# STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND AND WATER

# PRELIMINARY DECISION

ADL 232200 Donlin Gold LLC - Application for Lease Jungjuk Port AS 38.05.070(c)

This Preliminary Decision (PD) is the initial determination on a proposed disposal of interest in state land and is subject to comments received during the public notice period. The public is invited to comment on this PD. The deadline for commenting is **5:00 PM** on **March 29, 2019**. Please see the Comments and Competitive Interest section of this decision for details on how and where to send comments for consideration. Only the applicant and those who comment have the right to appeal the Final Finding and Decision (FFD).

### **Proposed Action:**

The Department of Natural Resources (DNR), Division of Mining, Land and Water (DMLW), Southcentral Regional Land Office (SCRO) has received a request from Donlin Gold LLC (Donlin) to lease eight acres, more or less, of submerged state land for 55 years, located within the Kuskokwim River, eight miles northeast from the community of Crooked Creek, Alaska. Donlin is proposing to use this site for the construction of the Jungjuk Port and related facilities in support of the proposed Donlin Gold Project (Figure 1). Supplies, fuel, and materials will be delivered to the port by river barge from the community of Bethel, Alaska located approximately 177 river miles southwest of the proposed port location. The Jungjuk Port and related facilities will support construction, operation, and future reclamation activities at the mine. The port will encompass approximately 21 acres, of which only eight acres, more or less, will be located on submerged state land. The majority of the Jungjuk Port will be situated on land owned by the Kuskokwim and Calista Corporations. The location of ADL 232200 is further described as being within Section 29 of Township 20 North, Range 49 West, Seward Meridian.

ADL 232200 would authorize a leasehold for the construction, use, operation, and maintenance of the portion of the Jungjuk Port that is situated on submerged state land. Donlin's lease application requests a 55-year lease term. However, given Donlin's own projection of an approximately 27.5-

year mine operating life, DMLW is considering the issuance of a 30-year lease under AS 38.05.070(c) and AS 38.05.070(d) to Donlin for a port and related facilities. DMLW would issue an Entry Authorization (EA) for construction, use, operation, maintenance, survey, and appraisal of the lease site prior to lease issuance.

### **Background:**

Donlin Gold LLC is a limited liability company that is equally owned by Barrick Gold U.S., Incorporated and NovaGold Resources Alaska, Incorporated. Donlin is proposing to develop an open pit, hard rock gold mine, referred to as the Donlin Gold Project, located 10 miles north of the community of Crooked Creek and approximately 145 miles northeast of Bethel, Alaska. The open pit portion of the mine will be located on private land owned by the Kuskokwim Corporation and the subsurface estate containing the ore deposits to be mined is owned by the Calista Corporation. The mine is expected to take three to four years to construct, and Donlin plans to produce over 33-million ounces of gold during the life of the mine, estimated at approximately 27.5 years. Donlin foresees employing up to 3,000 people during mine construction and up to 1,400 people annually during mine operations.

Materials and supplies will be transported to the mine site via barges on the Kuskokwim River from a proposed port facility (ADL 232200). The port will be connected to the mine site by a proposed road (ADL 232346). The airstrip (ADL 232199) will also be connected to the proposed road and will provide an additional way to access the mine and related infrastructure. To date, DMLW has received multiple applications from Donlin to construct associated improvements on state land, and will be responsible for adjudicating separate authorizations for the proposed mine, consisting of:

- ADL 232199 Lease for an airstrip and associated infrastructure;
- ADL 232200 Lease for a port facility;
- ADL 232334/ADL 232360 Material Sale Contract/Material Site;
- ADL 232335/ADL 232361 Material Sale Contract/Material Site;
- ADL 232336/ADL 232362 Material Sale Contract/Material Site;
- ADL 232337/ADL 232363 Material Sale Contract/Material Site;
- ADL 232338/ADL 232364 Material Sale Contract/Material Site;
- ADL 232339/ADL 232365 Material Sale Contract/Material Site;
- ADL 232340/ADL 232366 Material Sale Contract/Material Site;
- ADL 232346 Easement for access roads;
- ADL 232368 –Easement for a fiber optic cable;
- LAS 31107 Land Use Permit for a temporary access road;
- LAS 31108 Land Use Permit for a temporary access road.

Additional applications may be received from Donlin for other projects related to the proposed Donlin Gold Project.

### **Scope of Review:**

The scope of this decision is to determine if it is the State's best interest to issue ADL 232200, and determine if competitive interest exists from other companies in developing the site.

### **Authority:**

This lease application is being adjudicated pursuant to AS 38.05.035(b)(1) and AS 38.05.035(e) Powers and Duties of the Director; AS 38.05.070(c) and (d) Generally; and AS 38.05.945 Notice.

The authority to execute the PD, FFD, the EA, and the lease has been delegated to the Regional Managers of DMLW.

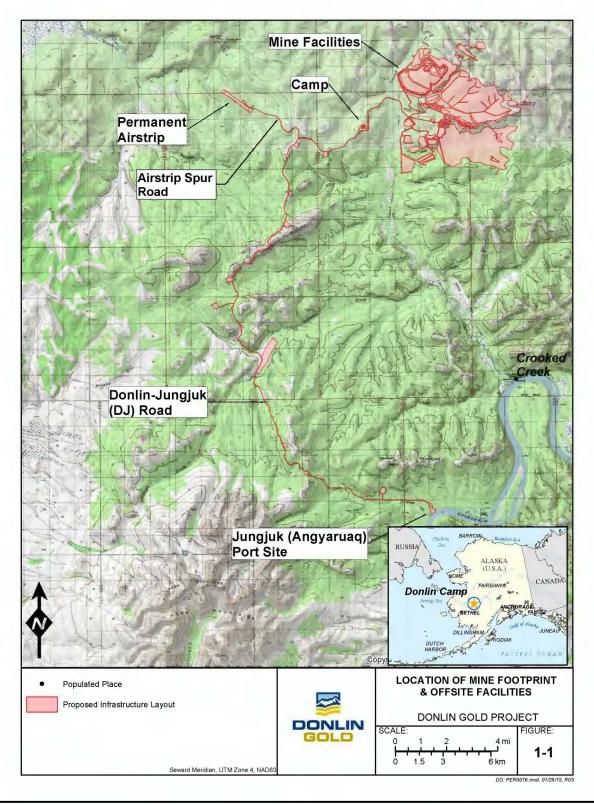
### **Administrative Record:**

Case file ADL 232200 constitutes the administrative record for the Donlin port lease application.

# **Legal Description, Location, and Geographical Features:**

The state land where this proposed lease is located is described as follows:

- **Legal Description:** NW 1/2 of Section 29 of Township 20 North, Range 49 West, Seward Meridian
- Geographical Location: Eight miles northeast from the community of Crooked Creek
- Approximate Lat/Long: 61°47′ 42.21" N, 158°12′ 48.99" W
- Area Geographical Features: Kuskokwim River
- Existing Surveys: None
- Municipality/Borough: Unorganized Borough
- Native Corporations/Federally Recognized Tribes: Calista Corporation, the Kuskokwim Corporation, and the Village of Crooked Creek
- Size: Eight acres, more or less



 $Figure\ 1: Location\ of\ proposed\ Donlin\ Gold\ mine\ and\ related\ facilities.$ 

# Title:

A DNR Title Report (RPT-10587) issued on March 21, 2018 from DMLW's Realty Services Section, attests that the State of Alaska holds title to the subject lands under the Equal Footing Doctrine and the Submerged Lands Act of 1953.

### **Public Trust Doctrine:**

Pursuant to AS 38.05.126, all authorizations for this site will be subject to the principles of the Public Trust Doctrine; specifically, the right of the public to use navigable waterways and the land beneath them for navigation, commerce, fishing, hunting, protection of areas for ecological studies, and other purposes. These rights must be protected.

# **Third Party Interests:**

There are no known third party interests within the proposed boundary of ADL 232200.

### **Classification and Planning:**

A proposed Amendment to DNR's Kuskokwim Area Plan and Land Classification Order (No. SC-88-001A21) have been drafted by DMLW's Resource Assessment and Development Section to address management of state land and unclassified land within the proposed Donlin project area. The proposed Area Plan Amendment and Land Classification Order is being issued for public comment concurrently with this decision. Information on how to comment on the proposed Area Plan Amendment and Land Classification Order can be found on the Alaska Online Public Notice System.

