TRUE NORTH PROJECT

RECLAMATION PLAN

Submitted to:

Alaska Department of Natural Resources
Division of Mining, Land and Water
3700 Airport Way
Fairbanks, Alaska 99709

and

U.S. Army Corps of Engineers
Alaska District - Regulatory Branch
P.O. Box 898
Anchorage, Alaska 99506-0898

Submitted by:

Fairbanks Gold Mining, Inc.
A Subsidiary of Kinross Gold Corporation
P.O. Box 73726
Fairbanks, Alaska 99707-3726

September 2000

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1.0 INTRODUCTION

1.1 Purpose

This True North Project Reclamation Plan document updates the reclamation plan prepared by Fairbanks Gold Mining, Inc. (FGMI) in February 2000. This current reclamation plan incorporates changes made by FGMI as a result of its ongoing design and analysis process, as well as those changes made in response to agency and public review and comments received.

The True North Project operator is Fairbanks Gold Mining, Inc. (FGMI), a wholly owned subsidiary of Kinross Gold Corporation (KGC). FGMI owns 65% of the True North Venture with the remaining 35% owned by LaTeko Resources, Inc. another wholly owned subsidiary of Kinross Gold Corporation. The True North Venture has lease agreements with the underlying claim owners; the agreements include the area of the Millsite Lease and additional claims within the overall exploration area listed in Section 2.0.

Fairbanks Gold Mining, Inc. (FGMI), has prepared this plan to address interim, concurrent, final reclamation and post-mining land use of the True North Project. This plan is submitted to the Alaska Department of Natural Resources, Division of Mining, Land and Water (ADNR) in accordance with AS 27.19.010 et. seq. and 11 AAC 97.100 et. seq. Concurrently, the plan is being submitted to the U.S. Army Corps of Engineers (COE) as required by the Clean Water Act Section 404 Permit No. M-940742, N-940742, O-940742, and P-940742, Murry Creek 2.

The True North Project and all operating and ancillary facilities are located on legally filed and held State mining claims. The State mining claims are on land administered by ADNR.

FGMI will reclaim exploration, development, and mining-related disturbances at the True North Project in a manner compatible with the land use selected and discussed herein. Reclamation practices will utilize best practicable established and accepted technologies and methodologies suitable to the interior forest or Taiga environment of the True North Project area. Where pertinent, documented successful practices from other interior forest region reclamation projects (i.e. Trans Alaska Pipeline, the Fort Knox Mine, and placer mining) will be implemented at the True North Project.

As generally discussed in the True North Project Description, reclamation practices are under constant scrutiny by government, industry, and the public. Although there are no process facilities, the True North Project is subject to the Alaska Reclamation Act. Therefore, reclamation plans must be, within the context of existing regulations, dynamic and capable of changing with the input of new information, ideas, and techniques (11 AAC 97.330 Amendment of Reclamation Plan).

Final reclamation (final contouring of development dumps, facility sites, and seed bed

preparation) will be initiated immediately and completed within two years of cessation of mining operations where affected land cannot practicably be reclaimed concurrently. Notification, in writing, of final closure will be given to the ADNR and COE within 90 days after cessation of mining operations.

Access by Federal and State regulatory personnel to the True North Project mine facilities for the purpose of inspecting for reclamation or other appropriate compliance areas are statutory/regulatory mandates and will be honored by FGMI, with the request that agents contact mine management to gain access. The health and safety of FGMI employees and that of regulatory personnel is the rational for this request. Mining is regulated under the Mine Safety and Health Administration (MSHA). Their regulations require minimum training for employees and visitors for Hazard Recognition and Safety. Visitors as well as employees must wear safety equipment, approved by MSHA.

FGMI requests consideration by the regulatory agencies to conduct routine inspections during weekdays when administration and mine managers are available to answer questions and, if necessary, accompany agents to different areas of the site.

