375	\$ 4,150.00	\$ 1,660.00	\$ 5,810.00
980 Loader	\$	16,650.00	41.625	\$ 16,650.00	\$ 6,660.00	\$ 23,310.00
992 Loader	\$	57,500.00	143.75	\$ 57,500.00	\$ 23,000.00	\$ 80,500.00
777 Haul Truck	\$	41,500.00	103.75	\$ 41,500.00	\$ 16,600.00	\$ 58,100.00
420 Backhoe	\$	3,500.00	8.75	\$ 3,500.00	\$ 1,400.00	\$ 4,900.00
H-160 Hammer attachment for 345	\$	16,100.00	40.25	\$ 16,100.00	\$ 6,440.00	\$ 22,540.00
20 ton crane	\$	9,500.00	23.75	\$ 9,500.00	\$ 3,800.00	\$ 13,300.00
50 ton crane	\$	14,600.00	36.5	\$ 14,600.00	\$ 5,840.00	\$ 20,440.00
120 ton crane	\$	28,100.00	70.25	\$ 28,100.00	\$ 11,240.00	\$ 39,340.00
10 yd dump truck	\$	4,500.00	11.25	\$ 4,500.00	\$ 1,800.00	\$ 6,300.00
Flatbed truck – 2-1/2 ton or so	\$	2,350.00	5.875	\$ 2,350.00	\$ 940.00	\$ 3,290.00
		200 hour month				

CRANES

MAKE	DESCRIPTION	DAY	WEEK	MONTH
LINKBELT	30 TON ROUGH TERRAIN	1390	4170	12500
LINKBELT	50 TON ROUGH TERRAIN	2625	4870	14600
LINKBELT	65 TON ROUGH TERRAIN	1945	5830	17500
LINKBELT	80 TON ROUGH TERRAIN	2435	7300	21900
LINKBELT	100 TON ROUGH TERRAIN	2900	8700	26000
LINKBELT	110 TON ROUGH TERRAIN	3125	9370	28100
LINKBELT	TCC1100 TELESCOPIC CRAWLER	3900	11700	35000

GENSETS

MAKE	MODEL	PRIME POWER	DAY	WEEK	MONTH
DOOSAN	G25	20KW@480V	130	385	1150
DOOSAN	G40	28KW@480V	185	550	1650
ATLAS	QAS45	35KW@480V	185	550	1650
DOOSAN	G70	62KW@480V	300	900	2700
DOOSAN	G85	78KW@480V	335	1000	3000
ATLAS	QAS120	95KW@480V	355	1070	3200
DOOSAN	G150	120KW@480V	380	1135	3400
DOOSAN	G190	155KW@480V	430	1285	3850
DOOSAN	G240	190KW@480V	485	1450	4350
ATLAS	QAS330	264KW@480V	545	1635	4900
DOOSAN	G450	365KW@480V	730	2185	6550
DOOSAN	G570	456KW@480V	910	2735	8200
ATLAS	QAS600	457KW@480V	910	2735	8200

TRACK DRILLS W / COMPRESSOR

MAKE	MODEL	HOLE DIAMETER	DAY	WEEK	MONTH
I-R	LM100W/P375	1" to 2 1/2"	810	2435	7300

SELF CONTAINED TRACK DRILLS

MAKE	MODEL	HOLE DIAMETER	DAY	WEEK	MONTH
ATLAS	T35E	2 1/2" to 4 1/2"	1850	5550	16650

Rental Terms:

- 1. All prices are F.O.B. CMI's yard, freight charges to job site are customers responsibility.
- 2. Customers must have proof of insurance meeting CMI requirements for any equipment rented before delivery.
- 3. Rental rates included in this rate sheet are based on single shift hours. 10 hours per day, 50 hours per week and 200 hours per month.

MACK TRUCKS

MAKE	DESCRIPTION	DAY	WEEK	MONTH
MACK	4000 GALLON WATER TANKER	625	1870	5600
MACK	TRACTOR W/DAY CAB	680	2035	6100

2/32nds of tire wear allowed per month per tire. Additional tire wear to be billed at \$34 per 32nd per tire.

CRUSHING/SCREEN PLANTS

MAKE	MODEL	DESCRIPTION	DAY	WEEK	MONTH
CEC	STACKER ELEC.	CONVEYOR	N/A	520	1550
CEC	STACKER HYD.	RADIAL	N/A	935	2800
METSO	CV100D	2 DECK	N/A	3085	9250
METSO	ST3.8 TRK	2 DECK 5x12	N/A	4750	14250
METSO	LT300HP	TRACK-CONE	N/A	13100	39300
METSO	LT106	TRACK-JAW	N/A	10750	32250
ATLAS	PC3	HORIZ. IMPACT	N/A	12135	36400
ATLAS	PC HS1 ADD-ON	SCREEN BOX	N/A	1735	5200

Wear parts billed at prorated amount based on percentage of life used upon return.

LIGHT TOWERS

MAKE	MODEL	DAY	WEEK	MONTH
ALLMAND	NITE LITE PRO 8KW	85	250	750
MAGNUM	MLT4080KV 8KW	85	250	750

DIESEL POWERED PUMPS

			DAY	WEEK	MONTH
G-R	PA4A60C	4" PRIME AIRE	330	980	2950
G-R	PA6C60	6" PRIME AIRE	360	1070	3200
4"x 25' Suction & 4"x50' discharge hoses			20	50	150
6"x 25' Suction & 6"x50' discharge hoses			45	130	390

TELESCOPING BOOM LIFTS & SCISSOR LIFTS

MAKE	MODEL	DESCRIPTION	DAY	WEEK	MONTH
SKYJACK	SJ45T	45' BOOM	350	1050	3150
SKYJACK	SJ66T	66' BOOM	510	1535	4600
GENIE	S65	65' BOOM	510	1535	4600
GENIE	S85	85' BOOM	960	2885	8650
SKYJACK	SJ46AJ	46' Z BOOM	350	1050	3150
GENIE	GS1930	19' SCISSOR	110	335	1000
SKYJACK	SJ6826RT	26' SCISSOR	230	685	2050
SKYJACK	SJ6832RT	32' SCISSOR	250	750	2250
SKYJACK	SJ6832RTE	32' SCISSOR	250	750	2250



Construction Machinery Industrial, LLC

5400 HOMER DR.
ANCHORAGE, AK 99518
(907) 563-3822 PH / (907) 563-1381 FAX
FAIRBANKS
2615 20TH AVE.
FAIRBANKS , AK. 99709
(907) 455-9600 PH / (907) 455-9700 FAX
JUNEAU
5302 COMMERCIAL BLVD.
JUNEAU, AK. 99801
(907) 780-4030 PH / (907) 780-4800 FAX
KETCHIKAN
7332 NORTH TONGASS AVE.
KETCHIKAN, AK. 99901
(907) 247-2228 PH / (907) 247-2229 FAX

2017 RENTAL RATES

ANCHORAGE
Ph. (907) 563-3822
Fax (907) 563-1381

FAIRBANKS
Ph. (907) 455-9600
Fax (907) 455-9700

JUNEAU
Ph. (907) 780-4030
Fax (907) 780-4800

KETCHIKAN
Ph. (907) 247-2228
Fax (907) 247-2229

COMPRESSORS

MODEL	DESCRIPTION	DAY	WEEK	MONTH
P185/XAS185	185CFM / 100PSI	110	320	950
P185/XAS185	With 90lb Breaker or Rotary Drill & 50' Hose	140	420	1249.5
HP375/XATS375	375CFM / 150PSI	250	750	2250
XAVS650	650CFM / 225PSI	600	1800	5400
XRVS476	975CFM / 365PSI	1210	3635	10900
XP1000	1000CFM / 125PSI	600	1800	5400
XAMS1150	1150CFM / 125PSI	625	1870	5600
HP1300	1300CFM / 150PSI	870	2600	7800
HP1600	1600CFM / 150PSI	1160	3470	10400
HP1600	With Instrument Quality Air	1290	3870	11600
XAS1800	1600CFM / 150PSI or 1800CFM / 100PSI W/IQ Air	1290	3870	11600

COMPACTION EQUIPMENT

MAKE	MODEL	DESCRPT	DRUM-WGT	DAY	WEEK	MONTH
VOLVO	SD25	SOIL	41.5" - 2.5 TON	270	800	2400
VOLVO	DD25	ASPHALT	47" - 2.5 TON	270	800	2400
VOLVO	SD45	SOIL	54" - 5 TON	370	1100	3300
VOLVO	SD75	SOIL	66" - 8 TON	460	1385	4150
VOLVO	SD105	SOIL	84" - 10 TON	580	1735	5200
VOLVO	SD115DX	SOIL	84" - 11.5 TON	695	2085	6250
VOLVO	SD160DX	SOIL	84" - 18 TON	870	2600	7800
VOLVO	SD200	SOIL	84" - 20 TON	920	2770	8300

HYDRAULIC EXCAVATOR ATTACHMENTS

MODEL	DESCRIPTION	DAY	WEEK	MONTH	
MS30	SHEAR	JAW SET W/ROTATION	N/A	4170	12500
	BREAKER	IMPACT CLASS 2000 ft lbs	N/A	2370	7100
	BREAKER	IMPACT CLASS 4500 ft lbs	N/A	2670	8000
	BREAKER	IMPACT CLASS 10000 ft lbs	N/A	4500	13500
	BREAKER	IMPACT CLASS 15000 ft lbs	N/A	5370	16100
	HOE PACK	FORCE 11425 - 24300 lbs	N/A	920	2750

Breaker steel will be measured before and after rental.
There will be a charge of \$150 per inch of use on breaker bits below 10,000 ft lb class and \$450 per inch of use over 10,000 ft lbs.

FOR LONGER TERM OR MULTIPLE PIECE RENTAL,
PLEASE CALL FOR RATE QUOTE
RENTAL RATES EFFECTIVE JANUARY 2017

WHEEL LOADERS

MAKE	MODEL	BKT CAP	WEIGHT	DAY	WEEK	MONTH	FORKS
VOLVO	L20	1.0 Cu Yd	9950#	325	970	2900	POR
VOLVO	L30	1.4 Cu Yd	12000#	360	1070	3200	POR
VOLVO	L35	1.4 Cu Yd	13700#	370	1100	3300	POR
VOLVO	L45	2.2 Cu Yd	19000#	410	1220	3650	POR
VOLVO	L60	2.5 Cu Yd	26000#	460	1385	4150	POR
VOLVO	L70	3.0 Cu Yd	29500#	480	1735	5200	POR
VOLVO	L90	3.5 Cu Yd	33550#	750	2250	6750	POR
VOLVO	L110	4.1 Cu Yd	40880#	895	2685	8050	POR
VOLVO	L120	4.5 Cu Yd	43000#	1125	3370	10100	POR
VOLVO	L150	5.2 Cu Yd	53000#	1270	3800	11400	POR
VOLVO	L180	6 Cu Yd	60000#	1500	4500	13500	POR
VOLVO	L220	7 Cu Yd	70000#	1850	5550	16650	POR
VOLVO	L250	8 Cu Yd	75000#	2080	6235	18700	POR
VOLVO	L350	9-10 Cu Yd	111000#	2900	8700	26000	POR

HYDRAULIC EXCAVATORS

MAKE	MODEL	BKT CAP	WEIGHT	DAY	WEEK	MONTH	Extra Att Spec bkts/th
HITACHI	ZX27	1/10 YD3	6485 #	290	870	2600	POR
HITACHI	ZX35	1/5 YD3	7675 #	310	930	2800	POR
HITACHI	ZX50	1/4 YD3	10450 #	335	1000	3000	POR
HITACHI	ZX60	1/3 YD3	13500 #	380	1135	3400	POR
HITACHI	ZX85	1/2 YD3	15900 #	410	1220	3650	POR
HITACHI	ZX120/ZX135	3/4 YD3	28000#	610	1835	5500	POR
HITACHI	ZX160/ZX180	1.0 YD3	35500 #	730	2185	6550	POR
HITACHI	ZX210/ZX245	1 1/8 YD3	45/54000#	860	2570	7700	POR
HITACHI	ZX350LC	2 1/8 YD3	80000 #	1360	4070	12200	POR
HITACHI	ZX470LC	3.0 YD3	115000#	1790	5370	16100	POR
HITACHI	ZX670LC	4 1/2 YD3	152000 #	2670	8000	24000	POR
HITACHI	ZX870LC	6.0 YD3	186000 #	3470	10400	31200	POR
VOLVO	ECR38	1/5 YD3	7650 #	310	935	2800	POR
VOLVO	ECR58	1/4 YD3	12100#	335	1000	3000	POR
VOLVO	ECR88	1/2 YD3	18200 #	410	1220	3650	POR
VOLVO	EC140/ECR145	7/8 YD3	29/33450#	635	1900	5700	POR
VOLVO	EC160	1.0 YD3	36000#	730	2185	6550	POR
VOLVO	EC220/ECR235	1 1/8 YD3	48/54000#	860	2570	7700	POR
VOLVO	EC380	2 1/8 YD3	85800 #	1360	4070	12200	POR
VOLVO	EC480	3.0 YD3	115000 #	1790	5370	16100	POR
VOLVO	EC750	4 1/2 YD3	154980 #	2900	8700	26000	POR

AUTOMATICS AVAILABLE UPON REQUEST

SKID STEER LOADERS

MAKE	MODEL	WGT / BKT SIZE & CAP	DAY	WEEK	MONTH	NOTES
VOLVO	MC85/MC95	7000# / 72" 15.2 cu ft	290	870	2600	
VOLVO	MC110	7900# / 78" 16.5 cu ft	310	935	2800	
VOLVO	MCT125C	10800# / 84" 22.4 cu ft	370	1100	3300	TRACK
VOLVO	MCT135C	11800# / 84" 22.4 cu ft	410	1220	3650	TRACK

SKID STEER ATTACHMENTS

MAKE	MODEL	DESCRIPTION	DAY	WEEK	MONTH
		AUGER	80	235	700
		BREAKER 300 ft lbs	185	550	1650
		BREAKER 500 ft lbs	245	735	2200
		BROOM	120	350	1050
		BROOM- PICK-UP	150	450	1350
		BRUSH HOG	225	670	2000
		FORKS	60	185	550
		SNOW BLADE	160	485	1450
		DOZER BLADE	160	485	1450
		SNOW BLOWER	90	270	800
		TILLER	80	235	700
		PLANER	345	1035	3100
		TRENCHER	225	670	2000
		GRAPPLE BUCKET	120	350	1050

TELESCOPING FORKLIFTS

MAKE	MODEL	DESCRIPTION	DAY	WEEK	MONTH
SKYJACK	VR843	8000# Cap/ 43' Reach	395	1185	3550
SKYJACK	VR1056	10000# Cap/ 56' Reach	450	1350	4050
GENIE	GTH1056	10000# Cap/ 56' Reach	450	1350	4050

HEATERS

MAKE	MODEL	DAY	WEEK	MONTH
ALLMAND	MAXI HEAT 1 MILLION BTU	395	1185	3550
TIOGA	IDF-3 SCO 750K BTU	500	1500	4500

OFF HIGHWAY DUMP/ HAULERS

MAKE	MODEL	DESCRIPTION	DAY	WEEK	MONTH
VOLVO	A30	30 TON / 23yd3 Artic	1625	4870	14600
VOLVO	A35	35 TON / 28yd3 Artic	1910	5735	16500
VOLVO	A40	40 TON / 31yd3 Artic	2080	6235	17600
VOLVO	A45	45 TON / 33yd3 Artic	2200	6500	19500
VOLVO	A60	60 TON / 44yd3 Artic			POR

Allowed 2/32nds of tire wear per month on trucks.
Additional wear will be charged at \$250 per 32nd on 29.5R25 and \$200 per 32nd on 26.5R25. Tire surveys required on all truck rentals.

Cost Buildup for Salary Professional Labor - Salary.com													
Salary Category from Salary.com	SRCE Destination labor Category	Yearly Base Salary	Bonuses	401k	Healthcare	Pension	UN	SS	MED	WC	Total Annual Burden	Total Burdened Annual Salary (\$)	Hourly Rate for Shift Work
Project Manager Sr. - Construction	Project Manager	\$ 154,124.00	6.70%	2.70%	2.90%	4.70%	2.03%	6.20%	1.45%	4.52%	\$ 43,534.89	\$ 197,658.89	\$ 95.03
Mine Foreman	Forman	\$ 84,316.00	0.00%	2.60%	5.60%	4.50%	2.03%	6.20%	1.45%	4.52%	\$ 21,755.00	\$ 106,071.00	\$ 51.00
Geologist III	Field Geologist Engineer	\$ 78,993.00	2.50%	2.60%	5.80%	4.50%	2.03%	6.20%	1.45%	4.52%	\$ 22,563.98	\$ 101,556.98	\$ 48.83
Environmental Engineer I	Field Tech Sampler	\$ 67,607.00	1.50%	2.60%	6.80%	4.50%	2.03%	6.20%	1.45%	4.52%	\$ 19,424.86	\$ 87,031.86	\$ 41.84
Biologist III	Range Scientist	\$ 79,326.00	0.80%	2.60%	5.90%	4.50%	2.03%	6.20%	1.45%	4.52%	\$ 21,386.57	\$ 100,712.57	\$ 48.42
Engineer V	Senior Planning Engineer	\$ 144,478.00	5.40%	2.70%	3.20%	4.70%	2.03%	6.20%	1.45%	4.52%	\$ 39,874.43	\$ 184,352.43	\$ 88.63
Project Engineer IV	Project Engineer	\$ 129,519.00	4.10%	2.70%	3.60%	4.70%	2.03%	6.20%	1.45%	4.52%	\$ 35,422.26	\$ 164,941.26	\$ 79.30
Annual Hours Worked	2080												

Notes:

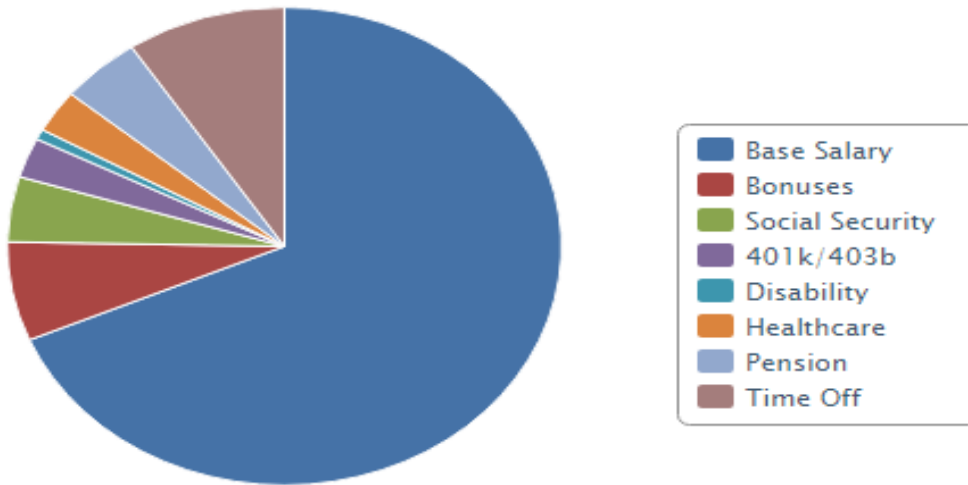
Salary and Benefits data from:

WC	Workers Compensation	InfoMine 2016 Surface non-coal Mine
UN	Unemployment Insurance	InfoMine 2016 New Mine, applicable to first 38700 in wages
SS	Social Security	InfoMine 2016, 6.2 percent on first 118,500
MED	Medicare	InfoMine 2016 1.45 percent plus additional 0.9 percent for salary above \$250,000

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Project Manager Sr. - Construction



Core Compensation	Median	% of Total
Base Salary	\$154,124	68.6%
Bonuses	\$15,012	6.7%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$9,799	4.4%
401K/403B	\$6,089	2.7%
Disability	\$1,522	0.7%
Healthcare	\$6,592	2.9%
Pension	\$10,656	4.7%
Time Off	\$20,817	9.3%

Value of Benefits indicates the employer's expected contribution and paid time off.

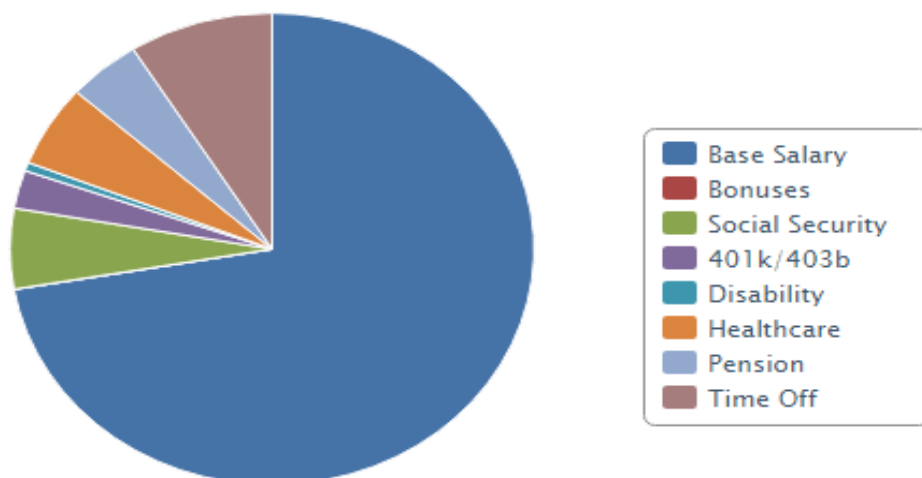
\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

Total Compensation	\$224,612	100%

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Mine Foreman



Core Compensation	Median	% of Total
Base Salary	\$84,316	72.2%
Bonuses	\$0	0.0%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

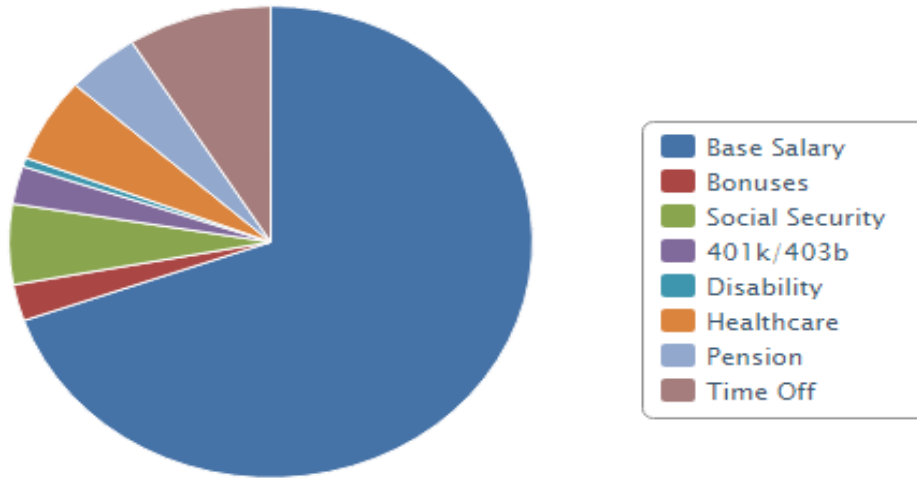
Social Security	\$6,450	5.5%
401K/403B	\$3,035	2.6%
Disability	\$759	0.6%
Healthcare	\$6,592	5.6%
Pension	\$5,312	4.5%
Time Off	\$10,377	8.9%
Total Compensation	\$116,841	100%

Value of Benefits indicates the employer's expected contribution and paid time off.

\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK Geologist III



Core Compensation	Median	% of Total
Base Salary	\$78,993	69.6%
Bonuses	\$2,796	2.5%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$6,257	5.5%
401K/403B	\$2,944	2.6%
Disability	\$736	0.6%
Healthcare	\$6,592	5.8%
Pension	\$5,153	4.5%
Time Off	\$10,066	8.9%

Value of Benefits indicates the employer's expected contribution and paid time off.

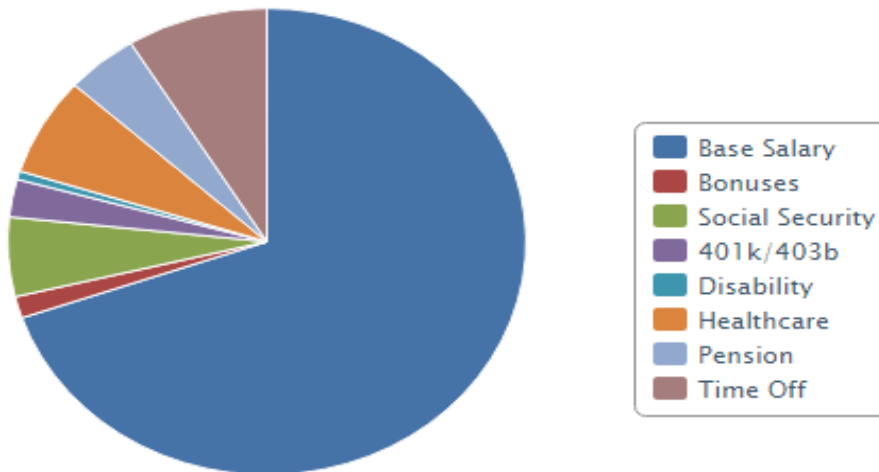
\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

Total Compensation	\$113,538	100%

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Environmental Engineer I



Core Compensation

Core Compensation	Median	% of Total
Base Salary	\$67,607	69.7%
Bonuses	\$1,480	1.5%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$5,285	5.5%
401K/403B	\$2,487	2.6%
Disability	\$622	0.6%
Healthcare	\$6,592	6.8%
Pension	\$4,352	4.5%
Time Off	\$8,503	8.8%
Total Compensation	\$96,928	100%

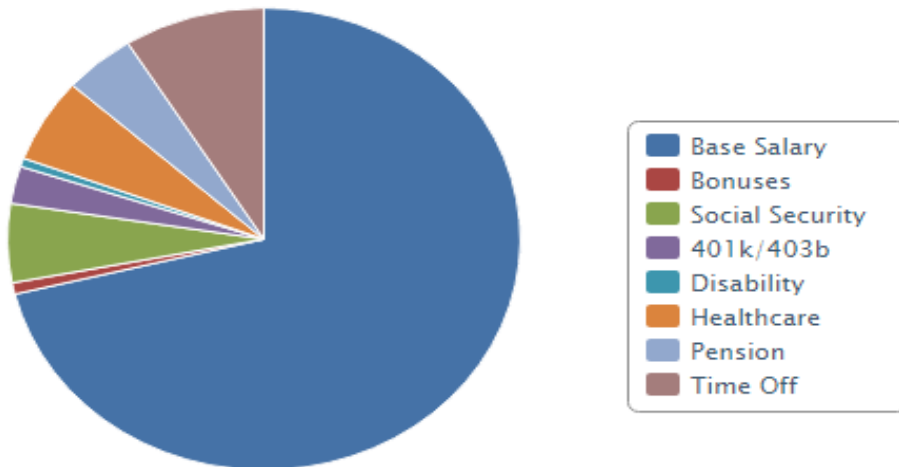
Value of Benefits indicates the employer's expected contribution and paid time off.

\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Biologist III



Core Compensation	Median	% of Total
Base Salary	\$79,326	71.1%
Bonuses	\$929	0.8%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$6,140	5.5%
401K/403B	\$2,889	2.6%
Disability	\$722	0.6%
Healthcare	\$6,592	5.9%
Pension	\$5,056	4.5%
Time Off	\$9,878	8.9%
Total Compensation	\$111,531	100%

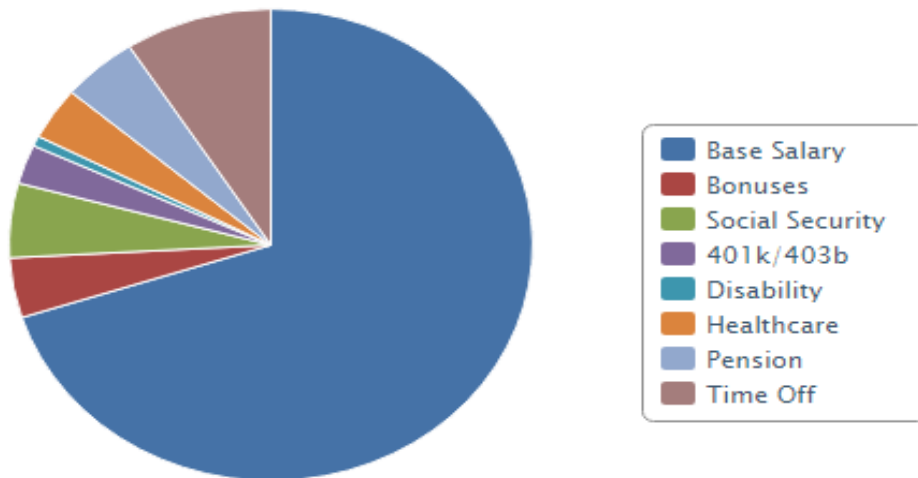
Value of Benefits indicates the employer's expected contribution and paid time off.

\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Project Engineer IV



Core Compensation

Base Salary	Median	% of Total
	\$129,519	70.1%

Bonuses	\$7,597	4.1%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$9,335	5.1%

401K/403B	\$4,936	2.7%

Disability	\$1,234	0.7%

Healthcare	\$6,592	3.6%

Pension	\$8,638	4.7%

Time Off	\$16,876	9.1%

Value of Benefits indicates the employer's expected contribution and paid time off.

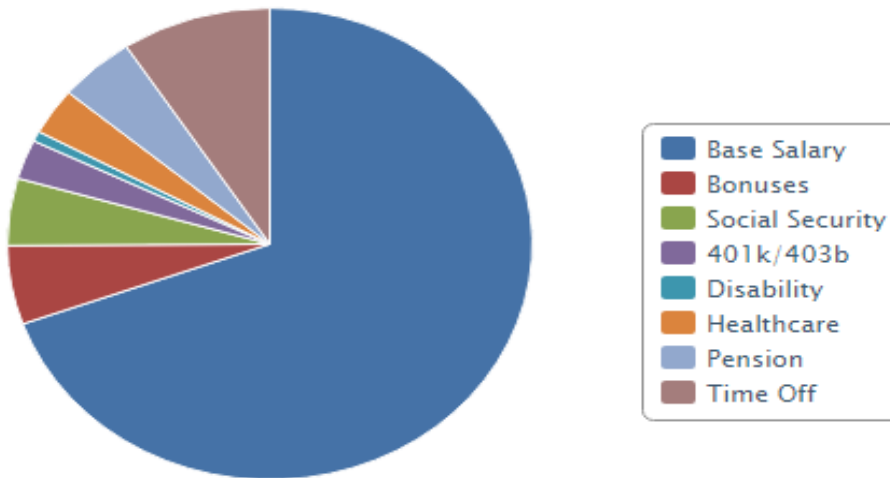
\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

Total Compensation	\$184,727	100%

[Salary](#)[Salary + Bonus](#)[Benefits](#)[Similar Jobs](#)[Statistics](#)[Job Openings](#)

Averages for Anchorage, AK

Engineer V



Core Compensation	Median	% of Total
Base Salary	\$144,478	69.5%
Bonuses	\$11,234	5.4%

Core Compensation is based on averages for this job and does not reflect personal factors used to determine your projected salary range.

Value of Benefits

Social Security	\$9,605	4.6%
401K/403B	\$5,606	2.7%
Disability	\$1,401	0.7%
Healthcare	\$6,592	3.2%
Pension	\$9,810	4.7%
Time Off	\$19,165	9.2%

Value of Benefits indicates the employer's expected contribution and paid time off.

\$ Use the [Benefits Calculator](#) to compare your benefits with the industry average.

Total Compensation	\$207,890	100%

WESTERN REGION – 2016 U.S. Mine Salary Survey

The Western region includes California, Nevada, Oregon, Washington, and Alaska. The table below summarizes the salary data by selected job title. Salary tables for each mine in the region are shown on the following pages.

Twenty-three surface mines and eight underground mines responded to the salary survey in this region, ranging in size from under 1,000,000 to over 5,000,000 tons ore mined annually. All of the mines in this region are metal, industrial mineral or aggregate operations.

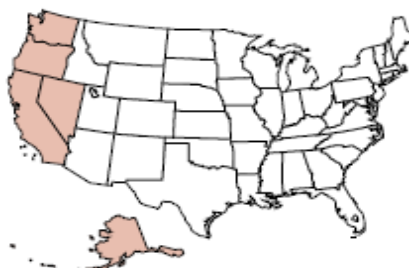


TABLE 24. Summary of Annual Base Salaries for Selected Job Titles: Surface and Underground Mines: Western Region (U.S. dollars per year)

	Surface		Underground		Total
Number of Mines	23		8		31
Job Title:	Range	Average	Range	Average	Average
General Manager	154,400 - 270,000	198,800	195,000 - 270,000	223,200	207,400
Mine Manager	93,900 - 168,900	130,200	114,800 - 189,500	149,800	137,000
Plant Manager	118,500 - 178,800	145,200	165,600*	165,600	146,900
Mine Superintendent	97,900 - 145,800	123,000	83,400 - 145,800	127,800	125,000
Mill Superintendent	103,200 - 148,200	128,100	126,200 - 145,800	139,700	132,900
Mech/Elect Superintendent	90,100 - 146,300	123,100	90,000 - 147,200	133,500	126,200
Mine Foreman	60,600 - 135,000	100,300	86,400 - 129,000	103,400	100,500
Mill Foreman	70,700 - 116,000	99,300	86,700 - 128,800	103,600	101,000
Chief Engineer	92,500 - 145,800	114,800	98,600 - 140,900	117,700	116,000
Mine Engineer	69,300 - 121,200	90,200	69,300 - 111,900	90,500	90,300
Chemist	42,900 - 105,600	72,200	41,800 - 135,500	76,900	74,400
Metallurgist	69,300 - 145,800	102,500	41,800 - 145,800	93,900	98,300
Chief Geologist	85,000 - 186,900	128,000	96,600 - 145,800	125,400	127,300
Mine Geologist	60,000 - 170,000	86,500	65,900 - 105,900	84,900	85,900
Environmental Coordinator	71,000 - 168,400	107,600	66,000 - 152,100	101,800	105,200
Environmental Technician	39,500 - 98,600	69,900	41,800 - 98,600	70,700	70,300
Health/Safety Coordinator	55,300 - 141,700	96,000	66,000 - 152,100	102,200	98,600
Purchasing Agent	77,300 - 120,000	93,600	65,000 - 114,800	88,600	90,400
Buyer	62,000 - 88,200	75,600	41,800 - 88,200	66,500	70,600
Personnel Manager	45,900 - 178,800	111,700	77,500 - 161,700	113,500	112,400
Accountant	55,000 - 176,800	98,300	50,000 - 133,700	86,600	94,100
Accounting Clerk	50,200 - 58,600	54,300	35,000 - 67,500	53,600	53,800
Administrative Assistant	38,500 - 60,800	49,400	41,800 - 60,600	50,600	49,800
Secretary	45,500 - 75,000	60,300	---	---	60,300
Warehouse Clerk	41,400 - 92,700	58,800	37,000 - 64,600	52,000	54,300

* limited data

TABLE 41. STATE UNEMPLOYMENT INSURANCE RATES - 2016

State	New Mine Tax Rate	Wage Base	New Mine Time Period	Experienced Rate Range
Alabama	2.7%	\$8,000	1 yr.	0.20% - 6.8%
Alaska	2.60% 0.57% <i>Amount that can be passed on to employee</i>	38,700	1 yr.	1.0% - 5.4%
Arizona	2.0%	7,000	2 yr.	0.03% - 8.91%

TABLE 42. STATE WORKERS' COMPENSATION RATES - 2016 (Dollars per \$100 payroll)

State	Underground Coal Mine	Surface Coal Mine	Underground NonCoal Mine	Surface NonCoal Mine	Ore Mill Operation
Alabama	\$34.48	\$15.91	\$11.19	\$9.07	\$7.49 – 8.25
Alaska	18.28	6.63	7.29	4.52	2.73 – 5.62
Arizona	20.44	8.51	10.57	4.85	4.31 – 9.27
Arkansas	13.86	5.49	5.36	2.62	3.30 – 3.32

APPENDIX D

Federal Employment Taxes

State Unemployment Insurance and Workers' Compensation Rates

FEDERAL EMPLOYMENT TAXES

The United States' federal employment taxes comprise Federal Withholding (Income) Tax, Social Security (FICA) Tax, and Federal Unemployment (FUTA) Tax.

Federal Withholding Tax

Withholding (income) taxes are deducted from the employee's wages and paid to the federal government by the employer. They are fully paid by the employee, so need not be considered in cost estimating.

Federal Unemployment Tax

The Federal Unemployment Tax (FUTA) provides funding for federal support of state unemployment programs. The tax rate for 2016 is 6.0% of wages paid, up to a maximum wage of \$7,000 per year for each employee. A credit up to a maximum of 5.4% of taxable wages can be taken against this tax for state unemployment taxes paid. The FUTA tax rate after taking the state tax credit is 0.6%. This tax is fully paid by the employer.

Social Security Tax and Medicare Tax

The Social Security Tax (FICA) and Medicare Tax provide federal funding for retirement, disability, medical and other benefits to workers. Employer and employee share in payment of these taxes. Since 1994, the Medicare Tax has been calculated and applied separately from Social Security Tax.

The wage base for 2016 is \$118,500, for Social Security Tax (old age, survivors, and disability insurance); the tax rate is 6.2% each for employers and employees.

For Medicare, the rate is 1.45% each for employers and employees, with all wages subject to tax. Effective in 2013, earnings over \$250,000 (married filing jointly) are taxed at an additional 0.9%.

STATE EMPLOYMENT TAXES

State Unemployment Insurance Tax

Unemployment insurance taxes are collected from all employers to provide state funding for payment of benefits to unemployed workers. Normally the employer pays the entire amount of this tax. Exceptions are Alaska, New Jersey, and Pennsylvania, where employees may be required to contribute a share.

Tax rates are established yearly for each employer. Several methods are used by the states for calculating

the rates, but in most cases rates depend upon two variables: the employer's experience record and the status of the state's unemployment fund. An employer pays a higher rate if many claims for benefits have been filed against his account by laid-off workers. All employers pay higher rates if the state fund is low.

A new employer with no experience record is usually charged a standard rate for a period of time ranging from one to four years until he qualifies for a calculated rate based on his experience record. This standard rate may be fixed by state law, it may be an average for the state, or it may be an average for that industry in the state.

The tax is calculated by multiplying *the rate times wages paid*. Most states have a maximum annual wage, called the "wage base," taxable by this formula. Wages paid to each employee in excess of the wage base are not taxable. The wage base is usually established for each year, often as a fixed percentage of the average wage for the state. Table 41 lists the new mining employer tax rate, wage base, new employer time period, and the rate range for experienced employers in each state.

Workers' Compensation Insurance

All states require employers to carry insurance to pay medical and other expenses for employees injured on the job. Until recently, state governments acted as exclusive carriers for this insurance. Now many states allow employers to contract with private carriers. Most of these states maintain a program for residual employers unwilling or unable to find a private carrier.

Rates are established for each industry based on the claim record for that industry. Tax rates (insurance premiums) are usually quoted as dollars per hundred dollars of wages paid and are chargeable against the full amount of wages. Table 42 lists current rates for surface and underground metal and industrial mineral miners.

State occupational disease coverage as applied to metal and industrial mineral mines is included in the rates. In some instances, federal occupational disease premiums must be paid in addition to the rates stated.

Where no compensation insurance rate is listed, either none has been established for the state, or none was identified by our survey.

**Attachment C: Premature Closure SRCE Cost
Summary**

(Full File Provided Electronically)

Closure Cost Estimate
Property Information

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1

Build 016 (revised 01 Aug 2014)

NOT YET VALIDATED FOR REGULATORY USE IN NEVADA

COST DATA FILE INFORMATION	
File Name:	Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Cost Data File:	Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Data Date:	May 10, 2017
Cost Data Basis:	User Data Data Cost Units: Metric
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_Lab

PROJECT INFORMATION	
Property/Mine Name:	Donlin Gold Property Code: 1516
Project Name:	Donlin Gold - Reclamation Bond - Operation Year 3 Closure
Date of Submittal:	July 2017 Average Altitude: 1000 m
Units of Measure:	☒ Metric (m, km, ha, etc.) ☐ Imperial (ft, mi, acres, etc.)
Select One:	☐ Notice or Sm Exploration Plan ☐ Lg Exploration Plan ☒ Mine Operation
Select One:	☐ Private Land ☒ Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	Alaska Davis Bacon 2016 Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes
Cost Basis Description:	☐ This project is in the State of Nevada

**Closure Cost Estimate
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Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure
Project Date: July 2017
Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Reclamation Plan

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Waste Rock Dumps
Heap Leach Pads
Tailings
Roads
Pits
Quarries & Borrow Pits
Underground Openings
Material Hauling
Foundations and Buildings
Other Demo & Equipment Removal
Sediment & Drainage Control
Process Ponds
Landfills
Yards, Etc.
Waste Disposal
Well Abandonment
Misc. Costs
Monitoring
Construction Management
Solution Management
Closure Planning
General & Administration
Human Resources
Other User
Reclamation Quantities
Labor Costs
Equipment Costs
Material Costs
Misc. Unit Costs
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Productivity
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Seed Mixture
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User Sheet 3
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User Sheet 5

Description
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Bulk fuel storage tanks demolition
Miscellaneous hazardous waste disposal
Tank demolition and disposal
Equipment mobilization

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[User Sheet 20](#)

Not used
Remove sheet piling
Camp and crew mobilization costs
Manpower estimate
Long Term Monitoring Costs
Geogrid/geotextile AND dredging costs for Mine Year 3
Solution management pumping scheduling - Do Not Print
Earthworks scheduling - Do not Print
GIS Database Outputs - Do Not Print
Well abandonment schedule - Do not Print
Not Used
R.S. Means Crews
List of sources referenced
Material Available for Reclamation for the First 3 Years of Operations
Not Used

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure
Project Date: July 2017
Model Version: Version 1.4.1
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

A. Earthwork/Recontouring				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$519,480	\$1,820,631	\$0	\$2,340,111
Well Abandonment	\$721,996	\$1,606,040	\$95,715	\$2,423,751
Pits	\$25,794	\$113,226	N/A	\$139,020
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings	\$0	\$0	\$0	\$0
Process Ponds	\$25,019	\$98,463	\$0	\$123,482
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Landfills	\$0	\$0	\$0	\$0
Tailings	\$869,703	\$3,642,708	\$0	\$4,512,411
Foundation & Buildings Areas	\$44,822	\$203,019	\$0	\$247,841
Yards, Etc.	\$980,461	\$4,030,624	\$0	\$5,011,085
Drainage & Sediment Control	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Generic Material Hauling	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Other User Costs (from Other User sheet)	\$108,001	\$0	\$980,012	\$1,088,014
Other**				\$0
Subtotal	\$22,491,252	\$44,550,491	\$13,248,853	\$80,290,596
Mob/Demob if included in Other User sheet	\$1,404,320	\$2,808,640	\$0	\$4,212,960
Mob/Demob				\$0
Subtotal "A"	\$23,895,572	\$47,359,131	\$13,248,853	\$84,503,556
B. Revegetation/Stabilization				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$20,022	\$5,793	\$93,690	\$119,505
Well Abandonment				N/A
Pits	\$1,399	\$404	\$2,781	\$4,584
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings				N/A
Process Ponds	\$338	\$98	\$486	\$922
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$102,204	\$29,565	\$203,082	\$334,851
Landfills	\$0	\$0	\$0	\$0
Tailings	\$74,126	\$21,443	\$105,970	\$201,539
Foundation & Buildings Areas	\$7,843	\$2,269	\$1,584	\$11,696
Yards, Etc.	\$181,543	\$52,517	\$360,547	\$594,607
Drainage & Sediment Control	\$11,840	\$3,424	\$17,110	\$32,374
Generic Material Hauling	\$6,048	\$1,750	\$12,019	\$19,817
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "B"	\$405,363	\$117,262	\$797,269	\$1,319,895
C. Detoxification/Water Treatment/Disposal of Wastes**				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Process Ponds/Sludge				\$0
Heaps				\$0
Dumps (Waste & Landfill)				\$0
Tailings				\$0
Surplus Water Disposal				\$0
Monitoring				\$0
Miscellaneous				\$0
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
Pumping (from Solution Mgmt sheet)	\$0	\$50,722,404	N/A	\$50,722,404
Evaporation (from Solution Mgmt sheet)	\$0	\$0	\$0	\$0
Treatment (from Solution Mgmt sheet)	\$0	\$704,386,004	\$19,008,405	\$723,394,409
Decontamination (from Solution Mgmt sheet)	\$118,389	\$13,771	\$0	\$132,160
Other User Costs (from Other User sheet)	\$115,954	\$16,002,336	\$1,805,472	\$17,923,761
Other**				\$0
Subtotal "C"	\$284,869	\$771,170,582	\$21,013,977	\$792,469,428
D. Structure, Equipment and Facility Removal, and Misc.				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Foundation & Buildings Areas	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$90,283	\$195,081	\$0	\$285,364
Fence Removal	\$0	\$0	\$0	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert Removal	\$0	\$0	N/A	\$0
Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Powerline Removal	\$856,945			\$856,945
Transformer Removal	\$106,026			\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Misc. Costs	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$2,019,185	\$1,478,142	\$684,000	\$4,181,327
Other**				\$0
Subtotal "D"	\$12,908,550	\$5,741,972	\$684,000	\$19,334,523
E. Monitoring				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Reclamation Monitoring and Maintenance	\$270,044	\$428,440	\$64,434	\$762,918
Ground and Surface Water Monitoring	\$15,846	\$1,202	\$23,363	\$40,411
Other User Costs (from Other User sheet)	\$1,750,000	\$178,345	\$2,263,962	\$4,192,307
Subtotal "E"	\$2,035,890	\$607,987	\$2,351,759	\$4,995,636
F. Construction Management & Support				
	Labor	Equipment ⁽²⁾	Materials	Total
Construction Management	\$4,160,033	\$548,076	N/A	\$4,708,109
Construction Support	\$0	\$0	\$0	\$0
Road Maintenance	\$1,983,312	\$2,239,164	\$0	\$4,222,476
Other User Costs (from Other User sheet)	\$14,026,364	\$17,093,016	\$0	\$31,119,380
Other**				\$0
Subtotal "F"	\$20,169,709	\$19,880,256	\$0	\$40,049,965
G. Closure Planning, G&A, Human Resources				
			Include?	Total
Closure Planning				\$0
General & Administration				\$0
Human Resources				\$128,770,832
Other User Costs (from Other User sheet)	\$70,976,381	\$14,197,040	\$0	\$85,173,421
Other**				\$0

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure

Project Date: July 2017

Model Version: Version 1.4.1

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Subtotal "G"	\$70,976,381	\$14,197,040	\$0	\$213,944,253
Subtotal Operational & Maintenance Costs	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials ⁽³⁾	Total
Subtotal A through G	\$130,676,334	\$859,074,230	\$38,095,858	\$1,156,617,256

** Other Operator supplied costs - additional documentation required.

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure
Project Date: July 2017
Model Version: Version 1.4.1
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Indirect Costs				Include?	Total	
1. Engineering, Design and Construction (ED&C) Plan (7)					\$46,264,690	
2. Contingency (8)					\$46,264,690	
3. Insurance (9)					\$1,960,145	
4. Performance Bond (10)					\$34,698,518	
5. Contractor Profit (11)					\$115,661,726	
6. Contract Administration (12)					\$69,397,035	
7. Government Indirect Cost (13)					\$0	
Subtotal Add-On Costs					\$314,246,804	
Total Indirect Costs as % of Direct Cost					27%	
GRAND TOTAL					\$1,470,864,060	
Administrative Cost Rates (%)						
		Cost Ranges for Indirect Cost Percentages				
		<=	<=	<=	>	
1. Engineering, Design and Construction (ED&C) Plan (7)		\$500,000	\$2,500,000	\$25,000,000	\$25,000,000	Small Plan
Variable Rate		8%	6%		4%	0%
2. Contingency (8)		\$500,000	\$5,000,000	\$50,000,000	\$50,000,000	Small Plan
Variable Rate		10%	8%	6%	4%	0%
3. Insurance (9)		1.5% of labor costs				
4. Bond (10)		3.0% of the O&M costs if O&M costs are >\$100,000				
5. Contractor Profit (11)		10% of the O&M costs				
		<=	<=	<=	>	
6. Contract Administration (12)		\$1,000,000	\$25,000,000		\$25,000,000	
Variable Rate		10%	8%		6%	
0		0% of contract administration				

RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES
NOTE :

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Cost Schedule and Financial Analysis

Engineering, Design and Construction Plan (%)	4%
Contingency (%)	4.0%
Contractor OH and Profit (CP)(%):	10%
Contract Administration (%)	6%
Show how many years in schedule (10 to 100)	100 ÷

<<< Set years and click "Set Years" button

[illegible]

Hydrocarbon Contaminated Soils			\$	-	\$	218,637										\$	54,659	\$	54,659	\$	54,659	
Pumping (from Solution Mgmt sheet)			\$	-	\$	50,722,404										\$	63,696	\$	63,696	\$	158,700	
Evaporation (from Solution Mgmt sheet)			\$	-	\$	-																
Treatment (from Solution Mgmt sheet)			\$	-	\$	723,394,409											\$	11,510,474	\$	6,487,501	\$	6,487,501
Decontamination (from Solution Mgmt sheet)			\$	-	\$	132,160											\$	44,053	\$	44,053	\$	44,053
Other User Costs (from Other User sheet)			\$	-	\$	17,923,761											\$	6,845,328	\$	1,573,565	\$	9,504,868
Other**			\$	-	\$	-																
Subtotal "C"			\$	-	\$	792,469,428	\$	-	\$	-	\$	-	\$	-	\$	-	\$	63,696	\$	63,696	\$	18,632,729

D. Structure, Equipment and Facility Removal, and Misc.

Foundation & Buildings Areas		\$	-	\$	11,703,345													\$4,478,103	\$4,478,103	\$2,747,140			
Other Demolition		\$	-	\$	-																		
Equipment Removal		\$	-	\$	285,364													\$285,364					
Fence Removal		\$	-	\$	-																		
Fence Installation		\$	-	\$	-																		
Culvert Removal		\$	-	\$	-																		
Pipe Removal		\$	-	\$	169,756															\$169,756			
Powerline Removal		\$	-	\$	856,945															\$856,945			
Transformer Removal		\$	-	\$	106,026															\$106,026			
Rip-rap, rock lining, gabions		\$	-	\$	2,031,760													\$1,410,672	\$621,088				
Other Misc. Costs		\$	-	\$	-																		
Other User Costs (from Other User sheet)		\$	-	\$	4,181,327													\$1,954,724		\$226,602			
Other**		\$	-	\$	-																		
Subtotal "D"		\$	-	\$	19,334,523	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	8,128,863	\$	5,099,190	\$	4,106,469

E. Monitoring

Reclamation Monitoring and Maintenance	\$	-	\$	762,918													\$190,730	\$190,730	\$190,730			
Ground and Surface Water Monitoring (calculated from user input in Monitoring Sheet)	\$	-	\$	40,411													\$	40,411	\$	-	\$	-
Other User Costs (from Other User sheet)	\$	-	\$	4,192,307														\$416,263	\$	416,263	\$	416,263
Subtotal "E"	\$	-	\$	4,995,636	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	647,403	\$	606,992	\$	606,992

F. Construction Management & Support

Construction Management		\$	-	\$	4,708,109																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

G. Closure Planning, G&A, Human Resources

Closure Planning		\$	-	\$	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Subtotal Operational & Maintenance Costs

Subtotal A through G	\$ -	\$ 1,156,617,256	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 844,486	\$ 844,486	\$ 60,706,948	\$ 35,351,279	\$ 43,490,714

Indirect Costs

1. Engineering, Design and Construction (ED&C) Plan (7)	\$	-	\$	46,264,690									\$33,779	\$2,428,278	\$1,414,051	\$1,739,629						
2. Contingency (8)			\$	46,264,690	\$	-	\$	-	\$	-	\$	-	\$	33,779	\$	33,779	\$	2,428,278	\$	1,414,051	\$	1,739,629
3. Insurance (9)	\$	-	\$	1,960,145										\$1,431	\$102,881	\$59,911	\$73,705					
4. Performance Bond (10)	\$	-	\$	34,698,518										\$25,335	\$1,821,208	\$1,060,538	\$1,304,721					
5. Contractor Profit (11)			\$	115,661,726	\$	-	\$	-	\$	-	\$	-	\$	84,449	\$	84,449	\$	6,070,695	\$	3,535,128	\$	4,349,071
6. Contract Administration (12)			\$	69,397,035	\$	-	\$	-	\$	-	\$	-	\$	50,669	\$	50,669	\$	3,642,417	\$	2,121,077	\$	2,609,443
7. Government Indirect Cost (13)	\$	-	\$	-																		
Subtotal Add-On Costs	\$	-	\$	314,246,804	\$	-	\$	-	\$	-	\$	-	\$	168,897	\$	229,442	\$	16,493,757	\$	9,604,756	\$	11,816,198

Grand Total (Undiscounted)

	\$	-	\$	1,470,864,060	\$	-	\$	-	\$	-	\$	-	\$	-	\$	1,013,384	\$	1,073,929	\$	77,200,705
Inflation Adjustment (Future Value = FV)	FV = Se ^(rt)				\$	-	\$	-	\$	-	\$	-	\$	-	\$	1,013,384	\$	1,073,929	\$	77,200,705
Market Risk Adjustment	(MR x FV)				\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Future Value (Fv _{adj})	Fv _{adj} = (FV + MR)				\$	-	\$	-	\$	-	\$	-	\$	-	\$	1,013,384	\$	1,073,929	\$	77,200,705
Net Present Value (PV)	PV = FV _{adj} /((1+i) ^t	\$	1,470,864,060		\$	-	\$	-	\$	-	\$	-	\$	-	\$	1,013,384	\$	1,073,929	\$	77,200,705

Grand Total (Undiscounted)		\$	1,470,864,060
Grand Total (Inflation Adjusted) (FV)		\$	1,470,864,060
Grand Total Market Risk Adjusted (Fv _{adj})		\$	1,470,864,060
Grand Total Net Present Value (NPV)		\$	1,470,864,060

96	97	98	99	100	TOTAL	Comments
97	98	99	100	101		
					\$ -	
					\$ -	
					\$ 2,340,111	
					\$ 2,423,751	
					\$ 139,020	
					\$ -	
					\$ -	
				\$ 123,482	\$ 123,482	
					\$ -	
					\$ 8,677,651	
					\$ -	
					\$ 4,512,411	
					\$ 247,841	
					\$ 5,011,085	
					\$ 28,487,706	
					\$ 27,239,524	
					\$ 1,088,014	
					\$ -	
					\$ 4,212,960	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 123,482	\$ 84,503,556	

					\$ -	
					\$ -	
					\$ 119,505	
					\$ -	
					\$ 4,584	
					\$ -	
					\$ -	
				\$ 922	\$ 922	
					\$ -	
					\$ 334,851	
					\$ -	
					\$ 201,539	
					\$ 11,696	
					\$ 594,607	
					\$ 32,374	
					\$ 19,817	
					\$ -	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 922	\$ 1,319,895	

					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ 78,057	
					\$ -	
					\$ -	

					\$ 218,637	
\$ 164,470	\$ 164,470	\$ 164,470	\$ 164,470	\$ 35,543,987	\$ 50,722,404	
					\$ -	
\$ 1,664,699	\$ 1,664,699	\$ 1,664,699	\$ 45,164,699	\$ 372,099,202	\$ 723,394,409	
					\$ 132,160	
					\$ 17,923,761	
					\$ -	
\$ 1,829,169	\$ 1,829,169	\$ 1,829,169	\$ 45,329,169	\$ 407,643,188	\$ 792,469,428	

					\$ 11,703,345	
					\$ -	
					\$ 285,364	
					\$ -	
					\$ -	
					\$ -	
					\$ 169,756	
					\$ 856,945	
					\$ 106,026	
					\$ 2,031,760	
					\$ -	
				\$1,500,000	\$ 4,181,327	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 19,334,523	

					\$ 762,918	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,411	
\$11,724	\$11,724	\$11,724	\$11,724	\$1,406,838	\$ 4,192,307	
\$ 11,724	\$ 11,724	\$ 11,724	\$ 11,724	\$ 1,406,838	\$ 4,995,636	

					\$ 4,708,109	
					\$ -	
					\$ 4,222,476	
\$146,100	\$146,100	\$146,100	\$146,100	\$18,554,748	\$ 31,119,380	
					\$ -	
\$ 146,100	\$ 146,100	\$ 146,100	\$ 146,100	\$ 18,554,748	\$ 40,049,965	

					\$ -	
					\$ -	
\$566,686	\$566,686	\$566,686	\$566,686	\$72,276,142	\$ 128,770,832	
\$367,640	\$367,640	\$367,640	\$367,640	\$44,943,101	\$ 85,173,421	
					\$ -	
\$ 934,326	\$ 934,326	\$ 934,326	\$ 934,326	\$ 117,219,243	\$ 213,944,253	

\$ 2,921,319	\$ 2,921,319	\$ 2,921,319	\$ 46,421,319	\$ 546,448,421	\$ 1,156,617,256	

\$116,853	\$116,853	\$116,853	\$1,856,853	\$21,891,716	\$ 46,264,690	
\$ 116,853	\$ 116,853	\$ 116,853	\$ 1,856,853	\$ 21,857,937	\$ 46,264,690	
\$4,951	\$4,951	\$4,951	\$78,671	\$927,509	\$ 1,960,145	
\$87,640	\$87,640	\$87,640	\$1,392,640	\$16,418,787	\$ 34,698,518	
\$ 292,132	\$ 292,132	\$ 292,132	\$ 4,642,132	\$ 54,644,842	\$ 115,661,726	
\$ 175,279	\$ 175,279	\$ 175,279	\$ 2,785,279	\$ 32,786,905	\$ 69,397,035	
					\$ -	
\$ 793,707	\$ 793,707	\$ 793,707	\$ 12,612,427	\$ 148,527,697	\$ 314,246,804	

\$ 3,715,026	\$ 3,715,026	\$ 3,715,026	\$ 59,033,746	\$ 694,976,119	\$ 1,470,864,060	

\$ 3,715,026	\$ 3,715,026	\$ 3,715,026	\$ 59,033,746	\$ 694,976,119	\$ 1,470,864,060	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$ 3,715,026	\$ 3,715,026	\$ 3,715,026	\$ 59,033,746	\$ 694,976,119	\$ 1,470,864,060	
\$ 3,715,026	\$ 3,715,026	\$ 3,715,026	\$ 59,033,746	\$ 694,976,119	\$ 1,470,864,060	

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - User Input - Pumping														Operating Period			User Overrides	
	Description (required)	ID Code	Water Type (select)	Management Type (select)	Capital Cost \$	Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Hrs/Day	Days/ Month	Number of Months	Crew Size	Power Cost (\$/kWh)	
1	TSF SRS to ACMA Pit (Maintenance)		Contact Water	Active		56.85	5,300	80.0	450	HDPE	80	20	24.0	30.4	24	0		
2	TSF to WTP (Physical Closure)		Contact Water	Active		161.41	1,800	42.0	650	HDPE	80	20	24.0	30.4	60	0		
3	TSF SRS to ACMA Pit (Physical Closure)		Contact Water	Active		56.85	5,300	80.0	450	HDPE	80	20	24.0	30.4	60	0		
4	TSF SRS to ACMA Pit (Pit Lake Fills)		Contact Water	Active		56.85	5,300	80.0	450	HDPE	80	20	24.0	30.4	36	0		
5	TSF Consolidation to Pit (Pit Lake Fills)		Contact Water	Active		1.26	4,000	0.0	450	HDPE	80	20	24.0	30.4	36	0		
6	TSF SRS to ACMA Pit (Post Closure)		Contact Water	Active		56.85	2,500	80.0	450	HDPE	80	20	24.0	30.4	2,436	0	0.2	
7	TSF Consolidation to Pit (Post Closure)		Contact Water	Active		1.26	4,000	0.0	450	HDPE	80	20	24.0	30.4	2,436	0	0.2	
8	Pit to WTP (Post Closure 1st 30 yrs - WTP at Mill)		Contact Water	Active		167.22	3,500	195.5	650	HDPE	80	20	24.0	30.4	276	0	0.2	
9	Pit to WTP (Post Closure - WTP at pit)		Contact Water	Active		167.22	100	20.5	650	HDPE	80	20	24.0	30.4	2,160	0	0.2	

Notes: 1. k (total of all losses related to valves, restrictions, etc.). Typically 8 -20. Not significant for longer pipes.
2. Default crew assumes crew of two laborers required during pumping hours

Assumes that tailings return line and pumps will be available for pumping surplus decant water to pit at end of mine life
Crews under Human Resources
Flow rates per User 12.
Line 6-8, Long term costs for electricity modified to assume diesel generator.

Static head to pump to lower elevations is set to zero.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - User Input - Forced Evaporation															Operating Period		
	Description (required)	ID Code	Water Type (select)	Management Type (select)	Forced Evaporation Method (select)	Capital Cost \$	Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Required Pressure at Outlet mH2O	Hrs/Day	Days/Month	Number of Months

Notes: 1. Default crew assumes crew of two laborers required during pumping hours
3. Assumes 1-1.5 ton truck for every 2 laborers

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - Water Treatment											Operating Period	
	Description (required)	ID Code	Water Type (select)	Treatment Type (select)	Treatment Method	Monthly Quantity m3	Treatment Labor Crew Size per Shift	Capital Cost \$	Consumable Cost/ m3 \$	Treatment Operating Cost/m3 \$	Number of Months	Hour per Day
1	Treatment of Plant Decontamination Rinsate		Contact Water	Active	Operating WTP	5,253	0			\$0.51	4.0	12.0
2	HDS Treatment (Closure Yr 3-7) TSF Flows		Contact Water	Active	HDS	423,953	0	\$5,000,000	\$0.75	\$0.08	60.0	24.0
3	HDS treatment (Closure Yr 11-220)		Contact Water	Active	HDS	439,213	0	\$348,000,000		\$0.30	2,520.0	24.0
4	RO treatment (Closure Yr 3-7) TSF Flows		Contact Water	Active	RO	423,953	0			\$0.44	60.0	24.0

Notes:

1. Use pumping section (above) to calculate pumping costs (including groundwater pumping).
2. Include initial materials (e.g. chemicals, organic substrate, etc.) in capital cost.
3. Treatment crew includes 1 foreman (crew defined by user above), 1 light truck if crew size > 0
4. Assumes active treatment crew works 8 hr/day, 365 days/year.
5. Assumes 1 truck per each two employees per shift

Assumes operational WTP will be available at the same operating cost/m3 as during operations

Treatment and pumping Crews under Human Resources

RO Treatment Costs from Summary of Water Treatment Costs for Early Mine Closure (May 3, 2017) see email from J. Fuego.

HDS Capital Cost include \$5M to repurpose existing mill components and 1 full cost rebuild (\$87M and 6 replacements at 1/2 rebuild cost)

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - User Input - Decontamination																	
														Operating Period		User Overrides	
	Description (required)	ID Code	Management Type (select)	Type	Disposal Location	Capital Cost \$	Pumping Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Number of Work Days days	Pumping Hrs/Day	Crew Size	Power Cost (\$/kWh)
1	Plant decontamination		Active	Process - Plant & Buildings			5.00	1,200	0.0	300	HDPE	80	8	122.0	12.0		

- Notes:
- 1. Assumes triple rinse of all piping, tanks and vessels requiring decontamination
 - 2. Standard crew includes 2 laborers and 1 foreman
 - 3. Assumes 1-1.5 ton truck for every 2 laborers
 - 4. Assumes crew works 8 hr/day



Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Water Management - Assumptions & Calculations																													
<table><tr><th colspan="2">Manning's Roughness Coefficient</th></tr><tr><th>Pipe material</th><th>Manning n</th></tr><tr><td>HDPE</td><td></td></tr><tr><td>ID < 4" (100 mm)</td><td>0.011</td></tr><tr><td>ID ≥ 4 in (100 mm) < 10 in (250 mm)</td><td>0.01</td></tr><tr><td>ID ≥ 10 in (250 mm)</td><td>0.009</td></tr><tr><td>PVC</td><td></td></tr><tr><td>ID < 4" (100 mm)</td><td>0.011</td></tr><tr><td>ID ≥ 4 in (100 mm) < 10 in (250 mm)</td><td>0.01</td></tr><tr><td>ID ≥ 10 in (250 mm)</td><td>0.009</td></tr><tr><td>Brass</td><td>0.011</td></tr><tr><td>Cast Iron</td><td>0.013</td></tr><tr><td>Smooth Steel</td><td>0.012</td></tr><tr><td>Asbestos Cement</td><td>0.011</td></tr></table>		Manning's Roughness Coefficient		Pipe material	Manning n	HDPE		ID < 4" (100 mm)	0.011	ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01	ID ≥ 10 in (250 mm)	0.009	PVC		ID < 4" (100 mm)	0.011	ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01	ID ≥ 10 in (250 mm)	0.009	Brass	0.011	Cast Iron	0.013	Smooth Steel	0.012	Asbestos Cement	0.011
Manning's Roughness Coefficient																													
Pipe material	Manning n																												
HDPE																													
ID < 4" (100 mm)	0.011																												
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Brass	0.011																												
Cast Iron	0.013																												
Smooth Steel	0.012																												
Asbestos Cement	0.011																												
<table><tr><th>Water Treatment Costs</th></tr><tr><td>Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)</td></tr><tr><td>CapEx = User Entered Value</td></tr><tr><td>Consumable costs = cost of treatment chemicals or materials based quantity treated</td></tr><tr><td>Labor Cost = No. Months x Days/mo. x [(Supervisor Cost x 8 hrs) + (Laborer Cost x Crew Size x Hours/day)]</td></tr><tr><td>Operating Cost = Fuel, power, maintenance or other costs calculated based on quantity treated</td></tr><tr><td>Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]</td></tr><tr><td>No. Crew Trucks = 1 per each two laborers per shift</td></tr></table>		Water Treatment Costs	Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)	CapEx = User Entered Value	Consumable costs = cost of treatment chemicals or materials based quantity treated	Labor Cost = No. Months x Days/mo. x [(Supervisor Cost x 8 hrs) + (Laborer Cost x Crew Size x Hours/day)]	Operating Cost = Fuel, power, maintenance or other costs calculated based on quantity treated	Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]	No. Crew Trucks = 1 per each two laborers per shift																				
Water Treatment Costs																													
Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)																													
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Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]																													
No. Crew Trucks = 1 per each two laborers per shift																													

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - Pumping																	
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Monthly Operating Hours hrs	Pump Capital Cost \$	Total Operating Cost \$	Total Labor Cost \$	Total Crew Equipment Cost \$	Total Cost \$	Cost/ m3 \$
1	TSF SRS to ACMA Pit (Maintenance)	56.85	0.009	20	0.357	1	81	80	56.53	76	730	\$0	\$127,392	\$0	\$0	\$127,392	\$0.04
2	TSF to WTP (Physical Closure)	161.41	0.009	20	0.486	1	43	80	84.32	114	730	\$0	\$475,020	\$0	\$0	\$475,020	\$0.02
3	TSF SRS to ACMA Pit (Physical Closure)	56.85	0.009	20	0.357	1	81	80	56.53	76	730	\$0	\$318,480	\$0	\$0	\$318,480	\$0.04
4	TSF SRS to ACMA Pit (Pit Lake Fills)	56.85	0.009	20	0.357	1	81	80	56.53	76	730	\$0	\$191,088	\$0	\$0	\$191,088	\$0.04
5	TSF Consolidation to Pit (Pit Lake Fills)	1.26	0.009	20	0.008	0	0	80	0.00	0	730	\$0	\$0	\$0	\$0	\$0	\$0.00
6	TSF SRS to ACMA Pit (Post Closure)	56.85	0.009	20	0.357	1	81	80	56.16	76	730	\$0	\$19,963,020	\$0	\$0	\$19,963,020	\$0.05
7	TSF Consolidation to Pit (Post Closure)	1.26	0.009	20	0.008	0	0	80	0.00	0	730	\$0	\$0	\$0	\$0	\$0	\$0.00
8	Pit to WTP (Post Closure 1st 30 yrs - WTP at Mill)	167.22	0.009	20	0.504	1	197	80	402.82	541	730	\$0	\$16,223,004	\$0	\$0	\$16,223,004	\$0.13
9	Pit to WTP (Post Closure - WTP at pit)	167.22	0.009	20	0.504	0	21	80	42.59	58	730	\$0	\$13,424,400	\$0	\$0	\$13,424,400	\$0.01
											6,566	\$0	\$50,722,404	\$0	\$0	\$50,722,404	

Notes:

- Assumes 2 man labor crew unless user overrides default.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - Forced Evaporation																	
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Annual Operating Hours hrs	Evaporator/ Pump Capital Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Power Cost \$	Total Cost \$	Cost/ m3 \$
												\$0	\$0	\$0	\$0	\$0	

Notes:
1. Assumes 2 man labor crew unless user overrides default.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - Water Treatment								
	Description (required)	Total Quantity Treated m3	Capital Cost \$	Total Consumables Cost \$	Total Labor Cost \$	Total Equipment + Operating Cost \$	Total Treatment Cost \$	Cost/ m3 \$
1	Treatment of Plant Decontamination Rinsate	21,012	\$0	\$0	\$0	\$22,973	\$22,973	\$1.093
2	HDS Treatment (Closure Yr 3-7) TSF Flows	25,437,171	\$5,000,000	\$19,008,405	\$0	\$2,114,457	\$26,122,862	\$0.830
3	HDS treatment (Closure Yr 11-220)	1,105,817,144	\$348,000,000	\$0	\$0	\$337,933,932	\$685,933,932	\$0.305
4	RO treatment (Closure Yr 3-7) TSF Flows	25,437,171	\$0	\$0	\$0	\$11,314,642	\$11,314,642	\$0.445
		1,157,712,498	\$353,000,000	\$19,008,405	\$0	\$351,386,004	\$723,394,409	

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$50,722,404	N/A	\$0	\$50,722,404
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$0	\$351,386,004	\$19,008,405	\$353,000,000	\$723,394,409
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$118,389	\$402,122,179	\$19,008,405	\$353,000,000	\$774,248,973

Solution/Water Management - Decontamination																
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Total Operating Hours hrs	Pump Capital Cost \$	Total Operating Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Cost \$
1	Plant decontamination	5.00	0.009	8	0.071	0	0	80	0.00	0	1,464	\$0	\$0	\$118,389	\$13,771	\$132,160
											1,464	\$0	\$0	\$118,389	\$13,771	\$132,160

Closure Cost Estimate Other User

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Other Cost Items Calculated Elsewhere										
	Description (required)	ID Code	Facility Type	Quantity	Units	Total Capital Cost \$	Material Unit Cost \$	Labor Unit Cost \$	Equipment/ Operating Unit Cost \$	Cost Type (select)
1	LLDPE Liner for WRF Diversion Ditch		Waste Rock Dump	40,500	m2				\$12.12	C. Water Management
2	Bulk Tank Demolition and Burial (User Sheet 2)		Equipment Removal	1	LS			\$342,048.35	\$228,340.57	D. Facility & Equipment
3	Miscellaneous Hazardous Waste Disposal (see User Sheet 3)		Equipment Removal	1	LS			\$909,556.90	\$454,778.45	D. Facility & Equipment
4	Jung Port Sheet Piling Removal. (User Sheet 7)		Off Site Facilities	1	ea.			\$99,579.75	\$127,022.52	D. Facility & Equipment
5	Bag House Dust Disposal		Hazardous Materials	1	ls	\$20,000				D. Facility & Equipment
6	Tailings embankment spillway		Surface Channels	579,768	ton		\$0.40	\$0.20	\$0.40	C. Water Management
7	Closure Crew Camp and Transporation Costs		Closure G & A	5	years			\$1,004,640.00	\$203,320.00	G. Closure Planning, G&
8	Solution Mgmt Crew Transportation Costs	LT	Closure G & A	213	years			\$305,760.00	\$61,880.00	G. Closure Planning, G&
9	Solution Mgmt Crew 2 year maintenance (Reduced Crew)		Closure G & A	2	yrs			\$413,150.40		G. Closure Planning, G&
10	Tailings causeway Liner (hvy biaxial geogrid)		Tailings Impoundments	400,005	M2		\$2.45	\$0.27		A. Earthwork
11	Equipment Mobilization/Demobilization		Closure G & A	1	ls			\$1,404,320.00	\$2,808,640.00	Mob/Demob
12	Crooked Creek span bridge replacement cost every 50 years	LT	Other Facilities	4	ls		\$166,000.00	\$167,000.00	\$167,000.00	D. Facility & Equipment
13	Manholes for TSF consolidation		Tailings Impoundments	1,000	each				\$5,774.70	C. Water Management
14	Mine Year 3 - Dredge capex		Tailings Impoundments	5	ea				\$619,000.00	C. Water Management
15	Mine Year 3 - Pipe+floats capex		Tailings Impoundments	5	ea				\$248,100.00	C. Water Management
16	Mine Year 3 - Dredge opex including depreciation		Tailings Impoundments	2	years				\$718,872.55	C. Water Management
17	Mine Year 3 - Booster capex		Tailings Impoundments	5	each				\$594,000.00	C. Water Management
18	Mine Year 3 - Booster opex including depreciation		Tailings Impoundments	2	years				\$380,811.64	C. Water Management
19	WTP Crew Camp Construction	LT	Water Treatment - Contac	1	ea.	\$1,573,565				C. Water Management
20	Long Term Monitoring and Sampling (User 10)	LT	Monitoring/Regulatory Re	1	ea.		\$2,263,961.80		\$53,345.00	E. Monitoring
21	Geotechnical Dam Monitoring (TSF and CWD)		Monitoring/Regulatory Re	5	Yrs			\$350,000.00		E. Monitoring
22	Geotechnical Dam Instrumentation (TSF and CWD)		Monitoring/Regulatory Re	5	Yrs				\$25,000.00	E. Monitoring
23	Long Term Road/Airport Maintenance		Security & Maintenance	213	Yrs			\$65,851.48	\$80,248.90	F. Construction Mgmt
						\$1,593,565	\$4,139,881	\$90,400,205	\$51,757,518	

Notes: Capital cost is lump sum (i.e. not multiplied by the quantity).
 Material, Labor and Equipment/Operating costs are unit costs (i.e. multiplied by the quantity).
 Item 10, assumed division of labor, equipment and materials.
 Item 6 Tailings embankment spillway excavation costs in 'Sediment and Drainage Control.'

Closure Cost Estimate Other User

Total Cost \$	Comments
\$490,860	Cost from DGLLC; includes excavation, liner bedding, LLDPE liner, and riprap.
\$570,389	See User Sheet 2
\$1,364,335	See User Sheet 3
\$226,602	From "Port Sheet pile estimate.xlsx"
\$20,000	From June 8, 2011 email from Alexandra J Kozak.
\$579,768	Drilling and blasting costs from costs developed by DGLLC
\$6,039,800	See User Sheet 8 and 9
\$78,307,320	See User Sheet 8
\$826,301	2 Laborers plus one supervisor - 24 hour coverage, costs from Human Resources sheet
\$1,088,014	See Email in User Sheet 11, labor and equipment is estimated, area proportioned for current tailings
\$4,212,960	See User Sheet 5
\$2,000,000	e-mail James Fueg 5/27/2015
\$5,774,700	Per quote from Plasson USA, April 28, 2016 (SP-7982.pdf)
\$3,095,000	See User 11
\$1,240,500	See User 11
\$1,437,745	See User 11
\$2,970,000	See User 11
\$761,623	See User 11
\$1,573,565	From Donlin Gold Trust Fund Model, June 3, 2015 excel file
\$2,317,307	See User 10
\$1,750,000	Based on Red Dog Bond Cost
\$125,000	Based on Red Dog Bond Cost
\$31,119,380	See User 1
\$147,891,169	

Closure Cost Estimate
Human Resources

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Human Resources	
	Totals
Salaries & Benefits	\$128,770,832
Severance & Relocation	\$0
TOTALS	\$128,770,832

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Human Resources - Salary & Benefits																						
	Job Description (required)	Avg. Annual Salary (incl. benefits) \$	Type	Closure Year 1 #	Closure Year 2 #	Closure Year 3 #	Closure Year 4 #	Closure Year 5 #	Closure Year 6 #	Closure Year 7 #	Closure Year 8 #	Closure Year 9 #	Closure Year 10 #	Closure Year 11 #	Closure Year 12 #	Closure Year 13 #	Closure Year 14 #	Closure Year 15 #	Closure Year 16 #	Closure Year 17 #	Closure Year 18 #	Closure Year 19 #
1	Environmental - Environmental Engineer	\$164,000	Monitoring/Regulatory Reporting	1	1	1	1	1														
2	Environmental - Environmental Technician	\$164,000	Monitoring/Regulatory Reporting	4	4	4	4	4														
3	Soln Mgmt Rotation 1 - laborer 1	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Soln Mgmt Rotation 1 - laborer 2	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Soln Mgmt Rotation 1 - laborer 3	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Soln Mgmt - supervisor	\$106,080	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Soln Mgmt Rotation 2 - laborer 1	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Soln Mgmt Rotation 2 - laborer 2	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Soln Mgmt Rotation 2 - laborer 3	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SUBTOTAL				\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686

Notes:

Human Resources - Severance & Outplacement Benefits																						
	Job Description	Severance & Outplacement Cost \$		Closure Year 1 #	Closure Year 2 #	Closure Year 3 #	Closure Year 4 #	Closure Year 5 #	Closure Year 6 #	Closure Year 7 #	Closure Year 8 #	Closure Year 9 #	Closure Year 10 #	Closure Year 11 #	Closure Year 12 #	Closure Year 13 #	Closure Year 14 #	Closure Year 15 #	Closure Year 16 #	Closure Year 17 #	Closure Year 18 #	Closure Year 19 #
1	Environmental - Environmental Engineer	\$0						1.0														
2	Environmental - Environmental Technician	\$0						4.0														
3	Soln Mgmt Rotation 1 - laborer 1	\$0																				
4	Soln Mgmt Rotation 1 - laborer 2																					
5	Soln Mgmt Rotation 1 - laborer 3																					
6	Soln Mgmt - supervisor																					
7	Soln Mgmt Rotation 2 - laborer 1																					
8	Soln Mgmt Rotation 2 - laborer 2																					
9	Soln Mgmt Rotation 2 - laborer 3																					
SUBTOTAL				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Notes:

1. Assumes Severance + Outplacement

Closure Cost Estimate
Human Resources

Closure Year 20 #	Closure Year 21 #	Closure Year 22 #	Closure Year 23 #	Closure Year 24 #	Closure Year 25 #	Closure Year 26 #	Closure Year 27 #	Closure Year 28 #	Closure Year 29 #	Closure Year 30 #	Closure Year 31 #	Closure Year 32 #	Closure Year 33 #	Closure Year 34 #	Closure Year 35 #	Closure Year 36 #	Closure Year 37 #	Closure Year 38 #	Closure Year 39 #	Closure Year 40 #	Closure Year 41 #	Closure Year 42 #
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686

Closure Year 20 #	Closure Year 21 #	Closure Year 22 #	Closure Year 23 #	Closure Year 24 #	Closure Year 25 #	Closure Year 26 #	Closure Year 27 #	Closure Year 28 #	Closure Year 29 #	Closure Year 30 #	Closure Year 31 #	Closure Year 32 #	Closure Year 33 #	Closure Year 34 #	Closure Year 35 #	Closure Year 36 #	Closure Year 37 #	Closure Year 38 #	Closure Year 39 #	Closure Year 40 #	Closure Year 41 #	Closure Year 42 #
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Closure Cost Estimate
Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsoil Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - User Input																					
You must fill in ALL green cells in this section for each dump, lift or dump category																					
Facility Description				Physical - MANDATORY									Cover				Growth Media				
	Description (required)	ID Code	Type	Underlying Ground Slope % Grade	Ungraded Slope _H:1V	Final Slope _H:1V	Final Top Slope % Grade	Lift (dump) Height m	Mid-Bench Length m	Average Flat Area Long Dimension (ripping distance) m	Final (Regraded) Dump Footprint ha	Regrade Volume (1) (if calculated elsewhere) m3	Cover Thickness Slopes mm	Cover Thickness Flat Areas mm	Distance from Cover Borrow m	Slope from Dump to Cover Borrow % grade	Slope Growth Media Thickness mm	Flat Area Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Dump to Stockpile % grade	
1	WRDF (Operation Year 3 Configuration) - 1		Waste Rock Dump	0.0	1.4	3.0	1.0	18	2,212	2,000	13.27		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
2	WRDF (Operation Year 3 Configuration) - 2		Waste Rock Dump	0.0	1.4	3.0	1.0	18	2,338	2,000	45.04		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
3	WRDF (Operation Year 3 Configuration) - 3		Waste Rock Dump	0.0	1.4	3.0	1.0	27	2,302	2,000	111.77		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
4	WRDF (Operation Year 3 Configuration) - 4		Waste Rock Dump	0.0	1.4	3.0	1.0	27	671	1,000	41.48		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
5	WRDF (Operation Year 3 Configuration) - 5		Waste Rock Dump	0.0	1.4	3.0	1.0	18	1,772	2,000	74.82		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
6	WRDF (Operation Year 3 Configuration) - 6		Waste Rock Dump	0.0	1.4	3.0	1.0	25	657	1,000	54.16		305.0	305.0	5,000	-2.3	355.0	355.0	7,000	-1.9	
7	Ore Stockpile (Operation Year 3 Configuration) - 1		Ore Stockpile	0.0	1.4	3.0	1.0	21	607	2,000	22.58		305.0	305.0	3,500	-0.8	355.0	355.0	5,400	-0.9	
8	Ore Stockpile (Operation Year 3 Configuration) - 2		Ore Stockpile	0.0	1.4	3.0	1.0	5	829	1,000	13.01		305.0	305.0	3,500	-0.8	355.0	355.0	5,400	-0.9	

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Inputs per "Yr3_Mid-benches.xlsx"

Closure Cost Estimate Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsail Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each dump, lift or dump category																
		Grading				Cover		Growth Media		Revegetation								
	Description (required)	Dozing Material Condition (select)	Dump Material Type (select)	Grading Equipment Fleet (select)	Slot/Side-by- Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Slopes (select)	Seed Mix Flat Areas (select)	Mulch Slopes (select)	Mulch Flat Areas (select)	Fertilizer Slopes (select)	Fertilizer Flat Areas (select)	Slope Scarify Rip? (select)	Flat Area Scarify Rip? (select)	Scarify/Ripping Fleet (select)
1	WRDF (Operation Year 3 Configuration) - 1	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
2	WRDF (Operation Year 3 Configuration) - 2	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
3	WRDF (Operation Year 3 Configuration) - 3	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
4	WRDF (Operation Year 3 Configuration) - 4	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
5	WRDF (Operation Year 3 Configuration) - 5	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
6	WRDF (Operation Year 3 Configuration) - 6	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
7	Ore Stockpile (Operation Year 3 Configuration) - 1	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer
8	Ore Stockpile (Operation Year 3 Configuration) - 2	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	Mix 1	Mix 1			Chemical	Chemical	Yes	Yes	Large Dozer

Notes:

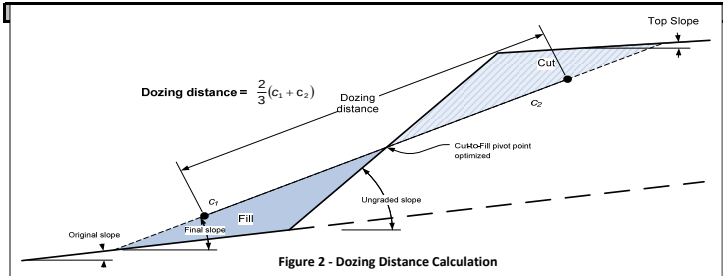
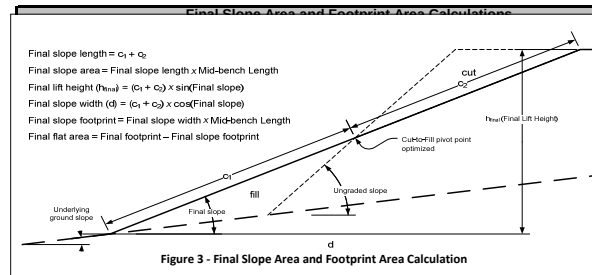
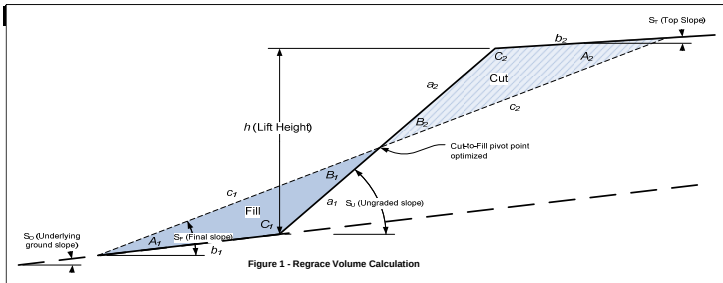
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Closure Cost Estimate Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsoil Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - Calculations



Ripping/Scarifying Calculations

Minimum 1 hr ripping/scarifying time per dump

Slopes:

Number of passes = Final slope length ÷ Grader width
 Travel distance = Number of passes x Mid-bench length
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
 Minimum 1 hr

Flat Areas:

Flat area width = Final flat area ÷ Average long dimensions
 Number of passes = Flat area width ÷ Grader width
 Travel distance = Number of passes x Average long dimensions
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation: Minimum 1 acre revegetation crew time per area

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsail Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	WRDF (Operation Year 3 Configuration) - 1	144,238	29	D10R	1,288	1.6	1.0	0.88	1.0	1,129	128	\$7,784	\$30,376	\$38,160
2	WRDF (Operation Year 3 Configuration) - 2	152,448	29	D10R	1,288	1.6	1.0	0.88	1.0	1,129	135	\$8,209	\$32,037	\$40,246
3	WRDF (Operation Year 3 Configuration) - 3	341,562	44	D10R	913	1.6	1.0	0.88	1.0	800	427	\$25,966	\$101,331	\$127,297
4	WRDF (Operation Year 3 Configuration) - 4	99,488	44	D10R	913	1.6	1.0	0.88	1.0	800	124	\$7,540	\$29,426	\$36,966
5	WRDF (Operation Year 3 Configuration) - 5	115,553	29	D10R	1,288	1.6	1.0	0.88	1.0	1,129	102	\$6,203	\$24,206	\$30,409
6	WRDF (Operation Year 3 Configuration) - 6	82,747	41	D10R	976	1.6	1.0	0.88	1.0	856	97	\$5,899	\$23,019	\$28,918
7	Ore Stockpile (Operation Year 3 Configuration) - 1	54,178	34	D10R	1,130	1.6	1.0	0.88	1.0	990	55	\$3,345	\$13,052	\$16,397
8	Ore Stockpile (Operation Year 3 Configuration) - 2	4,006	15	D10R	2,243	1.6	1.0	0.88	1.0	1,966	2	\$122	\$475	\$597
		994,220									1,070	\$65,068	\$253,922	\$318,990

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsail Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - Cover and Growth Media Costs																	
		Cover (lower layer)								Growth Media Placement							
	Description (required)	Cover Volume m3	Cover Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Cover Labor Cost \$	Cover Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Replacement Fleet	Fleet Productivity BCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsolling Cost \$
1	WRDF (Operation Year 3 Configuration) - 1	42,361	777D/992G	726	5	58	\$25,040	\$105,393	\$130,433	49,304	777D/992G	808	7	61	\$33,901	\$140,888	\$174,789
2	WRDF (Operation Year 3 Configuration) - 2	139,600	777D/992G	726	5	192	\$82,890	\$348,887	\$431,777	162,479	777D/992G	808	7	201	\$111,708	\$464,238	\$575,946
3	WRDF (Operation Year 3 Configuration) - 3	343,433	777D/992G	726	5	473	\$204,204	\$859,498	\$1,063,702	399,718	777D/992G	808	7	495	\$275,101	\$1,143,272	\$1,418,373
4	WRDF (Operation Year 3 Configuration) - 4	127,553	777D/992G	726	5	175	\$75,551	\$317,995	\$393,547	148,458	777D/992G	808	7	183	\$101,704	\$422,664	\$524,368
5	WRDF (Operation Year 3 Configuration) - 5	229,692	777D/992G	726	5	317	\$136,855	\$576,027	\$712,882	267,336	777D/992G	808	7	331	\$183,957	\$764,491	\$948,448
6	WRDF (Operation Year 3 Configuration) - 6	166,520	777D/992G	726	5	229	\$98,864	\$416,120	\$514,984	193,811	777D/992G	808	7	240	\$133,382	\$554,314	\$687,696
7	Ore Stockpile (Operation Year 3 Configuration) - 1	69,208	777D/992G	680	3	102	\$31,383	\$135,109	\$166,492	80,550	777D/992G	719	4	112	\$41,406	\$175,936	\$217,342
8	Ore Stockpile (Operation Year 3 Configuration) - 2	39,720	777D/992G	680	3	59	\$18,153	\$78,151	\$96,304	46,230	777D/992G	719	4	64	\$23,661	\$100,535	\$124,196
		1,158,087				1,605	\$672,940	\$2,837,181	\$3,510,121	1,347,886				1,687	\$904,820	\$3,766,338	\$4,671,158

Closure Cost Estimate Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$65,068	\$253,922	N/A	\$318,990
Cover Placement Cost	\$672,940	\$2,837,181	N/A	\$3,510,121
Topsail Placement Cost	\$904,820	\$3,766,338	N/A	\$4,671,158
Ripping/Scarifying Cost	\$36,182	\$141,200	N/A	\$177,382
Subtotal Earthworks	\$1,679,010	\$6,998,641	\$0	\$8,677,651
Revegetation Cost	\$102,204	\$29,565	\$203,082	\$334,851
TOTALS	\$1,781,214	\$7,028,206	\$203,082	\$9,012,502

Waste Rock Dumps - Scarifying/Revegetation Costs																
	Description (required)	Slope Area ha	Flat Area ha	Total Surface Area ha	Final Slope Length m	Flat Area Long Dimension m	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	WRDF (Operation Year 3 Configuration) - 1	12.67	1.21	13.88	57	2,000	D10R	19	2	\$1,277	\$4,984	\$6,261	\$3,739	\$1,082	\$7,425	\$12,246
2	WRDF (Operation Year 3 Configuration) - 2	13.40	32.37	45.77	57	2,000	D10R	20	51	\$4,318	\$16,849	\$21,167	\$12,320	\$3,564	\$24,480	\$40,364
3	WRDF (Operation Year 3 Configuration) - 3	19.93	92.67	112.60	87	2,000	D10R	32	146	\$10,824	\$42,241	\$53,065	\$30,309	\$8,768	\$60,225	\$99,302
4	WRDF (Operation Year 3 Configuration) - 4	5.90	36.02	41.82	87	1,000	D10R	9	57	\$4,013	\$15,662	\$19,675	\$11,257	\$3,256	\$22,368	\$36,881
5	WRDF (Operation Year 3 Configuration) - 5	10.15	65.15	75.30	57	2,000	D10R	15	102	\$7,115	\$27,765	\$34,880	\$20,271	\$5,864	\$40,275	\$66,410
6	WRDF (Operation Year 3 Configuration) - 6	5.22	49.37	54.59	80	1,000	D10R	8	78	\$5,230	\$20,409	\$25,639	\$14,695	\$4,251	\$29,198	\$48,144
7	Ore Stockpile (Operation Year 3 Configuration) - 1	4.08	18.62	22.70	67	2,000	D10R	6	29	\$2,128	\$8,306	\$10,434	\$6,108	\$1,766	\$12,142	\$20,016
8	Ore Stockpile (Operation Year 3 Configuration) - 2	1.29	11.74	13.03	16	1,000	D10R	2	19	\$1,277	\$4,984	\$6,261	\$3,505	\$1,014	\$6,969	\$11,488
		72.54	307.15	379.69				111	484	\$36,182	\$141,200	\$177,382	\$102,204	\$29,565	\$203,082	\$334,851

Notes: 1) Minimum total ripping hours = 1 (i.e. If total ripping hrs (slope + flat) < 1, then one hour of fleet time is assumed, regardless of acres shown in in scarifying table.)