### **Traditional Use Findings:**

Per AS 38.05.830, prior to a lease being issued for state land that is located within an unorganized borough, the effects of the proposed lease on local populations and potential conflicts with traditional uses of the land shall be considered. Traditional activities near the proposed project area include subsistence activities, hunting and fishing, trapping, and mining. Possible impacts to traditional use activities from the proposed port may include impacts to fish and wildlife populations and/or habitat, increased competition for subsistence resources, and restrictions on access to resources.

Donlin has developed the following mitigation measures to address effects on traditional use activities: best management practices; compliance with regulations and standard permit requirements; design and construction of infrastructure; federal agency considered mitigation methods; compensation for impacts such as providing substitute resources; monitoring and adaptive management; following guidance of the final Donlin Gold Project Environmental Impact Statement dated April 2018; and coordination with the public, and state and federal agencies.

Further, Donlin will be subject to DMLW's standard, additional stipulations, and any other stipulations generated as a result of the public notice process.

# **Access:**

Current access to the proposed port facility is by boat via the Kuskokwim River. Winter access is possible by all-terrain vehicle or snow machine. Donlin intends to construct the Jungjuk Road from the Jungjuk Port to the mine site, and all future access to the port will be from the Jungjuk Road or the Kuskokwim River.

# **Access to Navigable or Public Waters:**

Nearly all shore and tidelands in the State of Alaska are subject to a To and Along easement (AS 38.05.127 and 11 AAC 51.045(d)). The purpose of this easement is to uphold the constitutional right of the public to have free access to, and use of, the State's waterways. Due to public safety concerns, the State is not reserving a To and Along easement at the proposed leasehold. Enough access is provided via navigable water.

# **Scoping Notice:**

A Scoping Notice was conducted August 31, 2016. The comment period closed October 17, 2016. The purpose of the Scoping Notice was to inform interested parties, and receive public input, on the Donlin applications received by DMLW. The information gained as a result of the Scoping Notice has been considered in this PD. The 11 comments submitted serve to inform the decision-making process on the Donlin applications under consideration, however, they are not addressed or being responded to in this PD, nor the FFD.

### **Agency Review:**

Two Agency Reviews were conducted for the proposed Donlin authorizations. The first Agency Review was conducted on June 28, 2016, and the deadline to submit comments was August 12, 2016. A second Agency Review was conducted on February 27, 2018, and the deadline to submit comments was April 2, 2018.

The following agencies were included in the reviews:

- DNR DMLW Mining
- DNR DMLW Water
- DNR DMLW Survey
- DNR DMLW Resource Assessment and Development
- DNR DMLW Land Sales
- DNR Division of Parks and Outdoor Recreation (DPOR)
- DNR DPOR Office of History and Archaeology, State Historic Preservation Office
- DNR Division of Oil and Gas (DOG)
- DNR Division of Agriculture

- DNR Office of Project Management and Permitting
- Alaska Department of Fish and Game (ADF&G) Division of Habitat
- ADF&G Division of Wildlife Conservation
- Alaska Department of Environmental Conservation (ADEC)
- Alaska Department of Transportation and Public Facilities
- Alaska Department of Commerce, Community and Economic Development
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service
- U.S. Department of Homeland Security, Coast Guard
- U.S. Department of the Interior, Bureau of Land Management
- U.S. Department of Transportation, Pipeline & Hazardous Materials Safety Administration
- U.S. Department of Defense, Army Corps of Engineers
- U.S. Department of the Interior, Fish & Wildlife Service (USFWS)
- U.S. Environmental Protection Agency

During the 2016 Agency Notice, DMLW received one comment from USFWS. During the 2018 Agency Notice, a comment from ADEC was received concerning the location of a known contaminated site near the easement alignment proposed in ADL 232368; this comment was outside the scope of this PD.

### **USFWS Comment:**

"The U.S. Fish and Wildlife Service (Service) provides the following permit specific recommendations, in response to the Donlin Gold Mine lease permits applications to the State of Alaska. The following permit-specific recommendations provide consistency in our recommendations on this project to the state and the USACE. We look forward to continuing to provide engagement with the state to support early project planning to avoid and reduce project related impacts on fish and wildlife.

### Disturbance Areas

- To expedite succession of functional habitat, we suggest salvaging and re-spreading topsoil over disturbed areas of surrounding facilities and along barrow ditches of access roads. The first 10-12 inches of soil contains site specific native seed and organic matter that will ultimately conserve resources and promote infill with native vegetation. We suggest salvaging the organic topsoil (by soil type) and spreading the topsoil (by soil type) back over the disturbed areas after construction. Topsoil should be signed as topsoil and stored in a manner that will keep it viable until it is spread back over the disturbed site.
- If placement of materials such as riprap is implemented to stabilize stream banks above or below stream crossings, use topsoil to fill the voids between the stones and seed the surface with native grasses and/or forbs to provide some habitat value and help stabilize the rock.

- Incorporate erosion control measures to reduce erosion on cut and fill slopes and to prevent sediment from entering wetlands/waterways.
- Provide a noxious weed prevention plan to avoid the establishment and spread of undesirable non-native vegetation in disturbed areas.

### **Avian Habitat Protection**

- To protect migratory birds, avoid clearing previously undisturbed ground cover or vegetation during the nesting season. See the attached document, "Land Clearing Timing Guidance for Alaska", for the appropriate dates.
- Recommend a disturbance buffer of 660 feet for eagle nests, and to avoid blasting and other activities that produce extremely loud noises with 0.5 mile of bald eagle nests (or within 1 mile in open areas), unless greater tolerance to the activity (or similar activity) has been demonstrated by the eagles in the nesting area."

### **SCRO Response:**

Donlin has been made aware of these comments through this PD. Donlin is advised to follow all local, state, and federal laws and the conditions of necessary related authorizations for the protection of fish and wildlife habitat within the proposed project area.

# **Lease Discussion:**

DMLW is considering issuance of a 30-year lease to Donlin under AS 38.05.070(c) and (d) for use of eight acres, more or less, of submerged state land for the construction, use, operation, and maintenance of a port and other associated infrastructure in support of the proposed Donlin gold mine. The proposed port will be located on the north bank of the Kuskokwim River about eight miles downstream of the village of Crooked Creek, Alaska. The proposed port and associated infrastructure will encompass a total of 21 acres, 17 of which will be located on private Native Corporation uplands and about three and a half acres of submerged state land will encompass the wharf and associated infrastructure. An additional four and a half acres of submerged state land is necessary for operational and docking space for barges, therefore, Donlin is requesting the use of eight acres, more or less, of submerged state land for the port and related facilities. The purpose of the port is to provide for the transportation of fuel, materials, and supplies by river barge from Bethel to the mine site. Donlin intends to begin construction of the port early in the mine project as the port is important in supplying materials for mine construction.

According to Donlin's Development Plan, three and a half acres of the proposed leasehold will comprise a wharf with a barge berth and ramp built into the wharf face, perpendicular to the river. The ramp will be approximately 200-feet-long by 62.7-feet wide and will be used for cargo offloading and onloading. The wharf will be approximately 952-feet-long and 75-feet-high. The wharf will extend roughly 60 to 130-feet into the river from the shoreline at the Mean High Water mark and will be constructed of open cell steel sheet pile bulkhead and rock fill ("sheet piles" are

defined as long structural sections with a vertical interlocking system that create a continuous wall).

Approximately 100,000-square-feet of sheet pile will be driven into the riverbed to resistance to form the structure of the wharf, with approximately 110,000-cubic-yards (cy) of locally sourced rock fill placed behind the sheet piles. Donlin is planning to use clean shot rock for the wharf's fill, developed from material sites along the proposed Jungjuk Road. Roughly 2,000 cy of locally sourced riprap will then be placed at the upstream and downstream ends of the wharf for erosion protection ("riprap" is defined as a layer of stones or similar material on an embankment slope to prevent erosion). All volumes of fill are approximate at this stage of the project. The wharf will be designed to accommodate and allow for mooring of two barges of an unspecified size at the same time. The wharf can accommodate barges arriving in tows of four, in a two-by-two configuration. Facilities on the private upland portion of the port yard will support heavy equipment and container storage, cargo, fuel storage, and personnel facilities. The cargo storage area will have the capacity to store about 1,000 containers, typically stacked in blocks of five containers long by three containers wide. A portion of the container storage area and a snow storage area would extend onto state lands and into the lease boundary of ADL 232200. Electrical power for lighting, personnel accommodations, equipment, and navigational aids at the proposed port facility will be provided by diesel generators. Donlin intends to supply potable water to the proposed port from a groundwater well and has applied to DNR to authorize such water use. Final design of the port will be completed during the detailed engineering phase of the construction.