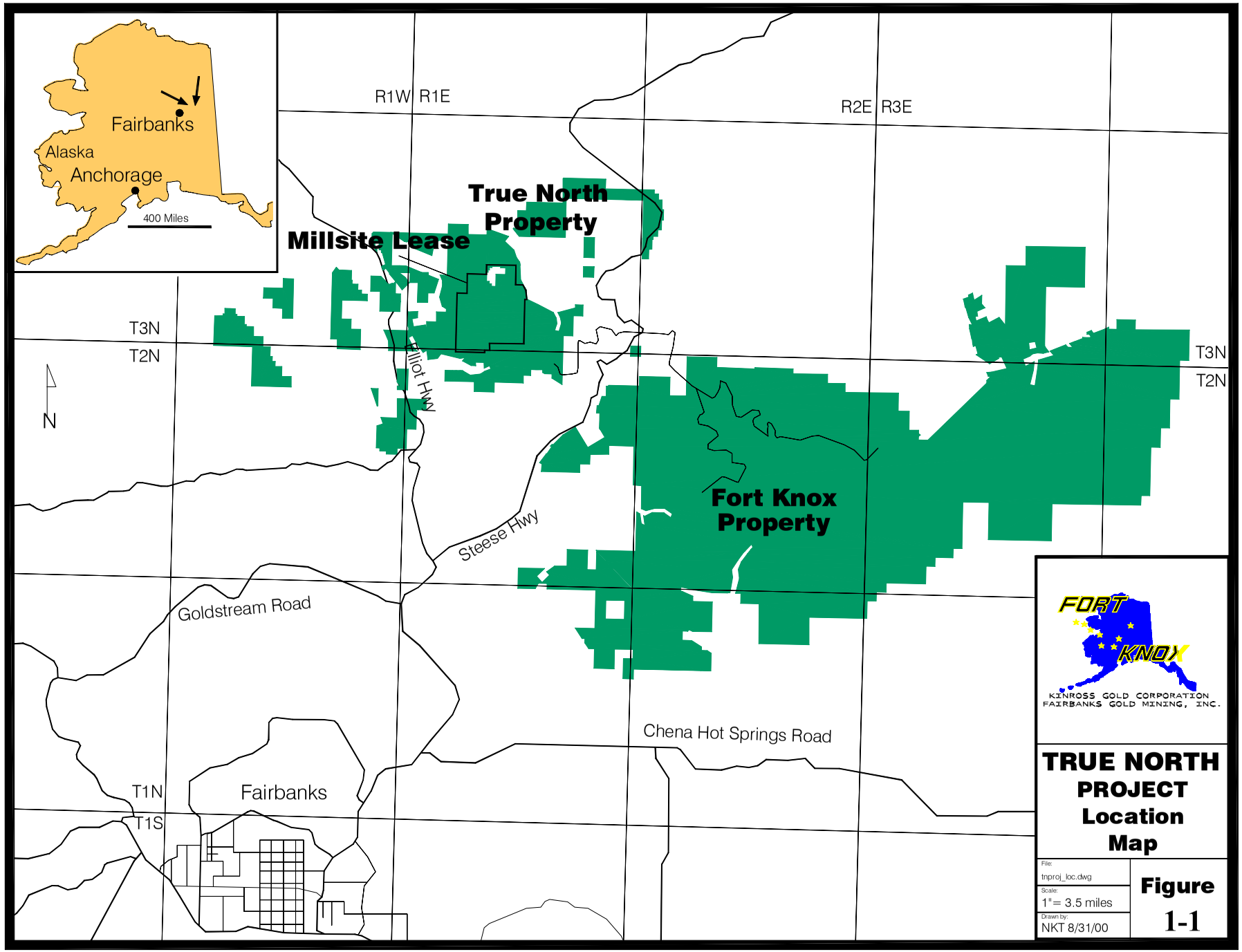
1.2. Project Summary

1.2.1 Location and Land Status

The True North Project is within the Chatanika River watershed located on the northwest flank of Pedro Dome approximately 25 miles northeast of Fairbanks (Figure 1-1 and 1-2). The ridgelines drain into Murray Creek, a tributary of Dome Creek to the south; and Louis Creek, Whiskey Gulch, and Spruce Creek, tributaries of Little Eldorado Creek to the north. More specifically, the Millsite Lease boundary is located in portions of Sections 21, 27, 28, 29, 32, & 33, Township 3N, Range 1E, Fairbanks meridian (Figure 2-1). The project site is located entirely on State and University of Alaska land. There is no federal land involved within the project boundaries and the closest residence is approximately one mile from the project boundary.

The ore body and large majority of the project area are situated on State of Alaska land. Figure 1-1 shows the large block of FGMI's leased mineral rights. The True North ore body and ancillary facilities have been placed within the Millsite Lease (Figure 2-1).

The center of the ore body is located on the northwest flank of Pedro Dome on the ridge between Dome Creek and Eldorado Creeks. Calcareous and carbonate-altered schist hosts the True North deposit. The ore body is elongated northeast gently dipping to the southwest. True North’s topographic features are shown in Figure 3-1.


Fairbanks
Alaska
Anchorage
400 Miles
R1W R1E
R2E R3E
True North Property
Millsite Lease
T3N
T2N
Elliot Hwy
N
Steese Hwy
Fort Knox Property
Goldstream Road
Chena Hot Springs Road
T1N
T1S
Fairbanks
FORT KNOX
KINROSS GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.
TRUE NORTH PROJECT Location Map
File: tnproj_loc.dwg
Scale: 1" = 3.5 miles
Drawn by: NKT 8/31/00
Figure 1-1

1.2.2 General Environmental Information

The True North Project area is in the Yukon-Tanana Uplands, characterized by rounded, even topped ridges with gentle slopes. The deposit is located on the northwest flank of Pedro Dome at elevations ranging between 1,760 to 1,200 feet.

The climate is continental sub-arctic with mean annual precipitation of less than 12 inches. The area is predominantly forested. Well-drained soils of the uplands and alluvial plains are covered mainly with white spruce (*Picea glauca*) and a mixture of broadleaf trees such as paper birch (*Betula paprifera*) and quaking aspen *(Populus tremuloides*). The climax forest on well-drained soils in the area is white spruce. The moderately well drained and imperfectly drained soils may support forests similar to those on the well-drained soils, but more commonly black spruce (*Picea mariana*) and willow (*Salix spp*.) are found. Mosses (*Sphagnum* spp.), along with horsetail (*Equisetum* spp.) and grass, typically cover the ground. Shrubs such as willow, however, are also prevalent.