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - User Input																		
You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment																		
Facility Description			Physical - MANDATORY								Cover				Growth Media			
	Description (required)	ID Code	Underlying Ground Slope % Grade	Ungraded Slope _H:1V	Final (Regraded) Embankment Slope _H:1V	Final Embankment Height m	Final Tailings Surface Area ha	Mid- Embankment or Ripping Length m	Embankment Regrade Volume (if calculated elsewhere) m3	Surface Regrade Volume (calculated elsewhere) m3	Embankment Cover Thickness mm	Tailings Surface Cover Thickness mm	Distance from Cover Borrow m	Slope from Tailings to Borrow % grade	Embankment Growth Media Thickness mm	Tailings Surface Growth Media Thickness mm	Distance from Growth Material Stockpile m	Slope from Tailings to Stockpile % grade
1	Tailings Storage Area (Operation Year 3 Configuration)		0.0	1.7	1.7	45	266.90	960		27,567	0.0	300.0	3,216	-2.8	0.0	350.0	3,785	0.5

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Rock fill included in Haul Material sheet. Cover layer (colluvium) will be (300mm) and growth media (peat) will be (350mm). - BGC , GM from nearest storage location, cover from waste rock dump.
Dimensions from "TSF-DAM-YEAR-3.xls"
Tailings NAG and consolidation layers are in Haul Materials sheet.

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment																
		Grading				Cover		Growth Media		Revegetation								
	Description (required)	Dozing Material Condition (select)	Embankment Material Type (select)	Grading Equipment Fleet (select)	Slot/Side-by- Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Embankment Slope (select)	Seed Mix Tailings Surface (select)	Mulch Embankment Slopes (select)	Mulch Tailings Surface (select)	Fertilizer Embankment Slopes (select)	Fertilizer Tailings Surface (select)	Embankment Slope Scarify/ Rip? (select)	Tailings Surface Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	Tailings Storage Area (Operation Year 3 Configuration)	1	Alluvium	Med	No	Gravel	Med Truck	Alluvium	Med Truck	Mix 2	Mix 2	None	None	Chemical	Chemical	Yes	Yes	Grader

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Bond Calculation Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - Calculations

Surface Area Calculations

Top Surface Area provided by user

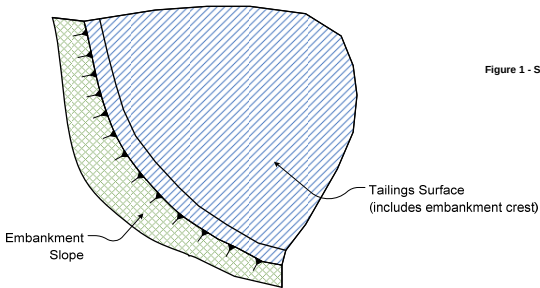


Figure 1 - Surface Areas

Final Slope Area and Footprint Area Calculations

$$\text{Overall slope length (c)} = \frac{\text{Embankment height}}{\cos(\text{Overall slope angle})}$$

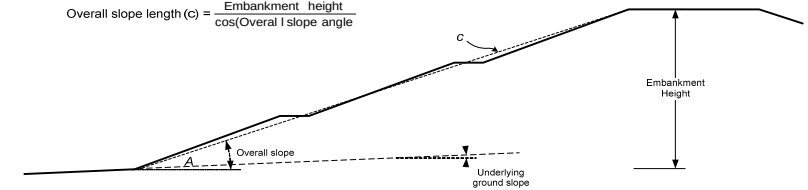


Figure 2 - Final Slope Area and Footprint Area Calculation

Grading Calculations

Grading assumed on impoundment surface only, not embankment
 Average push distance assumed to be 2/3 of the 180 m maximum from Caterpillar Handbook or 120 m
 Material assumed to be loose stockpile (1.2 productivity factor)
 Dozing density correction based on dry sand = 2300/2400 = 0.96
 Slope assumed to be 0 to 5% (1.0 productivity factor)

Ripping/Scarifying/Revegetation Calculation

Minimum 1 hr ripping/scarifying per acre
 Minimum 1 acre revegetation crew time per acre

Regrading Volume Calculation

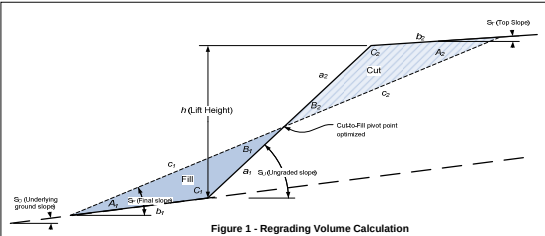


Figure 1 - Regrading Volume Calculation

Regrading Push Distance Calculation

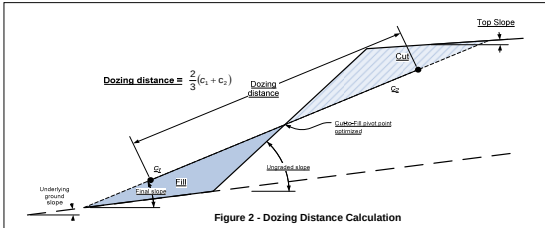


Figure 2 - Dozing Distance Calculation

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - Embankment Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material Condition	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Tailings Storage Area (Operation Year 3 Configuration)	0		D10R								\$0	\$0	\$0
												\$0	\$0	\$0

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - Surface Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Density Correction	Dozing Material	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Tailings Storage Area (Operation Year 3 Configuration)	27,567	122	D10R	383	1.00	0.96	1.20	1.00	274	101	\$6,142	\$23,968	\$30,110
		27,567									101	\$6,142	\$23,968	\$30,110

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - Cover and Growth Media Costs																	
		Cover Placement								Growth Media Placement							
	Description (required)	Cover Volume m3	Cover Placement Fleet	Cover Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$	Growth Media Volume m3	Growth Media Placement Fleet	Growth Media Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoil Placement Cost \$
1	Tailings Storage Area (Operation Year 3 Configuration)	800,698	777D/992G	764	4	1.048	\$387,446	\$1,646,261	\$2,033,707	949,096	777D/992G	782	4	1.213	\$448,446	\$1,905,453	\$2,353,899
		800,698				1.048	\$387,446	\$1,646,261	\$2,033,707	949,096				1.213	\$448,446	\$1,905,453	\$2,353,899

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$6,142	\$23,968	N/A	\$30,110
Cover Placement Cost	\$387,446	\$1,646,261	N/A	\$2,033,707
Topsoil Placement Cost	\$448,446	\$1,905,453	N/A	\$2,353,899
Ripping/Scarifying Cost	\$27,669	\$67,026	N/A	\$94,695
Subtotal Earthworks	\$869,703	\$3,642,708	\$0	\$4,512,411
Revegetation Cost	\$74,126	\$21,443	\$105,970	\$201,539
TOTALS	\$943,829	\$3,664,151	\$105,970	\$4,713,950

Tailings - Scarifying/Revegetation Costs															
	Description (required)	Embankment Slope Area ha	Tailings Surface Area ha	Total Surface Area ha	Final Slope Length m	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Cost \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Cost \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Tailings Storage Area (Operation Year 3 Configuration)	8.49	266.90	275.39	88	16G/H	14	441	\$27,669	\$67,026	\$94,695	\$74,126	\$21,443	\$105,970	\$201,539
		8.49	266.90	275.39			14	441	\$27,669	\$67,026	\$94,695	\$74,126	\$21,443	\$105,970	\$201,539

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate
Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - User Input														
Facility Description				Physical (1) - MANDATORY						User Overrides		Growth Media		
	Description (required)	ID Code	Type	Underlying Ground Slope % grade	Ungraded Slope _H:1V	Cut Slope degrees	Road Width m	Road Length m	Slope Replacement Percent %	Regrade Volume (if calculated elsewhere) m3	Disturbed Area (if calculated elsewhere) ha	Growth Media Thickness mm	Haul Distance from Growth Media Stockpile m	Slope from Road to Stockpile % grade
1	LAH-1-ORIG		Project Road	26.0	1.4	35.0	9.0	3,990		14.81		350.0	1,000	0%
2	LAH-2-ORIG		Project Road	20.0	1.4	35.0	9.0	990		3.05		350.0	1,000	0%
3	LAH-ACCESS-1		Project Road	14.0	1.4	35.0	9.0	645		1.53		350.0	1,000	0%
4	LAH-ACCESS-4		Project Road	2.0	1.4	35.0	5.0	193		0.28		350.0	1,000	0%
5	LAO-1		Project Road	22.0	1.4	35.0	5.0	3,972		10.57		350.0	1,000	0%
6	LCF-1		Project Road	7.0	1.4	35.0	22.0	1,124		4.43		350.0	1,000	0%
7	LCF-2-DAM		Project Road	17.0	1.4	35.0	22.0	1,965		13.47		350.0	1,000	0%
8	LMF-1		Project Road	11.0	1.4	35.0	32.0	2,243		12.21		350.0	1,000	0%
9	LMF-2		Project Road	11.0	1.4	35.0	32.0	5,444		30.22		350.0	1,000	0%
10	LMF-2-OPT		Project Road	5.0	1.4	35.0	13.0	1,920		0.96		350.0	1,000	0%
11	SCF-1		Project Road	13.0	1.4	35.0	13.0	2,885		5.77		350.0	1,000	0%
12	SCF-2		Project Road	16.0	1.4	35.0	13.0	627		8.14		350.0	1,000	0%
13	SCF-2-OPT-2		Project Road	12.0	1.4	35.0	13.0	2,666		1.57		350.0	1,000	0%
14	SCF-3		Project Road	28.0	1.4	35.0	6.0	67		15.57		350.0	1,000	0%
15	JUNGJUK		Access Road	3.0	1.4	35.0	45.0	1,403		6.41		350.0	1,000	0%
16	Other Road - ID16		Project Road	35.0	1.4	35.0	45.0	1,373		6.36		350.0	1,000	0%
17	Other Road - ID17		Project Road	13.0	1.4	35.0	45.0	1,379		5.67		350.0	1,000	0%
18	Other Road - ID18		Project Road	10.0	1.4	35.0	45.0	969		5.71		350.0	1,000	0%
19	Other Road - ID19		Project Road	12.0	1.4	35.0	45.0	417		5.44		350.0	1,000	0%
20	Other Road - ID20		Project Road	2.0	1.4	35.0	45.0	522		1.75		350.0	1,000	0%
21	Other Road - ID21		Project Road	2.0	1.4	35.0	45.0	942		2.39		350.0	1,000	0%
22	Other Road - ID22		Project Road	17.0	1.4	35.0	45.0	375		4.19		350.0	1,000	0%
23	Other Road - ID23		Project Road	7.0	1.4	35.0	45.0	184		1.48		350.0	1,000	0%
24	Other Road - ID24		Project Road	5.0	1.4	35.0	25.0	1,750		0.58		350.0	1,000	0%
25	Other Road - ID25		Project Road	2.0	1.4	35.0	25.0	1,282		1.81		350.0	1,000	0%
26	Other Road - ID26		Project Road	27.0	1.4	35.0	25.0	116		4.41		350.0	1,000	0%
27	Other Road - ID27		Project Road	13.0	1.4	35.0	6.0	64		0.87		350.0	1,000	0%
28	Other Road - ID28		Project Road	13.0	1.4	35.0	6.0	183		2.80		350.0	1,000	0%
29	Other Road - ID29		Project Road	7.0	1.4	35.0	6.0	40		0.26		350.0	1,000	0%
30	Other Road - ID30		Project Road	1.0	1.4	35.0	6.0	169		0.03		350.0	1,000	0%
31	Other Road - ID31		Project Road	5.0	1.4	35.0	6.0	1,733		0.03		350.0	1,000	0%
32	Other Road - ID32		Project Road	4.0	1.4	35.0	25.0	528		0.03		350.0	1,000	0%
33	Other Road - ID33		Project Road	15.0	1.4	35.0	6.0	92		0.05		350.0	1,000	0%
34	Other Road - ID34		Project Road	6.0	1.4	35.0	6.0	581		1.06		350.0	1,000	0%
35	Other Road - ID35		Project Road	10.0	1.4	35.0	14.0	1,220		0.24		350.0	1,000	0%
36	Other Road - ID36		Project Road	15.0	1.4	35.0	20.0	1,036		0.05		350.0	1,000	0%
37	Other Road - ID37		Project Road	9.0	1.4	35.0	20.0	381		0.41		350.0	1,000	0%
38	Other Road - ID38		Project Road	5.0	1.4	35.0	5.0	99		0.56		350.0	1,000	0%

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Because the work required for building roads with a dozer is similar to that required to regrade a road with a dozer, this sheet could be used to provide a rough estimate of road construction costs if a dozer is selected as the grading fleet.
Measured from GIS drawing. From "Yr3_Roads.xlsx"

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate
Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - User Input (cont.)						
		Haul Road Safety Berms				
	Description (required)	Berm Length m	Berm Height m	Berm Base Width m	Berm Sideslope Angle H:1V	Number of Berms (2) (1 or 2 sides)
1	LAH-1-ORIG	3,990.0	1.5	8.0	2.5	1
2	LAH-2-ORIG	990.0	1.5	8.0	2.5	1
3	LAH-ACCESS-1	645.0	1.5	8.0	2.5	1
4	LAH-ACCESS-4	193.0	1.5	8.0	2.5	1
5	LAO-1	3,972.0	1.5	8.0	2.5	1
6	LCF-1	1,124.0	1.5	8.0	2.5	1
7	LCF-2-DAM	1,965.0	1.5	8.0	2.5	1
8	LMF-1	2,243.0	1.5	8.0	2.5	1
9	LMF-2	5,444.0	1.5	8.0	2.5	1
10	LMF-2-OPT	1,920.0	1.5	8.0	2.5	1
11	SCF-1	2,885.0	1.5	8.0	2.5	1
12	SCF-2	627.0	1.5	8.0	2.5	1
13	SCF-2-OPT-2	2,666.0	1.5	8.0	2.5	1
14	SCF-3	67.0	1.5	8.0	2.5	1
15	JUNJUK	1,403.0	1.5	8.0	2.5	1
16	Other Road - ID16	1,373.0	1.5	8.0	2.5	1
17	Other Road - ID17	1,379.0	1.5	8.0	2.5	1
18	Other Road - ID18	969.0	1.5	8.0	2.5	1
19	Other Road - ID19	417.0	1.5	8.0	2.5	1
20	Other Road - ID20	522.0	1.5	8.0	2.5	1
21	Other Road - ID21	942.0	1.5	8.0	2.5	1
22	Other Road - ID22	375.0	1.5	8.0	2.5	1
23	Other Road - ID23	184.0	1.5	8.0	2.5	1
24	Other Road - ID24	1,750.0	1.5	8.0	2.5	1
25	Other Road - ID25	1,282.0	1.5	8.0	2.5	1
26	Other Road - ID26	116.0	1.5	8.0	2.5	1
27	Other Road - ID27	64.0	1.5	8.0	2.5	1
28	Other Road - ID28	183.0	1.5	8.0	2.5	1
29	Other Road - ID29	40.0	1.5	8.0	2.5	1
30	Other Road - ID30	169.0	1.5	8.0	2.5	1
31	Other Road - ID31	1,733.0	1.5	8.0	2.5	1
32	Other Road - ID32	528.0	1.5	8.0	2.5	1
33	Other Road - ID33	92.0	1.5	8.0	2.5	1
34	Other Road - ID34	581.0	1.5	8.0	2.5	1
35	Other Road - ID35	1,220.0	1.5	8.0	2.5	1
36	Other Road - ID36	1,036.0	1.5	8.0	2.5	1
37	Other Road - ID37	381.0	1.5	8.0	2.5	1
38	Other Road - ID38	99.0	1.5	8.0	2.5	1

(2) Enter 1 if berm on only one side of road, 2 if both sides of road are bermed.

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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - User Input (cont.)													
You must fill in ALL green cells and relevant blue cells in this section for each road													
		Grading				Growth Media			Revegetation				
	Description (required)	Dozing Material Condition (select)	Cut Material Type (select)	Recontouring Equipment Fleet ⁽²⁾ (select)	No. of Excavators if grade >30% (select)	Growth Media Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarifying/ Ripping? (select)	Ripping Fleet (select)
1	LAH-1-ORIG	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
2	LAH-2-ORIG	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
3	LAH-ACCESS-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
4	LAH-ACCESS-4	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
5	LAO-1	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
6	LCF-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
7	LCF-2-DAM	1	Alluvium	Med Excavator		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
8	LMF-1	1	Alluvium	Med Excavator		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
9	LMF-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
10	LMF-2-OPT	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
11	SCF-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
12	SCF-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
13	SCF-2-OPT-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
14	SCF-3	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
15	JUNGJUK	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
16	Other Road - ID16	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
17	Other Road - ID17	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
18	Other Road - ID18	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
19	Other Road - ID19	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
20	Other Road - ID20	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
21	Other Road - ID21	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
22	Other Road - ID22	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
23	Other Road - ID23	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
24	Other Road - ID24	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
25	Other Road - ID25	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
26	Other Road - ID26	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
27	Other Road - ID27	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
28	Other Road - ID28	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
29	Other Road - ID29	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
30	Other Road - ID30	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
31	Other Road - ID31	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
32	Other Road - ID32	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
33	Other Road - ID33	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
34	Other Road - ID34	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
35	Other Road - ID35	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
36	Other Road - ID36	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
37	Other Road - ID37	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
38	Other Road - ID38	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
2. If original slope >30% only excavators are allowed.

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - Calculations

Regrading Volume and Footprint Volume

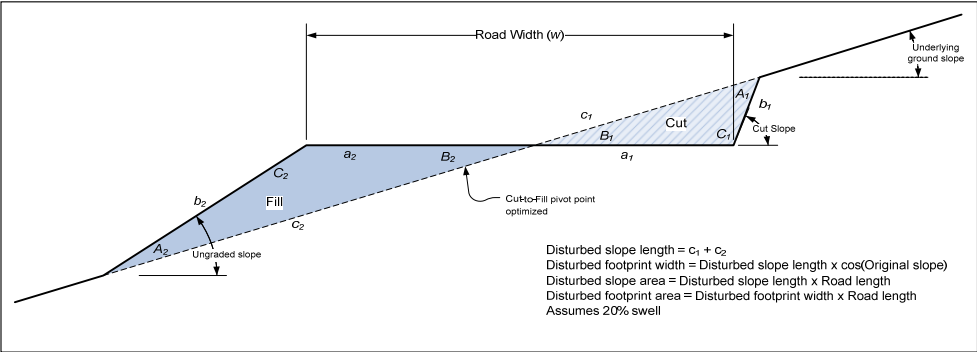


Figure 1 - Regrading Volume Calculation

Will not allow dozer for slopes greater than 30%
For dozer regrading push distance = road width
Assumes dozer push is uphill
Assumes minimum push distance of 30 m

Ripping/Scarifying Calculations

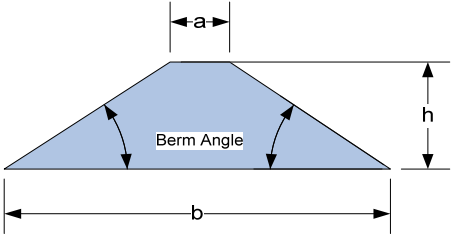
Minimum 1 hr ripping/scarifying time per area
Number of passes = Final slope length ÷ Grader width
Travel distance = Number of passes x Road length
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
For dozer regrading assumes push distance = 3 x road width

Revegetation Calculations

Minimum of 1 acre crew time per area

Safety Berm Volume Calculation

Cross Sectional Area = $\frac{(a + b)}{2} \times h$
Berm Volume = Berm Length x Cross Sectional Area x No. Sides



Total berm volume doubled if both sides of road are bermed.
If length of berm on each side of road is different, input total length of both berms
and input 1 for number of sides

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate
Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - Regrading Costs								
	Description (required)	Regrading Volume m3	Recontouring Fleet	Fleet Productivity m3/hr	Total Fleet Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	LAH-1-ORIG	43,763	345B	367	119	\$21,709	\$51,795	\$73,504
2	LAH-2-ORIG	9,362	D10R	337	28	\$1,703	\$6,645	\$8,348
3	LAH-ACCESS-1	5,330	D10R	424	13	\$791	\$3,085	\$3,876
4	LAH-ACCESS-4	1,222	D10R	587	2	\$122	\$475	\$597
5	LAO-1	29,030	345B	367	79	\$14,412	\$34,385	\$48,797
6	LCF-1	12,796	D10R	520	25	\$1,520	\$5,933	\$7,453
7	LCF-2-DAM	41,261	345B	367	112	\$13,621	\$36,488	\$50,109
8	LMF-1	54,956	345B	367	150	\$18,243	\$48,869	\$67,112
9	LMF-2	133,383	D10R	447	299	\$18,182	\$70,956	\$89,138
10	LMF-2-OPT	14,465	D10R	547	26	\$1,581	\$6,170	\$7,751
11	SCF-1	28,876	D10R	437	66	\$4,013	\$15,662	\$19,675
12	SCF-2	6,975	D10R	395	18	\$1,095	\$4,272	\$5,367
13	SCF-2-OPT-2	25,763	D10R	451	57	\$3,466	\$13,527	\$16,993
14	SCF-3	578	345B	367	2	\$365	\$871	\$1,236
15	JUNGJUK	21,020	D10R	411	51	\$3,101	\$12,103	\$15,204
16	Other Road - ID16	273,091	345B	367	744	\$135,728	\$323,826	\$459,554
17	Other Road - ID17	69,714	D10R	313	222	\$13,500	\$52,683	\$66,183
18	Other Road - ID18	37,456	D10R	343	109	\$6,628	\$25,867	\$32,495
19	Other Road - ID19	19,370	D10R	323	60	\$3,649	\$14,239	\$17,888
20	Other Road - ID20	6,262	D10R	421	15	\$912	\$3,560	\$4,472
21	Other Road - ID21	11,301	D10R	421	27	\$1,642	\$6,407	\$8,049
22	Other Road - ID22	25,678	D10R	273	94	\$5,716	\$22,307	\$28,023
23	Other Road - ID23	5,132	D10R	372	14	\$851	\$3,322	\$4,173
24	Other Road - ID24	19,010	D10R	547	35	\$2,128	\$8,306	\$10,434
25	Other Road - ID25	10,292	D10R	587	18	\$1,095	\$4,272	\$5,367
26	Other Road - ID26	5,057	345B	367	14	\$2,554	\$6,094	\$8,648
27	Other Road - ID27	453	D10R	437	1	\$61	\$237	\$298
28	Other Road - ID28	1,294	D10R	437	3	\$182	\$712	\$894
29	Other Road - ID29	267	D10R	520	1	\$61	\$237	\$298
30	Other Road - ID30	1,067	D10R	600	2	\$122	\$475	\$597
31	Other Road - ID31	11,301	D10R	547	21	\$1,277	\$4,984	\$6,261
32	Other Road - ID32	5,221	D10R	560	9	\$547	\$2,136	\$2,683
33	Other Road - ID33	666	D10R	409	2	\$122	\$475	\$597
34	Other Road - ID34	3,820	D10R	534	7	\$426	\$1,661	\$2,087
35	Other Road - ID35	11,469	D10R	479	24	\$1,459	\$5,695	\$7,154
36	Other Road - ID36	17,403	D10R	409	43	\$2,615	\$10,204	\$12,819
37	Other Road - ID37	4,562	D10R	493	9	\$547	\$2,136	\$2,683
38	Other Road - ID38	638	D10R	547	1	\$61	\$237	\$298
		969,304			2,522	\$285,807	\$811,308	\$1,097,115

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety

Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - Growth Media Costs									
	Description (required)	Growth Media Volume m3	Growth Media Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$
1	LAH-1-ORIG	51,842	777D/992G	707	2	73	\$17,933	\$78,719	\$96,652
2	LAH-2-ORIG	10,687	777D/992G	707	2	15	\$3,685	\$16,175	\$19,860
3	LAH-ACCESS-1	5,345	777D/992G	707	2	8	\$1,965	\$8,627	\$10,592
4	LAH-ACCESS-4	969	777D/992G	707	2	1	\$246	\$1,078	\$1,324
5	LAO-1	36,999	777D/992G	707	2	52	\$12,774	\$56,074	\$68,848
6	LCF-1	15,517	777D/992G	707	2	22	\$5,405	\$23,723	\$29,128
7	LCF-2-DAM	47,139	777D/992G	707	2	67	\$16,459	\$72,249	\$88,708
8	LMF-1	42,724	777D/992G	707	2	60	\$14,740	\$64,700	\$79,440
9	LMF-2	105,782	777D/992G	707	2	150	\$36,849	\$161,751	\$198,600
10	LMF-2-OPT	3,351	777D/992G	707	2	5	\$1,228	\$5,392	\$6,620
11	SCF-1	20,196	777D/992G	707	2	29	\$7,124	\$31,272	\$38,396
12	SCF-2	28,503	777D/992G	707	2	40	\$9,826	\$43,134	\$52,960
13	SCF-2-OPT-2	5,478	777D/992G	707	2	8	\$1,965	\$8,627	\$10,592
14	SCF-3	54,502	777D/992G	707	2	77	\$18,916	\$83,032	\$101,948
15	JUNGJUK	22,419	777D/992G	707	2	32	\$7,861	\$34,507	\$42,368
16	Other Road - ID16	22,249	777D/992G	707	2	31	\$7,615	\$33,429	\$41,044
17	Other Road - ID17	19,837	777D/992G	707	2	28	\$6,878	\$30,194	\$37,072
18	Other Road - ID18	19,981	777D/992G	707	2	28	\$6,878	\$30,194	\$37,072
19	Other Road - ID19	19,050	777D/992G	707	2	27	\$6,633	\$29,115	\$35,748
20	Other Road - ID20	6,129	777D/992G	707	2	9	\$2,211	\$9,705	\$11,916
21	Other Road - ID21	8,351	777D/992G	707	2	12	\$2,948	\$12,940	\$15,888
22	Other Road - ID22	14,663	777D/992G	707	2	21	\$5,159	\$22,645	\$27,804
23	Other Road - ID23	5,195	777D/992G	707	2	7	\$1,720	\$7,548	\$9,268
24	Other Road - ID24	2,033	777D/992G	707	2	3	\$737	\$3,235	\$3,972
25	Other Road - ID25	6,330	777D/992G	707	2	9	\$2,211	\$9,705	\$11,916
26	Other Road - ID26	15,419	777D/992G	707	2	22	\$5,405	\$23,723	\$29,128
27	Other Road - ID27	3,059	777D/992G	707	2	4	\$983	\$4,313	\$5,296
28	Other Road - ID28	9,815	777D/992G	707	2	14	\$3,439	\$15,097	\$18,536
29	Other Road - ID29	901	777D/992G	707	2	1	\$246	\$1,078	\$1,324
30	Other Road - ID30	119	777D/992G	707	2	1	\$246	\$1,078	\$1,324
31	Other Road - ID31	120	777D/992G	707	2	1	\$246	\$1,078	\$1,324
32	Other Road - ID32	91	777D/992G	707	2	1	\$246	\$1,078	\$1,324
33	Other Road - ID33	177	777D/992G	707	2	1	\$246	\$1,078	\$1,324
34	Other Road - ID34	3,710	777D/992G	707	2	5	\$1,228	\$5,392	\$6,620
35	Other Road - ID35	851	777D/992G	707	2	1	\$246	\$1,078	\$1,324
36	Other Road - ID36	169	777D/992G	707	2	1	\$246	\$1,078	\$1,324
37	Other Road - ID37	1,440	777D/992G	707	2	2	\$491	\$2,157	\$2,648
38	Other Road - ID38	1,948	777D/992G	707	2	3	\$737	\$3,235	\$3,972
		613,090				871	\$213,971	\$939,233	\$1,153,204

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Closure Cost Estimate
Roads

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$285,807	\$811,308	N/A	\$1,097,115
Cover Placement Cost	\$213,971	\$939,233	N/A	\$1,153,204
Ripping/Scarifying Cost	\$19,702	\$70,090	N/A	\$89,792
Subtotal Earthworks	\$519,480	\$1,820,631		\$2,340,111
Revegetation Cost	\$20,022	\$5,793	\$93,690	\$119,505
TOTALS	\$539,502	\$1,826,424	\$93,690	\$2,459,616

Roads - Scarifying/Revegetation Costs											
	Description (required)	Total Surface Area ha	Final Slope Length m	Ripping Hours hrs	Ripping Labor Costs \$	Ripping Equipment Cost \$	Total Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	LAH-1-ORIG	14.81	37.0	27	\$1,642	\$5,841	\$7,483	\$1,613	\$467	\$7,923	\$10,003
2	LAH-2-ORIG	3.05	31.0	6	\$365	\$1,298	\$1,663	\$333	\$96	\$1,633	\$2,062
3	LAH-ACCESS-1	1.53	24.0	3	\$182	\$649	\$831	\$166	\$48	\$817	\$1,031
4	LAH-ACCESS-4	0.28	14.0	1	\$61	\$216	\$277	\$109	\$32	\$148	\$288
5	LAO-1	10.57	27.0	20	\$1,216	\$4,327	\$5,543	\$1,152	\$333	\$5,654	\$7,139
6	LCF-1	4.43	39.0	8	\$486	\$1,731	\$2,217	\$483	\$140	\$2,371	\$2,994
7	LCF-2-DAM	13.47	69.0	23	\$1,399	\$4,976	\$6,375	\$1,467	\$424	\$7,203	\$9,094
8	LMF-1	12.21	55.0	22	\$1,338	\$4,759	\$6,097	\$1,330	\$385	\$6,529	\$8,244
9	LMF-2	30.22	55.0	54	\$3,284	\$11,682	\$14,966	\$3,292	\$952	\$16,165	\$20,409
10	LMF-2-OPT	0.96	5.0	1	\$61	\$216	\$277	\$109	\$32	\$512	\$652
11	SCF-1	5.77	20.0	11	\$669	\$2,380	\$3,049	\$629	\$182	\$3,086	\$3,897
12	SCF-2	8.14	130.0	15	\$912	\$3,245	\$4,157	\$887	\$257	\$4,356	\$5,500
13	SCF-2-OPT-2	1.57	6.0	3	\$182	\$649	\$831	\$170	\$49	\$838	\$1,057
14	SCF-3	15.57	2,322.0	30	\$1,824	\$6,490	\$8,314	\$1,696	\$491	\$8,329	\$10,516
15	JUNGSUK	6.41	46.0	11	\$669	\$2,380	\$3,049	\$698	\$202	\$3,426	\$4,326
16	Other Road - ID16	6.36	46.0	11	\$669	\$2,380	\$3,049	\$692	\$200	\$3,400	\$4,292
17	Other Road - ID17	5.67	41.0	10	\$608	\$2,163	\$2,771	\$617	\$179	\$3,031	\$3,827
18	Other Road - ID18	5.71	59.0	10	\$608	\$2,163	\$2,771	\$622	\$180	\$3,053	\$3,855
19	Other Road - ID19	5.44	130.0	10	\$608	\$2,163	\$2,771	\$593	\$172	\$2,912	\$3,677
20	Other Road - ID20	1.75	34.0	3	\$182	\$649	\$831	\$191	\$55	\$937	\$1,183
21	Other Road - ID21	2.39	25.0	4	\$243	\$865	\$1,108	\$260	\$75	\$1,276	\$1,611
22	Other Road - ID22	4.19	112.0	8	\$486	\$1,731	\$2,217	\$456	\$132	\$2,241	\$2,829
23	Other Road - ID23	1.48	81.0	3	\$182	\$649	\$831	\$162	\$47	\$794	\$1,003
24	Other Road - ID24	0.58	3.0	1	\$61	\$216	\$277	\$109	\$32	\$311	\$451
25	Other Road - ID25	1.81	14.0	3	\$182	\$649	\$831	\$197	\$57	\$967	\$1,221
26	Other Road - ID26	4.41	379.0	8	\$486	\$1,731	\$2,217	\$480	\$139	\$2,356	\$2,975
27	Other Road - ID27	0.87	137.0	2	\$122	\$433	\$555	\$109	\$32	\$468	\$608
28	Other Road - ID28	2.80	153.0	5	\$304	\$1,082	\$1,386	\$305	\$88	\$1,499	\$1,892
29	Other Road - ID29	0.26	64.0	1	\$61	\$216	\$277	\$109	\$32	\$138	\$278
30	Other Road - ID30	0.03	2.0	1	\$61	\$216	\$277	\$109	\$32	\$18	\$158
31	Other Road - ID31	0.03	0.0	1	\$61	\$216	\$277	\$109	\$32	\$18	\$158
32	Other Road - ID32	0.03	1.0	1	\$61	\$216	\$277	\$109	\$32	\$14	\$154
33	Other Road - ID33	0.05	5.0	1	\$61	\$216	\$277	\$109	\$32	\$27	\$167
34	Other Road - ID34	1.06	18.0	2	\$122	\$433	\$555	\$115	\$33	\$567	\$715
35	Other Road - ID35	0.24	2.0	1	\$61	\$216	\$277	\$109	\$32	\$130	\$270
36	Other Road - ID36	0.05	1.0	1	\$61	\$216	\$277	\$109	\$32	\$26	\$166
37	Other Road - ID37	0.41	11.0	1	\$61	\$216	\$277	\$109	\$32	\$220	\$360
38	Other Road - ID38	0.56	56.0	1	\$61	\$216	\$277	\$109	\$32	\$297	\$437
		175.17		324	\$19,702	\$70,090	\$89,792	\$20,022	\$5,793	\$93,690	\$119,505

Closure Cost Estimate Pits

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$25,794	\$113,226	N/A	\$139,020
Safety Berm Revegetation Cost	\$1,399	\$404	\$2,781	\$4,584
TOTALS	\$27,193	\$113,630	\$2,781	\$143,604

Pits - User Input																		
Facility Description				Pit Berms					Berm Construction		Excavate or Doze	Hauling (if selected method)				Revegetation		
	Description (required)	ID Code	Type	Berm (or Highwall) Length m	Berm Height m	Berm Base Width m	Berm Sideslope Angle H:1V	Volume (if calculated elsewhere) m3	Construction Method (select)	Berm Material Type (select)	Berm Construction Equipment Fleet (select)	Berm Hauling Fleet (select)	Distance to Borrow Source m	Slope to Borrow Source % grade	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	Pit 1 (Operation Year 3 Configuration)		Pit	5,675.8	2.0	6.0	1.3		Haul & Place	Sandstone	Med	Med Truck	1,800	0.0		Mix 1		Chemical
2	Pit 2 (Operation Year 3 Configuration)		Pit	2,857.9	2.0	6.0	1.3		Haul & Place	Sandstone	Med	Med Truck	1,800	0.0		Mix 1		Chemical

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Inputs from 2016_SRCE_disturbance.xlsx (see User 14)

**Closure Cost Estimate
Pits**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$25,794	\$113,226	N/A	\$139,020
Safety Berm Revegetation Cost	\$1,399	\$404	\$2,781	\$4,584
TOTALS	\$27,193	\$113,630	\$2,781	\$143,604

Pits - Calculations

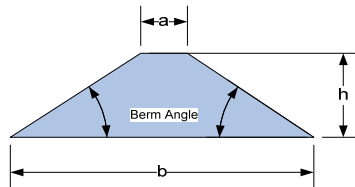
Safety Berm Volume Calculation

$$\text{Cross Sectional Area} = \frac{(a + b)}{2} \times h$$

$$\text{Berm Volume} = \text{Berm Length} \times \text{Cross Sectional Area}$$

Dozer productivity assumes push distance of:

100 feet



Dozer:

Length x (Berm Base Width + Dozer Push Distance) - accounts for disturbance created in borrow area

Excavator:

Length x (Berm Base Width + (2 x Excavator Track Width) - accounts for disturbance created in borrow area

Haul & Place:

Length x Berm Base Width - if necessary use Yards sheet to account for disturbance created in borrow area

Revegetation Calculations

Minimum 1 acre revegetation crew time per area

**Closure Cost Estimate
Pits**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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Pits - Cost Summary				
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Safety Berm Construction Cost	\$25,794	\$113,226	N/A	\$139,020
Safety Berm Revegetation Cost	\$1,399	\$404	\$2,781	\$4,584
TOTALS	\$27,193	\$113,630	\$2,781	\$143,604

Pits - Safety Berm Construction Costs									
		Safety Berm							
	Description (required)	Safety Berm Volume m3	Selected Fleet	Number of Trucks/ Scrapers	Corrected Fleet Productivity m3/hr	Total Hours	Safety Berm Labor Cost \$	Safety Berm Equipment Cost \$	Total Safety Berm Cost \$
1	Pit 1 (Operation Year 3 Configuration)	40,232	777D/992G	2	571	70	\$17,196	\$75,484	\$92,680
2	Pit 2 (Operation Year 3 Configuration)	20,258	777D/992G	2	571	35	\$8,598	\$37,742	\$46,340
		60,490				105	\$25,794	\$113,226	\$139,020

**Closure Cost Estimate
Pits**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$25,794	\$113,226	N/A	\$139,020
Safety Berm Revegetation Cost	\$1,399	\$404	\$2,781	\$4,584
TOTALS	\$27,193	\$113,630	\$2,781	\$143,604

Pits - Safety Berms - Revegetation Costs						
	Description (required)	Flat Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Pit 1 (Operation Year 3 Configuration)	3.46	\$931	\$269	\$1,850	\$3,050
2	Pit 2 (Operation Year 3 Configuration)	1.74	\$468	\$135	\$931	\$1,534
		5.20	\$1,399	\$404	\$2,781	\$4,584

Closure Cost Estimate
Haul Material

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$5,099,707	\$21,836,597	N/A	\$26,936,304
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$243,874	N/A	\$303,220
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$5,165,101	\$22,082,221	\$12,019	\$27,259,341

Generic Material Hauling - User Input																			
Facility Description				Physical		Hauled Material			Crushing & Screening					Cover			Growth Media		
	Description (required)	ID Code	Type	Final Surface Area ha	Average Ripping Distance m	Material Volume Required m3	Distance from Borrow Source (1) m	Slope to Borrow Source % grade	Crush Material	Screen Material	Loss to Crushing/ Screening %	Distance to Placement Location (2) m	Slope to Placement % grade	Cover Thickness mm	Distance to Cover Borrow m	Slope to Borrow % grade	Growth Media Thickness mm	Distance to Growth Material Stockpile m	Slope to Stockpile % grade
1	NAG waste rock - 1 M		Tailings Impo	0.00	0	2,669,000	5,000	-2.3											
2	Tailings capillary break layer - 1 Meter		Tailings Impo	0.00	0	2,669,000	5,000	-2.3											
3	Removal of Contact Pond Dam		Sediment Cor	0.00	0	240,000	5,000	-5.0											
4	Removal of Rock Groyne (Primary Crusher)		Process - Cru	0.00	0	355,000	1,000	0.0											
5	Reclaimed WRF Runoff Collection Channel - liner bedding		Waste Rock D	0.00	0	16,800	1,500	-5.0											
6	Reclaimed WRF Runoff Collection Channel - pea gravel		Waste Rock D	0.00	0	6,100	1,500	-5.0											
7	Upper Contact Water Pond Backfill, growth media, reveg		Ponds	22.47	0	3,000,000	1,000	0.0									300	8,000	-5.0
8	Lower CWD Breach and Slope (not reclaimed in Mine Year 3)		Ponds	0.00	0														
9	Snow Gulch Fresh Water Dam Breach		Sediment Cor	31.93	0	352,200	1,000	0.0											
10	Primary Channel (WRF) cushion layer		Surface Chan	0.00	0	83,700	10,000	0.0		Yes	70%	1,000	0.0						
11	Primary Channel (WRF) Armor Layer		Surface Chan	0.00	0	84,900	10,000	0.0		Yes	50%	1,000	0.0						
12	Secondary Channel (WRF) Armor Layer		Surface Chan	0.00	0	36,200	10,000	0.0		Yes	50%	1,000	0.0						

Notes:
1. Input distance to crusher if material to be crushed
2. Input distance from crusher to placement if material to be crushed
3. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Snow Gulch FWD, American and Lower CWD breach assumed to be equal to construction quantities listed in "DC11-007 - American_Creek_and_Snow_Gulch_Contact_and_Fresh_Water_Dam_Design -. DRAFT_MTOs"
Line 1: NAG waste rock fill to counteract settlement in the tailings to maintain positive drainage off TSF reclaimed surface.
Line 1 and 2: Cover and Growth Media are included in Tailings worksheet.

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$5,099,707	\$21,836,597	N/A	\$26,936,304
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$243,874	N/A	\$303,220
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$5,165,101	\$22,082,221	\$12,019	\$27,259,341

Generic Material Hauling - User Input (cont.)																
		Hauling Material				Cover			Growth Media			Revegetation				
	Description (required)	Haul Material Type (select)	Material Hauling Fleet (select)	Fleet Size (from/to crusher) (user override)	Compact After Placement?	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch Type (select)	Fertilizer Type (select)	Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	NAG waste rock - 1 M	LS - broken	Med Truck		No											
2	Tailings capillary break layer - 1 Meter	LS - broken	Med Truck		No											
3	Removal of Contact Pond Dam	LS - broken	Med Truck		No											
4	Removal of Rock Groyne (Primary Crusher)	Alluvium	Med Truck		No											
5	Reclaimed WRF Runoff Collection Channel - liner bedding	Granite - brok	Med Truck		No											
6	Reclaimed WRF Runoff Collection Channel - pea gravel	Alluvium	Med Truck		No											
7	Upper Contact Water Pond Backfill, growth media, reveg	LS - broken	Med Truck		No				Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
8	Lower CWD Breach and Slope (not reclaimed in Mine Year	LS - broken	Med Truck		No											
9	Snow Gulch Fresh Water Dam Breach	Alluvium	Med Truck		No											
10	Primary Channel (WRF) cushion layer	Alluvium	Med Truck		No											
11	Primary Channel (WRF) Armor Layer	Alluvium	Med Truck		No											
12	Secondary Channel (WRF) Armor Layer	Alluvium	Med Truck		No											

Notes:
 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$5,099,707	\$21,836,597	N/A	\$26,936,304
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$243,874	N/A	\$303,220
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$5,165,101	\$22,082,221	\$12,019	\$27,259,341

Generic Material Hauling - Load, Haul, Place and Grade													
		Material Haulage								Crush and/or Compact			
	Description (required)	Material Volume to Crusher m3	Final Material Volume m3	Material Haulage Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Hauling Labor Cost \$	Hauling Equipment Cost \$	Total Crush/ Screen Cost \$	Compact Labor Cost \$	Compact Equipment Cost \$	Total Load/Haul/ Place Cost \$
1	NAG waste rock - 1 M	2,669,000	2,669,000	777D/992G	726	5	3,675	\$1,596,571	\$6,677,916	\$0	\$0	\$0	\$8,264,487
2	Tailings capillary break layer - 1 Meter	2,669,000	2,669,000	777D/992G	726	5	3,675	\$1,596,571	\$6,677,916	\$0	\$0	\$0	\$8,264,487
3	Removal of Contact Pond Dam	240,000	240,000	777D/992G	835	7	287	\$159,503	\$662,867	\$0	\$0	\$0	\$822,370
4	Removal of Rock Groyne (Primary Crusher)	355,000	355,000	777D/992G	707	2	502	\$123,321	\$541,327	\$0	\$0	\$0	\$664,648
5	Reclaimed WRF Runoff Collection Channel - liner bedding	16,800	16,800	777D/992G	754	3	22	\$6,769	\$29,141	\$0	\$0	\$0	\$35,910
6	Reclaimed WRF Runoff Collection Channel - pea gravel	6,100	6,100	777D/992G	754	3	8	\$2,461	\$10,597	\$0	\$0	\$0	\$13,058
7	Upper Contact Water Pond Backfill, growth media, reveg	3,000,000	3,000,000	777D/992G	707	2	4,242	\$1,042,090	\$4,574,318	\$0	\$0	\$0	\$5,616,408
8	Lower CWD Breach and Slope (not reclaimed in Mine Year							\$0	\$0	\$0	\$0	\$0	\$0
9	Snow Gulch Fresh Water Dam Breach	352,200	352,200	777D/992G	707	2	498	\$122,339	\$537,013	\$0	\$0	\$0	\$659,352
10	Primary Channel (WRF) cushion layer	278,999	83,700	777D/992G	807	10	346	\$242,740	\$1,011,585	\$66,515	\$0	\$0	\$1,320,840
11	Primary Channel (WRF) Armor Layer	169,800	84,900	777D/992G	807	10	210	\$159,213	\$666,140	\$67,469	\$0	\$0	\$892,822
12	Secondary Channel (WRF) Armor Layer	72,400	36,200	777D/992G	807	10	90	\$68,129	\$285,026	\$28,767	\$0	\$0	\$381,922
		9,829,299	9,512,900				13,555	\$5,099,707	\$21,673,846	\$162,751	\$0	\$0	\$26,936,304

Notes: Final Material Volume includes allowance for additional material hauled to crushing/screening plant based on Loss to Crushing/Screening input above.

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$5,099,707	\$21,836,597	N/A	\$26,936,304
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$243,874	N/A	\$303,220
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$5,165,101	\$22,082,221	\$12,019	\$27,259,341

Generic Material Hauling - Cover and Growth Media Costs																	
		Cover Placement							Growth Media Placement								
	Description (required)	Cover Volume m3	Cover Placement Fleet	Cover Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$	Growth Media Volume m3	Growth Media Placement Fleet	Growth Media Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoil Placement Cost \$
1	NAG waste rock - 1 M						\$0	\$0	\$0	0					\$0	\$0	\$0
2	Tailings capillary break layer - 1 Meter						\$0	\$0	\$0	0					\$0	\$0	\$0
3	Removal of Contact Pond Dam						\$0	\$0	\$0	0					\$0	\$0	\$0
4	Removal of Rock Groyne (Primary Crusher)						\$0	\$0	\$0	0					\$0	\$0	\$0
5	Reclaimed WRF Runoff Collection Channel - liner bedding						\$0	\$0	\$0	0					\$0	\$0	\$0
6	Reclaimed WRF Runoff Collection Channel - pea gravel						\$0	\$0	\$0	0					\$0	\$0	\$0
7	Upper Contact Water Pond Backfill, growth media, reveg						\$0	\$0	\$0	67,409	777D/992G	838	10	80	\$59,346	\$243,874	\$303,220
8	Lower CWD Breach and Slope (not reclaimed in Mine Year						\$0	\$0	\$0	0					\$0	\$0	\$0
9	Snow Gulch Fresh Water Dam Breach						\$0	\$0	\$0	0					\$0	\$0	\$0
10	Primary Channel (WRF) cushion layer						\$0	\$0	\$0	0					\$0	\$0	\$0
11	Primary Channel (WRF) Armor Layer						\$0	\$0	\$0	0					\$0	\$0	\$0
12	Secondary Channel (WRF) Armor Layer						\$0	\$0	\$0	0					\$0	\$0	\$0
							\$0	\$0	\$0	67,409				80	\$59,346	\$243,874	\$303,220

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$5,099,707	\$21,836,597	N/A	\$26,936,304
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$243,874	N/A	\$303,220
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$5,159,053	\$22,080,471	\$0	\$27,239,524
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$5,165,101	\$22,082,221	\$12,019	\$27,259,341

Generic Material Hauling - Scarifying/Revegetation Costs											
	Description (required)	Total Surface Area ha	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Cost \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Cost \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$	
1	NAG waste rock - 1 M	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2	Tailings capillary break layer - 1 Meter	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3	Removal of Contact Pond Dam	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
4	Removal of Rock Groyne (Primary Crusher)	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
5	Reclaimed WRF Runoff Collection Channel - liner bedding	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6	Reclaimed WRF Runoff Collection Channel - pea gravel	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
7	Upper Contact Water Pond Backfill, growth media, reveg	22.47					\$6,048	\$1,750	\$12,019	\$19,817	
8	Lower CWD Breach and Slope (not reclaimed in Mine Year	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
9	Snow Gulch Fresh Water Dam Breach	31.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
10	Primary Channel (WRF) cushion layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
11	Primary Channel (WRF) Armor Layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
12	Secondary Channel (WRF) Armor Layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		54.80		\$0	\$0	\$0	\$6,048	\$1,750	\$12,019	\$19,817	

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

Buildings & Foundation - User Input																	
You must fill in ALL green cells and relevant blue cells in this section for each building or facility																	
Facility Description				Physical - MANDATORY								Foundation Cover (1)			Growth Media (1) (entire footprint)		
	Description (required)	ID Code	Type	Length m	Width m	Eve Height m	Slab Thickness mm	Foundation Wall Thickness mm	Foundation Wall Height mm	Average Flat Area Long Dimension (ripping distance) m	Building Area Footprint (including surrounding facilities) ha	Foundation Cover Thickness mm	Distance from Foundation Cover Borrow Area m	Slope from Facility to Borrow Area % grade	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	Mine Site Washbay		Site Facilities - Structures	25	30	20	400	100	300			700	100	0.0	300	500	0.0
2	Mine Site Truck Shop		Site Facilities - Structures	186	49	19	300	250	300			700	100	0.0	300	500	0.0
3	Repair Shop		Site Facilities - Structures	35	51	7	200	250				700	100	0.0	300	500	0.0
4	Primary Crusher		Site Facilities - Structures	22	12	45	600	80	1,200			700	100	0.0	300	500	0.0
5	Primary Crusher - Concrete		Process - Crushing & Screening	22	12	33	1,000	750				700	100	0.0	300	500	0.0
6	Primary Crusher - Steel Bldg. Below Ground		Process - Crushing & Screening	10	9	42											
7	Primary Crusher - Steel Bldg. Above Ground		Process - Crushing & Screening	35	12	14											
8	Take-up Tower		Process - Plant & Buildings	28	15	10	600	250				3000	100	0.0	300	500	0.0
9	Conveyor (Total)		Process - Plant & Buildings	1812	2	2		300									
10	Drive House		Process - Plant & Buildings	27	11	22											
11	Ore Stockpile Cover		Process - Plant & Buildings	125		45											
12	Pebble Crusher		Process - Plant & Buildings	28	22	30	300	300	600			700	400	0.0	300	500	0.0
13	Grinding Building		Process - Plant & Buildings	96	48	35	300	100	600			700	400	0.0	300	500	0.0
14	Ball Mill Foundations (two total)		Process - Plant & Buildings	50	25	1	4,000					4000	400	0.0	300	500	0.0
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)		Process - Plant & Buildings	43.6	44	1											
16	SAG Mill Foundation		Process - Plant & Buildings	25	30	1	4,000					4000	400	0.0	300	500	0.0
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)		Process - Plant & Buildings	33.2	33	1											
18	POX Process Building - High Section		Process - Plant & Buildings	57.8	42	46	600	600	600			700	100	0.0	300	500	0.0
19	POX Process Building - Lower Section		Process - Plant & Buildings	102.5	42	28	600	600	600			700	100	0.0	300	500	0.0
20	POX Process Building - End addition		Process - Plant & Buildings	27.5	19	14	600	600	600			1000	400	0.0	300	500	0.0
21	POX Misc. Small Tanks (8)		Process - Plant & Buildings	32	4	5		100									
22	Autoclaves (2)		Process - Plant & Buildings	40	6	6		600									
23	Stock Tanks Concrete Contain.		Process - Plant & Buildings	150	60	0	500	100	600			700	400	0.0	300	500	0.0
24	Concrete Thickener Concrete		Process - Plant & Buildings	100	110	0	500	100	600			700	100	0.0	300	500	0.0
25	Flot./POX Thickener Concrete		Process - Plant & Buildings	240	140	0	600	250				700	400	0.0	300	500	0.0
26	Hot Cure Tanks		Process - Plant & Buildings	42	14	16		100									
27	Flotation Building		Process - Plant & Buildings	120	96	35	600	100	600			700	400	0.0	300	500	0.0
28	CIL Building		Process - Plant & Buildings	96	40	38	600	230	600			700	400	0.0	300	500	0.0
29	Refinery		Process - Plant & Buildings	32	24	35	600	250	600			700	400	0.0	300	500	0.0
30	Cyanide Reagent Building		Process - Plant & Buildings	32	96	35	600	100	600			700	300	0.0	300	500	0.0
31	Water Treatment Plant Building - Construction		Process - Plant & Buildings	24.4	12	8	600	300	600			700	100	0.0	300	500	0.0
32	Water Treatment Plant Building - Operation		Process - Plant & Buildings	45.5	26	14	600	300	300			700	100	0.0	300	500	0.0
33	Man Camp - Airstrip		Off Site Facilities	65	11	23	100	150				700	300	0.0	300	500	0.0
34	Man Camp - Airstrip		Off Site Facilities	65	11	23	100	150				700	300	0.0	300	500	0.0
35	Man Camp - Airstrip		Off Site Facilities	98	11	23	100	150				700	300	0.0	300	500	0.0
36	Man Camp - Airstrip		Off Site Facilities	98	11	23	100	150				700	300	0.0	300	500	0.0
37	Man Camp - Airstrip		Off Site Facilities	72	11	23	100	150				700	300	0.0	300	500	0.0
38	Man Camp - Airstrip		Off Site Facilities	77.2	29	12	100	150				700	300	0.0	300	500	0.0
39	STP Building		Off Site Facilities	18.3	12	7	300	150				700	300	0.0	300	500	0.0
40	Power Station A/B Buildings		Site Facilities - Buildings	120	30	15	300	100				700	400	0.0	300	500	0.0
41	Power Station A Gensets		Site Facilities - Buildings	70	15	4		100									
42	Power station A Transformers		Site Facilities - Buildings	24	20	4		100									
43	Power Station A Tanks		Site Facilities - Buildings	20	20	15		100									
44	Power Station A Building		Site Facilities - Buildings	36	20	12	300	100				700	300	0.0	300	500	0.0
45	Power Station A Building (small)		Site Facilities - Buildings	32	18	6	200	100				700	300	0.0	300	500	0.0
46	Power Station B Gensets		Site Facilities - Buildings	70	15	4		100									
47	Power station B Transformers		Site Facilities - Buildings	24	20	4		100									
48	Power Station B Tanks		Site Facilities - Buildings	20	20	15		100									
49	Power Station B Building (small)		Site Facilities - Buildings	32	18	6	200	100				700	300	0.0	300	500	0.0
50	Cold Storage Building		Process - Other	46	23	8	300	100	600			700	100	0.0	300	500	0.0
51	Autoclave Feed Tanks		Process - Plant & Buildings	18	18	14		100									
52	Quench/Flash/Heaters		Process - Plant & Buildings	11	11	35		300									
53	Absorber Towers		Process - Plant & Buildings	6	6	8		300									
54	Cooling Towers		Process - Plant & Buildings	12	12	8		300									
55	Mercury Scrubbing		Process - Plant & Buildings	12	6	8		300									
56	Quench Building (60 m total H)		Process - Plant & Buildings	54.5	22	35	300	100				700	100	0.0	300	500	0.0

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

57	Autoclave		Process - Plant & Buildings	40	6	6		100									
58	HP cooling tank		Process - Plant & Buildings	12	12	14		100									
59	Demin Tank		Process - Plant & Buildings	8	8	8		100									
60	Seal Water Tank		Process - Plant & Buildings	4	4	8		100									
61	Autoclave Feed Pumps		Process - Plant & Buildings	6	5	3		100									
62	LP Column		Process - Plant & Buildings	12	12	10		100									
63	HP Column		Process - Plant & Buildings	12	12	10		100									
64	Main Heat Exchanger		Process - Plant & Buildings	16	12	10		100									
65	Wash Water Tower		Process - Plant & Buildings	7	7	7		100									
66	Chilled Water Tower		Process - Plant & Buildings	7	7	7		100									
67	Compressors (3)		Process - Plant & Buildings	55	10	10		100				700	100	0.0	300	500	0.0
68	Warehouse		Site Facilities - Buildings	46	31	9	300	300				700	100	0.0	300	500	0.0
69	Boiler Room		Process - Plant & Buildings	30	30	9	300	600				700	100	0.0	300	500	0.0
70	STP Building		Process - Plant & Buildings	49	18	8	300	600				700	100	0.0	300	500	0.0
71	Utilidor		Off Site Facilities	215	5	7											
72	RO plant (not to be demolished, required for treatment)		Process - Other														

- Notes:
- Foundation cover only calculated to cover slab. Growth media estimated over entire footprint area
 - If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivty Sheet)

Buildings and Tanks per AMEC drawings.
Bridge demolition measurements from Amec drawings. Assumed same cost as large steel building.
Break and bury in place costs selected to cover burial costs at waste dump and breakup cost to prepare for hauling.

Closure Cost Estimate
Foundations & Buildings

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Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

Buildings & Foundation - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each building or facility															
		Construction Materials		Slab Demolition		Foundation Cover			Growth Media			Revegetation					
	Description (required)	Building Type (select)	Foundation Wall Type (select)	Slab Demo Method (select)	Slab Breaking Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)	
1	Mine Site Washbay	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
2	Mine Site Truck Shop	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
3	Repair Shop	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
4	Primary Crusher	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
5	Primary Crusher - Concrete	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
6	Primary Crusher - Steel Bldg. Below Ground	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
7	Primary Crusher - Steel Bldg. Above Ground	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
8	Take-up Tower	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
9	Conveyor (Total)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
10	Drive House	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
11	Ore Stockpile Cover	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
12	Pebble Crusher	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
13	Grinding Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
14	Ball Mill Foundations (two total)	Lg. concrete	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
16	SAG Mill Foundation	Lg. concrete	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
18	POX Process Building - High Section	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
19	POX Process Building - Lower Section	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
20	POX Process Building - End additioin	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
21	POX Misc. Small Tanks (8)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
22	Autoclaves (2)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
23	Stock Tanks Concrete Contain.	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
24	Concrete Thickener Concrete	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
25	Flot./POX Thickener Concrete	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
26	Hot Cure Tanks	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
27	Flotation Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
28	CIL Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
29	Refinery	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
30	Cyanide Reagent Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
31	Water Treatment Plant Building - Construction	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
32	Water Treatment Plant Building - Operation	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
33	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
34	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
35	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
36	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
37	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
38	Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
39	STP Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
40	Power Station A/B Buildings	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
41	Power Station A Gensets	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
42	Power station A Transformers	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
43	Power Station A Tanks	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
44	Power Station A Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
45	Power Station A Building (small)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
46	Power Station B Gensets	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
47	Power station B Transformers	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
48	Power Station B Tanks	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
49	Power Station B Building (small)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
50	Cold Storage Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
51	Autoclave Feed Tanks	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
52	Quench/Flash/Heaters	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
53	Absorber Towers	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
54	Cooling Towers	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
55	Mercury Scrubbing	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
56	Quench Building (60 m total H)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			
57	Autoclave	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical			

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

58	HP cooling tank	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
59	Demin Tank	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
60	Seal Water Tank	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
61	Autoclave Feed Pumps	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
62	LP Column	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
63	HP Column	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
64	Main Heat Exchanger	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
65	Wash Water Tower	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
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68	Warehouse	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
69	Boiler Room	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
70	STP Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
71	Utilidor	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		
72	RO plant (not to be demolished, required for treatment)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

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Buildings & Foundation - Calculations

Building Volume Calculations

Using Means Heavy Construction Cost Data (2004) calculates cubic feet from building dimensions
Estimage slab thickness and wall thickness if not known
Assumes that all concrete slabs are reinforced
Productivity for crew from Means Heavy Construction Cost Data (2004) adjusted for supervision
(addressed in Misc. Costs) and Davis-Bacon Wage Rates
Demolition costs do not include hauling or disposing if debris - Use Waste Disposal module

Slab Demolition Calculations

Minimum 1 hr excavator time for slab demolition

Cover Volume Calculation

Foundation area x cover thickness
If "Bury in Place" is selected as slab demolition method, cover thickness is adjusted such that
total cover (cover + growth media) equals value entered in "Minimum thickness of cover over unbroken slab" cell above

Ripping/Scarifying Calculations

Flat area width = Final flat area ÷ Average long dimensions
Number of passes = Flat area width ÷ Grader width
Travel distance = Number of passes x Average long dimensions
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation

Minimum 1 acre revegetation crew time per area

Closure Cost Estimate
Foundations & Buildings

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TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

Building & Foundation Demolition Costs																			
Uses RS Means Heavy Construction Cost Data for building and wall demolition cost calculations. Uses CAT Handbook for slab breaking production.																			
	Description (required)	Building Footprint (slab area) m2	Building Volume m3	Wall Length m	Wall Area m2	Slab Demolition Fleet	Slab Volume m3	Total Labor Cost \$	Total Equipment Cost \$	Total Building Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Wall Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Slab Breaking Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Demolition Costs \$
1	Mine Site Washbay	750	15,000	110	33	345B	300	\$70,188	\$31,518	\$101,706	\$796	\$0	\$796	\$0	\$0	\$0	\$70,984	\$31,518	\$102,502
2	Mine Site Truck Shop	9,114	168,610	470	141	345B	2,734	\$788,959	\$354,287	\$1,143,246	\$3,400	\$0	\$3,400	\$0	\$0	\$0	\$792,359	\$354,287	\$1,146,646
3	Repair Shop	1,785	12,495	172	0	345B	357	\$58,467	\$26,255	\$84,722	\$0	\$0	\$0	\$0	\$0	\$0	\$58,467	\$26,255	\$84,722
4	Primary Crusher	264	11,880	68	82	345B	158	\$55,588	\$24,962	\$80,550	\$1,977	\$0	\$1,977	\$0	\$0	\$0	\$57,565	\$24,962	\$82,527
5	Primary Crusher - Concrete	264	8,712	68	0	345B	264	\$40,765	\$18,306	\$59,071	\$0	\$0	\$0	\$0	\$0	\$0	\$40,765	\$18,306	\$59,071
6	Primary Crusher - Steel Bldg. Below Ground	90	3,780	38	0	345B	0	\$17,687	\$7,943	\$25,630	\$0	\$0	\$0	\$0	\$0	\$0	\$17,687	\$7,943	\$25,630
7	Primary Crusher - Steel Bldg. Above Ground	420	5,880	94	0	345B	0	\$27,514	\$12,355	\$39,869	\$0	\$0	\$0	\$0	\$0	\$0	\$27,514	\$12,355	\$39,869
8	Take-up Tower	420	4,200	86	0	345B	252	\$19,653	\$8,825	\$28,478	\$0	\$0	\$0	\$0	\$0	\$0	\$19,653	\$8,825	\$28,478
9	Conveyor (Total)	3,624	7,249	3,628	0	345B	0	\$33,918	\$15,231	\$49,149	\$0	\$0	\$0	\$0	\$0	\$0	\$33,918	\$15,231	\$49,149
10	Drive House	297	6,534	76	0	345B	0	\$30,574	\$13,729	\$44,303	\$0	\$0	\$0	\$0	\$0	\$0	\$30,574	\$13,729	\$44,303
11	Ore Stockpile Cover	0	0	250	0	345B	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	Pebble Crusher	616	18,480	100	60	345B	185	\$86,471	\$38,830	\$125,301	\$1,447	\$0	\$1,447	\$0	\$0	\$0	\$87,918	\$38,830	\$126,748
13	Grinding Building	4,608	161,279	288	173	345B	1,382	\$754,657	\$338,884	\$1,093,541	\$4,171	\$0	\$4,171	\$0	\$0	\$0	\$758,828	\$338,884	\$1,097,712
14	Ball Mill Foundations (two total)	1,250	1,250	150	0	345B	5,000	\$8,237	\$3,686	\$11,923	\$0	\$0	\$0	\$0	\$0	\$0	\$8,237	\$3,686	\$11,923
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	1,901	1,901	174	0	345B	0	\$8,893	\$3,994	\$12,887	\$0	\$0	\$0	\$0	\$0	\$0	\$8,893	\$3,994	\$12,887
16	SAG Mill Foundation	750	750	110	0	345B	3,000	\$4,942	\$2,212	\$7,154	\$0	\$0	\$0	\$0	\$0	\$0	\$4,942	\$2,212	\$7,154
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	1,101	1,101	133	0	345B	0	\$5,153	\$2,314	\$7,467	\$0	\$0	\$0	\$0	\$0	\$0	\$5,153	\$2,314	\$7,467
18	POX Process Building - High Section	2,399	110,341	199	119	345B	1,439	\$516,306	\$231,851	\$748,157	\$2,869	\$0	\$2,869	\$0	\$0	\$0	\$519,175	\$231,851	\$751,026
19	POX Process Building - Lower Section	4,254	119,105	288	173	345B	2,552	\$557,319	\$250,268	\$807,587	\$4,171	\$0	\$4,171	\$0	\$0	\$0	\$561,490	\$250,268	\$811,758
20	POX Process Building - End additioin	512	7,161	92	55	345B	307	\$33,508	\$15,047	\$48,555	\$1,326	\$0	\$1,326	\$0	\$0	\$0	\$34,834	\$15,047	\$49,881
21	POX Misc. Small Tanks (8)	128	640	72	0	345B	0	\$2,995	\$1,345	\$4,340	\$0	\$0	\$0	\$0	\$0	\$0	\$2,995	\$1,345	\$4,340
22	Autoclaves (2)	240	1,440	92	0	345B	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764
23	Stock Tanks Concrete Contain.	9,000	0	420	252	345B	4,500	\$0	\$0	\$0	\$6,076	\$0	\$6,076	\$0	\$0	\$0	\$6,076	\$0	\$6,076
24	Concrete Thickener Concrete	11,000	0	420	252	345B	5,500	\$0	\$0	\$0	\$6,076	\$0	\$6,076	\$0	\$0	\$0	\$6,076	\$0	\$6,076
25	Flot./POX Thickener Concrete	33,600	0	760	0	345B	20,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Hot Cure Tanks	588	9,408	112	0	345B	0	\$44,022	\$19,768	\$63,790	\$0	\$0	\$0	\$0	\$0	\$0	\$44,022	\$19,768	\$63,790
27	Flotation Building	11,520	403,199	432	259	345B	6,912	\$1,886,647	\$847,212	\$2,733,859	\$6,244	\$0	\$6,244	\$0	\$0	\$0	\$1,892,891	\$847,212	\$2,740,103
28	CIL Building	3,840	145,921	272	163	345B	2,304	\$682,791	\$306,612	\$989,403	\$3,930	\$0	\$3,930	\$0	\$0	\$0	\$686,721	\$306,612	\$993,333
29	Refinery	768	26,880	112	67	345B	461	\$125,776	\$56,481	\$182,257	\$1,615	\$0	\$1,615	\$0	\$0	\$0	\$127,391	\$56,481	\$183,872
30	Cyanide Reagent Building	3,072	107,520	256	154	345B	1,843	\$503,106	\$225,923	\$729,029	\$3,713	\$0	\$3,713	\$0	\$0	\$0	\$506,819	\$225,923	\$732,742
31	Water Treatment Plant Building - Construction	298	2,233	73	44	345B	179	\$10,447	\$4,691	\$15,138	\$1,061	\$0	\$1,061	\$0	\$0	\$0	\$11,508	\$4,691	\$16,199
32	Water Treatment Plant Building - Operation	1,183	16,207	143	43	345B	710	\$75,837	\$34,055	\$109,892	\$1,037	\$0	\$1,037	\$0	\$0	\$0	\$76,874	\$34,055	\$110,929
33	Man Camp - Airstrip	741	17,043	153	0	345B	74	\$79,748	\$35,811	\$115,559	\$0	\$0	\$0	\$0	\$0	\$0	\$79,748	\$35,811	\$115,559
34	Man Camp - Airstrip	741	17,043	153	0	345B	74	\$79,748	\$35,811	\$115,559	\$0	\$0	\$0	\$0	\$0	\$0	\$79,748	\$35,811	\$115,559
35	Man Camp - Airstrip	1,117	25,696	219	0	345B	112	\$120,235	\$53,993	\$174,228	\$0	\$0	\$0	\$0	\$0	\$0	\$120,235	\$53,993	\$174,228
36	Man Camp - Airstrip	1,117	25,696	219	0	345B	112	\$120,235	\$53,993	\$174,228	\$0	\$0	\$0	\$0	\$0	\$0	\$120,235	\$53,993	\$174,228
37	Man Camp - Airstrip	821	18,878	167	0	345B	82	\$88,336	\$39,668	\$128,004	\$0	\$0	\$0	\$0	\$0	\$0	\$88,336	\$39,668	\$128,004
38	Man Camp - Airstrip	2,262	27,143	213	0	345B	226	\$127,010	\$57,035	\$184,045	\$26	\$0	\$0	\$0	\$0	\$0	\$127,010	\$57,035	\$184,045
39	STP Building	223	1,563	61	0	345B	67	\$7,313	\$3,284	\$10,597	\$0	\$0	\$0	\$0	\$0	\$0	\$7,313	\$3,284	\$10,597
40	Power Station A/B Buildings	3,600	54,001	300	0	345B	1,080	\$252,678	\$113,467	\$366,145	\$0	\$0	\$0	\$0	\$0	\$0	\$252,678	\$113,467	\$366,145
41	Power Station A Gensets	1,050	4,200	170	0	345B	0	\$19,652	\$8,825	\$28,477	\$0	\$0	\$0	\$0	\$0	\$0	\$19,652	\$8,825	\$28,477
42	Power station A Transformers	480	1,920	88	0	345B	0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0	\$0	\$8,984	\$4,034	\$13,018
43	Power Station A Tanks	400	6,000	80	0	345B	0	\$28,076	\$12,608	\$40,684	\$0	\$0	\$0	\$0	\$0	\$0	\$28,076	\$12,608	\$40,684
44	Power Station A Building	720	8,640	112	0	345B	216	\$40,428	\$18,155	\$58,583	\$0	\$0	\$0	\$0	\$0	\$0	\$40,428	\$18,155	\$58,583
45	Power Station A Building (small)	576	3,456	100	0	345B	115	\$16,171	\$7,262	\$23,433	\$0	\$0	\$0	\$0	\$0	\$0	\$16,171	\$7,262	\$23,433
46	Power Station B Gensets	1,050	4,200	170	0	345B	0	\$19,652	\$8,825	\$28,477	\$0	\$0	\$0	\$0	\$0	\$0	\$19,652	\$8,825	\$28,477
47	Power station B Transformers	480	1,920	88	0	345B	0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0	\$0	\$8,984	\$4,034	\$13,018
48	Power Station B Tanks	400	6,000	80	0	345B	0	\$28,076	\$12,608	\$40,684	\$0	\$0	\$0	\$0	\$0	\$0	\$28,076	\$12,608	\$40,684
49	Power Station B Building (small)	576	3,456	100	0	345B	115	\$16,171	\$7,262	\$23,433	\$0	\$0	\$0	\$0	\$0	\$0	\$16,171	\$7,262	\$23,433
50	Cold Storage Building	1,058	8,464	138	83	345B	317	\$39,605	\$17,785	\$57,390	\$2,001	\$0	\$2,001	\$0	\$0	\$0	\$41,606	\$17,785	\$59,391
51	Autoclave Feed Tanks	324	4,536	72	0	345B	0	\$21,225	\$9,531	\$30,756	\$0	\$0	\$0	\$0	\$0	\$0	\$21,225	\$9,531	\$30,756
52	Quench/Flash/Heaters	121	4,235	44	0	345B	0	\$19,816	\$8,899	\$28,715	\$0	\$0	\$0	\$0	\$0	\$0	\$19,816	\$8,899	\$28,715
53	Absorber Towers	36	288	24	0	345B	0	\$1,348	\$605	\$1,953	\$0	\$0	\$0	\$0	\$0	\$0	\$1,348	\$605	\$1,953
54	Cooling Towers	144	1,152	48	0	345B	0	\$5,390	\$2,421	\$7,811	\$0	\$0	\$0	\$0	\$0	\$0	\$5,390	\$2,421	\$7,811
55	Mercury Scrubbing	72	576	36	0	345B	0	\$2,695	\$1,210	\$3,905	\$0	\$0	\$0	\$0	\$0	\$0	\$2,695	\$1,210	\$3,905
56	Quench Building (60 m total H)	1,199	41,965	153	0	345B	359	\$196,361	\$88,177	\$284,538	\$0	\$0	\$0	\$0	\$0	\$0	\$196,361	\$88,177	\$284,538
57	Autoclave	240	1,440	92	0	345B	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

58	HP cooling tank	144	2,016	48	0	345B	0	\$9,433	\$4,236	\$13,669	\$0	\$0	\$0	\$0	\$0	\$0	\$9,433	\$4,236	\$13,669
59	Demin Tank	64	512	32	0	345B	0	\$2,396	\$1,076	\$3,472	\$0	\$0	\$0	\$0	\$0	\$0	\$2,396	\$1,076	\$3,472
60	Seal Water Tank	16	128	16	0	345B	0	\$599	\$269	\$868	\$0	\$0	\$0	\$0	\$0	\$0	\$599	\$269	\$868
61	Autoclave Feed Pumps	30	90	22	0	345B	0	\$421	\$189	\$610	\$0	\$0	\$0	\$0	\$0	\$0	\$421	\$189	\$610
62	LP Column	144	1,440	48	0	345B	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764
63	HP Column	144	1,440	48	0	345B	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764
64	Main Heat Exchanger	192	1,920	56	0	345B	0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0	\$0	\$8,984	\$4,034	\$13,018
65	Wash Water Tower	49	343	28	0	345B	0	\$1,605	\$721	\$2,326	\$0	\$0	\$0	\$0	\$0	\$0	\$1,605	\$721	\$2,326
66	Chilled Water Tower	49	343	28	0	345B	0	\$1,605	\$721	\$2,326	\$0	\$0	\$0	\$0	\$0	\$0	\$1,605	\$721	\$2,326
67	Compressors (3)	550	5,500	130	0	345B	0	\$25,735	\$11,556	\$37,291	\$0	\$0	\$0	\$0	\$0	\$0	\$25,735	\$11,556	\$37,291
68	Warehouse	1,426	12,835	154	0	345B	428	\$60,054	\$26,968	\$87,022	\$0	\$0	\$0	\$0	\$0	\$0	\$60,054	\$26,968	\$87,022
69	Boiler Room	900	7,650	120	0	345B	270	\$35,796	\$16,074	\$51,870	\$0	\$0	\$0	\$0	\$0	\$0	\$35,796	\$16,074	\$51,870
70	STP Building	897	7,174	135	0	345B	269	\$33,567	\$15,073	\$48,640	\$0	\$0	\$0	\$0	\$0	\$0	\$33,567	\$15,073	\$48,640
71	Utilidor	1,075	7,525	440	0	345B	0	\$35,211	\$15,812	\$51,023	\$0	\$0	\$0	\$0	\$0	\$0	\$35,211	\$15,812	\$51,023
72	RO plant (not to be demolished, required for treatment)	0	0	0	0	345B	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		1,717,583				64,415		\$8,040,715	\$3,610,720	\$11,651,435	\$51,910	\$0	\$51,910	\$0	\$0	\$0	\$8,092,625	\$3,610,720	\$11,703,345

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

Building & Foundation - Foundation Cover and Growth Media Costs																				
		Foundation Cover								Growth Media							Total Cover & Growth Media Costs			
	Description (required)	Cover Volume m3	Cover Repacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Repacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Costs \$
1	Mine Site Washbay	525	777D/992G	499	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
2	Mine Site Truck Shop	6,379	777D/992G	499	1	13	\$2,387	\$10,817	\$13,204						\$0	\$0	\$0	\$2,387	\$10,817	\$13,204
3	Repair Shop	1,249	777D/992G	499	1	3	\$551	\$2,496	\$3,047						\$0	\$0	\$0	\$551	\$2,496	\$3,047
4	Primary Crusher	185	777D/992G	499	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
5	Primary Crusher - Concrete	185	777D/992G	499	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
6	Primary Crusher - Steel Bldg. Below Ground	83	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
7	Primary Crusher - Steel Bldg. Above Ground	384	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
8	Take-up Tower	1,260	777D/992G	499	1	3	\$551	\$2,496	\$3,047						\$0	\$0	\$0	\$551	\$2,496	\$3,047
9	Conveyor (Total)	3,314	777D/992G	530	1	6	\$1,102	\$4,992	\$6,094						\$0	\$0	\$0	\$1,102	\$4,992	\$6,094
10	Drive House	271	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
11	Ore Stockpile Cover						\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
12	Pebble Crusher	431	777D/992G	437	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
13	Grinding Building	3,226	777D/992G	437	1	7	\$1,285	\$5,825	\$7,110						\$0	\$0	\$0	\$1,285	\$5,825	\$7,110
14	Ball Mill Foundations (two total)	5,000	777D/992G	437	1	11	\$2,020	\$9,153	\$11,173						\$0	\$0	\$0	\$2,020	\$9,153	\$11,173
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	1,738	777D/992G	530	1	3	\$551	\$2,496	\$3,047						\$0	\$0	\$0	\$551	\$2,496	\$3,047
16	SAG Mill Foundation	3,000	777D/992G	437	1	7	\$1,285	\$5,825	\$7,110						\$0	\$0	\$0	\$1,285	\$5,825	\$7,110
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	1,007	777D/992G	530	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
18	POX Process Building - High Section	1,679	777D/992G	499	1	3	\$551	\$2,496	\$3,047						\$0	\$0	\$0	\$551	\$2,496	\$3,047
19	POX Process Building - Lower Section	2,978	777D/992G	499	1	6	\$1,102	\$4,992	\$6,094						\$0	\$0	\$0	\$1,102	\$4,992	\$6,094
20	POX Process Building - End additioin	511	777D/992G	437	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
21	POX Misc. Small Tanks (8)	117	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
22	Autoclaves (2)	219	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
23	Stock Tanks Concrete Contain.	6,300	777D/992G	437	1	14	\$2,571	\$11,649	\$14,220						\$0	\$0	\$0	\$2,571	\$11,649	\$14,220
24	Concrete Thickener Concrete	7,700	777D/992G	499	1	15	\$2,755	\$12,481	\$15,236						\$0	\$0	\$0	\$2,755	\$12,481	\$15,236
25	Flot./POX Thickener Concrete	23,520	777D/992G	437	1	54	\$9,917	\$44,932	\$54,849						\$0	\$0	\$0	\$9,917	\$44,932	\$54,849
26	Hot Cure Tanks	537	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
27	Flotation Building	8,064	777D/992G	437	1	18	\$3,306	\$14,977	\$18,283						\$0	\$0	\$0	\$3,306	\$14,977	\$18,283
28	CIL Building	2,688	777D/992G	437	1	6	\$1,102	\$4,992	\$6,094						\$0	\$0	\$0	\$1,102	\$4,992	\$6,094
29	Refinery	537	777D/992G	437	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
30	Cyanide Reagent Building	2,151	777D/992G	455	1	5	\$918	\$4,160	\$5,078						\$0	\$0	\$0	\$918	\$4,160	\$5,078
31	Water Treatment Plant Building - Construction	209	777D/992G	499	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
32	Water Treatment Plant Building - Operation	828	777D/992G	499	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
33	Man Camp - Airstrip	518	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
34	Man Camp - Airstrip	518	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
35	Man Camp - Airstrip	782	777D/992G	455	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
36	Man Camp - Airstrip	782	777D/992G	455	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
37	Man Camp - Airstrip	574	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
38	Man Camp - Airstrip	1,583	777D/992G	455	1	3	\$551	\$2,496	\$3,047						\$0	\$0	\$0	\$551	\$2,496	\$3,047
39	STP Building	156	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
40	Power Station A/B Buildings	2,520	777D/992G	437	1	6	\$1,102	\$4,992	\$6,094						\$0	\$0	\$0	\$1,102	\$4,992	\$6,094
41	Power Station A Gensets	960	777D/992G	530	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
42	Power station A Transformers	439	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
43	Power Station A Tanks	365	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
44	Power Station A Building	504	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
45	Power Station A Building (small)	403	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
46	Power Station B Gensets	960	777D/992G	530	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
47	Power station B Transformers	439	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
48	Power Station B Tanks	365	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
49	Power Station B Building (small)	403	777D/992G	455	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
50	Cold Storage Building	741	777D/992G	499	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
51	Autoclave Feed Tanks	296	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
52	Quench/Flash/Heaters	111	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
53	Absorber Towers	33	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
54	Cooling Towers	132	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
55	Mercury Scrubbing	66	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016
56	Quench Building (60 m total H)	839	777D/992G	499	1	2	\$367	\$1,664	\$2,031						\$0	\$0	\$0	\$367	\$1,664	\$2,031
57	Autoclave	219	777D/992G	530	1	1	\$184	\$832	\$1,016						\$0	\$0	\$0	\$184	\$832	\$1,016

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

58	HP cooling tank	132	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
59	Demin Tank	59	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
60	Seal Water Tank	15	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
61	Autoclave Feed Pumps	28	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
62	LP Column	132	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
63	HP Column	132	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
64	Main Heat Exchanger	176	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
65	Wash Water Tower	45	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
66	Chilled Water Tower	45	777D/992G	530	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
67	Compressors (3)	385	777D/992G	499	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
68	Warehouse	999	777D/992G	499	1	2	\$367	\$1,664	\$2,031					\$0	\$0	\$0	\$367	\$1,664	\$2,031
69	Boiler Room	630	777D/992G	499	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
70	STP Building	628	777D/992G	499	1	1	\$184	\$832	\$1,016					\$0	\$0	\$0	\$184	\$832	\$1,016
71	Utilidor	983	777D/992G	530	1	2	\$367	\$1,664	\$2,031					\$0	\$0	\$0	\$367	\$1,664	\$2,031
72	RO plant (not to be demolished, required for treatment)						\$0	\$0	\$0					\$0	\$0	\$0	\$0	\$0	\$0
		105,372				244	\$44,822	\$203,019	\$247,841					\$0	\$0	\$0	\$44,822	\$203,019	\$247,841

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

Building & Foundation - Scarifying/Revegetation Costs																
					Scarifying/Ripping			Revegetation				Total Scarify & Revegation Costs				
	Description (required)	Flat Area ha	Area Long Dimension m	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revgetation Material Cost \$	Total Revegetation Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Costs \$	
1	Mine Site Washbay	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
2	Mine Site Truck Shop	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
3	Repair Shop	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
4	Primary Crusher	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
5	Primary Crusher - Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
6	Primary Crusher - Steel Bldg. Below Ground	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
7	Primary Crusher - Steel Bldg. Above Ground	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
8	Take-up Tower	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
9	Conveyor (Total)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
10	Drive House	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
11	Ore Stockpile Cover	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
12	Pebble Crusher	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
13	Grinding Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
14	Ball Mill Foundations (two total)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
16	SAG Mill Foundation	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
18	POX Process Building - High Section	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
19	POX Process Building - Lower Section	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
20	POX Process Building - End addition	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
21	POX Misc. Small Tanks (8)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
22	Autoclaves (2)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
23	Stock Tanks Concrete Contain.	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
24	Concrete Thickener Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
25	Flot./POX Thickener Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
26	Hot Cure Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
27	Flotation Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
28	CIL Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
29	Refinery	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
30	Cyanide Reagent Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
31	Water Treatment Plant Building - Construction	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
32	Water Treatment Plant Building - Operation	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
33	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
34	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
35	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
36	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
37	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
38	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
39	STP Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
40	Power Station A/B Buildings	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
41	Power Station A Gensets	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
42	Power station A Transformers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
43	Power Station A Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
44	Power Station A Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
45	Power Station A Building (small)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
46	Power Station B Gensets	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
47	Power station B Transformers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
48	Power Station B Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
49	Power Station B Building (small)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
50	Cold Storage Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
51	Autoclave Feed Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
52	Quench/Flash/Heaters	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
53	Absorber Towers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
54	Cooling Towers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
55	Mercury Scrubbing	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
56	Quench Building (60 m total H)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	
57	Autoclave	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162	

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$203,019	N/A	\$247,841
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$203,019	\$0	\$247,841
Revegetation Cost	\$7,843	\$2,269	\$1,584	\$11,696
TOTALS	\$8,145,290	\$3,816,008	\$1,584	\$11,962,882

58	HP cooling tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
59	Demin Tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
60	Seal Water Tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
61	Autoclave Feed Pumps	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
62	LP Column	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
63	HP Column	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
64	Main Heat Exchanger	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
65	Wash Water Tower	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
66	Chilled Water Tower	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
67	Compressors (3)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
68	Warehouse	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
69	Boiler Room	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
70	STP Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
71	Utilidor	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
72	RO plant (not to be demolished, required for treatment)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
		2.88			\$0	\$0	\$0	\$7,843	\$2,269	\$1,584	\$11,696	\$7,843	\$2,269	\$1,584	\$11,696

**Closure Cost Estimate
Other Demo & Equip Removal**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Other Demolition and Equipment Removal - Cost Summary				
	Labor	Equipment	Materials	Totals
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$90,283	\$195,081	\$0	\$285,364
TOTALS	\$90,283	\$195,081	\$0	\$285,364

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Other Demolition									
Facility Description									
	Description (required)	ID Code	Type	Quantity	Units	Labor Unit Cost \$	Equipment Unit Cost \$	Material Unit Cost \$	Total Cost \$
						\$0	\$0	\$0	

Notes:

**Closure Cost Estimate
Other Demo & Equip Removal**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Other Demolition and Equipment Removal - Cost Summary				
	Labor	Equipment	Materials	Totals
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$90,283	\$195,081	\$0	\$285,364
TOTALS	\$90,283	\$195,081	\$0	\$285,364

Equipment & Material Removal									
Facility Description									
	Description (required)	ID Code	Type	Quantity	Units	Labor Unit Cost (\$)	Equipment Unit Cost (\$)	Material Unit Cost (\$)	Total Cost (\$)
1	Misc. Tanks and Vessels (see User Sheet 4)		Process - Plant & Buildings	1	ea	\$90,283.35	\$195,080.85		\$285,364
						\$90,283	\$195,081	\$0	\$285,364

Notes:

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction Diversion Ditch Liner Diversion Ditch Rip-Rap Sed Pond Construct/Regrade Liner Installation Sed Pond Cover Ripping/Scarifying Cost	\$139,194	\$250,554	N/A	\$389,748
	\$1,912,141	\$802,498	\$914,900	\$3,629,539
	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
	\$0	\$0	N/A	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	N/A	\$0
	\$0	\$0	N/A	\$0
	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation Sediment Pond Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Diversion Ditches - User Input																
			Diversions Ditches							Revegetation			Liner and Rip-Rap Installation			
	Description (required)	ID Code	Diversion Length m	Diversion Depth m	Ditch Bottom Width m	Ditch Sideslope Angle _H:1V	Excavate Volume (if calculated elsewhere) m3	Excavating Material Condition (select)	Excavating Equipment Fleet (select)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Liner Area m2	Liner Type (select)	Rip-Rap Area m2	Rip-Rap Type (select type)
1	Reclaimed WRF RO Collection		4425	2.0	4.0	2.0	87,600	1	Medium	Mix 1					34,222	Rip-Rap 18 in (456)
2	Primary Channel (WRF)		12000	2.0	4.0	2.0		1	Medium	Mix 1			130700	40 mil VLDPE	130,700	Rip-Rap 3/8 to 1/4
3	Secondary Channel (WRF)		26000	1.0	2.0	2.0		1	Medium	Mix 1					156,000	Rip-Rap 3/8 to 1/4
4	Tailings spillway construction (excavation volume in User 11)		1000	10.5	10.0	2.0	386,512	0.6	Medium	Mix 1						

Notes:
Item 2 and Item 3 diversion lengths and liner area from "DC11-028_Closure_Period_MTOs_for_WRF_Diversion_Channels.pdf"
Tailings spillway construction blasting costs in "Other User."