Depending on ice and river conditions, the barging season on the Kuskokwim River is generally from June through October. Fuel, construction materials, and supplies will be transported via river barge from Bethel to the proposed Jungjuk Port. From the port, supplies and materials will be trucked to the mine via the proposed Jungjuk Road. During fuel delivery from barge, Donlin is planning to have crews deploy a floating spill containment boom around the fuel barges as a spill control measure. Fuel will then be transferred from the barges through a shore-based fuel pump and piping system into a storage tank before being pumped into trucks which will then deliver the fuel to the mine. Spill containment will be provided around all fueling stations and fuel storage areas at the proposed port facility.

Donlin anticipates staffing the port with approximately 20 people on a 24-7 basis during the summer barge season. During the non-barge season, the proposed port would be used for storing heavy equipment, containers, and other associated materials. The port would not be staffed during the non-barging season but would be monitored for security and routine maintenance.

Prior to construction of the Donlin Jungjuk Port and related facilities, DMLW would issue an EA for Donlin to access state lands and complete construction, survey, and appraisal of the leasehold prior to lease issuance. The proposed lease will be subject to the terms of DMLW's standard lease

document (available for review upon request) and any stipulations based, in part, upon the following considerations and as a result of agency and public comments received.

### **Development Plan:**

The Development Plan attached to this decision (Attachment A) and dated September 8, 2015 is under consideration by DMLW. Should the proposed lease be granted, it is anticipated that the Development Plan will need to be updated throughout the life of the lease as activities and/or infrastructure are added or subtracted. All updates must be approved, in writing, by DMLW before any construction, deconstruction, replacement of infrastructure, or change in activity will be permitted. DMLW reserves the right to require additional agency review and/or public notice for changes that are deemed by DMLW to be beyond the scope of this decision.

### **Hazardous Materials and Potential Contaminants:**

Per Donlin's Development Plan "a large volume of reagents and other hazardous goods would be moved annually via the port to the mine...Movement of reagents and other hazardous goods from the Jungjuk Port to the mine site would conform to regulatory and permit requirements and approved spill and response plans." All hazardous substances delivered by barges will be transported over State-owned submerged land and stored on private uplands; no such materials, including fuel, oils, lubricants, antifreeze, batteries, solvents, and other chemicals will be stored on state land.

The upland portion of the port facility will host a 2.8 million-gallon, aboveground diesel fuel tank. Two additional diesel fuel tanks (approximately 25,000 gallons each) will be used to power a generator and mobile equipment, while a smaller diesel tank (approximately 270 gallons) will be used to power a fire suppression water pump. The tanks will be placed on privately owned uplands. All fuel will be transported by barge upriver from Bethel to the wharf and pumped or hauled over state land to the individual tanks.

The use and storage of all hazardous substances must be done in accordance with existing federal, state, and local laws. Debris (such as soil) contaminated with used motor oil, solvents, or other chemicals may be classified as a hazardous substance, and must be removed from the lease site and disposed of in accordance with state and federal law.

# **Lease Performance Guaranty (bonding):**

In accordance with AS 38.05.035, AS 38.05.860, and 11 AAC 96.060(a) Performance Guaranty, Donlin will be required to submit two performance guaranties for the lease site.

• \$10,000.00 EA Cash Bond: This bond will serve as a default to be forfeited, all or in part, if the applicant fails to submit the survey, appraisal, or other documentation necessary for the issuance of the lease by the required due dates.

• \$200,000.00 Performance Bond: It is anticipated that this bond amount will be included as a letter of credit or other instrument approved by the Department and covered under one bond submitted to the State for the Donlin applications. This bond will remain in place for the life of the proposed lease. The bond amount is based upon the level of development, amounts of hazardous material and/or substances on site, and the perceived liability to the State. This bond will be used to ensure the applicant's compliance with the terms and conditions of the lease issued for their project. This bond amount will be subject to periodic adjustments and may be adjusted upon approval of any amendments, assignments, reappraisals, changes in the Development Plan, changes in the activities conducted, or changes in the performance of operations conducted on the authorized premises, and as a result of any violations to one or more of the authorizations associated with this project. DMLW is reserving the right to require a reclamation bond due to noncompliance issues during the term of the lease or near the end of the life of the project.

# **Insurance:**

In accordance with 11 AAC 96.065 Insurance, Donlin will be required to submit proof of liability insurance to DMLW, with the State of Alaska listed as a "NAMED" insured party. Donlin will be responsible for maintaining such insurance throughout the term of the EA and the lease.

### **Surveys**:

In accordance with AS 38.04.045, Donlin must complete an approved Alaska State Land Survey (ASLS) according to the requirements and standards of DMLW's Survey Section prior to lease issuance. The draft survey must be submitted for review to the Survey Section within **two years** of issuance of the survey instructions. If the submitted survey is accepted by DMLW, the measurements identified will be used to accurately calculate the total acreage and location of the leasehold. The survey requirements also include completion of a pre-construction topographic survey of the ordinary high water mark in the construction zone per the requirements of the Survey Section, prior to the placement of material within the lease area. A survey instruction fee per 11 AAC 05.240 may be applicable.

### **Entry Authorization:**

An entry authorization (EA) is an interim authorization that is issued when a survey and/or appraisal is necessary prior to issuance of the lease. DMLW is proposing to authorize Donlin's entry onto state land through the issuance of an EA while Donlin is completing the construction necessary to complete the survey and appraisal of the leasehold. The proposed EA would be issued for a five-year term that would begin after the effective date of the FFD. The effective date of the EA is the beginning date of the lease term.

DMLW may choose to extend the EA beyond the initial five-year term if Donlin demonstrates it is working toward meeting the EA's requirements. To request an extension, Donlin must submit a written request prior to the expiration date of the EA, that includes information to document Donlin's progress toward obtaining the survey and/or appraisal and certify there have been no changes to the prior approved development plan. The extension of the EA may be subject to applicable fees. DMLW reserves the right to amend the terms of the EA prior to extension.

A Minimum Rent Determination completed by DNR's Appraisal Unit on March 15, 2016, indicated that the available data clearly indicates annual rent is less than the minimum required by 11 AAC 58.410. SCRO is setting the annual fee for the proposed EA at \$1,000.00 per acre, resulting in an annual fee of \$8,000.00. This fee is based on the information provided by the applicant and is subject to revision based on the amount of actual acreage reported on the DMLW approved post-construction ASLS survey.

### **Compensation and Appraisal:**

In accordance with AS 38.05.840, State-owned land may only be leased if it has been appraised within two years before lease issuance. SCRO has coordinated with DMLW's Appraisal Unit, and Donlin will not be required to provide an appraisal of the lease site before the proposed lease will be issued. SCRO has determined that the annual lease fee will be set at \$8,000.00. Furthermore, in accordance with AS 38.05.105, the proposed EA and lease will be subject to reappraisal and compensation adjustment at five-year intervals after the issuance of the proposed authorization.

# **Subleasing:**

Subleasing is permissible through AS 38.05.095, if the proposed lease is approved. A sublease is defined as improvements not owned by the lessee that are located within the leasehold on the land or located on structures owned by the lessee. A sublease pertaining to the proposed lease includes but is not limited to, user agreements, license agreements, communication site agreements, or any contracts between the lessee and other commercial entities. All potential subleases must first be approved in writing by DMLW. Depending on the activity of any potential subleases, DMLW is reserving the right to reevaluate the need for further agency review and/or public notice before making a determination on the appropriateness of the proposed sublease. Sublease compensation to the State will be determined by DMLW according to AS 38.05.073(m), under the authority of AS 38.05.075(a) Leasing Procedures. In any case, the sublease fee for commercial activities will not be less than 25% of the annual fee paid to the leaseholder by the sublessee.

### **Assignment of Lease:**

The proposed lease, if issued, may be transferred or assigned only with written approval from DMLW. A lease will not be assigned if the assignee does not meet or comply with statutory, regulatory or other requirements identified by DMLW, or if the assignee is considered not to be in

"good standing" with this or any other agency authorization. DMLW reserves the right to amend the terms of the lease prior to assignment.