The poorly drained soils with a high permafrost table generally support communities of black spruce, willow, and alder (*Alnus* spp.). A thick moss mat, principally *Sphagnum* spp., covers the ground. Lichens such as *Cladonia* spp. and *Peltigera* spp. are common in the moss mat also. This mat supports a dense cover of shrubs; primarily bog birch (*Betula glandulosa*), spirea (*Spirea beauverdiana*), Labrador tea (*Ledum decumbens*), cranberry (*Vaccinium vitis-idaea*), and blueberry (*Vaccinium uliginosum*). Tussocks of cotton grass (*Eriophorum* spp.) are also common, especially along the toe slopes. Poorly drained soils with a high permafrost table may be found on the northern exposures of the mountain slopes, especially those areas that are concave or broken. Spindly black spruce and a thick moss mat are typical on these sites. Permafrost is discontinuous throughout the project area, and does not exist on some north-facing mountain slopes where it normally would be expected. South-facing slopes receive much more radiation from the sun, and generally support white spruce, paper birch, and quaking aspen.

ABR, Inc. performed three wetland delineations for True North. No high value wetlands are located within the Millsite Lease area. The impacted wetlands are associated with permafrost and have vegetative cover of black spruce and a moss mat. Similar type wetlands are abundant in the True North Project area and surrounding region (ABR, Inc., 1996, 1997). Approximately 64 acres of wetlands will be disturbed due to roads and pit development. The office, shop, explosive storage area, development rock dumps, growth medium stockpile and ore stockpile will all be located on uplands.

The True North Project area does not currently support any threatened or endangered species, but does support populations of three species of concern: Northern Goshawk, Olive-sided Flycatcher, and lynx. Populations of these species appear to be present in numbers similar to other locations in interior Alaska. Suitable habitats for these species are abundant in the True North Project area and surrounding region (ABR, Inc., 1998).

2.0. APPLICANT INFORMATION

2.1 Claims, Surface and Millsite Lease Information

The True North Project area and overall exploration areas are located in portions of Sections 1-2, 4, and 12-13, T2N, R1W, Fairbanks Meridian; Sections 3-9, T2N, R1E, Fairbanks Meridian; Sections 24-26, 28, 32-33, and 35-36, T3N, R1W, Fairbanks Meridian; Sections 10-12, 15-17, 19-21, 23, and 26-35, T3N, R1E, Fairbanks Meridian; and Sections 7, and 18-19, T3N, R2E, Fairbanks Meridian.

The True North Project area consists of a mixture of 388 state claims, 65.5 acres of federal patented land owned by Kinross, 401.2 acres of federal patented land under lease, and 4.68 acres of private real estate under lease. FGMI has applied for a Millsite Lease (Figure 2-1) for development within a portion of the True North Project area. More specifically, the True North Project Millsite Lease (ADL #416509) is located in portions of Sections 21, 27, 28, 29, 32 & 33, T3N, R1E, Fairbanks Meridian. The area within the Millsite Lease covers 2,096 acres with 79 state mining claims. The locations of the lease boundary and underlying claims are illustrated on Figure 2-2.

2.2 Corporation Officer Completing Application

Name: Thomas E. Irwin
Title: General Manager/Vice President
Telephone: (907) 488-4653 ext. 2201
Date: January 2000

2.3 Designated Contact Person

Name: William R. Jeffress
Title: Manager - Environmental Services
Telephone: (907) 490-2206

2.4 Corporate Information

Business Name: Fairbanks Gold Mining, Inc.
Address: P.O. Box 73726
Fairbanks, Alaska 99707-3726
Telephone: (907) 488-4653

President: Arthur H. Ditto
Vice President: Robert W. Schafer
Vice President: Thomas E. Irwin
Treasurer Brian W. Penny
Secretary Shelley M. Riley

Fairbanks Gold Mining, Inc. is a wholly owned subsidiary of Kinross Gold U.S.A., Inc., a

Nevada corporation that in turn is a wholly owned subsidiary of Kinross Gold Corporation a precious metals corporation with the principal operating office at Scotia Plaza, 57th Floor; 40 King Street West; Toronto, Ontario M5H 3Y2; CANADA.

2.5 Alaska Registered Agent

Name: Fairbanks Gold Mining, Inc.
Address: c/o C. T. Corporation System (Agent)
240 Main Street, Suite 800
Juneau, Alaska 99801