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction Diversion Ditch Liner Diversion Ditch Rip-Rap Sed Pond Construct/Regrade Liner Installation Sed Pond Cover Ripping/Scarifying Cost	\$139,194	\$250,554	N/A	\$389,748
	\$1,912,141	\$802,498	\$914,900	\$3,629,539
	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
	\$0	\$0	N/A	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	N/A	\$0
	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Sediment/Evaporation Pond Construction/Removal - User Input													
			Sediment Ponds								Growth Media		
	Description (required)	ID Code	Pond Width m	Pond/Berm Length m	Berm Height m	Crest Width m	Sideslope Angle _H:1V	Final Area (if calculated elsewhere) ha	Regrade Volume (if calculated elsewhere) m3	Cover Volume (if calculated elsewhere) m3	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Pond to Borrow % grade

- Notes:
- 1. All Physical parameters must be input even if manual overrides for volume or area are used.
 - 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
 - 3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Sediment/Evaporation Pond Construction/Removal - User Input (cont.)													
		Sediment Ponds				Growth Media			Revegetation			Ripping/Scarifying	
	Description (required)	Excavating Material Condition (select)	Material Type (select)	Excavating Equipment Fleet (select)	Liner Type (select)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Scarify/ Ripping Fleet (select)

- Notes:
- 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
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Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$139,194	\$250,554	N/A	\$389,748
Diversion Ditch Liner	\$1,912,141	\$802,498	\$914,900	\$3,629,539
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$139,194	\$250,554	N/A	\$389,748
Diversion Ditch Liner	\$1,912,141	\$802,498	\$914,900	\$3,629,539
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Diversions Ditch Volume Calculation

Cross Sectional Area = $\frac{(a+b)}{2} \times d$

Ditch Volume = Ditch Length x Cross Sectional Area

Figure 1 - Ditch Volume Calculation

- 1) Assume 20% swell for excavations
- 2) Assumes heavy duty trenching bucket is used

Sediment/Evaporation Pond Construction Calculation

Cut = Fill
Push distance = pond width up to 2/3 max push distance (120 m)

Figure 2 - Sediment Ponds

- 1) Assume balanced cut-to-fill for berm construction
- 2) Include cost for liner, if required.
- 3) Include line items for removal, if necessary.
- 4) Assume 20% swell for excavations
- 5) Minimum 1 hr ripping/scarifying per area
- 6) Minimum 0.4 ha revegetation crew time per area

Diversion Ditches - Excavation Costs																
									Liner Installation				Rip-Rap Installation			
	Description (required)	Diversion Ditch Volume LCM	Diversion Ditch Equipment	Corrected Excavator Productivity LCM/hr	Total Hours	Diversion Ditch Labor Cost \$	Diversion Ditch Equipment Cost \$	Total Diversion Ditch Cost	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Reclaimed WRF RO Collection	105,120	345B	480	239	\$14,534	\$26,161	\$40,695	\$0	\$0	\$0	\$0	\$1,585,163	\$446,597	\$0	\$2,031,760
2	Primary Channel (WRF)	252,844	345B	480	689	\$41,898	\$75,418	\$117,316	\$1,912,141	\$802,498	\$914,900	\$3,629,539	\$3,975,894	\$1,120,099	\$5,132,369	\$10,228,362
3	Secondary Channel (WRF)	113,045	345B	480	308	\$18,729	\$33,714	\$52,443	\$0	\$0	\$0	\$0	\$4,745,520	\$1,336,920	\$6,125,857	\$12,208,297
4	Tailings spillway construction (excavation volume in User 3)	463,814	345B	480	1,053	\$64,033	\$115,261	\$179,294	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		934,823			2,289	\$139,194	\$250,554	\$389,748	\$1,912,141	\$802,498	\$914,900	\$3,629,539	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419

Notes: LCM assumes 20% swell from ditch volume

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$139,194	\$250,554	N/A	\$389,748
Diversion Ditch Liner	\$1,912,141	\$802,498	\$914,900	\$3,629,539
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$139,194	\$250,554	N/A	\$389,748
Diversion Ditch Liner	\$1,912,141	\$802,498	\$914,900	\$3,629,539
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,357,912	\$3,956,668	\$12,173,126	\$28,487,706
Diversion Ditch Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,840	\$3,424	\$17,110	\$32,374
TOTALS	\$12,369,752	\$3,960,092	\$12,190,236	\$28,520,080

Diversion Ditches - Revegetation Costs						
	Description (required)	Surface Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revgetation Material Cost \$	Total Revegetation Cost \$
1	Reclaimed WRF RO Collection	5.99	\$1,612	\$466	\$2,329	\$4,407
2	Primary Channel (WRF)	16.19	\$4,357	\$1,260	\$6,296	\$11,913
3	Secondary Channel (WRF)	16.19	\$4,357	\$1,260	\$6,296	\$11,913
4	Tailings spillway construction (excavation volume in User)	5.63	\$1,514	\$438	\$2,189	\$4,141
		44.00	\$11,840	\$3,424	\$17,110	\$32,374

Sediment/Evaporation Ponds - Construction/Regrading Costs																	
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83)											Earthwork			Liner			
	Description (required)	Regrading Volume m3	Sed/Evap Pond Equipment	Dozing Distance (see above) m	Uncorrected Dozer Productivity LCM/hr	Grade Correction	Density Correction	Excavating Material	Corrected Productivity LCM/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Constr/ Regrading Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$
											\$0	\$0	\$0	\$0	\$0	\$0	\$0

Sediment/Evaporation Ponds - Growth Media Costs									
	Growth Media								
	Description (required)	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$
							\$0	\$0	\$0

Sediment/Evaporation Ponds - Revegetation Costs												
	Description (required)	Surface Area ha	Long Ripping Distance m	Area Width m	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revgetation Material Cost \$	Total Revegetation Cost \$
					0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$87,968	N/A	\$108,671
Growth Media Placement Costs	\$2,218	\$9,425	N/A	\$11,643
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$98,463	\$0	\$123,482
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - User Input														
You must fill in ALL green cells and relevant blue cells in this section for each pond														
Facility Description			Pond Dimensions (1)					Backfill - (If trucks are used) (1)				Growth Media		
	Description (required)	ID Code	Pond Length m	Pond Width m	Pond Depth m	Pond Sideslope Angle _H:1V	Disturbed Area (if calculated elsewhere) ha	Percent Backfill (100% if blank)	Distance from Backfill Borrow m	Slope from Facility to Borrow Area % grade	Pond Volume (if calculated elsewhere) m3	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	TSF seepage pond (required long-term for water treatment)		100	75	10.0	2.0	1.25		4,400	-5%		350	4,400	-5%

- Notes:
- All Physical parameters must be input even if manual overrides for volume or area are used.
 - If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)



Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$87,968	N/A	\$108,671
Growth Media Placement Costs	\$2,218	\$9,425	N/A	\$11,643
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$98,463	\$0	\$123,482
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - User Input (cont.)											
		Liner	Backfill			Growth Media			Revegetation		
	Description (required)	Crew Cut & Fold Time ⁽²⁾ hrs	Backfill Material Type (select)	Backfill Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	TSF seepage pond (required long-term for water treatment)	16.0	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

(2) Pond liner removal crew (2Clab + excavator) = 2 General Laborers + 325C Excavator

Closure Cost Estimate Process Ponds

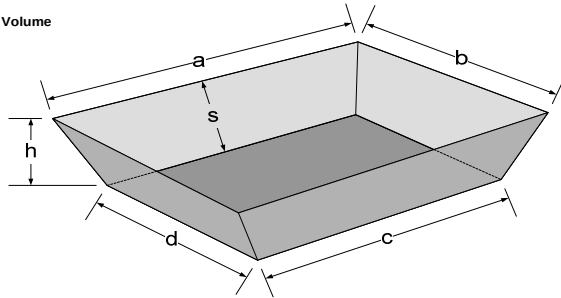
Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$87,968	N/A	\$108,671
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Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - Calculations

Pond Volume Calculation

Figure 1 - Pond Volume



Area and Volume of the Frustum of a Pyramid

$$\text{Surface Area} = ab + cd + (a+b+c+d) \times \frac{s}{2}$$

$$\text{Volume} = \frac{h(ab + cd + \sqrt{abcd})}{3}$$

Revegetation Calculations

Minimum 0.4 ha revegetation crew time per area

**Closure Cost Estimate
Process Ponds**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
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Subtotal Earthworks	\$25,019	\$98,463	\$0	\$123,482
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - Liner Cutting and Folding					
	Description (required)	Crew Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$
1	TSF seepage pond (required long-term for water treatment)	16	\$2,098	\$1,070	\$3,168
		16	\$2,098	\$1,070	\$3,168

Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$87,968	N/A	\$108,671
Growth Media Placement Costs	\$2,218	\$9,425	N/A	\$11,643
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$98,463	\$0	\$123,482
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - Backfill and Growth Media Costs																	
		Pond Backfill								Growth Media							
	Description (required)	Backfill Volume m3	Backfill Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Backfill Cost \$	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$
1	TSF seepage pond (required long-term for water treatment)	45,319	777D/992G	804	4	56	\$20,703	\$87,968	\$108,671	4,461	777D/992G	804	4	6	\$2,218	\$9,425	\$11,643
		45,319				56	\$20,703	\$87,968	\$108,671	4,461				6	\$2,218	\$9,425	\$11,643

**Closure Cost Estimate
Process Ponds**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$87,968	N/A	\$108,671
Growth Media Placement Costs	\$2,218	\$9,425	N/A	\$11,643
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$98,463	\$0	\$123,482
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$98,561	\$486	\$124,404

Process Ponds - Revegetation Costs						
	Description (required)	Surface Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	TSF seepage pond (required long-term for water treatment)	1.25	\$338	\$98	\$486	\$922
		1.25	\$338	\$98	\$486	\$922

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - User Input												
You must fill in ALL green cells and relevant blue cells in this section for each building or facility												
Facility Description				Physical			Cover			Growth Media		
	Description (required)	ID Code	Type	Area ha	Average Flat Area Long Dimension (ripping distance) m	Regrade Volume (calculated elsewhere) m3	Cover Thickness mm	Distance from Cover Borrow Area m	Slope from Facility to Borrow Area % grade	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	Permanent Man Camp Yards		Yard	14.84	500	29,679				300	1,000	0.0
2	Material Sites - 1		Yard	11.19	500	22,378				300	1,000	0.0
3	Material Sites - 2		Yard	4.17	500	8,339				300	1,000	0.0
4	Material Sites - 3		Yard	5.74	500	11,477				300	1,000	0.0
5	Material Sites - 4		Yard	84.30	500	168,604				300	1,000	0.0
6	Material Sites - 5		Yard	1.89	500	3,787				300	1,000	0.0
7	Material Sites - 6		Yard	9.01	500	18,016				300	1,000	0.0
8	Material Sites - 7		Yard	8.86	500	17,729				300	1,000	0.0
9	Material Sites - 8		Yard	1.15	500	2,296				300	1,000	0.0
10	Material Sites - 9		Yard	9.87	500	19,749				300	1,000	0.0
11	Material Sites - 10		Yard	4.24	500	8,490				300	1,000	0.0
12	Material Sites - 11		Yard	6.35	500	12,703				300	1,000	0.0
13	Material Sites - 12		Yard	8.70	500	17,402				300	1,000	0.0
14	Material Sites - 13		Yard	14.84	500	29,678				300	1,000	0.0
15	Material Sites - 14		Yard	9.89	100	19,784				300	1,000	0.0
16	Material Sites - 15		Yard	5.05	100	10,105				300	1,000	0.0
17	Material Sites - 16		Yard	1.12	100	2,231				300	1,000	0.0
18	Lower Contact Water Dam (see "Haul Material" sheet)											
19	Upper Contact Water Dam (see "Haul Material" sheet)											
20	Jung Port Disturbance (not reclaimed)		Yard	8.48								
21	Mine Borrow Areas		Yard	74.21	1,000	148,420				300	1,000	0.0
22	Growth media - TSF Stockpile 1		Yard	54.63	1,000	109,260						
23	Growth media - TSF Stockpile 2		Yard	42.60	1,000	85,200						
24	Growth media - North Overburden Stockpile 2028		Yard	47.47	1,000	94,940						
25	Growth media - Airstrip Overburden Stockpile		Yard	2.31	1,000	4,620						
26	Growth media - Airstrip Overburden Stockpile		Yard	2.46	1,000	4,920						
27	Growth media - Jungjuk Port Site Overburden Stockpile		Yard	2.11	1,000	4,220						
28	Growth media - South Overburden Stockpile 2019		Yard	77.32	1,000	154,640						
29	Misc. Yards		Yard	158.00	2,000	316,000				300	1,000	0.0
30	Plant Site		Yard	9.79	1,000	19,580				300	1,000	0.0
31	Primary Crusher		Yard	1.85	1,000	3,700				300	1,000	0.0
32	Truck Shop		Yard	0.09	1,000	180				300	1,000	0.0
33	Airstrip (Not Reclaimed)		Yard	35.99								

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Assume nominal amount of regrading required - m3 per ha:

2000

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - User Input (cont.)															
You must fill in ALL green cells and relevant blue cells in this section for each building or facility															
	Description (required)	Grading			Cover			Growth Media			Revegetation				
		Dozing Material Condition (select)	Dozing Material Type (select)	Grading Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1	Permanent Man Camp Yards	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
2	Material Sites - 1	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
3	Material Sites - 2	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
4	Material Sites - 3	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
5	Material Sites - 4	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
6	Material Sites - 5	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
7	Material Sites - 6	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
8	Material Sites - 7	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
9	Material Sites - 8	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
10	Material Sites - 9	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
11	Material Sites - 10	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
12	Material Sites - 11	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
13	Material Sites - 12	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
14	Material Sites - 13	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
15	Material Sites - 14	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
16	Material Sites - 15	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
17	Material Sites - 16	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
18	Lower Contact Water Dam (see "Haul Material" sheet)														
19	Upper Contact Water Dam (see "Haul Material" sheet)														
20	Jung Port Disturbance (not reclaimed)														
21	Mine Borrow Areas	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
22	Growth media - TSF Stockpile 1	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
23	Growth media - TSF Stockpile 2	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
24	Growth media - North Overburden Stockpile 2028	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
25	Growth media - Airstrip Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
26	Growth media - Airstrip Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
27	Growth media - Jungjuk Port Site Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
28	Growth media - South Overburden Stockpile 2019	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
29	Misc. Yards	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
30	Plant Site	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
31	Primary Crusher	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
32	Truck Shop	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Med Dozer
33	Airstrip (Not Reclaimed)														

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - Calculations Grading Calculations Average push distance assumed to be 2/3 of the 180 m maximum from Caterpillar Handbook or 120 m Material assumed to be loose stockpile (1.2 productivity factor) Slope assumed to be 0 to 5% (1.0 productivity factor) Cover Volume Calculation Yard area x cover thickness Ripping/Scarifying Calculations Flat area width = Final flat area ÷ Average long dimensions Number of passes = Flat area width ÷ Grader width Travel distance = Number of passes x Average long dimensions Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time) Minimum 1 hr ripping/scarifying per area Revegetation Minimum 0.4 ha revegetation crew time per area

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
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Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - Regrading Costs												
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side)												
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material	Density Correction	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Permanent Man Camp Yards	29,679	122	383	1.0	1.0	0.79	188	158	\$9,608	\$37,495	\$47,103
2	Material Sites - 1	22,378	122	383	1.0	1.0	0.79	188	119	\$7,236	\$28,240	\$35,476
3	Material Sites - 2	8,339	122	383	1.0	1.0	0.79	188	44	\$2,676	\$10,442	\$13,118
4	Material Sites - 3	11,477	122	383	1.0	1.0	0.79	188	61	\$3,709	\$14,476	\$18,185
5	Material Sites - 4	168,604	122	383	1.0	1.0	0.79	188	896	\$54,486	\$212,630	\$267,116
6	Material Sites - 5	3,787	122	383	1.0	1.0	0.79	188	20	\$1,216	\$4,746	\$5,962
7	Material Sites - 6	18,016	122	383	1.0	1.0	0.79	188	96	\$5,838	\$22,782	\$28,620
8	Material Sites - 7	17,729	122	383	1.0	1.0	0.79	188	94	\$5,716	\$22,307	\$28,023
9	Material Sites - 8	2,296	122	383	1.0	1.0	0.79	188	12	\$730	\$2,848	\$3,578
10	Material Sites - 9	19,749	122	383	1.0	1.0	0.79	188	105	\$6,385	\$24,918	\$31,303
11	Material Sites - 10	8,490	122	383	1.0	1.0	0.79	188	45	\$2,736	\$10,679	\$13,415
12	Material Sites - 11	12,703	122	383	1.0	1.0	0.79	188	68	\$4,135	\$16,137	\$20,272
13	Material Sites - 12	17,402	122	383	1.0	1.0	0.79	188	93	\$5,655	\$22,070	\$27,725
14	Material Sites - 13	29,678	122	383	1.0	1.0	0.79	188	158	\$9,608	\$37,495	\$47,103
15	Material Sites - 14	19,784	122	383	1.0	1.0	0.79	188	105	\$6,385	\$24,918	\$31,303
16	Material Sites - 15	10,105	122	383	1.0	1.0	0.79	188	54	\$3,284	\$12,815	\$16,099
17	Material Sites - 16	2,231	122	383	1.0	1.0	0.79	188	12	\$730	\$2,848	\$3,578
18	Lower Contact Water Dam (see "Haul Material" sheet)									\$0	\$0	\$0
19	Upper Contact Water Dam (see "Haul Material" sheet)									\$0	\$0	\$0
20	Jung Port Disturbance (not reclaimed)									\$0	\$0	\$0
21	Mine Borrow Areas	148,420	122	383	1.0	1.0	0.79	188	789	\$47,979	\$187,238	\$235,217
22	Growth media - TSF Stockpile 1	109,260	122	383	1.0	1.0	0.79	188	581	\$35,331	\$137,877	\$173,208
23	Growth media - TSF Stockpile 2	85,200	122	383	1.0	1.0	0.79	188	453	\$27,547	\$107,501	\$135,048
24	Growth media - North Overburden Stockpile 2028	94,940	122	383	1.0	1.0	0.79	188	505	\$30,709	\$119,842	\$150,551
25	Growth media - Airstrip Overburden Stockpile	4,620	122	383	1.0	1.0	0.79	188	25	\$1,520	\$5,933	\$7,453
26	Growth media - Airstrip Overburden Stockpile	4,920	122	383	1.0	1.0	0.79	188	26	\$1,581	\$6,170	\$7,751
27	Growth media - Jungjuk Port Site Overburden Stockpile	4,220	122	383	1.0	1.0	0.79	188	22	\$1,338	\$5,221	\$6,559
28	Growth media - South Overburden Stockpile 2019	154,640	122	383	1.0	1.0	0.79	188	822	\$49,986	\$195,069	\$245,055
29	Misc. Yards	316,000	122	383	1.0	1.0	0.79	188	1,680	\$102,161	\$398,681	\$500,842
30	Plant Site	19,580	122	383	1.0	1.0	0.79	188	104	\$6,324	\$24,680	\$31,004
31	Primary Crusher	3,700	122	383	1.0	1.0	0.79	188	20	\$1,216	\$4,746	\$5,962
32	Truck Shop	180	122	383	1.0	1.0	0.79	188	1	\$61	\$237	\$298
33	Airstrip (Not Reclaimed)									\$0	\$0	\$0
		1,348,127							7,168	\$435,886	\$1,701,041	\$2,136,927

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - Cover and Growth Media Costs																		
		Cover								Growth Media								
	Description (required)	Cover Volume m3	Topsoil Repacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$	
1	Permanent Man Camp Yards						\$0	\$0	\$0	45,269	777D/992G	707	2	64	\$15,722	\$69,014	\$84,736	
2	Material Sites - 1						\$0	\$0	\$0	34,044	777D/992G	707	2	48	\$11,792	\$51,760	\$63,552	
3	Material Sites - 2						\$0	\$0	\$0	12,705	777D/992G	707	2	18	\$4,422	\$19,410	\$23,832	
4	Material Sites - 3						\$0	\$0	\$0	17,515	777D/992G	707	2	25	\$6,142	\$26,959	\$33,101	
5	Material Sites - 4						\$0	\$0	\$0	256,934	777D/992G	707	2	363	\$89,175	\$391,437	\$480,612	
6	Material Sites - 5						\$0	\$0	\$0	5,798	777D/992G	707	2	8	\$1,965	\$8,627	\$10,592	
7	Material Sites - 6						\$0	\$0	\$0	27,506	777D/992G	707	2	39	\$9,581	\$42,055	\$51,636	
8	Material Sites - 7						\$0	\$0	\$0	27,013	777D/992G	707	2	38	\$9,335	\$40,977	\$50,312	
9	Material Sites - 8						\$0	\$0	\$0	3,453	777D/992G	707	2	5	\$1,228	\$5,392	\$6,620	
10	Material Sites - 9						\$0	\$0	\$0	30,097	777D/992G	707	2	43	\$10,563	\$46,369	\$56,932	
11	Material Sites - 10						\$0	\$0	\$0	12,952	777D/992G	707	2	18	\$4,422	\$19,410	\$23,832	
12	Material Sites - 11						\$0	\$0	\$0	19,365	777D/992G	707	2	27	\$6,633	\$29,115	\$35,748	
13	Material Sites - 12						\$0	\$0	\$0	26,520	777D/992G	707	2	37	\$9,089	\$39,899	\$48,988	
14	Material Sites - 13						\$0	\$0	\$0	45,269	777D/992G	707	2	64	\$15,722	\$69,014	\$84,736	
15	Material Sites - 14						\$0	\$0	\$0	30,097	777D/992G	707	2	43	\$10,563	\$46,369	\$56,932	
16	Material Sites - 15						\$0	\$0	\$0	15,419	777D/992G	707	2	22	\$5,405	\$23,723	\$29,128	
17	Material Sites - 16						\$0	\$0	\$0	3,453	777D/992G	707	2	5	\$1,228	\$5,392	\$6,620	
18	Lower Contact Water Dam (see "Haul Material" sheet)						\$0	\$0	\$0						\$0	\$0	\$0	
19	Upper Contact Water Dam (see "Haul Material" sheet)						\$0	\$0	\$0						\$0	\$0	\$0	
20	Jung Port Disturbance (not reclaimed)						\$0	\$0	\$0						\$0	\$0	\$0	
21	Mine Borrow Areas						\$0	\$0	\$0	226,220	777D/992G	707	2	320	\$78,611	\$345,069	\$423,680	
22	Growth media - TSF Stockpile 1						\$0	\$0	\$0						\$0	\$0	\$0	
23	Growth media - TSF Stockpile 2						\$0	\$0	\$0						\$0	\$0	\$0	
24	Growth media - North Overburden Stockpile 2028						\$0	\$0	\$0						\$0	\$0	\$0	
25	Growth media - Airstrip Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0	
26	Growth media - Airstrip Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0	
27	Growth media - Jungjuk Port Site Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0	
28	Growth media - South Overburden Stockpile 2019						\$0	\$0	\$0						\$0	\$0	\$0	
29	Misc. Yards						\$0	\$0	\$0	481,551	777D/992G	707	2	681	\$167,294	\$734,350	\$901,644	
30	Plant Site						\$0	\$0	\$0	29,851	777D/992G	707	2	42	\$10,318	\$45,290	\$55,608	
31	Primary Crusher						\$0	\$0	\$0	5,674	777D/992G	707	2	8	\$1,965	\$8,627	\$10,592	
32	Truck Shop						\$0	\$0	\$0	247	777D/992G	707	2	1	\$246	\$1,078	\$1,324	
33	Airstrip (Not Reclaimed)						\$0	\$0	\$0						\$0	\$0	\$0	
							\$0	\$0	\$0	1,356,952				1,919	\$471,421	\$2,069,336	\$2,540,757	

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$435,886	\$1,701,041	N/A	\$2,136,927
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$471,421	\$2,069,336	N/A	\$2,540,757
Ripping/Scarifying Cost	\$73,154	\$260,247	N/A	\$333,401
Subtotal Earthworks	\$980,461	\$4,030,624		\$5,011,085
Revegetation Cost	\$181,543	\$52,517	\$360,547	\$594,607
TOTALS	\$1,162,004	\$4,083,141	\$360,547	\$5,605,692

Yards, Etc. - Scarifying/Revegetation Costs											
	Description (required)	Surface Area ha	Area Long Dimension m	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Permanent Man Camp Yards	14.85	500	26	\$1,581	\$5,625	\$7,206	\$3,998	\$1,156	\$7,942	\$13,096
2	Material Sites - 1	11.17	500	20	\$1,216	\$4,327	\$5,543	\$3,006	\$870	\$5,975	\$9,851
3	Material Sites - 2	4.17	500	8	\$486	\$1,731	\$2,217	\$1,122	\$325	\$2,231	\$3,678
4	Material Sites - 3	5.75	500	10	\$608	\$2,163	\$2,771	\$1,547	\$447	\$3,076	\$5,070
5	Material Sites - 4	84.30	500	151	\$9,182	\$32,666	\$41,848	\$22,690	\$6,564	\$45,088	\$74,342
6	Material Sites - 5	1.90	500	3	\$182	\$649	\$831	\$512	\$148	\$1,016	\$1,676
7	Material Sites - 6	9.02	500	16	\$973	\$3,461	\$4,434	\$2,429	\$703	\$4,824	\$7,956
8	Material Sites - 7	8.86	500	16	\$973	\$3,461	\$4,434	\$2,386	\$690	\$4,739	\$7,815
9	Material Sites - 8	1.13	500	2	\$122	\$433	\$555	\$305	\$88	\$604	\$997
10	Material Sites - 9	9.87	500	18	\$1,095	\$3,894	\$4,989	\$2,658	\$769	\$5,279	\$8,706
11	Material Sites - 10	4.25	500	8	\$486	\$1,731	\$2,217	\$1,144	\$331	\$2,274	\$3,749
12	Material Sites - 11	6.35	500	11	\$669	\$2,380	\$3,049	\$1,710	\$495	\$3,396	\$5,601
13	Material Sites - 12	8.70	500	15	\$912	\$3,245	\$4,157	\$2,342	\$677	\$4,653	\$7,672
14	Material Sites - 13	14.85	500	26	\$1,581	\$5,625	\$7,206	\$3,998	\$1,156	\$7,942	\$13,096
15	Material Sites - 14	9.87	100	19	\$1,155	\$4,110	\$5,265	\$2,658	\$769	\$5,279	\$8,706
16	Material Sites - 15	5.06	100	10	\$608	\$2,163	\$2,771	\$1,362	\$394	\$2,707	\$4,463
17	Material Sites - 16	1.13	100	2	\$122	\$433	\$555	\$305	\$88	\$604	\$997
18	Lower Contact Water Dam (see "Haul Material" sheet)	0.04	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	Upper Contact Water Dam (see "Haul Material" sheet)	0.04	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Jung Port Disturbance (not reclaimed)	8.50	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	Mine Borrow Areas	74.22	1,000	132	\$8,027	\$28,556	\$36,583	\$19,978	\$5,779	\$39,697	\$65,454
22	Growth media - TSF Stockpile 1	54.63	1,000	97	\$5,899	\$20,984	\$26,883	\$14,706	\$4,254	\$29,219	\$48,179
23	Growth media - TSF Stockpile 2	42.61	1,000	76	\$4,622	\$16,441	\$21,063	\$11,470	\$3,318	\$22,790	\$37,578
24	Growth media - North Overburden Stockpile 2028	47.47	1,000	84	\$5,108	\$18,172	\$23,280	\$12,777	\$3,696	\$25,390	\$41,863
25	Growth media - Airstrip Overburden Stockpile	2.31	1,000	4	\$243	\$865	\$1,108	\$621	\$180	\$1,235	\$2,036
26	Growth media - Airstrip Overburden Stockpile	2.47	1,000	4	\$243	\$865	\$1,108	\$664	\$192	\$1,321	\$2,177
27	Growth media - Jungjuk Port Site Overburden Stockpile	2.10	1,000	4	\$243	\$865	\$1,108	\$566	\$164	\$1,124	\$1,854
28	Growth media - South Overburden Stockpile 2019	77.34	1,000	138	\$8,392	\$29,854	\$38,246	\$20,817	\$6,022	\$41,366	\$68,205
29	Misc. Yards	157.99	2,000	281	\$17,088	\$60,789	\$77,877	\$42,526	\$12,302	\$84,502	\$139,330
30	Plant Site	9.79	1,000	18	\$1,095	\$3,894	\$4,989	\$2,636	\$763	\$5,236	\$8,635
31	Primary Crusher	1.86	1,000	3	\$182	\$649	\$831	\$501	\$145	\$995	\$1,641
32	Truck Shop	0.08	1,000	1	\$61	\$216	\$277	\$109	\$32	\$43	\$184
33	Airstrip (Not Reclaimed)	35.98	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
		718.66		1,203	\$73,154	\$260,247	\$333,401	\$181,543	\$52,517	\$360,547	\$594,607

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Solid Waste									
						Landfill (Bulk) Disposal			Dumpster
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity m3	Distance to Landfill m	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Mill and Crusher Liner Waste		Waste Mgmt & Disposal	Landfill (bulk)	33,163	5000	0.0		

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Liner waste disposal quantities from 1. June 8, 2011 email from Alexandra J. Kozak.

Closure Cost Estimate
Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

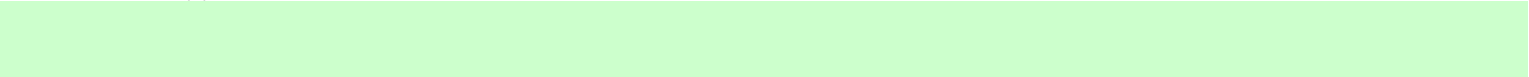
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Hazardous Materials									
	Description (required)	ID Code	Waste Type (select)	Container Type (select)	Vacuum Truck Size (select)	Liquid Quantity litres	Soild Quantity m3	One Way Travel Distance to Disposal Site km	One Way Travel Time to Disposal Site hr

- Notes:
1. Use Other Demo & Equip Removal Sheet for tank removal



Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Hydrocarbon Contaminated Soils						
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity m3	Travel Distance to Offsite Disposal km
1	Ready Line		Waste Mgmt & Disposal	On site	630	1
2	Truck Shop		Waste Mgmt & Disposal	On site	500	1
3	Power Plant		Waste Mgmt & Disposal	On site	1,300	1
4	Mine Area Fuel Storage Area		Waste Mgmt & Disposal	On site	3,500	1
5	Port Fuel Storage Area		Waste Mgmt & Disposal	On site	400	1
6	Misc. Areas		Waste Mgmt & Disposal	On site	500	1

Notes:

1. Use Yards or Landfills Sheets for bioremediation facility reclamation

Assume 0.5m deep at ready line, 1m deep at truck shop

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Assumptions & Calculations

Solid Waste Disposal

Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)]
 On site disposal assumes use of small loader/truck fleet for haulage
 Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3)
 For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16

Hazardous Materials Disposal

Assumes all hazardous materials are known
 Enter EITHER solid or liquid quantity each line.
 If container type = 55 gallon (200 liter) drum then solid waste hauling costs apply
 Average density for solids assumed to be 2,600 lb/cy (1,540 kg/m3)
 Vacuum truck sizes: small = 2,200 gal (~8,300 litres), large = 5,000 gal (~19,000 litres)
 Vacuum truck on site for 4 hours for each load

Hydrocarbon Contaminated Soils Disposal

Assumes all hazardous materials are known
 On site disposal assumes biopad treatment
 Exavation productivity =45 cy./hr (35 m3/hr) (Means Heavy Construction, 2006: 02315-424-0360)

**Closure Cost Estimate
Waste Disposal**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Solid Waste Disposal										
	Description (required)	Waste Volume m3	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCM/hr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost \$	Total Labor Cost \$	Total Equipment Cost \$
1	Mill and Crusher Liner Waste	33,163		740	427	6	78	\$0	\$38,364	\$39,693
		33,163					78	\$0	\$38,364	\$39,693

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Hazardous Materials Disposal									
	Description (required)	Liquid Waste Volume litres	Solid Waste Volume m3	Number of Truck Loads	Tonnes of Waste Tonnes	Pick-up Fees \$	Transport Fees \$	Disposal Fees \$	Total Hazardous Material Cost \$
						\$0	\$0	\$0	\$0

**Closure Cost Estimate
Waste Disposal**

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Hydrocarbon Contaminated Soils									
	Description (required)	Quantity m3	Total Fleet Hours	Treatment Cost \$	Transport Fees \$	Disposal Fees \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
1	Ready Line	630		\$18,458	\$0	\$0	\$1,095	\$574	\$20,127
2	Truck Shop	500		\$14,650	\$0	\$0	\$912	\$478	\$16,040
3	Power Plant	1,300		\$38,080	\$0	\$0	\$2,311	\$1,211	\$41,602
4	Mine Area Fuel Storage Area	3,500		\$102,547	\$0	\$0	\$6,203	\$3,251	\$112,001
5	Port Fuel Storage Area	400		\$11,715	\$0	\$0	\$730	\$382	\$12,827
6	Misc. Areas	500		\$14,650	\$0	\$0	\$912	\$478	\$16,040
		6,830		\$200,100	\$0	\$0	\$12,163	\$6,374	\$218,637

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$692,944	\$1,540,502	\$83,643	\$2,317,089
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$721,996	\$1,606,040	\$95,715	\$2,423,751

Production, Dewatering and Infiltration Well Closure																											
		Description (required)	ID Code	Number of Holes	Casing Diam mm	Average Depth ⁽¹⁾ m bgs	Depth to First Water m bgs	Original Static Water Level m bgs	Top of Slotted Casing ⁽²⁾ m bgs	Blank Casing Below Top of Screen ⁽²⁾ m	Type of Pump (if any) (select)	Depth to Pump m bgs	Hole Plug Method (select)	Casing Volume per m m3	Perforation Length ^(3,4) m	Grout Volume per Hole ^(4,5) m3	Cement Volume per Hole ⁽⁶⁾ m3	Inert Media Volume per Hole ⁽⁷⁾ m3	Pump Removal Labor Cost \$	Pump Removal Equip Cost \$	Perf Labor Cost \$	Perf Equip Cost ⁽⁸⁾ \$	Grout + Cement Labor Cost ⁽⁹⁾ \$	Grout + Cement Equip Cost ⁽⁹⁾ \$	Grout + Cement Material Cost \$	Inert Media Labor Cost ⁽¹⁰⁾ \$	Inert Media Equip Cost ⁽⁹⁾ \$
1	P1609			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
2	P1610			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
3	P1611			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
4	P1701			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
5	P1702			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
6	P1704			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
7	P1705			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
8	P2001			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
9	P2002			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
10	P2003			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
11	P2004			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
12	P2005			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
13	P2006			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
14	P2007			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
15	P2008			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
16	P2201			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
17	P2202			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
18	P2203			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
19	P2501			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
20	P2502			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
21	P2701			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
22	P3001			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
23	P3002			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
24	P3003			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
25	P3004			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
26	P3401			1	203.2	215	115	165	160	15	Submersit	120	Grout Only	0.010	80	13.65	0.15		\$4,005	\$8,701	\$1,146	\$3,290	\$1,069	\$2,456	\$669	\$288	\$96
27	Permanent camp and mill potable water wells (e-mail Sep			8	203.2	200	175	175	200	0	Submersit	200	Grout Only	0.010	45	101.49	0.15		\$53,348	\$115,901	\$6,282	\$17,386	\$35,443	\$81,395	\$39,428	\$2,303	\$765
28	Jungjuk Port potable water well (e-mail September 19, 201			1	152.4	60	50	50	50	15	Submersit	50	Grout Only	0.006	35	2.05	0.08		\$1,667	\$3,622	\$612	\$1,694	\$534	\$1,226	\$103	\$288	\$96
29	I1905			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
30	I1904			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
31	I1903			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
32	I1902			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
33	I1901			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
34	I1906			1	152.4	192	92	142	137	15	Submersit	97	Grout Only	0.006	80	6.96	0.08		\$3,233	\$7,023	\$1,005	\$2,963	\$779	\$1,789	\$341	\$288	\$96
35	I1908			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963	\$835	\$1,918	\$384	\$288	\$96
36	I1909			1	152.4	216	116	166	161	15	Submersit	121	Grout Only	0.006	80	7.85	0.08		\$4,036	\$8,768	\$1,005	\$2,963</					

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$692,944	\$1,540,502	\$83,643	\$2,317,089
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$721,996	\$1,606,040	\$95,715	\$2,423,751

67	I2803		1	152.4	182	82	132	127	15	Submersit	87	Grout Only	0.006	80	6.58	0.08		\$2,897	\$6,294	\$1,005	\$2,966	\$753	\$1,729	\$323	\$288	\$96
68	I2901		1	152.4	162	62	112	107	15	Submersit	67	Grout Only	0.006	80	5.83	0.08		\$2,236	\$4,859	\$1,005	\$2,966	\$716	\$1,645	\$286	\$288	\$96
69	I2902		1	152.4	162	62	112	107	15	Submersit	67	Grout Only	0.006	80	5.83	0.08		\$2,236	\$4,859	\$1,005	\$2,966	\$716	\$1,645	\$286	\$288	\$96
70	I2903		1	152.4	220	120	170	165	15	Submersit	125	Grout Only	0.006	80	8.00	0.08		\$4,168	\$9,055	\$1,005	\$2,963	\$855	\$1,963	\$391	\$288	\$96
71	I2904		1	152.4	186	86	136	131	15	Submersit	91	Grout Only	0.006	80	6.73	0.08		\$3,039	\$6,603	\$1,005	\$2,966	\$773	\$1,774	\$330	\$288	\$96
72	I2905		1	152.4	186	86	136	131	15	Submersit	91	Grout Only	0.006	80	6.73	0.08		\$3,039	\$6,603	\$1,005	\$2,966	\$773	\$1,774	\$330	\$288	\$96
73	I2906		1	152.4	186	86	136	131	15	Submersit	91	Grout Only	0.006	80	6.73	0.08		\$3,039	\$6,603	\$1,005	\$2,966	\$773	\$1,774	\$330	\$288	\$96
74	I2907		1	152.4	186	86	136	131	15	Submersit	91	Grout Only	0.006	80	6.73	0.08		\$3,039	\$6,603	\$1,005	\$2,966	\$773	\$1,774	\$330	\$288	\$96
75	I2908		1	152.4	186	86	136	131	15	Submersit	91	Grout Only	0.006	80	6.73	0.08		\$3,039	\$6,603	\$1,005	\$2,966	\$773	\$1,774	\$330	\$288	\$96
76	I2909		1	152.4	196	96	146	141	15	Submersit	101	Grout Only	0.006	80	7.10	0.08		\$3,365	\$7,310	\$1,005	\$2,966	\$799	\$1,834	\$348	\$288	\$96
77	I2910		1	152.4	196	96	146	141	15	Submersit	101	Grout Only	0.006	80	7.10	0.08		\$3,365	\$7,310	\$1,005	\$2,966	\$799	\$1,834	\$348	\$288	\$96
78	I2911		1	152.4	220	120	170	165	15	Submersit	125	Grout Only	0.006	80	8.00	0.08		\$4,168	\$9,055	\$1,005	\$2,963	\$855	\$1,963	\$391	\$288	\$96
79	I2912		1	152.4	220	120	170	165	15	Submersit	125	Grout Only	0.006	80	8.00	0.08		\$4,168	\$9,055	\$1,005	\$2,963	\$855	\$1,963	\$391	\$288	\$96
80	I3101		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
81	I3102		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
82	I3103		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
83	I3104		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
84	I3105		1	152.4	240	140	190	185	15	Submersit	145	Grout Only	0.006	80	8.73	0.08		\$4,839	\$10,512	\$1,005	\$2,966	\$907	\$2,082	\$427	\$288	\$96
85	I3106		1	152.4	240	140	190	185	15	Submersit	145	Grout Only	0.006	80	8.73	0.08		\$4,839	\$10,512	\$1,005	\$2,966	\$907	\$2,082	\$427	\$288	\$96
86	I3107		1	152.4	240	140	190	185	15	Submersit	145	Grout Only	0.006	80	8.73	0.08		\$4,839	\$10,512	\$1,005	\$2,966	\$907	\$2,082	\$427	\$288	\$96
87	I3108		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
88	I3109		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
89	I3110		1	152.4	138	38	88	83	15	Submersit	43	Grout Only	0.006	78	4.95	0.08		\$1,433	\$3,114	\$989	\$2,910	\$645	\$1,481	\$243	\$288	\$96
90	I3111		1	152.4	162	62	112	107	15	Submersit	67	Grout Only	0.006	80	5.83	0.08		\$2,236	\$4,859	\$1,005	\$2,966	\$716	\$1,645	\$286	\$288	\$96
91	I3301		1	152.4	196	96	146	141	15	Submersit	101	Grout Only	0.006	80	7.10	0.08		\$3,365	\$7,310	\$1,005	\$2,966	\$799	\$1,834	\$348	\$288	\$96
92	I3302		1	152.4	196	96	146	141	15	Submersit	101	Grout Only	0.006	80	7.10	0.08		\$3,365	\$7,310	\$1,005	\$2,966	\$799	\$1,834	\$348	\$288	\$96
93	I3401		1	152.4	264	164	214	209	15	Submersit	169	Grout Only	0.006	80	9.63	0.08		\$5,632	\$12,235	\$1,005	\$2,966	\$963	\$2,211	\$470	\$288	\$96
94	I3402		1	152.4	264	164	214	209	15	Submersit	169	Grout Only	0.006	80	9.63	0.08		\$5,632	\$12,235	\$1,005	\$2,966	\$963	\$2,211	\$470	\$288	\$96
95	I3403		1	152.4	240	140	190	185	15	Submersit	145	Grout Only	0.006	80	8.73	0.08		\$4,839	\$10,512	\$1,005	\$2,966	\$907	\$2,082	\$427	\$288	\$96
96	I3501		1	152.4	92	92	42	37	15	Submersit	97	Grout Only	0.006	0	3.24	0.08		\$3,233	\$7,023	\$0	\$0	\$565	\$1,275	\$160	\$288	\$96
97	I3502		1	152.4	92	92	42	37	15	Submersit	97	Grout Only	0.006	0	3.24	0.08		\$3,233	\$7,023	\$0	\$0	\$565	\$1,275	\$160	\$288	\$96
98	I3503		1	152.4	92	92	42	37	15	Submersit	97	Grout Only	0.006	0	3.24	0.08		\$3,233	\$7,023	\$0	\$0	\$565	\$1,275	\$160	\$288	\$96
99	I3801		1	152.4	166	66	116	111	15	Submersit	71	Grout Only	0.006	80	5.99	0.08		\$2,369	\$5,146	\$1,005	\$2,963	\$721	\$1,655	\$294	\$288	\$96
100	I3802		1	152.4	166	66	116	111	15	Submersit	71	Grout Only	0.006	80	5.99	0.08		\$2,369	\$5,146	\$1,005	\$2,963	\$721	\$1,655	\$294	\$288	\$96
101	I3803		1	152.4	166	66	116	111	15	Submersit	71	Grout Only	0.006	80	5.99	0.08		\$2,369	\$5,146	\$1,005	\$2,963	\$721	\$1,655	\$294	\$288	\$96
102	I3901		1	152.4	114	14	64	59	15	Submersit	19	Grout Only	0.006	54	4.05	0.08		\$630	\$1,369	\$785	\$2,246	\$589	\$1,352	\$200	\$288	\$96
103	I3902		1	152.4	114	14	64	59	15	Submersit	19	Grout Only	0.006	54	4.05	0.08		\$630	\$1,369	\$785	\$2,246	\$589	\$1,352	\$200	\$288	\$96
104	I3903		1	152.4	114	14	64	59	15	Submersit	19	Grout Only	0.006	54	4.05	0.08		\$630	\$1,369	\$785	\$2,246	\$589	\$1,352	\$200	\$288	\$96
105	I4101		1	152.4	98	98	48	43	15	Submersit	103	Grout Only	0.006	0	3.46	0.08		\$3,436	\$7,465	\$0	\$0	\$565	\$1,275	\$171	\$288	\$96
106	I4102		1	152.4	98	98	48	43	15	Submersit	103	Grout Only	0.006	0	3.46	0.08		\$3,436	\$7,465	\$0	\$0	\$565	\$1,275	\$171	\$288	\$96
107	I4103		1	152.4	146	46	96	91	15	Submersit	51	Grout Only	0.006	80	5.24	0.08		\$1,698	\$3,688	\$1,005	\$2,966	\$669	\$1,536	\$258	\$288	\$96
108	I4104		1	152.4	146	46	96	91	15	Submersit	51	Grout Only	0.006	80	5.24	0.08		\$1,698	\$3,688	\$1,005	\$2,966	\$669	\$1,536	\$258	\$288	\$96
																		\$424,791	\$922,872	\$109,283	\$317,927	\$125,764	\$288,708	\$83,643	\$33,106	\$10,995

- (1) For previously abandoned holes enter "0" for depth
- (2) Wells abandoned per Nevada Administrative Code (NAC 534.420). Hole grouted and perforated from bottom to 50 feet (15.24m) above the top of the screen, or first water encountered or original static water level, depending on vertical hydraulic gradient and well construction parameters. Inert media (cuttings or alluvium) used from top of grout to top seal.
- (3) Perforation length = amount of blank casing below first water (for confined aquifers) or predicted recovered water table (unconfined aquifers) + 50 feet (15.24m) of blank casing above water table
- (4) Assumes 50' (15.24m) sanitary seal at top of hole. Therefore, perforation and grouting only required to bottom of sanitary seal.
- (5) Assumes 100% loss to formation for grout (abandonite) for screened and perforated sections.
- (6) Assumes 10' (3m) top seal of cement in casing only. See note 4.
- (7) Inert material is cuttings or alluvium sourced locally.
- (8) Includes perforation tool wear cost/ft of perforation (see Productivity Sheet).
- (9) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup. If no perforation required, use standard drill rig.
- (10) See Productivity Sheet for hourly production. Minimum 1 hr per hole.

Notes:
See User 15 for details.

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$692,944	\$1,540,502	\$83,643	\$2,317,089
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$721,996	\$1,606,040	\$95,715	\$2,423,751

Monitoring Well Closure																		
	Description (required)	ID Code	Number of Holes	Casing Diam mm	Average Depth m bgs	Top of Screen ⁽¹⁾ m bgs	Hole Plug Method (select)	Casing Volume per m m3	Grout Volume/ Well ^(2,3) m3	Cement Volume per Hole ⁽⁴⁾ m3	Inert Backfill Volume per Hole ⁽⁵⁾ m3	Total Grouting Hours/ Hole hr	Total Inert Media Hours/ Hole hr	Grout + Cement Labor Cost ⁽⁶⁾ \$	Grout + Cement Equip Cost ⁽⁶⁾ \$	Grout + Cement Material Cost \$	Inert Material Labor Cost ⁽⁷⁾ \$	Inert Material Equip Cost ⁽⁷⁾ \$
1	Monitoring wells		50	152.4	215	160	Grout Only	0.006	4.88	0.11		3.7		\$29,052	\$65,538	\$12,072	\$0	\$0
														\$29,052	\$65,538	\$12,072	\$0	\$0

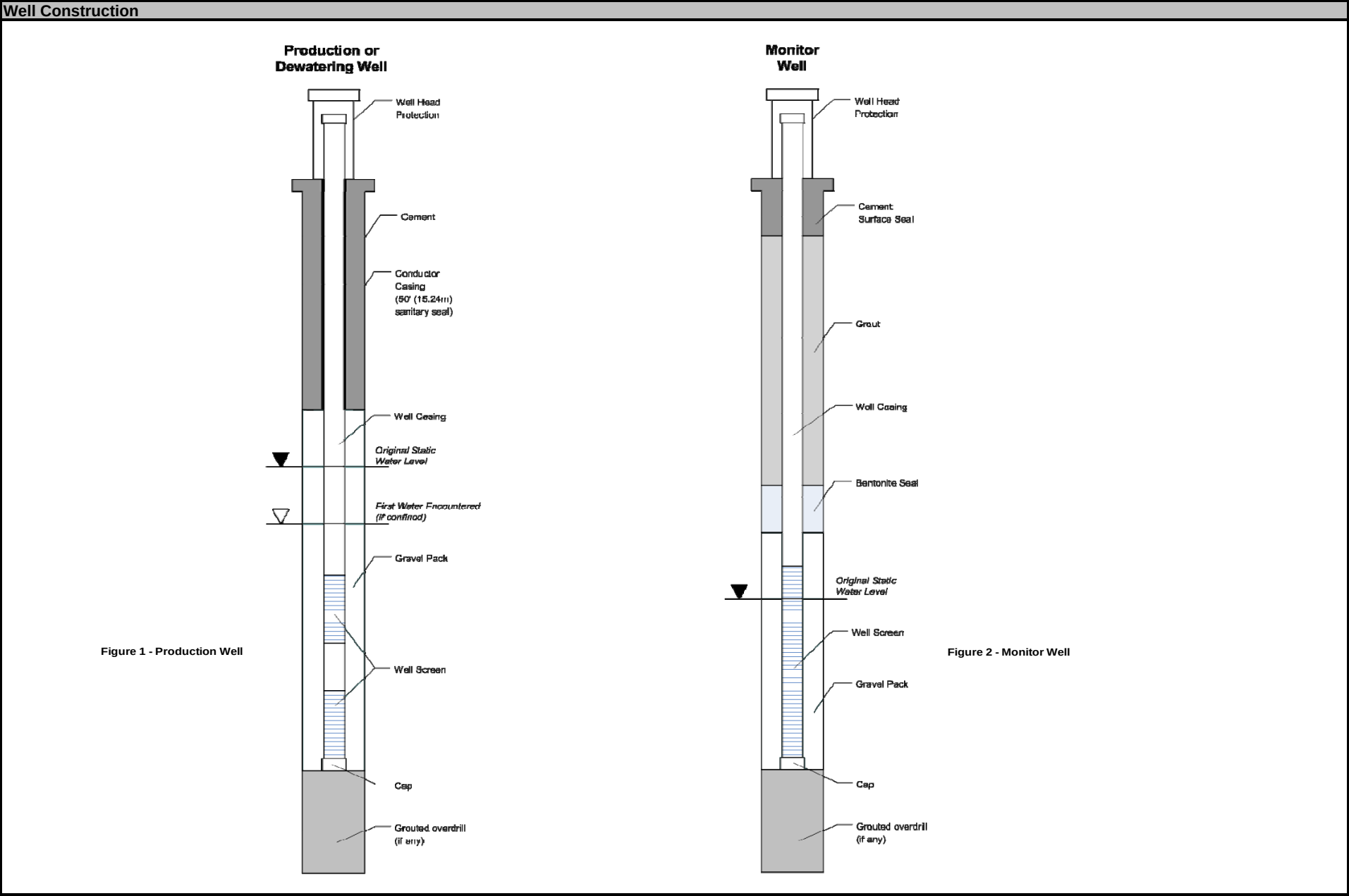
- Wells abandoned per NAC 534.420 with bentonite grout placed to 50 feet above the top of the screen (see note 1).
- (1) Assumes top of screen is at or above the static water level (in unconfined aquifers) or the depth of first water encountered (in confined aquifers).
- (2) Assumes 25% loss to formation for grouting
- (3) Grouting only required to 50' (15.24m) above the top of screen because monitor wells are constructed with a seal in the annular space.
- (4) Assumes top 10' (3m) plugged with cement.
- (5) Assumes hole plugged with inert material (cuttings or alluvium) above grout up to cement surface plug.
- (6) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup (see Productivity Sheet).
- (7) See Productivity Sheet for hourly production. Minimum 1 hr per hole.

Notes:
See User 15 for details.

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$692,944	\$1,540,502	\$83,643	\$2,317,089
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$721,996	\$1,606,040	\$95,715	\$2,423,751



Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0		N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$856,945	N/A	N/A	\$856,945
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0			\$0
TOTALS	\$2,706,457	\$458,030	\$0	\$3,164,487

Fence Removal							
You must fill in ALL green and blue cells							
					Costs		
	Description (required)	ID Code	Length m	Type (select type)	Labor Cost \$	Equipment Cost \$	Total Cost \$
					\$0	\$0	\$0

Notes:

Fence Installation								
You must fill in ALL green and blue cells								
			Input		Costs			
	Description (required)	ID Code	Length m	Type (select type)	Labor Cost \$	Equipment Cost \$	Material Cost (\$)	Total Cost \$
					\$0	\$0	\$0	\$0

Notes:

Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0	\$0	N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$856,945	N/A	N/A	\$856,945
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,706,457	\$458,030	\$0	\$3,164,487

Culvert & Buried Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
	Description (required)	ID Code	Length m	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
						\$0	\$0	\$0

Notes:

Surface Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
	Description (required)	ID Code	Length m	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
1	Tailings Line		3700	20 in (500 mm) - 3	On site	\$94,794	\$6,845	\$101,639
2	TSF Return Water Line		3700	10 in (250 mm) - 1	On site	\$63,529	\$4,588	\$68,117
						\$158,323	\$11,433	\$169,756

Notes:

Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0	\$0	N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$856,945	N/A	N/A	\$856,945
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,706,457	\$458,030	\$0	\$3,164,487

Power Line and Substation Removal											
You must fill in ALL green and blue cells											
			Input				Costs			Cost Breakdown	
	Description (required)	ID Code	Power Line Length km	Power Line Type (select)	Number of Substations #	Location (select)	Power Line Removal \$	Substation Removal \$	Total Cost \$	Labor Cost \$	Equipment Cost \$
1	Mancamp Powerline		4.77	Double Pole	1	Off-site	\$166,978	\$35,342	\$202,320	\$40,464	\$161,856
2	Powerline to tailings		5.41	Double Pole		Off-site	\$189,382	\$0	\$189,382	\$37,876	\$151,506
3	Powerline to Crusher		1.3	Double Pole		Off-site	\$45,508	\$0	\$45,508	\$9,102	\$36,406
4	Misc. Mill Area Powerlines		0.5	Double Pole	1	Off-site	\$17,503	\$35,342	\$52,845	\$10,569	\$42,276
5	From Fuel Storage to Magazines		5.4	Double Pole		Off-site	\$189,032	\$0	\$189,032	\$37,806	\$151,226
6	From Fuel Storage to Pit Booster Pumps		7.1	Double Pole	1	Off-site	\$248,542	\$35,342	\$283,884	\$56,777	\$227,107
							\$856,945	\$106,026	\$962,971	\$192,594	\$770,377

Notes: If substation owned by operator, use Other Demo & Equipment Removal sheet
 User may need to add line items in Foundations & Buildings for substation slab demolition and fence removal
 Labor/Equipment costs assume approximately 80% of cost are equipment and 20% are labor related costs

Rip-Rap & Rock Lining								
You must fill in ALL green and blue cells								
			Input		Costs			
	Description (required)	ID Code	Area m2	Type (select type)	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Reclaimed WRF RO Collection		34222	Rip-Rap 18 in (45	\$1,585,163	\$446,597	\$0	\$2,031,760
					\$1,585,163	\$446,597	\$0	\$2,031,760

Notes:

Closure Cost Estimate
Monitoring

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$44,603	\$12,902	\$64,434	\$121,939
Erosion Maintenance	\$137,760	\$413,280	N/A	\$551,040
Reclamation Monitoring	\$87,681	\$2,258	N/A	\$89,939
Subtotal Reclamation Monitoring	\$270,044	\$428,440	\$64,434	\$762,918
Water Quality Monitoring	\$15,846	\$1,202	\$23,363	\$40,411
TOTAL MONITORING	\$285,890	\$429,642	\$87,797	\$803,329

Clear Sheet

Reclamation Maintenance								
Description	Total Revegetation Surface Area (1,2) ha	% Area Requiring Reseeding	Seed Mix (select)	Area Requiring Reseeding ha	Seed \$/ha	Labor \$/ha	Equipment \$/ha	Totals \$
Revegetation Maintenance	1,657	10%	Mix 1	165.7	\$388.85	\$269.17	\$77.86	
Labor Equipment Materials Cost/Ha								\$44,603
								\$12,902
								\$64,434
								\$736
	Subtotal							\$121,939
Notes: 1) Surface area is NOT the same as footprint disturbance area typically used for permitting purposes. 2) If BRCE model, revegetation surface area determined by area included in PER, LOM or Surety estimate								
	Total Volume Growth Media m3	% Volume Requiring Maintenance	Average Growth Media Placement Cost \$/m3	Volume Requiring Replacement m3		Labor (assume: 25%) \$/ha	Equipment (assume: 75%) \$/ha	Total \$
Erosion Maintenance	4,338,894	5%	\$2.54	216,945		\$137,760.00	\$413,280.00	\$551,040
Notes:								

Reclamation Monitoring					
Description	Hrs/Day	Days/Year	Number of Years	Rate \$/hr	
Field Work					
Field Geologist/Engineer	10	24	4	\$48.83	\$46,877
Range Scientist	10	5	4	\$48.42	\$9,684
Reporting					
Field Geologist/Engineer	8	10	4	\$48.83	\$15,626
Range Scientist	8	10	4	\$48.42	\$15,494
Subtotal					\$87,681
Travel					
	Hrs/Trip hr	Trips/Year	Years	Truck Cost \$/tr	
Travel	20	2	4	\$14.11	\$2,258
Subtotal					\$2,258
Total Reclamation Monitoring					\$89,939
Notes:					

Closure Cost Estimate Monitoring

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$44,603	\$12,902	\$64,434	\$121,939
Erosion Maintenance	\$137,760	\$413,280	N/A	\$551,040
Reclamation Monitoring	\$87,681	\$2,258	N/A	\$89,939
Subtotal Reclamation Monitoring	\$270,044	\$428,440	\$64,434	\$762,918
Water Quality Monitoring	\$15,846	\$1,202	\$23,363	\$40,411
TOTAL MONITORING	\$285,890	\$429,642	\$87,797	\$803,329

Clear Sheet

Water and Rock Sample Analysis

[illegible]

Notes: Sampling labor cost = No. Samplers x Years x Events/year x Days/event x Hour/Day x Labor Rate
Sampling equipment costs include 1 pickup truck for every two samplers

Ground & Surface Water Monitoring

Pump Costs

Description	No. of units		Years		Cost \$
Pump (purchased)		Replacement period (yrs):			\$0
Subtotal Field Work					\$0

Notes: Replacement period = frequency of pump replacement

Reporting	

Description	Hrs/Event	Rate \$/hr	Cost \$
Field Geologist/Engineer	80	\$48.83	\$7,813.60
Subtotal Reporting			\$7,813.60

Notes:

Closure Cost Estimate Constr. Mgmt

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Construction Management & Road Maintenance - Cost Summary				
	Labor	Equipment	Materials	Totals
Construction Management	\$4,160,033	\$548,076	N/A	\$4,708,109
Construction Support		\$0		\$0
Road Maintenance	\$1,983,312	\$2,239,164	\$0	\$4,222,476
TOTAL CONSTRUCTION MANAGEMENT	\$6,143,345	\$2,787,240	\$0	\$8,930,585

Clear Sheet

Construction Management							
Construction Management Staff							
Description	Duration mo.	Hours/ Month hr.	Number of Supervisors	Supervisor Rate \$/hr	Labor Cost \$	Equipment Cost ⁽¹⁾ \$	Totals \$
Active Reclamation	60	365	2	\$95.03	\$4,160,033	\$548,076	\$4,708,109
Monitoring & Maintenance					\$0	\$0	\$0
Total Staff					\$4,160,033	\$548,076	\$4,708,109
Construction Management Support							
Description	Duration mo.	Number of Units		Rental Rate \$/mo	Generator Cost \$/mo	Equipment Cost ⁽¹⁾ \$	Totals \$
Temporary Office Rental						\$0	\$0
Temporary Toilets						\$0	\$0
Total Support						\$0	\$0
Notes: Office rental assumes only 1 generator required for every 4 trailers							
Total Construction Management							\$4,708,109

Road Maintenance							
Description	Fleet Size (select)	Number	Duration mo.	Hours/ Month hr.	Labor Cost \$	Equipment Cost \$	Totals \$
Active Reclamation							
Water Truck	Medium	1	60	180	\$669,816	\$1,158,516	\$1,828,332
Grader	Medium	2	60	180	\$1,313,496	\$1,080,648	\$2,394,144
Monitoring & Maintenance							
Water Truck					\$0	\$0	\$0
Grader					\$0	\$0	\$0
Description	Litres/ Day	Days/ Month	Duration mo.	Cost/ Litre \$			Totals \$
Water Fees							
Water Fees							\$0
Total Project Maintenance					\$1,983,312	\$2,239,164	\$4,222,476
Notes: 1) Supervisor equipment = pickup truck Maintenance fleet assumed average life-of-project usage of 1/2 time. Assumes the grader will also maintain the runway as needed.							

Closure Cost Estimate
Labor Rates

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	
INDIRECT COSTS			
Unemployment (%)	0.00%		
Retirement/SS/Medicare (%)	0.00%		
Workman's Compensation (%)	0.00%		
Other Indirects			
State Payroll Tax (13),(15),(17),(18)			
Total Other Indirects	0.00%		

HOURLY LABOR RATE TABLE														
EQUIPMENT TYPE (1) OR JOB DESCRIPTION	Labor Group	Base Rate (\$/hr)	Zone Adjustment (\$/hr)	Hourly Wage (\$/hr)	Fringe (\$/hr)	Retirement/ Medicare (\$/hr)	Unemployment Insurance (\$/hr)	Workman's Compensation (\$/hr)	Other Indirect Costs (\$/hr)	Additional User Markups to Base Rate†			Total (\$/hr)	
										(\$/hr)	%	(\$/hr)		
Equipment Operators (\$/hr) (2)														
Bulldozers														
D6R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D6R w/ Winch	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D7R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D8R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D9R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D10R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
D11R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
Wheeled Dozers														
824G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
834G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
844	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
854G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
Motor Graders														
120H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
14G/H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
16G/H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
24M	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
Track Excavators														
312C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
320C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
325C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
330C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
345B	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
365BL	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
385BL	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
Scrapers														
631G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
637G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
Wheeled Loaders														
924G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
928G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
950G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
966G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
972G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
980G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
988G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
990	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
992G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81	
994D	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15	
L2350	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15	
Shovels														
PC2000					\$0.00							\$0		
PC3000					\$0.00							\$0		
PC4000					\$0.00							\$0		
PC5500					\$0.00							\$0		
PC8000					\$0.00							\$0		
Hydraulic Hammers														
H-120 (fits 325)														
H-160 (fits 345)														
H-180 (fits 365/385)														
Demolition Shears														
S340 (fits 322/325/330)														
S365 (fits 330/345)														
S390 (fits 365/385)														
Demolition Grapples														
G315 (fits 322/325)														
G320 (fits 325/330)														
G330 (fits 345/365)														

Closure Cost Estimate

Labor Rates

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	
INDIRECT COSTS			
Unemployment (%)	0.00%		
Retirement/SS/Medicare (%)	0.00%		
Workman's Compensation (%)	0.00%		
Other Indirects			
State Payroll Tax (13),(15),(17),(18)			
Total Other Indirects	0.00%		

HOURLY LABOR RATE TABLE													
Other Equipment													
420D 4WD Backhoe	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
428D 4WD Backhoe	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CS533E Vibratory Roller	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CS633E Vibratory Roller	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CP533E Sheepsfoot Compactor	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CP633E Sheepsfoot Compactor	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Light Truck - 1.5 Ton	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Supervisor's Truck	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Flatbed Truck	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Air Compressor + tools	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Welding Equipment	AO601	\$59.58	\$0.00	\$59.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$59.58
Heavy Duty Drill Rig	S1204	\$55.96	\$0.00	\$55.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$55.96
Pump (plugging) Drill Rig	S1204	\$55.96	\$0.00	\$55.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$55.96
Concrete Pump					\$0.00							\$0	
Gas Engine Vibrator	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Generator 5KW					\$0.00							\$0	
HDEP Welder (pipe or liner)					\$0.00							\$0	
5 Ton Crane	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
20 Ton Crane	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
50 Ton Crane	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
120 Ton Crane	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
NOTES:													
(1) Equipment Type:		Caterpillar model or equivalent, LeTourneau											
(2) Equipment Operator Source:		Alaska Pamphlet 600											
(3) Zone Basis:													
Truck Drivers (\$/hr) (4)													
725	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
730	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
735	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
740	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
769D	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
773E	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
777D	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
785C	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
793C	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
797B	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
613E (5,000 gal) Water Wagon	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
621E (8,000 gal) Water Wagon	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
777D Water Truck	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
785C Water Truck	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
Dump Truck (10-12 yd3)	A2105	\$56.78	\$0.00	\$56.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$56.78
NOTES:													
(4) Truck Driver Source:													
(5) Zone Basis:													

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	

Unemployment (%)	0.00%	
Retirement/SS/Medicare (%)	0.00%	
Workman's Compensation (%)	0.00%	

State Payroll Tax (13),(15),(17),(18)	
Total Other Indirects	0.00%

Laborers (\$/hr) (6,7)												
General Laborer	S1205	\$35.15	\$0.00	\$35.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$35.15
Skilled Laborer	S1202	\$50.39	\$0.00	\$50.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$50.39
Driller's Helper	A1605	\$50.54	\$0.00	\$50.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$50.54
Rodmen (reinforcing concrete)	SO401	\$56.57	\$0.00	\$56.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$56.57
Cement finisher	SO401	\$56.57	\$0.00	\$56.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$56.57
Carpenter	AO301	\$59.72	\$0.00	\$59.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0	\$59.72

(6) Laborer Source:	Alaska Pamphlet 600
(7) Carpenter Source:	Alaska Pamphlet 600, 090116
(8) Zone Basis:	

[illegible]

(9) Project Manager:	Salary.com 3/2017
(9) Foreman Source:	Salary.com 3/2017
(9) Technical Labor Source:	Salary.com 3/2017
Other Labor Source:	
Other Labor Source:	
†Additional User Markups	
(These are added by the user to the base rate to account for site-specific conditions or corporate requirements)	

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Monthly Rental Basis: 360 hrs month

EQUIPMENT RENTAL RATE TABLE				
EQUIPMENT TYPE (1)	Monthly Owner/Rental Rate	Equipment Hourly Rate	Fuel/Lube/ Wear	Total Rate
Bulldozers				
D6R	\$20,300.00	\$56.39	\$31.96	\$88.34
D6R w/ Winch	\$20,300.00	\$56.39	\$31.96	\$88.34
D7R	\$20,300.00	\$56.39	\$35.95	\$92.34
D8R			\$48.13	\$48.13
D9R	\$52,500.00	\$145.83	\$70.50	\$216.33
D10R	\$52,500.00	\$145.83	\$91.47	\$237.31
D11R	\$70,000.00	\$194.44	\$133.61	\$328.06
Wheeled Dozers				
824G			\$34.32	\$34.32
834G			\$40.23	\$40.23
844			\$47.89	\$47.89
854G			\$60.67	\$60.67
Motor Graders				
120H			\$35.00	\$35.00
14G/H			\$50.03	\$50.03
16G/H	\$31,500.00	\$87.50	\$59.81	\$147.31
24M			\$49.49	\$49.49
Track Excavators				
312C			\$14.00	\$14.00
320C			\$25.65	\$25.65
325C	\$12,530.00	\$34.81	\$32.07	\$66.88
330C			\$39.18	\$39.18
345B	\$22,540.00	\$62.61	\$46.85	\$109.46
365BL			\$42.15	\$42.15
385BL	\$43,680.00	\$121.33	\$77.88	\$199.21
Scrapers				
631G			\$56.69	\$56.69
637G			\$84.63	\$84.63
Wheeled Loaders				
924G			\$20.43	\$20.43
928G	\$5,810.00	\$16.14	\$23.83	\$39.96
950G			\$30.77	\$30.77
966G	\$23,310.00	\$64.75	\$43.72	\$108.47
972G			\$47.31	\$47.31
980G	\$23,310.00	\$64.75	\$51.64	\$116.39
988G			\$76.15	\$76.15
990			\$54.28	\$54.28
992G	\$80,500.00	\$223.61	\$145.88	\$369.49
994D	\$183,606.00	\$510.02	\$114.95	\$624.96
L2350			\$210.74	\$210.74
Shovels				
PC2000			\$118.14	\$118.14
PC3000			\$159.65	\$159.65
PC4000			\$223.51	\$223.51
PC5500			\$379.96	\$379.96
PC8000			\$475.75	\$475.75
Hydraulic Hammers				
H-120 (fits 325)			\$6.00	\$6.00
H-160 (fits 345)	\$22,540.00	\$62.61	\$12.00	\$74.61
H-180 (fits 365/385)	\$27,048.00	\$75.13	\$14.00	\$89.13
Demolition Shears				
S340 (fits 322/325/330)				\$0.00
S365 (fits 330/345)	\$22,500.00	\$62.50	\$12.00	\$74.50
S390 (fits 365/385)				\$0.00

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

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Demolition Grapples				
G315 (fits 322/325)				\$0.00
G320 (fits 325/330)				\$0.00
G330 (fits 345/365)			\$30.00	\$30.00
Other Equipment				
420D 4WD Backhoe	\$4,900.00	\$13.61	\$18.26	\$31.87
428D 4WD Backhoe	\$4,900.00	\$13.61	\$18.26	\$31.87
CS533E Vibratory Roller	\$14,843.98	\$41.23	\$11.97	\$53.21
CS633E Vibratory Roller			\$15.17	\$15.17
CP533E Sheepsfoot Compactor	\$14,843.98	\$41.23	\$11.97	\$53.21
CP633E Sheepsfoot Compactor	\$14,843.98	\$41.23	\$15.17	\$56.40
Light Truck - 1.5 Ton	\$3,290.00	\$9.14	\$4.97	\$14.11
Supervisor's Truck	\$3,290.00	\$9.14	\$3.38	\$12.52
Flatbed Truck	\$3,290.00	\$9.14	\$16.02	\$25.16
Air Compressor + tools	\$2,250.00	\$6.25	\$3.19	\$9.44
Welding Equipment	\$5,950.94	\$16.53	\$6.39	\$22.92
Heavy Duty Drill Rig	\$116,037.56	\$322.33	\$38.32	\$360.64
Pump (plugging) Drill Rig	\$116,037.56	\$322.33	\$31.93	\$354.26
Concrete Pump	\$29,562.66	\$82.12	\$31.93	\$114.05
Gas Engine Vibrator	\$1,279.04	\$3.55	\$3.19	\$6.75
Generator 5KW	\$1,871.00	\$5.20	\$4.79	\$9.99
HDEP Welder (pipe or liner)	\$15,280.09	\$42.44	\$6.39	\$48.83
5 Ton Crane	\$11,348.60	\$31.52	\$9.58	\$41.10
20 Ton Crane	\$13,300.00	\$36.94	\$12.77	\$49.72
50 Ton Crane	\$20,440.00	\$56.78	\$15.01	\$71.78
120 Ton Crane	\$39,340.00	\$109.28	\$16.60	\$125.88
Trucks				
725	\$28,509.82	\$79.19	\$39.49	\$118.68
730			\$41.08	\$41.08
735			\$55.93	\$55.93
740			\$57.06	\$57.06
769D			\$46.65	\$46.65
773E			\$58.18	\$58.18
777D	\$58,100.00	\$161.39	\$84.87	\$246.26
785C			\$77.43	\$77.43
793C			\$133.31	\$133.31
797B			\$187.59	\$187.59
613E (5,000 gal) Water Wagon	\$5,523.00	\$15.34	\$29.71	\$45.06
621E (8,000 gal) Water Wagon	\$20,907.20	\$58.08	\$49.19	\$107.27
777D Water Truck	\$58,100.00	\$161.39	\$84.87	\$246.26
785C Water Truck			\$77.43	\$77.43
Dump Truck (10-12 yd ³)	\$6,300.00	\$17.50	\$17.42	\$34.92
NOTES:				
(1) Power Equipment Source:				
(2) Power Equipment Type:	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels			
(3) Drilling Equipment Source:	Nevada Costs			
(4) Other Equipment Source:	Various quotes. See Donlin equipment Materials Cost Buildup_181202017_pl_R			
(5) Drill rig includes support (pipe) truck				

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

FUEL, LUBE AND WEAR CALCULATIONS						
EQUIPMENT TYPE	PM Cost Per Hour ⁽¹⁾	Under carriage or Tires ⁽²⁾	G.E.T Consumption (3)	Fuel Use Rate L/hr (4)	Cost@ 0.84/L	Total Hourly Equipment Cost
Bulldozers						
D6R	\$6.00		\$6.00	23.66	\$19.96	\$31.96
D6R w/ Winch	\$6.00		\$6.00	23.66	\$19.96	\$31.96
D7R	\$6.00		\$6.00	28.39	\$23.95	\$35.95
D8R	\$6.00		\$11.00	36.91	\$31.13	\$48.13
D9R	\$8.00		\$17.00	53.94	\$45.50	\$70.50
D10R	\$11.00		\$23.00	68.14	\$57.47	\$91.47
D11R	\$14.00		\$35.00	100.31	\$84.61	\$133.61
Wheeled Dozers						
824G		\$0.00		40.69	\$34.32	\$34.32
834G		\$0.00		47.69	\$40.23	\$40.23
844		\$0.00		56.78	\$47.89	\$47.89
854G		\$0.00		71.92	\$60.67	\$60.67
Motor Graders						
120H	\$7.00	\$3.23	\$12.00	15.14	\$12.77	\$35.00
14G/H	\$8.00	\$5.07	\$17.00	23.66	\$19.96	\$50.03
16G/H	\$6.00	\$6.86	\$23.00	28.39	\$23.95	\$59.81
24M				58.67	\$49.49	\$49.49
Track Excavators						
312C	\$4.00		\$4.00	7.12	\$6.00	\$14.00
320C	\$5.00		\$5.00	18.55	\$15.65	\$25.65
325C	\$5.00		\$6.00	24.98	\$21.07	\$32.07
330C	\$6.00		\$7.00	31.04	\$26.18	\$39.18
345B	\$6.00		\$7.00	40.12	\$33.85	\$46.85
365BL				49.97	\$42.15	\$42.15
385BL	\$7.00		\$15.00	66.24	\$55.88	\$77.88
Scrapers						
631G		\$8.79		56.78	\$47.89	\$56.69
637G		\$8.79		89.90	\$75.83	\$84.63
Wheeled Loaders						
924G	\$4.00	\$2.65	\$5.00	10.41	\$8.78	\$20.43
928G	\$5.00	\$2.65	\$5.00	13.25	\$11.18	\$23.83
950G	\$5.00	\$3.99	\$9.00	15.14	\$12.77	\$30.77
966G	\$7.00	\$6.36	\$12.00	21.77	\$18.36	\$43.72
972G	\$6.00	\$6.36	\$15.00	23.66	\$19.96	\$47.31
980G	\$6.00	\$6.69	\$15.00	28.39	\$23.95	\$51.64
988G	\$11.00	\$10.51	\$16.00	45.80	\$38.64	\$76.15
990				64.35	\$54.28	\$54.28
992G	\$13.00	\$23.44	\$36.00	87.06	\$73.44	\$145.88
994D				136.27	\$114.95	\$114.95
L2350				249.83	\$210.74	\$210.74
Shovels						
PC2000				140.06	\$118.14	\$118.14
PC3000				189.27	\$159.65	\$159.65
PC4000				264.97	\$223.51	\$223.51
PC5500				450.45	\$379.96	\$379.96
PC8000				564.01	\$475.75	\$475.75
Hydraulic Hammers						
H-120 (fits 325)	N/A		\$6.00			\$6.00
H-160 (fits 345)	N/A		\$12.00			\$12.00
H-180 (fits 365/385)	N/A		\$14.00			\$14.00
Demolition Shears						
S340 (fits 322/325/330)	N/A					\$0.00
S365 (fits 330/345)	N/A		\$12.00			\$12.00
S390 (fits 365/385)	N/A					\$0.00
Demolition Grapples						
G315 (fits 322/325)	N/A					\$0.00
G320 (fits 325/330)	N/A					\$0.00
G330 (fits 345/365)	N/A		\$30.00			\$30.00

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Other Equipment						
420D 4WD Backhoe	\$4.00	\$0.68	\$4.00	11.36	\$9.58	\$18.26
428D 4WD Backhoe	\$4.00	\$0.68	\$4.00	11.36	\$9.58	\$18.26
CS533E Vibratory Roller				14.19	\$11.97	\$11.97
CS633E Vibratory Roller				17.98	\$15.17	\$15.17
CP533E Sheepsfoot Compactor				14.19	\$11.97	\$11.97
CP633E Sheepsfoot Compactor				17.98	\$15.17	\$15.17
Light Truck - 1.5 Ton		\$0.18		5.68	\$4.79	\$4.97
Supervisor's Truck		\$0.18		3.79	\$3.19	\$3.38
Flatbed Truck		\$1.01		17.79	\$15.01	\$16.02
Air Compressor + tools			N/A	3.79	\$3.19	\$3.19
Welding Equipment			N/A	7.57	\$6.39	\$6.39
Heavy Duty Drill Rig				45.42	\$38.32	\$38.32
Pump (plugging) Drill Rig				37.85	\$31.93	\$31.93
Concrete Pump			N/A	37.85	\$31.93	\$31.93
Gas Engine Vibrator			N/A	3.79	\$3.19	\$3.19
Generator 5KW			N/A	5.68	\$4.79	\$4.79
HDEP Welder (pipe or liner)			N/A	7.57	\$6.39	\$6.39
5 Ton Crane				11.36	\$9.58	\$9.58
20 Ton Crane				15.14	\$12.77	\$12.77
50 Ton Crane				17.79	\$15.01	\$15.01
120 Ton Crane				19.68	\$16.60	\$16.60
Trucks						
725	\$8.00	\$13.48	\$3.00	17.79	\$15.01	\$39.49
730	\$8.00	\$13.48	\$3.00	19.68	\$16.60	\$41.08
735	\$8.00	\$21.46	\$3.00	27.82	\$23.47	\$55.93
740	\$8.00	\$22.59	\$3.00	27.82	\$23.47	\$57.06
769D	\$9.00	\$4.12	\$4.00	35.01	\$29.54	\$46.65
773E	\$8.00	\$8.67	\$4.00	44.48	\$37.52	\$58.18
777D	\$11.00	\$15.39	\$5.00	63.40	\$53.48	\$84.87
785C				91.79	\$77.43	\$77.43
793C				158.04	\$133.31	\$133.31
797B				222.39	\$187.59	\$187.59
613E (5,000 gal) Water Wagon	\$7.00	\$3.56		22.71	\$19.16	\$29.71
621E (8,000 gal) Water Wagon	\$8.00	\$6.87		40.69	\$34.32	\$49.19
777D Water Truck	\$11.00	\$15.39	\$5.00	63.40	\$53.48	\$84.87
785C Water Truck				91.79	\$77.43	\$77.43
Dump Truck (10-12 yd3) (5)	N/A	\$0.81	N/A	19.68	\$16.60	\$17.42
Notes:						
(1) PM Source:	July 2012 Cashman Equipment Rental Rate, Elko, NV (except as noted)					
(2) Undercarriage Source:	Cashman Equipment Reno Nevada 2012; 50% added for shipping and handling					
(3) G.E.T. Source:	CAT Historical Data					
(4) Fuel Use Source:	Caterpillar Handbook, Edition 35, Ch. 20; or estimated average for smaller vehicles					
(5) Dump Truck Oper. Cost Source:	Means Heavy Construction (2008)					

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

TIRE COST TABLES						
Equipment	Tire Size	# of Tires Per Piece of Equipment	Cost Per Tire	Tire Cost ⁽¹⁾⁽²⁾	Life Expectancy Hours ⁽³⁾ (Low/Zone A)	Tire Cost per Hour
Bulldozers						
D6R			N/A			
D6R w/ Winch			N/A			
D7R			N/A			
D8R			N/A			
D9R			N/A			
D10R			N/A			
D11R			N/A			
Wheeled Dozers						
824G	29.5R25	4		\$0.00	3,500	\$0.00
834G	35/65-R33	4		\$0.00	3,500	\$0.00
844	45/65-R39	4		\$0.00	3,500	\$0.00
854G	45/65-R45	4		\$0.00	3,500	\$0.00
Motor Graders						
120H	13PR24	6	\$1,884.00	\$11,304.00	3,500	\$3.23
14G/H	20.5R25	6	\$2,959.00	\$17,754.00	3,500	\$5.07
16G/H	23.5R25	6	\$4,003.00	\$24,018.00	3,500	\$6.86
24M	23.5R25	6		\$0.00	3,500	
Track Excavators						
312C			N/A			
320C			N/A			
325C			N/A			
330C			N/A			
345B			N/A			
365BL			N/A			
385BL			N/A			
Scrapers						
631G	37.25R35	4	\$8,793.00	\$35,172.00	4,000	\$8.79
637G	37.25R35	4	\$8,793.00	\$35,172.00	4,000	\$8.79
Wheeled Loaders						
924G	17.5R25	4	\$2,982.00	\$11,928.00	4,500	\$2.65
928G	17.5R25	4	\$2,982.00	\$11,928.00	4,500	\$2.65
950G	26.5R25	4	\$4,493.00	\$17,972.00	4,500	\$3.99
966G	26.5R25	4	\$7,153.00	\$28,612.00	4,500	\$6.36
972G	26.5R25	4	\$7,153.00	\$28,612.00	4,500	\$6.36
980G	29.5R25	4	\$7,531.00	\$30,124.00	4,500	\$6.69
988G	35/65-33	4	\$11,827.00	\$47,308.00	4,500	\$10.51
990	41.25/70-39	4		\$0.00	4,500	
992G	45/65R45	4	\$26,371.00	\$105,484.00	4,500	\$23.44
994D	55/85R57	4		\$0.00	4,500	
L2350	55/85R57	4		\$0.00	4,500	
Shovels						
PC2000			N/A			
PC3000			N/A			
PC4000			N/A			
PC5500			N/A			
PC8000			N/A			
Hydraulic Hammers						
H-120 (fits 325)			N/A			
H-160 (fits 345)			N/A			
H-180 (fits 365/385)			N/A			
Demolition Shears						
S340 (fits 322/325/330)			N/A			
S365 (fits 330/345)			N/A			
S390 (fits 365/385)			N/A			
Demolition Grapples						
G315 (fits 322/325)			N/A			
G320 (fits 325/330)			N/A			
G330 (fits 345/365)			N/A			

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Other Equipment						
420D 4WD Backhoe	340/80R18-19.5LR24	2	\$1,023.00	\$2,046.00	3,000	\$0.68
428D 4WD Backhoe	340/80R18-16.9R28	2	\$1,023.00	\$2,046.00	3,000	\$0.68
CS533E Vibratory Roller			N/A			
CS633E Vibratory Roller			N/A			
CP533E Sheepfoot Compactor			N/A			
CP633E Sheepfoot Compactor			N/A			
Light Truck - 1.5 Ton		4	138	\$552.00	3,000	\$0.18
Supervisor's Truck		4	138	\$552.00	3,000	\$0.18
Flatbed Truck		22	138	\$3,036.00	3,000	\$1.01
Air Compressor + tools			N/A			
Welding Equipment			N/A			
Heavy Duty Drill Rig		4		\$0.00	3,000	
Pump (plugging) Drill Rig		4		\$0.00	3,000	
Concrete Pump			N/A			
Gas Engine Vibrator			N/A			
Generator 5KW			N/A			
HDEP Welder (pipe or liner)			N/A			
5 Ton Crane		4		\$0.00	3,000	
20 Ton Crane		4		\$0.00	3,000	
50 Ton Crane		6		\$0.00	3,000	
120 Ton Crane		6		\$0.00	3,000	
Trucks						
725	23.5R25	6	\$4,493.00	\$26,958.00	2,000	\$13.48
730	23.5R25	6	\$4,493.00	\$26,958.00	2,000	\$13.48
735	26.5R25	6	\$7,153.00	\$42,918.00	2,000	\$21.46
740	29.5R25	6	\$7,531.00	\$45,186.00	2,000	\$22.59
769D	18.00R33	6	\$4,117.00	\$24,702.00	6,000	\$4.12
773E	24.00R35	6	\$7,221.00	\$43,326.00	5,000	\$8.67
777D	27.00R49	6	\$12,821.00	\$76,926.00	5,000	\$15.39
785C	33.00R51	6		\$0.00	4,000	
793C	40.00R57	6		\$0.00	4,000	
797B	40.00R57	6		\$0.00	4,000	
613E (5,000 gal) Water Wagon	23.5R25	6	\$3,556.00	\$21,336.00	6,000	\$3.56
621E (8,000 gal) Water Wagon	33.25R29	6	\$9,157.00	\$54,942.00	8,000	\$6.87
777D Water Truck	27.00R49	6	\$12,821.00	\$76,926.00	5,000	\$15.39
785C Water Truck	33.00R51	6		\$0.00	4,000	
Dump Truck (10-12 yd3)		10	\$487.00	\$4,870.00	6,000	\$0.81
Notes:						
(1) Unit Cost Basis:	Cost per tyre each					
(2) Cost Basis:	Cashman Equipment Reno Nevada 2012					
(3) Tire Cost Source:	Cashman Equipment Reno Nevada 2012, 50% added for shipping and handling					
(4) Tire Wear Source:	Caterpillar Handbook, Edition 37					

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Revegetation Materials			
Seed Mixes			
Seed Mix	Description	Cost/Ha	
None			
Mix 1	Basins	\$388.85	
Mix 2	Low Hills	\$238.80	
Mix 3	Uplands		
Mix 4	Riparian or Custom		
User Mix 1			
User Mix 2			
User Mix 3			
User Mix 4			
	Cost/lb	kg/Ha	Cost/Ha
User Mix 5 (from Seed Mix sheet)	\$17.54	\$7.42	\$130.14
Notes:			
Mulch			
Item	Cost/kg	kg/Ha	Cost/Ha
None			
Straw Mulch		2000	
Hydro Mulch		100	
Timber Mulch		100	
Notes:			

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Amendments			
Item	Cost/kg	kg/Ha	Cost/Ha
None			
Organic Matter		2000	
Treated Sludge			
Chemical	\$1.46	100	\$146.00
Notes:			

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Well Abandonment Materials			
Description	Cost/20kg bag	Units	Cost/unit*
Cement	\$6.79	m3	\$42.44
Grout (Low Grade Bentonite)	\$7.76	m3	\$48.50
Inert Material/Cuttings		m3	
		m3	
		m3	
NDEP 2016 costs converted to metric units and adjusted for location.			
* Assumes 1 bag mixes with water to make 0.21 y3 or 0.16 m3 of grout/cement slurry.			