### **Lease Renewal:**

Upon lease expiration, AS 38.05.070(e) allows the Director to renew a lease upon expiration of the original term. In order to qualify for a renewal, a lessee must be in good standing. Good standing refers to the fact that the lessee's accounts are current and there are no outstanding compliance issues. The applicant must request a renewal of the lease at least one year prior to lease expiration.

### **Reclamation:**

In accordance with AS 38.05.090(b), all lessees must restore their lease site to a "good and marketable condition" within 120 days after the termination of their leases. What level of reclamation constitutes as being "good and marketable" is at the discretion of SCRO, including total reclamation of the site. Per the current Reclamation Plan, Donlin proposes to completely remove the wharf's sheet piles, rock fill, and riprap from the leasehold after closure of the mine, leaving only a barge landing area at the site.

# **Public Notice of the Preliminary Decision:**

Pursuant to AS 38.05.945, this PD will be advertised for 60-day public comment period. Notice will be posted on the Alaska Online Public Notice System at

http://aws.state.ak.us/OnlinePublicNotices/Default.aspx and the post offices located in Crooked Creek, Red Devil, Sleetmute, Holy Cross, Aniak, and Bethel. Courtesy notices will also be mailed or emailed to neighboring property owners, permit/lease holders, and other interested parties on January 28, 2019 for a 60-day public comment period.

### **Comment(s) and Competitive Interests:**

This PD is subject to both public and agency comments. All comments and competitive interests received by the comment deadline will be considered in the FFD. Only those who comment, and the applicant have the right to appeal the FFD.

During the 60-day Public Notice period, SCRO is soliciting interest under AS 38.05.070(d) to determine if there is interest from other companies in developing the site for a similar purpose. If there is a qualified competing interest, SCRO may proceed with a competitive auction. If no qualified interest is expressed, then SCRO will proceed with a negotiated lease to Donlin.

To be considered a qualified potential bidder expressing interest in a competitive auction, a person must express interest in writing before the expiration of this 60-day Public Notice period and submit a complete application with a development plan within the 30 days following the end of the public notice for solicitation of competitive interest.

# Written comments on this PD must be received in this office no later than 5:00 PM on March 29, 2019 to be considered.

To submit comments or other project proposals, please choose one of the following methods:

Postal: Department of Natural Resources

Division of Mining, Land and Water Southcentral Regional Land Office

ATTN: Donlin Team

550 West 7<sup>th</sup> Avenue, Suite 900C Anchorage, AK 99501-3577

Website: http://dnr.alaska.gov/mlw/notice/donlin/

Email: <u>dnr.scro.donlin@alaska.gov</u>

Fax: (907) 269-8913

Questions about the proposed port lease portion of this project can be directed to April Parrish at (907) 269-8549.

If public comments result in significant changes to the Preliminary Decision, additional public notice will be given. To be eligible to appeal the Final Finding and Decision, a person must provide written comments during the Preliminary Decision comment period per AS 38.05.035(i)-(m).

Signature page follows:

# **Recommendation:**

DMLW has completed a review of the information provided by the applicant, examined the relevant land management documents, and has found that the proposed lease is consistent with all applicable statutes and regulations. This decision also considers the submitted agency comments. DMLW considered three criteria to determine if the proposed lease provided the best interest to the State and the development of its natural resources. The criteria include direct economic benefit to the State, indirect economic benefit to the State, and encouragement of the development of the State's resources. Collection of the one-time filing fee and any annual rent and/or fees represent the direct economic benefit to the State. Indirect economic benefits provided by the proposed authorization include creation of jobs and increased activity in the local communities. Moreover, this authorization is in the State's best interest as it furthers development of natural resources and supports increased economic activity regionally and statewide. It is recommended that DMLW issue a 30-year lease to Donlin for the construction, use, operation, maintenance, and survey of a portion of the Jungjuk Port and associated facilities in support of the proposed Donlin Gold Project.

April Parrish, Natural Resource Specialist II

1-24-19 Date

### **Preliminary Decision:**

It is the determination of DMLW that it may be in the State's best interest to issue a lease under AS 38.05.070(c) and AS 38.05.070(d) for 30 years to Donlin, as described above. DMLW will issue an EA for a term of five years prior to lease issuance to allow for a survey to be completed. The lease annual fee will be calculated upon DMLW's approval of a final survey. The EA annual fee will be \$8,000.00. Donlin will be required to submit a \$10,000.00 EA cash bond, and a performance bond of \$200,000.00. Additionally, Donlin will be required to submit proof of insurance to DMLW, with the State of Alaska listed as a "NAMED" insured party. This application shall now proceed to public notice.

Clark Cox, Regional Manager

Date

1/24/19

Southcentral Regional Land Office, Division of Mining, Land and Water

### Attachments

Attachment A – Development Plan Attachment B – Location Map



# Jungjuk (Angyaruaq) Port Site Plan of Development

Donlin Gold Project

September 2015



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

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

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Donlin Gold i September 2015

PoD - Jungjuk (Angyaruaq) Port Site Donlin Gold Project Table of Contents **FIGURES** Figure 1-1: Location of Mine Footprint & Offsite Facilities......1-2 Figure 3-1: Figure 3-2: Figure 3-3: Figure 3-4: **ACRONYMS** AST aboveground storage tank **ADNR** Alaska Department of Natural Resources **ADEC** Alaska Department of Environmental Conservation ATV all-terrain vehicle BLM Bureau of Land Management COE U.S. Army Corps of Engineers DOT U.S. Department of Transportation DPS Department of Public Safety FRP Facilities Response Plan MS Material Site **ODPCP** Oil Discharge Prevention and Contingency Plan **OHWM** ordinary high water mark **RCRA** Resource Conservation and Recovery Act **RST** Revised Statute Trail SPCC Spill Prevention, Control and Countermeasure Plan **SWPPP** Storm Water Pollution Prevention Plan TEU twenty-foot equivalent (refers to most project containers - standard 20 foot containers) TKC the Kuskokwim Corporation

Treatment, Storage, and Disposal Facility

U.S. Coast Guard

TSDF

USGC

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

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# **UNITS OF MEASURE**

cfs cubic feet per second
ft. foot/feet
ha hectares
km kilometers
kPa kilopascals
L liter

m meter meter squared

m³/h meter squared per hour

ML million liter
mm millimeters
m/s meter per second
psf pounds per square foot

USgal US gallons

USgpm US gallons per minute

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Introduction

#### 1.0 INTRODUCTION

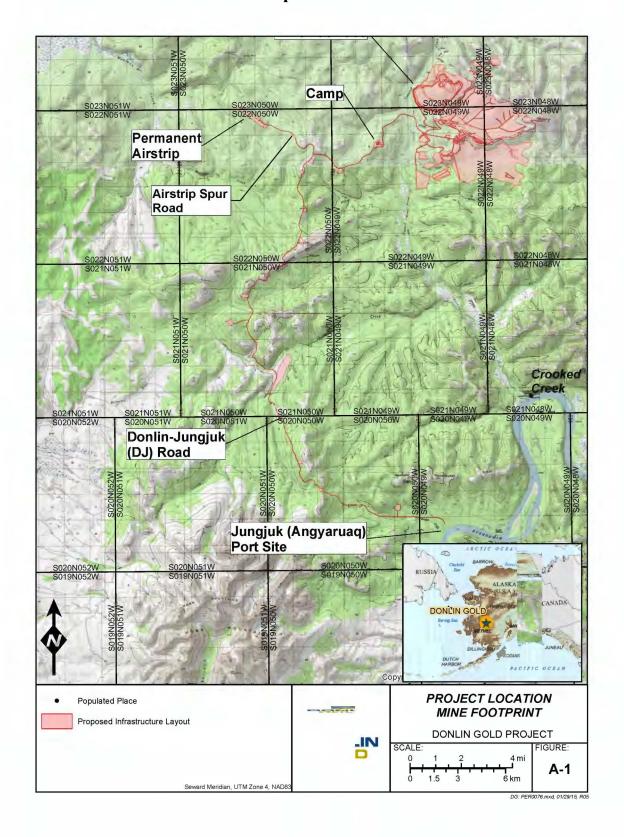
The proposed Donlin Gold project is approximately 277 miles (446 km) west of Anchorage, 145 miles (233 km) northeast of Bethel, and 10 miles (16 km) north of the village of Crooked Creek (Figure 1-1). Bethel, 73 river miles (117 km) upstream from the mouth of the Kuskokwim River on the Bering Sea, is the regional center for the Yukon–Kuskokwim region of Alaska. Bethel is 177 river miles (285 km) southwest of the proposed Jungjuk (Angyaruaq) Port site. The city of Aniak, also on the Kuskokwim River, approximately 57 river miles (92 km) southwest of the proposed Jungjuk Port site, is the regional center for the middle Kuskokwim Valley.