2.6 Corporate Guaranty and Reclamation Bonding

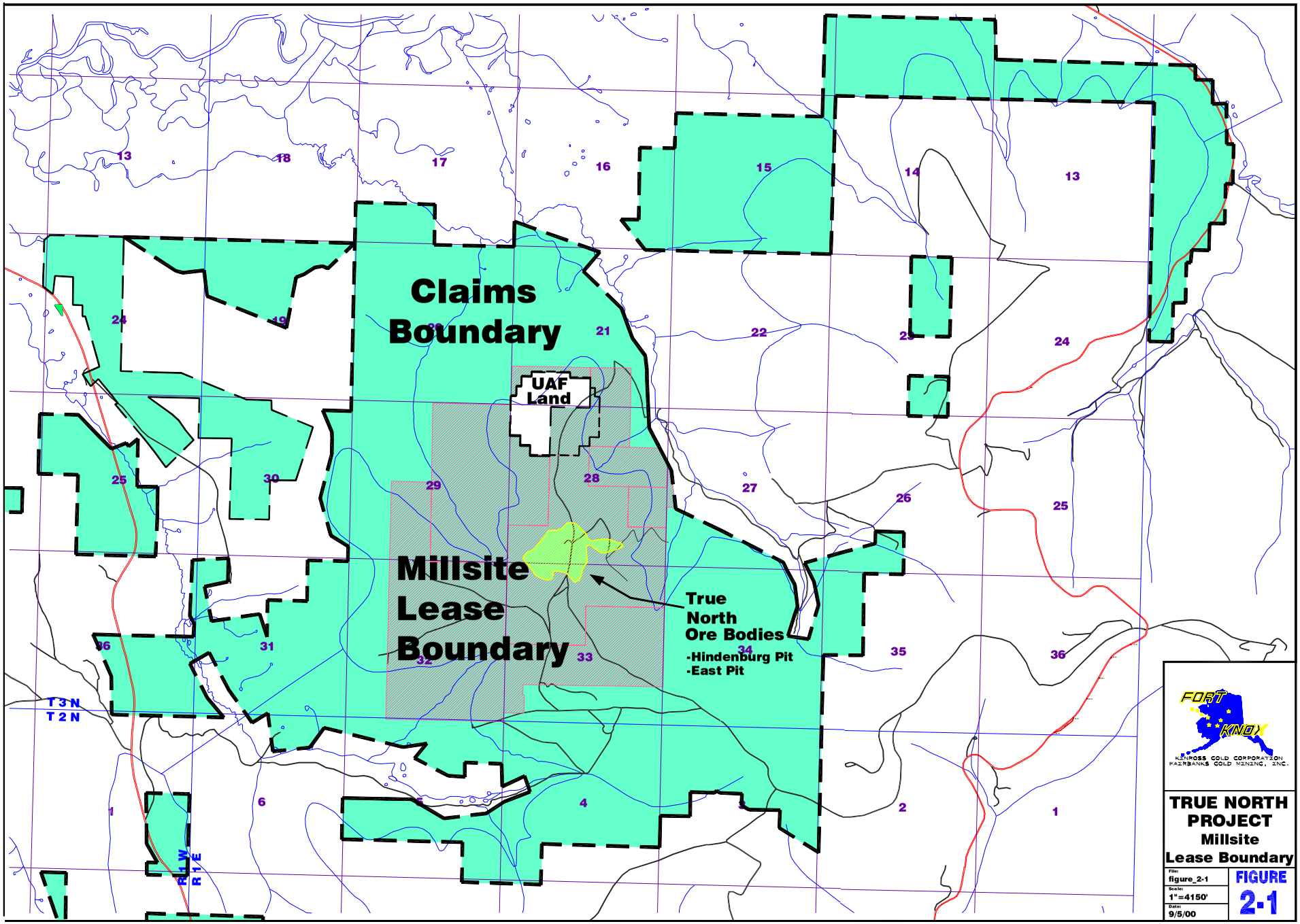
Kinross Gold Corporation shall provide a Corporate Guaranty in addition to the reclamation bond that shall cover the total closure costs for closure and reclamation of the True North Project.