Monitoring Costs		
Description	Units	Cost/unit
Monitor Well Pump	ea.	\$2,459.66
Sampling Supplies	ea.	\$5.75
Water Analysis (Complete) (1)	ea.	\$1,055.00
ABA + S speciation	ea.	
Cyanide - WAD	ea.	
Cyanide - Free	ea.	
Cyanide - Total soils	ea.	
Cyanide - Total water	ea.	
TPH in soils	ea.	\$80.00
Humidity Cell (20 wk) (2)	ea.	
Humidity Cell (40 wk)	ea.	
NAG	ea.	
TCLP w/ full analysis	ea.	\$185.00
SPLP w/ full analysis	ea.	\$150.00
AS4439 Leach test w/ full analysis	ea.	
Methy Hg	ea.	
	ea.	
Pump and consumable costs from Drillers World		
AK Lab Rates from SRK Consulting based on similar projects		

Closure Cost Estimate

Material Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis: Alaska Davis Bacon 2016**

Fuel, Etc.			
Description	Units	Cost/unit	User Overrides
Off-road Diesel - delivered (1)	\$/Litre	\$0.844	
Pickup Truck Mileage	\$/km	\$0.348	
Electical Power	\$/kWh	\$0.129	
Donlin feasibility 2011 inflated to 2016			
IRS allowance converted to metric			
Donlin feasibility 2011 inflated to 2016			

Closure Cost Estimate

Material Costs

Revegetation Method				
Slopes				
Disturbance Type	Seed Application Method	Labor Cost/Ha	Equipment Cost/Ha	Total Cost/Ha
Waste Rock Dumps	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Heap Leach	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Tailings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Quarries & Borrow Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Flat Areas and Undifferentiated				
Disturbance Type	Seed Application Method	Labor Cost/Ha	Equipment Cost/Ha	Total Cost/Ha
Exploration Trenches	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Exploration Roads	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Waste Rock Dumps	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Heap Leach	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Tailings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Quarries & Borrow Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Roads	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Haul Material	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Foundations & Buildings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Sediment & Drainage Control	Hand Broadcast	\$389.34	\$144.20	\$533.54
Process Ponds	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Landfills	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Yards, Etc.	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Revegetation Maintenance	Mechanical Broadcast	\$269.16	\$77.87	\$347.03

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Revegetation										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Materials	Labor	Equipment	Total	Notes
Seeding - Broadcast Hand (1)		ha					\$389.34	\$144.20	\$533.54	
Seeding - Broadcast Mechanical (1)		ha					\$269.16	\$77.87	\$347.03	
Seeding - Drill (1)		ha		365			\$403.76	\$288.40	\$692.16	
Seeding - Hydroseeding (1)				365			\$721.00	\$360.50	\$1,081.50	
Shrub Planting - bare root 6-10 in (150- 250mm) (2)	02910-400-0561	ea.	1 Clab	365			\$0.77	\$0.00	\$0.77	
Tree Planting - bare root 11-16 in (270- 400mm) (3)	02910-400-0562	ea.	1 Clab	260			\$1.08	\$0.00	\$1.08	
Cactus Planting (4)		ea.	1 Clab						\$0.00	
NOTES:										
(1) Seeding Source:	Nevada 2016, NDEP costs converted to metric									
(2) Shrub Source:										
(3) Tree Source:										
(4) Cactus Source:										
Building and Wall Demolition										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data . All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Labor	Equipment	Premium	Total	Notes
Building Demolition										
Lg. steel	02220-110-0012	m3	B-8	609		\$4.68	\$2.10		\$6.78	
Lg. concrete	02220-110-0050	m3	B-8	433		\$6.59	\$2.95		\$9.54	
Lg. masonry	02220-110-0080	m3	B-8	569		\$5.01	\$2.24		\$7.25	
Lg. mixed	02220-110-0100	m3	B-8	569		\$5.01	\$2.24		\$7.25	
Sm. steel	02220-110-0500	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Sm. concrete	02220-110-0600	m3	B-3	320		\$7.39	\$2.75		\$10.14	
Sm. masonry	02220-110-0650	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Sm. wood	02220-110-0700	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Wall Demolition										
Block 4 in (100 mm) thick	02220-130-2000	m2	1 Clab	17		\$16.54	\$0.00	20%	\$19.85	
Block 6 in (150 mm) thick	02220-130-2040	m2	1 Clab	16		\$17.58	\$0.00	20%	\$21.10	
Block 8 in (200 mm) thick	02220-130-2080	m2	1 Clab	14		\$20.09	\$0.00	20%	\$24.11	
Block 12 in (300 mm) thick	02220-130-2100	m2	1 Clab	14		\$20.09	\$0.00	20%	\$24.11	
Conc 6 in (150 mm) thick	02220-130-2400	m2	B-9	15		\$134.62	\$5.03	10%	\$153.62	
Conc 8 in (200 mm) thick	02220-130-2420	m2	B-9	13		\$155.33	\$5.81	10%	\$177.25	
Conc 10 in (250 mm) thick	02220-130-2440	m2	B-9	11		\$183.57	\$6.87	10%	\$209.48	
Conc 12 in (300 mm) thick	02220-130-2500	m2	B-9	9		\$224.36	\$8.39	10%	\$256.03	

Closure Cost Estimate
Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal										
Unit rates from Means Heavy Construction 2006 Edition by permission of R.S.Means/Reed Construction Data .										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment		Total	Notes
Rubbish Handling										
Dumpster delivery (average for all sizes)	02220-350-0910	ea.			\$64.44				\$64.44	
Haul (average for all sizes)	02220-350-0920	ea.			\$201.83				\$201.83	
Rent per month (average for all sizes)	02220-350-0940	ea.			\$68.70				\$68.70	
Disposal fee per ton (tonne) (average for all sizes)	02220-350-0950	tonne			\$83.11				\$83.11	
NOTES:										
Dumpster Cost Source:	2016 Means Heavy Construction									
Dumpster Disposal Fee Source:	2016 Means Heavy Construction									
Hazardous Material Handling - Solids (+ Liquids in drums)										
Pickup fees 55 gal (200 L). drums	02110-300-1100	ea.			\$299.10				\$299.10	
Bulk material (average)	02110-300-1220/1230	tonne			\$539.56				\$539.56	
Transport - truck load (80 drums, 25 cy (m3), 18 tons)	02110-300-1260/1270	km			\$4.15				\$4.15	
Dump site solid disposal fee	02110-300-6000/6020	tonne			\$381.38				\$381.38	
NOTES:										
Solid Handling Cost Source:	2016 Means Heavy Construction									
Solid Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 81 0300-6000, 6020									
Hazardous Material Handling - Liquids										
Vacuum Truck Pickup (2200 gal/8300 L)	02110-300-3110	hr.			\$168.20				\$168.20	
Vacuum Truck Pickup (5000 gal/19000 L)	02110-300-3120	hr.			\$244.12				\$244.12	
Dump site liquid disposal fee	02110-300-6000/6020	tonne			\$381.38				\$381.38	
NOTES:										
Liquid Handling Cost Source:	2012 Means Heavy Construction									
Liquid Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 11 0300-6000, 6020									
Hydrocarbon Contaminated Soils (HCS)										
Insitu Biotreatment	02115-200-2020/2021	m3			\$29.29				\$29.29	
HCS disposal fee	02115-200-2050/2055	m3			\$73.47				\$73.47	
NOTES:										
Insitu Treatment Cost Source:	2012 Means Heavy Construction, ave. 02 65 1030-2020, 2021									
HCS Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 65 1030-2050, 2055 plus barging fee of \$265/tonne									

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Concrete Structure Installation										
Weekly dumpster rental rates from Means Heavy Construction 2005 Edition with permission by R.S.Means/Reed Construction Data . Weekly dumpster rental rates include haul to off-site disposal site and disposal fees										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Reinforced Concrete Bulkheads and Shaft Covers										
Grade walls - 15 in (400mm) thick, 8 ft (2.5m) high	03310-240-4300	m3	C-14D	61.18	\$217.74	\$194.26	\$17.43		\$429.43	includes reinforcing
Grade walls - 15 in (400mm) thick, 12 ft (3.7m) high	03310-240-4350	m3	C-14D	39.19	\$217.74	\$303.26	\$27.22		\$548.22	includes reinforcing
Elevated conc, 1-way beam & slab - 15ft (4.6m) span	03310-240-2700	m3	C-14B	15.74	\$359.20	\$780.62	\$67.76		\$1,207.58	includes reinforcing
Elevated conc, 1-way beam & slab - 25ft (7.5m) span	03310-240-2750	m3	C-14B	21.68	\$346.48	\$566.74	\$49.20		\$962.42	includes reinforcing
Bat Gate/Foam Plug Installation										
Bat Gate (5)		ea.								materials \$/ea. Installed
Culvert Gate (5)		ea.								materials \$/ea. Installed
Adit Foam Plug (6)		ea./m3								materials \$/cy placed
Production Opening Foam Plug (6)		ea./m3								materials \$/cy placed
NOTES:										
(5) Bat Gate Source:	Not used									
(6) Foam Plug Source:	Not used									

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Misc. Linear Projects										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data . All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Fencing Installation										
Barbed 3-strand	02820-170-1650	m	B-80A	232	\$0.18	\$5.66	\$0.49		\$6.33	
Barbed 4-strand	extrapolated	m	B-80A	174	\$0.24	\$7.55	\$0.65		\$8.44	
Barbed 5-strand	02820-130-0920	m	B-80A	139	\$0.30	\$9.45	\$0.81		\$10.56	
Chain link 8-10ft (2.5-3m) Install	02820-130-0920	m	B-80C	55	\$14.28	\$23.89	\$2.05		\$40.22	
Wood stockade fence 6 ft (2 m) high - Install	02820-510-1240	m	B-80C	46	\$5.93	\$28.57	\$2.45		\$36.95	
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
Fencing Removal										
Barbed 3-strand Removal	02220-220-1600	m	2 Clab	131		\$7.89	\$0.86		\$8.75	
Barbed 4-strand Removal	extrapolated	m	2 Clab	108		\$9.56	\$1.05		\$10.61	
Barbed 5-strand Removal	02220-220-1650	m	2 Clab	85		\$12.15	\$1.33		\$13.48	
Chain link 8-10 ft (2.5-3 m) Removal	02220-220-1700	m	B-6	136		\$7.71	\$2.35		\$10.06	
Wood, all types 4-6 ft ("1.5-2 m) high - Removal	02220-220-1775	m	2 Clab	131		\$7.89	\$0.86		\$8.75	
	user	m								
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
Culvert Removal										
12 in (300 mm) Diameter	02220-220-2900	m	B-6	53		\$19.79	\$6.03		\$25.82	
18 in (450 mm) Diameter	02220-220-2930	m	B-6	46		\$22.80	\$6.95		\$29.75	
24 in (600 mm) Diameter	02220-220-2960	m	B-6	37		\$28.35	\$8.64		\$36.99	
36 in (1m) Diameter	02220-220-3000	m	B-6	27		\$38.85	\$11.84		\$50.69	
Pipeline Removal										
0.75 in (20mm) - 4 in (100 mm) diameter	02220-381-1600	m	B-20	213		\$7.34	\$0.53		\$7.87	
6 in (150 mm) - 8 in (200 mm)	02220-381-1700	m	B-20	152		\$10.28	\$0.74		\$11.02	
10 in (250 mm) - 18 in (450 mm)	02220-381-1800	m	B-20	91		\$17.17	\$1.24		\$18.41	
20 in (500 mm) - 36 in (1 m)	02220-381-1900	m	B-20	61		\$25.62	\$1.85		\$27.47	
Pipe and Drainpipe Installation										
Water 4in (100mm) 40ft (12m) length, welded HDPE	02510-760-0100	m	B-22A	122	\$0.84	\$19.75	\$12.93		\$33.52	
Water 6in (150mm) 40ft (12m) length, welded HDPE	02510-760-0200	m	B-22A	116	\$2.34	\$20.77	\$13.60		\$36.71	
Water 12in (300mm) 40ft (12m) length, welded HDPE	02510-760-0500	m	B-22A	79		\$30.49	\$19.96		\$50.45	
Drain 4in (100mm) perforated PVC	02620-630-2100	m	B-14	96	\$0.48	\$25.94	\$3.83		\$30.25	
Drain 6in (150mm) perforated PVC	02620-630-2110	m	B-14	91	\$1.05	\$27.36	\$4.04		\$32.45	
Drain 4in (100mm) corrugated, perf or plain	02620-660-0040	m	2 Clab	366	\$0.22	\$2.82	\$0.31		\$3.35	
Drain 6in (150mm) corrugated., perf or plain	02620-660-0060	m	2 Clab	274	\$0.51	\$3.77	\$0.41		\$4.69	

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Drain Rock Preparation										
Crushing		m3							\$0.79	
Screening		m3							\$0.79	
TOTAL									\$1.59	
Misc.										
Backhoe work	02210-700-0120	m3	B-11M	21		\$23.17	\$12.14		\$35.31	
Powerline and Transformer Removal										
Single Pole		km							\$30,630.16	
Double Pole		km							\$35,005.89	
Transformer (9)		ea.							\$35,342.26	
NOTES:										
(7) Single Pole Source: NVEnergy estimate (2009) Adjusted to 2016										
(8) Double Pole Source: NVEnergy estimate (2009) Adjusted to 2016										
(9) Transformer Source: Sierra Pacific Power Company estimate (2004) adjusted to 2016										
Erosion and Sedimentation Control										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data .										
All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Rip-Rap & Rock Lining										
Rip-Rap 3/8 to 1/4 CY (m3) pieces, grouted	02370-450-0110	m2	B-13	67	\$39.27	\$30.42	\$8.57		\$78.26	assumes on-site source of rip-rap
Rip-Rap 18 in (450 mm) min thick, no grout	02370-450-0200	m2	B-13	44		\$46.32	\$13.05		\$59.37	assumes on-site source of rip-rap
Gabions, 6 in (150 mm) deep	02370-450-0400	m2	B-13	167	\$11.20	\$12.20	\$3.44		\$26.84	assumes on-site source rock fill for gabions
Gabions, 9 in (250 mm) deep	02370-450-0500	m2	B-13	136	\$14.03	\$14.99	\$4.22		\$33.24	assumes on-site source rock fill for gabions
Gabions, 12 in (300 mm) deep	02370-450-0200	m2	B-13	128	\$18.62	\$15.92	\$4.49		\$39.03	assumes on-site source rock fill for gabions
Gabions, 18 in (450 mm) deep	02370-450-0200	m2	B-13	85	\$26.18	\$23.98	\$6.76		\$56.92	assumes on-site source rock fill for gabions
Gabions, 36 in (1m) deep	02370-450-0200	m2	B-13	50	\$44.36	\$40.76	\$11.48		\$96.60	assumes on-site source rock fill for gabions
HDEP Liner Installation										
Finish grading large area	2310-100-0100	m2	B-11L	5017		\$0.15	\$0.08		\$0.23	
Compaction-riding, vibrating roller - 12in (300mm) lifts	2315-310-5100	m3	B-10Y	242		\$3.17	\$1.76		\$4.93	
1.5mm HDPE	2660-610-0010	m2	3 Skwk	149	\$0.80	\$11.38	\$4.33	10%	\$18.16	
80 mil HDPE	user	m2	3 Skwk	149	\$9.00	\$11.38	\$4.33		\$24.71	
40 mil VLDPE	user	m2	3 Skwk	150	\$7.00	\$11.31	\$4.30		\$22.61	
	user	m2	3 Skwk	149		\$11.38	\$4.33		\$15.71	
	user	m2	3 Skwk	149		\$11.38	\$4.33		\$15.71	

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Construction Management Support											
Office Trailer, Furnished, no hook-ups		0150-500-0250	mo.				\$235.88			\$235.88	
Toilet Portable, chemical		1590-400-6410	mo.				\$251.44			\$251.44	
TOTAL							\$487.32			\$487.32	
Pump and Casing Removal											
	Pump Type	Measurement	Unit				Labor	Equipment		Total	Notes
Pump Removal											
Submersible		ft to pump	m				\$10.17	\$22.08		\$32.25	
Line Shaft		ft to pump	m				\$23.72	\$51.58		\$75.30	
NOTES:											
(10) Pump Removal Source: Nevada 2016, NDEP costs converted to metric											

Closure Cost Estimate

User 1

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Post Closure Road/Airport Maintenance Costs

This sheet estimates the annual cost for road and airport maintenance. The costs are entered in the Other User Sheet.

Equipment	Qty.	h/day/unit	Total hrs/year	Equip. Unit Costs (\$)	Labor Unit Costs (\$)	Total Annual Equip (\$)	Total Annual Labor (\$)	Total Annual Cost (\$)
325C Excavator	1	0.5	182.5	\$ 66.88	\$ 60.81	\$ 12,205.60	\$ 11,097.83	\$ 23,303.43
14G Grader, All-Wheel Drive, Cat 16H or Equivalent, site & off-site roads	1	0.5	182.5	\$ 147.31	\$ 60.81	\$ 26,884.08	\$ 11,097.83	\$ 37,981.90
Water truck (5000 Gallon)	1	0.5	182.5	\$ 45.06	\$ 60.81	\$ 8,223.45	\$ 11,097.83	\$ 19,321.28
CS533E Vibratory Roller	1	0.5	182.5	\$ 53.21	\$ 60.81	\$ 9,710.83	\$ 11,097.83	\$ 20,808.65
Dump Truck, 12 cub yds, yard maintenance, snow removal	1	0.5	182.5	\$ 34.92	\$ 56.78	\$ 6,372.90	\$ 10,362.35	\$ 16,735.25
Small Dozer D7R	1	0.5	182.5	\$ 92.34	\$ 60.81	\$ 16,852.05	\$ 11,097.83	\$ 27,949.88
Light Truck (Truck and Foreman included in Water Treatment Crew)	0	0.5	0.0	\$ 14.11	\$ 30.47	\$ -	\$ -	\$ -
Total Annual Costs (Entered in Other User Sheet)						\$ 80,248.90	\$ 65,851.48	\$ 146,100.38

Closure Cost Estimate

User 2

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

User 2 - Bulk Fuel Storage Tanks Demolition

This sheet calculates the estimated cost to demolish the bulk steel storage tanks using a shear to cut and fold them. The tanks will then be hauled to the waste rock facility and buried.

	Labor	Equipment	Totals
Totals Added to the Other User sheet >>>	\$342,048	\$228,341	\$570,389

User 2 - Bulk Fuel Storage Tanks Demolition

Demolition Crew		Haulage Crew	
1 Foreman	\$ 50.39	Operator	\$ 62.02
2 Laborer	\$ 124.04	777 Haul Truck	\$ 246.26
1 Operator	\$ 60.81	Total Crew Cost	\$ 308.28
1 Cat Excavator 345	\$ 47.89		
1 Demolition Shear	\$ 74.50		
Total Crew Cost (\$/Hr)	\$ 357.63		
Hours per tank	48	Includes loading onto 777 Haul Truck	
Number of Tanks	29		
Total Cost (Labor)	\$ 327,449	Assume 500 gallons of rinse per tank.	
Total Cost (Equip)	\$ 170,373	Total gallons	14500.0
		Total M3	54.8
Tons of Steel per Tank	300	Total Cost	20.8
Tons of Steel per Load	20	Water Treatment cost not added.	
Total Loads	405.0		
Haul Distance (meters)	8,500		
Travel Time Uphill (min)	11		
Travel Time Downhill (min)	8.8		
Load Dump Time	15		
Total Fleet Time (hrs)	235.4		
Total Cost (Labor)	\$ 14,599		
Total Cost (Equip)	\$ 57,967		
Bulk demolition time from 2/10/2009 tel. call with Fred Glueck of Plant Reclamation (California).			
Fred estimated 1 week of crew time per bulk tank. Fred's company had demolished Barrick tanks at Tombo and McCloughlin.			
1 day added for each tank to account for rinsing. Pumping and water treatment costs calculated in Solution Mnagement worksheet.			
Shear: Genesis GXT 995R, Monthly rental quote from Bejac Equip (2017).			

Closure Cost Estimate

User 3

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

User 3 - Miscellaneous Hazardous Waste Disposal

This sheet calculates the estimated cost to dispose of hazardous waste. Waste is hauled to Jung Port and loaded on barge to Seattle.

	Labor	Materials	Totals
Totals Added to the Other User sheet >>>	\$909,557	\$454,778.45	\$1,364,335

User 3 - Miscellaneous Hazardous Waste Disposal

	Amount Generated (Metric tonnes)	Quantity (Real Tons)	Quantity (lbs)
Mercury Contaminated Carbon	16.7	18	36,817
Autoclave Lead Waste - Bricks	200	220	440,920
Autoclave Lead Waste - Backing	50	55	110,230
Assay Lab Lead Waste	27.4	30	60,406
Total	294.1	324	648,373

Ave. Weight of drum (lbs)	700
# drums required	927

	2011 costs \$/drum	Adjusted costs (see User 20)	
Disposal Costs	\$ 410.00	\$ 442.80	\$ 410,475.60
Transportation (Seattle Port to Disposal)		\$ 0.32	\$ 207,131.79
Federal Tax (6.25%)			\$ 12,945.74
Total Disposal Cost			\$ 630,553.12

	2011 costs \$/tonne (2,204 lbs)	Adjusted costs (see User 20)	
Transportation			
Mine to Jung (\$/ton)	\$ 20.00	\$ 21.60	\$ 6,352.56
Jung Handling (\$/ton)	\$ 20.00	\$ 21.60	\$ 6,352.56
Jung to Seattle (\$/ton)	\$ 265.00	\$ 286.20	\$ 84,171.42
Seattle Handling	\$ 20.00	\$ 21.60	\$ 6,352.56
Total			\$ 103,229.10
Grand Total			\$ 733,782.22

Closure Cost Estimate User 3

	2011 cost \$/tonne (2,204 lbs)	Adjustment factor from 2011 (User 2)	\$/tonne (2,204 lbs)
Mine to Jung (\$/ton)	\$ 50.00	1.08	\$ 54.00
Jung Port Handling (\$/ton)	\$ 20.00	1.08	\$ 21.60
Jung to Seattle (\$/ton)	\$ 265.00	1.08	\$ 286.20
Seattle Handling (\$/ton)	\$ 20.00	1.08	\$ 21.60
Total			
	2011 cost	Adjustment factor from 2011 (User 20)	
Spent Antifreeze for Recycle	\$ 155.00	1.08	\$ 167.40
Spent (Non-regulated) Grease for Landfill	\$ 245.00	1.08	\$ 264.60
Non-regulated Fuels and Oils for Fuel Blending	\$ 52.50	1.08	\$ 56.70
Transportation \$/lb (to Disp.)	\$ 0.29	1.08	\$ 0.31
Energy Surcharge (2%)			\$ 0.01
Total			\$ 0.32
Federal Tax (6.25%)			\$ 0.02
Total Transportation (\$/lb)			\$ 0.34
Notes:			
Red entries area estimated.			
Fuel and oil assumed 7 lbs. per gallon			
Grease assumed 8 lbs per gallon.			
Mine transportation and handling costs from 4/19/2011 email from Les Scovell (AMEC) ("2011 Shipping Costs.docx")			

Closure Cost Estimate User 4

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsr
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsr
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

User 4 - Tank Demolition and Disposal Costs			
	Labor	Equipment	Totals
Totals Added to the Other Demo & Equip Removal >>>	\$90,283	\$ 195,080.85	\$ 285,364.20
This sheet calculates the cost to demolish and bury various steel tanks onsite except for the bulk diesel tanks which are calculated in User 2. Also vendor owned tanks are not demolished but will be picked up by vendor. A demolition shear is used to cut the tanks into manageable sizes, fold and load onto a truck for transport to the pit.			

Demolition Crew	#	Labor	Equipment	Total
1 Foreman	1	\$51		
2 Laborer	2	\$70		
1 Cat Excavator 385	1	\$61	\$ 199.21	
1 Demolition Shear	1		\$ 74.50	
Total Crew Cost (\$/Hr)		\$182	\$ 273.71	\$ 455.82

Shear				Total Rate
				\$ 74.50

Haulage Crew	Labor	Equipment	Total
777 Haul Truck	\$ 62.02	\$ 246.26	
Total Crew Cost (\$/hr)	\$ 62.02	\$ 246.26	\$ 308.28
Load Time for Trucks (min)	10		
Cost to Load	\$ 10.34	\$ 41.04	\$ 51.38
Demolition Crew Re-position between Tanks (15 Min)	\$ 45.53	\$ 68.43	\$ 113.96
Average Haul Distance (m)	8,500		
Travel Time Uphill (min)	11		
Travel Time Downhill (min)	9		
Load Dump Time (min)	15		
Total Fleet Time per Load (min)	34.9		
Haulage Cost Per Load (\$/hr)	\$ 36.05	\$ 143.13	\$ 179.18
Total Load and Haul Cost per Load (\$/Load)	\$ 153.93	\$ 498.86	\$ 652.79

Notes: from: "Equipment List_RevK_Tanks and Vessels. DemoCost. PL.xls"

Closure Cost Estimate
User 5

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 5 - Equipment Mobilization

	Labor	Equipment	Totals
Totals Added to the Other User sheet >>>	\$1,404,320	\$2,808,640	\$4,212,960

The sheet calculates the estimated cost to mobilize and demobilize equipment. Costs include barging and transport from the port at the mine to the project site. Cost also include assembly and disassembly on the larger pieces of equipment. Assumed 1/3 of total cost is labor.

User 5 - Equipment Mobilization								
		Assembly/Disassembly			Equip. Time (2)	Shipping (Barge)		
EQUIPMENT TYPE (1)		Disassembly	Assembly	Total		Equip. Wt (lbs)	Total Tonnes	Shipping costs (3)
Bulldozers		# of Units						
D6R		\$0.00	\$0.00	\$0.00	\$0.00			
D6R w/ Winch		\$0.00	\$0.00	\$0.00	\$0.00			
D7R	4	\$0.00	\$0.00	\$0.00	\$40,600.00	55000	110.00	\$69,750.00
D8R		\$0.00	\$0.00	\$0.00	\$0.00	83000		
D9R		\$0.00	\$0.00	\$0.00	\$0.00	109000		
D10R	4	\$0.00	\$0.00	\$0.00	\$105,000.00	144000	288.00	\$181,320.00
D11R		\$0.00	\$0.00	\$0.00	\$0.00			
Wheeled Dozers								
824G		\$0.00	\$0.00	\$0.00	\$0.00			
834G		\$0.00	\$0.00	\$0.00	\$0.00			
844		\$0.00	\$0.00	\$0.00	\$0.00			
854G		\$0.00	\$0.00	\$0.00	\$0.00			
Motor Graders								
120H		\$0.00	\$0.00	\$0.00	\$0.00			
14G/H		\$0.00	\$0.00	\$0.00	\$0.00	41000		
16G/H	2	\$0.00	\$0.00	\$0.00	\$31,500.00	54000	\$54.00	\$45,810.00
24M		\$0.00	\$0.00	\$0.00	\$0.00			
Track Excavators								
312C		\$0.00	\$0.00	\$0.00	\$0.00			
320C		\$0.00	\$0.00	\$0.00	\$0.00			
325C		\$0.00	\$0.00	\$0.00	\$0.00	56000		
330C		\$0.00	\$0.00	\$0.00	\$0.00			
345B	4	\$0.00	\$0.00	\$0.00	\$45,080.00	105000	210.00	\$100,730.00
365BL		\$0.00	\$0.00	\$0.00	\$0.00			
385BL	1	\$0.00	\$0.00	\$0.00	\$21,840.00	183000	91.50	\$46,087.50
Scrapers								
631G		\$0.00	\$0.00	\$0.00	\$0.00			
637G					\$0.00			
Wheeled Loaders								
924G		\$0.00	\$0.00	\$0.00	\$0.00			
928G	2	\$0.00	\$0.00	\$0.00	\$5,810.00	14000	7.00	\$7,665.00
950G		\$0.00	\$0.00	\$0.00	\$0.00			
966G		\$0.00	\$0.00	\$0.00	\$0.00			
972G		\$0.00	\$0.00	\$0.00	\$0.00			
980G	2	\$0.00	\$0.00	\$0.00	\$23,310.00		0.00	\$23,310.00
988G		\$0.00	\$0.00	\$0.00	\$0.00			
990		\$0.00	\$0.00	\$0.00	\$0.00			
992G	4	\$0.00	\$0.00	\$0.00	\$161,000.00	94000	47.00	\$173,455.00
994D		\$0.00	\$0.00	\$0.00	\$0.00	191000		
L2350		\$0.00	\$0.00	\$0.00	\$0.00			

User 5 - Equipment Mobilization						
Unload and Mobilize to site						
EQUIPMENT TYPE (1)	Load/Unload (4) (hours)	Load/Unload (4) (\$)	RSM Crew No.	RSM Bare Cost (\$/hr)	Operator (Truck Driver) (\$/Hr)	Total Cost (5)
Bulldozers						
D6R	1		A-3D			
D6R w/ Winch	1		A-3D			
D7R	1	\$909.86	B-34N	\$103.34	\$56.78	\$1,069.98
D8R	1		B-34K			
D9R	1		B-34K			
D10R	2	\$1,819.72	B-34K	\$105.38	\$56.78	\$2,144.04
D11R	3		B-34K			
Wheeled Dozers						
824G	1		B-34K			
834G	1		B-34K			
844	1		B-34K			
854G	1		B-34K			
Motor Graders						
120H	1		B-34N			
14G/H	1		Self			
16G/H	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
24M	2		B-34K			
Track Excavators						
312C	1		B-34N			
320C	1		B-34N			
325C	1		B-34N			
330C	1		B-34N			
345B	1	\$909.86	B-34K	\$105.38	\$56.78	\$1,072.02
365BL	1		B-34K			
385BL	2	\$1,819.72	B-34K	\$105.38	\$56.78	\$2,144.04
Scrapers						
631G	1		B-34K			
637G	1		B-34K			
Wheeled Loaders						
924G	1		Self			
928G	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
950G	1		Self			
966G	1		Self			
972G	1		Self			
980G	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
988G	1		Self			
990	1		Self			
992G	2	\$1,819.72	Self	\$304.06	\$56.78	\$2,541.40
994D	3		Self			
L2350	4		Self			

Closure Cost Estimate
User 5

EQUIPMENT TYPE (1)		Disassembly	Assembly	Total	Equip. Time (2)	Equip. Wt (lbs)	Total Tonnes	Shipping costs (2)
Shovels								
PC2000		\$0.00	\$0.00	\$0.00				
PC3000		\$0.00	\$0.00	\$0.00				
PC4000		\$0.00	\$0.00	\$0.00				
PC5500		\$0.00	\$0.00	\$0.00				
PC8000		\$0.00	\$0.00	\$0.00				
Hydraulic Hammers								
H-120 (fits 325)		\$0.00	\$0.00	\$0.00	#VALUE!	3476		
H-160 (fits 345)	4	\$0.00	\$0.00	\$0.00	\$90,160.00	7784	15.60	\$94,294.00
H-180 (fits 365/385)		\$0.00	\$0.00	\$0.00	\$0.00	9570		
Demolition Shears								
S340 (fits 322/325/330)		\$0.00	\$0.00	\$0.00		10351		
S365 (fits 330/345)	1	\$0.00	\$0.00	\$0.00	\$22,500.00	15145	7.60	\$24,514.00
S390 (fits 365/385)		\$0.00	\$0.00	\$0.00		17580		
Demolition Grapples								
G315 (fits 322/325)		\$0.00	\$0.00	\$0.00				
G320 (fits 325/330)		\$0.00	\$0.00	\$0.00				
G330 (fits 345/365)		\$0.00	\$0.00	\$0.00				
Other Equipment								
420D 4WD Backhoe	4	\$0.00	\$0.00	\$0.00	\$19,600.00	24251	12.10	\$22,806.50
428D 4WD Backhoe		\$0.00	\$0.00	\$0.00				
CS533E Vibratory Roller		\$0.00	\$0.00	\$0.00		23900		
CS633E Vibratory Roller		\$0.00	\$0.00	\$0.00		31901		
CP533E Sheepsfoot Compactor		\$0.00	\$0.00	\$0.00		25750		
CP633E Sheepsfoot Compactor		\$0.00	\$0.00	\$0.00		31901		
Light Truck - 1.5 Ton	4	\$0.00	\$0.00	\$0.00	\$13,160.00	20000	10.00	\$15,810.00
Supervisor's Truck	2	\$0.00	\$0.00	\$0.00	6,580	6000	3.00	\$7,375.00
Flatbed Truck	4	\$0.00	\$0.00	\$0.00	\$13,160.00	20000	10.00	\$15,810.00
Air Compressor + tools	2	\$0.00	\$0.00	\$0.00	\$4,500.00	2500	1.30	\$4,844.50
Welding Equipment	2	\$0.00	\$0.00	\$0.00	\$11,901.87	1500	0.80	\$12,113.90
Heavy Duty Drill Rig	1	\$0.00	\$0.00	\$0.00	\$116,037.56	40000	20.00	\$121,337.60
Pump (plugging) Drill Rig	1	\$0.00	\$0.00	\$0.00	\$116,037.56	40000	20.00	\$121,337.60
Concrete Pump	1	\$0.00	\$0.00	\$0.00	\$29,562.66	2500	1.30	\$29,907.20
Gas Engine Vibrator		\$0.00	\$0.00	\$0.00				
Generator 5KW	4	\$0.00	\$0.00	\$0.00	\$7,484.00		0.00	\$7,484.00
HDEP Welder (Ram 824)	2	\$0.00	\$0.00	\$0.00	\$30,560.18	6600	3.30	\$31,434.70
5 Ton Crane		\$0.00	\$0.00	\$0.00	\$0.00			
20 Ton Crane	4	\$0.00	\$0.00	\$0.00	\$53,200.00	42500	21.30	\$58,844.50
50 Ton Crane	1	\$0.00	\$0.00	\$0.00	\$20,440.00		0.00	\$20,440.00
120 Ton Crane	1	\$0.00	\$0.00	\$0.00	\$39,340.00	132000	66.00	\$56,830.00
Trucks								
725		\$0.00	\$0.00	\$0.00				
730		\$0.00	\$0.00	\$0.00	#VALUE!			
735		\$0.00	\$0.00	\$0.00	#VALUE!			
740		\$0.00	\$0.00	\$0.00	#VALUE!	72973		
769D		\$0.00	\$0.00	\$0.00				
773E		\$0.00	\$0.00	\$0.00				
777D	10	\$0.00	\$0.00	\$0.00	\$581,000.00	175000	87.50	\$604,187.50
785C		\$0.00	\$0.00	\$0.00				
793C		\$0.00	\$0.00	\$0.00				
797B		\$0.00	\$0.00	\$0.00				
613E (5,000 gal) Water Wagon		\$0.00	\$0.00	\$0.00				
621E (8,000 gal) Water Wagon		\$0.00	\$0.00	\$0.00				
777D Water Truck	2	\$0.00	\$0.00	\$0.00	\$116,200.00	175000	87.50	\$139,387.50
785C Water Truck		\$0.00	\$0.00	\$0.00				
Dump Truck (10-12 yd3)	4	\$0.00	\$0.00	\$0.00	\$25,200.00	20000	10.00	\$27,850.00

EQUIPMENT TYPE (1)	Load/Unload (3) (hours)	Load/Unload (3) (\$)	RSM Crew No.		Operator (Truck Driver) (\$/Hr)	Total Cost (4)
Shovels						
PC2000						
PC3000						
PC4000						
PC5500						
PC8000						
Hydraulic Hammers						
H-120 (fits 325)	1		NA			
H-160 (fits 345)	1	\$909.86	NA	\$304.06	\$56.78	\$1,270.70
H-180 (fits 365/385)	1		NA			
Demolition Shears						
S340 (fits 322/325/330)	1		NA			
S365 (fits 330/345)	1	\$909.86	NA	\$304.06	\$56.78	\$1,270.70
S390 (fits 365/385)	1		NA			
Demolition Grapples						
G315 (fits 322/325)			NA			
G320 (fits 325/330)			NA			
G330 (fits 345/365)			NA			
Other Equipment						
420D 4WD Backhoe	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
428D 4WD Backhoe	1		A-3D			
CS533E Vibratory Roller	1		B-34N			
CS633E Vibratory Roller	1		B-34N			
CP533E Sheepsfoot Compactor	1		B-34N			
CP633E Sheepsfoot Compactor	1		B-34N			
Light Truck - 1.5 Ton	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
Supervisor's Truck	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
Flatbed Truck	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
Air Compressor + tools	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
Welding Equipment	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
Heavy Duty Drill Rig	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
Pump (plugging) Drill Rig	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
Concrete Pump	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
Gas Engine Vibrator	1		A-3D			
Generator 5KW	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
HDEP Welder (Ram 824)	1	\$909.86	A-3D	\$84.57	\$56.78	\$1,051.21
5 Ton Crane	1		Self			
20 Ton Crane	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70
50 Ton Crane	2	\$1,819.72	Self	\$304.06	\$56.78	\$2,541.40
120 Ton Crane	3	\$2,729.58	Self	\$304.06	\$56.78	\$3,812.10
Trucks						
725	1					
730	1					
735	11					
740	1		Self			
769D	1					
773E	1					
777D	2	\$1,819.72	Self	\$304.06	\$56.78	\$2,541.40
785C	2					
793C	2					
797B	2					
613E (5,000 gal) Water Wagon	1					
621E (8,000 gal) Water Wagon	1					
777D Water Truck	2	\$1,819.72	Self	\$304.06	\$56.78	\$2,541.40
785C Water Truck	2					
Dump Truck (10-12 yd3)	1	\$909.86	Self	\$304.06	\$56.78	\$1,270.70

1. Equipment barged from Anchorage.
2. Mobilization assumed 2-weeks charged for each piece of equipment.

Total Mobilization	\$2,106,480.00
Total De-mobilization	\$2,106,480.00
Grand Total	\$4,212,960.00

Closure Cost Estimate

User 7

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.

Cost Estimate Type: Surety

Cost Basis: Alaska Davis Bacon 2016

User 7 - Remove sheet piling - Jung Port			
	Labor	Equipment	Totals
Totals Added to the Other User sheet >>>	\$99,580	\$127,023	\$226,602
This sheet calculates the estimated time to remove sheet piling at the Jung Port and haul to the project site for burial.			

Remove sheet piling - Jung Port					
Crew		Quantity	Hourly Cost	Hours	Total Cost
Laborers		3	\$ 62.02	207	\$ 38,590
Foreman		1	\$ 50.39	207	\$ 10,451
Crane Operator		1	\$ 58.82	207	\$ 12,200
Oiler Mechanic		1	\$ 62.02	207	\$ 12,863
Haulage and Burial					
Operator (D8)		1	\$ 60.81	207	\$ 12,612
Operator (785)		1	\$ 62.02	207	\$ 12,863
Total Labor					\$ 99,580
Equipment					
50 ton crane		1	\$ 71.78	207	\$ 14,888
Lube Vehicle	Lube Vehicle	1	\$ 246.26	207	\$ 51,076
Haulage and Burial					
Dozer D10		1	\$ 48.13	207	\$ 9,983
777 Haul Truck		1	\$ 246.26	207	\$ 51,076
Total Equipment					\$ 127,023
Assumptions:					
Quantity of sheet piling (linear ft)		1400			
Crew Hours		207			
Crew Productivity		54	Linear feet per day		
		6.75	Linear feet per hour		
Note: Oiler labor same rate as skilled tradesman					
Lube vehicle assumed same cost as 777.					
Crew and productivity from RS Means 2009, 02.41.13.72-0400.					

Closure Cost Estimate

User 8

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 1 - Camp Costs

This sheet calculates the estimated cost mobilize the reclamation and closure crew to and from the site. This also includes the man camp cost for them to stay at the project site during their rotation. Labor and materials are assumed to be broken out 50-50.

User 8 Camp and Crew Mobilization Costs	Cost per man/day	Travel Costs per shift/man
Camp Cost per shift* (2 Way)	\$ 120.00	\$ 340.00
Rotations per season	26	26
Days per Rotation/man	14	
Trips per Rotation		1
Costs per season/man	\$ 43,680	\$ 8,840
Crew size (Average for 4 years)	23	23

Annual cost	\$ 1,004,640	\$ 203,320
*Note: The daily camp rate of \$120 includeds cost of power generation.		

Water treatment crew costs	Cost per man/day	Travel Costs per shift/man
Camp Cost per shift*	\$ 120.00	\$ 340.00
Rotations per season	26	26
Days per Rotation/man	14	
Trips per Rotation		1
Costs per season/man	\$ 43,680	\$ 8,840
Crew size	7	7

Annual costs	\$ 305,760	\$ 61,880
*Note: The daily camp rate of \$120 includeds cost of power generation.		

Closure Cost Estimate User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 9 - Manpower Estimate

This worksheet sums the fleet hours for each piece of equipment by worksheet and facility. This is used to estimate the number of crew and number of pieces of equipment required to complete the reclamation and closure.

Op Hours/Year

Total Man-hours over closure period

4,320

17,280

[illegible]

Closure Cost Estimate
User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

LMF-2-OPT	D10R	1			1	26	26
SCF-1	D10R	1			1	66	66
SCF-2	D10R	1			1	18	18
SCF-2-OPT-2	D10R	1			1	57	57
SCF-3	345B	2			2	2	4
JUNGJUK	D10R	1			1	51	51
Other Road - ID16	345B	2			2	744	1,488
Other Road - ID17	D10R	1			1	222	222
Other Road - ID18	D10R	1			1	109	109
Other Road - ID19	D10R	1			1	60	60
Other Road - ID20	D10R	1			1	15	15
Other Road - ID21	D10R	1			1	27	27
Other Road - ID22	D10R	1			1	94	94
Other Road - ID23	D10R	1			1	14	14
Other Road - ID24	D10R	1			1	35	35
Other Road - ID25	D10R	1			1	18	18
Other Road - ID26	345B	2			2	14	28
Other Road - ID27	D10R	1			1	1	1
Other Road - ID28	D10R	1			1	3	3
Other Road - ID29	D10R	1			1	1	1
Other Road - ID30	D10R	1			1	2	2
Other Road - ID31	D10R	1			1	21	21
Other Road - ID32	D10R	1			1	9	9
Other Road - ID33	D10R	1			1	2	2
Other Road - ID34	D10R	1			1	7	7
Other Road - ID35	D10R	1			1	24	24
Other Road - ID36	D10R	1			1	43	43
Other Road - ID37	D10R	1			1	9	9
Other Road - ID38	D10R	1			1	1	1
							3,218

User 9

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Cover Placement	LAH-1-ORIG	777D/992G	1	2	1	4	73	292	
	LAH-2-ORIG	777D/992G	1	2	1	4	15	60	
	LAH-ACCESS-1	777D/992G	1	2	1	4	8	32	
	LAH-ACCESS-4	777D/992G	1	2	1	4	1	4	
	LAO-1	777D/992G	1	2	1	4	52	208	
	LCF-1	777D/992G	1	2	1	4	22	88	
	LCF-2-DAM	777D/992G	1	2	1	4	67	268	
	LMF-1	777D/992G	1	2	1	4	60	240	
	LMF-2	777D/992G	1	2	1	4	150	600	
	LMF-2-OPT	777D/992G	1	2	1	4	5	20	
	SCF-1	777D/992G	1	2	1	4	29	116	
	SCF-2	777D/992G	1	2	1	4	40	160	
	SCF-2-OPT-2	777D/992G	1	2	1	4	8	32	
	SCF-3	777D/992G	1	2	1	4	77	308	
	JUNGGJUK	777D/992G	1	2	1	4	32	128	
	Other Road - ID16	777D/992G	1	2	1	4	31	124	
	Other Road - ID17	777D/992G	1	2	1	4	28	112	
	Other Road - ID18	777D/992G	1	2	1	4	28	112	
	Other Road - ID19	777D/992G	1	2	1	4	27	108	
	Other Road - ID20	777D/992G	1	2	1	4	9	36	
	Other Road - ID21	777D/992G	1	2	1	4	12	48	
	Other Road - ID22	777D/992G	1	2	1	4	21	84	
	Other Road - ID23	777D/992G	1	2	1	4	7	28	
	Other Road - ID24	777D/992G	1	2	1	4	3	12	
	Other Road - ID25	777D/992G	1	2	1	4	9	36	
	Other Road - ID26	777D/992G	1	2	1	4	22	88	
	Other Road - ID27	777D/992G	1	2	1	4	4	16	
	Other Road - ID28	777D/992G	1	2	1	4	14	56	
	Other Road - ID29	777D/992G	1	2	1	4	1	4	
	Other Road - ID30	777D/992G	1	2	1	4	1	4	
	Other Road - ID31	777D/992G	1	2	1	4	1	4	
	Other Road - ID32	777D/992G	1	2	1	4	1	4	
	Other Road - ID33	777D/992G	1	2	1	4	1	4	
	Other Road - ID34	777D/992G	1	2	1	4	5	20	
	Other Road - ID35	777D/992G	1	2	1	4	1	4	
	Other Road - ID36	777D/992G	1	2	1	4	1	4	
	Other Road - ID37	777D/992G	1	2	1	4	2	8	
	Other Road - ID38	777D/992G	1	2	1	4	3	12	
	Ripping	LAH-1-ORIG	Med Dozer	1			1	27	27
		LAH-2-ORIG	Med Dozer	1			1	6	6
		LAH-ACCESS-1	Med Dozer	1			1	3	3
LAH-ACCESS-4		Med Dozer	1			1	1	1	
LAO-1		Med Dozer	1			1	20	20	
LCF-1		Med Dozer	1			1	8	8	
LCF-2-DAM		Med Dozer	1			1	23	23	
LMF-1		Med Dozer	1			1	22	22	
LMF-2		Med Dozer	1			1	54	54	
LMF-2-OPT		Med Dozer	1			1	1	1	
SCF-1		Med Dozer	1			1	11	11	
SCF-2		Med Dozer	1			1	15	15	
SCF-2-OPT-2		Med Dozer	1			1	3	3	
SCF-3		Med Dozer	1			1	30	30	
JUNGGJUK		Med Dozer	1			1	11	11	
Other Road - ID16		Med Dozer	1			1	11	11	
Other Road - ID17		Med Dozer	1			1	10	10	
Other Road - ID18		Med Dozer	1			1	10	10	
Other Road - ID19		Med Dozer	1			1	10	10	
Other Road - ID20		Med Dozer	1			1	3	3	
Other Road - ID21		Med Dozer	1			1	4	4	

User 9

Cost Estimate Type: Surety **Cost Basis: Alaska Davis Bacon 2016**

[illegible]

Closure Cost Estimate
User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Buildings	Slab demolition	Mine Site Washbay	345B	1			1	196	196
		Mine Site Truck Shop	345B	1			1	2,197	2,197
		Repair Shop	345B	1			1	162	162
		Primary Crusher	345B	1			1	158	158
		Primary Crusher - Concrete	345B	1			1	113	113
		Primary Crusher - Steel Bldg. Below Ground	345B	1			1	49	49
		Primary Crusher - Steel Bldg. Above Ground	345B	1			1	76	76
		Take-up Tower	345B	1			1	55	55
		Conveyor (Total)	345B	1			1	94	94
		Drive House	345B	1			1	85	85
		Ore Stockpile Cover	345B	1			1	0	-
		Pebble Crusher	345B	1			1	243	243
		Grinding Building	345B	1			1	2,103	2,103
		Ball Mill Foundations (two total)	345B	1			1	23	23
		Ball Mill Foundations (Concr.Piers Above Grade Slab.)	345B	1			1	25	25
		SAG Mill Foundation	345B	1			1	14	14
		SAG Mill Foundation (Concr.Piers Above Grade Slab.)	345B	1			1	14	14
		POX Process Building - High Section	345B	1			1	1,439	1,439
		POX Process Building - Lower Section	345B	1			1	1,555	1,555
		POX Process Building - End addition	345B	1			1	96	96
		POX Misc. Small Tanks (8)	345B	1			1	8	8
		Autoclaves (2)	345B	1			1	19	19
		Stock Tanks Concrete Contain.	345B	1			1	12	12
		Concrete Thickener Concrete	345B	1			1	12	12
		Flot./POX Thickener Concrete	345B	1			1	0	-
		Hot Cure Tanks	345B	1			1	122	122
		Flotation Building	345B	1			1	5,249	5,249
		CIL Building	345B	1			1	1,903	1,903
		Refinery	345B	1			1	352	352
		Cyanide Reagent Building	345B	1			1	1,404	1,404
		Water Treatment Plant Building - Construction	345B	1			1	31	31
		Water Treatment Plant Building - Operation	345B	1			1	212	212
		Man Camp - Airstrip	345B	1			1	221	221
		Man Camp - Airstrip	345B	1			1	221	221
		Man Camp - Airstrip	345B	1			1	334	334
		Man Camp - Airstrip	345B	1			1	334	334
		Man Camp - Airstrip	345B	1			1	245	245
		Man Camp - Airstrip	345B	1			1	353	353
		STP Building	345B	1			1	20	20
		Power Station A/B Buildings	345B	1			1	701	701
		Power Station A Gensets	345B	1			1	55	55
		Power station A Transformers	345B	1			1	25	25
		Power Station A Tanks	345B	1			1	78	78
		Power Station A Building	345B	1			1	112	112
		Power Station A Building (small)	345B	1			1	45	45
		Power Station B Gensets	345B	1			1	55	55
		Power station B Transformers	345B	1			1	25	25
		Power Station B Tanks	345B	1			1	78	78
		Power Station B Building (small)	345B	1			1	45	45
		Cold Storage Building	345B	1			1	114	114
		Autoclave Feed Tanks	345B	1			1	59	59
		Quench/Flash/Heaters	345B	1			1	55	55
		Absorber Towers	345B	1			1	4	4
		Cooling Towers	345B	1			1	15	15
		Mercury Scrubbing	345B	1			1	7	7
		Quench Building (60 m total H)	345B	1			1	545	545
		Autoclave	345B	1			1	19	19
		HP cooling tank	345B	1			1	26	26
		Demin Tank	345B	1			1	7	7
		Seal Water Tank	345B	1			1	2	2
		Autoclave Feed Pumps	345B	1			1	1	1
		LP Column	345B	1			1	19	19

User 9

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

[illegible]

Closure Cost Estimate

User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Cover Placement	Mine Site Washbay	777D/992G	1	1	2	1	2
	Mine Site Truck Shop	777D/992G	1	1	2	13	26
	Repair Shop	777D/992G	1	1	2	3	6
	Primary Crusher	777D/992G	1	1	2	1	2
	Primary Crusher - Concrete	777D/992G	1	1	2	1	2
	Primary Crusher - Steel Bldg. Below Ground	777D/992G	1	1	2	1	2
	Primary Crusher - Steel Bldg. Above Ground	777D/992G	1	1	2	1	2
	Take-up Tower	777D/992G	1	1	2	3	6
	Conveyor (Total)	777D/992G	1	1	2	6	12
	Drive House	777D/992G	1	1	2	1	2
	Ore Stockpile Cover		1		1		-
	Pebble Crusher	777D/992G	1	1	2	1	2
	Grinding Building	777D/992G	1	1	2	7	14
	Ball Mill Foundations (two total)	777D/992G	1	1	2	11	22
	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	777D/992G	1	1	2	3	6
	SAG Mill Foundation	777D/992G	1	1	2	7	14
	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	777D/992G	1	1	2	2	4
	POX Process Building - High Section	777D/992G	1	1	2	3	6
	POX Process Building - Lower Section	777D/992G	1	1	2	6	12
	POX Process Building - End addition	777D/992G	1	1	2	1	2
	POX Misc. Small Tanks (8)	777D/992G	1	1	2	1	2
	Autoclaves (2)	777D/992G	1	1	2	1	2
	Stock Tanks Concrete Contain.	777D/992G	1	1	2	14	28
	Concrete Thickener Concrete	777D/992G	1	1	2	15	30
	Flot./POX Thickener Concrete	777D/992G	1	1	2	54	108
	Hot Cure Tanks	777D/992G	1	1	2	1	2
	Flotation Building	777D/992G	1	1	2	18	36
	CIL Building	777D/992G	1	1	2	6	12
	Refinery	777D/992G	1	1	2	1	2
	Cyanide Reagent Building	777D/992G	1	1	2	5	10
	Water Treatment Plant Building - Construction	777D/992G	1	1	2	1	2
	Water Treatment Plant Building - Operation	777D/992G	1	1	2	2	4
	Man Camp - Airstrip	777D/992G	1	1	2	1	2
	Man Camp - Airstrip	777D/992G	1	1	2	1	2
	Man Camp - Airstrip	777D/992G	1	1	2	2	4
	Man Camp - Airstrip	777D/992G	1	1	2	2	4
	Man Camp - Airstrip	777D/992G	1	1	2	1	2
	Man Camp - Airstrip	777D/992G	1	1	2	3	6
	STP Building	777D/992G	1	1	2	1	2
	Power Station A/B Buildings	777D/992G	1	1	2	6	12
	Power Station A Gensets	777D/992G	1	1	2	2	4
	Power station A Transformers	777D/992G	1	1	2	1	2
	Power Station A Tanks	777D/992G	1	1	2	1	2
	Power Station A Building	777D/992G	1	1	2	1	2
	Power Station A Building (small)	777D/992G	1	1	2	1	2
	Power Station B Gensets	777D/992G	1	1	2	2	4
	Power station B Transformers	777D/992G	1	1	2	1	2
	Power Station B Tanks	777D/992G	1	1	2	1	2
	Power Station B Building (small)	777D/992G	1	1	2	1	2
	Cold Storage Building	777D/992G	1	1	2	1	2
	Autoclave Feed Tanks	777D/992G	1	1	2	1	2
	Quench/Flash/Heaters	777D/992G	1	1	2	1	2
	Absorber Towers	777D/992G	1	1	2	1	2
	Cooling Towers	777D/992G	1	1	2	1	2
	Mercury Scrubbing	777D/992G	1	1	2	1	2
	Quench Building (60 m total H)	777D/992G	1	1	2	2	4
	Autoclave	777D/992G	1	1	2	1	2
	HP cooling tank	777D/992G	1	1	2	1	2
	Demin Tank	777D/992G	1	1	2	1	2
	Seal Water Tank	777D/992G	1	1	2	1	2
	Autoclave Feed Pumps	777D/992G	1	1	2	1	2
	LP Column	777D/992G	1	1	2	1	2

Closure Cost Estimate
User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

	HP Column	777D/992G	1	1	2	1	2
	Main Heat Exchanger	777D/992G	1	1	2	1	2
	Wash Water Tower	777D/992G	1	1	2	1	2
	Chilled Water Tower	777D/992G	1	1	2	1	2
	Compressors (3)	777D/992G	1	1	2	1	2
	Warehouse	777D/992G	1	1	2	2	4
	Boiler Room	777D/992G	1	1	2	1	2
	STP Building	777D/992G	1	1	2	1	2
	Utilidor	777D/992G	1	1	2	2	4
	RO plant (not to be demolished, required for treatment)		1		1		-
							488

Closure Cost Estimate
User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Drainage	Construction	Reclaimed WRF RO Collection	345B	1			1	239	239	
		Primary Channel (WRF)	345B	1			1	689	689	
		Secondary Channel (WRF)	345B	1			1	308	308	
		Tailings spillway construction (excavation volume in User 11)	345B	1			1	1,053	1,053	
										2,289
Process Ponds	Backfilling	TSF seepage pond (required long-term for water treatment)	777D/992G	1	4		5	56	280	
	Topsoil	TSF seepage pond (required long-term for water treatment)	777D/992G	1	6		7	6	42	
	Liner cut/fold	TSF seepage pond (required long-term for water treatment)		1			1	16	16	
										338
Yards	Grading	Permanent Man Camp Yards	Med	1			1	158	158	
		Material Sites - 1	Med	1			1	119	119	
		Material Sites - 2	Med	1			1	44	44	
		Material Sites - 3	Med	1			1	61	61	
		Material Sites - 4	Med	1			1	896	896	
		Material Sites - 5	Med	1			1	20	20	
		Material Sites - 6	Med	1			1	96	96	
		Material Sites - 7	Med	1			1	94	94	
		Material Sites - 8	Med	1			1	12	12	
		Material Sites - 9	Med	1			1	105	105	
		Material Sites - 10	Med	1			1	45	45	
		Material Sites - 11	Med	1			1	68	68	
		Material Sites - 12	Med	1			1	93	93	
		Material Sites - 13	Med	1			1	158	158	
		Material Sites - 14	Med	1			1	105	105	
		Jung Port Disturbance (not reclaimed)	0	1			1		-	
		Mine Borrow Areas	Med	1			1	789	789	
		Growth media - TSF Stockpile 1	Med	1			1	581	581	
		Growth media - TSF Stockpile 2	Med	1			1	453	453	
		Growth media - TSF Stockpile 2	Med	1			1	453	453	
		Growth media - North Overburden Stockpile 2028	Med	1			1	505	505	
		Growth media - Airstrip Overburden Stockpile	Med	1			1	25	25	
		Growth media - Airstrip Overburden Stockpile	Med	1			1	26	26	
		Growth media - Jungjuk Port Site Overburden Stockpile	Med	1			1	22	22	
		Growth media - South Overburden Stockpile 2019	Med	1			1	822	822	
		Growth media - South Overburden Stockpile 2019	Med	1			1	822	822	
		Misc. Yards	Med	1			1	1,680	1,680	
		Plant Site	Med	1			1	104	104	
		Primary Crusher	Med	1			1	20	20	
		Truck Shop	Med	1			1	1	1	
	Airstrip (Not Reclaimed)	0	1			1		-		
										5,585
	Topsoil	Permanent Man Camp Yards	777D/992G	1	2		3	64	192	
		Material Sites - 1	777D/992G	1	2		3	48	144	
		Material Sites - 2	777D/992G	1	2		3	18	54	
		Material Sites - 3	777D/992G	1	2		3	25	75	
		Material Sites - 4	777D/992G	1	2		3	363	1,089	
		Material Sites - 5	777D/992G	1	2		3	8	24	
		Material Sites - 6	777D/992G	1	2		3	39	117	
		Material Sites - 7	777D/992G	1	2		3	38	114	
		Material Sites - 8	777D/992G	1	2		3	5	15	
		Material Sites - 9	777D/992G	1	2		3	43	129	
		Material Sites - 10	777D/992G	1	2		3	18	54	
		Material Sites - 11	777D/992G	1	2		3	27	81	
		Material Sites - 12	777D/992G	1	2		3	37	111	
		Material Sites - 13	777D/992G	1	2		3	64	192	
		Material Sites - 14	777D/992G	1	2		3	43	129	
		Jung Port Disturbance (not reclaimed)		1			1		-	
		Mine Borrow Areas	777D/992G	1	2		3	320	960	
		Growth media - TSF Stockpile 1		1			1		-	
		Growth media - TSF Stockpile 2		2			2		-	
		Growth media - TSF Stockpile 2		1			1		-	

Closure Cost Estimate

User 9

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

		Growth media - North Overburden Stockpile 2028		1			1		-	
		Growth media - Airstrip Overburden Stockpile		1			1		-	
		Growth media - Airstrip Overburden Stockpile		1			1		-	
		Growth media - South Overburden Stockpile 2019		1			1		-	
		Misc. Yards	777D/992G	1	2		3	681	2,043	
		Plant Site	777D/992G	1	2		3	42	126	
		Primary Crusher	777D/992G	1	2		3	8	24	
		Truck Shop	777D/992G	1	2		3	1	3	
		Airstrip (Not Reclaimed)		1			1		-	
										5,676
Reveg		Permanent Man Camp Yards	Med Dozer	1			1	26	26	
		Material Sites - 1	Med Dozer	1			1	20	20	
		Material Sites - 2	Med Dozer	1			1	8	8	
		Material Sites - 3	Med Dozer	1			1	10	10	
		Material Sites - 4	Med Dozer	1			1	151	151	
		Material Sites - 5	Med Dozer	1			1	3	3	
		Material Sites - 6	Med Dozer	1			1	16	16	
		Material Sites - 7	Med Dozer	1			1	16	16	
		Material Sites - 8	Med Dozer	1			1	2	2	
		Material Sites - 9	Med Dozer	1			1	18	18	
		Material Sites - 10	Med Dozer	1			1	8	8	
		Material Sites - 11	Med Dozer	1			1	11	11	
		Material Sites - 12	Med Dozer	1			1	15	15	
		Material Sites - 13	Med Dozer	1			1	26	26	
		Material Sites - 14	Med Dozer	1			1	19	19	
		Jung Port Disturbance (not reclaimed)	0	1			1		-	
		Mine Borrow Areas	Med Dozer	1			1	132	132	
		Growth media - TSF Stockpile 1	Med Dozer	1			1	97	97	
		Growth media - TSF Stockpile 2	Med Dozer	2			2	76	152	
		Growth media - TSF Stockpile 2	Med Dozer	1			1	76	76	
		Growth media - North Overburden Stockpile 2028	Med Dozer	1			1	84	84	
		Growth media - Airstrip Overburden Stockpile	Med Dozer	1			1	4	4	
		Growth media - Airstrip Overburden Stockpile	Med Dozer	1			1	4	4	
		Growth media - Jungjuk Port Site Overburden Stockpile	Med Dozer	2			2	4	8	
		Growth media - South Overburden Stockpile 2019	Med Dozer	3			3	138	414	
		Growth media - South Overburden Stockpile 2019	Med Dozer	1			1	138	138	
		Misc. Yards	Med Dozer	1			1	281	281	
		Plant Site	Med Dozer	1			1	18	18	
		Primary Crusher	Med Dozer	1			1	3	3	
		Truck Shop	Med Dozer	1			1	1	1	
		Airstrip (Not Reclaimed)	0	1			1		-	1,761

Grand Total - Man-hrs

173,053

Operator Crew Size	9	Total Man-hours divided by total planned working hours.	
Misc. Crew	12	Estimated from misc other tasks.	
Supervisor	2	See Const.Mgmt. Worksheet	
G & A Site Crew (excluding solution management)	0	(Agency Oversight inc. in Indirects)	
Total Crew	23		

Op Hours/Season

4,320

Tot Hours - Seasons

21,600

Closure Cost Estimate
User 10

Long
Date of Submittal: July 2017
File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 10 - Long Term Monitoring Costs															
Sampling, monitoring events for long term water treatment plant and site sampling are entered here. The total is entered in the Other User Sheet.															
Description	Samples #	Events/Year	No. Years	First Sample Year closure year (1-100)	No. of Samplers	Days/Event	Hrs/Day	Analysis Cost \$/sample	Supplies \$/sample	Lab Cost \$	Material Cost \$	Equipment Cost \$	Labor Cost \$	Cost \$	Comments
Water Analysis (Complete) (1)	7	4	5	1				\$1,055.00	\$5.75	\$147,700	\$840	\$3,500		\$152,040	020520146 Post Closure Sampling.docx Yrs 2051-2055
Water Analysis (Complete) (1)	9	1	5	6				\$1,055.00	\$5.75	\$47,475	\$270	\$1,125		\$48,870	02202015 Post Closure Sampling_Rev01.docx Yrs 2056-2060
Water Analysis (Complete) (1)	9	0	35	11				\$1,055.00	\$5.75	\$66,465	\$378	\$1,575		\$68,418	02202015 Post Closure Sampling_Rev01.docx Yrs 2061-2095
Water Analysis (Complete) (1)	8	0	171	50				\$1,055.00	\$5.75	\$144,324	\$821	\$3,420		\$148,565	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266
Water Analysis (Complete) (1)	8	1	171	50				\$1,055.00	\$5.75	\$1,443,240	\$8,208	\$34,200		\$1,485,648	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266 WTP
Water Analysis (Complete) (1)	1	1	171	50				\$1,055.00	\$5.75	\$180,405	\$1,026	\$4,275		\$185,706	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266 WTP
Water Analysis (Complete) (1)	1	1	210	18				\$1,055.00	\$5.75	\$221,550	\$1,260	\$5,250		\$228,060	A QA/QC sample is added for each sample event and captured in Sample #
								\$1,055.00	\$5.75	\$0	\$0	\$0		\$0	
								\$2,251,159.00			\$12,802.80	\$53,345.00			
															Subtotal Sampling Costs
															\$2,317,307

Notes and Assumptions1. WTP staff will collect samples. Costs are already included in the WTP staff, see Human Resources tab.

Misc. Material Costs (per sample)	\$6.00
Equipment Costs (per sample)	\$25.00

Ground & Surface Water Monitoring					
Reporting					
Description	Hrs/Event	Rate \$/hr	Cost \$/Event	Cost \$	
Field Geologist/Engineer	40	\$48.83	\$1,953	\$410,172	
Notes: Assume 210 years with one report per year Site staff would compile report and data Offsite consultant would review and submit. No cost added for onsite staff to compile. Costs for WTP staff are in Human Resources worksheet.					

Closure Cost Estimate
User 10

87	88	89	90	91	92	93	94	95	96	97	98	99	100	101			
														\$0.00	\$152,040.00	\$152,040.00	
														\$0.00	\$48,870.00	\$48,870.00	
														\$0.00	\$68,418.00	\$68,418.00	
\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$ 868.80	\$104,256.00	\$148,564.80	\$148,564.80	
\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$ 8,688.00	\$1,042,560.00	\$1,485,648.00	\$1,485,648.00	
\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$ 1,086.00	\$130,320.00	\$185,706.00	\$185,706.00	
\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$ 1,080.85	\$129,702.37	\$228,060.00	\$228,060.00	
														\$0.00		\$0.00	
\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 11,723.65	\$ 1,406,838.37		\$ 2,317,306.80	

Closure Cost Estimate
User 11

ect Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
of Submittal: July 2017
Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
el Version: Version 1.4.1
: Data: User Data
: Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
: Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 11 - Tailings Geotextile Assumptions

This sheet documents assumptions about how the equipment will be used to cover the tailings facility. For bonding the assumed truck size is a CAT 777. The assumptions are used to calculate the square-feet of geotextile required to support the trucks on the tails.

From: Clint Logue

To: Jeffress, Bill

Sent: Wed Aug 24 17:26:21 2011

Subject: Geogrid/geotextile

Bill:

Based on experience with closing tailings facilities in the oil sands, the following are the two main options typically used for getting out on what would otherwise be untrafficable tailings:

1. No heavy haul truck: Nilex 4553 geotextile (\$1.27/m2)+Tensar Biaxial type 1 geogrid (\$1.18/m2) will do. This only supports our cover and light reclamation equipment. The geotextile is to prevent tailings squeezing through the geogrid.

2. Heavy haul truck: higher strength biaxial geogrid BX1200-BX1500 (\$2-3+/m2)+geotextile. We've seen one of the companies go with woven geotextile (strong but will need sewing) in favour of non-woven, but either would work.

Option 1 is what I had in mind for Donlin, but if heavier haul equipment was required, option would be workable.

I hope this helps.

Cheers,

Clint.

GeoGrid Quantity

777 truck has a turning radius of 94 feet. Assumed causeway is 125' (29 meters) wide. Causeways are 100 meters apart. Assume lighter geotextile can be used with smaller truck.

Area of causeway (% of total)

22%

Assume that geogrid will only be required on 2/3 of the causeways.

1,446,976

Geotextile Quantity

Area of tailings (ha):

267

Area of tailings (m2):

2,669,000

Area of causeway at 22% (m2):

600,008

Geogrid required on 2/3 of causeway (m2):

Total used in the Other User worksheet >>>

400,005

RS Mean Liner Installation Crew (2 clab) 31 32			
Productivity	Units		
2,500	CY/day	(8 hours per day)	
2090	m2/8hrs		
Crew	Qty	Cost/hr (\$)	Cost/M2 (\$)
General Labor	2	70.30	0.27
This number used in Other User sheet for liner installation labor costs (Doubled because two liners).			~~~~

Closure Cost Estimate
User 11

ect Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
of Submittal: July 2017
Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
el Version: Version 1.4.1
: Data: User Data
: Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
: Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016
Dredging Scheduling

		# years	\$/year	Year 1	Year 2
Mine Year 3 - Dredge capex	\$	3,095,000	1 \$	3,095,000	\$ 3,095,000
Mine Year 3 - Pipe+floats capex	\$	1,240,500	1 \$	1,240,500	\$ 1,240,500
Mine Year 3 - Dredge opex including depreciation	\$	1,437,745	2 \$	718,873	\$ 718,873
Mine Year 3 - Booster capex	\$	2,970,000	1 \$	2,970,000	\$ 2,970,000
Mine Year 3 - Booster opex including depreciation	\$	761,623	2 \$	380,812	\$ 380,812
				\$ 8,405,184	\$ 1,099,684

adapted from "Estimated Operating Cost Worksheet - SRK - rough estimates - UNLOCKED.xlsx"

ESTIMATED YEARLY COST WORKSHEET

Dredge Model:	
Booster Model:	
Work Hrs. per Day:	22
Work Days per Week:	7
Work Weeks per Year:	20
TOTAL HRS./Year:	3,080
Sale Price of Dredge:	\$619,000.00 <-Other User
Sale Price of Pipe + Floats:	\$248,100.00 <-Other User
Price Per Gallon - Diesel:	\$3.19 <DieselCost>
Labor/Hr. - Operator:	\$63.15 <maximum of equipment operators>
Labor/Hr. - Assistant:	\$35.15 <general labor rate>
Labor/Hr. - Mechanic:	\$60.75 <from User 10>

5012LP	8x10 - Diesel
5012HP	10x12 - Diesel
7012	8x10 - Elect.
8010	10x12 - Elect.
DM-55	-SELECT-
	-SELECT-

Consumable Parts Only	
DREDGE	CONSUM \$
5012 LP	\$ 14,330.00
5012 HP	\$ 11,882.00
7012	\$ 11,601.00
8010	\$ 8,985.00
DM-55**	\$ 23,350.00
8x10 - D	\$ 11,015.00
10x12 - D	\$ 11,015.00
8x10 - E**	\$ 6,100.00
10x12 - E**	\$ 6,100.00
** Estimation	

Dredge Price (total)	\$619,000.00	
Depreciated (10 yr. life)	\$ 61,900.00	Cost per year
Pipe (estimated 3 year life)	\$ 82,700.00	Cost per year
Yearly maintenance and consumables estimation	\$ 22,331.93	
Yearly Fuel (\$/gal x RATED GPH x hr/yr)	\$ 202,399.12	
Yearly Labor Operator(hr rate x hrs/yr)	\$ 194,502.00	
Assistant(hr rate x hrs/yr)	\$ 108,262.00	
Mechanic (hr rate x 1/4 hr/yr)	\$ 46,777.50	
Est. Yearly Oper. Cost - Dredge		
Including Depreciation	\$ 718,872.55	<-Other User
Excluding Depreciation	\$ 574,272.55	
Est. Hourly Cost - Dredge		
Including Depreciation	\$ 233.40	
Excluding Depreciation	\$ 186.45	

Additional costs for Boosters	
Sale Price of Booster:	\$594,000.00
Labor/Hr. - General:	\$35.15

METHODOLOGY
(dredge price each + options)
(total dredge price / 10 years)
(total pipe and float price / 3 years)
((cost of consumables for 2000 hr + 25% for fluids)x
% of hours over 2000)
(GPH x hours per year x \$ per Gallon)
(Estimate Local Rate x hours per year)
(Estimate Local Rate x hours per year)
(Estimate Local Rate x 25% of total hours)
(yr.dredge + yr. pipe + maint. + yr. fuel + yr. labor)

Fuel Consumption	
DREDGE	Gal/Hr
5012 LP	15.90
5012 HP	15.90
7012	20.60
8010	17.90
DM-55**	31.50
8x10	12.30
10x12	15.70
** Estimation	

Closure Cost Estimate User 11

ect Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
 of Submittal: July 2017
 Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
 el Version: Version 1.4.1
 : Data: User Data
 : Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 : Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Booster Price		\$594,000.00	<-Other User	(booster price each)
	Depreciated (10 yr. life)	\$ 59,400.00	Cost per year	(total booster price / 10 years)
Yearly Maintenance and				
	Consumables Estimation	\$ 12,116.50		(cost of spares x # of boosters + 10% for fluids)
Yearly Fuel				
	(\$ /gal x RATED GPH x hr/yr)	\$ 154,255.64		(GPH x hours per year x \$ per Gallon)
Yearly Labor				
	General (hr rate x hrs/yr)	\$ 108,262.00		(Estimate Local Rate x hours per year)
	Mechanic (hr rate x 1/4 hr/yr)	\$ 46,777.50		(Estimate Local Rate x 25% of total hours)
Est. Yearly Oper. Cost - Booster				(yr.booster + maint. + yr. fuel + yr. labor)
	Including Depreciation	\$ 380,811.64	<-Other User	
	Excluding Depreciation	\$ 321,411.64		
Est. Hourly Cost - Booster				
	Including Depreciation	\$ 123.64		
	Excluding Depreciation	\$ 104.35		
TOTAL ESTIMATED COST/YEAR				
	Including Depreciation	\$1,099,684.19		
	Excluding Depreciation	\$895,684.19		
TOTAL ESTIMATED HOURLY COST				
	Including Depreciation	\$ 357.04		
	Excluding Depreciation	\$ 290.81		
PRODUCTION ANALYSIS:				
Project - Total Volume		7,000,000	cubic yards	
Pumping Volume (GPM)		5000		Not to exceed 5000 GPM - 7012 or 3500 GPM - 5012
Average % Solids (by Volume)		20%		Not to exceed 25%.
Dredging Operation Efficiency		75%		Percentage of time in productive cutting
Estimated Production		222	Cubic yd./hr.	
Estimated Cost Per Cubic Meter				
	~~Including Depreciation~~	~~\$1.50~~	~~/cubic yard~~	
	~~Excluding Depreciation~~	~~\$1.20~~	~~/cubic yard~~	
Estimated Project Completion				
	1 IMS (7012 + 3 boosters)	1,433	Days*	* Number of days based upon hours per day stated.
	5 IMS (7012 + 15 boosters)	287	Days*	* Number of days based upon hours per day stated.

In Summary:

Based upon the information provided by the customer, head and flow calculations were performed. The IMS 7012 with 3 boosters per dredge would average approximately 220 cubic yards per hour. To hit the target removal rate would require 5 systems (1 dredge and 3 boosters per system) for 2 seasons of 5 months each, or 10 systems for one season of 5 months.

There is an advantage over 1-2 larger dredges in that the impact from dredge going down will be much smaller.

Also with financing, capital outlay can be reduced significantly.

IMPORTANT: Due to the many variable that can affect production that are beyond the control of

Closure Cost Estimate
User 11

ect Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
of Submittal: July 2017
Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
el Version: Version 1.4.1
: Data: User Data
: Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
: Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

<u>Embankment Spillway</u>			
<i>Quantities from "181202.040spill_tsf.pdf"</i>			
		CY	
VOL_SPILLWAY_CUT_IN_ROAD		344,579	
VOL_SPILLWAY_CUT_IN_BEDROCK		72,635	
VOL_SPILLWAY_CUT_IN_ROAD		88,324	
total CY		505,538	
			<-- Other User excavation volume AND "Sediment and Drainage Control" excavation volume over-
total m3		386,512	ride
density (tons to m3)		1.5	
tons		579,768	<-- Other User blasting quantity
Excavation of spillway in "Sediment and Drainage Control"			

Closure Cost Estimate
User 12

Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Submittal: July 2017
ne: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm
ersion: Version 1.4.1
ta: User Data
ta File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
timate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Used 12 - Water Treatment Schedule.											
This sheet is used to gather pumping information for use in the Solution Management worksheet. GPM is converted to l/s. Elevations are entered here to assist calculating head and pipeline estimated lengths are entered here.											
Item	Water Management Years	Begin Yr	End Yr	Duration (yr)	OP Years	gpm	l/s		Pumping Total cost	Treatment Cost per year	Treatment (m3/mo)
TSF SRS to ACMA Pit (Maintenance)	1-2	1	2	2	8-9	901	57	Q125	\$ 127,392		
TSF to WTP (Physical Closure)	3-7	3	7	5	10-14	2,558	161	Q126	\$ 475,020	\$ 4,224,572	
TSF SRS to ACMA Pit (Physical Closure)	3-7	3	7	5	10-14	901	57	Q127	\$ 318,480		
TSF SRS to ACMA Pit (Pit Lake Fills)	8-10	8	10	3	15-17	901	57	Q128	\$ 191,088	\$ 2,262,928	
TSF Consolidation to Pit (Pit Lake Fills)	8-10	8	10	3	15-17	20	1	Q129	\$ -		
TSF SRS to ACMA Pit (Post Closure)	11-213	11	213	203	18-220	901	57	Q130	\$ 19,963,020		
TSF Consolidation to Pit (Post Closure)	11-213	11	213	203	18-220	20	1	Q131	\$ -		
Pit to WTP (Post Closure 1st 30 yrs - WTP at Mill)	11-33	11	33	23	18-40	2,650	167	Q132	\$ 16,223,004		
Pit to WTP (Post Closure - WTP at pit)	34-213	34	213	180	41-220	2,650	167	Q133	\$ 13,424,400		
WTP to Crooked Creek (Gravity Flow)	11-213	11	213	203	18-220	1,717	108			\$ 14,692,780	

Items	elev. (masl)
TSF pond	253.0
Seepage collection pond (SRS)	116.0
ACMA pit Rim at Haul Road	196.0
ACMA pit out (pit lake level)	99.5
Water Treatment Plant (Mill Location)	295.0
Treatment plant (Long Term)	120.0
	Annual cost
Pumping Years - 1-2	\$ 127,392
Pumping Years - 3-7	\$ 7,472,089
Pumping Years - 11-213	\$ 19,963,020
Pumping Years - 11-213	\$ 44,340,184

Pipeline	Length (m)
ACMA pit to Treatment plant	3,500
Treatment plant to Crooked Creek	7,874
TSF pond to Treatment plant	1,800
TSF Pond to ACMA Pit	4,000
Seepage collection (SRS) to Treatment plant	2,500
SRS to ACMA Pit	5,300
Note: Measured from "year5 closurepipeline.dwg"	

Linked back to Solution Mgmt. worksheet

These numbers from James Fueg email May 3, 2017

\$ 74,580

Closure Cost Estimate User 17

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

User 17 - R.S. Means Crews							
This sheet links the equipment and labor costs from the model to the various defined RS Means crews for miscellaneous tasks in the model.							
Equipment to be updated:							
Flatbed trailer (\$/hr)	\$	11.64		Assumed equal to 1/3rd dump truck hourly cost			
Truck tractor (\$/hr)	\$	34.92		Assumed equal to dump truck hourly cost			
Lowbed trailer (\$/hr)	\$	11.64		Assumed equal to 1/3rd dump truck hourly cost			
Pipe fitter	\$	60.75					
A-3A							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pickup truck	Yes	1	\$ 58.82	\$ 14.11	\$ 58.82	\$ 14.11	\$ 72.93
				Total Crew Cost	\$58.82	\$14.11	\$72.93
A-3D							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pickup truck	Yes	1	\$ 58.82	\$ 14.11	\$ 58.82	\$ 14.11	\$ 72.93
Flatbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$58.82	\$25.75	\$84.57
B-34K							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Truck tractor	No	1	\$ 58.82	\$ 34.92	\$ 58.82	\$ 34.92	\$ 93.74
Lowbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$58.82	\$46.56	\$105.38
B-34N							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Dump truck	Yes	1	\$ 56.78	\$ 34.92	\$ 56.78	\$ 34.92	\$ 91.70

Closure Cost Estimate
User 17

Flatbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$56.78	\$46.56	\$103.34
B-34Q							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pipe fitter	No	1	\$ 60.75		\$ 60.75	\$ -	\$ 60.75
Dump truck	Yes	1	\$ 56.78	\$ 34.92	\$ 56.78	\$ 34.92	\$ 91.70
Hydraulic crane, 25 ton	Yes	1	\$ 60.81	\$ 49.72	\$ 60.81	\$ 49.72	\$110.53
Flatbed trailer	No	1		\$ 11.64		\$ 11.64	\$ 11.64
				Total Crew Cost	\$178.34	\$96.28	\$274.62
D-3							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Bricklayer (A0201)	No	3	\$ 60.03		\$ 180.09	\$ -	\$ 180.09
Bricklayer helper (S2202)	No	2	\$ 54.52		\$ 109.04	\$ -	\$ 109.04
Carpenter	Yes	0.25	\$ 59.72		\$ 14.93	\$ -	\$ 14.93
				Total Crew Cost	\$304.06	\$0.00	\$304.06

Closure Cost Estimate User 18

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

List of sources referenced

#	SRCE Sheet	Reference	File Name
1	Other User	LLDPE Liner for WRF Diversion Ditch includes excavation, liner bedding, LLDPE liner, and riprap.	Cost developed by DGLLC; includes excavation, liner bedding, LLDPE liner, and riprap.
2	Other User	From June 8, 2011 email from Alexandra J Kozak.	
3	Waste Disposal	Liner waste disposal quantities from 1. June 8, 2011 email from Alexandra J. Kozak.	FW Additional Information for Closure Costs.pdf
4	Other User	Miscellaneous Hazardous Waste Disposal (see User Sheet 3)	2011 Shipping Costs.docx
	User 1		
	User 3		
7	Other User	Per quote from Plasson USA, April 28, 2016 (SP-7982.pdf)	SP-7982.pdf
8	Waste Rock Dumps	Inputs per 2016 SRCE disturbance.xlsx and SRCE Disturbance 20160331 ML.pdf	SRCE Disturbance 20160331 ML.pdf
9	Waste Rock Dumps	Inputs per 2016 SRCE disturbance.xlsx and SRCE Disturbance 20160331 ML.pdf	2016_SRCE_disturbance.xlsx
	Pits	Inputs from 2016 SRCE disturbance.xlsx	
11	Tailings	Dimensions from "TSF-DAM-YEAR-3.xls"	TSF-DAM-YEAR-3.xls
12	Roads	Items 1 through 9 from 2016 SRCE Roads.xlsx	2016 SRCE Roads.xlsx
13	Haul Material	Snow Gulch FWD, American and Lower CWD breach assumed to be equal to construction quantities listed in "DC11-007_-_American_Creek_and_Snow_Gulch_Contact_and_Fresh_Water_Dam_Design_-_DRAFT_MTOs"	DC11-007_-_American_Creek_and_Snow_Gulch_Contact_and_Fresh_Water_Dam_Design_-_DRAFT_MTOs
14	Foundations and Buildings, Yards	Buildings and Tanks per AMEC drawings.	E5-2 AMEC Civil Drawing Index (FSU2).doc A1-166549-10-13-002(PlantSite_GA).pdf A1-166549-10-13-003(Gen_Site_Plan).pdf A1-166549-10-13-004(Plantsite_Sections).pdf A1-166549-10-13-005(Pipeline_Sections).pdf A1-166549-10-13-006(Overall_GA).pdf A1-166549-10-13-006.pdf A1-166549-10-13-007_(Utility_Plan).pdf A1-166549-10-13-008(PermanentCamp_GA).pdf A1-166549-80-13-020(Airstrip_Plan).pdf A1-166549-80-13-021(Airstrip_Sections).pdf
25	Sediment and Drainage Control	Item 2 and Item 3 diversion lengths and liner area from "DC11-028_Closure_Period_MTOs_for_WRF_Diversion_Channels.pdf"	DC11-028_Closure_Period_MTOs_for_WRF_Diversion_Channels.pdf
26	Wells	See User 15.	wells_revise_v2.xls
28	User 12		Table 2 Pit Perimeter Dewatering Wells.pdf
29	User 15	Sources.	Table 3 In-Pit Dewatering Wells.pdf
30	Monitoring	020520146 Post Closure Sampling.docx Yrs 2051-2055	020520146 Post Closure Sampling.docx
31	User 16	RO treatment costs backup	#REF!