Currently there is no road or rail access to the site, and all personnel and supplies are transported by air to an existing airstrip. The project is completely isolated from existing power distribution networks and other public utility infrastructure.

Donlin Gold is proposing to construct a port referred to as the Jungjuk (Angyaruaq) Port at a location on the north bank of the Kuskokwim River, immediately upstream of the mouth of Jungjuk Creek and approximately 8 miles (13 km) downstream of the nearest village, Crooked Creek. The site is currently undeveloped. The main Jungjuk Port area would encompasses a total of approximately 21 acres (8.5 ha) of which approximately 3.5 acres (1.4 ha) would be constructed on State of Alaska submerged lands and approximately 17.3 acres (7 ha) on native corporation land. An additional approximately 4.3 acres (1.7 ha) of State of Alaska submerged lands would be required for operational space to allow safe docking of barges to the port. An additional approximately 5.2 acres (2.1 ha) would be used for an overburden stockpile on Native Corporation land. A total of approximately 7.8 acres (3.2 ha) of State of Alaska submerged lands would be required for the Port.

The Jungjuk Port facility is required to complete the transition of supplies and consumables from water to land transport and vice-versa throughout the life of the project: construction, operations, and reclamation.

Most construction materials, consumables, and fuel required each year would be delivered to the Jungjuk Port by river barge from Bethel. The barging season on the Kuskokwim River, depending on ice and river conditions, can run from the beginning of June through October. During the non-barge season the Jungjuk Port would be used for storage of empty containers, other backhaul, and equipment such as fuel tankers. During the non-barging season the Jungjuk Port would not be staffed, but would be monitored for security and visited as needed for maintenance purposes. Prior to the start of the barge season the Jungjuk Port would be prepared for seasonal operation. At the completion of the barging season the Jungjuk Port would be prepared for the winter non-barging period. It is anticipated that approximately 20 people would be needed to operate the facility on a 24-7 basis using two shifts as necessary during the barge season. Actual personnel needs and shift requirements would be determined during final design.



PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Project Description

#### 2.0 PROJECT DESCRIPTION

The proposed Jungjuk Port is designed with mooring capacity for two (2) barge tows. The wharf includes a ramp to assist offload to be conducted. The two (2) cargo barge tows could be docked at the port wharf simultaneously. Facilities at the Jungjuk Port also would include container-handling equipment, seasonal storage for containers, break-bulk cargo, fuel storage, and barge-season office/lunchroom facilities (*Donlin Gold Project Transportation Plan*, SRK 2013). Cargoes would be unloaded from the river barges and placed in storage to await onward transport to the mine.

Containers and other cargo would be trucked from the Jungjuk Port throughout the summer barging season using the Donlin-Jungjuk Road (Figure 1-1) which is approximately 27 miles (44 km) to the mine site (Donlin Gold Project, *Donlin-Jungjuk Road and Airstrip Spur Road Plan of Development*, SRK September 2015). Empty containers would be returned to the Port for storage and backhaul shipment. Fuel would be off-loaded from barges and temporarily held in a storage tank before being pumped to B-train trucks for transport to the main fuel storage facility at the mine site.

For construction of the gas pipeline materials and equipment delivered to Bethel on ocean-capable barges would be temporarily offloaded to the storage yard at Bethel for later transfer to shallow-draft barges capable of transporting loads up the Kuskokwim River to the Jungjuk Port and further on to the barge landing/material storage sites on each bank of the river at the pipeline crossing (Kuskokwim East and West). Once at the Jungjuk Port, pipe would first be trucked from the Port site to the mine. From the mine, specific pipeline construction Spread 1 pipe storage yards would be supplied with pipe by truck or tracked carrier.

Early completion of the Jungjuk Port is essential to the overall Donlin Gold project schedule as both mine and pipeline construction activities are dependent on supplies, materials, and equipment being transported to the Port for construction purposes.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Site Description

#### 3.0 SITE DESCRIPTION

As shown in Figure 1-1, the Jungjuk Port site is approximately 8 miles (13 km) downstream of the nearest village, Crooked Creek. The site is located on the north side of a tight bend in the Kuskokwim River that has an outside radius of approximately 1 mile (1.6 km). The river at this location is confined to a single channel with an approximate width of 1,400 ft. (427 m). At the Jungjuk Port site, the shoreline is fairly steep and the land surface rises rapidly away from the river. The river bottom profile indicates that from the shoreline, the river channel bottom slopes rapidly to a depth of approximately 10 ft. (3 m) below mean summer water level of 127 ft. (38.7 m) elevation. The wharf face height would be at approximately 146.5 ft. (44.6 m) elevation with the surface grading inland at +1.75% from the face. All fixed ancillary facilities and structures would be at approximately 155 ft. (47 m) elevation or higher. Fuel storage would be at approximately 177 ft. (54 m) elevation. Although the current design of the wharf structure would consist of tieback sheet pile wall with coarse rock fill this would be confirmed during final design. The wharf would extend approximately 146 ft. (44 m) into the river from the ordinary high water mark. The actual distance would be determined during final design.

The Jungjuk Port facilities, shown in Figure 3-1 would be in service and operated only during the ice-free shipping season.

#### 3.1 Summary of River and Port Data

Data included in the project feasibility study as produced by AMEC is summarized as follows:

- approximate shoreline at 38,800 CFS, water level 127.3 ft. (38.8 m)
- approximate shoreline at 13,400 CFS, water level 122.4 ft. (37 m)
- approximate shoreline at 284,300 CFS, water level 147.3 ft. (44.8 m) (record flood)
- approximate extent of ice during 2011 ice jam event, 146.3 ft. (44.6 m). Height of wharf structure at face, 146.5 ft. (44.6 m) at top of bullrail.

During survey of maximum ice inundation following the 2011 ice jam extreme event, it was noted that the measured extent of ice roughly coincided with shoreward limit of old growth timber and undisturbed terrain features, which indicates that no event in recent history has exceeded the 2011 ice jam-related flooding (*Technical Memorandum*, *Jungjuk Port-Preliminary Assessment of Potential for Ice Jam and Related Impacts*, RECON 2013).

Site and bathymetric surveys completed in the Jungjuk Port site area confirm that immediately downstream of the port structure is a shallow delta feature at the mouth of Jungjuk Creek. This natural delta extends into the Kuskokwim River channel to approximately the same distance offshore as the face of the wharf. Consequently, the Jungjuk Port structure essentially mimics or extends upstream the naturally-occurring constriction of the river channel that is the result of sediment deposition at the mouth of Jungjuk Creek. As proposed, the port structure does not appear to modify the natural river morphology in a way that would significantly contribute to ice jam development or related flooding, both considerations in the design of the Jungjuk Port facility as concluded by RECON in its preliminary assessment of potential for ice jam and related impacts technical memorandum.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