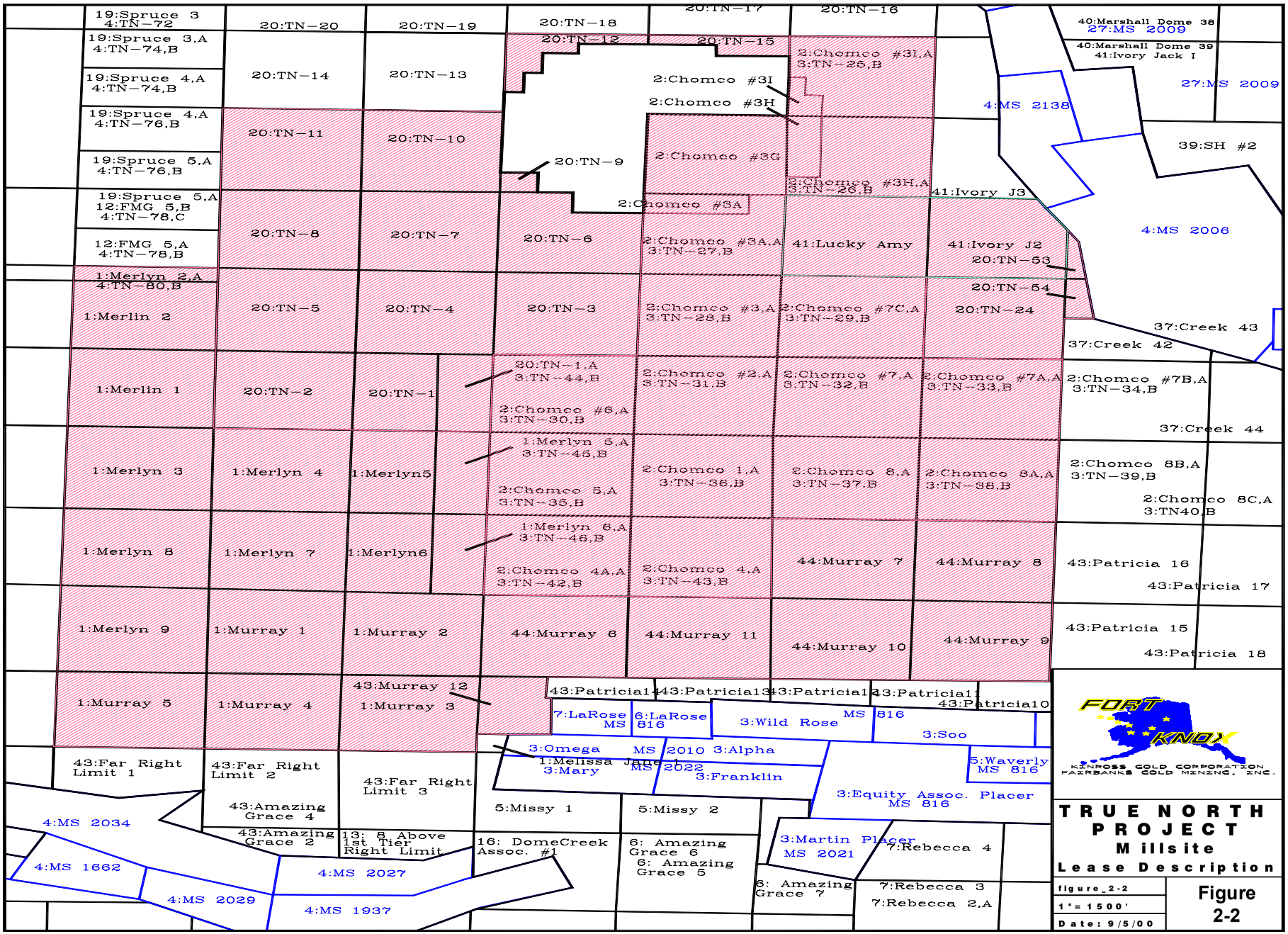
3.0. PROJECT DESCRIPTION

3.1. General

The True North Project is located 25 miles northeast of Fairbanks, on the northwest flank of Pedro Dome. Historic access to the True North Project is via the Steese Highway to Cleary Summit, then 6.5 miles via a gravel road skirting the south side of Pedro Dome. The new access/haul road begins approximately 0.5 miles south of the Cleary Summit and follows a new road alignment along the north side of Pedro Dome.

The True North Project operation will involve an open-pit mine and related facilities to maintain equipment and personnel. Operational designs are based on estimated reserves for the True North “Hindenburg” and “East” pits of 7.2 million tons, averaging 0.063 oz/t. FGMI exploration crews continue drilling to further define mineralization in the area. Kinross is optimistic that additional development will proceed as exploration drilling confirms additional reserves. The mine will operate year-around with conventional open pit mining averaging 30,000 tons per day, at a 2:1 strip ration with an average of 82.4% recovery, and producing approximately 180,000 ounces of gold annually. Approximately 10,000 tons of ore per day will be trucked to the Fort Knox mill for processing. Mining of the Hindenburg and East pits are projected to begin in the fourth quarter of 2000 and continue for approximately 2.5 to 3 years. The mine will


Claims Boundary
UAF Land
Millsite Lease Boundary
True North Ore Bodies
-Hindenburg Pit
-East Pit
T 3 N
T 2 N
R 1 W
R 1 E
FORT KNOX
KINROSS GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.
TRUE NORTH PROJECT
Millsite Lease Boundary
File: figure_2-1
Scale: 1"=4150'
Date: 9/5/00
FIGURE 2-1


19:Spruce 3
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19:Spruce 3,A
4:TN-74,B
19:Spruce 4,A
4:TN-74,B
19:Spruce 4,A
4:TN-76,B
19:Spruce 5,A
4:TN-76,B
19:Spruce 5,A
12:FMG 5,B
4:TN-78,C
12:FMG 5,A
4:TN-78,B
1:Merlyn 2,A
4:TN-80,B
1:Merlin 2
1:Merlin 1
1:Merlyn 3
1:Merlyn 8
1:Merlyn 9
1:Murray 5
20:TN-20
20:TN-19
20:TN-18
20:TN-17
20:TN-16
20:TN-14
20:TN-13
20:TN-12
20:TN-15
20:TN-11
20:TN-10
20:TN-9
20:TN-8
20:TN-7
20:TN-6
20:TN-5
20:TN-4
20:TN-3
20:TN-2
20:TN-1
20:TN-1,A
3:TN-44,B
2:Chomco #6,A
3:TN-30,B
1:Merlyn 5,A
3:TN-45,B
2:Chomco 5,A
3:TN-35,B
1:Merlyn 6,A
3:TN-46,B
2:Chomco 4A,A
3:TN-42,B
1:Merlyn 4
1:Merlyn5
1:Merlyn 7
1:Merlyn6
1:Murray 1
1:Murray 2
1:Murray 4
43:Murray 12
1:Murray 3
2:Chomco #3I
2:Chomco #3H
2:Chomco #3G
2:Chomco #3A
2:Chomco #3A,A
3:TN-27,B
2:Chomco #3,A
3:TN-28,B
2:Chomco #2,A
3:TN-31,B
2:Chomco 1,A
3:TN-36,B
2:Chomco 4,A
3:TN-43,B
44:Murray 6
44:Murray 11
2:Chomco #3I,A
3:TN-25,B
2:Chomco #3H,A
3:TN-26,B
41:Lucky Amy
2:Chomco #7C,A
3:TN-29,B
2:Chomco #7,A
3:TN-32,B
2:Chomco 8,A
3:TN-37,B
44:Murray 7
44:Murray 10
41:Ivory J3
41:Ivory J2
20:TN-53
20:TN-54
20:TN-24
2:Chomco #7A,A
3:TN-33,B
2:Chomco 8A,A
3:TN-38,B
44:Murray 8
44:Murray 9
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27:MS 2009
40:Marshall Dome 39
41:Ivory Jack 1
27:MS 2009
4:MS 2138
39:SH #2
4:MS 2006
37:Creek 43
37:Creek 42
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3:TN-34,B
37:Creek 44
2:Chomco 8B,A
3:TN-39,B
2:Chomco 8C,A
3:TN40,B
43:Patricia 16
43:Patricia 17
43:Patricia 15
43:Patricia 18
43:Patricia14
43:Patricia13
43:Patricia12
43:Patricia11
43:Patricia10
7:LaRose
MS 816
6:LaRose
MS 816
3:Wild Rose
MS 816
3:Soo
3:Omega
MS 2010
3:Alpha
1:Melissa Jane 1
3:Mary
MS 2022
3:Franklin
5:Waverly
MS 816
3:Equity Assoc. Placer
MS 816
43:Far Right
Limit 1
43:Far Right
Limit 2
43:Far Right
Limit 3
43:Amazing
Grace 4
43:Amazing
Grace 2
13: 8 Above
1st Tier
Right Limit
5:Missy 1
5:Missy 2
16: DomeCreek
Assoc. #1
6: Amazing
Grace 6
6: Amazing
Grace 5
3:Martin Placer
MS 2021
7:Rebecca 4
6: Amazing
Grace 7
7:Rebecca 3
7:Rebecca 2,A
4:MS 2034
4:MS 1662
4:MS 2029
4:MS 2027
4:MS 1937
FORT KNOX
KINROSS GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.
TRUE NORTH
PROJECT
Millsite
Lease Description
figure_2-2
1"= 1500'
Date: 9/5/00
Figure
2-2