Closure Cost Estimate

User 20

Project Name: Donlin Gold - Reclamation Bond - Operation Year 3 Closure - Reclamation Plan
Date of Submittal: July 2017

File Name: Donlin_RecBond_OpYr_3_181202_017_20170718_REV02_FNL.xlsm

Software Version: Version 1.4.1

Data: User Data

Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 20 - Inflation Adjustment Factor		
The calculations in this sheet calculate indexes used to adjust quotes to current rates based on Anchorage Consumer Price Index for		
http://laborstats.alaska.gov/cpi/cpi.htm		
Last retrieved June 8, 2016		
Consumer Price Index for Anchorage Municipality & U.S.		
Not Seasonally Adjusted		
All Items - All Urban Consumers		
(CPI-U) 1960-Present		
Year	Average	Percent Change From Previous Year
2016	217.830	
2015	216.909	0.500
2014	215.805	1.600
2013	212.381	3.100
2012	205.916	2.200
2011	201.427	3.200
Adjustment factor:	1.1	

Attachment D: Life-of-Mine SRCE Cost Summary

(Full File Provided Electronically)

Closure Cost Estimate
Property Information

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1

Build 016 (revised 01 Aug 2014)

NOT YET VALIDATED FOR REGULATORY USE IN NEVADA

COST DATA FILE INFORMATION	
File Name:	Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Cost Data File:	Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Data Date:	May 10, 2017
Cost Data Basis:	User Data Data Cost Units: Metric
Author/Source:	plassiter, Donlin_Equipment Materials Cost Buildup_181202017_pl_REV01.xlsx, Donlin_Lab

PROJECT INFORMATION	
Property/Mine Name:	Donlin Gold Property Code: 1516
Project Name:	Donlin Gold - Reclamation Bond - LOM
Date of Submittal:	July 2017 Average Altitude: 1000 m
Units of Measure:	☒ Metric (m, km, ha, etc.) ☐ Imperial (ft, mi, acres, etc.)
Select One:	☐ Notice or Sm Exploration Plan ☐ Lg Exploration Plan ☒ Mine Operation
Select One:	☐ Private Land ☒ Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	Alaska Davis Bacon 2016 Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes
Cost Basis Description:	☐ This project is in the State of Nevada

**Closure Cost Estimate
Table of Contents**

**Project Name: Donlin Gold - Reclamation Bond - LOM
Project Date: July 2017
Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Reclamation Plan**

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Waste Rock Dumps
Heap Leach Pads
Tailings
Roads
Pits
Quarries & Borrow Pits
Underground Openings
Material Hauling
Foundations and Buildings
Other Demo & Equipment Removal
Sediment & Drainage Control
Process Ponds
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Yards, Etc.
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Tank Demolition and Disposal Costs
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Closure Cost Estimate Table of Contents

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Drain mobile equipment
Remove sheet piling - Jung Port
Camp and crew mobilization costs
Manpower estimate
Labor build-up for cost data file
Cover, Growth Media, and Rock Fill Volume Summaries
Solution management scheduling - Do Not Print
Earthworks and demolition scheduling - Do Not Print
Post Closure Road/Airport Maintenance
Wells Planning - Do Not Print
RO Treatment Backup Documents
RS Means Crew Costs
Not Used
Not Used
Inflation Adjustment Factors

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - LOM
Project Date: July 2017
Model Version: Version 1.4.1
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

A. Earthwork/Recontouring	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$582,916	\$2,035,643	\$0	\$2,618,559
Well Abandonment	\$348,840	\$766,504	\$63,188	\$1,178,532
Pits	\$30,216	\$135,216	N/A	\$165,432
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings	\$0	\$0	\$0	\$0
Process Ponds	\$25,019	\$99,764	\$0	\$124,783
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Landfills	\$0	\$0	\$0	\$0
Tailings	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Foundation & Buildings Areas	\$44,822	\$208,140	\$0	\$252,962
Yards, Etc.	\$1,624,694	\$6,860,774	\$0	\$8,485,468
Drainage & Sediment Control	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Generic Material Hauling	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Other User Costs (from Other User sheet)	\$391,783	\$0	\$3,555,070	\$3,946,853
Other**				\$0
Subtotal	\$39,758,322	\$120,030,736	\$15,791,384	\$175,580,441
Mob/Demob if included in Other User sheet	\$1,382,569	\$2,765,137	\$0	\$4,147,706
Mob/Demob				\$0
Subtotal "A"	\$41,140,890	\$122,795,873	\$15,791,384	\$179,728,147
B. Revegetation/Stabilization	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$20,131	\$5,824	\$94,027	\$119,982
Well Abandonment				N/A
Pits	\$1,624	\$470	\$3,203	\$5,297
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings				N/A
Process Ponds	\$338	\$98	\$486	\$922
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$360,824	\$104,375	\$712,138	\$1,177,337
Landfills	\$0	\$0	\$0	\$0
Tailings	\$277,418	\$80,248	\$394,299	\$751,965
Foundation & Buildings Areas	\$7,843	\$2,269	\$1,513	\$11,625
Yards, Etc.	\$283,066	\$81,883	\$562,289	\$927,238
Drainage & Sediment Control	\$11,797	\$3,411	\$16,885	\$32,093
Generic Material Hauling	\$6,048	\$1,750	\$12,019	\$19,817
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "B"	\$969,089	\$280,328	\$1,796,859	\$3,046,276
C. Detoxification/Water Treatment/Disposal of Wastes**	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Process Ponds/Sludge				\$0
Heaps				\$0
Dumps (Waste & Landfill)				\$0
Tailings				\$0
Surplus Water Disposal				\$0
Monitoring				\$0
Miscellaneous				\$0
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
Pumping (from Solution Mgmt sheet)	\$0	\$21,598,860	N/A	\$21,598,860
Evaporation (from Solution Mgmt sheet)	\$0	\$0	\$0	\$0
Treatment (from Solution Mgmt sheet)	\$203,580	\$111,368	\$0	\$314,948
Decontamination (from Solution Mgmt sheet)	\$118,389	\$13,771	\$0	\$132,160
Other User Costs (from Other User sheet)	\$3,181,548	\$306,579,960	\$306,136,965	\$615,898,473
Other**				\$0
Subtotal "C"	\$3,554,043	\$328,350,027	\$306,337,065	\$638,241,135
D. Structure, Equipment and Facility Removal, and Misc.	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Foundation & Buildings Areas	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$88,814	\$160,962	\$0	\$249,776
Fence Removal	\$0	\$0	\$0	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert Removal	\$0	\$0	N/A	\$0
Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Powerline Removal	\$667,447			\$667,447
Transformer Removal	\$106,026			\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Misc. Costs	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$2,215,190	\$1,484,896	\$3,441,696	\$7,141,782
Other**				\$0
Subtotal "D"	\$12,913,588	\$5,714,608	\$3,441,696	\$22,069,892
E. Monitoring	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Reclamation Monitoring and Maintenance	\$599,745	\$1,262,497	\$147,062	\$2,009,304
Ground and Surface Water Monitoring	\$10,377	\$3,662	\$23,363	\$37,402
Other User Costs (from Other User sheet)	\$1,750,000	\$219,250	\$3,999,970	\$5,969,220
Subtotal "E"	\$2,360,122	\$1,485,409	\$4,170,395	\$8,015,926
F. Construction Management & Support	Labor	Equipment ⁽²⁾	Materials	Total
Construction Management	\$3,328,027	\$438,460	N/A	\$3,766,487
Construction Support	\$0	\$0	\$0	\$0
Road Maintenance	\$1,586,650	\$4,673,203	\$0	\$6,259,853
Other User Costs (from Other User sheet)	\$14,223,919	\$17,333,762	\$0	\$31,557,681
Other**				\$0
Subtotal "F"	\$19,138,596	\$22,445,425	\$0	\$41,584,021
G. Closure Planning, G&A, Human Resources			Include?	Total
Closure Planning				\$0
General & Administration				\$0
Human Resources				\$128,770,832
Other User Costs (from Other User sheet)	\$24,526,840	\$0	\$24,526,840	\$49,053,680
Other**				\$0

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - LOM

Project Date: July 2017

Model Version: Version 1.4.1

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Subtotal "G"	\$24,526,840	\$0	\$24,526,840	\$177,824,512
Subtotal Operational & Maintenance Costs	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials ⁽³⁾	Total
Subtotal A through G	\$104,603,168	\$481,071,669	\$356,064,240	\$1,070,509,909

** Other Operator supplied costs - additional documentation required.

**Closure Cost Estimate
Cost Summary**

Project Name: Donlin Gold - Reclamation Bond - LOM
Project Date: July 2017
Model Version: Version 1.4.1
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Indirect Costs			Include?	Total
1. Engineering, Design and Construction (ED&C) Plan (7)				\$42,820,396
2. Contingency (8)				\$42,820,396
3. Insurance (9)		\$1,569,048		\$1,569,048
4. Performance Bond (10)				\$32,115,297
5. Contractor Profit (11)				\$107,050,991
6. Contract Administration (12)				\$64,230,595
7. Government Indirect Cost (13)				\$0
Subtotal Add-On Costs				\$290,606,723
Total Indirect Costs as % of Direct Cost				27%
GRAND TOTAL				\$1,361,116,632
Administrative Cost Rates (%)				
	Cost Ranges for Indirect Cost Percentages			
	<=	<=	<=	>
1. Engineering, Design and Construction (ED&C) Plan (7)	\$500,000	\$2,500,000	\$25,000,000	\$25,000,000
Variable Rate	8%	6%		4%
	<=	<=	<=	>
2. Contingency (8)	\$500,000	\$5,000,000	\$50,000,000	\$50,000,000
Variable Rate	10%	8%	6%	4%
3. Insurance (9)	1.5% of labor costs			
4. Bond (10)	3.0% of the O&M costs if O&M costs are >\$100,000			
5. Contractor Profit (11)	10% of the O&M costs			
	<=	<=	<=	>
6. Contract Administration (12)	\$1,000,000	\$25,000,000		\$25,000,000
Variable Rate	10%	8%		6%
0	0% of contract administration			

RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES
NOTE :

Clear Schedule

Budget Year:	2038
First Year of Operation	2009
Operating Period	
Closure Year 1:	2046
Closure Period:	4
Post Closure Period	100

years

years

Inflation Rate (r) (%):	
Market Risk (MR)(%):	
Discount Rate (i)(%):	
Closure Period:	
Post Closure Period:	

Engineering, Design and Construction Plan (%)	4%
Contingency (%)	4.0%
Contractor OH and Profit (CP)(%):	10%
Contract Administration (%)	6%
Show how many years in schedule (10 to 100)	
	101 ⁺

<<< Set years and click "Set Years" button

B. Revegetation/Stabilization															
Exploration		\$	-	\$	-										
Exploration Roads & Drill Pads		\$	-	\$	-										
Roads		\$	-	\$	119,982										\$ 119,982
Well Abandonment					N/A										
Pits		\$	-	\$	5,297								\$ 5,297		
Quarries & Borrow Areas		\$	-	\$	-										
Underground Openings					N/A										
Process Ponds		\$	-	\$	922										
Heaps		\$	-	\$	-										
Waste Rock Dumps		\$	-	\$	1,177,337								\$ 347,504	\$ 347,504	\$ 347,504 \$ 134,824
Landfills		\$	-	\$	-										
Tailings		\$	-	\$	751,965								\$ 353,034	\$ 347,337	\$ 51,594 \$ -
Foundation & Buildings Areas		\$	-	\$	11,625										\$ 11,625
Yards, Etc.		\$	-	\$	927,238										\$ 927,238
Drainage & Sediment Control		\$	-	\$	32,093										\$ 32,093
Generic Material Hauling		\$	-	\$	19,817										\$ 19,817
Other User Costs (from Other User sheet)		\$	-	\$	-										
Other**		\$	-	\$	-										
Subtotal "B"		\$	-	\$	3,046,276	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 705,836	\$ 694,841	\$ 399,098 \$ 1,245,579

[illegible]

Hydrocarbon Contaminated Soils			\$	-	\$	218,637									\$	54,659	\$	54,659	\$	54,659	\$	54,659
Pumping (from Solution Mgmt sheet)			\$	-	\$	21,598,860									\$	33,168	\$	33,168	\$	33,168	\$	33,168
Evaporation (from Solution Mgmt sheet)			\$	-	\$	-																
Treatment (from Solution Mgmt sheet)			\$	-	\$	314,948									\$	104,983	\$	104,983	\$	104,983		
Decontamination (from Solution Mgmt sheet)			\$	-	\$	132,160									\$	44,053	\$	44,053	\$	44,053		
Other User Costs (from Other User sheet)			\$	-	\$	615,898,473									\$	10,315,908						
Other**			\$	-	\$	-																
Subtotal "C"			\$	-	\$	638,241,135	\$	-	\$	-	\$	-	\$	-	\$	10,572,285	\$	256,378	\$	256,378	\$	107,342

Structure, Equipment and Facility Removal, and Misc.																						
Foundation & Buildings Areas			\$	-	\$	11,703,345									\$4,478,103	\$4,478,103	\$2,747,140	\$0				
Other Demolition			\$	-	\$	-																
Equipment Removal			\$	-	\$	249,776										\$249,776						
Fence Removal			\$	-	\$	-																
Fence Installation			\$	-	\$	-																
Culvert Removal			\$	-	\$	-																
Pipe Removal			\$	-	\$	169,756												\$169,756				
Powerline Removal			\$	-	\$	667,447												\$667,447				
Transformer Removal			\$	-	\$	106,026												\$106,026				
Rip-rap, rock lining, gabions			\$	-	\$	2,031,760									\$1,410,672	\$621,088						
Other Misc. Costs			\$	-	\$	-																
Other User Costs (from Other User sheet)			\$	-	\$	7,141,782									\$3,150,076	\$1,786,142	\$205,564					
Other**			\$	-	\$	-																
Subtotal "D"			\$	-	\$	22,069,892	\$	-	\$	-	\$	-	\$	-	\$	9,038,851	\$	7,135,108	\$	2,952,703	\$	943,229

E. Monitoring																								
Reclamation Monitoring and Maintenance	\$	-	\$	2,009,304									\$502,326	\$502,326	\$502,326	\$502,326								
Ground and Surface Water Monitoring (calculated from user input in Monitoring Sheet)	\$	-	\$	37,402									\$	37,402	\$	-	\$	-	\$	-				
Other User Costs (from Other User sheet)	\$	-	\$	5,969,220										\$375,000	\$375,000	\$375,000	\$375,000	\$375,000	\$375,000					
Subtotal "E"	\$	-	\$	8,015,926	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	914,728	\$	877,326	\$	877,326	\$	877,326

F. Construction Management & Support																					
Construction Management		\$	-	\$	3,766,487									\$941,622	\$941,622	\$941,622	\$941,622				
Construction Support		\$	-	\$	-																
Road Maintenance		\$	-	\$	6,259,853									\$1,564,963	\$1,564,963	\$1,564,963	\$1,564,963				
Other User Costs (from Other User sheet)		\$	-	\$	31,557,681																
Other**		\$	-	\$	-																
Subtotal "F"		\$	-	\$	41,584,021	\$	-	\$	-	\$	-	\$	-	\$	2,506,585	\$	2,506,585	\$	2,506,585	\$	2,506,585

G. Closure Planning, G&A, Human Resources																					
Closure Planning		\$	-	\$	-																
General & Administration		\$	-	\$	-																
Human Resources		\$	-	\$	128,770,832								\$1,386,686	\$1,386,686	\$1,386,686	\$1,386,686					
Other User Costs (from Other User sheet)		\$	-	\$	49,053,680								\$2,337,140	\$2,337,140	\$2,337,140	\$2,337,140					
Other**		\$	-	\$	-																
Subtotal "G"		\$	-	\$	177,824,512	\$	-	\$	-	\$	-	\$	-	\$	3,723,826	\$	3,723,826	\$	3,723,826	\$	3,723,826

Subtotal Operational & Maintenance Costs																				
Subtotal A through G	\$	-	\$	1,070,509,909	\$	-	\$	-	\$	-	\$	-	\$	79,818,476	\$	62,731,413	\$	46,473,059	\$	53,356,392

Indirect Costs																				
1. Engineering, Design and Construction (ED&C) Plan (7)	\$	-	\$	42,820,396									\$3,192,739	\$2,509,256	\$1,858,922	\$2,134,256				
2. Contingency (8)			\$	42,820,396	\$	-	\$	-	\$	-	\$	-	\$	3,192,739	\$	2,509,257	\$	1,858,922	\$	2,134,256
3. Insurance (9)	\$	-	\$	1,569,048									\$116,990	\$91,946	\$68,116	\$78,205				
4. Performance Bond (10)	\$	-	\$	32,115,297									\$2,394,554	\$1,881,942	\$1,394,192	\$1,600,692				
5. Contractor Profit (11)			\$	107,050,991	\$	-	\$	-	\$	-	\$	-	\$	7,981,848	\$	6,273,141	\$	4,647,306	\$	5,335,639
6. Contract Administration (12)			\$	64,230,595	\$	-	\$	-	\$	-	\$	-	\$	4,789,109	\$	3,763,885	\$	2,788,384	\$	3,201,384
7. Government Indirect Cost (13)	\$	-	\$	-																
Subtotal Add-On Costs	\$	-	\$	290,606,723	\$	-	\$	-	\$	-	\$	-	\$	21,667,978	\$	17,029,427	\$	12,615,842	\$	14,484,430

Grand Total (Undiscounted)	\$	-	\$	1,361,116,632	\$	-	\$	-	\$	-	\$	-	\$	101,486,454	\$	79,760,839	\$	59,088,901	\$	67,840,823

Inflation Adjustment (Future Value = FV)	$FV = Se^{(rt)}$		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	101,486,454	\$	79,760,839	\$	59,088,901	\$	67,840,823		
Market Risk Adjustment	$(MR \times FV)$		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Future Value (Fv _{adj})	$Fv_{adj} = (FV + MR)$		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	101,486,454	\$	79,760,839	\$	59,088,901	\$	67,840,823		
Net Present Value (PV)	$PV = Fv_{adj}/(1+i)^t$	\$	1,361,116,631	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	101,486,454	\$	79,760,839	\$	59,088,901	\$	67,840,823	

Grand Total (Undiscounted)		\$	1,361,116,631
Grand Total (Inflation Adjusted) (FV)		\$	1,361,116,631
Grand Total Market Risk Adjusted (Fv _{adj})		\$	1,361,116,631
Grand Total Net Present Value (NPV)		\$	1,361,116,631

96	97	98	99	100	TOTAL	Comments
2134	2135	2136	2137	2138		
					\$ -	
					\$ -	
					\$ 2,618,559	
					\$ 1,178,532	
					\$ 165,432	
					\$ -	
					\$ -	
				\$ 124,783	\$ 124,783	
					\$ -	
					\$ 37,901,096	
					\$ -	
					\$ 14,361,348	
					\$ 252,962	
					\$ 8,485,468	
					\$ 28,648,276	
					\$ 77,897,132	
					\$ 3,946,853	
					\$ -	
					\$ 4,147,706	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 124,783	\$ 179,728,147	

					\$ -	
					\$ -	
					\$ 119,982	
					\$ -	
					\$ 5,297	
					\$ -	
					\$ -	
				\$ 922	\$ 922	
					\$ -	
					\$ 1,177,337	
					\$ -	
					\$ 751,965	
					\$ 11,625	
					\$ 927,238	
					\$ 32,093	
					\$ 19,817	
					\$ -	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 922	\$ 3,046,276	

					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ -	
					\$ 78,057	
					\$ -	
					\$ -	

					\$ 218,637	
\$ 162,600	\$ 162,600	\$ 162,600	\$ 162,600	\$ 12,583,176	\$ 21,598,860	
					\$ -	
					\$ 314,948	
					\$ 132,160	
\$ 1,764,000	\$ 1,764,000	\$ 1,764,000	\$ 1,764,000	\$ 408,209,565	\$ 615,898,473	See User 12 for HDS Schedule out to 200 years. Truncated here
					\$ -	at 100 years.
\$ 1,926,600	\$ 1,926,600	\$ 1,926,600	\$ 1,926,600	\$ 420,792,741	\$ 638,241,135	

					\$ 11,703,345	
					\$ -	
					\$ 249,776	
					\$ -	
					\$ -	
					\$ -	
					\$ 169,756	
					\$ 667,447	
					\$ 106,026	
					\$ 2,031,760	
					\$ -	
				\$1,500,000	\$ 7,141,782	
					\$ -	
\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 22,069,892	

					\$ 2,009,304	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,402	
\$20,634	\$20,634	\$20,634	\$20,634	\$2,641,152	\$ 5,969,220	
\$ 20,634	\$ 20,634	\$ 20,634	\$ 20,634	\$ 2,641,152	\$ 8,015,926	

					\$ 3,766,487	
					\$ -	
					\$ 6,259,853	
\$146,100	\$146,100	\$146,100	\$146,100	\$18,700,848	\$ 31,557,681	
					\$ -	
\$ 146,100	\$ 146,100	\$ 146,100	\$ 146,100	\$ 18,700,848	\$ 41,584,021	

					\$ -	
					\$ -	
\$566,686	\$566,686	\$566,686	\$566,686	\$72,535,757	\$ 128,770,832	
\$183,820	\$183,820	\$183,820	\$183,820	\$23,528,960	\$ 49,053,680	
					\$ -	
\$ 750,506	\$ 750,506	\$ 750,506	\$ 750,506	\$ 96,064,717	\$ 177,824,512	

\$ 2,843,840	\$ 2,843,840	\$ 2,843,840	\$ 2,843,840	\$ 539,825,163	\$ 1,070,509,909	

\$113,754	\$113,754	\$113,754	\$113,754	\$21,593,006	\$ 42,820,396	
\$ 113,754	\$ 113,754	\$ 113,754	\$ 113,754	\$ 21,593,007	\$ 42,820,396	\$0
\$4,168	\$4,168	\$4,168	\$4,168	\$791,223	\$ 1,569,048	
\$85,315	\$85,315	\$85,315	\$85,315	\$16,194,755	\$ 32,115,297	
\$ 284,384	\$ 284,384	\$ 284,384	\$ 284,384	\$ 53,982,516	\$ 107,050,991	\$0
\$ 170,630	\$ 170,630	\$ 170,630	\$ 170,630	\$ 32,389,510	\$ 64,230,595	\$0
					\$ -	
\$ 772,005	\$ 772,005	\$ 772,005	\$ 772,005	\$ 146,544,016	\$ 290,606,723	

\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 686,369,180	\$ 1,361,116,632	

\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 686,369,180	\$ 1,361,116,631	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 686,369,180	\$ 1,361,116,631	
\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 3,615,845	\$ 686,369,180	\$ 1,361,116,631	

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - User Input - Pumping																	
	Description (required)	ID Code	Water Type (select)	Management Type (select)	Capital Cost \$	Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Operating Period			User Overrides	
													Hrs/Day	Days/ Month	Number of Months	Crew Size	Power Cost (\$/kWh)
1	Yrs 1-5 - TSF to ACMA pit		Contact Water	Active		131.56	6,096	0.0	650	HDPE	80	20	24.0	30.4	60	0	
2	Yrs 1-5 - TSF SRS to ACMA pit		Contact Water	Active		28.27	2,500	80.0	450	HDPE	80	20	24.0	30.4	60	0	
3	Yrs 6-10 - TSF to ACMA pit		Contact Water	Active		90.80	6,096	0.0	450	HDPE	80	20	24.0	30.4	60	0	
4	Yrs 6-10 - TSF SRS to ACMA pit		Contact Water	Active		28.27	5,300	80.0	450	HDPE	80	20	24.0	30.4	60	0	
5	Yrs 11-51 - TSF to ACMA pit		Contact Water	Active		30.04	6,096	0.0	450	HDPE	80	20	24.0	30.4	492	0	0.2
6	Yrs 11-51 - TSF SRS to ACMA pit		Contact Water	Active		28.27	5,300	80.0	450	HDPE	80	20	24.0	30.4	492	0	0.2
7	Yrs 52-220 - ACMA pit to Treatment plant		Contact Water	Active		184.00	3,500	20.5	450	HDPE	80	20	24.0	30.4	2,028	0	0.2

Notes: 1. k (total of all losses related to valves, restrictions, etc.). Typically 8 - 20. Not significant for longer pipes.

2. Default crew assumes crew of two laborers required during pumping hours

Assumes that tailings return line and pumps will be available for pumping surplus decant water to pit at end of mine life

Seepage from WRD passively drains to pit bottom. Crews under Human Resources

Elevation for pit lake for Yrs 52-220 - ACMA pit to Treatment plant from 'EOP_Y04_2022_Pit_Vol_imperial.pdf'

Elevations for static head obtained from 'Figure 3-9 Mine Water Management Features Closure (PER0291)_R09.pdf'

Where destination elevation is less than start, head is set to zero.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - User Input - Forced Evaporation															Operating Period		
	Description (required)	ID Code	Water Type (select)	Management Type (select)	Forced Evaporation Method (select)	Capital Cost \$	Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Required Pressure at Outlet mH2O	Hrs/Day	Days/Month	Number of Months

Notes: 1. Default crew assumes crew of two laborers required during pumping hours
3. Assumes 1-1.5 ton truck for every 2 laborers

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - Water Treatment												
										Operating Period		
	Description (required)	ID Code	Water Type (select)	Treatment Type (select)	Treatment Method	Monthly Quantity m3	Treatment Labor Crew Size per Shift	Capital Cost \$	Consumable Cost/ m3 \$	Treatment Operating Cost/m3 \$	Number of Months	Hour per Day
1	Treatment of Plant Decontamination Rinsate		Contact Water	Active	Operating WTP	5,253	3	\$50,000		\$0.38	4.0	12.0

- Notes:
1. Use pumping section (above) to calculate pumping costs (including groundwater pumping).
 2. Include initial materials (e.g. chemicals, organic substrate, etc.) in capital cost.
 3. Treatment crew includes 1 foreman (crew defined by user above), 1 light truck if crew size > 0
 4. Assumes active treatment crew works 8 hr/day, 365 days/year.
 5. Assumes 1 truck per each two employees per shift

Assumes operational WTP will be available at the same operating cost/m3 as during operations
Includes rinseate water from rinsing bulk tanks, demolishing costs in User 2

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - User Input - Decontamination																	
	Description (required)	ID Code	Management Type (select)	Type	Disposal Location	Capital Cost \$	Pumping Flow (Q) l/s	Pipeline Length m	Static Head m	Pipe Diameter (ID) mm	Pipe Material (select)	Pump Efficiency %	Total Concentrated Losses ⁽¹⁾	Operating Period		User Overrides	
														Number of Work Days days	Pumping Hrs/Day	Crew Size	Power Cost (\$/kWh)
1	Plant decontamination		Active	Process - Plant & Buildings			5.00	1,200	0.0	300	HDPE	80	8	122.0	12.0		

- Notes:
- 1. Assumes triple rinse of all piping, tanks and vessels requiring decontamination
 - 2. Standard crew includes 2 laborers and 1 foreman
 - 3. Assumes 1-1.5 ton truck for every 2 laborers
 - 4. Assumes crew works 8 hr/day

Includes tank rinsing for bulk tanks demolished in User 2

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Water Management - Assumptions & Calculations																													
<table><tr><th colspan="2">Manning's Roughness Coefficient</th></tr><tr><th>Pipe material</th><th>Manning n</th></tr><tr><td>HDPE</td><td></td></tr><tr><td> ID < 4" (100 mm)</td><td>0.011</td></tr><tr><td> ID ≥ 4 in (100 mm) < 10 in (250 mm)</td><td>0.01</td></tr><tr><td> ID ≥ 10 in (250 mm)</td><td>0.009</td></tr><tr><td>PVC</td><td></td></tr><tr><td> ID < 4" (100 mm)</td><td>0.011</td></tr><tr><td> ID ≥ 4 in (100 mm) < 10 in (250 mm)</td><td>0.01</td></tr><tr><td> ID ≥ 10 in (250 mm)</td><td>0.009</td></tr><tr><td>Brass</td><td>0.011</td></tr><tr><td>Cast Iron</td><td>0.013</td></tr><tr><td>Smooth Steel</td><td>0.012</td></tr><tr><td>Asbestos Cement</td><td>0.011</td></tr></table>		Manning's Roughness Coefficient		Pipe material	Manning n	HDPE		ID < 4" (100 mm)	0.011	ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01	ID ≥ 10 in (250 mm)	0.009	PVC		ID < 4" (100 mm)	0.011	ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01	ID ≥ 10 in (250 mm)	0.009	Brass	0.011	Cast Iron	0.013	Smooth Steel	0.012	Asbestos Cement	0.011
Manning's Roughness Coefficient																													
Pipe material	Manning n																												
HDPE																													
ID < 4" (100 mm)	0.011																												
ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01																												
ID ≥ 10 in (250 mm)	0.009																												
PVC																													
ID < 4" (100 mm)	0.011																												
ID ≥ 4 in (100 mm) < 10 in (250 mm)	0.01																												
ID ≥ 10 in (250 mm)	0.009																												
Brass	0.011																												
Cast Iron	0.013																												
Smooth Steel	0.012																												
Asbestos Cement	0.011																												
<table><tr><th>Water Treatment Costs</th></tr><tr><td>Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)</td></tr><tr><td>CapEx = User Entered Value</td></tr><tr><td>Consumable costs = cost of treatment chemicals or materials based quantity treated</td></tr><tr><td>Labor Cost = No. Months x Days/mo. x [(Supervisor Cost x 8 hrs) + (Laborer Cost x Crew Size x Hours/day)]</td></tr><tr><td>Operating Cost = Fuel, power, maintenance or other costs calculated based on quantity treated</td></tr><tr><td>Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]</td></tr><tr><td>No. Crew Trucks = 1 per each two laborers per shift</td></tr></table>		Water Treatment Costs	Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)	CapEx = User Entered Value	Consumable costs = cost of treatment chemicals or materials based quantity treated	Labor Cost = No. Months x Days/mo. x [(Supervisor Cost x 8 hrs) + (Laborer Cost x Crew Size x Hours/day)]	Operating Cost = Fuel, power, maintenance or other costs calculated based on quantity treated	Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]	No. Crew Trucks = 1 per each two laborers per shift																				
Water Treatment Costs																													
Water treatment cost = CapEx + Labor Cost + Equipment Cost (includes Operating Cost)																													
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Operating Cost = Fuel, power, maintenance or other costs calculated based on quantity treated																													
Equipment Cost = No. Months x Days/mo. x [(Supervisor Truck Cost x 8 hrs) + (Labor Truck Cost x No. Crew Trucks x Hours/day)]																													
No. Crew Trucks = 1 per each two laborers per shift																													

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - Pumping																	
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Monthly Operating Hours hrs	Pump Capital Cost \$	Total Operating Cost \$	Total Labor Cost \$	Total Crew Equipment Cost \$	Total Cost \$	Cost/ m3 \$
1	Yrs 1-5 - TSF to ACMA pit	131.56	0.009	20	0.396	1	1	80	1.67	3	730	\$0	\$9,420	\$0	\$0	\$9,420	\$0.00
2	Yrs 1-5 - TSF SRS to ACMA pit	28.27	0.009	20	0.178	0	80	80	27.77	38	730	\$0	\$156,420	\$0	\$0	\$156,420	\$0.04
3	Yrs 6-10 - TSF to ACMA pit	90.80	0.009	20	0.571	3	3	80	3.67	5	730	\$0	\$20,700	\$0	\$0	\$20,700	\$0.00
4	Yrs 6-10 - TSF SRS to ACMA pit	28.27	0.009	20	0.178	0	80	80	27.81	38	730	\$0	\$156,660	\$0	\$0	\$156,660	\$0.04
5	Yrs 11-51 - TSF to ACMA pit	30.04	0.009	20	0.189	0	0	80	0.13	1	730	\$0	\$9,348	\$0	\$0	\$9,348	\$0.00
6	Yrs 11-51 - TSF SRS to ACMA pit	28.27	0.009	20	0.178	0	80	80	27.81	38	730	\$0	\$1,996,536	\$0	\$0	\$1,996,536	\$0.05
7	Yrs 52-220 - ACMA pit to Treatment plant	184.00	0.009	20	1.157	8	29	80	65.05	88	730	\$0	\$19,249,776	\$0	\$0	\$19,249,776	\$0.02
											5,107	\$0	\$21,598,860	\$0	\$0	\$21,598,860	

Notes:
1. Assumes 2 man labor crew unless user overrides default.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - Forced Evaporation																	
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Annual Operating Hours hrs	Evaporator/ Pump Capital Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Power Cost \$	Total Cost \$	Cost/ m3 \$
												\$0	\$0	\$0	\$0	\$0	

Notes:
1. Assumes 2 man labor crew unless user overrides default.

Closure Cost Estimate
Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - Water Treatment								
	Description (required)	Total Quantity Treated m3	Capital Cost \$	Total Consumables Cost \$	Total Labor Cost \$	Total Equipment + Operating Cost \$	Total Treatment Cost \$	Cost/ m3 \$
1	Treatment of Plant Decontamination Rinsate	21.012	\$50,000	\$0	\$203,580	\$61,368	\$314,948	\$12.609
		21.012	\$50,000	\$0	\$203,580	\$61,368	\$314,948	

Closure Cost Estimate Solution Mgmt

Solution/Water Management - Cost Summary					
	Labor	Equipment + Operating + Power	Materials	Capital	Totals
Pumping	\$0	\$21,598,860	N/A	\$0	\$21,598,860
Forced Evaporation	\$0	\$0		\$0	\$0
Water Treatment	\$203,580	\$61,368	\$0	\$50,000	\$314,948
Decontamination	\$118,389	\$13,771		\$0	\$132,160
TOTALS	\$321,969	\$21,674,000	\$0	\$50,000	\$22,045,968

Solution/Water Management - Decontamination																
	Description (required)	Flow l/s	Manning n (see above)	Losses k	Velocity m/sec	Friction Head m	Total Dynamic Head m	Pump Efficiency %	Power Required kW	Horsepower Required HP	Total Operating Hours hrs	Pump Capital Cost \$	Total Operating Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Cost \$
1	Plant decontamination	5.00	0.009	8	0.071	0	0	80	0.00	0	1,464	\$0	\$0	\$118,389	\$13,771	\$132,160
											1,464	\$0	\$0	\$118,389	\$13,771	\$132,160

Closure Cost Estimate Other User

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Other Cost Items Calculated Elsewhere													
	Description (required)	ID Code	Facility Type	Quantity	Units	Total Capital Cost \$	Material Unit Cost \$	Labor Unit Cost \$	Equipment/ Operating Unit Cost \$	Cost Type (select)	Total Cost \$	Comments	
1	Pipeline - TSF pond to ACMA pit		Water Treatment - Contac	6,096	m			\$242.91		C. Water Management	\$1,480,779	8-inch pipe, @ \$74.04/ft = \$242.91/m; 6000 m length (seepage system to pit) per "Donlin Creek Budg	
2	Pipeline - Seepage collection to ACMA pit		Water Treatment - Contac	2,286	m			\$648.98		C. Water Management	\$1,483,568	24-inch pipe, @ \$197.81/ft = \$648.98/m; (from plant to pit) per "Donlin Creek Budgetary HDPE 24 an	
3	Drain Fluids from Equipment (User Sheet 6)		Equipment Removal	1				\$1,205,328.80	\$417,643.20	D. Facility & Equipment	\$1,622,972	See User Sheet 6	
4	Equipment Fluid Disposal Costs (See User 1)		Equipment Removal	1			\$1,949,311.79			D. Facility & Equipment	\$1,949,312	See User Sheet 1	
5	LLDPE Liner for WRF Diversion Ditch		Waste Rock Dump	40,500	m2				\$12.12	C. Water Management	\$490,860	Cost from DGLLC; includes excavation, liner bedding, LLDPE liner, and riprap.	
6	Bulk Tank Demolition and Burial (User Sheet 2)		Equipment Removal	1				\$258,723.89	\$276,826.02	D. Facility & Equipment	\$535,550	See User Sheet 2	
7	Miscellaneous Hazardous Waste Disposal (see User Sheet 3)		Equipment Removal	1			\$808,384.68			D. Facility & Equipment	\$808,385	See User Sheet 3	
8	Jung Port Sheet Piling Removal. (User Sheet 7)		Off Site Facilities	1	ea.			\$83,137.19	\$122,426.37	D. Facility & Equipment	\$205,564	Measured from GA from BGC/	
9	Bag House Dust Disposal		Hazardous Materials	1	ls	\$20,000				D. Facility & Equipment	\$20,000	From June 8, 2011 email from Alexandra J Kozak.	
10	American Creek Spillway drilling and blasting		Surface Channels	1,086,000	tonnes		\$0.40	\$0.20	\$0.40	C. Water Management	\$1,086,000	Drilling and blasting costs from DGLLC	
11	Closure Crew Camp and Transportation Costs		Closure G & A	4	years	\$1,076,660.00		\$1,076,660.00		G. Closure Planning, G	\$8,613,280	See User Sheet 8 and 9	
12	Solution Mgmt Crew Transportation Costs		Closure G & A	220	years	\$91,910.00		\$91,910.00		G. Closure Planning, G	\$40,440,400	See User Sheet 8	
13	Tailings causeway Liner (Lite biaxial geogrid)		Tailings Impoundments	1,451,049	M2		\$2.45	\$0.27		A. Earthwork	\$3,946,853	See Email in User Sheet 11, labor and equipment is estimated, area proportioned for current tailing	
14	Equipment Mobilization/Demobilization		Closure G & A	1	ls			\$1,382,568.53	\$2,765,137.05	Mob/Demob	\$4,147,706	See User Sheet 5	
15	HDS capex (Initial Construction)		Water Treatment - Contac	1	ls	\$86,894,000				C. Water Management	\$86,894,000	AMEC Water Treatment Plant - Closure Estimate	
16	HDS replacement costs (assume 30-year replacement schedule)		Water Treatment - Contac	5	ea.		\$43,447,000.00			C. Water Management	\$217,235,000	James Fueg, 3/20/2017 email, replacement every 30 yr = to 1/2 capex. Yr 80, 110, 140, 170	
17	HDS treatment operations		Water Treatment - Contac	170	Yrs				\$1,764,000.00	C. Water Management	\$299,880,000	Per Attachment 2 of October 18, 2016 "Technical Memorandum: Early Closure Water Volumes and 1	
18	Crooked Creek span bridge replacement cost every 50 years		Other Facilities	4	ls		\$166,000.00	\$167,000.00		D. Facility & Equipment	\$2,000,000	e-mail James Fueg 5/27/2015	
19	Manholes for TSF consolidation		Tailings Impoundments	1,000	each				\$5,774.70	C. Water Management	\$5,774,700	Per quote from Plasson USA, April 28, 2016 (SP-7982.pdf)	
20	WTP Capital Construction		Water Treatment - Contac	1	each	\$1,573,565				C. Water Management	\$1,573,565	From Donlin Gold Trust Fund Model, June 3, 2015 excel file	
21	Long Term Monitoring and Sampling		Monitoring/Regulatory Re	1	ea.		\$3,999,970.00		\$94,250.00	E. Monitoring	\$4,094,220	See User Sheet 10.	
22	Geotechnical Dam Monitoring (TSF and CWD)		Monitoring/Regulatory Re	5	Yrs			\$350,000.00		E. Monitoring	\$1,750,000	Based on Red Dog Bond Cost	
23	Geotechnical Dam Instrumentation (TSF and CWD)		Monitoring/Regulatory Re	5	Yrs				\$25,000.00	E. Monitoring	\$125,000	Based on Red Dog Bond Cost	
24	Long Term Road/Airport Maintenance		Security & Maintenance	216	Yrs			\$65,851.48	\$80,248.90	F. Construction Mgmt	\$31,557,681	See User 1	
						\$88,487,565	\$253,172,977	\$47,671,848	\$328,383,005				\$717,715,394

Notes: Capital cost is lump sum (i.e. not multiplied by the quantity).
Material, Labor and Equipment/Operating costs are unit costs (i.e. multiplied by the quantity).
Item 10, assumed division of labor, equipment and materials.
HDS plant 30 year periodic replacement assumes replacement of mechanical, piping, electrical, instrumentation and instrumentation and coatings.
HDS Plant replaced 5 times over 170 years (yr 80, 110, 140, 170, & 200).

Closure Cost Estimate
Human Resources

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Human Resources																						
		Totals																				
Salaries & Benefits		\$128,770,832																				
Severance & Relocation		\$0																				
TOTALS		\$128,770,832																				
Human Resources - Salary & Benefits																						
	Job Description (required)	Avg. Annual Salary (incl. benefits) \$	Type	Closure Year 1 #	Closure Year 2 #	Closure Year 3 #	Closure Year 4 #	Closure Year 5 #	Closure Year 6 #	Closure Year 7 #	Closure Year 8 #	Closure Year 9 #	Closure Year 10 #	Closure Year 11 #	Closure Year 12 #	Closure Year 13 #	Closure Year 14 #	Closure Year 15 #	Closure Year 16 #	Closure Year 17 #	Closure Year 18 #	Closure Year 19 #
1	Environmental - Environmental Engineer	\$164,000	Monitoring/Regulatory Reporting	1	1	1	1	1														
2	Environmental - Environmental Technician	\$164,000	Monitoring/Regulatory Reporting	4	4	4	4	4														
3	Soln Mgmt Rotation 1 - laborer 1	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Soln Mgmt Rotation 1 - laborer 2	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Soln Mgmt Rotation 1 - laborer 3	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Soln Mgmt - supervisor	\$106,080	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Soln Mgmt Rotation 2 - laborer 1	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Soln Mgmt Rotation 2 - laborer 2	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Soln Mgmt Rotation 2 - laborer 3	\$76,768	H2O Treat Sys Constr - Active	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SUBTOTAL				\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 1,386,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686

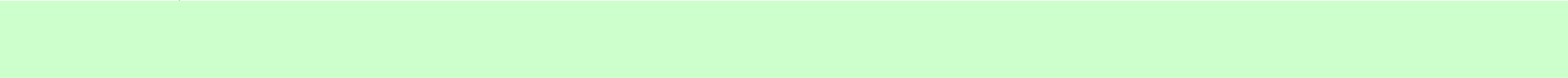
Notes:
Solution management crew, 3 laborers on 12 hour days, 14 day rotations for 13 shifts per year. 2 crews for full coverage. Supervisor is salary and not onsite at all times.
Construction management staff is in "Const. Mgmt" worksheet.

Closure Cost Estimate
Human Resources

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Human Resources																						
		Totals																				
Salaries & Benefits		\$128,770,832																				
Severance & Relocation		\$0																				
TOTALS		\$128,770,832																				
Human Resources - Severance & Outplacement Benefits																						
	Job Description	Severance & Outplacement Cost \$		Closure Year 1 #	Closure Year 2 #	Closure Year 3 #	Closure Year 4 #	Closure Year 5 #	Closure Year 6 #	Closure Year 7 #	Closure Year 8 #	Closure Year 9 #	Closure Year 10 #	Closure Year 11 #	Closure Year 12 #	Closure Year 13 #	Closure Year 14 #	Closure Year 15 #	Closure Year 16 #	Closure Year 17 #	Closure Year 18 #	Closure Year 19 #
1	Environmental - Environmental Engineer	\$0						1.0														
2	Environmental - Environmental Technician	\$0						4.0														
3	Soln Mgmt Rotation 1 - laborer 1	\$0																				
4	Soln Mgmt Rotation 1 - laborer 2																					
5	Soln Mgmt Rotation 1 - laborer 3																					
6	Soln Mgmt - supervisor																					
7	Soln Mgmt Rotation 2 - laborer 1																					
8	Soln Mgmt Rotation 2 - laborer 2																					
9	Soln Mgmt Rotation 2 - laborer 3																					
SUBTOTAL			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Notes:
1. Assumes Severance + Outplacement



Closure Cost Estimate
Human Resources

Closure Year 20 #	Closure Year 21 #	Closure Year 22 #	Closure Year 23 #	Closure Year 24 #	Closure Year 25 #	Closure Year 26 #	Closure Year 27 #	Closure Year 28 #	Closure Year 29 #	Closure Year 30 #	Closure Year 31 #	Closure Year 32 #	Closure Year 33 #	Closure Year 34 #	Closure Year 35 #	Closure Year 36 #	Closure Year 37 #	Closure Year 38 #	Closure Year 39 #	Closure Year 40 #	Closure Year 41 #	Closure Year 42 #
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686	\$ 566,686

Closure Cost Estimate
Human Resources

Closure Year 20 #	Closure Year 21 #	Closure Year 22 #	Closure Year 23 #	Closure Year 24 #	Closure Year 25 #	Closure Year 26 #	Closure Year 27 #	Closure Year 28 #	Closure Year 29 #	Closure Year 30 #	Closure Year 31 #	Closure Year 32 #	Closure Year 33 #	Closure Year 34 #	Closure Year 35 #	Closure Year 36 #	Closure Year 37 #	Closure Year 38 #	Closure Year 39 #	Closure Year 40 #	Closure Year 41 #	Closure Year 42 #
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Closure Cost Estimate Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsoil Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

Waste Rock Dumps - User Input																					
You must fill in ALL green cells in this section for each dump, lift or dump category																					
Facility Description				Physical - MANDATORY										Cover				Growth Media			
	Description (required)	ID Code	Type	Underlying Slope % Grade	Ungraded Slope H:1V	Final Slope H:1V	Final Top Slope % Grade	Lift (dump) Height m	Mid-Bench Length m	Average Flat Area Long Dimension (ripping distance) m	Final (Regraded) Dump Footprint ha	Regrade Volume (1) (if calculated elsewhere) m3	Cover Thickness Slopes mm	Cover Thickness Flat Areas mm	Distance from Dump to Cover Borrow m	Slope from Dump to Cover Borrow % grade	Slope Growth Media Thickness mm	Flat Area Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Dump to Stockpile % grade	
1	WRDF - Full Buildout		Waste Rock Dump	0.0	1.4	3.0	0.0	30	59,380	4,000	1017.30		305.0	305.0	6,500	-5.0	356.0	356.0	6,500	-5.0	
2	Mine Site Laydown A		Waste Rock Dump	18.0	2.0	3.0	0.0	10	900	500	28.50		350.0	350.0	3,000	-2.0	300.0	300.0	3,000	-2.0	
3	Mine Site Laydown B		Waste Rock Dump	18.0	2.0	3.0	0.0	12	650	200	30.80		350.0	350.0	3,000	-2.0	300.0	300.0	3,000	-2.0	
4	Mine Site - Laydown C		Waste Rock Dump	18.0	2.0	3.0	0.0	9	400	500	11.70		350.0	350.0	3,000	-2.0	300.0	300.0	3,000	-2.0	
5	Mine Site - Laydown D		Waste Rock Dump	18.0	2.0	3.0	0.0	12	440	500	29.50		350.0	350.0	3,000	-2.0	300.0	300.0	3,000	-2.0	
6	Process Plant Pad		Waste Rock Dump	20.0	2.0	3.0	0.0	15	600	100	41.80		350.0	350.0	4,000	-2.0	300.0	300.0	4,000	-2.0	
7	Ore Stockpile Pad		Ore Stockpile	0.0	3.0	3.0	0.0	1	1	500	83.40		350.0	350.0	2,500	-2.0	300.0	300.0	2,500	-2.0	
8	Fuel storage area pad		Waste Rock Dump	15.0	2.0	3.0	0.0	5	1,870	900	35.70		350.0	350.0	5,000	-3.0	300.0	300.0	5,000	-3.0	
9	Primary Crusher Pad and Ore stockpile		Ore Stockpile	15.0	2.0	3.0	0.0	12	450	500	25.00		350.0	350.0	2,500	-1.0	300.0	300.0	2,500	-1.0	
10	Truck Shop Pad		Waste Rock Dump	10.0	2.0	3.0	0.0	5	1,000	500	7.80		350.0	350.0	4,000	-1.0	300.0	300.0	4,000	-1.0	

- Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Haul distances and dump dimensions per AMEC mining and reclamation schedule. R. Ulansky.
 For reclamation bonding cover is assumed to be placed with rental 777 trucks.

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsail Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

Waste Rock Dumps - User Input (cont.)																			
You must fill in ALL green cells and relevant blue cells in this section for each dump, lift or dump category																			
		Grading				Cover		Growth Media		Revegetation									
	Description (required)	Dozing Material Condition (select)	Dump Material Type (select)	Grading Equipment Fleet (select)	Slot/Side-by- Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Equipment Fleet (select)	Seed Mix Slopes (select)	Seed Mix Flat Areas (select)	Flat Slopes (select)	Mulch Slopes (select)	Mulch Flat Areas (select)	Fertilizer Slopes (select)	Fertilizer Flat Areas (select)	Slope Scarify/ Rip? (select)	Flat Area Scarify/ Rip? (select)	Scarify/ Ripping Fleet (select)
1	WRDF - Full Buildout	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
2	Mine Site Laydown A	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
3	Mine Site Laydown B	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
4	Mine Site - Laydown C	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
5	Mine Site - Laydown D	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
6	Process Plant Pad	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
7	Ore Stockpile Pad	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
8	Fuel storage area pad	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
9	Primary Crusher Pad and Ore stockpile	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer
10	Truck Shop Pad	1	LS - broken	Med		Alluvium	Med Truck	Alluvium	Med Truck	User Mix 1	User Mix 1				Chemical	Chemical	Yes	Yes	Large Dozer

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

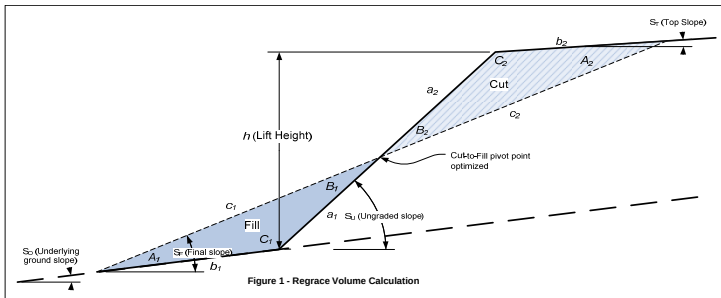
Closure Cost Estimate Waste Rock Dumps

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsoil Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

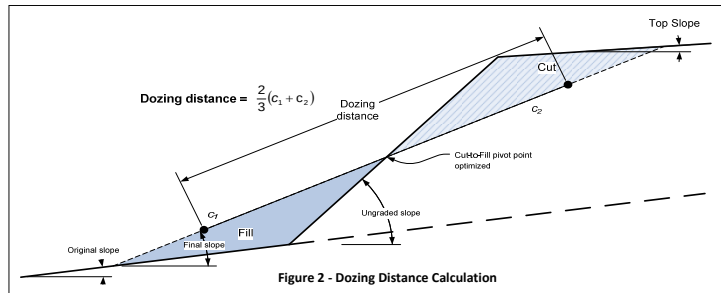
Waste Rock Dumps - Calculations

Regrading Volume Calculation

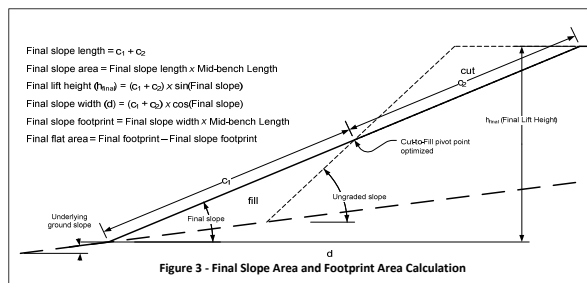


Regrading Push Distance Calculation

dozing distance: based on 2/3 final cut slope + 2/3 final fill slope (minimum = 15 m)



Final Slope Area and Footprint Area Calculations



Ripping/Scarifying Calculations

Minimum 1 hr ripping/scarifying time per dump

Slopes:

Number of passes = Final slope length ÷ Grader width
 Travel distance = Number of passes x Mid-bench length
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
 Minimum 1 hr

Flat Areas:

Flat area width = Final flat area ÷ Average long dimensions
 Number of passes = Flat area width ÷ Grader width
 Travel distance = Number of passes x Average long dimensions
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation: Minimum 1 acre revegetation crew time per area

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsoil Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

Waste Rock Dumps - Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	WRDF - Full Buildout	10,597,340	48	D10R	843	1.6	1.0	0.88	1.0	739	14,334	\$871,651	\$3,401,602	\$4,273,253
2	Mine Site Laydown A	13,296	20	D10R	1,794	1.6	1.0	0.88	1.0	1,573	8	\$486	\$1,898	\$2,384
3	Mine Site Laydown B	13,469	23	D10R	1,554	1.6	1.0	0.88	1.0	1,362	10	\$608	\$2,373	\$2,981
4	Mine Site - Laydown C	4,904	18	D10R	1,921	1.6	1.0	0.88	1.0	1,684	3	\$182	\$712	\$894
5	Mine Site - Laydown D	9,119	23	D10R	1,554	1.6	1.0	0.88	1.0	1,362	7	\$426	\$1,661	\$2,087
6	Process Plant Pad	20,295	30	D10R	1,244	1.6	1.0	0.88	1.0	1,090	19	\$1,155	\$4,509	\$5,664
7	Ore Stockpile Pad	0		D10R								\$0	\$0	\$0
8	Fuel storage area pad	6,254	15	D10R	2,243	1.6	1.0	0.88	1.0	1,966	3	\$182	\$712	\$894
9	Primary Crusher Pad and Ore stockpile	8,945	23	D10R	1,589	1.6	1.0	0.88	1.0	1,392	6	\$365	\$1,424	\$1,789
10	Truck Shop Pad	3,159	15	D10R	2,243	1.6	1.0	0.88	1.0	1,966	2	\$122	\$475	\$597
		10,676,780									14,392	\$875,177	\$3,415,366	\$4,290,543

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsail Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

Waste Rock Dumps - Cover and Growth Media Costs																	
		Cover (lower layer)								Growth Media Placement							
	Description (required)	Cover Volume m3	Cover Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Cover Labor Cost \$	Cover Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Replacement Fleet	Fleet Productivity BCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsolling Cost \$
1	WRDF - Full Buildout	3,191,207	777D/992G	787	8	4,056	\$2,505,716	\$10,451,825	\$12,957,541	3,724,847	777D/992G	787	8	4,735	\$2,925,188	\$12,201,527	\$15,126,715
2	Mine Site Laydown A	99,633	777D/992G	794	4	126	\$46,582	\$200,572	\$247,154	85,396	777D/992G	794	4	108	\$39,928	\$171,919	\$211,847
3	Mine Site Laydown B	107,791	777D/992G	794	4	136	\$50,279	\$216,490	\$266,769	92,390	777D/992G	794	4	116	\$42,885	\$184,653	\$227,538
4	Mine Site - Laydown C	41,601	777D/992G	794	4	52	\$19,224	\$82,776	\$102,000	35,657	777D/992G	794	4	45	\$16,637	\$71,633	\$88,270
5	Mine Site - Laydown D	103,132	777D/992G	794	4	130	\$48,061	\$206,939	\$255,000	89,396	777D/992G	794	4	111	\$41,037	\$176,694	\$217,731
6	Process Plant Pad	146,730	777D/992G	838	5	176	\$75,983	\$323,505	\$399,489	125,764	777D/992G	838	5	150	\$64,758	\$275,715	\$340,473
7	Ore Stockpile Pad	291,789	777D/992G	659	3	443	\$136,302	\$596,092	\$732,394	250,095	777D/992G	659	3	379	\$116,611	\$509,975	\$626,586
8	Fuel storage area pad	124,690	777D/992G	726	5	172	\$74,256	\$316,153	\$390,409	106,873	777D/992G	726	5	147	\$63,463	\$270,201	\$333,664
9	Primary Crusher Pad and Ore stockpile	87,409	777D/992G	794	3	110	\$33,845	\$148,014	\$181,859	74,919	777D/992G	794	3	94	\$28,922	\$126,485	\$155,407
10	Truck Shop Pad	27,012	777D/992G	846	4	32	\$11,830	\$50,939	\$62,769	23,152	777D/992G	846	4	28	\$10,352	\$44,572	\$54,924
		4,220,994				5,433	\$3,002,078	\$12,593,306	\$15,595,384	4,607,489				5,913	\$3,349,781	\$14,033,374	\$17,383,155

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$875,177	\$3,415,366	N/A	\$4,290,543
Cover Placement Cost	\$3,002,078	\$12,593,306	N/A	\$15,595,384
Topsoil Placement Cost	\$3,349,781	\$14,033,374	N/A	\$17,383,155
Ripping/Scarifying Cost	\$128,917	\$503,097	N/A	\$632,014
Subtotal Earthworks	\$7,355,953	\$30,545,143	\$0	\$37,901,096
Revegetation Cost	\$360,824	\$104,375	\$712,138	\$1,177,337
TOTALS	\$7,716,777	\$30,649,518	\$712,138	\$39,078,433

Waste Rock Dumps - Scarifying/Revegetation Costs																
	Description (required)	Slope Area ha	Flat Area ha	Total Surface Area ha	Final Slope Length m	Flat Area Long Dimension m	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	WRDF - Full Buildout	561.07	485.22	1046.29	94	4,000	D10R	886	762	\$100,215	\$391,087	\$491,302	\$281,631	\$81,466	\$555,831	\$918,928
2	Mine Site Laydown A	3.38	25.09	28.47	37	500	D10R	5	40	\$2,736	\$10,679	\$13,415	\$7,662	\$2,217	\$15,124	\$25,003
3	Mine Site Laydown B	2.87	27.92	30.79	44	200	D10R	4	45	\$2,980	\$11,628	\$14,608	\$8,289	\$2,398	\$16,357	\$27,044
4	Mine Site - Laydown C	1.36	10.52	11.88	34	500	D10R	2	17	\$1,155	\$4,509	\$5,664	\$3,199	\$925	\$6,312	\$10,436
5	Mine Site - Laydown D	1.95	27.52	29.47	44	500	D10R	3	44	\$2,858	\$11,154	\$14,012	\$7,931	\$2,295	\$15,656	\$26,882
6	Process Plant Pad	3.48	38.45	41.93	58	100	D10R	6	64	\$4,257	\$16,612	\$20,869	\$11,284	\$3,264	\$22,275	\$36,823
7	Ore Stockpile Pad	0.00	83.37	83.37	3	500	D10R	0	133	\$8,088	\$31,562	\$39,650	\$22,440	\$6,491	\$44,289	\$73,220
8	Fuel storage area pad	3.25	32.37	35.62	17	900	D10R	5	51	\$3,405	\$13,289	\$16,694	\$9,589	\$2,774	\$18,923	\$31,286
9	Primary Crusher Pad and Ore stockpile	1.91	23.07	24.98	42	500	D10R	3	37	\$2,432	\$9,492	\$11,924	\$6,722	\$1,944	\$13,270	\$21,936
10	Truck Shop Pad	1.65	6.07	7.72	16	500	D10R	3	10	\$791	\$3,085	\$3,876	\$2,077	\$601	\$4,101	\$6,779
		580.92	759.60	1,340.52				917	1,203	\$128,917	\$503,097	\$632,014	\$360,824	\$104,375	\$712,138	\$1,177,337

Notes: 1) Minimum total ripping hours = 1 (i.e. If total ripping hrs (slope + flat) < 1, then one hour of fleet time is assumed, regardless of acres shown in in scarifying table.)

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$22,196	\$86,618	N/A	\$108,814
Cover Placement Cost	\$849,247	\$3,800,349	N/A	\$4,649,596
Topsoil Placement Cost	\$1,722,085	\$7,531,211	N/A	\$9,253,296
Ripping/Scarifying Cost	\$102,161	\$247,481	N/A	\$349,642
Subtotal Earthworks	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - User Input																		
You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment																		
Facility Description			Physical - MANDATORY								Cover				Growth Media			
	Description (required)	ID Code	Underlying Ground Slope % Grade	Ungraded Slope _H:1V	Final (Regraded) Embankment Slope _H:1V	Final Embankment Height m	Final Tailings Surface Area ha	Mid- Embankment or Ripping Length m	Embankment Regrade Volume (if calculated elsewhere) m3	Surface Regrade Volume (calculated elsewhere) m3	Embankment Cover Thickness mm	Tailings Surface Cover Thickness mm	Distance from Cover Borrow m	Slope from Tailings to Borrow % grade	Embankment Growth Media Thickness mm	Tailings Surface Growth Media Thickness mm	Distance from Growth Material Stockpile m	Slope from Tailings to Stockpile % grade
1	Tailings Storage Area		0.0	1.7	1.7	80	968.20	3,962		100,000	0.0	300.0	500	0.0	300.0	350.0	2,000	-4.0

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Rock fill included in Haul Material sheet. Cover layer (colluvium) will be (300mm) and growth media (peat) will be (350mm). - BGC
Embankment height actual 125 meters. Average height conservatively estimated at 80 meters, with average mid-bench length at about 1100 meters.

Bond Calculation Tailings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$22,196	\$86,618	N/A	\$108,814
Cover Placement Cost	\$849,247	\$3,800,349	N/A	\$4,649,596
Topsoil Placement Cost	\$1,722,085	\$7,531,211	N/A	\$9,253,296
Ripping/Scarifying Cost	\$102,161	\$247,481	N/A	\$349,642
Subtotal Earthworks	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment																
	Description (required)	Grading				Cover		Growth Media		Revegetation								
		Dozing Material Condition (select)	Embankment Material Type (select)	Grading Equipment Fleet (select)	Slot/Side-by- Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Embankment Slope (select)	Seed Mix Tailings Surface (select)	Mulch Embankment Slopes (select)	Mulch Tailings Surface (select)	Fertilizer Embankment Slopes (select)	Fertilizer Tailings Surface (select)	Embankment Slope Scarify/ Rip? (select)	Tailings Surface Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	Tailings Storage Area	1	Alluvium	Med	No	Gravel	Med Truck	Alluvium	Med Truck	User Mix 2	User Mix 2	None	None	Chemical	Chemical	Yes	Yes	Grader

Notes:
 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Bond Calculation Tailings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
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TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - Calculations

Surface Area Calculations

Top Surface Area provided by user

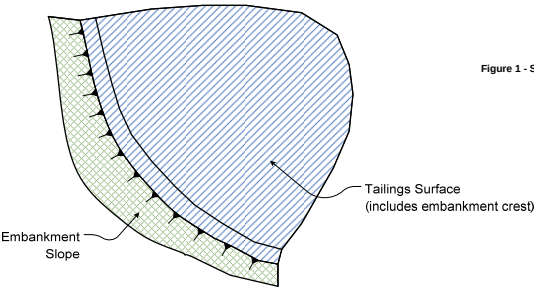


Figure 1 - Surface Areas

Final Slope Area and Footprint Area Calculations

$$\text{Overall slope length (c)} = \frac{\text{Embankment height}}{\cos(\text{Overall slope angle})}$$

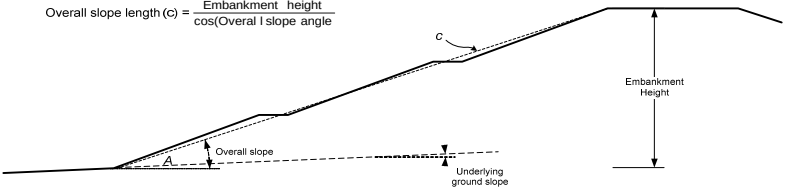


Figure 2 - Final Slope Area and Footprint Area Calculation

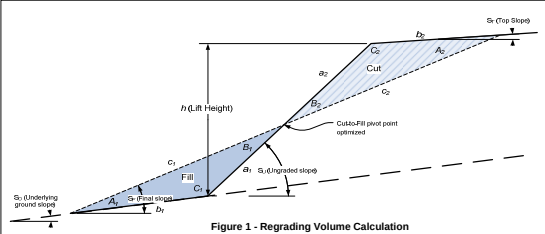
Grading Calculations

Grading assumed on impoundment surface only, not embankment
 Average push distance assumed to be 2/3 of the 180 m maximum from Caterpillar Handbook or 120 m
 Material assumed to be loose stockpile (1.2 productivity factor)
 Dozing density correction based on dry sand = 2300/2400 = 0.96
 Slope assumed to be 0 to 5% (1.0 productivity factor)

Ripping/Scarifying/Revegetation Calculation

Minimum 1 hr ripping/scarifying per area
 Minimum 1 acre revegetation crew time per area

Regrading Volume Calculation



Bond Calculation
Tailings

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Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - Embankment Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material Condition	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Tailings Storage Area	0		D10R								\$0	\$0	\$0
												\$0	\$0	\$0

Bond Calculation
Tailings

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Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$22,196	\$86,618	N/A	\$108,814
Cover Placement Cost	\$849,247	\$3,800,349	N/A	\$4,649,596
Topsoil Placement Cost	\$1,722,085	\$7,531,211	N/A	\$9,253,296
Ripping/Scarifying Cost	\$102,161	\$247,481	N/A	\$349,642
Subtotal Earthworks	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - Surface Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Regrading Fleet	Uncorrected Dozer Productivity m3/hr	Grade Correction	Density Correction	Dozing Material	Side-by-Side or Slot Dozing	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Tailings Storage Area	100,000	122	D10R	383	1.00	0.96	1.20	1.00	274	365	\$22,196	\$86,618	\$108,814
		100,000									365	\$22,196	\$86,618	\$108,814

Bond Calculation
Tailings

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Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$22,196	\$86,618	N/A	\$108,814
Cover Placement Cost	\$849,247	\$3,800,349	N/A	\$4,649,596
Topsoil Placement Cost	\$1,722,085	\$7,531,211	N/A	\$9,253,296
Ripping/Scarifying Cost	\$102,161	\$247,481	N/A	\$349,642
Subtotal Earthworks	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - Cover and Growth Media Costs																	
		Cover Placement								Growth Media Placement							
	Description (required)	Cover Volume m3	Cover Placement Fleet	Cover Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$	Growth Media Volume m3	Growth Media Placement Fleet	Growth Media Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoil Placement Cost \$
1	Tailings Storage Area	2,904,594	777D/992G	840	2	3,457	\$849,247	\$3,800,349	\$4,649,596	3,633,220	777D/992G	649	3	5,597	\$1,722,085	\$7,531,211	\$9,253,296
		2,904,594				3,457	\$849,247	\$3,800,349	\$4,649,596	3,633,220				5,597	\$1,722,085	\$7,531,211	\$9,253,296

Bond Calculation
Tailings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$22,196	\$86,618	N/A	\$108,814
Cover Placement Cost	\$849,247	\$3,800,349	N/A	\$4,649,596
Topsoil Placement Cost	\$1,722,085	\$7,531,211	N/A	\$9,253,296
Ripping/Scarifying Cost	\$102,161	\$247,481	N/A	\$349,642
Subtotal Earthworks	\$2,695,689	\$11,665,659	\$0	\$14,361,348
Revegetation Cost	\$277,418	\$80,248	\$394,299	\$751,965
TOTALS	\$2,973,107	\$11,745,907	\$394,299	\$15,113,313

Tailings - Scarifying/Revegetation Costs															
	Description (required)	Embankment Slope Area ha	Tailings Surface Area ha	Total Surface Area ha	Final Slope Length m	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Cost \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Cost \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Tailings Storage Area	62.43	968.20	1030.63	158	16G/H	101	1,579	\$102,161	\$247,481	\$349,642	\$277,418	\$80,248	\$394,299	\$751,965
		62.43	968.20	1,030.63			101	1,579	\$102,161	\$247,481	\$349,642	\$277,418	\$80,248	\$394,299	\$751,965

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - User Input														
You must fill in ALL green cells and relevant blue cells in this section for each road														
Facility Description				Physical (1) - MANDATORY						User Overrides		Growth Media		
	Description (required)	ID Code	Type	Underlying Ground Slope % grade	Ungraded Slope _H:1V	Cut Slope degrees	Road Width m	Road Length m	Slope Replacement Percent %	Regrade Volume (if calculated elsewhere) m3	Disturbed Area (if calculated elsewhere) ha	Growth Media Thickness mm	Haul Distance from Growth Media Stockpile m	Slope from Road to Stockpile % grade
1	LAH-1-ORIG		Project Road	26.0	1.4	35.0	9.0	3,800			14.81	350.0	1,000	0%
2	LAH-2-ORIG		Project Road	20.0	1.4	35.0	9.0	990			3.05	350.0	1,000	0%
3	LAH-ACCESS-1		Project Road	14.0	1.4	35.0	9.0	645			1.53	350.0	1,000	0%
4	LAH-ACCESS-4		Project Road	2.0	1.4	35.0	5.0	193			0.28	350.0	1,000	0%
5	LAO-1		Project Road	22.0	1.4	35.0	5.0	3,846			10.57	350.0	1,000	0%
6	LCF-1		Project Road	7.0	1.4	35.0	22.0	1,124			4.43	350.0	1,000	0%
7	LCF-2-DAM		Project Road	17.0	1.4	35.0	22.0	1,965			13.47	350.0	1,000	0%
8	LMF-1		Project Road	11.0	1.4	35.0	32.0	2,243			12.21	350.0	1,000	0%
9	LMF-2		Project Road	11.0	1.4	35.0	32.0	4,941			30.22	350.0	1,000	0%
10	LMF-2-OPT		Project Road	5.0	1.4	35.0	32.0	310			0.96	350.0	1,000	0%
11	SCF-1		Project Road	13.0	1.4	35.0	13.0	2,016			5.77	350.0	1,000	0%
12	SCF-2		Project Road	16.0	1.4	35.0	13.0	2,821			8.14	350.0	1,000	0%
13	SCF-2-OPT-2		Project Road	12.0	1.4	35.0	13.0	627			1.57	350.0	1,000	0%
14	SCF-3		Project Road	28.0	1.4	35.0	13.0	2,666			15.57	350.0	1,000	0%
15	JUNGJUK		Access Road	3.0	1.4	35.0	9.0	3,631			6.41	350.0	1,000	0%
16	Other Road - ID16		Project Road	35.0	1.4	35.0	45.0	1,403			6.36	350.0	1,000	0%
17	Other Road - ID17		Project Road	13.0	1.4	35.0	45.0	1,263			5.67	350.0	1,000	0%
18	Other Road - ID18		Project Road	10.0	1.4	35.0	45.0	1,262			5.71	350.0	1,000	0%
19	Other Road - ID19		Project Road	12.0	1.4	35.0	45.0	969			5.44	350.0	1,000	0%
20	Other Road - ID20		Project Road	2.0	1.4	35.0	45.0	417			1.75	350.0	1,000	0%
21	Other Road - ID21		Project Road	2.0	1.4	35.0	45.0	522			2.39	350.0	1,000	0%
22	Other Road - ID22		Project Road	17.0	1.4	35.0	45.0	964			4.19	350.0	1,000	0%
23	Other Road - ID23		Project Road	7.0	1.4	35.0	45.0	375			1.48	350.0	1,000	0%
24	Other Road - ID24		Project Road	5.0	1.4	35.0	45.0	184			0.58	350.0	1,000	0%
25	Other Road - ID25		Project Road	2.0	1.4	35.0	35.0	530			1.81	350.0	1,000	0%
26	Other Road - ID26		Project Road	27.0	1.4	35.0	25.0	1,761			4.41	350.0	1,000	0%
27	Other Road - ID27		Project Road	13.0	1.4	35.0	25.0	352			0.87	350.0	1,000	0%
28	Other Road - ID28		Project Road	13.0	1.4	35.0	25.0	1,107			2.80	350.0	1,000	0%
29	Other Road - ID29		Project Road	7.0	1.4	35.0	25.0	116			0.26	350.0	1,000	0%
30	Other Road - ID30		Project Road	1.0	1.4	35.0	6.0	67			0.03	350.0	1,000	0%
31	Other Road - ID31		Project Road	5.0	1.4	35.0	6.0	57			0.03	350.0	1,000	0%
32	Other Road - ID32		Project Road	4.0	1.4	35.0	6.0	36			0.03	350.0	1,000	0%
33	Other Road - ID33		Project Road	15.0	1.4	35.0	6.0	113			0.05	350.0	1,000	0%
34	Other Road - ID34		Project Road	6.0	1.4	35.0	6.0	1,733			1.06	350.0	1,000	0%
35	Other Road - ID35		Project Road	10.0	1.4	35.0	25.0	95			0.24	350.0	1,000	0%
36	Other Road - ID36		Project Road	15.0	1.4	35.0	6.0	92			0.05	350.0	1,000	0%
37	Other Road - ID37		Project Road	9.0	1.4	35.0	6.0	581			0.41	350.0	1,000	0%
38	Other Road - ID38		Project Road	5.0	1.4	35.0	14.0	229			0.56	350.0	1,000	0%
39	Other Road - ID39		Project Road	1.0	1.4	35.0	37.0	179			0.63	350.0	1,000	0%

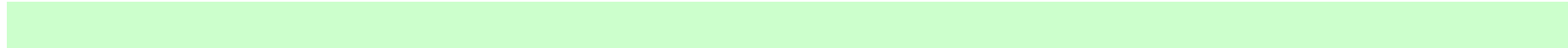
Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Because the work required for building roads with a dozer is similar to that required to regrade a road with a dozer, this sheet could be used to provide a rough estimate of road construction costs if a dozer is selected as the grading fleet.

Closure Cost Estimate Roads

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Roads - Cost Summary				
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Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541



Closure Cost Estimate Roads

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TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - User Input (cont.)						
		Haul Road Safety Berms				
	Description (required)	Berm Length m	Berm Height m	Berm Base Width m	Berm Sideslope Angle H:1V	Number of Berms (2) (1 or 2 sides)
1	LAH-1-ORIG	3,800.0	1.5	8.0	2.5	1
2	LAH-2-ORIG	990.0	1.5	8.0	2.5	1
3	LAH-ACCESS-1	645.0	1.5	8.0	2.5	1
4	LAH-ACCESS-4	193.0	1.5	8.0	2.5	1
5	LAO-1	3,846.0	1.5	8.0	2.5	1
6	LCF-1	1,124.0	1.5	8.0	2.5	1
7	LCF-2-DAM	1,965.0	1.5	8.0	2.5	1
8	LMF-1	2,243.0	1.5	8.0	2.5	1
9	LMF-2	4,941.0	1.5	8.0	2.5	1
10	LMF-2-OPT	310.0	1.5	8.0	2.5	1
11	SCF-1	2,016.0	1.5	8.0	2.5	1
12	SCF-2	2,821.0	1.5	8.0	2.5	1
13	SCF-2-OPT-2	627.0	1.5	8.0	2.5	1
14	SCF-3	2,666.0	1.5	8.0	2.5	1
15	JUNGJUK	3,631.0	1.5	8.0	2.5	1
16	Other Road - ID16	1,403.0	1.5	8.0	2.5	1
17	Other Road - ID17	1,263.0	1.5	8.0	2.5	1
18	Other Road - ID18	1,262.0	1.5	8.0	2.5	1
19	Other Road - ID19	969.0	1.5	8.0	2.5	1
20	Other Road - ID20	417.0	1.5	8.0	2.5	1
21	Other Road - ID21	522.0	1.5	8.0	2.5	1
22	Other Road - ID22	964.0	1.5	8.0	2.5	1
23	Other Road - ID23	375.0	1.5	8.0	2.5	1
24	Other Road - ID24	184.0	1.5	8.0	2.5	1
25	Other Road - ID25	530.0	1.5	8.0	2.5	1
26	Other Road - ID26	1,761.0	1.5	8.0	2.5	1
27	Other Road - ID27	352.0	1.5	8.0	2.5	1
28	Other Road - ID28	1,107.0	1.5	8.0	2.5	1
29	Other Road - ID29	116.0	1.5	8.0	2.5	1
30	Other Road - ID30	67.0	1.5	8.0	2.5	1
31	Other Road - ID31	57.0	1.5	8.0	2.5	1
32	Other Road - ID32	36.0	1.5	8.0	2.5	1
33	Other Road - ID33	113.0	1.5	8.0	2.5	1
34	Other Road - ID34	1,733.0	1.5	8.0	2.5	1
35	Other Road - ID35	95.0	1.5	8.0	2.5	1
36	Other Road - ID36	92.0	1.5	8.0	2.5	1
37	Other Road - ID37	581.0	1.5	8.0	2.5	1
38	Other Road - ID38	229.0	1.5	8.0	2.5	1
39	Other Road - ID39	179.0	1.5	8.0	2.5	1

(2) Enter 1 if berm on only one side of road, 2 if both sides of road are bermed.

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - User Input (cont.)													
You must fill in ALL green cells and relevant blue cells in this section for each road													
		Grading				Growth Media			Revegetation				
	Description (required)	Dozing Material Condition (select)	Cut Material Type (select)	Recontouring Equipment Fleet ⁽²⁾ (select)	No. of Excavators if grade >30% (select)	Growth Media Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarifying/ Ripping? (select)	Ripping Fleet (select)
1	LAH-1-ORIG	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
2	LAH-2-ORIG	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
3	LAH-ACCESS-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
4	LAH-ACCESS-4	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
5	LAO-1	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
6	LCF-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
7	LCF-2-DAM	1	Alluvium	Med Excavator		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
8	LMF-1	1	Alluvium	Med Excavator		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
9	LMF-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
10	LMF-2-OPT	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
11	SCF-1	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
12	SCF-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
13	SCF-2-OPT-2	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
14	SCF-3	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
15	JUNGJUK	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
16	Other Road - ID16	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
17	Other Road - ID17	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
18	Other Road - ID18	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
19	Other Road - ID19	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
20	Other Road - ID20	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
21	Other Road - ID21	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
22	Other Road - ID22	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
23	Other Road - ID23	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
24	Other Road - ID24	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
25	Other Road - ID25	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
26	Other Road - ID26	1	Alluvium	Med Excavator	2	Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
27	Other Road - ID27	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
28	Other Road - ID28	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
29	Other Road - ID29	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
30	Other Road - ID30	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
31	Other Road - ID31	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
32	Other Road - ID32	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
33	Other Road - ID33	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
34	Other Road - ID34	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
35	Other Road - ID35	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
36	Other Road - ID36	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
37	Other Road - ID37	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
38	Other Road - ID38	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
39	Other Road - ID39	1	Alluvium	Med Dozer		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
2. If original slope >30% only excavators are allowed.

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - Calculations

Regrading Volume and Footprint Volume

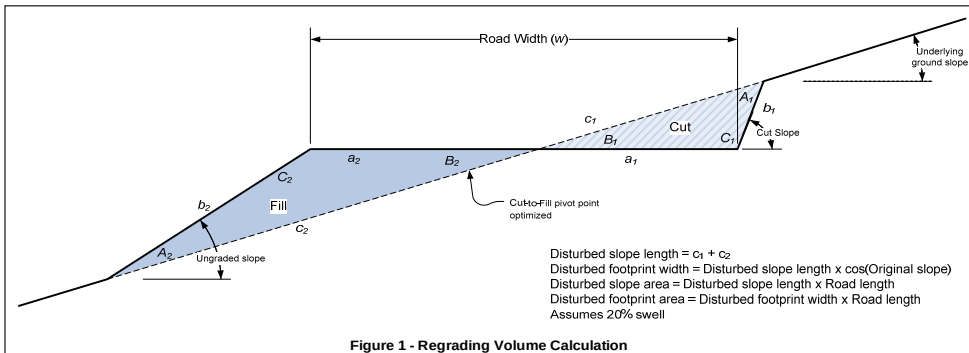


Figure 1 - Regrading Volume Calculation

Ripping/Scarifying Calculations

Minimum 1 hr ripping/scarifying time per area
 Number of passes = Final slope length ÷ Grader width
 Travel distance = Number of passes x Road length
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
 For dozer regrading assumes push distance = 3 x road width

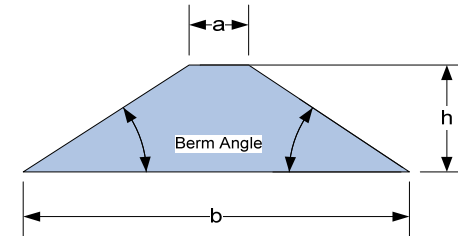
Revegetation Calculations

Minimum of 1 acre crew time per area

Safety Berm Volume Calculation

$$\text{Cross Sectional Area} = \frac{(a+b)}{2} \times h$$

$$\text{Berm Volume} = \text{Berm Length} \times \text{Cross Sectional Area} \times \text{No. Sides}$$



Total berm volume doubled if both sides of road are bermed.
 If length of berm on each side of road is different, input total length of both berms
 and input 1 for number of sides

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - Regrading Costs

	Description (required)	Regrading Volume m3	Recontouring Fleet	Fleet Productivity m3/hr	Total Fleet Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	LAH-1-ORIG	41,677	345B	367	114	\$20,797	\$52,010	\$72,807
2	LAH-2-ORIG	9,362	D10R	337	28	\$1,703	\$6,645	\$8,348
3	LAH-ACCESS-1	5,330	D10R	424	13	\$791	\$3,085	\$3,876
4	LAH-ACCESS-4	1,222	D10R	587	2	\$122	\$475	\$597
5	LAO-1	28,110	345B	367	77	\$14,047	\$35,130	\$49,177
6	LCF-1	12,796	D10R	520	25	\$1,520	\$5,933	\$7,453
7	LCF-2-DAM	41,261	345B	367	112	\$13,621	\$38,838	\$52,459
8	LMF-1	54,956	345B	367	150	\$18,243	\$52,016	\$70,259
9	LMF-2	121,062	D10R	447	271	\$16,480	\$64,311	\$80,791
10	LMF-2-OPT	4,278	D10R	525	8	\$486	\$1,898	\$2,384
11	SCF-1	20,178	D10R	437	46	\$2,797	\$10,916	\$13,713
12	SCF-2	31,380	D10R	395	79	\$4,804	\$18,747	\$23,551
13	SCF-2-OPT-2	6,059	D10R	451	13	\$791	\$3,085	\$3,876
14	SCF-3	45,720	345B	367	125	\$22,804	\$57,029	\$79,833
15	JUNGJUK	24,071	D10R	574	42	\$2,554	\$9,967	\$12,521
16	Other Road - ID16	279,032	345B	367	760	\$138,647	\$346,735	\$485,382
17	Other Road - ID17	63,859	D10R	313	204	\$12,405	\$48,411	\$60,816
18	Other Road - ID18	48,778	D10R	343	142	\$8,635	\$33,698	\$42,333
19	Other Road - ID19	45,013	D10R	323	139	\$8,453	\$32,986	\$41,439
20	Other Road - ID20	5,001	D10R	421	12	\$730	\$2,848	\$3,578
21	Other Road - ID21	6,262	D10R	421	15	\$912	\$3,560	\$4,472
22	Other Road - ID22	66,034	D10R	273	242	\$14,716	\$57,429	\$72,145
23	Other Road - ID23	10,450	D10R	372	28	\$1,703	\$6,645	\$8,348
24	Other Road - ID24	3,908	D10R	392	10	\$608	\$2,373	\$2,981
25	Other Road - ID25	5,156	D10R	521	10	\$608	\$2,373	\$2,981
26	Other Road - ID26	76,684	345B	367	209	\$38,128	\$95,352	\$133,480
27	Other Road - ID27	6,994	D10R	437	16	\$973	\$3,797	\$4,770
28	Other Road - ID28	21,992	D10R	437	50	\$3,041	\$11,866	\$14,907
29	Other Road - ID29	1,499	D10R	520	3	\$182	\$712	\$894
30	Other Road - ID30	424	D10R	600	1	\$61	\$237	\$298
31	Other Road - ID31	372	D10R	547	1	\$61	\$237	\$298
32	Other Road - ID32	232	D10R	560	1	\$61	\$237	\$298
33	Other Road - ID33	819	D10R	409	2	\$122	\$475	\$597
34	Other Road - ID34	11,396	D10R	534	21	\$1,277	\$4,984	\$6,261
35	Other Road - ID35	1,542	D10R	479	3	\$182	\$712	\$894
36	Other Road - ID36	666	D10R	409	2	\$122	\$475	\$597
37	Other Road - ID37	3,947	D10R	493	8	\$486	\$1,898	\$2,384
38	Other Road - ID38	1,767	D10R	547	3	\$182	\$712	\$894
39	Other Road - ID39	1,460	D10R	511	3	\$182	\$712	\$894
		1,110,749			2,990	\$354,037	\$1,019,549	\$1,373,586

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - Growth Media Costs									
	Description (required)	Growth Media Volume m3	Growth Media Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$
1	LAH-1-ORIG	51,840	777D/992G	707	2	73	\$17,933	\$80,250	\$98,183
2	LAH-2-ORIG	10,687	777D/992G	707	2	15	\$3,685	\$16,490	\$20,175
3	LAH-ACCESS-1	5,345	777D/992G	707	2	8	\$1,965	\$8,795	\$10,760
4	LAH-ACCESS-4	969	777D/992G	707	2	1	\$246	\$1,099	\$1,345
5	LAO-1	37,000	777D/992G	707	2	52	\$12,774	\$57,165	\$69,939
6	LCF-1	15,517	777D/992G	707	2	22	\$5,405	\$24,185	\$29,590
7	LCF-2-DAM	47,139	777D/992G	707	2	67	\$16,459	\$73,654	\$90,113
8	LMF-1	42,724	777D/992G	707	2	60	\$14,740	\$65,959	\$80,699
9	LMF-2	105,782	777D/992G	707	2	150	\$36,849	\$164,898	\$201,747
10	LMF-2-OPT	3,352	777D/992G	707	2	5	\$1,228	\$5,497	\$6,725
11	SCF-1	20,194	777D/992G	707	2	29	\$7,124	\$31,880	\$39,004
12	SCF-2	28,502	777D/992G	707	2	40	\$9,826	\$43,973	\$53,799
13	SCF-2-OPT-2	5,478	777D/992G	707	2	8	\$1,965	\$8,795	\$10,760
14	SCF-3	54,503	777D/992G	707	2	77	\$18,916	\$84,648	\$103,564
15	JUNGJUK	22,421	777D/992G	707	2	32	\$7,861	\$35,178	\$43,039
16	Other Road - ID16	22,249	777D/992G	707	2	31	\$7,615	\$34,079	\$41,694
17	Other Road - ID17	19,836	777D/992G	707	2	28	\$6,878	\$30,781	\$37,659
18	Other Road - ID18	19,981	777D/992G	707	2	28	\$6,878	\$30,781	\$37,659
19	Other Road - ID19	19,051	777D/992G	707	2	27	\$6,633	\$29,682	\$36,315
20	Other Road - ID20	6,129	777D/992G	707	2	9	\$2,211	\$9,894	\$12,105
21	Other Road - ID21	8,352	777D/992G	707	2	12	\$2,948	\$13,192	\$16,140
22	Other Road - ID22	14,663	777D/992G	707	2	21	\$5,159	\$23,086	\$28,245
23	Other Road - ID23	5,195	777D/992G	707	2	7	\$1,720	\$7,695	\$9,415
24	Other Road - ID24	2,032	777D/992G	707	2	3	\$737	\$3,298	\$4,035
25	Other Road - ID25	6,329	777D/992G	707	2	9	\$2,211	\$9,894	\$12,105
26	Other Road - ID26	15,419	777D/992G	707	2	22	\$5,405	\$24,185	\$29,590
27	Other Road - ID27	3,059	777D/992G	707	2	4	\$983	\$4,397	\$5,380
28	Other Road - ID28	9,815	777D/992G	707	2	14	\$3,439	\$15,390	\$18,829
29	Other Road - ID29	901	777D/992G	707	2	1	\$246	\$1,099	\$1,345
30	Other Road - ID30	119	777D/992G	707	2	1	\$246	\$1,099	\$1,345
31	Other Road - ID31	119	777D/992G	707	2	1	\$246	\$1,099	\$1,345
32	Other Road - ID32	92	777D/992G	707	2	1	\$246	\$1,099	\$1,345
33	Other Road - ID33	177	777D/992G	707	2	1	\$246	\$1,099	\$1,345
34	Other Road - ID34	3,709	777D/992G	707	2	5	\$1,228	\$5,497	\$6,725
35	Other Road - ID35	851	777D/992G	707	2	1	\$246	\$1,099	\$1,345
36	Other Road - ID36	169	777D/992G	707	2	1	\$246	\$1,099	\$1,345
37	Other Road - ID37	1,440	777D/992G	707	2	2	\$491	\$2,199	\$2,690
38	Other Road - ID38	1,948	777D/992G	707	2	3	\$737	\$3,298	\$4,035
39	Other Road - ID39	2,210	777D/992G	707	2	3	\$737	\$3,298	\$4,035
		615,298				874	\$214,708	\$960,805	\$1,175,513

Closure Cost Estimate Roads

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$354,037	\$1,019,549	N/A	\$1,373,586
Cover Placement Cost	\$214,708	\$960,805	N/A	\$1,175,513
Ripping/Scarifying Cost	\$14,171	\$55,289	N/A	\$69,460
Subtotal Earthworks	\$582,916	\$2,035,643		\$2,618,559
Revegetation Cost	\$20,131	\$5,824	\$94,027	\$119,982
TOTALS	\$603,047	\$2,041,467	\$94,027	\$2,738,541

Roads - Scarifying/Revegetation Costs

	Description (required)	Total Surface Area ha	Final Slope Length m	Ripping Hours hrs	Ripping Labor Costs \$	Ripping Equipment Cost \$	Total Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	LAH-1-ORIG	14.81	39.0	19	\$1,155	\$4,509	\$5,664	\$1,613	\$467	\$7,923	\$10,003
2	LAH-2-ORIG	3.05	31.0	4	\$243	\$949	\$1,192	\$333	\$96	\$1,633	\$2,062
3	LAH-ACCESS-1	1.53	24.0	2	\$122	\$475	\$597	\$166	\$48	\$817	\$1,031
4	LAH-ACCESS-4	0.28	14.0	1	\$61	\$237	\$298	\$109	\$32	\$148	\$288
5	LAO-1	10.57	27.0	14	\$851	\$3,322	\$4,173	\$1,152	\$333	\$5,654	\$7,139
6	LCF-1	4.43	39.0	6	\$365	\$1,424	\$1,789	\$483	\$140	\$2,371	\$2,994
7	LCF-2-DAM	13.47	69.0	17	\$1,034	\$4,034	\$5,068	\$1,467	\$424	\$7,203	\$9,094
8	LMF-1	12.21	55.0	15	\$912	\$3,560	\$4,472	\$1,330	\$385	\$6,529	\$8,244
9	LMF-2	30.22	61.0	40	\$2,432	\$9,492	\$11,924	\$3,292	\$952	\$16,165	\$20,409
10	LMF-2-OPT	0.96	31.0	1	\$61	\$237	\$298	\$109	\$32	\$512	\$652
11	SCF-1	5.77	29.0	8	\$486	\$1,898	\$2,384	\$629	\$182	\$3,086	\$3,897
12	SCF-2	8.14	29.0	11	\$669	\$2,610	\$3,279	\$887	\$257	\$4,356	\$5,500
13	SCF-2-OPT-2	1.57	25.0	2	\$122	\$475	\$597	\$170	\$49	\$838	\$1,057
14	SCF-3	15.57	59.0	20	\$1,216	\$4,746	\$5,962	\$1,696	\$491	\$8,329	\$10,516
15	JUNGJUK	6.41	18.0	9	\$547	\$2,136	\$2,683	\$698	\$202	\$3,426	\$4,326
16	Other Road - ID16	6.36	45.0	8	\$486	\$1,898	\$2,384	\$692	\$200	\$3,400	\$4,292
17	Other Road - ID17	5.67	45.0	7	\$426	\$1,661	\$2,087	\$617	\$179	\$3,031	\$3,827
18	Other Road - ID18	5.71	45.0	7	\$426	\$1,661	\$2,087	\$622	\$180	\$3,053	\$3,855
19	Other Road - ID19	5.44	56.0	7	\$426	\$1,661	\$2,087	\$593	\$172	\$2,912	\$3,677
20	Other Road - ID20	1.75	42.0	2	\$122	\$475	\$597	\$191	\$55	\$937	\$1,183
21	Other Road - ID21	2.39	46.0	3	\$182	\$712	\$894	\$260	\$75	\$1,276	\$1,611
22	Other Road - ID22	4.19	44.0	5	\$304	\$1,187	\$1,491	\$456	\$132	\$2,241	\$2,829
23	Other Road - ID23	1.48	40.0	2	\$122	\$475	\$597	\$162	\$47	\$794	\$1,003
24	Other Road - ID24	0.58	31.0	1	\$61	\$237	\$298	\$109	\$32	\$311	\$451
25	Other Road - ID25	1.81	34.0	2	\$122	\$475	\$597	\$197	\$57	\$967	\$1,221
26	Other Road - ID26	4.41	25.0	5	\$304	\$1,187	\$1,491	\$480	\$139	\$2,356	\$2,975
27	Other Road - ID27	0.87	25.0	1	\$61	\$237	\$298	\$109	\$32	\$468	\$608
28	Other Road - ID28	2.80	25.0	3	\$182	\$712	\$894	\$305	\$88	\$1,499	\$1,892
29	Other Road - ID29	0.26	22.0	1	\$61	\$237	\$298	\$109	\$32	\$138	\$278
30	Other Road - ID30	0.03	5.0	1	\$61	\$237	\$298	\$109	\$32	\$18	\$158
31	Other Road - ID31	0.03	6.0	1	\$61	\$237	\$298	\$109	\$32	\$18	\$158
32	Other Road - ID32	0.03	7.0	1	\$61	\$237	\$298	\$109	\$32	\$14	\$154
33	Other Road - ID33	0.05	5.0	1	\$61	\$237	\$298	\$109	\$32	\$27	\$167
34	Other Road - ID34	1.06	6.0	1	\$61	\$237	\$298	\$115	\$33	\$567	\$715
35	Other Road - ID35	0.24	26.0	1	\$61	\$237	\$298	\$109	\$32	\$130	\$270
36	Other Road - ID36	0.05	5.0	1	\$61	\$237	\$298	\$109	\$32	\$26	\$166
37	Other Road - ID37	0.41	7.0	1	\$61	\$237	\$298	\$109	\$32	\$220	\$360
38	Other Road - ID38	0.56	24.0	1	\$61	\$237	\$298	\$109	\$32	\$297	\$437
39	Other Road - ID39	0.63	35.0	1	\$61	\$237	\$298	\$109	\$32	\$337	\$477
		175.80		233	\$14,171	\$55,289	\$69,460	\$20,131	\$5,824	\$94,027	\$119,982

Closure Cost Estimate
Pits

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$30,216	\$135,216	N/A	\$165,432
Safety Berm Revegetation Cost	\$1,624	\$470	\$3,203	\$5,297
TOTALS	\$31,840	\$135,686	\$3,203	\$170,729

Pits - User Input																		
Facility Description				Pit Berms					Berm Construction		Excavate or Doze	Hauling (if selected method)				Revegetation		
	Description (required)	ID Code	Type	Berm (or Highwall) Length m	Berm Height m	Berm Base Width m	Berm Sideslope Angle _H:1V	Volume (if calculated elsewhere) m3	Construction Method (select)	Berm Material Type (select)	Berm Construction Equipment Fleet (select)	Berm Hauling Fleet (select)	Distance to Borrow Source m	Slope to Borrow Source % grade	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	Final Pit		Pit	9,900.0	2.0	6.0	1.3		Haul & Place	Sandstone	Med	Med Truck	1,800	0.0		User Mix 1		Chemical

- Notes:
- 1. All Physical parameters must be input even if manual overrides for volume or area are used.
 - 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
 - 3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Data derived from CAD drawing.