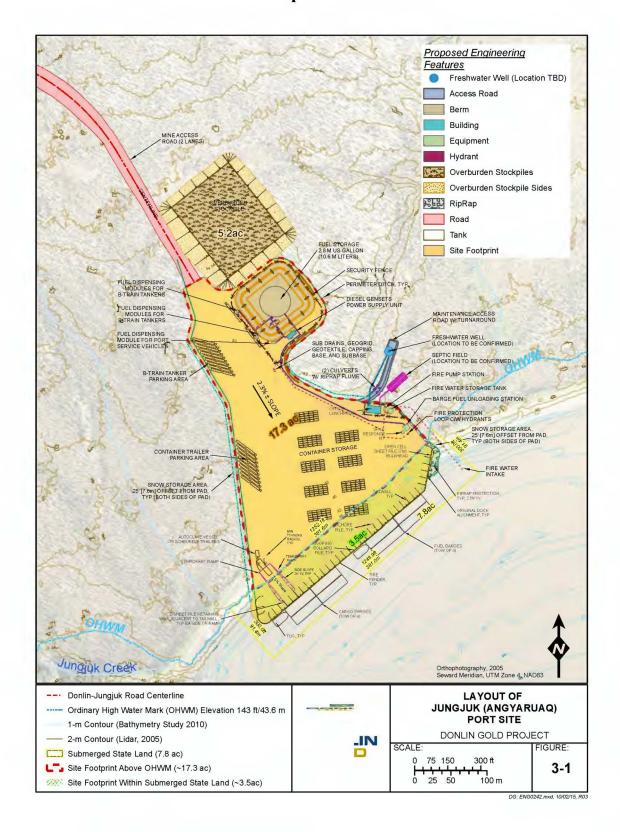
Site Description

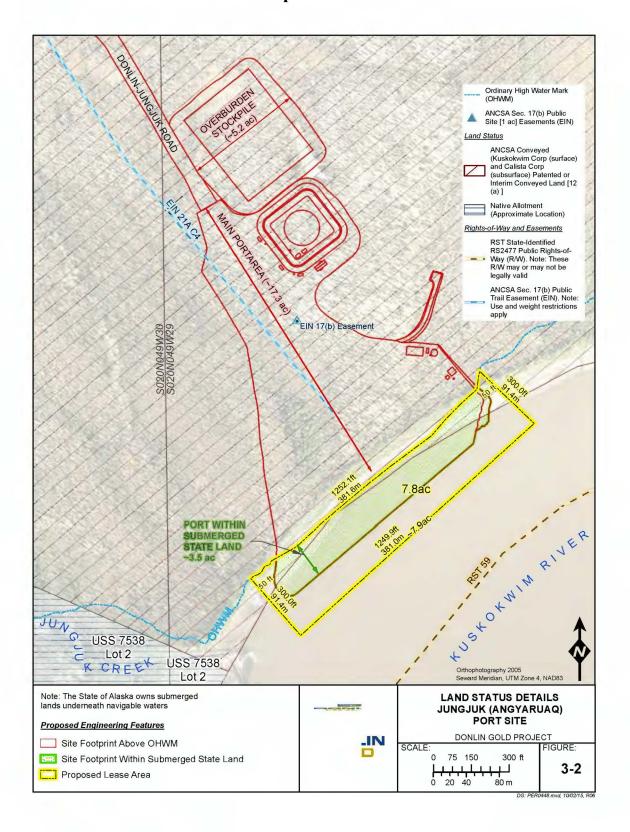
#### 3.2 Land Status

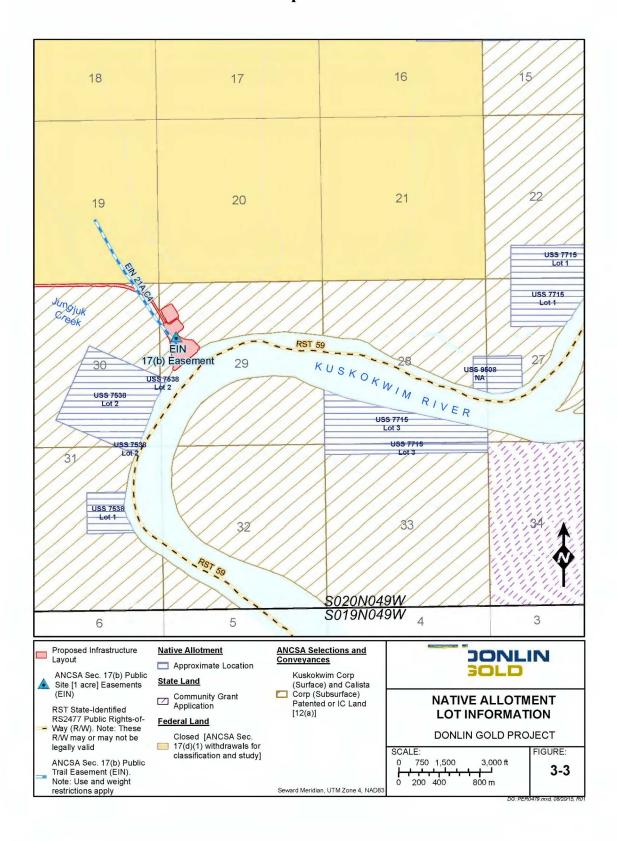
The land status for the proposed Port site is shown in Figure 3-2. The land above the ordinary high water mark (OHWM) is owned by the Kuskokwim Corporation (TKC) (surface) and Calista Corporation (Calista) (subsurface). Donlin Gold has entered into an agreement with the land owners for use of the uplands. The State of Alaska owns the land below the OHWM where an approximately 3.5 acres (1.4 ha) portion of the Jungjuk Port facility would be constructed as shown in Figure 3-2. Approximately 4.3 acres (1.7 ha) of additional operational space would be required to allow for safe docking of barges to the port. Altogether the total area proposed for leasing from the State of Alaska would be approximately 7.8 acres (3.2 ha). Since Donlin Gold has a land use agreement with TKC for use of the uplands Donlin Gold has indicated in its application for lease of State land that it may qualify for a non-competitive lease under AS 38.05.075(c).

There are public easements within or adjacent to the proposed port site: revised statute trail (RST) 59, and EIN 21 C4 and EIN 21A C4. The RST easement is collocated over the Kuskokwim River, while the EIN 21A C4 easement traverses the proposed port location perpendicularly. The proposed project should not affect the public access along RST 59; however, public access through federal easements EIN 21 C4 and EIN 21A C4 (Figures 3-2 and 3-3) cannot occur as this could present a safety hazard to the public or the port workers. Donlin Gold is in discussions with the Bureau of Land Management (BLM) to relocate these easements to practicable locations.

Native allotments located in the vicinity of the Jungjuk Port are shown in Figure 3-3.







PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Site Description

#### 3.3 Terrain / Ground Cover

The proposed port would be located on an undeveloped site. The site is forested with open black spruce and isolated stands of thick timber. The area is underlain by thick deposits of alluvium with the core of the area overlain by an isolated eolian sand and silt deposit. The topography at the port site is illustrated in Figure 3-4. The Jungjuk port site is located in an area with near ideal elevation above river level. Therefore, it would not be necessary to construct substantial ramps or undertake excessive earthworks. The nearest suitable source of construction fill is a quarry site, Material Site (MS)-16, approximately 2.2 miles (3.5 km) from the port site (*Donlin Gold Project, Material Sites Plan of Development*, SRK 2015). Rock suitable for rip-rap and surfacing material would be sourced from quarry site MS-13 along the road alignment, approximately 5.3 miles (8.6 km) from the port site.

Figure 3-4: Photo of Jungjuk River Frontage (Note: Photo taken in 2014. This area was burned by the Village Creek Fire- July 8, 2015.)



A short bluff up to 16 ft. (5 m) high rises immediately from the shoreline of the Kuskokwim River to a bench that then slopes up at an ~2% away from the bluff. A minimal amount of onshore grading would be required. Surface vegetation and organic surface soils would be removed and piled to the north of the site at the designated soil stockpile location as shown in Figure 3-1.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Site Description

A bathymetric survey indicates that suitable water depth is available to accommodate barges throughout the summer shipping season. Current measurements indicate flow speeds of approximately 1 knot (0.5 m/s) at most water levels.

Occurrence of permafrost is mostly restricted to the east side of the proposed Jungjuk Port facility footprint and appears to be discontinuous and does not extend to depths below 10 to 30 ft. (3 to 9 m) (RECON).

#### 3.4 Access

Existing access to the proposed Jungjuk Port is via the Kuskokwim River. Winter access is possible by all-terrain vehicle (ATV). Donlin Gold proposes to construct a road from the Jungjuk Port to the mine site with a connecting access spur road to the Donlin Gold Permanent Airstrip as shown in Figure 1-1.