employ 100 to 110 workers in two shifts, 24 hours per day, 365 days per year. There are no living accommodations at the project site. Grid power follows an alignment close to the access/haul road (approximately 3-miles) supplied by Golden Valley Electric Association; 480-volt, 3-phase power; will be established.

3.2. Surface Disturbances

3.2.1. Placer and Other Mining Disturbances as of July 1999

Prior to construction of the proposed True North Project mine facilities, placer, exploration, and other mining activities have disturbed approximately 68 acres within the True North Project area. This acreage (68 acres) does not include areas encompassed by trails, historic ditches, cabin sites, and small-localized disturbances. Some of these previously disturbed areas are located where the Hindenburg pit, East pit, and development rock dumps are planned.

3.2.2 Areas and Acreage of Disturbance

Table 1 lists the proposed disturbance on state land within the Millsite Lease area throughout the projected True North Project mine life. The areas of potential disturbance are identified in Figure 3-1.

Table 1.
Approximate Areas and Acreage of Disturbance by Project Component

Project Components	Total Acres	Wetlands Acres Only
Open Pits	67.21	34.69
Development Rock Dumps & Growth Medium Stockpiles	108.72	
Ore Stockpile	1.82	
Maintenance Complex	7.95	0.04
Blasting Supplies Storage	5.25	
Mine Site Roads	53.75	31.07
Subtotals	**244.70**	**65.80**
Access/Haul Roads	69.00	12.00
Totals	**313.70**	**77.80**