**Closure Cost Estimate
Pits**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$30,216	\$135,216	N/A	\$165,432
Safety Berm Revegetation Cost	\$1,624	\$470	\$3,203	\$5,297
TOTALS	\$31,840	\$135,686	\$3,203	\$170,729

Pits - Calculations

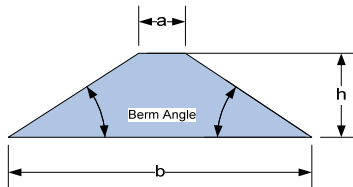
Safety Berm Volume Calculation

$$\text{Cross Sectional Area} = \frac{(a + b)}{2} \times h$$

$$\text{Berm Volume} = \text{Berm Length} \times \text{Cross Sectional Area}$$

Dozer productivity assumes push distance of:

100 feet



Dozer:

Length x (Berm Base Width + Dozer Push Distance) - accounts for disturbance created in borrow area

Excavator:

Length x (Berm Base Width + (2 x Excavator Track Width) - accounts for disturbance created in borrow area

Haul & Place:

Length x Berm Base Width - if necessary use Yards sheet to account for disturbance created in borrow area

Revegetation Calculations

Minimum 1 acre revegetation crew time per area

**Closure Cost Estimate
Pits**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$30,216	\$135,216	N/A	\$165,432
Safety Berm Revegetation Cost	\$1,624	\$470	\$3,203	\$5,297
TOTALS	\$31,840	\$135,686	\$3,203	\$170,729

Pits - Safety Berm Construction Costs									
		Safety Berm							
	Description (required)	Safety Berm Volume m3	Selected Fleet	Number of Trucks/ Scrapers	Corrected Fleet Productivity m3/hr	Total Hours	Safety Berm Labor Cost \$	Safety Berm Equipment Cost \$	Total Safety Berm Cost \$
1	Final Pit	70,175	777D/992G	2	571	123	\$30,216	\$135,216	\$165,432
		70,175				123	\$30,216	\$135,216	\$165,432

Closure Cost Estimate
Pits

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$30,216	\$135,216	N/A	\$165,432
Safety Berm Revegetation Cost	\$1,624	\$470	\$3,203	\$5,297
TOTALS	\$31,840	\$135,686	\$3,203	\$170,729

Pits - Safety Berms - Revegetation Costs						
	Description (required)	Flat Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Final Pit	6.03	\$1,624	\$470	\$3,203	\$5,297
		6.03	\$1,624	\$470	\$3,203	\$5,297

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$14,185,186	\$63,407,048	N/A	\$77,592,234
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$245,552	N/A	\$304,898
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$14,250,580	\$63,654,350	\$12,019	\$77,916,949

Generic Material Hauling - User Input																			
Facility Description				Physical		Hauled Material			Crushing & Screening					Cover			Growth Media		
	Description (required)	ID Code	Type	Final Surface Area ha	Average Ripping Distance m	Material Volume Required m3	Distance from Borrow Source (1) m	Slope to Borrow Source % grade	Crush Material	Screen Material	Loss to Crushing/ Screening %	Distance to Placement Location (2) m	Slope to Placement % grade	Cover Thickness mm	Distance to Cover Borrow m	Slope to Borrow % grade	Growth Media Thickness mm	Distance to Growth Material Stockpile m	Slope to Stockpile % grade
1	NAG rock fill (Capillary Break Fill)		Tailings Impot	0.00	0	9,373,000	1,200	0.0											
2	NAG rock fill (Capillary Break/Consolidation Fill)		Tailings Impot	0.00	0	22,697,000	1,200	0.0											
3	Tailings Spillway (Excavate and Fill)		Tailings Impot	0.00	0	724,000	3,000	-5.0											
4	Removal of Contact Pond Dam		Sediment Cor	0.00	0	240,000	5,000	-5.0											
5	Removal of Rock Groyne (Primary Crusher)		Process - Cru	0.00	0	355,000	1,000	0.0											
6	Reclaimed WRF Runoff Collection Channel - liner bedding		Waste Rock D	0.00	0	16,800	1,500	-5.0											
7	Reclaimed WRF Runoff Collection Channel - pea gravel		Waste Rock D	0.00	0	6,100	1,500	-5.0											
8	Upper Contact Water Pond Backfill, growth media, reveg		Ponds	22.47	0	3,000,000	1,000	0.0									300	8,000	-5.0
9	Lower CWD Breach and Slope		Ponds	30.39	0	172,500	1,000	0.0											
10	Snow Gulch Fresh Water Dam Breach		Sediment Cor	31.93	0	352,200	1,000	0.0											
11	Primary Channel (WRF) cushion layer		Surface Chan	0.00	0	83,700	10,000	0.0		Yes	70%	1,000	0.0						
12	Primary Channel (WRF) Armor Layer		Surface Chan	0.00	0	84,900	10,000	0.0		Yes	50%	1,000	0.0						
13	Secondary Channel (WRF) Armor Layer		Surface Chan	0.00	0	36,200	10,000	0.0		Yes	50%	1,000	0.0						

Notes:
1. Input distance to crusher if material to be crushed
2. Input distance from crusher to placement if material to be crushed
3. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Snow Gulch FWD, American and Lower CWD breach assumed to be equal to construction quantities listed in "DC11-007 - American_Creek_and_Snow_Gulch_Contact_and_Fresh_Water_Dam_Design - DRAFT_MTOs"
Capillary break layer minimum thickness is 1 meter but additional material is needed to account for consolidation of tailings. Reference BGC TSF Design Final 7/22/2011, adjusted for change in size of tailings surface.
Material removed from Tailings Spillway and Removal of Contact Pond Dam will be used as Tailings capillary break/consolidation fill (quantities are subtracted from the total consolidation fill required).
Rock Fill quantity from BGC report referenced for Capillary Break cover and adjusted for slight change in area of tails since the 2011 design.

Closure Cost Estimate

Haul Material

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$14,185,186	\$63,407,048	N/A	\$77,592,234
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$245,552	N/A	\$304,898
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$14,250,580	\$63,654,350	\$12,019	\$77,916,949

Generic Material Hauling - User Input (cont.)																
		Hauling Material				Cover			Growth Media			Revegetation				
	Description (required)	Haul Material Type (select)	Material Hauling Fleet (select)	Fleet Size (from/to crusher) (user override)	Compact After Placement?	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch Type (select)	Fertilizer Type (select)	Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	NAG rock fill (Capillary Break Fill)	LS - broken	Med Truck		No											
2	NAG rock fill (Capillary Break/Consolidation Fill)	LS - broken	Med Truck		No											
3	Tailings Spillway (Excavate and Fill)	LS - broken	Med Truck		No											
4	Removal of Contact Pond Dam	LS - broken	Med Truck		No											
5	Removal of Rock Groyne (Primary Crusher)	Alluvium	Med Truck		No											
6	Reclaimed WRF Runoff Collection Channel - liner bedding	Granite - brok	Med Truck		No											
7	Reclaimed WRF Runoff Collection Channel - pea gravel	Alluvium	Med Truck		No											
8	Upper Contact Water Pond Backfill, growth media, reveg	LS - broken	Med Truck		No				Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
9	Lower CWD Breach and Slope	LS - broken	Med Truck		No											
10	Snow Gulch Fresh Water Dam Breach	Alluvium	Med Truck		No											
11	Primary Channel (WRF) cushion layer	Alluvium	Med Truck		No											
12	Primary Channel (WRF) Armor Layer	Alluvium	Med Truck		No											
13	Secondary Channel (WRF) Armor Layer	Alluvium	Med Truck		No											

Notes:
 1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Closure Cost Estimate Haul Material

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$14,185,186	\$63,407,048	N/A	\$77,592,234
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$245,552	N/A	\$304,898
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$14,250,580	\$63,654,350	\$12,019	\$77,916,949

Generic Material Hauling - Load, Haul, Place and Grade													
		Material Haulage								Crush and/or Compact			
	Description (required)	Material Volume to Crusher m3	Final Material Volume m3	Material Haulage Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Hauling Labor Cost \$	Hauling Equipment Cost \$	Total Crush/ Screen Cost \$	Compact Labor Cost \$	Compact Equipment Cost \$	Total Load/Haul/ Place Cost \$
1	NAG rock fill (Capillary Break Fill)	9,373,000	9,373,000	777D/992G	667	2	14,043	\$3,449,803	\$15,437,751	\$0	\$0	\$0	\$18,887,554
2	NAG rock fill (Capillary Break/Consolidation Fill)	22,697,000	22,697,000	777D/992G	667	2	34,005	\$8,353,668	\$37,382,377	\$0	\$0	\$0	\$45,736,045
3	Tailings Spillway (Excavate and Fill)	724,000	724,000	777D/992G	677	4	1,069	\$395,209	\$1,701,677	\$0	\$0	\$0	\$2,096,886
4	Removal of Contact Pond Dam	240,000	240,000	777D/992G	835	7	287	\$159,503	\$668,888	\$0	\$0	\$0	\$828,391
5	Removal of Rock Groyne (Primary Crusher)	355,000	355,000	777D/992G	707	2	502	\$123,321	\$551,859	\$0	\$0	\$0	\$675,180
6	Reclaimed WRF Runoff Collection Channel - liner bedding	16,800	16,800	777D/992G	754	3	22	\$6,769	\$29,603	\$0	\$0	\$0	\$36,372
7	Reclaimed WRF Runoff Collection Channel - pea gravel	6,100	6,100	777D/992G	754	3	8	\$2,461	\$10,765	\$0	\$0	\$0	\$13,226
8	Upper Contact Water Pond Backfill, growth media, reveg	3,000,000	3,000,000	777D/992G	707	2	4,242	\$1,042,090	\$4,663,315	\$0	\$0	\$0	\$5,705,405
9	Lower CWD Breach and Slope	172,500	172,500	777D/992G	707	2	244	\$59,941	\$268,234	\$0	\$0	\$0	\$328,175
10	Snow Gulch Fresh Water Dam Breach	352,200	352,200	777D/992G	707	2	498	\$122,339	\$547,461	\$0	\$0	\$0	\$669,800
11	Primary Channel (WRF) cushion layer	278,999	83,700	777D/992G	807	10	346	\$242,740	\$1,021,320	\$66,515	\$0	\$0	\$1,330,575
12	Primary Channel (WRF) Armor Layer	169,800	84,900	777D/992G	807	10	210	\$159,213	\$673,063	\$67,469	\$0	\$0	\$899,745
13	Secondary Channel (WRF) Armor Layer	72,400	36,200	777D/992G	807	10	90	\$68,129	\$287,984	\$28,767	\$0	\$0	\$384,880
		37,457,799	37,141,400				55,566	\$14,185,186	\$63,244,297	\$162,751	\$0	\$0	\$77,592,234

Notes: Final Material Volume includes allowance for additional material hauled to crushing/screening plant based on Loss to Crushing/Screening input above.

Closure Cost Estimate
Haul Material

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$14,185,186	\$63,407,048	N/A	\$77,592,234
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$245,552	N/A	\$304,898
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$14,250,580	\$63,654,350	\$12,019	\$77,916,949

Generic Material Hauling - Cover and Growth Media Costs																	
		Cover Placement							Growth Media Placement								
		Cover Volume m3	Cover Placement Fleet	Cover Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$	Growth Media Volume m3	Growth Media Placement Fleet	Growth Media Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoil Placement Cost \$
1	NAG rock fill (Capillary Break Fill)						\$0	\$0	\$0	0					\$0	\$0	\$0
2	NAG rock fill (Capillary Break/Consolidation Fill)						\$0	\$0	\$0	0					\$0	\$0	\$0
3	Tailings Spillway (Excavate and Fill)						\$0	\$0	\$0	0					\$0	\$0	\$0
4	Removal of Contact Pond Dam						\$0	\$0	\$0	0					\$0	\$0	\$0
5	Removal of Rock Groyne (Primary Crusher)						\$0	\$0	\$0	0					\$0	\$0	\$0
6	Reclaimed WRF Runoff Collection Channel - liner bedding						\$0	\$0	\$0	0					\$0	\$0	\$0
7	Reclaimed WRF Runoff Collection Channel - pea gravel						\$0	\$0	\$0	0					\$0	\$0	\$0
8	Upper Contact Water Pond Backfill, growth media, reveg						\$0	\$0	\$0	67,409	777D/992G	838	10	80	\$59,346	\$245,552	\$304,898
9	Lower CWD Breach and Slope						\$0	\$0	\$0	0					\$0	\$0	\$0
10	Snow Gulch Fresh Water Dam Breach						\$0	\$0	\$0	0					\$0	\$0	\$0
11	Primary Channel (WRF) cushion layer						\$0	\$0	\$0	0					\$0	\$0	\$0
12	Primary Channel (WRF) Armor Layer						\$0	\$0	\$0	0					\$0	\$0	\$0
13	Secondary Channel (WRF) Armor Layer						\$0	\$0	\$0	0					\$0	\$0	\$0
							\$0	\$0	\$0	67,409				80	\$59,346	\$245,552	\$304,898

**Closure Cost Estimate
Haul Material**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$14,185,186	\$63,407,048	N/A	\$77,592,234
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$59,346	\$245,552	N/A	\$304,898
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$14,244,532	\$63,652,600	\$0	\$77,897,132
Revegetation Cost	\$6,048	\$1,750	\$12,019	\$19,817
TOTALS	\$14,250,580	\$63,654,350	\$12,019	\$77,916,949

Generic Material Hauling - Scarifying/Revegetation Costs											
	Description (required)	Total Surface Area ha	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Cost \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Cost \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$	
1	NAG rock fill (Capillary Break Fill)	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2	NAG rock fill (Capillary Break/Consolidation Fill)	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3	Tailings Spillway (Excavate and Fill)	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
4	Removal of Contact Pond Dam	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
5	Removal of Rock Groyne (Primary Crusher)	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
6	Reclaimed WRF Runoff Collection Channel - liner bedding	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
7	Reclaimed WRF Runoff Collection Channel - pea gravel	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
8	Upper Contact Water Pond Backfill, growth media, reveg	22.47				\$0	\$6,048	\$1,750	\$12,019	\$19,817	
9	Lower CWD Breach and Slope	30.39		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
10	Snow Gulch Fresh Water Dam Breach	31.93		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
11	Primary Channel (WRF) cushion layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
12	Primary Channel (WRF) Armor Layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
13	Secondary Channel (WRF) Armor Layer	0.04		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		85.19		\$0	\$0	\$0	\$6,048	\$1,750	\$12,019	\$19,817	

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,613	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,613	\$11,967,932

Buildings & Foundation - User Input																	
You must fill in ALL green cells and relevant blue cells in this section for each building or facility																	
Facility Description			Physical - MANDATORY							Foundation Cover (1)			Growth Media (1) (entire footprint)				
	Description (required)	ID Code	Type	Length m	Width m	Eve Height m	Slab Thickness mm	Foundation Wall Thickness mm	Foundation Wall Height mm	Average Flat Area Long Dimension (ripping distance) m	Building Area Footprint (including surrounding facilities) ha	Foundation Cover Thickness mm	Distance from Foundation Cover Borrow Area m	Slope from Facility to Borrow Area % grade	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	Mine Site Washbay		Site Facilities - Structures	25	30	20	400	100	300			700	100	0.0	300	500	0.0
2	Mine Site Truck Shop		Site Facilities - Structures	186	49	19	300	250	300			700	100	0.0	300	500	0.0
3	Repair Shop		Site Facilities - Structures	35	51	7	200	250				700	100	0.0	300	500	0.0
4	Primary Crusher		Site Facilities - Structures	22	12	45	600	80	1,200			700	100	0.0	300	500	0.0
5	Primary Crusher - Concrete		Process - Crushing & Screening	22	12	33	1,000	750				700	100	0.0	300	500	0.0
6	Primary Crusher - Steel Bldg, Below Ground		Process - Crushing & Screening	10	9	42											
7	Primary Crusher - Steel Bldg, Above Ground		Process - Crushing & Screening	35	12	14											
8	Take-up Tower		Process - Plant & Buildings	28	15	10	600	250				3000	100	0.0	300	500	0.0
9	Conveyor (Total)		Process - Plant & Buildings	1812	2	2		300									
10	Drive House		Process - Plant & Buildings	27	11	22											
11	Ore Stockpile Cover		Process - Plant & Buildings	125		45											
12	Pebble Crusher		Process - Plant & Buildings	28	22	30	300	300	600			700	400	0.0	300	500	0.0
13	Grinding Building		Process - Plant & Buildings	96	48	35	300	100	600			700	400	0.0	300	500	0.0
14	Ball Mill Foundations (two total)		Process - Plant & Buildings	50	25	1	4,000					4000	400	0.0	300	500	0.0
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)		Process - Plant & Buildings	43.6	44	1											
16	SAG Mill Foundation		Process - Plant & Buildings	25	30	1	4,000					4000	400	0.0	300	500	0.0
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)		Process - Plant & Buildings	33.2	33	1											
18	POX Process Building - High Section		Process - Plant & Buildings	57.8	42	46	600	600	600			700	100	0.0	300	500	0.0
19	POX Process Building - Lower Section		Process - Plant & Buildings	102.5	42	28	600	600	600			700	100	0.0	300	500	0.0
20	POX Process Building - End addition		Process - Plant & Buildings	27.5	19	14	600	600	600			1000	400	0.0	300	500	0.0
21	POX Misc. Small Tanks (8)		Process - Plant & Buildings	32	4	5		100									
22	Autoclaves (2)		Process - Plant & Buildings	40	6	6		600									
23	Stock Tanks Concrete Contain.		Process - Plant & Buildings	150	60	0	500	100	600			700	400	0.0	300	500	0.0
24	Concrete Thickener Concrete		Process - Plant & Buildings	100	110	0	500	100	600			700	100	0.0	300	500	0.0
25	Flot./POX Thickener Concrete		Process - Plant & Buildings	240	140	0	600	250				700	400	0.0	300	500	0.0
26	Hot Cure Tanks		Process - Plant & Buildings	42	14	16		100									
27	Flotation Building		Process - Plant & Buildings	120	96	35	600	100	600			700	400	0.0	300	500	0.0
28	CIL Building		Process - Plant & Buildings	96	40	38	600	230	600			700	400	0.0	300	500	0.0
29	Refinery		Process - Plant & Buildings	32	24	35	600	250	600			700	400	0.0	300	500	0.0
30	Cyanide Reagent Building		Process - Plant & Buildings	32	96	35	600	100	600			700	300	0.0	300	500	0.0
31	Water Treatment Plant Building - Construction		Process - Plant & Buildings	24.4	12	8	600	300	600			700	100	0.0	300	500	0.0
32	Water Treatment Plant Building - Operation		Process - Plant & Buildings	45.5	26	14	600	300	300			700	100	0.0	300	500	0.0
33	Man Camp - Airstrip		Off Site Facilities	65	11	23	100	150				700	300	0.0	300	500	0.0
34	Man Camp - Airstrip		Off Site Facilities	65	11	23	100	150				700	300	0.0	300	500	0.0
35	Man Camp - Airstrip		Off Site Facilities	98	11	23	100	150				700	300	0.0	300	500	0.0
36	Man Camp - Airstrip		Off Site Facilities	98	11	23	100	150				700	300	0.0	300	500	0.0
37	Man Camp - Airstrip		Off Site Facilities	72	11	23	100	150				700	300	0.0	300	500	0.0
38	Man Camp - Airstrip		Off Site Facilities	77.2	29	12	100	150				700	300	0.0	300	500	0.0
39	STP Building		Off Site Facilities	18.3	12	7	300	150				700	300	0.0	300	500	0.0
40	Power Station A/B Buildings		Site Facilities - Buildings	120	30	15	300	100				700	400	0.0	300	500	0.0
41	Power Station A Gensets		Site Facilities - Buildings	70	15	4		100									
42	Power station A Transformers		Site Facilities - Buildings	24	20	4		100									
43	Power Station A Tanks		Site Facilities - Buildings	20	20	15		100									
44	Power Station A Building		Site Facilities - Buildings	36	20	12	300	100				700	300	0.0	300	500	0.0
45	Power Station A Building (small)		Site Facilities - Buildings	32	18	6	200	100				700	300	0.0	300	500	0.0
46	Power Station B Gensets		Site Facilities - Buildings	70	15	4		100									
47	Power station B Transformers		Site Facilities - Buildings	24	20	4		100									
48	Power Station B Tanks		Site Facilities - Buildings	20	20	15		100									
49	Power Station B Building (small)		Site Facilities - Buildings	32	18	6	200	100				700	300	0.0	300	500	0.0
50	Cold Storage Building		Process - Other	46	23	8	300	100	600			700	100	0.0	300	500	0.0
51	Autoclave Feed Tanks		Process - Plant & Buildings	18	18	14		100									
52	Quench/Flash/Heaters		Process - Plant & Buildings	11	11	35		300									
53	Absorber Towers		Process - Plant & Buildings	6	6	8		300									
54	Cooling Towers		Process - Plant & Buildings	12	12	8		300									
55	Mercury Scrubbing		Process - Plant & Buildings	12	6	8		300									
56	Quench Building (60 m total H)		Process - Plant & Buildings	54.5	22	35	300	100				700	100	0.0	300	500	0.0
57	Autoclave		Process - Plant & Buildings	40	6	6		100									
58	HP cooling tank		Process - Plant & Buildings	12	12	14		100									
59	Demin Tank		Process - Plant & Buildings	8	8	8		100									

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,613	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,613	\$11,967,932

60	Seal Water Tank	Process - Plant & Buildings	4	4	8	100											
61	Autoclave Feed Pumps	Process - Plant & Buildings	6	5	3	100											
62	LP Column	Process - Plant & Buildings	12	12	10	100											
63	HP Column	Process - Plant & Buildings	12	12	10	100											
64	Main Heat Exchanger	Process - Plant & Buildings	16	12	10	100											
65	Wash Water Tower	Process - Plant & Buildings	7	7	7	100											
66	Chilled Water Tower	Process - Plant & Buildings	7	7	7	100											
67	Compressors (3)	Process - Plant & Buildings	55	10	10	100				700	100	0.0	300	500	0.0		
68	Warehouse	Site Facilities - Buildings	46	31	9	300	300			700	100	0.0	300	500	0.0		
69	Boiler Room	Process - Plant & Buildings	30	30	9	300	600			700	100	0.0	300	500	0.0		
70	STP Building	Process - Plant & Buildings	49	18	8	300	600			700	100	0.0	300	500	0.0		
71	Utilidor	Off Site Facilities	215	5	7												
72	RO plant (not to be demolished, required for treatment)	Process - Other															

Notes:

1. Foundation cover only calculated to cover slab. Growth media estimated over entire footprint area

2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Buildings and Tanks per AMEC drawings.

Bridge demolition measurements from Amec drawings. Assumed same cost as large steel building.

Break and bury in place costs selected to cover burial costs at waste dump and breakup cost to prepare for hauling.

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

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Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,513	\$11,967,932

Buildings & Foundation - User Input (cont.)																
You must fill in ALL green cells and relevant blue cells in this section for each building or facility																
Description (required)	Construction Materials			Slab Demolition		Foundation Cover			Growth Media			Revegetation				
	Building Type (select)	Foundation Type (select)	Wall Type (select)	Slab Demo Method (select)	Slab Breaking Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1 Mine Site Washbay	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
2 Mine Site Truck Shop	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
3 Repair Shop	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
4 Primary Crusher	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
5 Primary Crusher - Concrete	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
6 Primary Crusher - Steel Bldg. Below Ground	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
7 Primary Crusher - Steel Bldg. Above Ground	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
8 Take-up Tower	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
9 Conveyor (Total)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
10 Drive House	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
11 Ore Stockpile Cover	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
12 Pebble Crusher	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
13 Grinding Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
14 Ball Mill Foundations (two total)	Lg. concrete	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
15 Ball Mill Foundations (Concr.Piers Above Grade Slab.)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
16 SAG Mill Foundation	Lg. concrete	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
17 SAG Mill Foundation (Concr.Piers Above Grade Slab.)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
18 POX Process Building - High Section	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
19 POX Process Building - Lower Section	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
20 POX Process Building - End addition	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
21 POX Misc. Small Tanks (8)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
22 Autoclaves (2)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
23 Stock Tanks Concrete Contain.	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
24 Concrete Thickener Concrete	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
25 Flot.IPOX Thickener Concrete	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
26 Hot Cure Tanks	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
27 Flotation Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
28 CIL Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
29 Refinery	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
30 Cyanide Reagent Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
31 Water Treatment Plant Building - Construction	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
32 Water Treatment Plant Building - Operation	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
33 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
34 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
35 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
36 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
37 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
38 Man Camp - Airstrip	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
39 STP Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
40 Power Station A/B Buildings	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
41 Power Station A Gensets	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
42 Power station A Transformers	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
43 Power Station A Tanks	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
44 Power Station A Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
45 Power Station A Building (small)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
46 Power Station B Gensets	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
47 Power station B Transformers	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
48 Power Station B Tanks	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
49 Power Station B Building (small)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
50 Cold Storage Building	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
51 Autoclave Feed Tanks	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
52 Quench/Flash/Heaters	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
53 Absorber Towers	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
54 Cooling Towers	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
55 Mercury Scrubbing	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
56 Quench Building (60 m total H)	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
57 Autoclave	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
58 HP cooling tank	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
59 Demin Tank	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
60 Seal Water Tank	Lg. steel	Block 8 in (200 mm) thick		Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,513	\$11,967,932

61	Autoclave Feed Pumps	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
62	LP Column	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
63	HP Column	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
64	Main Heat Exchanger	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
65	Wash Water Tower	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
66	Chilled Water Tower	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
67	Compressors (3)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
68	Warehouse	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
69	Boiler Room	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
70	STP Building	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
71	Utilidor	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		User Mix 1		Chemical		
72	RO plant (not to be demolished, required for treatment)	Lg. steel	Block 8 in (200 mm) thick	Bury in place	Med Excavator	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical		

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Closure Cost Estimate
Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

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	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,513	\$11,967,932

Buildings & Foundation - Calculations

Building Volume Calculations

Using Means Heavy Construction Cost Data (2004) calculates cubic feet from building dimensions

Estimate slab thickness and wall thickness if not known

Assumes that all concrete slabs are reinforced

Productivity for crew from Means Heavy Construction Cost Data (2004) adjusted for supervision

(addressed in Misc. Costs) and Davis-Bacon Wage Rates

Demolition costs do not include hauling or disposing if debris - Use Waste Disposal module

Slab Demolition Calculations

Minimum 1 hr excavator time for slab demolition

Cover Volume Calculation

Foundation area x cover thickness

If "Bury in Place" is selected as slab demolition method, cover thickness is adjusted such that

total cover (cover + growth media) equals value entered in "Minimum thickness of cover over unbroken slab" cell above

Ripping/Scarifying Calculations

Flat area width = Final flat area ÷ Average long dimensions

Number of passes = Flat area width ÷ Grader width

Travel distance = Number of passes x Average long dimensions

Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation

Minimum 1 acre revegetation crew time per area

Closure Cost Estimate Foundations & Buildings

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

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Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

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Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,613	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,613	\$11,967,932

	Description (required)	Building Footprint (slab area) sq ft	Building Volume cu yd	Wall Length ft	Wall Area sq ft	Slab Demolition Fleet	Slab Volume cu yd	Building Demolition		Wall Demolition		Slab Demolition		Total Costs	
								Total Labor Cost \$	Total Equipment Cost \$	Total Building Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Slab Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$
1	Mine Site Washbay	750	15,000	110	33	3458	300	\$70,188	\$31,518	\$101,706	\$796	\$0	\$796	\$0	\$0
2	Mine Site Truck Shop	9,114	168,610	470	141	3458	2,734	\$788,959	\$354,287	\$1,143,246	\$3,400	\$0	\$3,400	\$0	\$0
3	Repair Shop	1,785	12,495	172	0	3458	357	\$58,467	\$26,255	\$84,722	\$0	\$0	\$0	\$0	\$0
4	Primary Crusher	264	11,880	68	0	3458	158	\$55,588	\$24,962	\$80,550	\$1,977	\$0	\$1,977	\$0	\$0
5	Primary Crusher - Concrete	264	8,712	68	0	3458	264	\$40,765	\$18,306	\$59,071	\$0	\$0	\$0	\$0	\$0
6	Primary Crusher - Steel Bldg, Below Ground	90	3,780	38	0	3458	0	\$17,687	\$7,943	\$25,630	\$0	\$0	\$0	\$0	\$0
7	Primary Crusher - Steel Bldg, Above Ground	420	5,880	94	0	3458	0	\$27,514	\$12,355	\$39,869	\$0	\$0	\$0	\$0	\$0
8	Take-up Tower	420	4,200	86	0	3458	252	\$19,653	\$8,825	\$28,478	\$0	\$0	\$0	\$0	\$0
9	Conveyor (Total)	3,624	7,249	3,628	0	3458	0	\$33,918	\$15,231	\$49,149	\$0	\$0	\$0	\$0	\$0
10	Drive House	297	6,534	76	0	3458	0	\$30,574	\$13,729	\$44,303	\$0	\$0	\$0	\$0	\$0
11	Ore Stockpile Cover	0	0	250	0	3458	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	Pebble Crusher	616	18,480	100	60	3458	185	\$86,471	\$38,830	\$125,301	\$1,447	\$0	\$1,447	\$0	\$0
13	Grinding Building	4,626	161,279	288	173	3458	1,382	\$754,657	\$338,884	\$1,093,541	\$4,171	\$0	\$4,171	\$0	\$0
14	Ball Mill Foundations (two total)	1,250	1,250	150	0	3458	5,000	\$8,237	\$3,686	\$11,923	\$0	\$0	\$0	\$0	\$0
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	1,901	1,901	174	0	3458	0	\$8,883	\$3,994	\$12,877	\$0	\$0	\$0	\$0	\$0
16	SAG Mill Foundation	750	750	110	0	3458	3,000	\$4,942	\$2,212	\$7,154	\$0	\$0	\$0	\$0	\$0
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	1,101	1,101	133	0	3458	0	\$5,153	\$2,314	\$7,467	\$0	\$0	\$0	\$0	\$0
18	POX Process Building - High Section	2,399	110,341	199	119	3458	1,439	\$516,306	\$231,851	\$748,157	\$2,869	\$0	\$2,869	\$0	\$0
19	POX Process Building - Lower Section	4,254	119,105	288	173	3458	2,552	\$557,319	\$250,268	\$807,587	\$4,171	\$0	\$4,171	\$0	\$0
20	POX Process Building - End addition	512	7,161	92	55	3458	307	\$33,508	\$15,047	\$48,555	\$1,326	\$0	\$1,326	\$0	\$0
21	POX Misc. Small Tanks (8)	128	640	72	0	3458	0	\$2,995	\$1,345	\$4,340	\$0	\$0	\$0	\$0	\$0
22	Autoclaves (2)	240	1,440	92	0	3458	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0
23	Stock Tanks Concrete Contain.	9,000	0	420	252	3458	4,500	\$0	\$0	\$0	\$6,076	\$0	\$6,076	\$0	\$0
24	Concrete Thickener Concrete	11,000	0	420	252	3458	5,500	\$0	\$0	\$0	\$6,076	\$0	\$6,076	\$0	\$0
25	Flot/POX Thickener Concrete	33,600	0	760	0	3458	20,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Hot Cure Tanks	588	9,408	112	0	3458	0	\$44,022	\$19,768	\$63,790	\$0	\$0	\$0	\$0	\$0
27	Flotation Building	11,520	403,199	432	259	3458	6,912	\$1,886,647	\$847,212	\$2,733,859	\$6,244	\$0	\$6,244	\$0	\$0
28	CIL Building	3,840	145,921	272	163	3458	2,304	\$682,791	\$306,612	\$989,403	\$3,930	\$0	\$3,930	\$0	\$0
29	Refinery	768	26,880	112	67	3458	461	\$125,776	\$56,481	\$182,257	\$1,615	\$0	\$1,615	\$0	\$0
30	Cyanide Reagent Building	3,072	107,520	256	154	3458	1,843	\$503,106	\$225,923	\$729,029	\$3,713	\$0	\$3,713	\$0	\$0
31	Water Treatment Plant Building - Construction	298	2,233	73	44	3458	179	\$10,447	\$4,691	\$15,138	\$1,061	\$0	\$1,061	\$0	\$0
32	Water Treatment Plant Building - Operation	1,183	16,207	143	43	3458	710	\$75,837	\$34,055	\$109,892	\$1,037	\$0	\$1,037	\$0	\$0
33	Man Camp - Airstrip	741	17,043	153	0	3458	74	\$79,748	\$35,811	\$115,559	\$0	\$0	\$0	\$0	\$0
34	Man Camp - Airstrip	741	17,043	153	0	3458	74	\$79,748	\$35,811	\$115,559	\$0	\$0	\$0	\$0	\$0
35	Man Camp - Airstrip	1,117	25,696	219	0	3458	112	\$120,235	\$53,993	\$174,228	\$0	\$0	\$0	\$0	\$0
36	Man Camp - Airstrip	1,117	25,696	219	0	3458	112	\$120,235	\$53,993	\$174,228	\$0	\$0	\$0	\$0	\$0
37	Man Camp - Airstrip	821	18,878	167	0	3458	82	\$88,336	\$39,668	\$128,004	\$0	\$0	\$0	\$0	\$0
38	Man Camp - Airstrip	2,262	27,143	213	0	3458	226	\$127,010	\$57,035	\$184,045	\$0	\$0	\$0	\$0	\$0
39	STP Building	223	1,563	61	0	3458	67	\$7,313	\$3,284	\$10,597	\$0	\$0	\$0	\$0	\$0
40	Power Station A/B Buildings	3,600	54,001	300	0	3458	1,080	\$252,678	\$113,467	\$366,145	\$0	\$0	\$0	\$0	\$0
41	Power Station A Gensets	1,050	4,200	170	0	3458	0	\$19,652	\$8,825	\$28,477	\$0	\$0	\$0	\$0	\$0
42	Power station A Transformers	480	1,920	88	0	3458	0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0
43	Power Station A Tanks	400	6,000	80	0	3458	0	\$28,076	\$12,608	\$40,684	\$0	\$0	\$0	\$0	\$0
44	Power Station A Building	720	8,640	112	0	3458	216	\$40,428	\$18,155	\$58,583	\$0	\$0	\$0	\$0	\$0
45	Power Station A Building (small)	576	3,456	100	0	3458	115	\$16,171	\$7,262	\$23,433	\$0	\$0	\$0	\$0	\$0
46	Power Station B Gensets	1,050	4,200	170	0	3458	0	\$19,652	\$8,825	\$28,477	\$0	\$0	\$0	\$0	\$0
47	Power station B Transformers	480	1,920	88	0	3458	0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0
48	Power Station B Tanks	400	6,000	80	0	3458	0	\$28,076	\$12,608	\$40,684	\$0	\$0	\$0	\$0	\$0
49	Power Station B Building (small)	576	3,456	100	0	3458	115	\$16,171	\$7,262	\$23,433	\$0	\$0	\$0	\$0	\$0
50	Cold Storage Building	1,058	8,464	138	83	3458	317	\$39,605	\$17,785	\$57,390	\$2,001	\$0	\$2,001	\$0	\$0
51	Autoclave Feed Tanks	324	4,536	72	0	3458	0	\$21,225	\$9,531	\$30,756	\$0	\$0	\$0	\$0	\$0
52	Quench/Flash/Heaters	121	4,235	44	0	3458	0	\$19,816	\$8,899	\$28,715	\$0	\$0	\$0	\$0	\$0
53	Absorber Towers	36	288	24	0	3458	0	\$1,348	\$605	\$1,953	\$0	\$0	\$0	\$0	\$0
54	Cooling Towers	144	1,152	48	0	3458	0	\$5,390	\$2,421	\$7,811	\$0	\$0	\$0	\$0	\$0
55	Mercury Scrubbing	72	576	36	0	3458	0	\$2,695	\$1,210	\$3,905	\$0	\$0	\$0	\$0	\$0
56	Quench Building (60 m total H)	1,199	41,965	153	0	3458	359	\$196,361	\$88,177	\$284,538	\$0	\$0	\$0	\$0	\$0
57	Autoclave	240	1,440	92	0	3458	0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0
58	HP cooling tank	144	2,016	48	0	3458	0	\$9,433	\$4,236	\$13,669	\$0	\$0	\$0	\$0	\$0
59	Demin Tank	64	512	32	0	3458	0	\$2,396	\$1,076	\$3,472	\$0	\$0	\$0	\$0	\$0
60	Seal Water Tank	16	128	16	0	3458	0	\$599	\$269	\$868	\$0	\$0	\$0	\$0	\$0

Closure Cost Estimate Foundations & Buildings

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Cost Data: User Data

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
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Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$28,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$28,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,513	\$11,967,932

61	Autoclave Feed Pumps		30		90		22		0		345B		0	\$421	\$189	\$610	\$0	\$0	\$0	\$0	\$0	\$421	\$189	\$610
62	LP Column		144		1,440		48		0		345B		0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764
63	HP Column		144		1,440		48		0		345B		0	\$6,738	\$3,026	\$9,764	\$0	\$0	\$0	\$0	\$0	\$6,738	\$3,026	\$9,764
64	Main Heat Exchanger		192		1,920		56		0		345B		0	\$8,984	\$4,034	\$13,018	\$0	\$0	\$0	\$0	\$0	\$8,984	\$4,034	\$13,018
65	Wash Water Tower		49		343		28		0		345B		0	\$1,605	\$721	\$2,326	\$0	\$0	\$0	\$0	\$0	\$1,605	\$721	\$2,326
66	Chilled Water Tower		49		343		28		0		345B		0	\$1,605	\$721	\$2,326	\$0	\$0	\$0	\$0	\$0	\$1,605	\$721	\$2,326
67	Compressors (3)		550		5,500		130		0		345B		0	\$25,735	\$11,556	\$37,291	\$0	\$0	\$0	\$0	\$0	\$25,735	\$11,556	\$37,291
68	Warehouse		1,426		14,835		154		0		345B		0	\$80,054	\$37,968	\$118,022	\$0	\$0	\$0	\$0	\$0	\$80,054	\$37,968	\$118,022
69	Boiler Room		900		7,650		120		0		345B		270	\$35,796	\$16,074	\$51,870	\$0	\$0	\$0	\$0	\$0	\$35,796	\$16,074	\$51,870
70	STP Building		897		7,174		135		0		345B		269	\$33,567	\$15,073	\$48,640	\$0	\$0	\$0	\$0	\$0	\$33,567	\$15,073	\$48,640
71	Utilidor		1,075		7,525		440		0		345B		0	\$35,211	\$15,812	\$51,023	\$0	\$0	\$0	\$0	\$0	\$35,211	\$15,812	\$51,023
72	RO plant (not to be demolished, required for treatment)		0		0		0		0		345B		0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					1,717,583								64,415	\$8,040,715	\$3,610,720	\$11,651,435	\$51,910	\$0	\$51,910	\$0	\$0	\$8,092,625	\$3,610,720	\$11,703,345

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
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Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,613	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,613	\$11,967,932

Building & Foundation - Foundation Cover and Growth Media Costs																			
		Foundation Cover								Growth Media							Total Cover & Growth M		
	Description (required)	Cover Volume m3	Cover Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$	Total Labor Cost \$	Total Equipment Cost \$
1	Mine Site Washbay	525	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
2	Mine Site Truck Shop	6,379	777D/992G	499	1	13	\$2,387	\$11,090	\$13,477						\$0	\$0	\$0	\$2,387	\$11,090
3	Repair Shop	1,249	777D/992G	499	1	3	\$551	\$2,559	\$3,110						\$0	\$0	\$0	\$551	\$2,559
4	Primary Crusher	185	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
5	Primary Crusher - Concrete	185	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
6	Primary Crusher - Steel Bldg, Below Ground	83	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
7	Primary Crusher - Steel Bldg, Above Ground	384	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
8	Take-up Tower	1,260	777D/992G	499	1	3	\$551	\$2,559	\$3,110						\$0	\$0	\$0	\$551	\$2,559
9	Conveyor (Total)	3,314	777D/992G	530	1	6	\$1,102	\$5,118	\$6,220						\$0	\$0	\$0	\$1,102	\$5,118
10	Drive House	271	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
11	Ore Stockpile Cover						\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0
12	Pebble Crusher	431	777D/992G	437	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
13	Grinding Building	3,226	777D/992G	437	1	7	\$1,285	\$5,971	\$7,256						\$0	\$0	\$0	\$1,285	\$5,971
14	Ball Mill Foundations (two total)	5,000	777D/992G	437	1	11	\$2,020	\$9,384	\$11,404						\$0	\$0	\$0	\$2,020	\$9,384
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	1,738	777D/992G	530	1	3	\$551	\$2,559	\$3,110						\$0	\$0	\$0	\$551	\$2,559
16	SAG Mill Foundation	3,000	777D/992G	437	1	7	\$1,285	\$5,971	\$7,256						\$0	\$0	\$0	\$1,285	\$5,971
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	1,007	777D/992G	530	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
18	POX Process Building - High Section	1,679	777D/992G	499	1	3	\$551	\$2,559	\$3,110						\$0	\$0	\$0	\$551	\$2,559
19	POX Process Building - Lower Section	2,978	777D/992G	499	1	6	\$1,102	\$5,118	\$6,220						\$0	\$0	\$0	\$1,102	\$5,118
20	POX Process Building - End addition	511	777D/992G	437	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
21	POX Misc. Small Tanks (8)	117	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
22	Autoclaves (2)	219	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
23	Stock Tanks Concrete Contain.	6,300	777D/992G	437	1	14	\$2,571	\$11,943	\$14,514						\$0	\$0	\$0	\$2,571	\$11,943
24	Concrete Thickener Concrete	7,700	777D/992G	499	1	15	\$2,755	\$12,796	\$15,551						\$0	\$0	\$0	\$2,755	\$12,796
25	Flot/POX Thickener Concrete	23,520	777D/992G	437	1	54	\$9,917	\$46,065	\$55,982						\$0	\$0	\$0	\$9,917	\$46,065
26	Hot Cure Tanks	537	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
27	Flotation Building	8,064	777D/992G	437	1	18	\$3,306	\$15,355	\$18,661						\$0	\$0	\$0	\$3,306	\$15,355
28	CIL Building	2,688	777D/992G	437	1	6	\$1,102	\$5,118	\$6,220						\$0	\$0	\$0	\$1,102	\$5,118
29	Refinery	537	777D/992G	437	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
30	Cyanide Reagent Building	2,151	777D/992G	455	1	5	\$918	\$4,265	\$5,183						\$0	\$0	\$0	\$918	\$4,265
31	Water Treatment Plant Building - Construction	209	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
32	Water Treatment Plant Building - Operation	828	777D/992G	499	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
33	Man Camp - Airstrip	518	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
34	Man Camp - Airstrip	518	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
35	Man Camp - Airstrip	782	777D/992G	455	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
36	Man Camp - Airstrip	782	777D/992G	455	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
37	Man Camp - Airstrip	574	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
38	Man Camp - Airstrip	1,583	777D/992G	455	1	3	\$551	\$2,559	\$3,110						\$0	\$0	\$0	\$551	\$2,559
39	STP Building	156	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
40	Power Station A/B Buildings	2,520	777D/992G	437	1	6	\$1,102	\$5,118	\$6,220						\$0	\$0	\$0	\$1,102	\$5,118
41	Power Station A Gensets	960	777D/992G	530	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
42	Power station A Transformers	439	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
43	Power Station A Tanks	365	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
44	Power Station A Building	504	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
45	Power Station A Building (small)	403	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
46	Power Station B Gensets	960	777D/992G	530	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
47	Power station B Transformers	439	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
48	Power Station B Tanks	365	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
49	Power Station B Building (small)	403	777D/992G	455	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
50	Cold Storage Building	741	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
51	Autoclave Feed Tanks	296	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
52	Quench/Flash/Heaters	111	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
53	Absorber Towers	33	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
54	Cooling Towers	132	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
55	Mercury Scrubbing	66	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
56	Quench Building (60 m total H)	839	777D/992G	499	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
57	Autoclave	219	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
58	HP cooling tank	132	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
59	Demin Tank	59	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
60	Seal Water Tank	15	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,613	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,613	\$11,967,932

61	Autoclave Feed Pumps	28	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
62	LP Column	132	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
63	HP Column	132	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
64	Main Heat Exchanger	176	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
65	Wash Water Tower	45	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
66	Chilled Water Tower	45	777D/992G	530	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
67	Compressors (3)	385	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
68	Warehouse	999	777D/992G	499	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
69	Boiler Room	630	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
70	STP Building	628	777D/992G	499	1	1	\$184	\$853	\$1,037						\$0	\$0	\$0	\$184	\$853
71	Utilidor	983	777D/992G	530	1	2	\$367	\$1,706	\$2,073						\$0	\$0	\$0	\$367	\$1,706
72	RO plant (not to be demolished, required for treatment)						\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0
		105,372				244	\$44,822	\$208,140	\$252,962						\$0	\$0	\$0	\$44,822	\$208,140

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$6,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$6,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$6,145,290	\$3,821,129	\$1,513	\$11,967,932

Building & Foundation - Scarifying/Revegetation Costs															
	Description (required)	Flat Area ha	Area Long Dimension m	Scarifying/ Ripping Hours hrs	Scarifying/Ripping			Revegetation				Total Scarify & Revegation Costs			
					Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Costs \$
1	Mine Site Washbay	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
2	Mine Site Truck Shop	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
3	Repair Shop	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
4	Primary Crusher	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
5	Primary Crusher - Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
6	Primary Crusher - Steel Bldg. Below Ground	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
7	Primary Crusher - Steel Bldg. Above Ground	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
8	Take-up Tower	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
9	Conveyor (Total)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
10	Drive House	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
11	Ore Stockpile Cover	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
12	Pebble Crusher	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
13	Grinding Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
14	Ball Mill Foundations (two total)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
15	Ball Mill Foundations (Concr.Piers Above Grade Slab.)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
16	SAG Mill Foundation	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
17	SAG Mill Foundation (Concr.Piers Above Grade Slab.)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
18	POX Process Building - High Section	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
19	POX Process Building - Lower Section	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
20	POX Process Building - End addition	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
21	POX Misc. Small Tanks (8)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
22	Autoclaves (2)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
23	Stock Tanks Concrete Contain.	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
24	Concrete Thickener Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
25	Flot/POX Thickener Concrete	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
26	Hot Cure Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
27	Flotation Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
28	CIL Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
29	Refinery	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
30	Cyanide Reagent Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
31	Water Treatment Plant Building - Construction	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
32	Water Treatment Plant Building - Operation	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
33	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
34	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
35	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
36	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
37	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
38	Man Camp - Airstrip	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
39	STP Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
40	Power Station A/B Buildings	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
41	Power Station A Gensets	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
42	Power station A Transformers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
43	Power Station A Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
44	Power Station A Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
45	Power Station A Building (small)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
46	Power Station B Gensets	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
47	Power station B Transformers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
48	Power Station B Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
49	Power Station B Building (small)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
50	Cold Storage Building	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
51	Autoclave Feed Tanks	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
52	Quench/Flash/Heaters	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
53	Absorber Towers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
54	Cooling Towers	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
55	Mercury Scrubbing	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
56	Quench Building (60 m total H)	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
57	Autoclave	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
58	HP cooling tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
59	Demin Tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
60	Seal Water Tank	0.04	0		\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161

**Closure Cost Estimate
Foundations & Buildings**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$8,040,715	\$3,610,720	N/A	\$11,651,435
Wall Demolition Cost	\$51,910	\$0	N/A	\$51,910
Slab Demolition	\$0	\$0	N/A	\$0
Subtotal Demolition	\$8,092,625	\$3,610,720	\$0	\$11,703,345
Cover Placement Cost	\$44,822	\$208,140	N/A	\$252,962
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$44,822	\$208,140	\$0	\$252,962
Revegetation Cost	\$7,843	\$2,269	\$1,513	\$11,625
TOTALS	\$8,145,290	\$3,821,129	\$1,513	\$11,967,932

61	Autoclave Feed Pumps	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
62	LP Column	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
63	HP Column	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
64	Main Heat Exchanger	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
65	Wash Water Tower	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
66	Chilled Water Tower	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
67	Compressors (3)	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
68	Warehouse	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
69	Boiler Room	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
70	STP Building	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
71	Utilidor	0.04	0	\$0	\$0	\$0	\$109	\$32	\$21	\$161	\$109	\$32	\$21	\$161
72	RO plant (not to be demolished, required for treatment)	0.04	0	\$0	\$0	\$0	\$109	\$32	\$22	\$162	\$109	\$32	\$22	\$162
		2.88		\$0	\$0	\$0	\$7,843	\$2,269	\$1,513	\$11,625	\$7,843	\$2,269	\$1,513	\$11,625

Closure Cost Estimate
Foundations & Buildings

Closure Cost Estimate
Foundations & Buildings

Closure Cost Estimate Foundations & Buildings

[illegible]

Closure Cost Estimate
Foundations & Buildings

	\$1.037
	\$1.037
	\$1.037
	\$1.037
	\$1.037
	\$1.037
	\$1.037
	\$2.073
	\$1.037
	\$1.037
	\$2.073
	\$0
	\$252.962

Closure Cost Estimate
Foundations & Buildings

Closure Cost Estimate
Foundations & Buildings

**Closure Cost Estimate
Other Demo & Equip Removal**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Other Demolition and Equipment Removal - Cost Summary				
	Labor	Equipment	Materials	Totals
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$88,814	\$160,962	\$0	\$249,776
TOTALS	\$88,814	\$160,962	\$0	\$249,776

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Other Demolition									
Facility Description									
	Description (required)	ID Code	Type	Quantity	Units	Labor Unit Cost \$	Equipment Unit Cost \$	Material Unit Cost \$	Total Cost \$
						\$0	\$0	\$0	

Notes:

Equipment & Material Removal									
Facility Description									
	Description (required)	ID Code	Type	Quantity	Units	Labor Unit Cost (\$)	Equipment Unit Cost (\$)	Material Unit Cost (\$)	Total Cost (\$)
1	Misc. Tanks and Vessels (see file "Equipment List_RevK_Tanks and Vessels.DemoCost.PL.xls)		Process - Plant & Buildings	1	ea	\$88,814.14	\$160,962.33		\$249,776
						\$88,814	\$160,962	\$0	\$249,776

Notes:

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Diversion Ditches - User Input																
			Diversion Ditches							Revegetation			Liner and Rip-Rap Installation			
	Description (required)	ID Code	Diversion Length m	Diversion Depth m	Ditch Bottom Width m	Ditch Sideslope Angle _H:1V	Excavate Volume (if calculated elsewhere) m3	Excavating Material Condition (select)	Excavating Equipment Fleet (select)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Liner Area m2	Liner Type (select)	Rip-Rap Area m2	Rip-Rap Type (select type)
1	Reclaimed WRF RO Collection		4425	2.0	4.0	2.0	87,600	1	Medium	User Mix 1					34,222	Rip-Rap 18 in (45
2	Primary Channel (WRF)		12000	2.0	4.0	2.0		1	Medium	User Mix 1			130700	40 mil VLDPE	130,700	Rip-Rap 3/8 to 1/4
3	Secondary Channel (WRF)		26000	1.0	2.0	2.0		1	Medium	User Mix 1					156,000	Rip-Rap 3/8 to 1/4
4	Tailings Spillway Structure (exc. 724,000m3)		500	15.0	15.0	3.0	724,000	0.6	Medium	User Mix 1						

Notes:

Item 2 and Item 3 diversion lengths and liner area from "DC11-028_Closure_Period_MTOs_for_WRF_Diversion_Channels.pdf"

Closure Cost Estimate
Sediment & Drainage Control

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Sediment/Evaporation Pond Construction/Removal - User Input													
			Sediment Ponds								Growth Media		
	Description (required)	ID Code	Pond Width m	Pond/Berm Length m	Berm Height m	Crest Width m	Sideslope Angle _H:1V	Final Area (if calculated elsewhere) ha	Regrade Volume (if calculated elsewhere) m3	Cover Volume (if calculated elsewhere) m3	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Pond to Borrow % grade

- Notes:
- 1. All Physical parameters must be input even if manual overrides for volume or area are used.
 - 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
 - 3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Sediment/Evaporation Pond Construction/Removal - User Input (cont.)													
		Sediment Ponds				Growth Media			Revegetation			Ripping/Scarifying	
Description (required)	Excavating Material Condition (select)	Material Type (select)	Excavating Equipment Fleet (select)	Liner Type (select)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)		Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Scarify/ Ripping Fleet (select)

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Drainage Control - Calculations

Diversion Ditch Volume Calculation

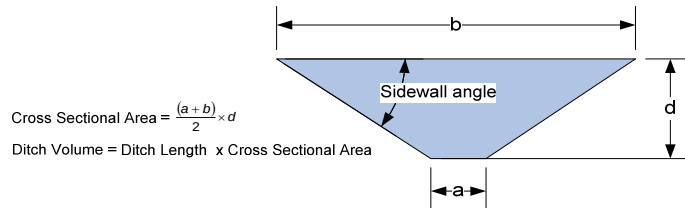


Figure 1 - Ditch Volume Calculation

- 1) Assume 20% swell for excavations
- 2) Assumes heavy duty trenching bucket is used

Sediment/Evaporation Pond Construction Calculation

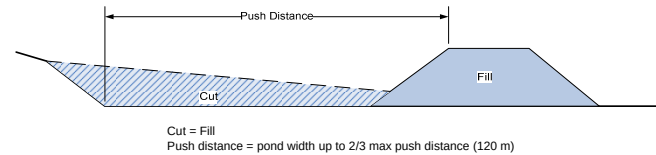


Figure 2 - Sediment Ponds

- 1) Assume balanced cut-to-fill for berm construction
- 2) Include cost for liner, if required.
- 3) Include line items for removal, if necessary.
- 4) Assume 20% swell for excavations
- 5) Minimum 1 hr ripping/scarifying per area
- 6) Minimum 0.4 ha revegetation crew time per area

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Diversion Ditches - Excavation Costs									Liner Installation				Rip-Rap Installation			
	Description (required)	Diversion Ditch Volume LCM	Diversion Ditch Equipment	Corrected Excavator Productivity LCM/hr	Total Hours	Diversion Ditch Labor Cost \$	Diversion Ditch Equipment Cost \$	Total Diversion Ditch Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Reclaimed WRF RO Collection	105,120	345B	480	239	\$14,534	\$26,161	\$40,695	\$0	\$0	\$0	\$0	\$1,585,163	\$446,597	\$0	\$2,031,760
2	Primary Channel (WRF)	252,844	345B	480	689	\$41,898	\$75,418	\$117,316	\$1,912,141	\$806,419	\$914,900	\$3,633,460	\$3,975,894	\$1,120,099	\$5,132,369	\$10,228,362
3	Secondary Channel (WRF)	113,045	345B	480	308	\$18,729	\$33,714	\$52,443	\$0	\$0	\$0	\$0	\$4,745,520	\$1,336,920	\$6,125,857	\$12,208,297
4	Tailings Spillway Structure (exc. 724,000m3)	868,800	345B	480	1,973	\$119,978	\$215,965	\$335,943	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		1,339,809			3,209	\$195,139	\$351,258	\$546,397	\$1,912,141	\$806,419	\$914,900	\$3,633,460	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419

Notes: LCM assumes 20% swell from ditch volume

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Diversion Ditches - Revegetation Costs						
	Description (required)	Surface Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Reclaimed WRF RO Collection	5.99	\$1,612	\$466	\$2,308	\$4,386
2	Primary Channel (WRF)	16.19	\$4,357	\$1,260	\$6,237	\$11,854
3	Secondary Channel (WRF)	16.19	\$4,357	\$1,260	\$6,237	\$11,854
4	Tailings Spillway Structure (exc. 724,000m3)	5.46	\$1,471	\$425	\$2,103	\$3,999
		43.83	\$11,797	\$3,411	\$16,885	\$32,093

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Sediment/Evaporation Ponds - Construction/Regrading Costs																
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83)											Earthwork			Liner		
	Description (required)	Regrading Volume m3	Sed/Evap Pond Equipment	Dozing Distance (see above) m	Uncorrected Dozer Productivity LCM/hr	Grade Correction	Density Correction	Excavating Material	Corrected Productivity LCM/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Constr/ Regrading Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$
											\$0	\$0	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Sediment/Evaporation Ponds - Growth Media Costs									
Growth Media									
	Description (required)	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$
							\$0	\$0	\$0

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$195,139	\$351,258	N/A	\$546,397
Diversion Ditch Liner	\$1,912,141	\$806,419	\$914,900	\$3,633,460
Diversion Ditch Rip-Rap	\$10,306,577	\$2,903,616	\$11,258,226	\$24,468,419
Sed Pond Construct/Regrade	\$0	\$0	N/A	\$0
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$12,413,857	\$4,061,293	\$12,173,126	\$28,648,276
Diversion Ditch Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$11,797	\$3,411	\$16,885	\$32,093
TOTALS	\$12,425,654	\$4,064,704	\$12,190,011	\$28,680,369

Sediment/Evaporation Ponds - Revegetation Costs													
		Description (required)	Surface Area ha	Long Ripping Distance m	Area Width m	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
						0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Process Ponds**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - User Input														
You must fill in ALL green cells and relevant blue cells in this section for each pond														
Facility Description			Pond Dimensions (1)					Backfill - (If trucks are used) (1)				Growth Media		
	Description (required)	ID Code	Pond Length m	Pond Width m	Pond Depth m	Pond Sideslope Angle _H:1V	Disturbed Area (if calculated elsewhere) ha	Percent Backfill (100% if blank)	Distance from Backfill Borrow m	Slope from Facility to Borrow Area % grade	Pond Volume (if calculated elsewhere) m3	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	TSF seepage pond (required long-term for water treatment)		100	75	10.0	2.0	1.25		4,400	-5%		350	4,400	-5%

- Notes:
- 1. All Physical parameters must be input even if manual overrides for volume or area are used.
 - 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)



Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - User Input (cont.)											
		Liner	Backfill			Growth Media			Revegetation		
	Description (required)	Crew Cut & Fold Time ⁽²⁾ hrs	Backfill Material Type (select)	Backfill Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	TSF seepage pond (required long-term for water treatment)	16.0	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
- (2) Pond liner removal crew (2Clab + excavator) = 2 General Laborers + 325C Excavator

Closure Cost Estimate Process Ponds

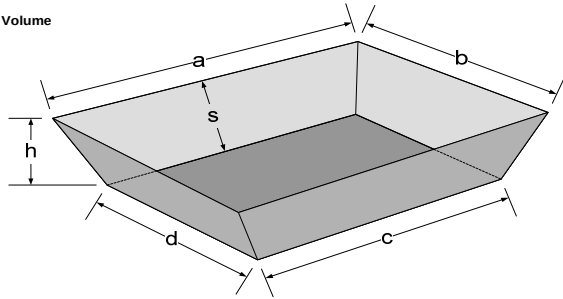
Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
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 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - Calculations

Pond Volume Calculation

Figure 1 - Pond Volume



Area and Volume of the Frustrum of a Pyramid

$$\text{Surface Area} = ab + cd + (a+b+c+d) \times \frac{s}{2}$$

$$\text{Volume} = \frac{h(ab + cd + \sqrt{abcd})}{3}$$

Revegetation Calculations

Minimum 0.4 ha revegetation crew time per area

**Closure Cost Estimate
Process Ponds**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - Liner Cutting and Folding					
	Description (required)	Crew Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$
1	TSF seepage pond (required long-term for water treatment)	16	\$2,098	\$1,070	\$3,168
		16	\$2,098	\$1,070	\$3,168

Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - Backfill and Growth Media Costs																		
		Pond Backfill								Growth Media								
	Description (required)	Backfill Volume m3	Backfill Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Backfill Cost \$	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$	
1	TSF seepage pond (required long-term for water treatment)	45,319	777D/992G	804	4	56	\$20,703	\$89,143	\$109,846	4,461	777D/992G	804	4	6	\$2,218	\$9,551	\$11,769	
		45,319				56	\$20,703	\$89,143	\$109,846	4,461				6	\$2,218	\$9,551	\$11,769	

Closure Cost Estimate Process Ponds

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$20,703	\$89,143	N/A	\$109,846
Growth Media Placement Costs	\$2,218	\$9,551	N/A	\$11,769
Liner Cutting & Folding Costs	\$2,098	\$1,070	N/A	\$3,168
Subtotal Earthworks	\$25,019	\$99,764	\$0	\$124,783
Revegetation Costs	\$338	\$98	\$486	\$922
TOTALS	\$25,357	\$99,862	\$486	\$125,705

Process Ponds - Revegetation Costs						
	Description (required)	Surface Area ha	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	TSF seepage pond (required long-term for water treatment)	1.25	\$338	\$98	\$486	\$922
		1.25	\$338	\$98	\$486	\$922

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - User Input												
You must fill in ALL green cells and relevant blue cells in this section for each building or facility												
Facility Description				Physical			Cover			Growth Media		
	Description (required)	ID Code	Type	Area ha	Average Flat Area Long Dimension (ripping distance) m	Regrade Volume (calculated elsewhere) m3	Cover Thickness mm	Distance from Cover Borrow Area m	Slope from Facility to Borrow Area % grade	Growth Media Thickness mm	Distance from Growth Media Stockpile m	Slope from Facility to Stockpile % grade
1	Permanent Man Camp Yards		Yard	14.84	100	29,679				300	1,000	0.0
2	Material Sites		Other Facilities	198.61	100	397,220				300	100	0.0
3	Lower Contact Water Dam (see "Haul Material" sheet)											
4	Upper Contact Water Dam (see "Haul Material" sheet)											
5	Jung Port Disturbance (not reclaimed)		Yard	8.48		16,960						
6	Mine Borrow Areas		Yard	74.21	1,000	148,420				300	1,000	0.0
7	Growth media - TSF Stockpile 1		Yard	48.88	1,000	97,760						
8	Growth media - TSF Stockpile 3		Yard	80.42	1,000	160,840						
9	Growth media - TSF Stockpile 2		Yard	22.96	1,000	45,920						
10	Growth media - North Overburden Stockpile 2028		Yard	64.79	1,000	129,580						
11	Growth media - Airstrip Overburden Stockpile		Yard	3.78	1,000	7,560						
12	Growth media - Airstrip Overburden Stockpile		Yard	4.78	1,000	9,560						
13	Growth media - Jungjuk Port Site Overburden Stockpile		Yard	2.06	1,000	4,120						
14	Growth media - North Overburden Stockpile 2028 - buffer		Yard	17.06	1,000	34,120						
15	Growth media - South Overburden Stockpile 2019		Yard	22.53	1,000	45,060						
16	Misc. Yards		Yard	484.60	2,000	969,200				300	1,000	0.0
17	Plant Site		Yard	9.79	1,000	19,580				300	1,000	0.0
18	Primary Crusher		Yard	1.85	1,000	3,700				300	1,000	0.0
19	Truck Shop		Yard	0.09	1,000	180				300	1,000	0.0
20	Airstrip (Not Reclaimed)		Yard	35.99								

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Assume nominal amount of regrading required - m3 per ha: 2000

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - User Input (cont.)															
You must fill in ALL green cells and relevant blue cells in this section for each building or facility															
	Description (required)	Grading			Cover			Growth Media			Revegetation				
		Dozing Material Condition (select)	Dozing Material Type (select)	Grading Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1	Permanent Man Camp Yards	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
2	Material Sites	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
3	Lower Contact Water Dam (see "Haul Material" sheet)														
4	Upper Contact Water Dam (see "Haul Material" sheet)														
5	Jung Port Disturbance (not reclaimed)														
6	Mine Borrow Areas	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
7	Growth media - TSF Stockpile 1	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
8	Growth media - TSF Stockpile 3	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
9	Growth media - TSF Stockpile 2	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
10	Growth media - North Overburden Stockpile 2028	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
11	Growth media - Airstrip Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
12	Growth media - Airstrip Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
13	Growth media - Jungjuk Port Site Overburden Stockpile	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
14	Growth media - North Overburden Stockpile 2028 - buffer	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
15	Growth media - South Overburden Stockpile 2019	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
16	Misc. Yards	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
17	Plant Site	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
18	Primary Crusher	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
19	Truck Shop	1	Alluvium	Med	Alluvium	Med Truck		Alluvium	Med Truck		Mix 1		Chemical	Yes	Large Dozer
20	Airstrip (Not Reclaimed)														

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - Calculations
Grading Calculations Average push distance assumed to be 2/3 of the 180 m maximum from Caterpillar Handbook or 120 m Material assumed to be loose stockpile (1.2 productivity factor) Slope assumed to be 0 to 5% (1.0 productivity factor)
Cover Volume Calculation Yard area x cover thickness
Ripping/Scarifying Calculations Flat area width = Final flat area ÷ Average long dimensions Number of passes = Flat area width ÷ Grader width Travel distance = Number of passes x Average long dimensions Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time) Minimum 1 hr ripping/scarifying per area
Revegetation Minimum 0.4 ha revegetation crew time per area

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
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Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - Regrading Costs												
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side)												
	Description (required)	Regrading Volume m3	Dozing Distance (see above) m	Uncorrected Dozer Productivity m3/hr	Grade Correction	Dozing Material	Density Correction	Total Hourly Productivity m3/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Permanent Man Camp Yards	29,679	122	383	1.0	1.0	0.79	188	158	\$9,608	\$37,495	\$47,103
2	Material Sites	397,220	122	383	1.0	1.0	0.79	188	2,112	\$128,431	\$501,199	\$629,630
3	Lower Contact Water Dam (see "Haul Material" sheet)									\$0	\$0	\$0
4	Upper Contact Water Dam (see "Haul Material" sheet)									\$0	\$0	\$0
5	Jung Port Disturbance (not reclaimed)	16,960	122	Select Fleet	Select Fleet	Select Fleet	Select Fleet			\$0	\$0	\$0
6	Mine Borrow Areas	148,420	122	383	1.0	1.0	0.79	188	789	\$47,979	\$187,238	\$235,217
7	Growth media - TSF Stockpile 1	97,760	122	383	1.0	1.0	0.79	188	520	\$31,621	\$123,401	\$155,022
8	Growth media - TSF Stockpile 3	160,840	122	383	1.0	1.0	0.79	188	855	\$51,993	\$202,900	\$254,893
9	Growth media - TSF Stockpile 2	45,920	122	383	1.0	1.0	0.79	188	244	\$14,838	\$57,904	\$72,742
10	Growth media - North Overburden Stockpile 2028	129,580	122	383	1.0	1.0	0.79	188	689	\$41,898	\$163,507	\$205,405
11	Growth media - Airstrip Overburden Stockpile	7,560	122	383	1.0	1.0	0.79	188	40	\$2,432	\$9,492	\$11,924
12	Growth media - Airstrip Overburden Stockpile	9,560	122	383	1.0	1.0	0.79	188	51	\$3,101	\$12,103	\$15,204
13	Growth media - Jungjuk Port Site Overburden Stockpile	4,120	122	383	1.0	1.0	0.79	188	22	\$1,338	\$5,221	\$6,559
14	Growth media - North Overburden Stockpile 2028 - buffer	34,120	122	383	1.0	1.0	0.79	188	181	\$11,007	\$42,953	\$53,960
15	Growth media - South Overburden Stockpile 2019	45,060	122	383	1.0	1.0	0.79	188	240	\$14,594	\$56,954	\$71,548
16	Misc. Yards	969,200	122	383	1.0	1.0	0.79	188	5,153	\$313,354	\$1,222,858	\$1,536,212
17	Plant Site	19,580	122	383	1.0	1.0	0.79	188	104	\$6,324	\$24,680	\$31,004
18	Primary Crusher	3,700	122	383	1.0	1.0	0.79	188	20	\$1,216	\$4,746	\$5,962
19	Truck Shop	180	122	383	1.0	1.0	0.79	188	1	\$61	\$237	\$298
20	Airstrip (Not Reclaimed)									\$0	\$0	\$0
		2,119,459							11,179	\$679,795	\$2,652,888	\$3,332,683

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - Cover and Growth Media Costs																	
		Cover							Growth Media								
	Description (required)	Cover Volume m3	Topsoil Replacement Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume m3	Growth Media Fleet	Fleet Productivity LCM/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Topsoiling Cost \$
1	Permanent Man Camp Yards						\$0	\$0	\$0	45,269	777D/992G	707	2	64	\$15,722	\$70,356	\$86,078
2	Material Sites						\$0	\$0	\$0	605,393	777D/992G	499	1	1,213	\$222,755	\$1,034,762	\$1,257,517
3	Lower Contact Water Dam (see "Haul Material" sheet)						\$0	\$0	\$0						\$0	\$0	\$0
4	Upper Contact Water Dam (see "Haul Material" sheet)						\$0	\$0	\$0						\$0	\$0	\$0
5	Jung Port Disturbance (not reclaimed)						\$0	\$0	\$0						\$0	\$0	\$0
6	Mine Borrow Areas						\$0	\$0	\$0	226,220	777D/992G	707	2	320	\$78,611	\$351,782	\$430,393
7	Growth media - TSF Stockpile 1						\$0	\$0	\$0						\$0	\$0	\$0
8	Growth media - TSF Stockpile 3						\$0	\$0	\$0						\$0	\$0	\$0
9	Growth media - TSF Stockpile 2						\$0	\$0	\$0						\$0	\$0	\$0
10	Growth media - North Overburden Stockpile 2028						\$0	\$0	\$0						\$0	\$0	\$0
11	Growth media - Airstrip Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0
12	Growth media - Airstrip Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0
13	Growth media - Jungjuk Port Site Overburden Stockpile						\$0	\$0	\$0						\$0	\$0	\$0
14	Growth media - North Overburden Stockpile 2028 - buffer						\$0	\$0	\$0						\$0	\$0	\$0
15	Growth media - South Overburden Stockpile 2019						\$0	\$0	\$0						\$0	\$0	\$0
16	Misc. Yards						\$0	\$0	\$0	1,477,095	777D/992G	707	2	2,089	\$513,184	\$2,296,479	\$2,809,663
17	Plant Site						\$0	\$0	\$0	29,851	777D/992G	707	2	42	\$10,318	\$46,171	\$56,489
18	Primary Crusher						\$0	\$0	\$0	5,674	777D/992G	707	2	8	\$1,965	\$8,795	\$10,760
19	Truck Shop						\$0	\$0	\$0	247	777D/992G	707	2	1	\$246	\$1,099	\$1,345
20	Airstrip (Not Reclaimed)						\$0	\$0	\$0						\$0	\$0	\$0
							\$0	\$0	\$0	2,389,749				3,737	\$842,801	\$3,809,444	\$4,652,245

**Closure Cost Estimate
Yards, Etc.**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$679,795	\$2,652,888	N/A	\$3,332,683
Cover Placement Cost	\$0	\$0	N/A	\$0
Growth Media Placement Cost	\$842,801	\$3,809,444	N/A	\$4,652,245
Ripping/Scarifying Cost	\$102,098	\$398,442	N/A	\$500,540
Subtotal Earthworks	\$1,624,694	\$6,860,774		\$8,485,468
Revegetation Cost	\$283,066	\$81,883	\$562,289	\$927,238
TOTALS	\$1,907,760	\$6,942,657	\$562,289	\$9,412,706

Yards, Etc. - Scarifying/Revegetation Costs											
	Description (required)	Surface Area ha	Area Long Dimension m	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Permanent Man Camp Yards	14.85	100	25	\$1,520	\$5,933	\$7,453	\$3,998	\$1,156	\$7,942	\$13,096
2	Material Sites	198.62	100	332	\$20,189	\$78,787	\$98,976	\$53,463	\$15,465	\$106,233	\$175,161
3	Lower Contact Water Dam (see "Haul Material" sheet)	0.04	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Upper Contact Water Dam (see "Haul Material" sheet)	0.04	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Jung Port Disturbance (not reclaimed)	8.50	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Mine Borrow Areas	74.22	1,000	117	\$7,115	\$27,765	\$34,880	\$19,978	\$5,779	\$39,697	\$65,454
7	Growth media - TSF Stockpile 1	48.89	1,000	77	\$4,682	\$18,273	\$22,955	\$13,159	\$3,806	\$26,149	\$43,114
8	Growth media - TSF Stockpile 3	80.41	1,000	127	\$7,723	\$30,138	\$37,861	\$21,644	\$6,261	\$43,008	\$70,913
9	Growth media - TSF Stockpile 2	22.95	1,000	36	\$2,189	\$8,543	\$10,732	\$6,176	\$1,787	\$12,275	\$20,238
10	Growth media - North Overburden Stockpile 2028	64.79	1,000	103	\$6,263	\$24,443	\$30,706	\$17,440	\$5,045	\$34,653	\$57,138
11	Growth media - Airstrip Overburden Stockpile	3.76	1,000	6	\$365	\$1,424	\$1,789	\$1,013	\$293	\$2,011	\$3,317
12	Growth media - Airstrip Overburden Stockpile	4.78	1,000	8	\$486	\$1,896	\$2,384	\$1,285	\$372	\$2,557	\$4,214
13	Growth media - Jungjuk Port Site Overburden Stockpile	2.06	1,000	3	\$182	\$712	\$894	\$556	\$161	\$1,102	\$1,819
14	Growth media - North Overburden Stockpile 2028 - buffer	17.08	1,000	27	\$1,642	\$6,407	\$8,049	\$4,597	\$1,330	\$9,136	\$15,063
15	Growth media - South Overburden Stockpile 2019	22.54	1,000	36	\$2,189	\$8,543	\$10,732	\$6,067	\$1,755	\$12,056	\$19,878
16	Misc. Yards	484.61	2,000	762	\$46,337	\$180,830	\$227,167	\$130,444	\$37,733	\$259,196	\$427,373
17	Plant Site	9.79	1,000	16	\$973	\$3,797	\$4,770	\$2,636	\$763	\$5,236	\$8,635
18	Primary Crusher	1.86	1,000	3	\$182	\$712	\$894	\$501	\$145	\$995	\$1,641
19	Truck Shop	0.08	1,000	1	\$61	\$237	\$298	\$109	\$32	\$43	\$184
20	Airstrip (Not Reclaimed)	35.98	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0
		1,095.85		1,679	\$102,098	\$398,442	\$500,540	\$283,066	\$81,883	\$562,289	\$927,238

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Solid Waste									
						Landfill (Bulk) Disposal			Dumpster
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity m3	Distance to Landfill m	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Mill and Crusher Liner Waste		Waste Mgmt & Disposal	Landfill (bulk)	33,163	5000	0.0		

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Liner waste disposal quantities from 1. June 8, 2011 email from Alexandra J. Kozak.

Closure Cost Estimate
Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

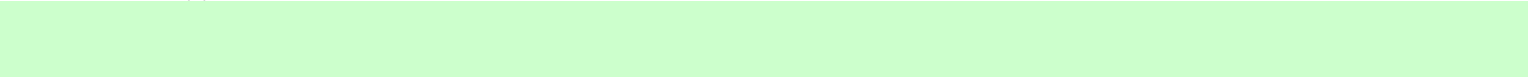
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Hazardous Materials									
	Description (required)	ID Code	Waste Type (select)	Container Type (select)	Vacuum Truck Size (select)	Liquid Quantity litres	Soild Quantity m3	One Way Travel Distance to Disposal Site km	One Way Travel Time to Disposal Site hr

- Notes:
1. Use Other Demo & Equip Removal Sheet for tank removal



Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - User Input - Hydrocarbon Contaminated Soils						
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity m3	Travel Distance to Offsite Disposal km
1	Ready Line		Waste Mgmt & Disposal	On site	630	1
2	Truck Shop		Waste Mgmt & Disposal	On site	500	1
3	Power Plant		Waste Mgmt & Disposal	On site	1,300	1
4	Mine Area Fuel Storage Area		Waste Mgmt & Disposal	On site	3,500	1
5	Port Fuel Storage Area		Waste Mgmt & Disposal	On site	400	1
6	Misc. Areas		Waste Mgmt & Disposal	On site	500	1

Notes:

1. Use Yards or Landfills Sheets for bioremediation facility reclamation

Assume 0.5m deep at ready line, 1m deep at truck shop

Assume 0.5m deep at ready line, 1m deep at truck shop

Assume 0.5m deep at ready line, 1m deep at truck shop

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Assumptions & Calculations

Solid Waste Disposal

Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)]

On site disposal assumes use of small loader/truck fleet for haulage

Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3)

For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16

Hazardous Materials Disposal

Assumes all hazardous materials are known

Enter EITHER solid or liquid quantity each line.

If container type = 55 gallon (200 liter) drum then solid waste hauling costs apply

Average density for solids assumed to be 2,600 lb/cy (1,540 kg/m3)

Vacuum truck sizes: small = 2,200 gal (~8,300 litres), large = 5,000 gal (~19,000 litres)

Vacuum truck on site for 4 hours for each load

Hydrocarbon Contaminated Soils Disposal

Assumes all hazardous materials are known

On site disposal assumes biopad treatment

Exavation productivity =45 cy./hr (35 m3/hr) (Means Heavy Construction, 2006: 02315-424-0360)

**Closure Cost Estimate
Waste Disposal**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Solid Waste Disposal										
	Description (required)	Waste Volume m3	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCM/hr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost \$	Total Labor Cost \$	Total Equipment Cost \$
1	Mill and Crusher Liner Waste	33,163		740	427	6	78	\$0	\$38,364	\$39,693
		33,163					78	\$0	\$38,364	\$39,693

Closure Cost Estimate Waste Disposal

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Hazardous Materials Disposal									
	Description (required)	Liquid Waste Volume litres	Solid Waste Volume m3	Number of Truck Loads	Tonnes of Waste Tonnes	Pick-up Fees \$	Transport Fees \$	Disposal Fees \$	Total Hazardous Material Cost \$
						\$0	\$0	\$0	\$0

**Closure Cost Estimate
Waste Disposal**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$38,364	\$39,693	N/A	\$78,057
Solid Waste - Off Site				\$0
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$12,163	\$6,374	\$200,100	\$218,637
TOTALS	\$50,527	\$46,067	\$200,100	\$296,694

Waste Disposal - Hydrocarbon Contaminated Soils									
	Description (required)	Quantity m3	Total Fleet Hours	Treatment Cost \$	Transport Fees \$	Disposal Fees \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
1	Ready Line	630		\$18,458	\$0	\$0	\$1,095	\$574	\$20,127
2	Truck Shop	500		\$14,650	\$0	\$0	\$912	\$478	\$16,040
3	Power Plant	1,300		\$38,080	\$0	\$0	\$2,311	\$1,211	\$41,602
4	Mine Area Fuel Storage Area	3,500		\$102,547	\$0	\$0	\$6,203	\$3,251	\$112,001
5	Port Fuel Storage Area	400		\$11,715	\$0	\$0	\$730	\$382	\$12,827
6	Misc. Areas	500		\$14,650	\$0	\$0	\$912	\$478	\$16,040
		6,830		\$200,100	\$0	\$0	\$12,163	\$6,374	\$218,637

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$319,788	\$700,966	\$51,116	\$1,071,870
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$348,840	\$766,504	\$63,188	\$1,178,532

Production, Dewatering and Infiltration Well Closure																											
		Description (required)	ID Code	Number of Holes	Casing Diam mm	Average Depth ⁽¹⁾ m bgs	Depth to First Water m bgs	Original Static Water Level m bgs	Top of Slotted Casing ⁽²⁾ m bgs	Blank Casing Below Top of Screen ⁽²⁾ m	Type of Pump (if any) (select)	Depth to Pump m bgs	Hole Plug Method (select)	Casing Volume per m m3	Perforation Length ^(3,4) m	Grout Volume per Hole ^(4,5) m3	Cement Volume per Hole ⁽⁶⁾ m3	Inert Media Volume per Hole ⁽⁷⁾ m3	Pump Removal Labor Cost \$	Pump Removal Equip Cost \$	Perf Labor Cost \$	Perf Equip Cost ⁽⁸⁾ \$	Grout + Cement Labor Cost ⁽⁹⁾ \$	Grout + Cement Equip Cost ⁽⁹⁾ \$	Grout + Cement Material Cost \$	Inert Media Labor Cost ⁽¹⁰⁾ \$	Inert Media Equip Cost ⁽⁹⁾ \$
1		P1704		1	152.4	196	146	166	161	15	Submersit	120	Grout Only	0.006	50	7.10	0.08		\$4,005	\$8,701	\$738	\$2,105	\$799	\$1,834	\$348	\$288	\$96
2		P1705		1	152.4	264	214	234	229	15	Submersit	120	Grout Only	0.006	50	9.63	0.08		\$4,005	\$8,701	\$738	\$2,105	\$963	\$2,211	\$470	\$288	\$96
3		P2001		1	152.4	264	214	234	229	15	Submersit	120	Grout Only	0.006	50	9.63	0.08		\$4,005	\$8,701	\$738	\$2,105	\$963	\$2,211	\$470	\$288	\$96
4		P2002		1	152.4	240	190	210	205	15	Submersit	120	Grout Only	0.006	50	8.73	0.08		\$4,005	\$8,701	\$754	\$2,144	\$907	\$2,082	\$427	\$288	\$96
5		P2003		1	152.4	92	42	62	57	15	Submersit	120	Grout Only	0.006	50	3.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$565	\$1,298	\$160	\$288	\$96
6		P2004		1	152.4	92	42	62	57	15	Submersit	120	Grout Only	0.006	50	3.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$565	\$1,298	\$160	\$288	\$96
7		P2005		1	152.4	92	42	62	57	15	Submersit	120	Grout Only	0.006	50	3.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$565	\$1,298	\$160	\$288	\$96
8		P2006		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
9		P2007		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
10		P2203		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
11		P2502		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
12		P2701		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
13		P3001		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
14		P3002		1	152.4	98	48	68	63	15	Submersit	120	Grout Only	0.006	50	3.46	0.08		\$4,005	\$8,701	\$754	\$2,144	\$565	\$1,298	\$171	\$288	\$96
15		P3003		1	152.4	98	48	68	63	15	Submersit	120	Grout Only	0.006	50	3.46	0.08		\$4,005	\$8,701	\$754	\$2,144	\$565	\$1,298	\$171	\$288	\$96
16		P3004		1	152.4	146	96	116	111	15	Submersit	120	Grout Only	0.006	50	5.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$669	\$1,536	\$258	\$288	\$96
17		P3401		1	152.4	146	96	116	111	15	Submersit	120	Grout Only	0.006	50	5.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$669	\$1,536	\$258	\$288	\$96
18	Permanent camp and mill potable water wells (e-mail Sep			8	203.2	200	175	175	200	0	Submersit	200	Grout Only	0.010	45	101.49	0.15		\$53,348	\$115,901	\$6,282	\$17,386	\$35,443	\$81,395	\$39,428	\$2,303	\$765
19	Jungjuk Port potable water well (e-mail September 19, 20			1	152.4	60	50	50	50	15	Submersit	50	Grout Only	0.006	35	2.05	0.08		\$1,667	\$3,622	\$612	\$1,694	\$534	\$1,226	\$103	\$288	\$96
20		I2503		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
21		I2504		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
22		I2505		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
23		I2506		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
24		I2507		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
25		I2508		1	152.4	266	216	236	231	15	Submersit	120	Grout Only	0.006	50	9.71	0.08		\$4,005	\$8,701	\$738	\$2,105	\$965	\$2,216	\$474	\$288	\$96
26		I2801		1	152.4	182	132	152	147	15	Submersit	120	Grout Only	0.006	50	6.58	0.08		\$4,005	\$8,701	\$738	\$2,105	\$753	\$1,729	\$323	\$288	\$96
27		I2802		1	152.4	182	132	152	147	15	Submersit	120	Grout Only	0.006	50	6.58	0.08		\$4,005	\$8,701	\$738	\$2,105	\$753	\$1,729	\$323	\$288	\$96
28		I2803		1	152.4	182	132	152	147	15	Submersit	120	Grout Only	0.006	50	6.58	0.08		\$4,005	\$8,701	\$738	\$2,105	\$753	\$1,729	\$323	\$288	\$96
29		I3402		1	152.4	264	214	234	229	15	Submersit	120	Grout Only	0.006	50	9.63	0.08		\$4,005	\$8,701	\$738	\$2,105	\$963	\$2,211	\$470	\$288	\$96
30		I3403		1	152.4	240	190	210	205	15	Submersit	120	Grout Only	0.006	50	8.73	0.08		\$4,005	\$8,701	\$754	\$2,144	\$907	\$2,082	\$427	\$288	\$96
31		I3801		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
32		I3802		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
33		I3803		1	152.4	166	116	136	131	15	Submersit	120	Grout Only	0.006	50	5.99	0.08		\$4,005	\$8,701	\$738	\$2,105	\$721	\$1,655	\$294	\$288	\$96
34		I3901		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
35		I3902		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
36		I3903		1	152.4	114	64	84	79	15	Submersit	120	Grout Only	0.006	50	4.05	0.08		\$4,005	\$8,701	\$738	\$2,105	\$589	\$1,352	\$200	\$288	\$96
37		I4101		1	152.4	98	48	68	63	15	Submersit	120	Grout Only	0.006	50	3.46	0.08		\$4,005	\$8,701	\$754	\$2,144	\$565	\$1,298	\$171	\$288	\$96
38		I4102		1	152.4	98	48	68	63	15	Submersit	120	Grout Only	0.006	50	3.46	0.08		\$4,005	\$8,701	\$754	\$2,144	\$565	\$1,298	\$171	\$288	\$96
39		I4103		1	152.4	146	96	116	111	15	Submersit	120	Grout Only	0.006	50	5.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$669	\$1,536	\$258	\$288	\$96
40		I4104		1	152.4	146	96	116	111	15	Submersit	120	Grout Only	0.006	50	5.24	0.08		\$4,005	\$8,701	\$738	\$2,105	\$669	\$1,536	\$258	\$288	\$96
																			\$207,205	\$450,161	\$35,034	\$99,304	\$64,019	\$147,007	\$51,116	\$13,530	\$4,494

- (1) For previously abandoned holes enter "0" for depth
(2) Wells abandoned per Nevada Administrative Code (NAC 534.420). Hole grouted and perforated from bottom to 50 feet (15.24m) above the top of the screen, or first water encountered or original static water level, depending on vertical hydraulic gradient and well construction parameters. Inert media (cuttings or alluvium) used from top of grout to top seal.
(3) Perforation length = amount of blank casing below first water (for confined aquifers) or predicted recovered water table (unconfined aquifers) + 50 feet (15.24m) of blank casing above water table
(4) Assumes 50' (15.24m) sanitary seal at top of hole. Therefore, perforation and grouting only required to bottom of sanitary seal.
(5) Assumes 100% loss to formation for grout (abandonite) for screened and perforated sections.
(6) Assumes 10' (3m) top seal of cement in casing only. See note 4.
(7) Inert material is cuttings or alluvium sourced locally.
(8) Includes perforation tool wear cost/ft of perforation (see Productivity Sheet).
(9) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup. If no perforation required, use standard drill rig.
(10) See Productivity Sheet for hourly production. Minimum 1 hr per hole.

Notes:

Some pit perimeter well parameters from User 15.