Donlin Gold would provide alternate access from the high water line on each side of the site around the Jungjuk Port facilities for public safety purposes as may be required.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

#### 4.0 Port Site Infrastructure, Facilities and Site Utilities

#### 4.1 Port Site Area / Buildings and Other Structures

The developed Jungjuk Port area would have a total area of approximately 21 acres (8.5 ha) for the main port area of which approximately 17.3 acres (7 ha) is TKC land plus approximately 3.5 acres (1.4 ha) of State land for the wharf. An additional approximately 5.2 acres (2.1 ha) of TKC land would be used as an overburden stockpile as shown in Figure 3-2. Outward from the wharf an additional approximately 4.3 acres (1.7 ha) of state submerged lands would be required for barge operational space. Because construction cargoes would be moved to the construction sites as soon as possible, the layout of the Jungjuk Port was based primarily on requirements during mine operations.

#### 4.2 Port Site Layout

The following factors influenced the layout of the Jungjuk Port site:

- minimize the area of disturbance
- avoid encroachment on any heritage sites recommendations and findings of site investigations
- provide adequate water depth for river barges and tugs at the berth
- design to accommodate two general cargo river tows at the wharf
- provide a 62.7 ft. (19 m) wide temporary ramp to allow roll-on/roll-off cargo handling
- minimize the probability of overtopping the wharf during the freshet
- provide alternate public access along Kuskokwim.

#### 4.3 Wharf Design and Layout

The following sections present the approximated dimensions and current design criteria for the Jungjuk Port, based on preliminary engineering plans, pending detail engineering design (Donlin Gold Project Feasibility Study Update 2, AMEC 2011 and PND Engineers, Inc. concept).

#### 4.3.1 Design Criteria

The wharf structures, fender systems, and mooring systems would be designed for a minimum service life of approximately 30 years to meet the needs of the proposed mining operation. The river barges would arrive in tows of four (two-by-two configuration).

Other design criteria and assumptions used as the basis of the wharf design included:

- A uniform deck load of 375 psf (18 kPa) was assumed to account for the containerhandling equipment and storage behind the wall.
- Design would be checked to confirm capacity for mobile equipment loading.
- Active and passive earth pressure coefficients for native soils and imported fill were taken from the site geotechnical investigations

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

The final design of the Port also would take into consideration environmental parameters and loads (including pressure of moving ice, ice impact forces, and ice jam forces) in accordance with applicable codes or as otherwise determined necessary for:

- Precipitation
- Snow loads
- Temperature
- Seismic
- · Ice (thickness, movement, speed and duration, height of action, and bed scour)
- Wind
- Waves
- · Ground conditions
- In-river geotechnical data.

Measures would be taken in final design to protect the port facilities against corrosion and abrasion.

Scour protection would be required for the sheet pile bulkhead. 3.3 ft. (1 m) of scour would be considered in the final design.

Final design would also take into account the occurrence of permafrost in the area of the proposed ramp. Liquefaction of the fine sandy soil and presence of permafrost are concerns that must be considered in final design and development of the appropriate construction methodology.

#### 4.3.2 Wharf Structure

An open cell sheet pile bulkhead earth-retaining system would be used.

#### 4.3.2 Wharf Layout

The wharf would be approximately 952 ft. (290 m) long, sufficient for two barge tows to be at the berth at the same time as shown in Figure 3-1. The temporary ramp would be about 200 ft. (61 m) long x 62.7 ft. (19 m) wide. This ramp would be used to unload roll on/roll off type cargo.

#### 4.4 Port Site Yard

In areas not founded on bedrock, a geotextile would be placed on the exposed native material, followed by a 39 inch (1 m) thick layer of crushed rock structural fill. To minimize differential settlements, a layer of reinforcing biaxial geogrid would be placed within the structural fill.

An 8 inch (20 cm) thick topping layer of 3 inch (8 cm) minus granular base material would be placed over the sub-base. The site would be sloped approximately 2.3% to the southeast towards the Kuskokwim River. Rip-rap erosion protection would be placed at the upstream and downstream ends of the terminal, along the riverbank.

#### 4.5 Mobile Equipment

The following is a typical list of mobile equipment required for port operations. The actual equipment type and quantity could vary during detail engineering design as deemed necessary during the life of the mine:

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

#### Construction and Maintenance Mobile Equipment

- Dozers (Type CAT D6, D8 or D10)
- Excavators (Type CAT 320, 330, 345, 385)
- Trucks (Type CAT 740)
- Graders (Type CAT 14H)
- Compactors (Type CAT CS563, 815, 825, 563)
- Cranes (Type Manitowoc 150 600 tons)
- Water Trucks (Type CAT 725)
- Loaders (Type CAT 950, 963, 992, 980, 963, 988H, IT28)
- Compressors (Type 150 1000 CFM)
- Diesel pumps (Type 50 200 HP)
- Electrical pumps (Type 50 250 HP)
- Generators & Lighting Equipment (Type 6 kW to 1500 kW)
- Light trucks (Type Ford 150, 250, 350)

#### Cargo Moving Equipment

- 2 mobile harbor cranes
- 1 wheel loader
- 4 container forklifts
- 4 crew-cab pickup trucks
- 5 semi-trailer tractors
- 1 4x4 pickup truck
- . 8 container trailers (bomb carts)
- 4 terminal tractors
- 1 highboy trailer
- 1 fire truck
- 1 Dredging excavator

### 4.6 Parking and Storage Areas

The port yard would be capable of storing about 1,000 twenty-foot equivalent unit (TEU) containers as shown in Figure 3-1. The containers typically would be stacked in blocks 5 containers long x 3 containers wide. Loaded containers could be stacked up to 3 TEUs high; empty containers could be stacked up to 6 TEUs high. Loaded and empty trailers would be parked in dedicated parking areas adjacent to the container storage area.

A designated parking area would be established for container trailer parking as well as a designated parking area for B-train tanker parking.

#### 4.7 Fuel Handling and Storage

Fuel would be delivered to the Port in tows of up to four barges each for use by the proposed Donlin Gold Project. Typically, before starting to unload a barge, crews would deploy a floating spill containment boom around the fuel barge as a control measure in case of a potential spill. Fuel would be transferred from all four barges through a shore-based fuel pump(s) and a piping system to a 2.8 USMgal (10.6 ML) diesel fuel aboveground

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

storage tank (AST). The tank design would include a lined, berm-surrounded containment pad equipped with sump systems.

Diesel fuel would be transferred from this tank into B-train tanker trucks (Typical 2x7250 gal) for transport to the mine fuel storage tank farm. Two truck loading pumping stations would be mounted on a curbed concrete pad adjacent to the storage tank. The B-train tanker trucks would be loaded by port staff and parked adjacent to the fueling area. Empty tankers returning from the mine would be swapped with full tankers thus reducing standby time to a minimum.

The 2.8 USMgal (10.6 ML) diesel tank would serve as a temporary storage buffer for the main fuel storage facility at the mine site, allowing barges to be unloaded without delay.

Additionally two (estimated 25,000 USgal (94,635 L) each) diesel AST fuel tanks would provide fuel for the diesel generator and mobile equipment to be used at the port. These tanks may be connected to smaller tanks for fuel dispensing purposes as necessary to meet fire codes.

A small diesel tank (estimated 270 USgal [1,022 L]) would supply the fire water pump. Mobile refueling trucks and limited amounts of other oil and lubricants would also be onsite.

Facilities and management practices would be designed and implemented as required to meet or exceed applicable Federal, State, and fire code requirements. Fire extinguishers and spill response supplies would be available in sufficient amounts at practical locations. The standard operating procedures for handling fuel transfers, inspections, training requirements, and spill response practices, would be documented in the required:

- Facility Response Plan (FRP)
- Spill Prevention Contingency and Countermeasures Plan (SPCC)
- Oil Discharge Prevention and Contingency Plan (ODPCP)

#### 4.8 Power Source

Electrical power at the port would be provided by diesel generators. Power supply is required for:

- · Lighting for the berths and onshore facilities as needed
- · Offices and accommodations
- · Fuel unloading and tanker loading equipment

### 4.9 Navigation Aids

Navigation and obstruction lights on all structures for approaching vessels would be provided to meet regulatory requirements.

### 4.10 Potable Water Supply

Potable water would be obtained from a groundwater well, the application for which has been submitted to Alaska Department of Natural Resources (ADNR). Donlin Gold would construct an access road to the well location for drilling, maintenance, operation, and reclamation purposes.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

#### 4.11 Waste Types, Waste Sources, and Disposal Methods

Solid waste from the Jungjuk Port would include a combination of non-municipal solid waste (such as plastics, cardboard or wood from packing materials) and, municipal solid waste type. The port would also generate oily waste. Waste would be segregated and hauled to the mine facilities where it would be reused or recycled (on site or offsite), incinerated, or disposed at the mine site regulated solid waste landfill. Domestic wastewater would be disposed of at the onsite septic system.