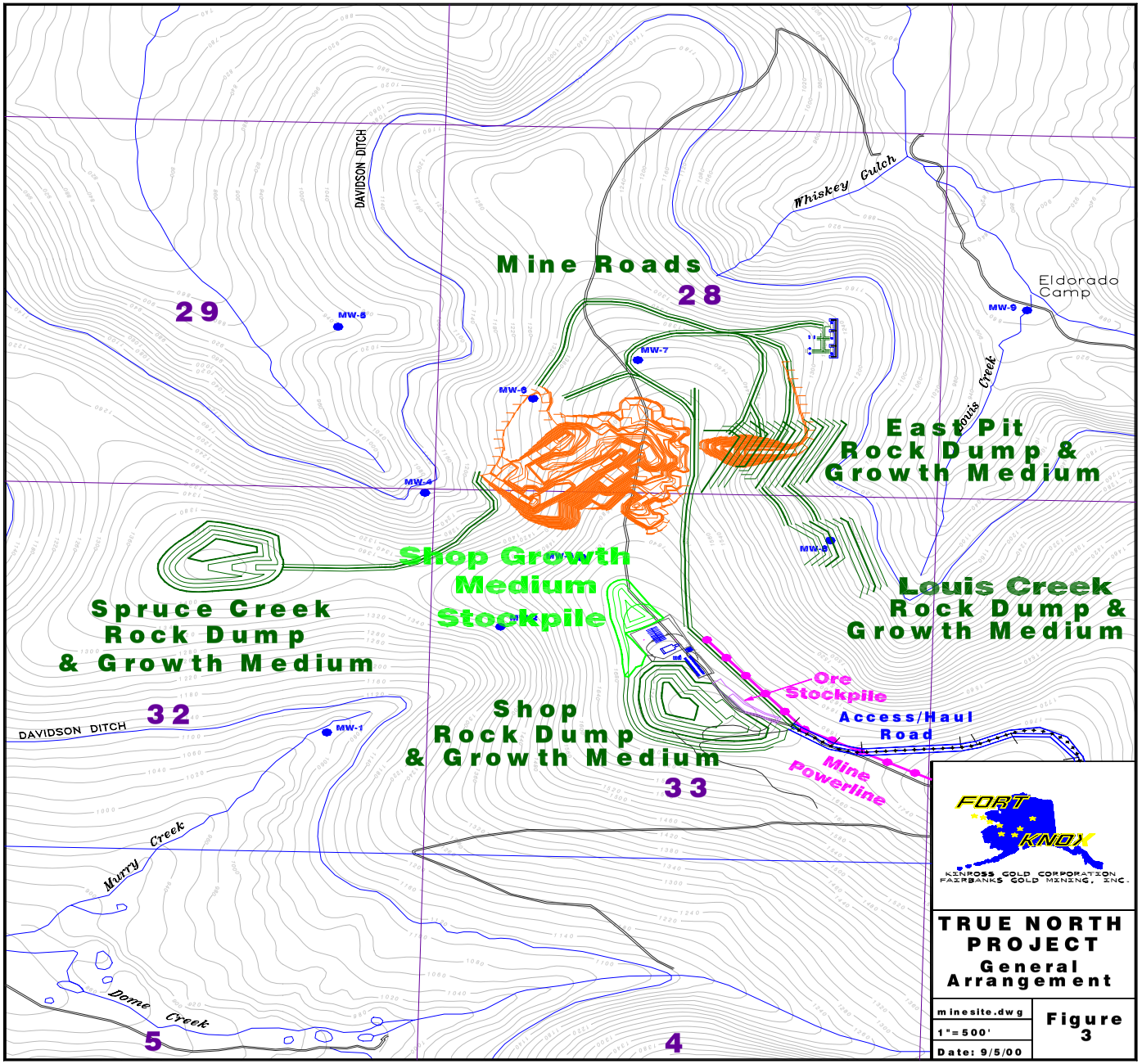

Mine Roads
28
29
32
33
4
5
East Pit
Rock Dump &
Growth Medium
Louis Creek
Rock Dump &
Growth Medium
Shop Growth
Medium
Stockpile
Spruce Creek
Rock Dump
& Growth Medium
Shop
Rock Dump
& Growth Medium
Ore
Stockpile
Access/Haul
Road
Mine
Powerline
DAVIDSON DITCH
DAVIDSON DITCH
Whiskey Gulch
Eldorado
Camp
Louis Creek
Murry Creek
Dome Creek
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
FORT KNOX
KINROSS GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.
TRUE NORTH
PROJECT
General
Arrangement
minesite.dwg
1"=500'
Date: 9/5/00
Figure
3

Figure
3-1

4.0. RECLAMATION PLAN

4.1 General

FGMI's long-term goals of reclamation during and after mining operations are to shape, stabilize, revegetate or otherwise treat the land in order to return it to a safe and stable condition consistent with the Tanana Basin Area Plan (TBAP) and the Kinross Gold Corporation Environmental Policy (Appendix A). The current designated post-mining uses for the True North Project area are for wildlife habitat and recreation as prescribed by AS 27.19.020. FGMI is incorporating practices that include contouring and stabilizing disturbed areas using best engineering practices to create seed beds that invite and promote early seral colonization, using commercially available native plant species, when available, and soil amendments with proven track records.

FGMI will adhere to the above general philosophy in developing and implementing this reclamation plan for the True North Project. Therefore the objectives of the plan are:

1. Stabilization and protection of surficial soil materials from wind and water erosion;

2. Stabilization of steep slopes through contouring and leveling to provide rounded landforms and suitable seedbeds;

1. Establishment of long-term, self-sustaining vegetation communities through reseeding and/or promotion of natural invasion and succession.

FGMI will continue working with ADNR, and Alaska Department of Fish & Game (ADF&G) with the implementation and evaluation of both concurrent and long-term reclamation activities. This consultation is consistent with the preliminary revegetation proposal of Fort Knox as described in Appendix C-*U.S. Fish & Wildlife Service-Estimating Wildlife Habitat Variables*.

FGMI considers reclamation to be a progressive process tied directly to the design, construction, operation, and closure of the mining operation. Reclamation will occur in the following phases, with some overlap:

1. Interim reclamation to stabilize and maintain viability of topsoil and growth medium stockpiles will be completed during and directly after construction (Figure 3-1);

2. Previously disturbed areas including historic exploration trenches, abandoned roads, and exploration drill pads that will not be affected by current mining operations will be concurrently reclaimed;

3. Final reclamation (Phase I) will occur upon cessation of mining operations. Phase I reclamation (final contouring of development rock/growth medium dumps, facility sites, and seed bed preparation), where affected land cannot practicably be reclaimed concurrently, will be initiated immediately upon cessation of mining operations, and re-contouring will be completed within 2 to 5 years; and

4. Passive reclamation (Phase II) will consist of water quality monitoring until closure and all reclamation performance standards are achieved.

The physical reclamation of the True North Project site will utilize best practicable proven and documented technology. The specifics of this technology are discussed in Section 4.1.7. The details and procedures for area specific reclamation such as the pit, and development rock dumps are discussed in Section 4.2.