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$319,788	\$700,966	\$51,116	\$1,071,870
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$348,840	\$766,504	\$63,188	\$1,178,532

Monitoring Well Closure																		
	Description (required)	ID Code	Number of Holes	Casing Diam mm	Average Depth m bgs	Top of Screen ⁽¹⁾ m bgs	Hole Plug Method (select)	Casing Volume per m m3	Grout Volume/ Well ^(2,3) m3	Cement Volume per Hole ⁽⁴⁾ m3	Inert Backfill Volume per Hole ⁽⁵⁾ m3	Total Grouting Hours/ Hole hr	Total Inert Media Hours/ Hole hr	Grout + Cement Labor Cost ⁽⁶⁾ \$	Grout + Cement Equip Cost ⁽⁶⁾ \$	Grout + Cement Material Cost \$	Inert Material Labor Cost ⁽⁷⁾ \$	Inert Material Equip Cost ⁽⁷⁾ \$
1	Monitoring wells		50	152.4	215	160	Grout Only	0.006	4.88	0.11		3.7		\$29,052	\$65,538	\$12,072	\$0	\$0
														\$29,052	\$65,538	\$12,072	\$0	\$0

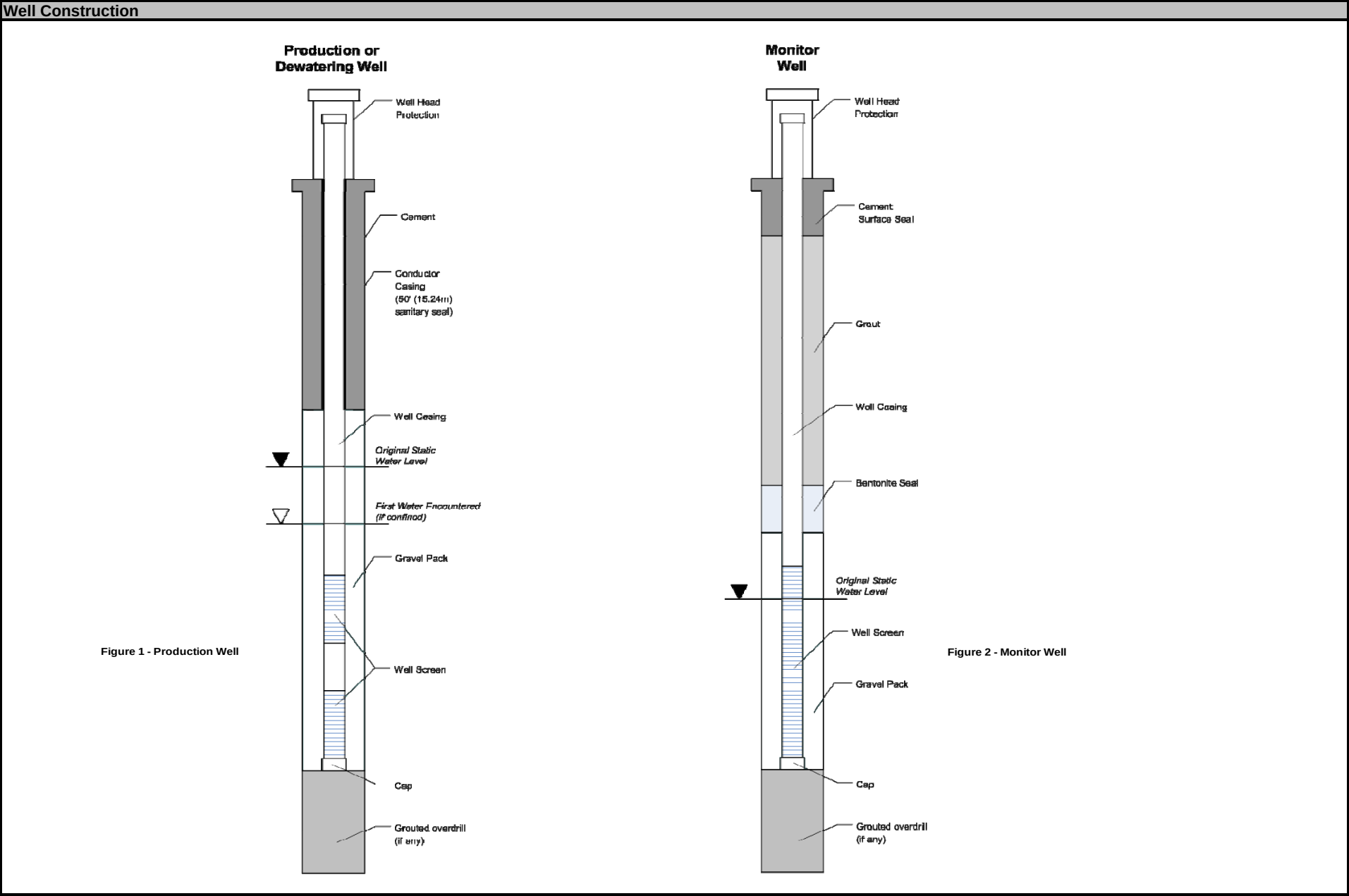
- Wells abandoned per NAC 534.420 with bentonite grout placed to 50 feet above the top of the screen (see note 1).
- (1) Assumes top of screen is at or above the static water level (in unconfined aquifers) or the depth of first water encountered (in confined aquifers).
- (2) Assumes 25% loss to formation for grouting
- (3) Grouting only required to 50' (15.24m) above the top of screen because monitor wells are constructed with a seal in the annular space.
- (4) Assumes top 10' (3m) plugged with cement.
- (5) Assumes hole plugged with inert material (cuttings or alluvium) above grout up to cement surface plug.
- (6) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup (see Productivity Sheet).
- (7) See Productivity Sheet for hourly production. Minimum 1 hr per hole.

Notes:

Closure Cost Estimate
Well Abandonment

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$319,788	\$700,966	\$51,116	\$1,071,870
Monitoring Wells	\$29,052	\$65,538	\$12,072	\$106,662
TOTALS	\$348,840	\$766,504	\$63,188	\$1,178,532



Closure Cost Estimate
Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0		N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$667,447	N/A	N/A	\$667,447
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,516,959	\$458,030	\$0	\$2,974,989

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0		N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$667,447	N/A	N/A	\$667,447
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,516,959	\$458,030	\$0	\$2,974,989

Fence Removal							
You must fill in ALL green and blue cells							
Costs							
	Description (required)	ID Code	Length m	Type (select type)	Labor Cost \$	Equipment Cost \$	Total Cost \$
					\$0	\$0	\$0

Notes:

Fence Installation								
You must fill in ALL green and blue cells								
Input				Costs				
	Description (required)	ID Code	Length m	Type (select type)	Labor Cost \$	Equipment Cost \$	Material Cost (\$)	Total Cost \$
					\$0	\$0	\$0	\$0

Notes:

Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0	\$0	N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$667,447	N/A	N/A	\$667,447
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,516,959	\$458,030	\$0	\$2,974,989

Culvert & Buried Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
	Description (required)	ID Code	Length m	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
						\$0	\$0	\$0

Notes:

Surface Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
	Description (required)	ID Code	Length m	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
1	Tailings Line		3700	20 in (500 mm) - 3	On site	\$94,794	\$6,845	\$101,639
2	TSF Return Water Line		3700	10 in (250 mm) - 1	On site	\$63,529	\$4,588	\$68,117
						\$158,323	\$11,433	\$169,756

Notes:

Closure Cost Estimate Misc. Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert & Buried Pipe Removal	\$0	\$0	N/A	\$0
Surface Pipe Removal	\$158,323	\$11,433	N/A	\$169,756
Power Lines	\$667,447	N/A	N/A	\$667,447
Substations/Transformers	\$106,026	N/A	N/A	\$106,026
Rip-rap, rock lining, gabions	\$1,585,163	\$446,597	\$0	\$2,031,760
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$2,516,959	\$458,030	\$0	\$2,974,989

Power Line and Substation Removal											
You must fill in ALL green and blue cells											
			Input				Costs			Cost Breakdown	
	Description (required)	ID Code	Power Line Length km	Power Line Type (select)	Number of Substations #	Location (select)	Power Line Removal \$	Substation Removal \$	Total Cost \$	Labor Cost \$	Equipment Cost \$
1	Mancamp Powerline		4.7666	Double Pole	1	Off-site	\$166,859	\$35,342	\$202,201	\$40,440	\$161,761
2	Powerline to tailings - Remains for Post Closure		0	Double Pole		Off-site	\$0	\$0	\$0	\$0	\$0
3	Powerline to Crusher		1.3	Double Pole		Off-site	\$45,508	\$0	\$45,508	\$9,102	\$36,406
4	Misc. Mill Area Powerlines		0.5	Double Pole	1	Off-site	\$17,503	\$35,342	\$52,845	\$10,569	\$42,276
5	From Fuel Storage to Magazines		5.4	Double Pole		Off-site	\$189,032	\$0	\$189,032	\$37,806	\$151,226
6	From Fuel Storage to Pit Booster Pumps		7.1001	Double Pole	1	Off-site	\$248,545	\$35,342	\$283,887	\$56,777	\$227,110
							\$667,447	\$106,026	\$773,473	\$154,694	\$618,779

Notes: If substation owned by operator, use Other Demo & Equipment Removal sheet

User may need to add line items in Foundations & Buildings for substation slab demolition and fence removal

Labor/Equipment costs assume approximately 80% of cost are equipment and 20% are labor related costs

Rip-Rap & Rock Lining								
You must fill in ALL green and blue cells								
			Input		Costs			
	Description (required)	ID Code	Area m2	Type (select type)	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Reclaimed WRF RO Collection		34222	Rip-Rap 18 in (45	\$1,585,163	\$446,597	\$0	\$2,031,760
					\$1,585,163	\$446,597	\$0	\$2,031,760

Notes:

Closure Cost Estimate
Monitoring

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$101,800	\$29,448	\$147,062	\$278,310
Erosion Maintenance	\$410,264	\$1,230,791	N/A	\$1,641,055
Reclamation Monitoring	\$87,681	\$2,258	N/A	\$89,939
Subtotal Reclamation Monitoring	\$599,745	\$1,262,497	\$147,062	\$2,009,304
Water Quality Monitoring	\$10,377	\$3,662	\$23,363	\$37,402
TOTAL MONITORING	\$610,122	\$1,266,159	\$170,425	\$2,046,706

Clear Sheet

Reclamation Maintenance								
Description	Total Revegetation Surface Area (1,2) ha	% Area Requiring Reseeding	Seed Mix (select)	Area Requiring Reseeding ha	Seed \$/ha	Labor \$/ha	Equipment \$/ha	Totals \$
Revegetation Maintenance	3,782	10%	Mix 1	378.2	\$388.85	\$269.17	\$77.86	
Labor Equipment Materials Cost/Ha								\$101,800
								\$29,448
								\$147,062
								\$736
							Subtotal	\$278,310
Notes: 1) Surface area is NOT the same as footprint disturbance area typically used for permitting purposes. 2) If BRCE model, revegetation surface area determined by area included in PER, LOM or Surety estimate								
	Total Volume Growth Media m3	% Volume Requiring Maintenance	Average Growth Media Placement Cost \$/m3	Volume Requiring Replacement m3		Labor (assume: 25%) \$/ha	Equipment (assume: 75%) \$/ha	Total \$
Erosion Maintenance	11,317,626	5%	\$2.90	565,881		\$410,264.00	\$1,230,791.00	\$1,641,055
Notes:								

Reclamation Monitoring					
Description	Hrs/Day	Days/Year	Number of Years	Rate \$/hr	
Field Work					
Field Geologist/Engineer	10	24	4	\$48.83	\$46,877
Range Scientist	10	5	4	\$48.42	\$9,684
Reporting					
Field Geologist/Engineer	8	10	4	\$48.83	\$15,626
Range Scientist	8	10	4	\$48.42	\$15,494
Subtotal					\$87,681
Travel					
	Hrs/Trip hr	Trips/Year	Years	Truck Cost \$/tr	
Travel	20	2	4	\$14.11	\$2,258
Subtotal					\$2,258
Total Reclamation Monitoring					\$89,939
Notes:					

Closure Cost Estimate Monitoring

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$101,800	\$29,448	\$147,062	\$278,310
Erosion Maintenance	\$410,256	\$1,230,791	N/A	\$1,641,055
Reclamation Monitoring	\$87,681	\$2,258	N/A	\$89,939
Subtotal Reclamation Monitoring	\$589,736	\$1,262,497	\$147,062	\$2,099,304
Water Quality Monitoring	\$10,377	\$3,662	\$23,363	\$37,402
TOTAL MONITORING	\$610,122	\$1,266,159	\$170,425	\$2,046,706

Clear Sheet

Water and Rock Sample Analysis

[illegible]

Notes: Sampling labor cost = No. Samplers x Years x Events/year x Days/event x Hour/Day x Labor Rate
Sampling equipment costs include 1 pickup truck for every two samplers

Ground & Surface Water Monitoring

Pump Costs

Description	No. of units		Years		Cost \$
Pump (purchased)	2	Replacement period (yrs):	10	2459.66	\$2,460
Subtotal Field Work					\$2,460

Notes: Replacement period = frequency of pump replacement

Reporting

Description	Hrs/Event	Rate \$/hr	Cost \$
Field Geologist/Engineer	24	\$48.83	\$2,344
Subtotal Reporting			\$2,344

Notes:

Closure Cost Estimate Constr. Mgmt

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
 Date of Submittal: July 2017
 File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
 Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Construction Management & Road Maintenance - Cost Summary				
	Labor	Equipment	Materials	Totals
Construction Management	\$3,328,027	\$438,460	N/A	\$3,766,487
Construction Support		\$0		\$0
Road Maintenance	\$1,586,650	\$4,673,203	\$0	\$6,259,853
TOTAL CONSTRUCTION MANAGEMENT	\$4,914,677	\$5,111,663	\$0	\$10,026,340

Clear Sheet

Construction Management							
Construction Management Staff							
Description	Duration mo.	Hours/ Month hr.	Number of Supervisors	Supervisor Rate \$/hr	Labor Cost \$	Equipment Cost ⁽¹⁾ \$	Totals \$
Active Reclamation	48	365	2	\$95.03	\$3,328,027	\$438,460	\$3,766,487
Monitoring & Maintenance					\$0	\$0	\$0
Total Staff					\$3,328,027	\$438,460	\$3,766,487
Construction Management Support							
Description	Duration mo.	Number of Units		Rental Rate \$/mo	Generator Cost \$/mo	Equipment Cost ⁽¹⁾ \$	Totals \$
Temporary Office Rental						\$0	\$0
Temporary Toilets						\$0	\$0
Total Support						\$0	\$0
Notes: Office rental assumes only 1 generator required for every 4 trailers							
Total Construction Management							\$3,766,487

Road Maintenance							
Description	Fleet Size (select)	Number	Duration mo.	Hours/ Month hr.	Labor Cost \$	Equipment Cost \$	Totals \$
Active Reclamation							
Water Truck	Large	1	48	180	\$535,853	\$2,127,686	\$2,663,539
Grader	Large	2	48	180	\$1,050,797	\$2,545,517	\$3,596,314
Monitoring & Maintenance							
Water Truck					\$0	\$0	\$0
Grader					\$0	\$0	\$0
Description	Litres/ Day	Days/ Month	Duration mo.	Cost/ Litre \$			Totals \$
Water Fees							
Water Fees							\$0
Total Project Maintenance					\$1,586,650	\$4,673,203	\$6,259,853
Notes: 1) Supervisor equipment = pickup truck							
Maintenance fleet assumed average life-of-project usage of 1/2 time. Assumes the grader will also maintain the runway as needed.							

**Closure Cost Estimate
Labor Rates**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	
INDIRECT COSTS			
Unemployment (%)	0.00%		
Retirement/SS/Medicare (%)	0.00%		
Workman's Compensation (%)	0.00%		
Other Indirects			
State Payroll Tax (13),(15),(17),(18)			
Total Other Indirects	0.00%		

HOURLY LABOR RATE TABLE													
EQUIPMENT TYPE (1) OR JOB DESCRIPTION	Labor Group	Base Rate (\$/hr)	Zone Adjustment (\$/hr)	Hourly Wage (\$/hr)	Fringe (\$/hr)	Retirement/ Medicare (\$/hr)	Unemployment Insurance (\$/hr)	Workman's Compensation (\$/hr)	Other Indirect Costs (\$/hr)	Additional User Markups to Base Rate†			Total (\$/hr)
										(\$/hr)	%	(\$/hr)	
Equipment Operators (\$/hr) (2)													
Bulldozers													
D6R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D6R w/ Winch	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D7R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D8R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D9R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D10R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
D11R	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Wheeled Dozers													
824G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
834G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
844	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
854G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Motor Graders													
120H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
14G/H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
16G/H	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
24M	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Track Excavators													
312C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
320C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
325C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
330C	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
345B	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
365BL	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
385BL	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Scrapers													
631G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
637G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Wheeled Loaders													
924G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
928G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
950G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
966G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
972G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
980G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
988G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
990	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
992G	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
994D	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
L2350	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
Shovels													
PC2000					\$0.00							\$0	
PC3000					\$0.00							\$0	
PC4000					\$0.00							\$0	
PC5500					\$0.00							\$0	
PC8000					\$0.00							\$0	
Hydraulic Hammers													
H-120 (fits 325)													
H-160 (fits 345)													
H-180 (fits 365/385)													
Demolition Shears													
S340 (fits 322/325/330)													
S365 (fits 330/345)													
S390 (fits 365/385)													
Demolition Grapples													
G315 (fits 322/325)													
G320 (fits 325/330)													
G330 (fits 345/365)													

**Closure Cost Estimate
Labor Rates**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	
INDIRECT COSTS			
Unemployment (%)	0.00%		
Retirement/SS/Medicare (%)	0.00%		
Workman's Compensation (%)	0.00%		
Other Indirects			
State Payroll Tax (13),(15),(17),(18)			
Total Other Indirects	0.00%		

HOURLY LABOR RATE TABLE													
Other Equipment													
420D 4WD Backhoe	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
428D 4WD Backhoe	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CS533E Vibratory Roller	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CS633E Vibratory Roller	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CP533E Sheepsfoot Compactor	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
CP633E Sheepsfoot Compactor	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Light Truck - 1.5 Ton	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Supervisor's Truck	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Flatbed Truck	A1604	\$58.82	\$0.00	\$58.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$58.82
Air Compressor + tools	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Welding Equipment	AO601	\$59.58	\$0.00	\$59.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$59.58
Heavy Duty Drill Rig	S1204	\$55.96	\$0.00	\$55.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$55.96
Pump (plugging) Drill Rig	S1204	\$55.96	\$0.00	\$55.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$55.96
Concrete Pump					\$0.00							\$0	
Gas Engine Vibrator	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
Generator 5KW					\$0.00							\$0	
HDEP Welder (pipe or liner)					\$0.00							\$0	
5 Ton Crane	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
20 Ton Crane	A1601	\$60.81	\$0.00	\$60.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$60.81
50 Ton Crane	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
120 Ton Crane	A1602	\$63.15	\$0.00	\$63.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$63.15
NOTES:													
(1) Equipment Type:		Caterpillar model or equivalent, LeTourneau											
(2) Equipment Operator Source:		Alaska Pamphlet 600											
(3) Zone Basis:													
Truck Drivers (\$/hr) (4)													
725	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
730	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
735	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
740	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
769D	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
773E	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
777D	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
785C	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
793C	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
797B	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
613E (5,000 gal) Water Wagon	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
621E (8,000 gal) Water Wagon	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
777D Water Truck	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
785C Water Truck	A2102	\$62.02	\$0.00	\$62.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$62.02
Dump Truck (10-12 yd3)	A2105	\$56.78	\$0.00	\$56.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0	\$56.78
NOTES:													
(4) Truck Driver Source:													
(5) Zone Basis:													

Closure Cost Estimate

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS

Cost Basis/Project Region	Alaska Davis Bacon 2016	Pamphlet 600 Sept. 2016, 2017 Equip. Rental Quotes	
Power Equipment Operators	none	\$0.00	
Truck Drivers	none	\$0.00	
Laborers	none	\$0.00	

INDIRECT COSTS

Unemployment (%)	0.00%
Retirement/SS/Medicare (%)	0.00%
Workman's Compensation (%)	0.00%

Other Indirects

State Payroll Tax (13),(15),(17),(1	
Total Other Indirects	0.00%

HOURLY LABOR RATE TABLE

Laborers (\$/hr) (6,7)

General Laborer	S1205	\$35.15	\$0.00	\$35.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$35.15
Skilled Laborer	S1202	\$50.39	\$0.00	\$50.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$50.39
Driller's Helper	A1605	\$50.54	\$0.00	\$50.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$50.54
Rodmen (reinforcing concrete)	SO401	\$56.57	\$0.00	\$56.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$56.57
Cement finisher	SO401	\$56.57	\$0.00	\$56.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$56.57
Carpenter	AO301	\$59.72	\$0.00	\$59.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$59.72

NOTES:

(6) Laborer Source:	Alaska Pamphlet 600
(7) Carpenter Source:	Alaska Pamphlet 600, 090116
(8) Zone Basis:	

Project Management and Technical Labor (\$/hr) (9)	

[illegible]

NOTES:

(9) Project Manager:	Salary.com 3/2017
(9) Foreman Source:	Salary.com 3/2017
(9) Technical Labor Source:	Salary.com 3/2017
Other Labor Source:	
Other Labor Source:	
1Additional User Markups	
(These are added by the user to the base rate to account for site-specific conditions or corporate requirements)	

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Monthly Rental Basis: 360 hrs month

EQUIPMENT RENTAL RATE TABLE				
EQUIPMENT TYPE (1)	Monthly Owner/Rental Rate	Equipment Hourly Rate	Fuel/Lube/ Wear	Total Rate
Bulldozers				
D6R	\$20,300.00	\$56.39	\$31.96	\$88.34
D6R w/ Winch	\$20,300.00	\$56.39	\$31.96	\$88.34
D7R	\$20,300.00	\$56.39	\$35.95	\$92.34
D8R			\$48.13	\$48.13
D9R	\$52,500.00	\$145.83	\$70.50	\$216.33
D10R	\$52,500.00	\$145.83	\$91.47	\$237.31
D11R	\$70,000.00	\$194.44	\$133.61	\$328.06
Wheeled Dozers				
824G			\$34.32	\$34.32
834G			\$40.23	\$40.23
844			\$47.89	\$47.89
854G			\$60.67	\$60.67
Motor Graders				
120H			\$35.00	\$35.00
14G/H			\$50.03	\$50.03
16G/H	\$31,500.00	\$87.50	\$59.81	\$147.31
24M			\$49.49	\$49.49
Track Excavators				
312C			\$14.00	\$14.00
320C			\$25.65	\$25.65
325C	\$12,530.00	\$34.81	\$32.07	\$66.88
330C			\$39.18	\$39.18
345B	\$22,540.00	\$62.61	\$46.85	\$109.46
365BL			\$42.15	\$42.15
385BL	\$43,680.00	\$121.33	\$77.88	\$199.21
Scrapers				
631G			\$56.69	\$56.69
637G			\$84.63	\$84.63
Wheeled Loaders				
924G			\$20.43	\$20.43
928G	\$5,810.00	\$16.14	\$23.83	\$39.96
950G			\$30.77	\$30.77
966G	\$23,310.00	\$64.75	\$43.72	\$108.47
972G			\$47.31	\$47.31
980G	\$23,310.00	\$64.75	\$51.64	\$116.39
988G			\$76.15	\$76.15
990			\$54.28	\$54.28
992G	\$80,500.00	\$223.61	\$145.88	\$369.49
994D	\$183,606.00	\$510.02	\$114.95	\$624.96
L2350			\$210.74	\$210.74

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Shovels				
PC2000			\$118.14	\$118.14
PC3000			\$159.65	\$159.65
PC4000			\$223.51	\$223.51
PC5500			\$379.96	\$379.96
PC8000			\$475.75	\$475.75
Hydraulic Hammers				
H-120 (fits 325)			\$6.00	\$6.00
H-160 (fits 345)	\$22,540.00	\$62.61	\$12.00	\$74.61
H-180 (fits 365/385)	\$27,048.00	\$75.13	\$14.00	\$89.13
Demolition Shears				
S340 (fits 322/325/330)				\$0.00
S365 (fits 330/345)	\$22,500.00	\$62.50	\$12.00	\$74.50
S390 (fits 365/385)				\$0.00
Demolition Grapples				
G315 (fits 322/325)				\$0.00
G320 (fits 325/330)				\$0.00
G330 (fits 345/365)			\$30.00	\$30.00
Other Equipment				
420D 4WD Backhoe	\$4,900.00	\$13.61	\$18.26	\$31.87
428D 4WD Backhoe	\$4,900.00	\$13.61	\$18.26	\$31.87
CS533E Vibratory Roller	\$14,843.98	\$41.23	\$11.97	\$53.21
CS633E Vibratory Roller			\$15.17	\$15.17
CP533E Sheepsfoot Compactor	\$14,843.98	\$41.23	\$11.97	\$53.21
CP633E Sheepsfoot Compactor	\$14,843.98	\$41.23	\$15.17	\$56.40
Light Truck - 1.5 Ton	\$3,290.00	\$9.14	\$4.97	\$14.11
Supervisor's Truck	\$3,290.00	\$9.14	\$3.38	\$12.52
Flatbed Truck	\$3,290.00	\$9.14	\$16.02	\$25.16
Air Compressor + tools	\$2,250.00	\$6.25	\$3.19	\$9.44
Welding Equipment	\$5,950.94	\$16.53	\$6.39	\$22.92
Heavy Duty Drill Rig	\$116,037.56	\$322.33	\$38.32	\$360.64
Pump (plugging) Drill Rig	\$116,037.56	\$322.33	\$31.93	\$354.26
Concrete Pump	\$29,562.66	\$82.12	\$31.93	\$114.05
Gas Engine Vibrator	\$1,279.04	\$3.55	\$3.19	\$6.75
Generator 5KW	\$1,871.00	\$5.20	\$4.79	\$9.99
HDEP Welder (pipe or liner)	\$15,280.09	\$42.44	\$6.39	\$48.83
5 Ton Crane	\$11,348.60	\$31.52	\$9.58	\$41.10
20 Ton Crane	\$13,300.00	\$36.94	\$12.77	\$49.72
50 Ton Crane	\$20,440.00	\$56.78	\$15.01	\$71.78
120 Ton Crane	\$39,340.00	\$109.28	\$16.60	\$125.88
Trucks				
725	\$28,509.82	\$79.19	\$39.49	\$118.68
730			\$41.08	\$41.08
735			\$55.93	\$55.93
740			\$57.06	\$57.06
769D			\$46.65	\$46.65
773E			\$58.18	\$58.18
777D	\$58,100.00	\$161.39	\$84.87	\$246.26
785C			\$77.43	\$77.43
793C			\$133.31	\$133.31
797B			\$187.59	\$187.59
613E (5,000 gal) Water Wagon	\$5,523.00	\$15.34	\$29.71	\$45.06
621E (8,000 gal) Water Wagon	\$20,907.20	\$58.08	\$49.19	\$107.27
777D Water Truck	\$58,100.00	\$161.39	\$84.87	\$246.26
785C Water Truck			\$77.43	\$77.43
Dump Truck (10-12 yd ³)	\$6,300.00	\$17.50	\$17.42	\$34.92
NOTES:				
(1) Power Equipment Source:				
(2) Power Equipment Type:	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels			
(3) Drilling Equipment Source:	Nevada Costs			
(4) Other Equipment Source:	Various quotes. See Donlin_equipment Materials Cost Buildup_181202017_pl_Reclamation			
(5) Drill rig includes support (pipe) truck				

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

FUEL, LUBE AND WEAR CALCULATIONS						
EQUIPMENT TYPE	PM Cost Per Hour ⁽¹⁾	Under carriage or Tires ⁽²⁾	G.E.T Consumption ⁽³⁾	Fuel Use Rate L/hr (4)	Cost@ 0.84/L	Total Hourly Equipment Cost
Bulldozers						
D6R	\$6.00		\$6.00	23.66	\$19.96	\$31.96
D6R w/ Winch	\$6.00		\$6.00	23.66	\$19.96	\$31.96
D7R	\$6.00		\$6.00	28.39	\$23.95	\$35.95
D8R	\$6.00		\$11.00	36.91	\$31.13	\$48.13
D9R	\$8.00		\$17.00	53.94	\$45.50	\$70.50
D10R	\$11.00		\$23.00	68.14	\$57.47	\$91.47
D11R	\$14.00		\$35.00	100.31	\$84.61	\$133.61
Wheeled Dozers						
824G		\$0.00		40.69	\$34.32	\$34.32
834G		\$0.00		47.69	\$40.23	\$40.23
844		\$0.00		56.78	\$47.89	\$47.89
854G		\$0.00		71.92	\$60.67	\$60.67
Motor Graders						
120H	\$7.00	\$3.23	\$12.00	15.14	\$12.77	\$35.00
14G/H	\$8.00	\$5.07	\$17.00	23.66	\$19.96	\$50.03
16G/H	\$6.00	\$6.86	\$23.00	28.39	\$23.95	\$59.81
24M				58.67	\$49.49	\$49.49
Track Excavators						
312C	\$4.00		\$4.00	7.12	\$6.00	\$14.00
320C	\$5.00		\$5.00	18.55	\$15.65	\$25.65
325C	\$5.00		\$6.00	24.98	\$21.07	\$32.07
330C	\$6.00		\$7.00	31.04	\$26.18	\$39.18
345B	\$6.00		\$7.00	40.12	\$33.85	\$46.85
365BL				49.97	\$42.15	\$42.15
385BL	\$7.00		\$15.00	66.24	\$55.88	\$77.88
Scrapers						
631G		\$8.79		56.78	\$47.89	\$56.69
637G		\$8.79		89.90	\$75.83	\$84.63
Wheeled Loaders						
924G	\$4.00	\$2.65	\$5.00	10.41	\$8.78	\$20.43
928G	\$5.00	\$2.65	\$5.00	13.25	\$11.18	\$23.83
950G	\$5.00	\$3.99	\$9.00	15.14	\$12.77	\$30.77
966G	\$7.00	\$6.36	\$12.00	21.77	\$18.36	\$43.72
972G	\$6.00	\$6.36	\$15.00	23.66	\$19.96	\$47.31
980G	\$6.00	\$6.69	\$15.00	28.39	\$23.95	\$51.64
988G	\$11.00	\$10.51	\$16.00	45.80	\$38.64	\$76.15
990				64.35	\$54.28	\$54.28
992G	\$13.00	\$23.44	\$36.00	87.06	\$73.44	\$145.88
994D				136.27	\$114.95	\$114.95
L2350				249.83	\$210.74	\$210.74
Shovels						
PC2000				140.06	\$118.14	\$118.14
PC3000				189.27	\$159.65	\$159.65
PC4000				264.97	\$223.51	\$223.51
PC5500				450.45	\$379.96	\$379.96
PC8000				564.01	\$475.75	\$475.75
Hydraulic Hammers						
H-120 (fits 325)	N/A		\$6.00			\$6.00
H-160 (fits 345)	N/A		\$12.00			\$12.00
H-180 (fits 365/385)	N/A		\$14.00			\$14.00
Demolition Shears						
S340 (fits 322/325/330)	N/A					\$0.00
S365 (fits 330/345)	N/A		\$12.00			\$12.00
S390 (fits 365/385)	N/A					\$0.00
Demolition Grapples						
G315 (fits 322/325)	N/A					\$0.00
G320 (fits 325/330)	N/A					\$0.00
G330 (fits 345/365)	N/A		\$30.00			\$30.00

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Other Equipment						
420D 4WD Backhoe	\$4.00	\$0.68	\$4.00	11.36	\$9.58	\$18.26
428D 4WD Backhoe	\$4.00	\$0.68	\$4.00	11.36	\$9.58	\$18.26
CS533E Vibratory Roller				14.19	\$11.97	\$11.97
CS633E Vibratory Roller				17.98	\$15.17	\$15.17
CP533E Sheepsfoot Compactor				14.19	\$11.97	\$11.97
CP633E Sheepsfoot Compactor				17.98	\$15.17	\$15.17
Light Truck - 1.5 Ton		\$0.18		5.68	\$4.79	\$4.97
Supervisor's Truck		\$0.18		3.79	\$3.19	\$3.38
Flatbed Truck		\$1.01		17.79	\$15.01	\$16.02
Air Compressor + tools			N/A	3.79	\$3.19	\$3.19
Welding Equipment			N/A	7.57	\$6.39	\$6.39
Heavy Duty Drill Rig				45.42	\$38.32	\$38.32
Pump (plugging) Drill Rig				37.85	\$31.93	\$31.93
Concrete Pump			N/A	37.85	\$31.93	\$31.93
Gas Engine Vibrator			N/A	3.79	\$3.19	\$3.19
Generator 5KW			N/A	5.68	\$4.79	\$4.79
HDEP Welder (pipe or liner)			N/A	7.57	\$6.39	\$6.39
5 Ton Crane				11.36	\$9.58	\$9.58
20 Ton Crane				15.14	\$12.77	\$12.77
50 Ton Crane				17.79	\$15.01	\$15.01
120 Ton Crane				19.68	\$16.60	\$16.60
Trucks						
725	\$8.00	\$13.48	\$3.00	17.79	\$15.01	\$39.49
730	\$8.00	\$13.48	\$3.00	19.68	\$16.60	\$41.08
735	\$8.00	\$21.46	\$3.00	27.82	\$23.47	\$55.93
740	\$8.00	\$22.59	\$3.00	27.82	\$23.47	\$57.06
769D	\$9.00	\$4.12	\$4.00	35.01	\$29.54	\$46.65
773E	\$8.00	\$8.67	\$4.00	44.48	\$37.52	\$58.18
777D	\$11.00	\$15.39	\$5.00	63.40	\$53.48	\$84.87
785C				91.79	\$77.43	\$77.43
793C				158.04	\$133.31	\$133.31
797B				222.39	\$187.59	\$187.59
613E (5,000 gal) Water Wagon	\$7.00	\$3.56		22.71	\$19.16	\$29.71
621E (8,000 gal) Water Wagon	\$8.00	\$6.87		40.69	\$34.32	\$49.19
777D Water Truck	\$11.00	\$15.39	\$5.00	63.40	\$53.48	\$84.87
785C Water Truck				91.79	\$77.43	\$77.43
Dump Truck (10-12 yd3) (5)	N/A	\$0.81	N/A	19.68	\$16.60	\$17.42

Notes:

(1) PM Source:	July 2012 Cashman Equipment Rental Rate, Elko, NV (except as noted)
(2) Undercarriage Source:	Cashman Equipment Reno Nevada 2012, 50% added for shipping and handling
(3) G.E.T. Source:	CAT Historical Data
(4) Fuel Use Source:	Caterpillar Handbook, Edition 35, Ch. 20; or estimated average for smaller vehicles
(5) Dump Truck Oper. Cost Source:	Means Heavy Construction (2008)

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

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Cost Data: User Data

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TIRE COST TABLES						
Equipment	Tire Size	# of Tires Per Piece of Equipment	Cost Per Tire	Tire Cost ⁽¹⁾⁽²⁾	Life Expectancy Hours (Low/Zone A) ⁽³⁾	Tire Cost per Hour
Bulldozers						
D6R			N/A			
D6R w/ Winch			N/A			
D7R			N/A			
D8R			N/A			
D9R			N/A			
D10R			N/A			
D11R			N/A			
Wheeled Dozers						
824G	29.5R25	4		\$0.00	3,500	\$0.00
834G	35/65-R33	4		\$0.00	3,500	\$0.00
844	45/65-R39	4		\$0.00	3,500	\$0.00
854G	45/65-R45	4		\$0.00	3,500	\$0.00
Motor Graders						
120H	13PR24	6	\$1,884.00	\$11,304.00	3,500	\$3.23
14G/H	20.5R25	6	\$2,959.00	\$17,754.00	3,500	\$5.07
16G/H	23.5R25	6	\$4,003.00	\$24,018.00	3,500	\$6.86
24M	23.5R25	6		\$0.00	3,500	
Track Excavators						
312C			N/A			
320C			N/A			
325C			N/A			
330C			N/A			
345B			N/A			
365BL			N/A			
385BL			N/A			
Scrapers						
631G	37.25R35	4	\$8,793.00	\$35,172.00	4,000	\$8.79
637G	37.25R35	4	\$8,793.00	\$35,172.00	4,000	\$8.79
Wheeled Loaders						
924G	17.5R25	4	\$2,982.00	\$11,928.00	4,500	\$2.65
928G	17.5R25	4	\$2,982.00	\$11,928.00	4,500	\$2.65
950G	26.5R25	4	\$4,493.00	\$17,972.00	4,500	\$3.99
966G	26.5R25	4	\$7,153.00	\$28,612.00	4,500	\$6.36
972G	26.5R25	4	\$7,153.00	\$28,612.00	4,500	\$6.36
980G	29.5R25	4	\$7,531.00	\$30,124.00	4,500	\$6.69
988G	35/65-33	4	\$11,827.00	\$47,308.00	4,500	\$10.51
990	41.25/70-39	4		\$0.00	4,500	
992G	45/65R45	4	\$26,371.00	\$105,484.00	4,500	\$23.44
994D	55/85R57	4		\$0.00	4,500	
L2350	55/85R57	4		\$0.00	4,500	
Shovels						
PC2000			N/A			
PC3000			N/A			
PC4000			N/A			
PC5500			N/A			
PC8000			N/A			
Hydraulic Hammers						
H-120 (fits 325)			N/A			
H-160 (fits 345)			N/A			
H-180 (fits 365/385)			N/A			
Demolition Shears						
S340 (fits 322/325/330)			N/A			
S365 (fits 330/345)			N/A			
S390 (fits 365/385)			N/A			
Demolition Grapples						
G315 (fits 322/325)			N/A			
G320 (fits 325/330)			N/A			
G330 (fits 345/365)			N/A			

Closure Cost Estimate

Equipment Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Other Equipment						
420D 4WD Backhoe	340/80R18-19.5LR24	2	\$1,023.00	\$2,046.00	3,000	\$0.68
428D 4WD Backhoe	340/80R18-16.9R28	2	\$1,023.00	\$2,046.00	3,000	\$0.68
CS533E Vibratory Roller			N/A			
CS633E Vibratory Roller			N/A			
CP533E Sheepsfoot Compactor			N/A			
CP633E Sheepsfoot Compactor			N/A			
Light Truck - 1.5 Ton		4	138	\$552.00	3,000	\$0.18
Supervisor's Truck		4	138	\$552.00	3,000	\$0.18
Flatbed Truck		22	138	\$3,036.00	3,000	\$1.01
Air Compressor + tools			N/A			
Welding Equipment			N/A			
Heavy Duty Drill Rig		4		\$0.00	3,000	
Pump (plugging) Drill Rig		4		\$0.00	3,000	
Concrete Pump			N/A			
Gas Engine Vibrator			N/A			
Generator 5KW			N/A			
HDEP Welder (pipe or liner)			N/A			
5 Ton Crane		4		\$0.00	3,000	
20 Ton Crane		4		\$0.00	3,000	
50 Ton Crane		6		\$0.00	3,000	
120 Ton Crane		6		\$0.00	3,000	
Trucks						
725	23.5R25	6	\$4,493.00	\$26,958.00	2,000	\$13.48
730	23.5R25	6	\$4,493.00	\$26,958.00	2,000	\$13.48
735	26.5R25	6	\$7,153.00	\$42,918.00	2,000	\$21.46
740	29.5R25	6	\$7,531.00	\$45,186.00	2,000	\$22.59
769D	18.00R33	6	\$4,117.00	\$24,702.00	6,000	\$4.12
773E	24.00R35	6	\$7,221.00	\$43,326.00	5,000	\$8.67
777D	27.00R49	6	\$12,821.00	\$76,926.00	5,000	\$15.39
785C	33.00R51	6		\$0.00	4,000	
793C	40.00R57	6		\$0.00	4,000	
797B	40.00R57	6		\$0.00	4,000	
613E (5,000 gal) Water Wagon	23.5R25	6	\$3,556.00	\$21,336.00	6,000	\$3.56
621E (8,000 gal) Water Wagon	33.25R29	6	\$9,157.00	\$54,942.00	8,000	\$6.87
777D Water Truck	27.00R49	6	\$12,821.00	\$76,926.00	5,000	\$15.39
785C Water Truck	33.00R51	6		\$0.00	4,000	
Dump Truck (10-12 yd3)		10	\$487.00	\$4,870.00	6,000	\$0.81
Notes:						
(1) Unit Cost Basis:	Cost per tyre each					
(2) Cost Basis:	Cashman Equipment Reno Nevada 2012					
(3) Tire Cost Source:	Cashman Equipment Reno Nevada 2012, 50% added for shipping and handling					
(4) Tire Wear Source:	Caterpillar Handbook, Edition 37					

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Revegetation Materials			
Seed Mixes			
Seed Mix	Description		Cost/Ha
None			
Mix 1	Basins		\$388.85
Mix 2	Low Hills		\$238.80
Mix 3	Uplands		
Mix 4	Riparian or Custom		
User Mix 1	Mesic for rest		\$385.24
User Mix 2	Hydric for TSF		\$236.58
User Mix 3			
User Mix 4			
	Cost/lb	kg/Ha	Cost/Ha
User Mix 5 (from Seed Mix sheet)	\$17.54	\$7.42	\$130.14
Notes:			
Mulch			
Item	Cost/kg	kg/Ha	Cost/Ha
None			
Straw Mulch		2000	
Hydro Mulch		100	
Timber Mulch		100	
Notes:			

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Amendments			
Item	Cost/kg	kg/Ha	Cost/Ha
None			
Organic Matter		2000	
Treated Sludge			
Chemical	\$1.46	100	\$146.00
Notes:			

Closure Cost Estimate Material Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Well Abandonment Materials			
Description	Cost/20kg bag	Units	Cost/unit*
Cement	\$6.79	m3	\$42.44
Grout (Low Grade Bentonite)	\$7.76	m3	\$48.50
Inert Material/Cuttings		m3	
		m3	
		m3	
NDEP 2016 costs converted to metric units and adjusted for location.			
* Assumes 1 bag mixes with water to make 0.21 y3 or 0.16 m3 of grout/cement slurry.			

Monitoring Costs		
Description	Units	Cost/unit
Monitor Well Pump	ea.	\$2,459.66
Sampling Supplies	ea.	\$5.75
Water Analysis (Complete) (1)	ea.	\$1,055.00
ABA + S speciation	ea.	
Cyanide - WAD	ea.	
Cyanide - Free	ea.	
Cyanide - Total soils	ea.	
Cyanide - Total water	ea.	
TPH in soils	ea.	\$80.00
Humidity Cell (20 wk) (2)	ea.	
Humidity Cell (40 wk)	ea.	
NAG	ea.	
TCLP w/ full analysis	ea.	\$185.00
SPLP w/ full analysis	ea.	\$150.00
AS4439 Leach test w/ full analysis	ea.	
Methy Hg	ea.	
	ea.	
Pump and consumable costs from Drillers World		
AK Lab Rates from SRK Consulting based on similar projects		

Closure Cost Estimate

Material Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xls

Cost Estimate Type: Surety **Cost Basis: Alaska Davis Bacon 2016**

Fuel, Etc.			
Description	Units	Cost/unit	User Overrides
Off-road Diesel - delivered (1)	\$/Litre	\$0.844	
Pickup Truck Mileage	\$/km	\$0.348	
Electical Power	\$/kWh	\$0.129	
Donlin feasibility 2011 inflated to 2016			
IRS allowance converted to metric			
Donlin feasibility 2011 inflated to 2016			

Closure Cost Estimate Material Costs

Revegetation Method				
Slopes				
Disturbance Type	Seed Application Method	Labor Cost/Ha	Equipment Cost/Ha	Total Cost/Ha
Waste Rock Dumps	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Heap Leach	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Tailings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Quarries & Borrow Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Flat Areas and Undifferentiated				
Disturbance Type	Seed Application Method	Labor Cost/Ha	Equipment Cost/Ha	Total Cost/Ha
Exploration Trenches	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Exploration Roads	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Waste Rock Dumps	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Heap Leach	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Tailings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Quarries & Borrow Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Roads	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Pits	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Haul Material	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Foundations & Buildings	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Sediment & Drainage Control	Hand Broadcast	\$389.34	\$144.20	\$533.54
Process Ponds	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Landfills	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Yards, Etc.	Mechanical Broadcast	\$269.16	\$77.87	\$347.03
Revegetation Maintenance	Mechanical Broadcast	\$269.16	\$77.87	\$347.03

**Closure Cost Estimate
Misc. Unit Costs**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Revegetation										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Materials	Labor	Equipment	Total	Notes
Seeding - Broadcast Hand (1)		ha					\$389.34	\$144.20	\$533.54	
Seeding - Broadcast Mechanical (1)		ha					\$269.16	\$77.87	\$347.03	
Seeding - Drill (1)		ha		365			\$403.76	\$288.40	\$692.16	
Seeding - Hydroseeding (1)				365			\$721.00	\$360.50	\$1,081.50	
Shrub Planting - bare root 6-10 in (150- 250mm) (2)	02910-400-0561	ea.	1 Clab	365			\$0.77	\$0.00	\$0.77	
Tree Planting - bare root 11-16 in (270- 400mm) (3)	02910-400-0562	ea.	1 Clab	260			\$1.08	\$0.00	\$1.08	
Cactus Planting (4)		ea.	1 Clab						\$0.00	
NOTES:										
(1) Seeding Source:	Nevada 2016, NDEP costs converted to metric									
(2) Shrub Source:										
(3) Tree Source:										
(4) Cactus Source:										
Building and Wall Demolition										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data . All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Labor	Equipment	Premium	Total	Notes
Building Demolition										
Lg. steel	02220-110-0012	m3	B-8	609		\$4.68	\$2.10		\$6.78	
Lg. concrete	02220-110-0050	m3	B-8	433		\$6.59	\$2.95		\$9.54	
Lg. masonry	02220-110-0080	m3	B-8	569		\$5.01	\$2.24		\$7.25	
Lg. mixed	02220-110-0100	m3	B-8	569		\$5.01	\$2.24		\$7.25	
Sm. steel	02220-110-0500	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Sm. concrete	02220-110-0600	m3	B-3	320		\$7.39	\$2.75		\$10.14	
Sm. masonry	02220-110-0650	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Sm. wood	02220-110-0700	m3	B-3	419		\$5.65	\$2.10		\$7.75	
Wall Demolition										
Block 4 in (100 mm) thick	02220-130-2000	m2	1 Clab	17		\$16.54	\$0.00	20%	\$19.85	
Block 6 in (150 mm) thick	02220-130-2040	m2	1 Clab	16		\$17.58	\$0.00	20%	\$21.10	
Block 8 in (200 mm) thick	02220-130-2080	m2	1 Clab	14		\$20.09	\$0.00	20%	\$24.11	
Block 12 in (300 mm) thick	02220-130-2100	m2	1 Clab	14		\$20.09	\$0.00	20%	\$24.11	
Conc 6 in (150 mm) thick	02220-130-2400	m2	B-9	15		\$134.62	\$5.03	10%	\$153.62	
Conc 8 in (200 mm) thick	02220-130-2420	m2	B-9	13		\$155.33	\$5.81	10%	\$177.25	
Conc 10 in (250 mm) thick	02220-130-2440	m2	B-9	11		\$183.57	\$6.87	10%	\$209.48	
Conc 12 in (300 mm) thick	02220-130-2500	m2	B-9	9		\$224.36	\$8.39	10%	\$256.03	

Closure Cost Estimate
Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Waste Disposal										
Unit rates from Means Heavy Construction 2006 Edition by permission of R.S.Means/Reed Construction Data .										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment		Total	Notes
Rubbish Handling										
Dumpster delivery (average for all sizes)	02220-350-0910	ea.			\$64.44				\$64.44	
Haul (average for all sizes)	02220-350-0920	ea.			\$201.83				\$201.83	
Rent per month (average for all sizes)	02220-350-0940	ea.			\$68.70				\$68.70	
Disposal fee per ton (tonne) (average for all sizes)	02220-350-0950	tonne			\$83.11				\$83.11	
NOTES:										
Dumpster Cost Source:	2016 Means Heavy Construction									
Dumpster Disposal Fee Source:	2016 Means Heavy Construction									
Hazardous Material Handling - Solids (+ Liquids in drums)										
Pickup fees 55 gal (200 L). drums	02110-300-1100	ea.			\$299.10				\$299.10	
Bulk material (average)	02110-300-1220/1230	tonne			\$539.56				\$539.56	
Transport - truck load (80 drums, 25 cy (m3), 18 tons)	02110-300-1260/1270	km			\$4.15				\$4.15	
Dump site solid disposal fee	02110-300-6000/6020	tonne			\$381.38				\$381.38	
NOTES:										
Solid Handling Cost Source:	2016 Means Heavy Construction									
Solid Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 81 0300-6000, 6020									
Hazardous Material Handling - Liquids										
Vacuum Truck Pickup (2200 gal/8300 L)	02110-300-3110	hr.			\$168.20				\$168.20	
Vacuum Truck Pickup (5000 gal/19000 L)	02110-300-3120	hr.			\$244.12				\$244.12	
Dump site liquid disposal fee	02110-300-6000/6020	tonne			\$381.38				\$381.38	
NOTES:										
Liquid Handling Cost Source:	2012 Means Heavy Construction									
Liquid Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 11 0300-6000, 6020									
Hydrocarbon Contaminated Soils (HCS)										
Insitu Biotreatment	02115-200-2020/2021	m3			\$29.29				\$29.29	
HCS disposal fee	02115-200-2050/2055	m3			\$73.47				\$73.47	
NOTES:										
Insitu Treatment Cost Source:	2012 Means Heavy Construction, ave. 02 65 1030-2020, 2021									
HCS Disposal Fee Source:	2012 Means Heavy Construction, ave. 02 65 1030-2050, 2055 plus barging fee of \$265/tonne									

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Concrete Structure Installation										
Weekly dumpster rental rates from Means Heavy Construction 2005 Edition with permission by R.S.Means/Reed Construction Data . Weekly dumpster rental rates include haul to off-site disposal site and disposal fees										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Reinforced Concrete Bulkheads and Shaft Covers										
Grade walls - 15 in (400mm) thick, 8 ft (2.5m) high	03310-240-4300	m3	C-14D	61.18	\$217.74	\$194.26	\$17.43		\$429.43	includes reinforcing
Grade walls - 15 in (400mm) thick, 12 ft (3.7m) high	03310-240-4350	m3	C-14D	39.19	\$217.74	\$303.26	\$27.22		\$548.22	includes reinforcing
Elevated conc, 1-way beam & slab - 15ft (4.6m) span	03310-240-2700	m3	C-14B	15.74	\$359.20	\$780.62	\$67.76		\$1,207.58	includes reinforcing
Elevated conc, 1-way beam & slab - 25ft (7.5m) span	03310-240-2750	m3	C-14B	21.68	\$346.48	\$566.74	\$49.20		\$962.42	includes reinforcing
Bat Gate/Foam Plug Installation										
Bat Gate (5)		ea.								materials \$/ea. Installed
Culvert Gate (5)		ea.								materials \$/ea. Installed
Adit Foam Plug (6)		ea./m3								materials \$/cy placed
Production Opening Foam Plug (6)		ea./m3								materials \$/cy placed
NOTES:										
(5) Bat Gate Source:	Not used									
(6) Foam Plug Source:	Not used									

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Misc. Linear Projects

Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data .
 All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets

	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Fencing Installation										
Barbed 3-strand	02820-170-1650	m	B-80A	232	\$0.18	\$5.66	\$0.49		\$6.33	
Barbed 4-strand	extrapolated	m	B-80A	174	\$0.24	\$7.55	\$0.65		\$8.44	
Barbed 5-strand	02820-130-0920	m	B-80A	139	\$0.30	\$9.45	\$0.81		\$10.56	
Chain link 8-10ft (2.5-3m) Install	02820-130-0920	m	B-80C	55	\$14.28	\$23.89	\$2.05		\$40.22	
Wood stockade fence 6 ft (2 m) high - Install	02820-510-1240	m	B-80C	46	\$5.93	\$28.57	\$2.45		\$36.95	
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
Fencing Removal										
Barbed 3-strand Removal	02220-220-1600	m	2 Clab	131		\$7.89	\$0.86		\$8.75	
Barbed 4-strand Removal	extrapolated	m	2 Clab	108		\$9.56	\$1.05		\$10.61	
Barbed 5-strand Removal	02220-220-1650	m	2 Clab	85		\$12.15	\$1.33		\$13.48	
Chain link 8-10 ft (2.5-3 m) Removal	02220-220-1700	m	B-6	136		\$7.71	\$2.35		\$10.06	
Wood, all types 4-6 ft ("1.5-2 m) high - Removal	02220-220-1775	m	2 Clab	131		\$7.89	\$0.86		\$8.75	
	user	m								
	user	m							\$0.00	
	user	m							\$0.00	
	user	m							\$0.00	
Culvert Removal										
12 in (300 mm) Diameter	02220-220-2900	m	B-6	53		\$19.79	\$6.03		\$25.82	
18 in (450 mm) Diameter	02220-220-2930	m	B-6	46		\$22.80	\$6.95		\$29.75	
24 in (600 mm) Diameter	02220-220-2960	m	B-6	37		\$28.35	\$8.64		\$36.99	
36 in (1m) Diameter	02220-220-3000	m	B-6	27		\$38.85	\$11.84		\$50.69	
Pipeline Removal										
0.75 in (20mm) - 4 in (100 mm) diameter	02220-381-1600	m	B-20	213		\$7.34	\$0.53		\$7.87	
6 in (150 mm) - 8 in (200 mm)	02220-381-1700	m	B-20	152		\$10.28	\$0.74		\$11.02	
10 in (250 mm) - 18 in (450 mm)	02220-381-1800	m	B-20	91		\$17.17	\$1.24		\$18.41	
20 in (500 mm) - 36 in (1 m)	02220-381-1900	m	B-20	61		\$25.62	\$1.85		\$27.47	
Pipe and Drainpipe Installation										
Water 4in (100mm) 40ft (12m) length, welded HDPE	02510-760-0100	m	B-22A	122	\$0.84	\$19.75	\$12.93		\$33.52	
Water 6in (150mm) 40ft (12m) length, welded HDPE	02510-760-0200	m	B-22A	116	\$2.34	\$20.77	\$13.60		\$36.71	
Water 12in (300mm) 40ft (12m) length, welded HDPE	02510-760-0500	m	B-22A	79		\$30.49	\$19.96		\$50.45	
Drain 4in (100mm) perforated PVC	02620-630-2100	m	B-14	96	\$0.48	\$25.94	\$3.83		\$30.25	
Drain 6in (150mm) perforated PVC	02620-630-2110	m	B-14	91	\$1.05	\$27.36	\$4.04		\$32.45	
Drain 4in (100mm) corrugated, perf or plain	02620-660-0040	m	2 Clab	366	\$0.22	\$2.82	\$0.31		\$3.35	
Drain 6in (150mm) corrugated., perf or plain	02620-660-0060	m	2 Clab	274	\$0.51	\$3.77	\$0.41		\$4.69	

Closure Cost Estimate Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drain Rock Preparation										
Crushing		m3							\$0.79	
Screening		m3							\$0.79	
TOTAL									\$1.59	
Misc.										
Backhoe work	02210-700-0120	m3	B-11M	21		\$23.17	\$12.14		\$35.31	
Powerline and Transformer Removal										
Single Pole		km							\$30,630.16	
Double Pole		km							\$35,005.89	
Transformer (9)		ea.							\$35,342.26	
NOTES:										
(7) Single Pole Source: NVEnergy estimate (2009) Adjusted to 2016										
(8) Double Pole Source: NVEnergy estimate (2009) Adjusted to 2016										
(9) Transformer Source: Sierra Pacific Power Company estimate (2004) adjusted to 2016										
Erosion and Sedimentation Control										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data .										
All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Rip-Rap & Rock Lining										
Rip-Rap 3/8 to 1/4 CY (m3) pieces, grouted	02370-450-0110	m2	B-13	67	\$39.27	\$30.42	\$8.57		\$78.26	assumes on-site source of rip-rap
Rip-Rap 18 in (450 mm) min thick, no grout	02370-450-0200	m2	B-13	44		\$46.32	\$13.05		\$59.37	assumes on-site source of rip-rap
Gabions, 6 in (150 mm) deep	02370-450-0400	m2	B-13	167	\$11.20	\$12.20	\$3.44		\$26.84	assumes on-site source rock fill for gabions
Gabions, 9 in (250 mm) deep	02370-450-0500	m2	B-13	136	\$14.03	\$14.99	\$4.22		\$33.24	assumes on-site source rock fill for gabions
Gabions, 12 in (300 mm) deep	02370-450-0200	m2	B-13	128	\$18.62	\$15.92	\$4.49		\$39.03	assumes on-site source rock fill for gabions
Gabions, 18 in (450 mm) deep	02370-450-0200	m2	B-13	85	\$26.18	\$23.98	\$6.76		\$56.92	assumes on-site source rock fill for gabions
Gabions, 36 in (1m) deep	02370-450-0200	m2	B-13	50	\$44.36	\$40.76	\$11.48		\$96.60	assumes on-site source rock fill for gabions
HDEP Liner Installation										
Finish grading large area	2310-100-0100	m2	B-11L	5017		\$0.15	\$0.11		\$0.26	
Compaction-riding, vibrating roller - 12in (300mm) lifts	2315-310-5100	m3	B-10Y	242		\$3.17	\$1.76		\$4.93	
1.5mm HDPE	2660-610-0010	m2	3 Skwk	149	\$0.80	\$11.38	\$4.33	10%	\$18.16	
80 mil HDPE	user	m2	3 Skwk	149	\$9.00	\$11.38	\$4.33		\$24.71	
40 mil VLDPE	user	m2	3 Skwk	150	\$7.00	\$11.31	\$4.30		\$22.61	
	user	m2	3 Skwk	149		\$11.38	\$4.33		\$15.71	
	user	m2	3 Skwk	149		\$11.38	\$4.33		\$15.71	

Closure Cost Estimate

Misc. Unit Costs

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

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Model Version: Version 1.4.1

Cost Data: User Data

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Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Construction Management Support											
Office Trailer, Furnished, no hook-ups		0150-500-0250	mo.				\$235.88			\$235.88	
Toilet Portable, chemical		1590-400-6410	mo.				\$251.44			\$251.44	
TOTAL							\$487.32			\$487.32	
Pump and Casing Removal											
	Pump Type	Measurement	Unit				Labor	Equipment		Total	Notes
Pump Removal											
Submersible		ft to pump	m				\$10.17	\$22.08		\$32.25	
Line Shaft		ft to pump	m				\$23.72	\$51.58		\$75.30	
NOTES:											
(10) Pump Removal Source: Nevada 2016, NDEP costs converted to metric											

User 1

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Sheet: User 1 - Fluid Disposal

This worksheet calculates to the cost to dispose of fluids drained from equipment remaining at the end of mine life. All fluids will be drained and the equipment will be buried in the pit. Quantities were taken from specifications for each piece of equipment. Where specifications were not available (text in red) quantities were estimated based on relative size to other known equipment. Total quantity is converted to number of drums and estimated weight. Total cost for transportation is estimated by multiplying the total weight by the estimated shipping costs and disposal is estimated by multiplying the total drums by the per drum price.

		Capacity in Each Piece					Total Quantity				
Qty	Equipment	Hydraulic (gal)	Oil (gal)	Fuel (gal)	Coolant (gal)	Grease (gal)	Hydraulic (gal)	Oil (gal)	Fuel (gal)	Coolant (gal)	Grease (gal)
7	PC 8000 Shovels	5245	514	3564			36,715	3,598	24,948	0	0
2	PC 2000 Shovel	413	31	898	48	50	826	62	1,796	96	100
88	LT 282B Haul Trucks	1448	103	1250	200	200	127,424	9,064	110,000	17,600	17,600
6	LT 1850 Loaders	375	173	1050	110	5	2,250	1,038	6,300	660	30
1	Cat 994 loader	236	659.5	1013	129	5	236	660	1,013	129	5
4	Cat 785B Haul Trucks	378	169	500	100	5	1,512	676	2,000	400	20
3	Cat 785C Water Trucks	378	169	500	100	5	1,134	507	1,500	300	15
8	16M Grader	30	104.2	135	12.3	5	240	834	1,080	98	40
2	24M Grader	70	248.3	350	24	5	140	497	700	48	10
8	854G Rubber Tire Dozers	50	265	413	75.7	5	400	2,120	3,304	606	40
7	D-10 Dozers	28.6	150	257	100	5	200	1,050	1,799	700	35
10	D-11 Dozers	44.7	175	388	100	5	447	1,750	3,880	1,000	50
6	D80 Drills	100	25	250	25	10	600	150	1,500	150	60
22	D55 Drills	100	25	250	25	10	2,200	550	5,500	550	220
30	Titon 600 Drills	100	25	250	25	10	3,000	750	7,500	750	300
1	Horizontal Drain Hole Drill	100	25	250	25	10	100	25	250	25	10
2	Hydraulic Shovel 8 yd 3	413	31	898	48	25	826	62	1,796	96	50
2	Backhoe Loader 0.5 yd 3	35	21.6	45	10	5	70	43	90	20	10
2	Backhoe w/ Hammer & Bucket 345 CL	214	24.2	186	9.4	2	428	48	372	19	4
8	Fuel/Lube Trucks 75000 L CAT 777	50	383	300	61	2	400	3,064	2,400	488	16
3	Large Mechanical Trucks		10	100	5		0	30	300	15	0
12	Medium Mechanical Trucks		15	100	5		0	180	1,200	60	0
1	60 t Crane	50	30	500	25	5	50	30	500	25	5
1	150 t Crane	100	30	500	25	5	100	30	500	25	5
1	200 t Crane	200	30	500	25	5	200	30	500	25	5
1	Low Boy Truck/Toe CAT 793	440	490	1150	257	5	440	490	1,150	257	5
1	Tires Handler	29	55	100	10	5	29	55	100	10	5
4	FEL CAT 966	29	55	100	10	5	116	220	400	40	20
3	23.5 t Forklift	20	5	60	15	5	60	15	180	45	15
3	16.3 t Forklift	15	5	50	10	2	45	15	150	30	6
2	4.5 t Telehandler	10	5	40	10	2	20	10	80	20	4
2	4.5 t Forklift	10	5	40	10	2	20	10	80	20	4
10	Crew Buses		10	200	25		0	100	2,000	250	0
3	Compactors		1.5	30	5	2	0	5	90	15	6
3	SVE Lift Trucks		1.5	30	5		0	5	90	15	0
60	Light Plants		1.5	30	5		0	90	1,800	300	0
310	Light Vehicles		1.5	30	5		0	465	9,300	1,550	0
639	Total					Total	180,228	28,326	196,148	26,437	18,695
						Number of Drums	3,277	515	713	481	2,337
						Pounds	1,261,597	198,284	274,607	185,058	18,695

		\$/tonne (2,204 lbs)	Inflation Adjustment factor from 2011 (User 20)	\$/tonne (2,204 lbs)			Hydraulic (\$)	Oil (\$)	Fuel (\$)	Coolant (\$)	Grease (\$)
	Transportation Leg										
	Mine to Jung (\$/ton)	\$ 50.00	1.08	\$ 54.00			\$ 30,910	\$ 4,858	\$ 6,728	\$ 4,534	\$ 458
	Jung Port Handling (\$/ton)	\$ 20.00	1.08	\$ 21.60			\$ 12,364	\$ 1,943	\$ 2,691	\$ 1,814	\$ 183
	Jung to Seattle (\$/ton)	\$ 265.00	1.08	\$ 286.20			\$ 163,824	\$ 25,748	\$ 35,659	\$ 24,031	\$ 2,428
	Seattle Handling (\$/ton)	\$ 20.00	1.08	\$ 21.60			\$ 12,364	\$ 1,943	\$ 2,691	\$ 1,814	\$ 183
	Total						\$ 219,463	\$ 34,493	\$ 47,770	\$ 32,192	\$ 3,252

		2011 costs	Inflation Adjustment factor from 2011 (User 20)	Current Costs \$/Drum			Hydraulic (\$)	Oil (\$)	Fuel (\$)	Coolant (\$)	Grease (\$)
	Spent Antifreeze for Recycle	\$ 155.00	1.08	\$ 167.40							
	Spent (Non-regulated) Grease for Landfill	\$ 245.00	1.08	\$ 264.60							
	Non-regulated Fuels and Oils for Fuel Blending	\$ 52.50	1.08	\$ 56.70	Disposal Total (\$)		\$ 185,799	\$ 29,202	\$ 40,442	\$ 80,464	\$ 618,337

[illegible]

Closure Cost Estimate

User 2

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 2 - Bulk Fuel Storage Tanks Demolition

This sheet calculates the estimated cost to demolish the bulk steel storage tanks using a shear to cut and fold them. The tanks will then be hauled to the pit and buried with the equipment.

	Labor	Equipment	Totals
Totals Added to the Other User sheet >>>	\$258,724	\$276,826	\$535,550

Demolition Crew			Haulage Crew	
	Cost (\$)			Cost (\$)
1 Foreman	\$51.00		Operator	\$62.02
2 Laborer	\$70.30		777 Haul Truck	\$246.26
1 Operator	\$60.81			
1 Cat Excavator 345	\$109.46			
1 Demolition Shear	\$74.50			
Total Crew Cost (\$/Hr)	\$366.07		Total Crew Cost	\$308.28
Hours per tank	48		Includes loading onto 777 Haul Truck	
Number of Tanks	29			
Total Cost (Labor)	\$253,497.12			
Total Cost (Equip)	\$256,072.32			
Tons of Steel per Tank	300			
Tons of Steel per Load	60		Assumed cannot fully load a 777	
Total Loads	145			
Haul Distance (meters)	8,500			
Travel Time Uphill (min)	11			
Travel Time Downhill (min)	9			
Load Dump Time	15			
Total Fleet Time (hrs)	84			
Total Cost (Labor)	\$5,226.77			
Total Cost (Equip)	\$20,753.70			

Bulk demolition time from 2/10/2009 tel. call with Fred Glueck of Plant Reclamation (California). Fred estimated 1 week (40 hrs) of crew time per bulk tank. Fred's company had demolished Barrick tanks at Tombo and McClaughlin.

1 day added for each tank to account for rinsing. Pumping and water treatment costs calculated in Solution Mangement worksheet.

Shear: Genesis GXT 995R, Monthly rental quote from Bejac Equip (2017).

Closure Cost Estimate

User 3

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 3 - Miscellaneous Hazardous Waste Disposal

This sheet calculates the estimated cost to demolish the bulk steel storage tanks using a shear to cut and fold them. The tanks will then be hauled to the pit and buried with the equipment.

	Labor	Materials	Totals
Totals Added to the Other User sheet >>>		\$808,385	\$808,385

	Amount Generated (Metric tonnes)	Quantity (Tons)	Quantity (lbs)
Mercury Contaminated Carbon	18.4	20.3	40,565
Autoclave Lead Waste - Bricks	220.4	242.9	485,894
Autoclave Lead Waste - Backing	55.1	60.7	121,473
Assay Lab Lead Waste	30.2	33.3	66,579
Total	324.1	357.2	714,511

Ave. Weight of drum (lbs)	700
# drums required	1,021

	2011 costs \$/drum	Inflation Adjusted costs (\$)	Cost (\$)
Disposal Costs	\$410.00	\$442.80	\$452,099
Transportation (Seattle Port to Disposal)		\$0.32	\$228,260
Federal Tax (6.25%)			\$14,266
Total Disposal Cost			\$694,626

Transportation	2011 costs \$/metric-tonne	Inflation Adjusted costs (\$)	Cost (\$)
Mine to Jung (\$/ton)	\$20.00	\$21.60	\$7,000.56
Jung Handling (\$/ton)	\$20.00	\$21.60	\$7,000.56
Jung to Seattle (\$/ton)	\$265.00	\$286.20	\$92,757.42
Seattle Handling	\$20.00	\$21.60	\$7,000.56
Total			\$113,759.10

3/29/2017 - Updated quantities per 6/26/2014 email from BJeffress

Closure Cost Estimate
User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

TANK DEMOLITION AND DISPOSAL COSTS	CAPACITY	SIZE	Diam./Width	Width	Height	Is tank smaller than 7x10 M. (1)	Circumference	Number of Cuts (Top/Bottom)	Cut Length	No. of Cuts (side) (vert)	Cut Length	No. Cuts on Circumference (Horiz)	Cut Length	Total Length of Cuts	Crew Hours	Demo Crew (Labor)	Demo Crew (Equip)	Haulage Cost (Labor)	Haulage Cost (Equip)	Haulage Cost (Small Tanks) (Labor)	Haulage Cost (Small Tanks) (Equip)
				m	m		m		m		m		m	m	Hrs	\$	\$	\$	\$	\$	\$
CLARIFIER		38 m dia	38		4.5	FALSE	119.3	5.0	190.0	18.0	81.0	-	-	271.0	\$ 0.88	\$ 160.50	\$ 162.13	\$ 153.93	\$ 476.42		
CLARIFIER		19 m dia. x 4.5 m H wall	19		4.5	FALSE	59.7	2.0	38.0	9.0	40.5	-	-	78.5	\$ 3.04	\$ 554.07	\$ 559.70	\$ 153.93	\$ 476.42		
CLARIFIER, PRESSURE OXIDATION CCD CLARIFIER		4.25 m dia. X 7 m	4.25		7	TRUE		-	-											\$ 153.93	\$ 476.42
CELL, ELECTROWINNING NO 1 (included in bldg. demo)		3.5 M3 CELL						-	-												
CELL, ELECTROWINNING NO 2 (included in bldg. demo)		3.5 M3 CELL						-	-												
CELL, ELECTROWINNING NO 3 (included in bldg. demo)		3.5 M3 CELL						-	-												
CELL, ELECTROWINNING NO 4 (included in bldg. demo)		3.5 M3 CELL						-	-												
CELL, PRIMARY ROUGHER NO 1 A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 E, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 F, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 G, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 H, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 J, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 K, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 1 L, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 E, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 F, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 G, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 H, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 J, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 K, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, PRIMARY ROUGHER NO 2 L, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 E, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 F, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 G, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 H, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 J, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 K, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 1 L, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 E, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 F, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 G, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 H, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 J, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		

User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis: Alaska Davis Bacon 2016**

CELL, SECONDARY ROUGHER NO 2 K, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, SECONDARY ROUGHER NO 2 L, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER E, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER F, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER SCAVENGER A, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER SCAVENGER B, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER SCAVENGER C, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
CELL, CLEANER SCAVENGER D, FLOTATION	300 m3		8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
THICKENER, CONCENTRATE		45 m dia.	45		8	FALSE	141.3	6.0	270.0	21.0	168.0	-	-	438.0	\$ 0.55	\$ 99.30	\$ 100.31	\$ 153.93	\$ 476.42		
THICKENER, CONCENTRATE CCD NO 1		40 m dia.	40		8	FALSE	125.6	5.0	200.0	18.0	144.0	-	-	344.0	\$ 0.69	\$ 126.44	\$ 127.72	\$ 153.93	\$ 476.42		
THICKENER, CONCENTRATE CCD NO 2		40 m dia.	40		8	FALSE	125.6	5.0	200.0	18.0	144.0	-	-	344.0	\$ 0.69	\$ 126.44	\$ 127.72	\$ 153.93	\$ 476.42		
THICKENER, CONCENTRATE CCD NO 3		40 m dia.	40		8	FALSE	125.6	5.0	200.0	18.0	144.0	-	-	344.0	\$ 0.69	\$ 126.44	\$ 127.72	\$ 153.93	\$ 476.42		
THICKENER, PRESSURE OXIDATION DISCHARGE CCD NO 1		50 m dia.	50		8	FALSE	157.0	7.0	350.0	23.0	184.0	-	-	534.0	\$ 0.45	\$ 81.45	\$ 82.28	\$ 153.93	\$ 476.42		
THICKENER, PRESSURE OXIDATION DISCHARGE CCD NO 2		50 m dia.	50		8	FALSE	157.0	7.0	350.0	23.0	184.0	-	-	534.0	\$ 0.45	\$ 81.45	\$ 82.28	\$ 153.93	\$ 476.42		
THICKENER, PRESSURE OXIDATION DISCHARGE CCD NO 3		50 m dia.	50		8	FALSE	157.0	7.0	350.0	23.0	184.0	-	-	534.0	\$ 0.45	\$ 81.45	\$ 82.28	\$ 153.93	\$ 476.42		
THICKENER, PRESSURE OXIDATION DISCHARGE CCD NO 4		50 m dia.	50		8	FALSE	157.0	7.0	350.0	23.0	184.0	-	-	534.0	\$ 0.45	\$ 81.45	\$ 82.28	\$ 153.93	\$ 476.42		
THICKENER, FLOTATION TAILINGS		96 m dia.	96		15	FALSE	301.4	13.0	1,248.0	44.0	660.0	2.0	603.0	2,511.0	\$ 0.10	\$ 17.32	\$ 17.50	\$ 153.93	\$ 476.42		
TANK, DIESEL BULK NO 1, PORT SITE	10409 m3		42.6		7.7	FALSE	133.8	6.0	255.6	20.0	154.0	-	-	409.6	\$ 0.58	\$ 106.19	\$ 107.27	\$ 153.93	\$ 476.42		
TANK, DIESEL BULK NO 2, PORT SITE	10409 m3		42.6		7.7	FALSE	133.8	6.0	255.6	20.0	154.0	-	-	409.6	\$ 0.58	\$ 106.19	\$ 107.27	\$ 153.93	\$ 476.42		
TANK, DIESEL DAY- WAREHOUSE (included in bldg. demo)	18.9 m3							-	-												
TANK, DIESEL POWER PLANT	94.6 m3		5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DIESEL DISPENSING	94.6 m3		5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DIESEL TRANSER PUMP ENGINE DAY (included in bldg. demo)								-	-												
ANTI-CORROSION ADDITIVE PRODUCT TANK (included in bldg. demo)								-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 1	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 2	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 3	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 4	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 5	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 6	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 7	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 8	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 9	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 10	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 11	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 12	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 13	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 1, NO 14	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 1	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 2	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 3	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 4	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 5	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 6	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 7	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 8	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 9	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 10	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 11	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 12	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, DIESEL CONTAINMENT NO 2, NO 13	9936 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, TRUCK SHOP HEATING, DIESEL	18.9 m3	COSTS ARE CALCULATED ELSEWHERE (SEE USER SHEET 2)						-	-												
TANK, FUEL STATION NO 1, DIESEL	94.6 m3		5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FUEL STATION NO 2, DIESEL	94.6 m3		5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DIESEL GENERATOR FUEL SERVICE (350,000 gallons)	1325 m3		43		8	FALSE	135.0	6.0	258.0	20.0	160.0	-	-	418.0	\$ 0.57	\$ 104.05	\$ 105.11	\$ 153.93	\$ 476.42		
TANK, DIESEL SERVICE POWER PLANT A	124.9 m3		6		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DIESEL SERVICE POWER PLANT B	124.9 m3		6		7	TRUE		-	-											\$ 153.93	\$ 476.42

User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

[illegible]

Closure Cost Estimate
User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

TANK, PROPANE, MOBILE, CONSTRUCTION CAMP NO 12 (Vendor to pickup)	38 m3							-	-												
TANK, PROPANE, MOBILE, CONSTRUCTION CAMP NO 13 (Vendor to pickup)	38 m3							-	-												
TANK, PROPANE, MOBILE, CONSTRUCTION CAMP NO 14 (Vendor to pickup)	38 m3							-	-												
TANK, REACTOR NO 1	367 m3	7.5 m dia. x 9.5 m H	7.5		9.5	FALSE	23.6	1.0	7.5	4.0	38.0	-	-	45.5	\$ 5.25	\$ 955.92	\$ 965.63	\$ 153.93	\$ 476.42		
TANK, LIME / SLUDGE MIX	1 m3	1.5 m dia. x 2.3 m H	0.5		2.3	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, PH ADJUST	92 m3	5 m dia. x 7 m H	5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, UTILITY WATER	92 m3	5 m dia. x 7 m H	5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, REACTOR NO 2	367 m3	7.5 m dia. x 9.5 m H	7.5		9.5	FALSE	23.6	1.0	7.5	4.0	38.0	-	-	45.5	\$ 5.25	\$ 955.92	\$ 965.63	\$ 153.93	\$ 476.42		
TANK, DIRTY BACKWASH	600 m3	8.5 m dia. x 12 m H	8.5		12	FALSE	26.7	1.0	8.5	4.0	48.0	2.0	54.0	110.5	\$ 2.16	\$ 393.61	\$ 397.61	\$ 153.93	\$ 476.42		
TANK, FLOCCULANT MIX			5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT MIX HOLDING			5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FERRIC SULPHATE MIX			5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FERRIC SULPHATE HOLDING			5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, LIME MIX			8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
TANK, LIME HOLDING			5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, REACTOR NO 1	53 m3	4.0 m dia. x 5.8 m H	4		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, PH ADJUST	10 m3	2.5 m dia. x 4.0 m H	2.5		4	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, REACTOR NO 2	53 m3	4.0 m dia. x 5.8 m H	4		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, LIME MIX			8		10	FALSE	25.1	1.0	8.0	4.0	40.0	1.0	26.0	74.0	\$ 3.23	\$ 587.76	\$ 593.73	\$ 153.93	\$ 476.42		
TANK, DIRTY BACKWASH	20 m3	3 m dia. x 3.5 m H	3		3.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, SUMP (Included in BLDG demolition)								-	-												
TANK, REACTOR NO 1	230 m3	7.3 m dia. x 7.5 m H	7.3		7.5	FALSE	22.9	1.0	7.3	4.0	30.0	-	-	37.3	\$ 6.40	\$ 1,166.07	\$ 1,177.92	\$ 153.93	\$ 476.42		
TANK, LIME / SLUDGE MIX	1 m3	1.5 m dia. x 2.3 m H	1.5		2.3	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, PH ADJUST	92 m3	5 m dia. x 7 m H	5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, UTILITY WATER	36 m3	3.5 m dia. x 5.5 m H	3.5		5.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, REACTOR NO 2	230 m3	7.3 m dia. x 7.5 m H	7.3		7.5	FALSE	22.9	1.0	7.3	4.0	30.0	-	-	37.3	\$ 6.40	\$ 1,166.07	\$ 1,177.92	\$ 153.93	\$ 476.42		
TANK, DIRTY BACKWASH	320 m3	7.5 m dia. x 9.5 m H	7.5		9.5	FALSE	23.6	1.0	7.5	4.0	38.0	-	-	45.5	\$ 5.25	\$ 955.92	\$ 965.63	\$ 153.93	\$ 476.42		
TANK, FLOCCULANT MIX (included in bldg. demo)								-	-												
TANK, FLOCCULANT MIX HOLDING (included in bldg. demo)								-	-												
TANK, FERRIC SULPHATE MIX		2.5 m dia. x 3.5 m H	2.5		3.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FERRIC SULPHATE HOLDING		2.5 m dia. x 4.5 m H	2.5		4.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, LIME MIX (included in bldg. demo)								-	-												
TANK, CONDITIONING NO 1	320 m3	7.5 m dia. x 8 m H	7.5		8	FALSE	23.6	1.0	7.5	4.0	32.0	-	-	39.5	\$ 6.05	\$ 1,101.12	\$ 1,112.31	\$ 153.93	\$ 476.42		
TANK, CONDITIONING NO 2	320 m3	7.5 m dia. x 8 m H	7.5		8	FALSE	23.6	1.0	7.5	4.0	32.0	-	-	39.5	\$ 6.05	\$ 1,101.12	\$ 1,112.31	\$ 153.93	\$ 476.42		
TANK, SECONDARY ROUGHER CONDITIONING	400 m3	8 m dia. x 9 m H	8		9	FALSE	25.1	1.0	8.0	4.0	36.0	-	-	44.0	\$ 5.43	\$ 988.51	\$ 998.55	\$ 153.93	\$ 476.42		
TANK, CONCENTRATE THICKENER, DEAREATION	29 m3	3.5 m dia. x 5 m H	3.5		5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CONCENTRATE STORAGE NO 1	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		
TANK, CONCENTRATE STORAGE NO 2	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		
TANK, CONCENTRATE STORAGE NO 3	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		
TANK, CONCENTRATE STORAGE NO 4	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		
TANK, ACIDULATION NO 1	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		
TANK, ACIDULATION NO 2	4980 m3	17.5 m dia. x 21.3 m H	17.5		21.3	FALSE	55.0	2.0	35.0	8.0	170.4	3.0	165.0	370.4	\$ 0.64	\$ 117.43	\$ 118.62	\$ 153.93	\$ 476.42		

Closure Cost Estimate
User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

TANK, CONCENTRATE CCD NO 1 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CONCENTRATE CCD NO 1 THICKENER OVERFLOW		3 m dia. x 3.75 m H	3.5		3.75	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CONCENTRATE CCD NO 2 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CONCENTRATE CCD NO 3 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION DISCHARGE CCD NO 1 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION CCD NO 1 THICKENER OVERFLOW		3 m dia. x 3.75 m H	3		3.75	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION DISCHARGE CCD NO 2 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION DISCHARGE CCD NO 3 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION DISCHARGE CCD NO 4 THICKENER FEED	47 m3	3.5 m dia. x 5.6 m H	3.5		5.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, PRESSURE OXIDATION CCD CLARIFIER, OVERFLOW		3 m dia. x 3.75 m H	3		3.75	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CARBON-IN-LEACH FEED NEUTRALIZATION NO 1	3160 m3	14.6 m dia. x 19.5 m H	14.6		19.5	FALSE	45.8	2.0	29.2	7.0	136.5	2.0	92.0	257.7	\$ 0.93	\$ 168.78	\$ 170.49	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH FEED NEUTRALIZATION NO 2	3160 m3	14.6 m dia. x 19.5 m H	14.6		19.5	FALSE	45.8	2.0	29.2	7.0	136.5	2.0	92.0	257.7	\$ 0.93	\$ 168.78	\$ 170.49	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 1	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 2	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 3	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 4	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 5	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, CARBON-IN-LEACH NO 6	3160 m3	15.6 m dia. x 16.5 m H	15.6		16.5	FALSE	49.0	2.0	31.2	7.0	115.5	2.0	98.0	244.7	\$ 0.98	\$ 177.75	\$ 179.55	\$ 153.93	\$ 476.42			
TANK, HCN SCRUBBER SEAL		1.35 m dia. x 1.7 m H	1.35		1.7	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, RECOVERED CARBON COLLECTION		2.2 m dia. x 2.5 m H	2.2		1.7	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, ACID WASH SOLUTION NO 1	40 m3	3.5 m dia. x 6.1 m H	3.5		6.1	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, ACID WASH SOLUTION NO 2	40 m3	3.5 m dia. x 6.1 m H	3.5		6.1	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, BARREN ELUATE	320 m3	7.5 m dia. x 9.5 m H	7.5		9.5	FALSE	23.6	1.0	7.5	4.0	38.0	-	-	45.5	\$ 5.25	\$ 955.92	\$ 965.63	\$ 153.93	\$ 476.42			
TANK, PREGNANT ELUATE	320 m3	7.5 m dia. x 9.5 m H	7.5		9.5	FALSE	23.6	1.0	7.5	4.0	38.0	-	-	45.5	\$ 5.25	\$ 955.92	\$ 965.63	\$ 153.93	\$ 476.42			
TANK, ELUATE HEATER EXPANSION (Included in BLDG demolition)	1.5 m3							-	-													
TANK, BARREN SOLUTION DISCHARGE		2.6 m dia. x 2.6 m H	2.6		2.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CATHODE WASH		1.8 m x 1.8 m x 2.8 m H	1.8		1.8	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CARBON QUENCH		2.6 m dia. x 2.4 m H	2.6		2	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CARBON TRANSFER		2.2 m dia. x 4.6 m H	2.2		4.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CARBON FINES		2.2 m dia. x 4.6 m H	2.6		2.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, CARBON TRANSFER WATER		2.6 m dia. x 2.6 m H	2.6		2.6	TRUE		-	-												\$ 153.93	\$ 476.42
TANK, FLOTATION TAILINGS THICKENER OVERFLOW	36 m3	5.0 m dia. x 3.8 m H	11.5		10.5	FALSE	36.1	1.0	11.5	6.0	63.0	2.0	73.0	147.5	\$ 1.62	\$ 294.88	\$ 297.87	\$ 153.93	\$ 476.42			
TANK, CYANIDE DESTRUCTION REACTOR	890 m3	11.5 m dia. x 10.5 m H	11.5		10.5	FALSE	36.1	1.0	11.5	6.0	63.0	2.0	73.0	147.5	\$ 1.62	\$ 294.88	\$ 297.87	\$ 153.93	\$ 476.42			
TANK, FT NEUTRALIZATION NO 1	6480 m3	19.5 m dia. x 23.5 m H	19.5		23.5	FALSE	61.2	2.0	39.0	9.0	211.5	3.0	184.0	434.5	\$ 0.55	\$ 100.10	\$ 101.12	\$ 153.93	\$ 476.42			
TANK, FT NEUTRALIZATION NO 2	6480 m3	19.5 m dia. x 23.5 m H	19.5		23.5	FALSE	61.2	2.0	39.0	9.0	211.5	3.0	184.0	434.5	\$ 0.55	\$ 100.10	\$ 101.12	\$ 153.93	\$ 476.42			
TANK, FT NEUTRALIZATION NO 3	6480 m3	19.5 m dia. x 23.5 m H	19.5		23.5	FALSE	61.2	2.0	39.0	9.0	211.5	3.0	184.0	434.5	\$ 0.55	\$ 100.10	\$ 101.12	\$ 153.93	\$ 476.42			
TANK, FT NEUTRALIZATION NO 4	6480 m3	19.5 m dia. x 23.5 m H	19.5		23.5	FALSE	61.2	2.0	39.0	9.0	211.5	3.0	184.0	434.5	\$ 0.55	\$ 100.10	\$ 101.12	\$ 153.93	\$ 476.42			
TANK, FT NEUTRALIZATION NO 5	6480 m3	19.5 m dia. x 23.5 m H	19.5		23.5	FALSE	61.2	2.0	39.0	9.0	211.5	3.0	184.0	434.5	\$ 0.55	\$ 100.10	\$ 101.12	\$ 153.93	\$ 476.42			

User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

TANK, FROTHER NO 1, HOLDING	1 m3	1.5 m dia. x 2.4 m H	1.5		2.4	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, SULPHUR BURNER ACID DRAINAGE		1 m dia. x 2 m H	1		2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, MOLTEN SULPHUR		1.6 m L. x 6 m W. x 1.7 m H	1.6	6	1.7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, LIME SLURRY HOLDING NO 1	230 m3	7.3 m dia. x 7.5 m H	7.3		7.5	FALSE	22.9	1.0	7.3	4.0	30.0	-	-	37.3	\$ 6.40	\$ 1,166.07	\$ 1,177.92	\$ 153.93	\$ 476.42		
TANK, LIME SLURRY HOLDING NO 2	230 m3	7.3 m dia. x 7.5 m H	7.3		7.5	FALSE	22.9	1.0	7.3	4.0	30.0	-	-	37.3	\$ 6.40	\$ 1,166.07	\$ 1,177.92	\$ 153.93	\$ 476.42		
TANK, CYANIDE HOLDING	145 m3	6 m dia. x 7.8 m H	6		7.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CYANIDE MIX NO 1	24 m3	3.0 m dia. x 5.3 m H	3		5.3	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CYANIDE MIX NO 2 (Assumed same size as No. 1)	24 m3	3.0 m dia. x 5.3 m H	3		5.3	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CAUSTIC MIX	8 m3	2.5 m dia. x 3.5 m H	2.5		3.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CAUSTIC HOLDING	8 m3	2.5 m dia. x 3.5 m H	2.5		3.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 1, MIX	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 1, HOLDING	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 2, MIX	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 3, MIX	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 2, HOLDING	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FLOCCULANT NO 3, HOLDING	100 m3	5 m dia. x 5.2 m H	5		5.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FROTHER NO 2 BULK, HOLDING	13 m3	2.5 m dia. x 4.5 m H	2.5		4.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, XANTHATE, HOLDING	278 m3	7.5 m dia. x 11.3 m H	7.5		11.3	FALSE	23.6	1.0	7.5	4.0	45.2	2.0	48.0	100.7	\$ 2.37	\$ 431.92	\$ 436.31	\$ 153.93	\$ 476.42		
TANK, XANTHATE NO 1, MIX	46 m3	3.8 m dia. x 7.2 m H	3.8		7.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, XANTHATE NO 2, MIX	46 m3	3.8 m dia. x 7.2 m H	3.8		7.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, XANTHATE NO 3, MIX	46 m3	3.8 m dia. x 7.2 m H	3.8		7.2	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, COPPER SULPHATE MIX NO 1	62 m3	4.5 m dia. x 5.8 m H	4.5		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, COPPER SULPHATE MIX NO 2	62 m3	4.5 m dia. x 5.8 m H	4.5		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, COPPER SULPHATE HOLDING	100 m3	5.3 m dia. x 6.7 m H	5.3		6.7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DISPERSANT MIX	23 m3	3.4 m dia. x 4.7 m H	3.4		6.7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, SODA ASH HOLDING	14 m3	3 m dia. x 4 m H	3		4	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, SODA ASH MIX	27 m3	3 m dia. x 5.8 m H	4		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, FILTER WATER	92 m3	5 m dia. x 7 m H	5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, PERMEATE WATER	8 m3	2.5 m dia. x 3.5 m H	2.5		3.5	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, DEMINERALIZED WATER	53 m3	4.0 m dia. x 5.8 m H	4		5.8	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, RECLAIM WATER, HEAD	2750 m3	16 m dia. x 15.8 m H	16		5.8	FALSE	50.2	2.0	32.0	8.0	46.4	-	-	78.4	\$ 3.05	\$ 554.78	\$ 560.41	\$ 153.93	\$ 476.42		
TANK, GLAND WATER	340 m3	7.5 m dia. x 9.5 m H	7.5		15.8	FALSE	23.6	1.0	7.5	4.0	63.2	2.0	48.0	118.7	\$ 2.01	\$ 366.42	\$ 370.15	\$ 153.93	\$ 476.42		
TANK, FLOTATION PROCESS WATER	2400 m3	21 m dia. x 7.3 m H	21		7.3	FALSE	65.9	3.0	63.0	10.0	73.0	-	-	136.0	\$ 1.76	\$ 319.81	\$ 323.06	\$ 153.93	\$ 476.42		
TANK, PORT SITE FIRE WATER	1000 m3	11 m dia. x 12.5 m H	11		14	FALSE	34.5	1.0	11.0	5.0	70.0	2.0	70.0	151.0	\$ 1.58	\$ 288.04	\$ 290.97	\$ 153.93	\$ 476.42		
TANK, FIRE AND FRESH WATER		14 m dia. x 14 m H	14		14	FALSE	44.0	2.0	28.0	7.0	98.0	2.0	88.0	214.0	\$ 1.12	\$ 203.24	\$ 205.31	\$ 153.93	\$ 476.42		
TANK, FLOCCULANT MIXING WATER	92 m3	5 m dia. x 7 m H	5		7	TRUE		-	-											\$ 153.93	\$ 476.42
TANK, CONTACT WATER	500 m3	9 m dia. x 10 m H	9		10	FALSE	28.3	1.0	9.0	5.0	50.0	1.0	29.0	88.0	\$ 2.71	\$ 494.25	\$ 499.28	\$ 153.93	\$ 476.42		
TANK, RAW WATER	500 m3	9 m dia. x 10 m H	9		10	FALSE	28.3	1.0	9.0	5.0	50.0	1.0	29.0	88.0	\$ 2.71	\$ 494.25	\$ 499.28	\$ 153.93	\$ 476.42		
TANK, FRESH WATER, PLANT SITE	340 m3	7.5 m dia. x 9.5 m H	9		10	FALSE	28.3	1.0	9.0	5.0	50.0	1.0	29.0	88.0	\$ 2.71	\$ 494.25	\$ 499.28	\$ 153.93	\$ 476.42		
TANK, POTABLE WATER, PERMANENT CAMP	145 m3	6 m dia. x 7.8 m H	6		7.8	TRUE		-	-											\$ 153.93	\$ 476.42

User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety

TANK, POTABLE WATER, PLANT SITE		5 m dia. x 6.5 m H	5		6.5	TRUE		-	-									\$ 153.93	\$ 476.42			
TANK, POTABLE WATER, PORT SITE	20 m3	3 m dia. x 3.5 m H	3		3.5	TRUE		-	-									\$ 153.93	\$ 476.42			
TANK, FRESH WATER, PERMANENT CAMP	200 m3	6.5 m dia.x 7 m H	6.5		7	TRUE		-	-									\$ 153.93	\$ 476.42			
TANK, DEMINERALIZED WATER TURBINE F	20 m3	3 m dia. x 3.5 m H	3		3.5	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, ACID WASH COLUMN NO 1	12 tonnes	2 m dia. x 8.6 m H	2		8.6	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, ACID WASH COLUMN NO 2	12 tonnes	2 m dia. x 8.6 m H	2		8.6	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, SLUDGE RETORT, COLLECTOR		1 m dia. x 2 m L	1		2	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, SULPHUR BURNER QUENCH		1 m dia. x 5 m L	1		5	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 1	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 2	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 3	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 4	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 5	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 6	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 7	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 8	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 9	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 10	12.3 m/h	6.35 m dia. x 2.29 m H	6.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, PRESSURE FILTER NO 1	12.3 m/h	2.44 m dia. x 2.13 m H	2.4		2.1	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, PRESSURE FILTER NO 2	12.3 m/h	2.44 m dia. x 2.13 m H	2.4		2.1	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, PRESSURE FILTER NO 3	12.3 m/h	2.44 m dia. x 2.13 m H	2.4		2.1	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, PRESSURE FILTER NO 4			2.4		2.1	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 1	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 2	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 3	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 4	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 5	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 6	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, MULTIMEDIA PRESSURE FILTER NO 7	12.3 m/h	2.44 m dia. x 2.29 m H	2.4		2.3	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, ELUTION COLUMN NO 1	12 tonnes	2.2 m dia. x 8.8 m H	2.2		8.8	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, ELUTION COLUMN NO 2	12 tonnes	2.2 m dia. x 8.8 m H	2.2		8.8	TRUE		-	-									\$ 153.93	\$ 476.42			
VESSEL, COOLING WATER EXPANSION		1.5 m dia. x 2 m H	1.5		2	TRUE		-	-									\$ 153.93	\$ 476.42			
												TOTAL HOURS				\$ 300.05	\$ 54,641.49	\$ 55,196.57	\$ 17,394.19	\$ 53,835.72	\$ 16,778.46	\$ 51,930.03

NOTES:

1. If tank is smaller than 7 meters in diameter and 10 meters in length it is assumed it can be flattened (by Shear) and hauled directly to burial site. No cutting will be required.