All waste generated at the Jungjuk Port would be handled consistent with applicable Federal, State regulations, and best management practices documented in the *Donlin Gold Project Integrated Waste Management Plan*, SRK 2012.

#### 4.12 Fire Protection

Water for fire protection would be pumped from the river through a temporarily deployed pump and hose into a heated, insulated, above-ground approximately 237,800 USgal (900 m³) dedicated firewater storage tank. No permanent water intake would be constructed in the river because it would be susceptible to damage from marine traffic, debris, ice, and silt. In summer, fire water would be supplied by a hose temporarily installed in the river.

A firewater pump station adjacent to the water storage tank would pressurize buried distribution pipes at the site. The fire pumps would be diesel and electric, each rated at approximately 2,000 USgpm (454 m³/h), plus a jockey pump to maintain pressure in the fire mains. Fire protection water would be supplied to building sprinkler systems, hydrants, and foam systems for the fuel tank and pump module. Fire extinguishers would be of sufficient size and located at practical locations.

Donlin Gold has submitted a water rights application for water use from the Kuskokwim River for fire protection.

#### 4.13 Septic System

The port would be equipped with a septic tank and leach field sized for the maximum anticipated port workforce (approximately 20 people). The leach field would be placed in a suitable location. A preliminary location is shown in Figure 3-1, but the actual location would be verified during final engineering design.

#### 4.14 Drainage

Spill containment areas would be provided around all fuel manifolds and metering stations. Storm runoff from the containment area would be collected and treated if necessary. The Storm water Pollution Prevention Plan (SWPPP) would address storm water runoff specifically.

### 4.15 Hazardous Substances

A large volume of reagents and other hazardous goods would be moved annually via the port to the mine. All cargos shipped to the port in containers or as break-bulk classed as hazardous would be packaged and identified in accordance with the requirements of the applicable legislation and regulations. Processes and practices for the packaging, handling, storage, and marking of all hazardous materials would be developed and subject to

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

applicable approval. Personnel who provide logistics and transport services would be certified to handle, store, and transport these materials.

Typical chemicals/reagents listed below require special handling. The actual chemicals/reagents could vary during detail engineering design as deemed necessary during the life of the mine:

- · Potassium Amyl Xanthate
- Methyl Isobutyl Carbinol (MIBC) and F549
- Nitric Acid
- Lime (calcium oxide)
- Sodium Cyanide
- Activated Carbon
- Caustic soda (Sodium hydroxide)
- Mercury Suppressant (UNR 829)
- Flocculants
- Sulfur
- · Copper sulfate
- · Fluxes (borax, sodium nitrate, and silica sand)
- · Water Softening and Anti-Scalant Agents
- Ferric Sulphate
- Sulphuric Acid
- Sodium hydroxide
- Polymer
- · Potassium Permangenate
- Sodium Metabisulfite
- · Cleaning-In-Place (HC1, NaOH)
- Microsand
- Liquid Elemental Mercury
- Spent Activated Carbon (Mercury)

From the port shipping containers would be returned to marine terminals in Seattle or Vancouver on the backhaul trips of the barges. Most, but not all, would be empty and would be available to be used to transport off-site recyclable materials, empty return drums, as well as hazardous and non-hazardous waste that cannot be managed at the mine site, such as solvents, antifreeze, batteries, and chemicals or other materials.

Return shipments of hazardous waste or other hazardous materials would be manifested, packaged, labeled, and handled according to the applicable regulations of the U.S. Department of Transportation, U.S. Coast Guard (USCG), Resource Conservation and Recovery Act (RCRA) and other applicable laws. Personnel handling these shipments would be trained in accordance with the applicable regulations. Hazardous waste would be sent to a designated Treatment, Storage, and Disposal Facility (TSDF) according to the applicable RCRA regulations.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Port Site Infrastructure

Movement of reagents and other hazardous goods from Jungjuk Port to the mine site would conform to regulatory and permit requirements and approved spill and response plans.

### 4.16 Communications

The communications system for the proposed Donlin Gold mine site would link the off-site facilities such as the Jungjuk Port and would include 2-way radio communications as well as telephone.

### 4.17 Ancillary Services

Although Donlin Gold does not anticipate providing ancillary services such as fresh water, power and sewage to the barges, this would be reviewed during final design.

### 4.18 Office/Lunch Room Facility

An office and lunch room facility would be provided at the Port for the personnel working at the site. Details of the facility would be determined during final design.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Construction

#### 5.0 CONSTRUCTION

Once the NEPA review is finalized and detailed engineering design is completed, construction of the Jungjuk Port is anticipated to begin very early in the project life. Completion of the port facilities is essential to the overall Donlin Gold project schedule as both mine and pipeline construction activities are dependent on supplies, materials and equipment being transported to the Jungjuk Port.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

As-Built Survey

# 6.0 AS-BUILT SURVEY

Following completion of construction an as-built survey of the Jungjuk Port site and facilities locations would be completed.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Reclamation and Closure Plan

#### 7.0 RECLAMATION AND CLOSURE PLAN

The Jungjuk Port facility would be reclaimed at project termination when no longer required for project use, leaving only a small barge landing area and the access road to the mine site. The fill placed in the upland portion of the site would remain. Reclamation would include:

- Removal of tank(s) and buildings and bury
- Removal of sheet piling and bury
- Reclaim yard areas

The sheet piles and fill placed on state submerged lands would be removed and the area recontoured. Removal of the open cell sheet pile<sup>TM</sup> bulkhead and anchor piles at Jungjuk wharf and removal of the port buildings, tank(s), and other material on site are based on standard demolition costs. The demolished material would be buried near the Jungjuk Port or at locations near the Donlin-Jungjuk access road alignment.

At closure the fresh water well would be addressed in accordance with applicable agency regulatory requirements.

Reclamation and closure of the Jungjuk Port facility is part of the proposed *Donlin Gold Project, Plan of Operations, Mine Reclamation and Closure Plan, SRK 2012.* 

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Government Agency Involvement

#### 8.0 GOVERNMENT AGENCY INVOLVEMENT

Authorization for construction and operation of the Port would involve the following state and federal agencies as well as authorization from the Kuskokwim Corporation and Calista Corporation.

- · Alaska Department of Natural Resources (ADNR)
- Alaska Department of Fish and Game (ADF&G)
- Alaska Department of Environmental Conservation (ADEC)
- Alaska Division of Public Safety (ADPS)
- U.S. Army Corps of Engineers (USACE)
- . U.S. Coast Guard (USCG)
- U.S. Department of Homeland Security (USDHS)
- U.S. Environmental Protection Agency (USEPA)
- · National Marine Fisheries (NMFS)

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

Operation and Maintenance

# 9.0 OPERATION AND MAINTENANCE

The Jungjuk Port facility would be operated and maintained by Donlin Gold, TKC or a subcontractor as part of the Donlin Gold Project. All barge traffic and other watercraft using the facility, except in emergency situations, are anticipated to be associated with the ongoing proposed Donlin Gold Project.

The Jungjuk Port facility would be non-operational except during the barging season on the Kuskokwim River, depending on ice and river conditions, generally from late May or early June until late October. During the open water barging season the port would operate 24-7 based on the barge schedule. Prior to first barge arrival, the facility would be opened in preparation for the season. After completion of the barging season the port would be winterized for the non-barging period. Actual crew requirements would be determined during the final design.

PoD – Jungjuk (Angyaruaq) Port Site Donlin Gold Project

References

#### 10.0 REFERENCES

Much of the information used in the preparation of this Plan of Development was derived from Donlin Gold documents from the following sources:

AMEC Americas Limited. Donlin Creek Feasibility Study Update 2, November 2011 RECON LLC. Technical Memorandum: Jungjuk Port: Preliminary Assessment of Potential for Ice Jams and Related Impacts. December 2013

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SRK Consulting. Donlin Gold Project, Material Sites Plan of Development, September 2015

SRK Consulting. Donlin Gold Project, Plan of Operations, *Mine Reclamation and Closure Plan.* July 2012

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SRK Consulting. Donlin Gold Project, Plan of Operations, *Transportation Plan.* February 2013

# **Attachment B Location Map**