2. Assumed an average of one haul required per tank.

Grand Total Labor	\$ 88,814.14
Grand Total Equipment	\$ 160,962.33

Closure Cost Estimate
User 4

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 4 - Tank Demolition and Disposal Costs			
	Labor	Equipment	Totals
Totals Added to the Other Demo & Equip Removal >>>	\$88,814	\$160,962	\$249,776

This sheet calculates the cost to demolish and bury various steel tanks onsite. A demolition shear is used to cut the tanks into manageable sizes, fold and load onto a truck for transport to the pit.

Demolition Crew	#	Labor	Equipment	Total
1 Foreman	1	\$ 51.00		
2 Laborer	2	\$ 70.30		
1 Cat Excavator 345	1	\$ 60.81	\$ 109.46	
1 Demolition Shear	1		\$ 74.50	
Total Crew Cost (\$/Hr)		\$ 182.11	\$ 183.96	\$ 366.07

Shear	Mo. Rate	Hourly Rate	GET	Total Rate
	\$ 22,500.00	\$ 62.50	\$ 12.00	\$ 74.50

Haulage Crew	Labor	Equipment	Total
777 Haul Truck	\$ 62.02	\$ 246.26	
Total Crew Cost (\$/hr)	\$ 62.02	\$ 246.26	\$ -
Load Time for Trucks (min)	10		
Cost to Load	\$ 10.34	\$ 41.04	\$ 51.38
Demolition Crew Re-position between Tanks (15 Min)	\$ 45.53	\$ 45.99	\$ 91.52
Average Haul Distance (m)	8500.0		
Travel Time Uphill (min)	11.1		
Travel Time Downhill (min)	8.8		
Load Dump Time (min)	15.0		
Total Fleet Time per Load (min)	34.9		
Haulage Cost Per Load (\$/hr)	\$ 36.05	\$ 143.13	\$ 179.18
Total Load and Haul Cost per Load (\$/Load)	\$ 153.93	\$ 476.42	\$ 630.35

Notes:
Shear rental and GET/maintenance costs based on telephone call to Bejac Equipment 3/30/2017. Quoted model (GXT995R) is equivalent to Caterpillar S3090.

Shear Productivity					
See: (Accessed on 3/30/2017)	http://www.cat.com/en_US/products/new/attachments/shears/mobile-scrap-demolition-shears/1000030717.html				
Model:	CAT S3090 (Equivalent to Genesis 6XT-995R)		Cycle Time (s)		
Jaw Opening - 35.8 in.	Position and Open		10.0		
Jaw Depth - 35	Close		3.4		
Cycle Time - Open 4.5 seconds	Jaw Depth (ft)		2.9		
Cycle Time - Close - 3.4 seconds.	Cuts/Hour		268.7		
Cycle Time - Close	Cutting Length per hour (ft)		783.6		
	Cutting Length per hour (m)		238.8		

Closure Cost Estimate
User 5

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 5 - Equipment Mobilization						
	Labor	Equipment	Totals			
Totals Added to the Other User sheet >>>	\$1,382,569	\$2,765,137	\$4,147,706			
The sheet calculates the estimated cost to mobilize and demobilize equipment. Costs include barging and transport from the port at the mine to the project site. Cost also include assembly and disassembly on the larger pieces of equipment. Assumed 1/3 of total cost is labor.						

User 5 - Equipment Mobilization								
		Assembly/Disassembly			Equip. Time (2)	Shipping (Barge)		
EQUIPMENT TYPE (1)		Disassembly	Assembly	Total	Cost (\$)	Equip. Wt (lbs)	Equip. Wt (tons)	Shipping costs (3)
Bulldozers		# of Units						
D6R		\$0.00	\$0.00	\$0.00	\$0.00			
D6R w/ Winch		\$0.00	\$0.00	\$0.00	\$0.00			
D7R	4	\$0.00	\$0.00	\$0.00	\$40,600.00	55000	110.00	\$69,750.00
D8R		\$0.00	\$0.00	\$0.00	\$0.00	83000		
D9R		\$0.00	\$0.00	\$0.00	\$0.00	109000		
D10R	4	\$0.00	\$0.00	\$0.00	\$105,000.00	144000	288.00	\$181,320.00
D11R		\$0.00	\$0.00	\$0.00	\$0.00			
Wheeled Dozers								
824G		\$0.00	\$0.00	\$0.00	\$0.00			
834G		\$0.00	\$0.00	\$0.00	\$0.00			
844		\$0.00	\$0.00	\$0.00	\$0.00			
854G		\$0.00	\$0.00	\$0.00	\$0.00			
Motor Graders								
120H		\$0.00	\$0.00	\$0.00	\$0.00			
14G/H		\$0.00	\$0.00	\$0.00	\$0.00	41000		
16G/H	2	\$0.00	\$0.00	\$0.00	\$31,500.00	54000	\$54.00	\$45,810.00
24M		\$0.00	\$0.00	\$0.00	\$0.00			
Track Excavators								
312C		\$0.00	\$0.00	\$0.00	\$0.00			
320C		\$0.00	\$0.00	\$0.00	\$0.00			
325C	1	\$0.00	\$0.00	\$0.00	\$6,265.00	56000	28.00	\$13,685.00
330C		\$0.00	\$0.00	\$0.00	\$0.00			
345B	4	\$0.00	\$0.00	\$0.00	\$45,080.00	105000	210.00	\$100,730.00
365BL		\$0.00	\$0.00	\$0.00	\$0.00			
385BL		\$0.00	\$0.00	\$0.00	\$0.00	183000		
Scrapers								
631G		\$0.00	\$0.00	\$0.00	\$0.00			
637G					\$0.00			
Wheeled Loaders								
924G		\$0.00	\$0.00	\$0.00	\$0.00			
928G	2	\$0.00	\$0.00	\$0.00	\$5,810.00	14000	7.00	\$7,665.00
950G		\$0.00	\$0.00	\$0.00	\$0.00			
966G		\$0.00	\$0.00	\$0.00	\$0.00			
972G		\$0.00	\$0.00	\$0.00	\$0.00			
980G	2	\$0.00	\$0.00	\$0.00	\$23,310.00		0.00	\$23,310.00
988G		\$0.00	\$0.00	\$0.00	\$0.00			
990		\$0.00	\$0.00	\$0.00	\$0.00			
992G	4	\$0.00	\$0.00	\$0.00	\$161,000.00	94000	47.00	\$173,455.00
994D		\$0.00	\$0.00	\$0.00	\$0.00	191000		
L2350		\$0.00	\$0.00	\$0.00	\$0.00			

EQUIPMENT TYPE (1)		Disassembly	Assembly	Total	Equip. Time (2)	Equip. Wt (lbs)	Total Tonnes	Shipping costs (2)
Shovels								
PC2000		\$0.00	\$0.00	\$0.00				
PC3000		\$0.00	\$0.00	\$0.00				
PC4000		\$0.00	\$0.00	\$0.00				
PC5500		\$0.00	\$0.00	\$0.00				
PC8000		\$0.00	\$0.00	\$0.00				
Hydraulic Hammers								
H-120 (fits 325)		\$0.00	\$0.00	\$0.00		3476		
H-160 (fits 345)	4	\$0.00	\$0.00	\$0.00	\$90,160.00	7784	15.60	\$94,294.00
H-180 (fits 365/385)		\$0.00	\$0.00	\$0.00	\$0.00	9570		

User 5 - Equipment Mobilization						
Unload and Mobilize to site						
EQUIPMENT TYPE (1)	Load/ Unload (4) (hours)	Load/ Unload (4) (\$)	RSM Crew No.	RSM Bare Cost (\$/hr)	Operator (Truck Driver) (\$/Hr)	Total Cost (5) (\$)
Bulldozers						
D6R	1		A-3D			
D6R w/ Winch	1		A-3D			
D7R	1	\$909.86	B-34N	\$103.34	\$56.78	\$1,069.98
D8R	1		B-34K			
D9R	1		B-34K			
D10R	2	\$1,819.72	B-34K	\$105.38	\$56.78	\$2,144.04
D11R	3		B-34K			
Wheeled Dozers						
824G	1		B-34K			
834G	1		B-34K			
844	1		B-34K			
854G	1		B-34K			
Motor Graders						
120H	1		B-34N			
14G/H	1		Self			
16G/H	1	\$909.86	Self	\$313.76	\$56.78	\$1,280.40
24M	2		B-34K			
Track Excavators						
312C	1		B-34N			
320C	1		B-34N			
325C	1	\$909.86	B-34N	\$103.34	\$56.78	\$1,069.98
330C	1		B-34N			
345B	1	\$909.86	B-34K	\$105.38	\$56.78	\$1,072.02
365BL	1		B-34K			
385BL	2		B-34K			
Scrapers						
631G	1		B-34K			
637G	1		B-34K			
Wheeled Loaders						
924G	1		Self			
928G	1	\$909.86	Self	\$313.76	\$56.78	\$1,280.40
950G	1		Self			
966G	1		Self			
972G	1		Self			
980G	1	\$909.86	Self	\$313.76	\$56.78	\$1,280.40
988G	1		Self			
990	1		Self			
992G	2	\$1,819.72	Self	\$313.76	\$56.78	\$2,560.80
994D	3		Self			
L2350	4		Self			

RS Means Hvy Construction			
Crew	Hourly	Daily	
A-3A	\$ 72.93	\$	583
A-3D	\$ 84.57	\$	677
B-34K	\$ 105.38	\$	843
B-34N	\$ 103.34	\$	827
B-34Q	\$ 11.64	\$	93
D-3	\$ 313.76	\$	2,510

EQUIPMENT TYPE (1)	Load/Unload (3) (hours)	Load/Unload (3) (\$)	RSM Crew No.		Operator (Truck Driver) (\$/Hr)	Total Cost (4)
Shovels						
PC2000						
PC3000						
PC4000						
PC5500						
PC8000						
Hydraulic Hammers						
H-120 (fits 325)	1		NA			
H-160 (fits 345)	1	\$909.86	NA	\$313.76	\$56.78	\$1,280.40
H-180 (fits 365/385)	1		NA			

Closure Cost Estimate
User 5

Demolition Shears								
S340 (fits 322/325/330)		\$0.00	\$0.00	\$0.00		10351		
S365 (fits 330/345)	1	\$0.00	\$0.00	\$0.00	\$22,500.00	20000	10.00	\$25,150.00
S390 (fits 365/385)		\$0.00	\$0.00	\$0.00		20000		
Demolition Grapples								
G315 (fits 322/325)		\$0.00	\$0.00	\$0.00				
G320 (fits 325/330)		\$0.00	\$0.00	\$0.00				
G330 (fits 345/365)		\$0.00	\$0.00	\$0.00				
Other Equipment								
420D 4WD Backhoe	4	\$0.00	\$0.00	\$0.00	\$19,600.00	24251	12.10	\$22,806.50
428D 4WD Backhoe		\$0.00	\$0.00	\$0.00				
CS533E Vibratory Roller		\$0.00	\$0.00	\$0.00		23900		
CS633E Vibratory Roller		\$0.00	\$0.00	\$0.00		31901		
CP533E Sheepsfoot Compactor		\$0.00	\$0.00	\$0.00		25750		
CP633E Sheepsfoot Compactor		\$0.00	\$0.00	\$0.00		31901		
Light Truck - 1.5 Ton	4	\$0.00	\$0.00	\$0.00	\$13,160.00	20000	10.00	\$15,810.00
Supervisor's Truck	2	\$0.00	\$0.00	\$0.00	6,580	6000	3.00	\$7,375.00
Flatbed Truck	4	\$0.00	\$0.00	\$0.00	\$13,160.00	20000	10.00	\$15,810.00
Air Compressor + tools	2	\$0.00	\$0.00	\$0.00	\$4,500.00	2500	1.30	\$4,844.50
Welding Equipment	2	\$0.00	\$0.00	\$0.00	\$11,901.87	1500	0.80	\$12,113.90
Heavy Duty Drill Rig	1	\$0.00	\$0.00	\$0.00	\$116,037.56	40000	20.00	\$121,337.60
Pump (plugging) Drill Rig	1	\$0.00	\$0.00	\$0.00	\$116,037.56	40000	20.00	\$121,337.60
Concrete Pump	1	\$0.00	\$0.00	\$0.00	\$29,562.66	2500	1.30	\$29,907.20
Gas Engine Vibrator		\$0.00	\$0.00	\$0.00				
Generator 5KW	4	\$0.00	\$0.00	\$0.00	\$7,484.00		0.00	\$7,484.00
HDEP Welder (Ram 824)	2	\$0.00	\$0.00	\$0.00	\$30,560.18	6600	3.30	\$31,434.70
5 Ton Crane		\$0.00	\$0.00	\$0.00	\$0.00			
20 Ton Crane	4	\$0.00	\$0.00	\$0.00	\$53,200.00	42500	21.30	\$58,844.50
50 Ton Crane	1	\$0.00	\$0.00	\$0.00	\$20,440.00		0.00	\$20,440.00
120 Ton Crane	1	\$0.00	\$0.00	\$0.00	\$39,340.00	132000	66.00	\$56,830.00
Trucks								
725		\$0.00	\$0.00	\$0.00				
730		\$0.00	\$0.00	\$0.00				
735		\$0.00	\$0.00	\$0.00				
740		\$0.00	\$0.00	\$0.00		72973		
769D		\$0.00	\$0.00	\$0.00				
773E		\$0.00	\$0.00	\$0.00				
777D	10	\$0.00	\$0.00	\$0.00	\$581,000.00	175000	87.50	\$604,187.50
785C		\$0.00	\$0.00	\$0.00				
793C		\$0.00	\$0.00	\$0.00				
797B		\$0.00	\$0.00	\$0.00				
613E (5,000 gal) Water Wagon		\$0.00	\$0.00	\$0.00				
621E (8,000 gal) Water Wagon		\$0.00	\$0.00	\$0.00				
777D Water Truck	2	\$0.00	\$0.00	\$0.00	\$116,200.00	175000	87.50	\$139,387.50
785C Water Truck		\$0.00	\$0.00	\$0.00				
Dump Truck (10-12 yd3)	4	\$0.00	\$0.00	\$0.00	\$25,200.00	20000	10.00	\$27,850.00

1. Equipment barged from Anchorage.
2. Mobilization assumed 2-weeks charged for each piece of equipment.
3. Shipping Cost Anchorage to Jung \$ 265.00 \$/tonne
4. 100 ton crane
5. Assume 1 hour travel time to site. Wheeled equipment assumed to be driven to site.

Demolition Shears								
S340 (fits 322/325/330)	1		NA					
S365 (fits 330/345)	1	\$909.86	NA	\$313.76	\$56.78		\$1,280.40	
S390 (fits 365/385)	1		NA					
Demolition Grapples								
G315 (fits 322/325)			NA					
G320 (fits 325/330)			NA					
G330 (fits 345/365)			NA					
Other Equipment								
420D 4WD Backhoe	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
428D 4WD Backhoe	1		A-3D					
CS533E Vibratory Roller	1		B-34N					
CS633E Vibratory Roller	1		B-34N					
CP533E Sheepsfoot Compactor	1		B-34N					
CP633E Sheepsfoot Compactor	1		B-34N					
Light Truck - 1.5 Ton	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
Supervisor's Truck	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
Flatbed Truck	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
Air Compressor + tools	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
Welding Equipment	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
Heavy Duty Drill Rig	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
Pump (plugging) Drill Rig	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
Concrete Pump	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
Gas Engine Vibrator	1		A-3D					
Generator 5KW	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
HDEP Welder (Ram 824)	1	\$909.86	A-3D	\$84.57	\$56.78		\$1,051.21	
5 Ton Crane	1		Self					
20 Ton Crane	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
50 Ton Crane	2	\$1,819.72	Self	\$313.76	\$56.78		\$2,560.80	
120 Ton Crane	3	\$2,729.58	Self	\$313.76	\$56.78		\$3,841.20	
Trucks								
725	1							
730	1							
735	11							
740	1		Self					
769D	1							
773E	1							
777D	2	\$1,819.72	Self	\$313.76	\$56.78		\$2,560.80	
785C	2							
793C	2							
797B	2							
613E (5,000 gal) Water Wagon	1							
621E (8,000 gal) Water Wagon	1							
777D Water Truck	2	\$1,819.72	Self	\$313.76	\$56.78		\$2,560.80	
785C Water Truck	2							
Dump Truck (10-12 yd3)	1	\$909.86	Self	\$313.76	\$56.78		\$1,280.40	
				Total Mobilization		\$2,073,852.79		
				Total De-mobilization		\$2,073,852.79		
				Grand Total		\$4,147,705.58		

Closure Cost Estimate

User 6

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 6 -Drain Mobile Equipment

	Labor	Equipment	Totals
Totals Added to the Other User sheet >>>	\$1,205,329	\$417,643	\$1,622,972

This sheet calculates the estimated cost to drain all hydrocarbons out of all of the mine fleet equipment to prepare for disposal in the pit. Assumed that laborers would be able to do this.

Equipment	Crew	Quantity	Hours	Hourly Cost (\$)	Units	Total Cost (\$)
Original	Laborers	2	8	50.39	645	520,024.80
Additional	Laborers	2	8	50.39	850	685,304.00
					Total Labor	1,205,328.80
Equipment						
Original	Lube Vehicle	1	8	34.92	645	180,187.20
Additional	Lube Vehicle	1	8	34.92	850	237,456.00
					Total Equipment	417,643.20
* Lube truck assumed equivalent to dump truck cost.						

**Closure Cost Estimate
User 7**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Remove sheet piling - Jung Port				
		Labor	Equipment	Totals
Totals Added to the Other User sheet >>>		\$83,137	\$122,426	\$205,564
This sheet calculates the estimated time to remove sheet piling at the Jung Port and haul to the project site for burial.				
Crew	Quantity	Hourly Cost	Hours	Total Cost
Laborers	3	\$35.15	207.4	\$21,871
Foreman	1	\$51.00	207.4	\$10,578
Crane Operator	1	\$60.81	207.4	\$12,612
Oiler Mechanic	1	\$60.75	207.4	\$12,600
Haulage and Burial				
Operator (D7)	1	\$60.81	207.4	\$12,612
Operator (777)	1	\$62.02	207.4	\$12,863
			Total Labor	\$83,137
Equipment				
50 ton crane	1	\$71.78	207.4	\$14,888
Lube Vehicle	Lube Vehicle 1	\$34.92	207.4	\$7,243
Haulage and Burial				
Dozer D10	1	\$237.3	207.4	\$49,220
777 Haul Truck	1	\$246.3	207.4	\$51,076
			Total Equipment	\$122,426
Assumptions:				
Quantity of sheet piling (linear ft)	1,400			
Crew Hours	207.4			
Crew Productivity	54	Linear feet per day		
	6.8	Linear feet per hour		
Note: Oiler labor same rate as skilled tradesman				
Lube vehicle assumed same cost as dump truck				
Crew and productivity from RS Means 2009, 02.41.13.72-0400.				

from: Port Sheet pile estimate.xlsx

Typical Tailwall Section					Tailwall Section t Each			
Width	Height	Qty	Ft sq		Typical Tailwall :	1021.2	33	33699.6
	1.84	40	4	294.4	Tailwall Section f	910.8	1	910.8
	1.84	30	4	220.8	Tailwall Section /	1159.2	2	2318.4
	1.84	25	11	506	Wall			60900
				1021.2			Total	97828.8
							Width 10%	100000
Tailwall Seciton Ramp								
Width	Height	Qty	Ft sq					
	1.84	25	15	690				
	1.84	30	4	220.8				
	1.84	25	0	0				
				910.8				
Tailwall Seciton Adjacent to Ramp								
Width	Height	Qty	Ft sq					
	1.84	40	4	294.4				
	1.84	35	4	257.6				
	1.84	30	11	607.2				
				1159.2				
Wall Sheet pile								
Length	1400							
Hight	43.5							
Area	60900							
Dock Face								
Bottom Elevation			103					
Top Elevation			146.5					
	Height	43.5						

Closure Cost Estimate

User 8

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsr

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Camp Costs

This sheet calculates the estimated cost mobilize the reclamation and closure crew to and from the site. This also includes the man camp cost for them to stay at the project site during their rotation. Labor and materials are assumed to be broken out 50-50.

User 8 Camp and Crew Mobilization Costs	Cost per man/day	Travel Costs per shift/man
Camp Cost per shift*	\$ 120.00	\$ 340.00
Rotations per season	26.0	26.0
Days per Rotation/man	14.0	
Trips per Rotation		1.0
Costs per season/man	\$43,680	\$8,840
Crew size (Average for 4 years)	41.0	41.0
Annual cost	\$1,790,880	\$362,440
*Note: The daily camp rate of \$120 includeds cost of power generation.		

Water treatment crew costs	Cost per man/day	Travel Costs per shift/man
Camp Cost per shift*	\$ 120.00	\$ 340.00
Rotations per season	13.0	13.0
Days per Rotation/man	14.0	
Trips per Rotation		1.0
Costs per season/man	\$21,840	\$4,420
Crew size (Until treatment)	7	7

Annual costs	\$152,880	\$30,940
*Note: The daily camp rate of \$120 includeds cost of power generation.		

Closure Cost Estimate

User 9

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

[illegible]

Closure Cost Estimate User 9

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

	Cover Placement	LAH-1-ORIG	777D/992G	1	2	1	4	73	292		
		LAH-2-ORIG	777D/992G	1	2	1	4	15	60		
		LAH-ACCESS-1	777D/992G	1	2	1	4	8	32		
		LAH-ACCESS-4	777D/992G	1	2	1	4	1	4		
		LAO-1	777D/992G	1	2	1	4	52	208		
		LCF-1	777D/992G	1	2	1	4	22	88		
		LCF-2-DAM	777D/992G	1	2	1	4	67	268		
		LMF-1	777D/992G	1	2	1	4	60	240		
		LMF-2	777D/992G	1	2	1	4	150	600		
		LMF-2-OPT	777D/992G	1	2	1	4	5	20		
		SCF-1	777D/992G	1	2	1	4	29	116		
		SCF-2	777D/992G	1	2	1	4	40	160		
		SCF-2-OPT-2	777D/992G	1	2	1	4	8	32		
		SCF-3	777D/992G	1	2	1	4	77	308		
		JUNGSUK	777D/992G	1	2	1	4	32	128		
		Other Road - ID16	777D/992G	1	2	1	4	31	124		
		Other Road - ID17	777D/992G	1	2	1	4	28	112		
		Other Road - ID18	777D/992G	1	2	1	4	28	112		
		Other Road - ID19	777D/992G	1	2	1	4	27	108		
		Other Road - ID20	777D/992G	1	2	1	4	9	36		
		Other Road - ID21	777D/992G	1	2	1	4	12	48		
		Other Road - ID22	777D/992G	1	2	1	4	21	84		
		Other Road - ID23	777D/992G	1	2	1	4	7	28		
		Other Road - ID24	777D/992G	1	2	1	4	3	12		
		Other Road - ID25	777D/992G	1	2	1	4	9	36		
		Other Road - ID26	777D/992G	1	2	1	4	22	88		
		Other Road - ID27	777D/992G	1	2	1	4	4	16		
		Other Road - ID28	777D/992G	1	2	1	4	14	56		
		Other Road - ID29	777D/992G	1	2	1	4	1	4		
		Other Road - ID30	777D/992G	1	2	1	4	1	4		
		Other Road - ID31	777D/992G	1	2	1	4	1	4		
		Other Road - ID32	777D/992G	1	2	1	4	1	4		
		Other Road - ID33	777D/992G	1	2	1	4	1	4		
		Other Road - ID34	777D/992G	1	2	1	4	5	20		
		Other Road - ID35	777D/992G	1	2	1	4	1	4		
		Other Road - ID36	777D/992G	1	2	1	4	1	4		
		Other Road - ID37	777D/992G	1	2	1	4	2	8		
		Other Road - ID38	777D/992G	1	2	1	4	3	12		
		Other Road - ID39	777D/992G	1	2	1	4	3	12		
	Ripping	LAH-1-ORIG	Large Dozer	1			1	19	19		
		LAH-2-ORIG	Large Dozer	1			1	4	4		
		LAH-ACCESS-1	Large Dozer	1			1	2	2		
		LAH-ACCESS-4	Large Dozer	1			1	1	1		
		LAO-1	Large Dozer	1			1	14	14		
		LCF-1	Large Dozer	1			1	6	6		
		LCF-2-DAM	Large Dozer	1			1	17	17		
		LMF-1	Large Dozer	1			1	15	15		
		LMF-2	Large Dozer	1			1	40	40		
		LMF-2-OPT	Large Dozer	1			1	1	1		
		SCF-1	Large Dozer	1			1	8	8		
		SCF-2	Large Dozer	1			1	11	11		
		SCF-2-OPT-2	Large Dozer	1			1	2	2		
		SCF-3	Large Dozer	1			1	20	20		
		JUNGSUK	Large Dozer	1			1	9	9		
		Other Road - ID16	Large Dozer	1			1	8	8		
		Other Road - ID17	Large Dozer	1			1	7	7		
		Other Road - ID18	Large Dozer	1			1	7	7		
		Other Road - ID19	Large Dozer	1			1	7	7		
		Other Road - ID20	Large Dozer	1			1	2	2		
		Other Road - ID21	Large Dozer	1			1	3	3		
		Other Road - ID22	Large Dozer	1			1	5	5		
		Other Road - ID23	Large Dozer	1			1	2	2		
		Other Road - ID24	Large Dozer	1			1	1	1		
		Other Road - ID25	Large Dozer	1			1	2	2		
		Other Road - ID26	Large Dozer	1			1	5	5		
		Other Road - ID27	Large Dozer	1			1	1	1		
		Other Road - ID28	Large Dozer	1			1	3	3		
		Other Road - ID29	Large Dozer	1			1	1	1		
		Other Road - ID30	Large Dozer	1			1	1	1		
		Other Road - ID31	Large Dozer	1			1	1	1		
		Other Road - ID32	Large Dozer	1			1	1	1		
		Other Road - ID33	Large Dozer	1			1	1	1		
		Other Road - ID34	Large Dozer	1			1	1	1		
		Other Road - ID35	Large Dozer	1			1	1	1		
		Other Road - ID36	Large Dozer	1			1	1	1		
		Other Road - ID37	Large Dozer	1			1	1	1		
		Other Road - ID38	Large Dozer	1			1	1	1		
		Other Road - ID39	Large Dozer	1			1	1	1		
Pits	Berm construction	Final Pit	Med	1			1	0	0		
	Haul	Final Pit	Med Truck	1	2		3	123		369	
Hauling material	Hauling/Crush/Screen/Compact							0			
		NAG rock fill (Capillary Break Fill)	777D/992G	1	1	2	4	14,043		56,172	
		NAG rock fill (Capillary Break/Consolidation Fill)	777D/992G	1	1	2	4	34,005		136,020	
		Tailings Spillway (Excavate and Fill)	777D/992G	1	1	4	6	1,069		6,414	
		Removal of Contact Pond Dam	777D/992G	1		7	8	287		2,296	
		Removal of Rock Groyne (Primary Crusher)	777D/992G	1	1	2	4	502		2,008	
		Reclaimed WRF Runoff Collection Channel - liner bedding	777D/992G	1	1	3	5	22		110	
		Reclaimed WRF Runoff Collection Channel - pea gravel	777D/992G	1	1	3	5	8		40	
		Upper Contact Water Pond Backfill, growth media, reveg	777D/992G	1	1	2	4	4,242		16,968	
		Lower CWD Breach and Slope	777D/992G	1	1	2	4	244		976	
		Snow Gulch Fresh Water Dam Breach	777D/992G	1	1	2	4	498		1,992	
		Primary Channel (WRF) cushion layer	777D/992G	1		10	12	346		4,152	
		Primary Channel (WRF) Armor Layer	777D/992G	1		10	12	210		2,520	
		Secondary Channel (WRF) Armor Layer	777D/992G	1	1	10	12	90		1,080	
											174,576

Closure Cost Estimate
User 9

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Buildings	Slab demolition	Mine Site Washbay	345B	1	1		2	196	393		
		Mine Site Truck Shop	345B	1	1		2	2,197	4,393		
		Repair Shop	345B	1	1		2	162	325		
		Primary Crusher	345B	1	1		2	158	316		
		Primary Crusher - Concrete	345B	1	1		2	113	226		
		Primary Crusher - Steel Bldg. Below Ground	345B	1	1		2	49	98		
		Primary Crusher - Steel Bldg. Above Ground	345B	1	1		2	76	153		
		Take-up Tower	345B	1	1		2	55	109		
		Conveyor (Total)	345B	1	1		2	94	188		
		Drive House	345B	1	1		2	85	170		
		Ore Stockpile Cover	345B	1	1		2	0	0		
		Pebble Crusher	345B	1	1		2	243	486		
		Grinding Building	345B	1	1		2	2,103	4,206		
		Ball Mill Foundations (two total)	345B	1	1		2	23	46		
		Ball Mill Foundations (Concr.Piers Above Grade Slab.)	345B	1	1		2	25	49		
		SAG Mill Foundation	345B	1	1		2	14	27		
		SAG Mill Foundation (Concr.Piers Above Grade Slab.)	345B	1	1		2	14	29		
		POX Process Building - High Section	345B	1	1		2	1,439	2,877		
		POX Process Building - Lower Section	345B	1	1		2	1,555	3,110		
		POX Process Building - End additioin	345B	1	1		2	96	191		
		POX Misc. Small Tanks (8)	345B	1	1		2	8	17		
		Autoclaves (2)	345B	1	1		2	19	37		
		Stock Tanks Concrete Contain.	345B	1	1		2	12	23		
		Concrete Thickener Concrete	345B	1	1		2	12	23		
		Flot./POX Thickener Concrete	345B	1	1		2	0	0		
		Hot Cure Tanks	345B	1	1		2	122	244		
		Flotation Building	345B	1	1		2	5,249	10,498		
		CIL Building	345B	1	1		2	1,903	3,806		
		Refinery	345B	1	1		2	352	704		
		Cyanide Reagent Building	345B	1	1		2	1,404	2,807		
		Water Treatment Plant Building - Construction	345B	1	1		2	31	62		
		Water Treatment Plant Building - Operation	345B	1	1		2	212	425		
		Man Camp - Airstrip	345B	1	1		2	221	443		
		Man Camp - Airstrip	345B	1	1		2	221	443		
		Man Camp - Airstrip	345B	1	1		2	334	668		
		Man Camp - Airstrip	345B	1	1		2	334	668		
		Man Camp - Airstrip	345B	1	1		2	245	490		
		Man Camp - Airstrip	345B	1	1		2	353	705		
		STP Building	345B	1	1		2	20	41		
		Power Station A/B Buildings	345B	1	1		2	701	1,403		
		Power Station A Gensets	345B	1	1		2	55	109		
		Power station A Transformers	345B	1	1		2	25	50		
		Power Station A Tanks	345B	1	1		2	78	156		
		Power Station A Building	345B	1	1		2	112	224		
		Power Station A Building (small)	345B	1	1		2	45	90		
		Power Station B Gensets	345B	1	1		2	55	109		
		Power station B Transformers	345B	1	1		2	25	50		
		Power Station B Tanks	345B	1	1		2	78	156		
		Power Station B Building (small)	345B	1	1		2	45	90		
	Cold Storage Building	345B	1	1		2	114	228			
	Autoclave Feed Tanks	345B	1	1		2	59	118			
	Quench/Flash/Heaters	345B	1	1		2	55	110			
	Absorber Towers	345B	1	1		2	4	7			
	Cooling Towers	345B	1	1		2	15	30			
	Mercury Scrubbing	345B	1	1		2	7	15			
	Quench Building (60 m total H)	345B	1	1		2	545	1,090			
	Autoclave	345B	1	1		2	19	37			
	HP cooling tank	345B	1	1		2	26	52			
	Demin Tank	345B	1	1		2	7	13			
	Seal Water Tank	345B	1	1		2	2	3			
	Autoclave Feed Pumps	345B	1	1		2	1	2			
	LP Column	345B	1	1		2	19	37			
	HP Column	345B	1	1		2	19	37			
	Main Heat Exchanger	345B	1	1		2	25	50			
	Wash Water Tower	345B	1	1		2	4	9			
	Chilled Water Tower	345B	1	1		2	4	9			
	Compressors (3)	345B	1	1		2	71	143			
	Warehouse	345B	1	1		2	167	333			
	Boiler Room	345B	1	1		2	99	199			
	STP Building	345B	1	1		2	93	186			
	Utilidor	345B	1	1		2	98	195			
									44,839		
	Cover Placement		Mine Site Washbay	777D/992G	1	1	1	3	1	3	
			Mine Site Truck Shop	777D/992G	1	1	1	3	13	39	
			Repair Shop	777D/992G	1	1	1	3	3	9	
			Primary Crusher	777D/992G	1	1	1	3	1	3	
			Primary Crusher - Concrete	777D/992G	1	1	1	3	1	3	
			Primary Crusher - Steel Bldg. Below Ground	777D/992G	1	1	1	3	1	3	
			Primary Crusher - Steel Bldg. Above Ground	777D/992G	1	1	1	3	1	3	
			Take-up Tower	777D/992G	1	1	1	3	3	9	
			Conveyor (Total)	777D/992G	1	1	1	3	6	18	
			Drive House	777D/992G	1	1	1	3	1	3	
			Ore Stockpile Cover		1			1		0	
			Pebble Crusher	777D/992G	1	1	1	3	1	3	
			Grinding Building	777D/992G	1	1	1	3	7	21	
			Ball Mill Foundations (two total)	777D/992G	1	1	1	3	11	33	
			Ball Mill Foundations (Concr.Piers Above Grade Slab.)	777D/992G	1	1	1	3	3	9	
			SAG Mill Foundation	777D/992G	1	1	1	3	7	21	
			SAG Mill Foundation (Concr.Piers Above Grade Slab.)	777D/992G	1	1	1	3	2	6	
			POX Process Building - High Section	777D/992G	1	1	1	3	3	9	
			POX Process Building - Lower Section	777D/992G	1	1	1	3	6	18	
			POX Process Building - End additioin	777D/992G	1	1	1	3	1	3	
			POX Misc. Small Tanks (8)	777D/992G	1	1	1	3	1	3	
			Autoclaves (2)	777D/992G	1	1	1	3	1	3	
			Stock Tanks Concrete Contain.	777D/992G	1	1	1	3	14	42	
			Concrete Thickener Concrete	777D/992G	1	1	1	3	15	45	
			Flot./POX Thickener Concrete	777D/992G	1	1	1	3	54	162	
			Hot Cure Tanks	777D/992G	1	1	1	3	1	3	
			Flotation Building	777D/992G	1	1	1	3	18	54	
			CIL Building	777D/992G	1	1	1	3	6	18	
Refinery			777D/992G	1	1	1	3	1	3		
Cyanide Reagent Building			777D/992G	1	1	1	3	5	15		
Water Treatment Plant Building - Construction			777D/992G	1	1	1	3	1	3		
Water Treatment Plant Building - Operation			777D/992G	1	1	1	3	2	6		
Man Camp - Airstrip			777D/992G	1	1	1	3	1	3		
Man Camp - Airstrip			777D/992G	1	1	1	3	1	3		
Man Camp - Airstrip			777D/992G	1	1	1	3	2	6		
Man Camp - Airstrip			777D/992G	1	1	1	3	2	6		
Man Camp - Airstrip			777D/992G	1	1	1	3	1	3		
Man Camp - Airstrip			777D/992G	1	1	1	3	3	9		
STP Building			777D/992G	1	1	1	3	1	3		
Power Station A/B Buildings			777D/992G	1	1	1	3	6	18		
Power Station A Gensets			777D/992G	1	1	1	3	2	6		
Power station A Transformers			777D/992G	1	1	1	3	1	3		
Power Station A Tanks			777D/992G	1	1	1	3	1	3		
Power Station A Building			777D/992G	1	1	1	3	1	3		
Power Station A Building (small)			777D/992G	1	1	1	3	1	3		
Power Station B Gensets			777D/992G	1	1	1	3	2	6		
Power station B Transformers			777D/992G	1	1	1	3	1	3		
Power Station B Tanks			777D/992G	1	1	1	3	1	3		
Power Station B Building (small)			777D/992G	1	1	1	3	1	3		
Cold Storage Building			777D/992G	1	1	1	3	1	3		
Autoclave Feed Tanks			777D/992G	1	1	1	3	1	3		
Quench/Flash/Heaters	777D/992G	1	1	1	3	1	3				
Absorber Towers	777D/992G	1	1	1	3	1	3				
Cooling Towers	777D/992G	1	1	1	3	1	3				
Mercury Scrubbing	777D/992G	1	1	1	3	1	3				
Quench Building (60 m total H)	777D/992G	1	1	1	3	2	6				
Autoclave	777D/992G	1	1	1	3	1	3				
HP cooling tank	777D/992G	1	1	1	3	1	3				
Demin Tank	777D/992G	1	1	1	3	1	3				
Seal Water Tank	777D/992G	1	1	1	3	1	3				
Autoclave Feed Pumps	777D/992G	1	1	1	3	1	3				
LP Column	777D/992G	1	1	1	3	1	3				
HP Column	777D/992G	1	1	1	3	1	3				
Main Heat Exchanger	777D/992G	1	1	1	3	1	3				
Wash Water Tower	777D/992G	1	1	1	3	1	3				
Chilled Water Tower	777D/992G	1	1	1	3	1	3				
Compressors (3)	777D/992G	1	1	1	3	1	3				
Warehouse	777D/992G	1	1	1	3	2	6				
Boiler Room	777D/992G	1	1	1	3	1	3				
STP Building	777D/992G	1	1	1	3	1	3				
Utilidor	777D/992G	1	1	1	3	2	6				
								732			

Closure Cost Estimate User 9

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

Drainage	Construction	Reclaimed WRF RO Collection Primary Channel (WRF) Secondary Channel (WRF) Tailings Spillway Structure (exc. 724,000m3)	345B	1			1	239	239	3,209					
			345B	1			1	689	689						
			345B	1			1	308	308						
			345B	1			1	1,973	1,973						
Process Ponds	Backfilling Topsoil Liner cut/fold		0	1	0		1	0	0	0					
			0	1	0		1	0	0						
				1			1	0	0						
Yards	Grading	Permanent Man Camp Yards Material Sites Lower Contact Water Dam (see "Haul Material" sheet) Upper Contact Water Dam (see "Haul Material" sheet) Jung Port Disturbance (not reclaimed) Mine Borrow Areas Growth media - TSF Stockpile 1 Growth media - TSF Stockpile 3 Growth media - TSF Stockpile 2 Growth media - North Overburden Stockpile 2028 Growth media - Airstrip Overburden Stockpile Growth media - Airstrip Overburden Stockpile Growth media - Jungjuk Port Site Overburden Stockpile Growth media - North Overburden Stockpile 2028 - buffer Growth media - South Overburden Stockpile 2019 Misc. Yards Plant Site Primary Crusher Truck Shop Airstrip (Not Reclaimed)	Med	1			1	158	158	11,179					
			Med	1			1	2,112	2,112						
			0												
			0												
			0	1			1		0						
			Med	1			1	789	789						
			Med	1			1	520	520						
			Med	1			1	855	855						
			Med	1			1	244	244						
			Med	1			1	689	689						
			Med	1			1	40	40						
			Med	1			1	51	51						
			Med	1			1	22	22						
			Med	1			1	181	181						
			Med	1			1	240	240						
			Med	1			1	5,153	5,153						
			Med	1			1	104	104						
			Med	1			1	20	20						
			Med	1			1	1	1						
			0	1			1		0						
				Topsoil	Permanent Man Camp Yards Material Sites Upper Contact Water Dam (see "Haul Material" sheet) Jung Port Disturbance (not reclaimed) Mine Borrow Areas Growth media - TSF Stockpile 1 Growth media - TSF Stockpile 3 Growth media - TSF Stockpile 2 Growth media - North Overburden Stockpile 2028 Growth media - Airstrip Overburden Stockpile Growth media - Airstrip Overburden Stockpile Growth media - Jungjuk Port Site Overburden Stockpile Growth media - North Overburden Stockpile 2028 - buffer Growth media - South Overburden Stockpile 2019 Misc. Yards Plant Site Primary Crusher Truck Shop Airstrip (Not Reclaimed)	777D/992G	1	2	1		4	64	256	13,735	
						777D/992G	1	1	1		3	1,213	3,639		
						0									
						0									
						777D/992G	1	2	1		4	320	1,280		
							1		1		2		0		
							1		1		2		0		
							1		1		2		0		
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
		1					1	2		0					
	777D/992G	1				2	1	4	2,089	8,356					
	777D/992G	1				2	1	4	42	168					
	777D/992G	1				2	1	4	8	32					
	777D/992G	1				2	1	4	1	4					
		1					1	2		0					
		Reveg				Permanent Man Camp Yards Material Sites Upper Contact Water Dam (see "Haul Material" sheet) Jung Port Disturbance (not reclaimed) Mine Borrow Areas Growth media - TSF Stockpile 1 Growth media - TSF Stockpile 3 Growth media - TSF Stockpile 2 Growth media - North Overburden Stockpile 2028 Growth media - Airstrip Overburden Stockpile Growth media - Airstrip Overburden Stockpile Growth media - Jungjuk Port Site Overburden Stockpile Growth media - North Overburden Stockpile 2028 - buffer Growth media - South Overburden Stockpile 2019 Misc. Yards Plant Site Primary Crusher Truck Shop Airstrip (Not Reclaimed)	Large Dozer	1			1	25	25		1,679
							Large Dozer	1			1	332	332		
							0								
							0	1			1		0		
							Large Dozer	1			1	117	117		
							Large Dozer	1			1	77	77		
							Large Dozer	1			1	127	127		
Large Dozer			1				1	36	36						
Large Dozer			1				1	103	103						
Large Dozer			1				1	6	6						
Large Dozer			1				1	8	8						
Large Dozer			1				1	3	3						
Large Dozer			1				1	27	27						
Large Dozer			1				1	36	36						
Large Dozer			1				1	762	762						
Large Dozer			1				1	16	16						
Large Dozer			1				1	3	3						
Large Dozer			1				1	1	1						
0			1				1		0						

Closure Cost Estimate
User 10

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan
Date of Submittal: July 2017
File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm
Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 10 - Long Term Monitoring Costs															
Sampling.monitoring events for long term water treatment plant and site sampling are entered here. The total is entered in the Other User Sheet.															
Description	Samples #	Events/Year	No. Years	First Sample Year closure year (1-100)	No. of Samplers	Days/Event	Hrs/Day	Analysis Cost \$/sample	Supplies \$/sample	Lab Cost \$	Material Cost \$	Equipment Cost \$	Labor Cost \$	Cost \$	Comments
Water Analysis (Complete) (1)	9	1	5	18				\$1,055.00	\$5.75	\$47,475	\$270	\$1,125		\$48,870	02202015 Post Closure Sampling_Rev01.docx Yrs 2056-2060
Water Analysis (Complete) (1)	7	4	5	1				\$1,055.00	\$5.75	\$147,700	\$840	\$3,500		\$152,040	02202015 Post Closure Sampling_Rev01.docx Yrs 2051-2055
Water Analysis (Complete) (1)	9	1	35	23				\$1,055.00	\$5.75	\$332,325	\$1,890	\$7,875		\$342,090	02202015 Post Closure Sampling_Rev01.docx Yrs 2061-2095
Water Analysis (Complete) (1)	8	1	170	58				\$1,055.00	\$5.75	\$1,434,800	\$8,160	\$34,000		\$1,476,960	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266
Water Analysis (Complete) (1)	8	1	170	58				\$1,055.00	\$5.75	\$1,434,800	\$8,160	\$34,000		\$1,476,960	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266 WTP
Water Analysis (Complete) (1)	1	1	170	58				\$1,055.00	\$5.75	\$179,350	\$1,020	\$4,250		\$184,620	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266 WTP
Water Analysis (Complete) (1)	1	1	170	58				\$1,055.00	\$5.75	\$179,350	\$1,020	\$4,250		\$184,620	02202015 Post Closure Sampling_Rev01.docx Yrs 2096-2266 WTP
Water Analysis (Complete) (1)	1	1	210	18				\$1,055.00	\$5.75	\$221,550	\$1,260	\$5,250		\$228,060	A QA/QC sample is added for each sample event and captured in Sample #
										\$3,977,350.00	\$22,620.00	\$94,250.00			
Notes and Assumptions										Subtotal Sampling Costs				\$4,094,220	

Misc. Material Costs (per sample)	\$ 6.00
Equipment Costs (per sample)	\$ 25.00

Ground & Surface Water Monitoring					
Reporting					
Description	Hrs/Event	Rate \$/hr	Cost \$/Event	Cost \$	
Field Geologist/Engineer	40	\$48.83	\$1,953	\$410,172	
Notes: Assume 210 years with one report per year Site staff would compile report and data Offsite consultant would review and submit. No cost added for onsite staff to compile. Costs for WTP staff are in Human Resources worksheet.					

Closure Cost Estimate User 11

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

User 11 - Tailings Geotextile Assumptions

This sheet documents assumptions about how the equipment will be used to cover the tailings facility. For bonding the assumed truck size is a CAT 777. The assumptions are used to calculate the square-feet of geotextile required to support the trucks on the tails.

From: Clint Logue

To: Jeffress, Bill

Sent: Wed Aug 24 17:26:21 2011

Subject: Geogrid/geotextile

Bill:

Based on experience with closing tailings facilities in the oil sands, the following are the two main options typically used for getting out on what would otherwise be untrafficable tailings:

1. No heavy haul truck: Nilex 4553 geotextile (\$1.27/m2)+Tensar Biaxial type 1 geogrid (\$1.18/m2) will do. This only supports our cover and light reclamation equipment. The geotextile is to prevent tailings squeezing through the geogrid.
 2. Heavy haul truck: higher strength biaxial geogrid BX1200-BX1500 (\$2-3+/m2)+geotextile. We've seen one of the companies go with woven geotextile (strong but will need sewing) in favour of non-woven, but either would work.
- Option 1 is what I had in mind for Donlin, but if heavier haul equipment was required, option would be workable.

I hope this helps.

Cheers,

Clint.

RS Mean Liner Installation Crew (2 clab)

Productivity	Units		
2,500	CY/day	(8 hours per day)	
2090	m2/8hrs		
Crew	Qty	Cost/hr (\$)	Cost/M2 (\$)
General Labor	2	70.30	0.27
This number used in Other User sheet for liner installation labor costs (Doubled because two liners).			~~~~~

Closure Cost Estimate
User 11

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

GeoGrid Quantity

777 truck has a turning radius of 94 feet. Assumed causeway is 125' (29 meters) wide. Causeways are 100 meters apart.

Area of causeway (% of total)

22%

Assume that geogrid will only be required on 2/3 of the causeways.

Total geogrid needed (m2)

1,451,775

Geotextile Quantity

Area of tailings (ha):

968

Area of tailings (m2):

9,682,000

Area of causeway at 22% (m2):

2,176,574

Geogrid required on 2/3 of causeway (m2):

[Total used in the Other User worksheet >>>](#)

1,451,049

Closure Cost Estimate User 12

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Used 12 - Water Treatment Schedule.

This sheet collects the annual water treatment cost from the Solution Management sheet and schedules out by year. The sums of this schedule is entered (by formula) in the Cost Schedule worksheet in the rows referenced below (in Red). This work is based on the data in: Per Figure 5.1-Figure 5.4 in "Water Resources Management Plan: Advanced Water Treatment – Rev 2". Entries in green are used to schedule the costs. No original costs are calculated in this sheet. GPM numbers are converted to l/s in column I and entered by formula in the Solution Mangmt worksheet.

Item	Water Management Years	Begin Yr	End Yr	# yrs	Years	gpm	l/s	Total cost	Cost per year	Treatment (m3/mo)
TSF to ACMA pit	1-5	1	5	5	2046 - 2050	2,085	132	\$ 9,420	\$ 1,884	
TSF SRS to ACMA pit	1-5	1	5	5	2046 - 2050	448	28	\$ 156,420	\$ 31,284	
TSF to ACMA pit	6-10	6	10	5	2051 - 2055	1,439	91	\$ 20,700	\$ 4,140	
TSF SRS to ACMA pit	6-10	6	10	5	2051 - 2055	448	28	\$ 156,660	\$ 31,332	
TSF to ACMA pit	11-51	11	51	41	2056 - 2096	476	30	\$ 9,348	\$ 228	
TSF SRS to ACMA pit	11-51	11	51	41	2056 - 2096	448	28	\$ 1,996,536	\$ 48,696	
ACMA pit to Treatment plant	52-220	52	220	169	2097 - 2265	2,916	184	\$ 19,249,776	\$ 113,904	483,287

^^^

Linked back to Solution Mgmt. worksheet

^^^

These numbers from Figures B-4a - B-7a, undated drawings, no reference to which document they are from.

Items	elev. (masl)
TSF pond	253.0
Seepage collection (SRS Pond)	116.0
ACMA pit in (Rim)	196.0
ACMA pit out (pit lake elev.)	99.5
Treatment plant (Long term)	120.0
Treatment Plant (Mill)	295.0
Annual cost (Pump Opex)	
Pumping Years - 1-5	\$ 33,168
Pumping Years - 6-10	\$ 35,472
Pumping Years - 11-51	\$ 228
Pumping Years - 11-51	\$ 48,696
Pumping Years - 52-220	\$ 113,904
Pumping Years -	

<< These elevations are used in the Solutions Management worksheet to calculate head.

Pipelines run down pit access to just above Lake level.

<< These numbers are used in layout below to assign to years in schedule.

**Closure Cost Estimate
User 14**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety **Cost Basis:** Alaska Davis Bacon 2016

Post Closure Road/Airport Maintenance Costs

This sheet estimates the annual cost for road and airport maintenance. The costs are entered in the Other User Sheet.

Equipment	Qty.	h/day/unit	Total hrs/year	Equip. Unit Costs (\$)	Labor Unit Costs (\$)	Total Annual Equip (\$)	Total Annual Labor (\$)	Total Annual Cost (\$)
325C Excavator	1	0.5	182.5	\$ 66.88	\$ 60.81	\$ 12,205.60	\$ 11,097.83	\$ 23,303.43
14G Grader, All-Wheel Drive, Cat 16H or Equivalent, site & off-site roads	1	0.5	182.5	\$ 147.31	\$ 60.81	\$ 26,884.08	\$ 11,097.83	\$ 37,981.90
Water truck (5000 Gallon)	1	0.5	182.5	\$ 45.06	\$ 60.81	\$ 8,223.45	\$ 11,097.83	\$ 19,321.28
CS533E Vibratory Roller	1	0.5	182.5	\$ 53.21	\$ 60.81	\$ 9,710.83	\$ 11,097.83	\$ 20,808.65
Dump Truck, 12 cub yds, yard maintenance, snow removal	1	0.5	182.5	\$ 34.92	\$ 56.78	\$ 6,372.90	\$ 10,362.35	\$ 16,735.25
Small Dozer D7R	1	0.5	182.5	\$ 92.34	\$ 60.81	\$ 16,852.05	\$ 11,097.83	\$ 27,949.88
Light Truck (Truck and Foreman included in Water Treatment Crew)	0	0.5	0.0	\$ 14.11	\$ 30.47	\$ -	\$ -	\$ -
Total Annual Costs (Entered in Other User Sheet)						\$ 80,248.90	\$ 65,851.48	\$ 146,100.38

**Closure Cost Estimate
User 17**

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 17 - R.S. Means Crews							
This sheet links the equipment and labor costs from the model to the various defined RS Means crews for miscellaneous tasks in the model.							
Equipment to be updated:							
Flatbed trailer (\$/hr)	\$	11.64		Assumed equal to 1/3rd dump truck hourly cost			
Truck tractor (\$/hr)	\$	34.92		Assumed equal to dump truck hourly cost			
Lowbed trailer (\$/hr)	\$	11.64		Assumed equal to 1/3rd dump truck hourly cost			
Pipe fitter	\$	60.75					
A-3A							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pickup truck	Yes	1	\$ 58.82	\$ 14.11	\$ 58.82	\$ 14.11	\$ 72.93
				Total Crew Cost	\$58.82	\$14.11	\$72.93
A-3D							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pickup truck	Yes	1	\$ 58.82	\$ 14.11	\$ 58.82	\$ 14.11	\$ 72.93
Flatbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$58.82	\$25.75	\$84.57
B-34K							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Truck tractor	No	1	\$ 58.82	\$ 34.92	\$ 58.82	\$ 34.92	\$ 93.74
Lowbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$58.82	\$46.56	\$105.38
B-34N							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Dump truck	Yes	1	\$ 56.78	\$ 34.92	\$ 56.78	\$ 34.92	\$ 91.70
Flatbed trailer	No	1		\$ 11.64	\$ -	\$ 11.64	\$ 11.64
				Total Crew Cost	\$56.78	\$46.56	\$103.34
B-34Q							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Pipe fitter	No	1	\$ 60.75		\$ 60.75	\$ -	\$ 60.75
Dump truck	Yes	1	\$ 56.78	\$ 34.92	\$ 56.78	\$ 34.92	\$ 91.70
Hydraulic crane, 25 ton	Yes	1	\$ 60.81	\$ 49.72	\$ 60.81	\$ 49.72	\$ 110.53
Flatbed trailer	No	1		\$ 11.64		\$ 11.64	\$ 11.64
				Total Crew Cost	\$178.34	\$96.28	\$274.62
D-3							
Item	In cost data file?	# of item	Labor rate (\$/hr)	Equipment rate (\$/hr)	Labor cost	Equipment cost	Subtotal
Bricklayer	No	3	\$ 60.03		\$ 180.09	\$ -	\$ 180.09
Bricklayer helper	No	2	\$ 59.37		\$ 118.74	\$ -	\$ 118.74
Carpenter	Yes	0	\$ 59.72		\$ 14.93	\$ -	\$ 14.93
				Total Crew Cost	\$313.76	\$0.00	\$313.76

Closure Cost Estimate

User 20

Project Name: Donlin Gold - Reclamation Bond - LOM - Reclamation Plan

Date of Submittal: July 2017

File Name: Donlin_RecBond_LOM_181202_20170718_REV02_FNL.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: Donlin_RecBond_Cost_data_v1_12_181202_017_20170510_pl_REV02.xlsm

Cost Estimate Type: Surety Cost Basis: Alaska Davis Bacon 2016

User 20 - Inflation Adjustment Factor

The calculations in this sheet calculate indexes used to adjust quotes to current rates based on Anchorage Consumer Price Index for Anchorage.

<http://laborstats.alaska.gov/cpi/cpi.htm>

Last retrieved June 8, 2016

Consumer Price Index for Anchorage Municipality & U.S.

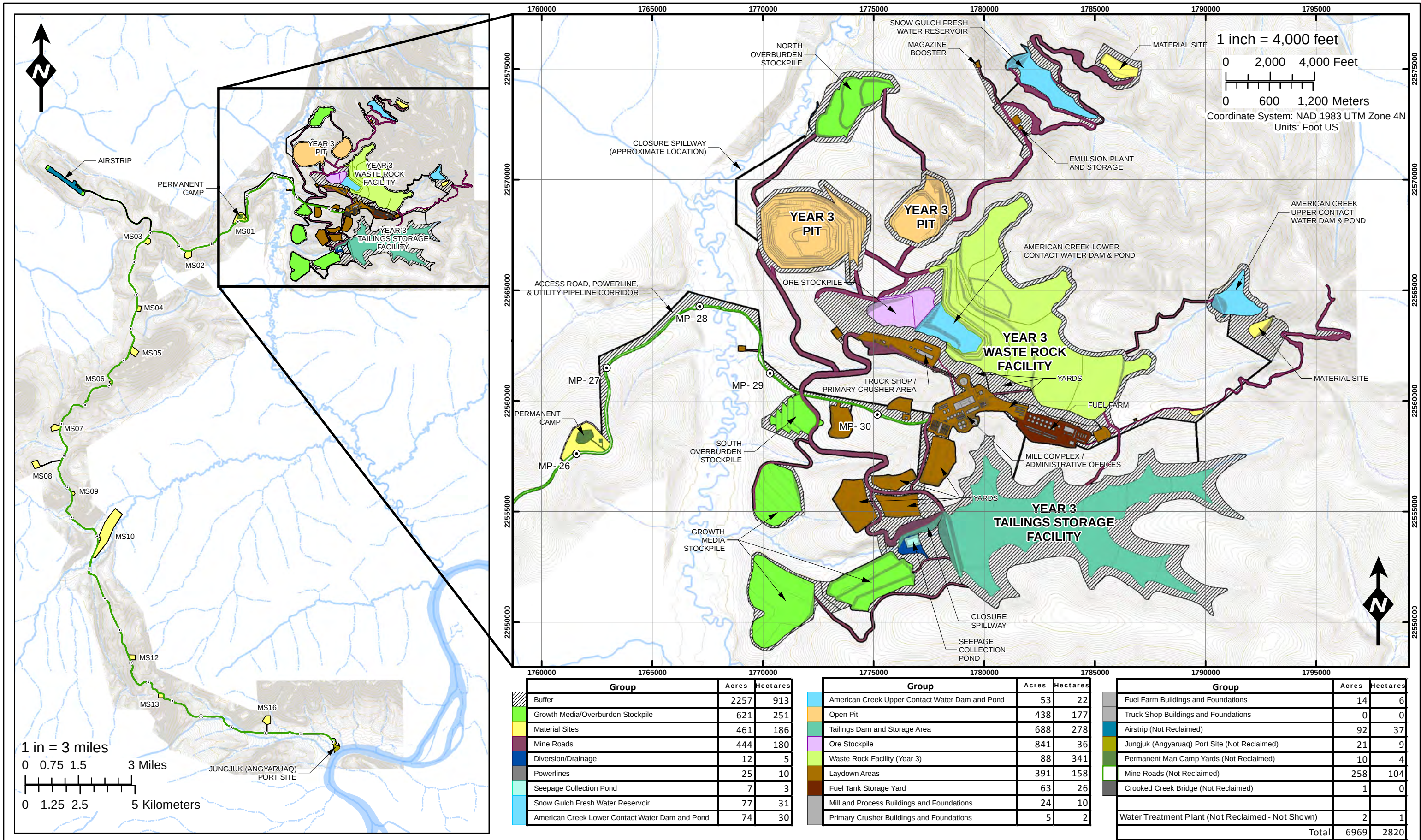
Not Seasonally Adjusted

All Items - All.1 Urban Consumers

(CPI-U) 1960-Present

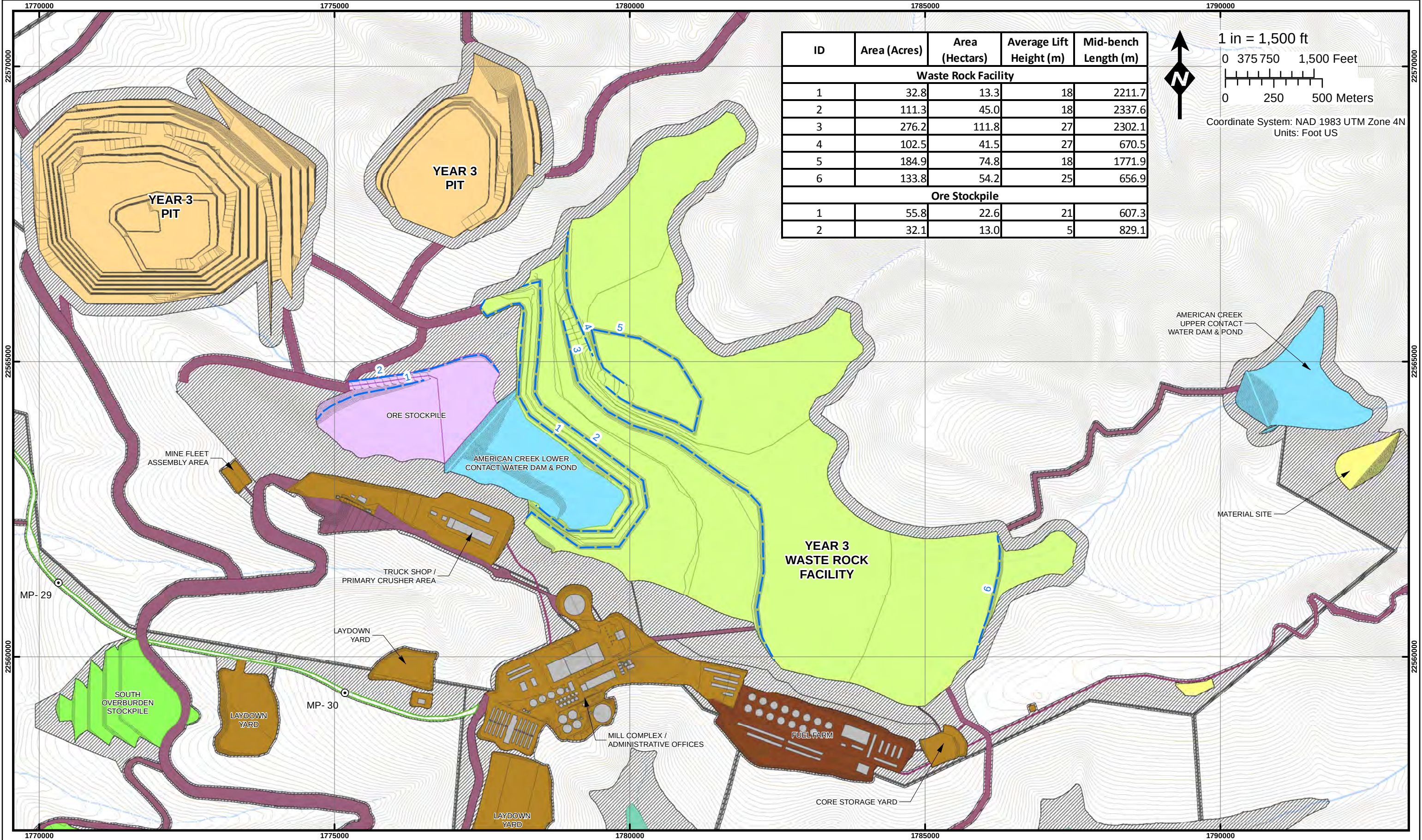
Year	Average	Percent Change From Previous Year
2016	217.830	
2015	216.909	0.500
2014	215.805	1.600
2013	212.381	3.100
2012	205.916	2.200
2011	201.427	3.200
Adjustment factor:		
	1.1	

Attachment E: SRCE Figures

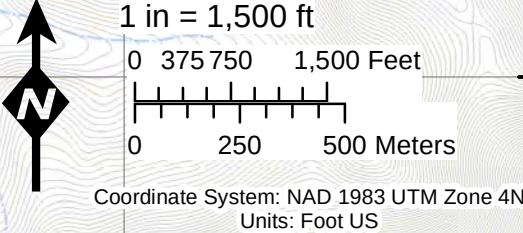


**PREMATURE CLOSURE
DISTURBANCE FOOTPRINT
DONLIN GOLD PROJECT**

FIGURE:
E-1



ID	Area (Acres)	Area (Hectars)	Average Lift Height (m)	Mid-bench Length (m)
Waste Rock Facility				
1	32.8	13.3	18	2211.7
2	111.3	45.0	18	2337.6
3	276.2	111.8	27	2302.1
4	102.5	41.5	27	670.5
5	184.9	74.8	18	1771.9
6	133.8	54.2	25	656.9
Ore Stockpile				
1	55.8	22.6	21	607.3
2	32.1	13.0	5	829.1



Buffer

Growth Media/Overburden Stockpile

Material Sites

Mine Roads

Diversion/Drainage

Powerlines

Seepage Collection Pond

Snow Gulch Fresh Water Reservoir

American Creek Lower Contact Water Dam and Pond

American Creek Upper Contact Water Dam and Pond

Open Pit

Tailings Dam and Storage Area

Ore Stockpile

Waste Rock Facility (Year 3)

Laydown Areas

Fuel Tank Storage Yard

Mill and Process Buildings and Foundations

Primary Crusher Buildings and Foundations

Fuel Farm Buildings and Foundations

Truck Shop Buildings and Foundations

Airstrip (Not Reclaimed)

Jungjuk (Angyaruaq) Port Site (Not Reclaimed)

Permanent Man Camp Yards (Not Reclaimed)

Mine Roads (Not Reclaimed)

Crooked Creek Bridge (Not Reclaimed)

Mid-Bench Lengths

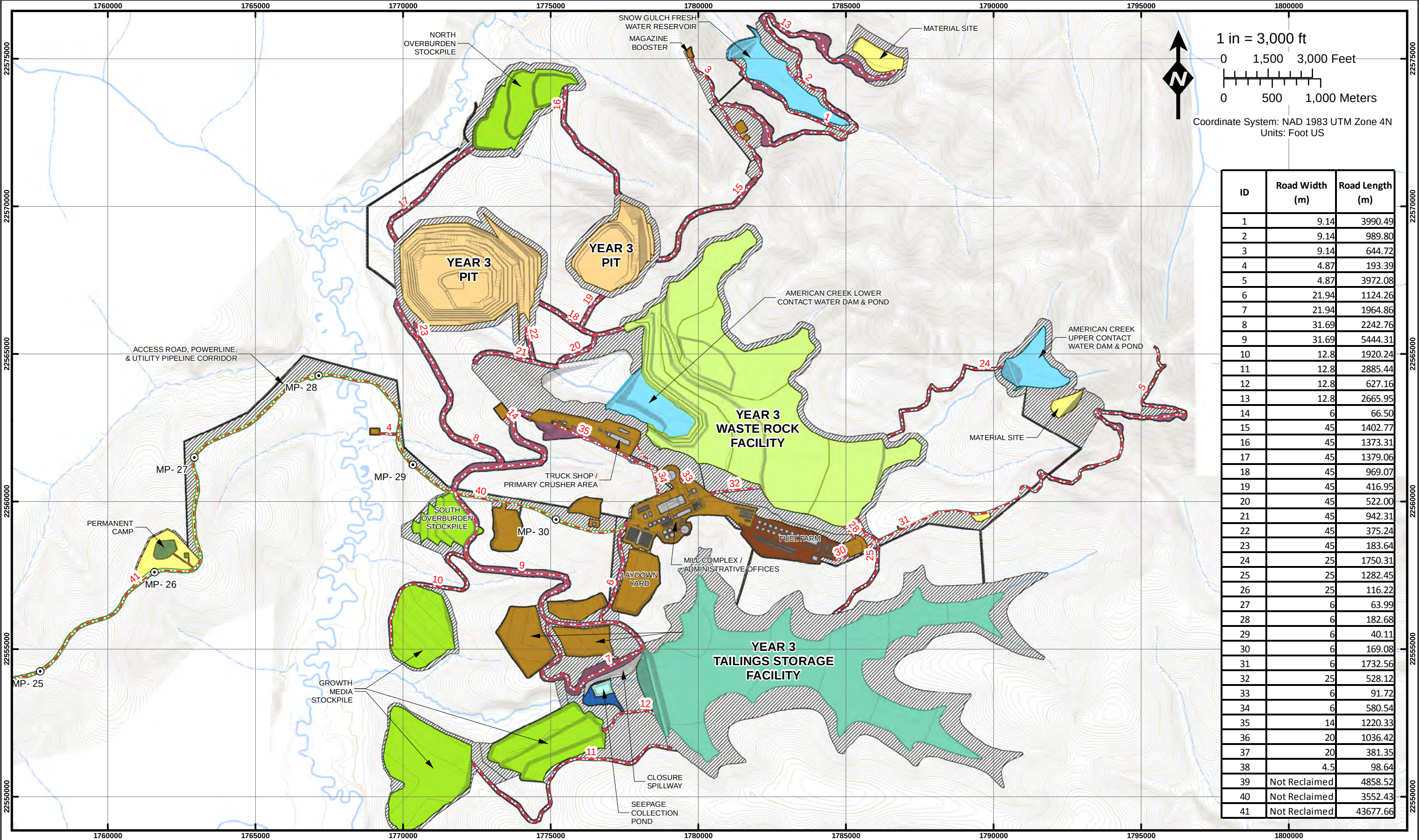
PREMATURE CLOSURE

WRF MID-BENCH LENGTHS

DONLIN GOLD PROJECT

FIGURE:

E-2



Buffer

Growth Media/Overburden Stockpile

Material Sites

Mine Roads

Diversion/Drainage

Powerlines

Seepage Collection Pond

Snow Gulch Fresh Water Reservoir

American Creek Lower Contact Water Dam and Pond

American Creek Upper Contact Water Dam and Pond

Open Pit

Tailings Dam and Storage Area

Waste Rock Facility (Year 3)

Laydown Areas

Fuel Tank Storage Yard

Mill and Process Buildings and Foundations

Primary Crusher

Truck Shop

Fuel Farm Buildings and Foundations

Airstrip (Not Reclaimed)

Jungjuk (Angyaruaq) Port Site (Not Reclaimed)

Permanent Man Camp Yards (Not Reclaimed)

Mine Roads (Not Reclaimed)

Crooked Creek Bridge (Not Reclaimed)

Mine Road Centerline (ID)

DONLIN GOLD

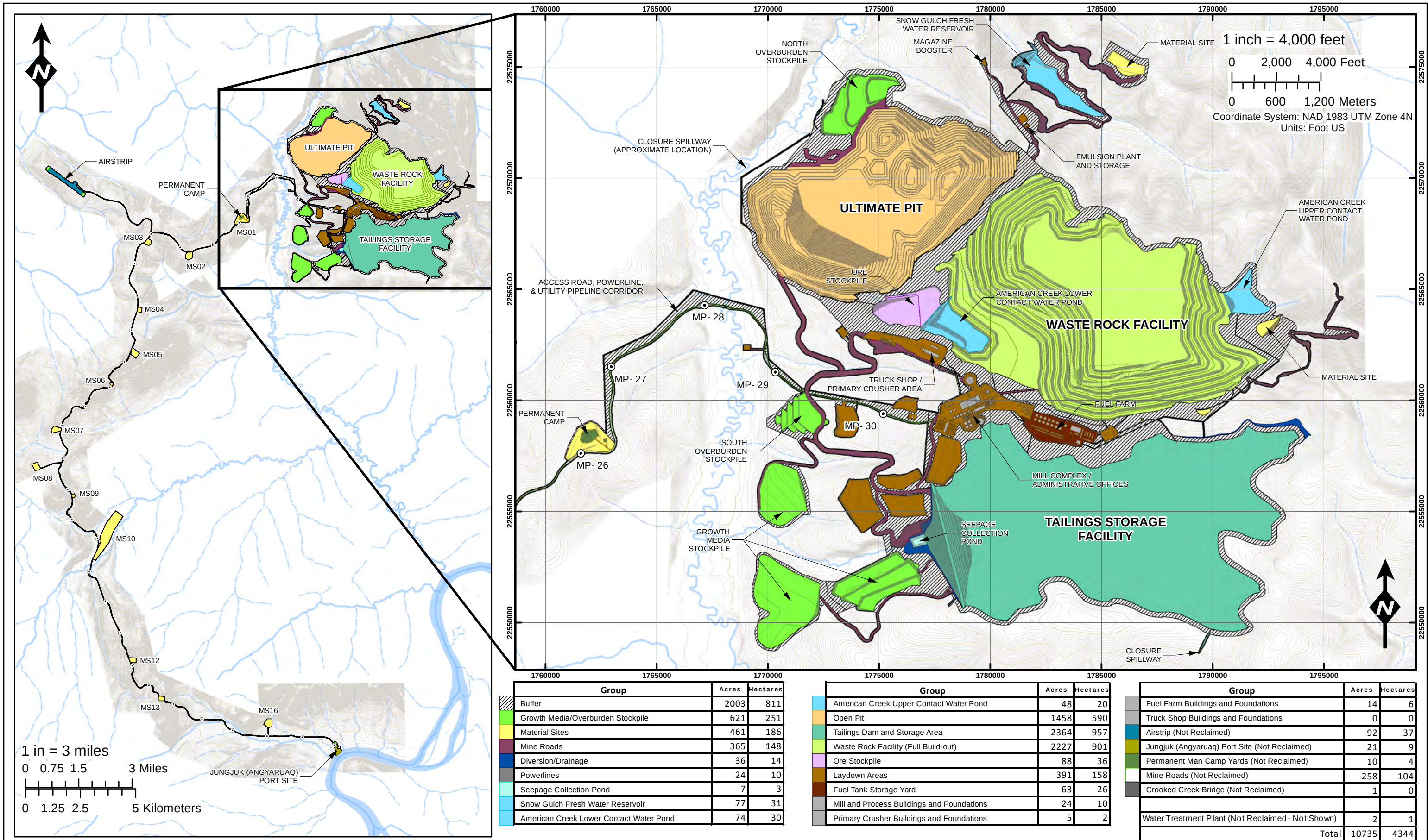
PREMATURE CLOSURE

ROAD DISTURBANCE ID & LENGTHS

DONLIN GOLD PROJECT

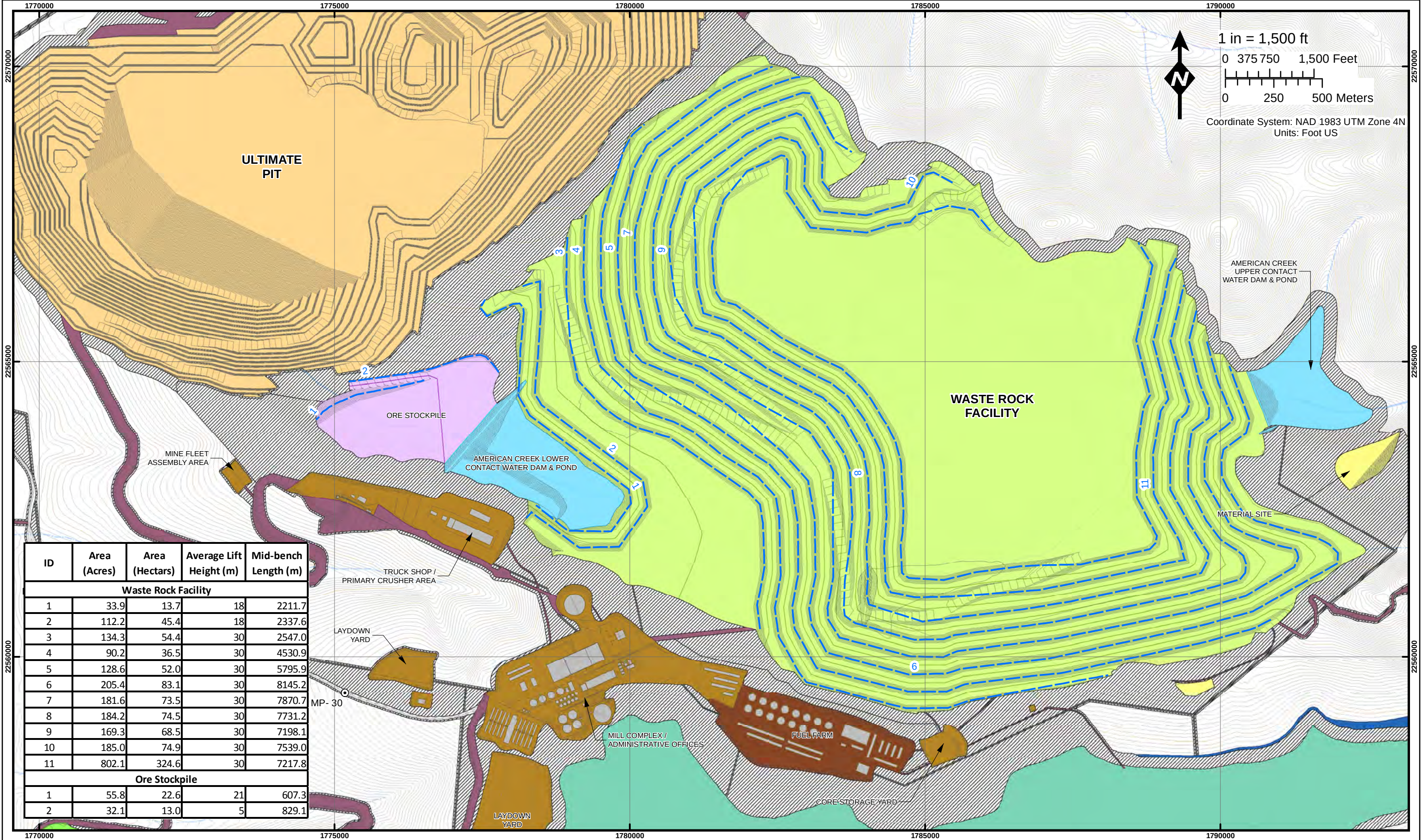
FIGURE:
E-3

PATH: H:\Donlin Gold\181202_017_Donlin_Gold_LLC_2017\040_Drafting\Task_300.11_Reclamation_& Closure\E-3_YR3_Roads_20170522_m1.mxd



**LOM CLOSURE
DISTURBANCE FOOTPRINT
DONLIN GOLD PROJECT**

FIGURE:
E-4



Buffer

Growth Media/Overburden Stockpile

Material Sites

Mine Roads

Diversion/Drainage

Powerlines

Seepage Collection Pond

Snow Gulch Fresh Water Reservoir

American Creek Lower Contact Water Pond

American Creek Upper Contact Water Pond

Open Pit

Tailings Dam and Storage Area

Waste Rock Facility (Full Build-out)

Ore Stockpile

Laydown Areas

Fuel Tank Storage Yard

Mill and Process Buildings and Foundations

Primary Crusher Buildings and Foundations

Fuel Farm Buildings and Foundations

Truck Shop Buildings and Foundations

Airstrip (Not Reclaimed)

Jungjuk (Angyaruaq) Port Site (Not Reclaimed)

Permanent Man Camp Yards (Not Reclaimed)

Mine Roads (Not Reclaimed)

Crooked Creek Bridge (Not Reclaimed)

Mid-bench Lengths

DONLIN GOLD

LOM CLOSURE

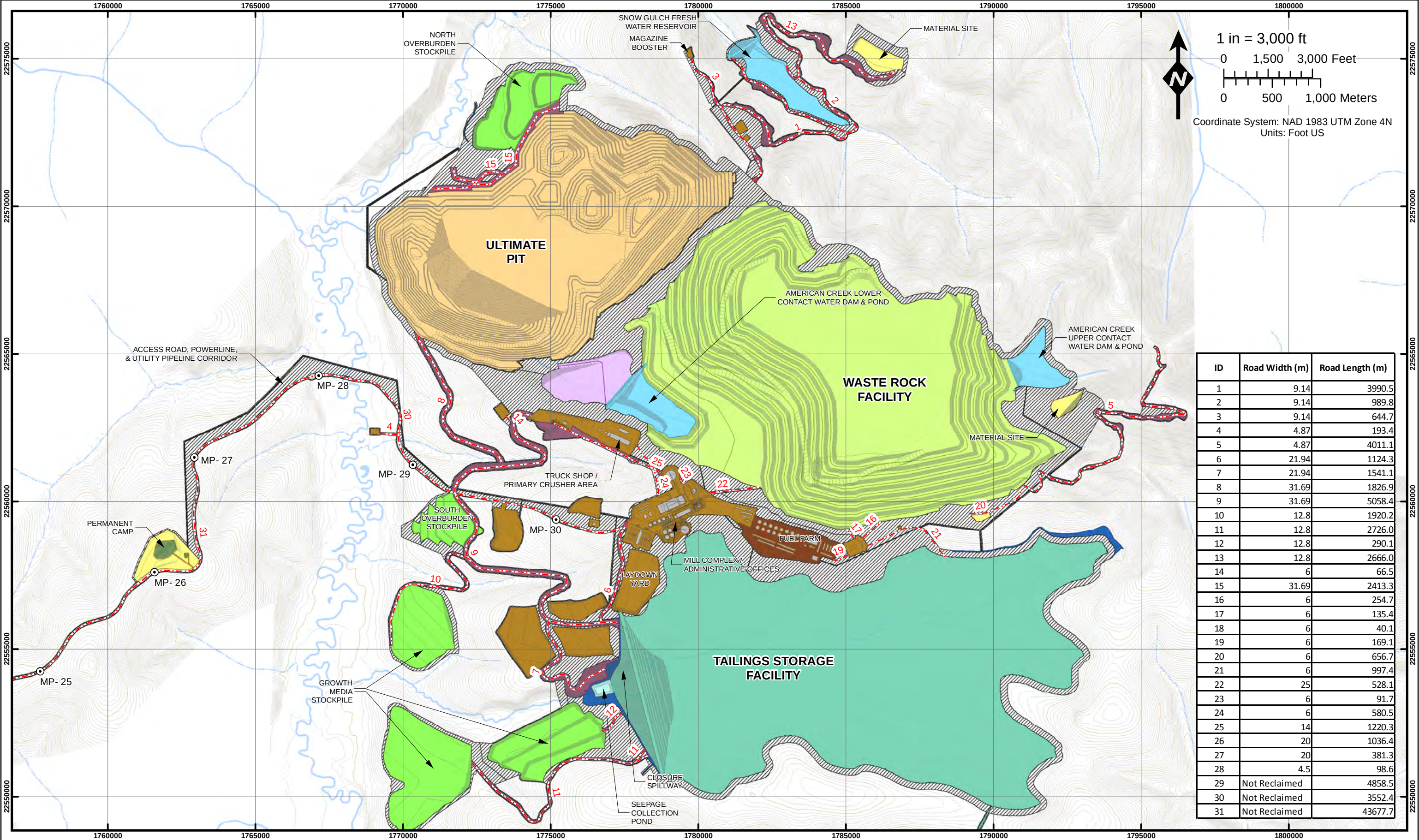
WRF MID-BENCH LENGTHS

DONLIN GOLD PROJECT

FIGURE:

E-5

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ID	Road Width (m)	Road Length (m)
1	9.14	3990.5
2	9.14	989.8
3	9.14	644.7
4	4.87	193.4
5	4.87	4011.1
6	21.94	1124.3
7	21.94	1541.1
8	31.69	1826.9
9	31.69	5058.4
10	12.8	1920.2
11	12.8	2726.0
12	12.8	290.1
13	12.8	2666.0
14	6	66.5
15	31.69	2413.3
16	6	254.7
17	6	135.4
18	6	40.1
19	6	169.1
20	6	656.7
21	6	997.4
22	25	528.1
23	6	91.7
24	6	580.5
25	14	1220.3
26	20	1036.4
27	20	381.3
28	4.5	98.6
29	Not Reclaimed	4858.5
30	Not Reclaimed	3552.4
31	Not Reclaimed	43677.7

Buffer

Growth Media/Overburden Stockpile

Material Sites

Mine Roads

Diversion/Drainage

Powerlines

Seepage Collection Pond

Snow Gulch Fresh Water Reservoir

American Creek Lower Contact Water Pond

American Creek Upper Contact Water Pond

Open Pit

Tailings Dam and Storage Area

Waste Rock Facility (Full Build-out)

Ore Stockpile

Laydown Areas

Fuel Tank Storage Yard

Mill and Process Buildings and Foundations

Primary Crusher Buildings and Foundations

Fuel Farm Buildings and Foundations

Truck Shop Buildings and Foundations

Airstrip (Not Reclaimed)

Jungjuk (Angyaruaq) Port Site (Not Reclaimed)

Permanent Man Camp Yards (Not Reclaimed)

Mine Roads (Not Reclaimed)

Crooked Creek Bridge (Not Reclaimed)

Mine Road Centerline (ID)

LOM CLOSURE

ROAD DISTURBANCE ID & LENGTHS

DONLIN GOLD PROJECT

FIGURE:

E-6