4.1.1 Changes to Scope of Reclamation Activities

FGMI will submit revisions to the approved True North Project Reclamation Plan for review and approval by the Alaska Department of Natural Resources when revised mining plans would result in the following:

1. A significant increase in the size (i.e., 25% increase in perimeter) of the pit;

2. A significant increase in the size (i.e., 25% increase in footprint) of the growth medium stockpiles or development rock dumps;

3. Any significant change in the geochemical characterization of the ore or development rock; and

4. Any other change that significantly alters the footprint of the project or the type of activity as described in the approved Plan of Operations.

4.1.2 Land Use

4.1.2.1 Land Use Prior to the True North Project

The True North Project area is located within the Tanana Basin Area Plan in Subregion 1-Fairbanks North Star Borough, Management Unit 1J2-Cleary Summit-Pedro. The primary management objective is subsurface development and the secondary objective is forestry. Other objectives are to protect fish and wildlife habitat and recreation opportunities.

Mineral extraction activities, both placer and lode mining, have been continuous throughout the Fairbanks Region. Mineral exploration and mining activities have produced the greatest visible impact to surface features. Recreational activities in this region include hiking, biking, berry picking, cross country skiing, snowmobiling,

mushing, horseback riding, trapping and small/large game hunting.

The site supports those wildlife species typically inhabiting taiga. Avian species include numerous migratory birds and raptors. Mammals range from small shrews, voles, mice, lemmings, Red squirrels and Snowshoe hares to larger species including, but not limited to foxes, wolves, Black bears, Brown bears, and moose.

4.1.2.2 Land Use During True North Project Operations

State surface land use authorizations (Millsite Lease) allow limited access to the general public. Restricted access is due to the inherent hazards associated with the operation of large mine equipment. Compliance with requirements of Mine Safety and Health Administration (MSHA) regulations will limit access to personnel trained to recognize hazards and observe safety rules to insure the health and safety of employees and visitors.

Wildlife habitation by certain species will be temporarily altered during the active portion of the mine life. Larger mammals will typically seek isolation from human disturbance; however, with concurrent reclamation the resident population of moose and wolves will increase. In order to ensure the safety of mine employees and the public, all hunting, fishing, and trapping within the Millsite Lease area are prohibited.

4.1.2.3 Refuse

All wooden pallets and cardboard remnants from operations will be disposed of in the proposed on-site burn pit. Burning will be conducted once a week. A burn permit will be applied for prior to burning from the Alaska Division of Forestry during the months of May through September.

Putresible waste from sack lunches will be disposed of in animal proof dumpsters to prevent attracting wildlife.

FGMI's waste minimization strategy is to recycle all materials where possible and promote innovative approaches to waste management. Refuse that cannot be recycled will be stored in dumpsters to be disposed of in the FNSB solid waste landfill.

4.1.2.4 Proposed Productive Post-Mining Land Uses

The True North Project operation will alter the landscape of the site for the long-term. FGMI will reclaim both wetland and upland sites to a more productive post-mining land use as wildlife habitat. ADNR, ADF&G, and FGMI will work as a team to formulate a successful post-mining land use consistent with the TBAP designations of multiple use including forestry and recreation.

4.1.3 Reclamation of Pre-Mining Disturbances

Prior to discovery and development of True North Project, more than 90 years of placer mining activities have substantially affected both the Dome Creek and Little Eldorado Creek. Approximately 68 acres have been previously disturbed within the Millsite Lease.

4.1.4 Schedule of Reclamation Activities

4.1.4.1 Reclamation During and Directly After Construction

Clearing methods shall be based on site specific conditions, including vegetation type, size, soils, slope, and proximity to water bodies. Timber salvage shall be in accordance with the Department of Natural Resources, Division of Forestry regulations. The following clearing methods may be used at the True North Project area:

1. Clearing methods for woody vegetation that minimize disturbance to the ground surface shall be used in areas where ground cover is desired to minimize permafrost degradation; or for areas where ground cover and topsoil will not be removed immediately after clearing to minimize erosion of surface material.

2. Preferred clearing methods that minimize surface disturbance and provide reclamation materials that may be handled and redistributed easily include hydro axing or other forms of tree mulching, mechanical clearing of small trees (<6" DBH).

3. Cleared vegetation shall be stockpiled in areas providing the most advantageous locations suitable for use in later reclamation (Shop, Louis Creek, East Pit, and Spruce Creek Development Rock Dumps).

4. Burning of cleared and stockpiled vegetation is not a preferred option for widespread disposal of surface material; however it may be considered in limited areas.

Growth medium salvage will continue as the ore body, development rock dumps, and other mine facilities are fully developed, and suitable growth medium will continue to be stockpiled throughout the mine life. Topsoil stockpiles will be located near their sites of origin (mine origin) as well as at the Shop Growth Medium Stockpile (Figure 3-1). Interim reclamation of the growth medium stockpiles will proceed after placement to stabilize and maintain viability of all stockpiled material for final reclamation if the material is needed.

Areas disturbed during construction and exploration that will not be re-disturbed during operations will be reclaimed. These areas will be identified during the first annual meeting. Areas to be identified for final reclamation during or immediately after construction should include material borrow sites, construction access roads,

abandoned exploration roads, and exploration drill pads.

4.1.4.2 Concurrent Reclamation

Development rock dumps (Spruce Creek, East Pit, Louis Creek and Shop) will be constructed as hilltop and head of valley dumps in steps or terraced lifts to achieve the desired overall slope (Figure 3-1). Inactive portions of these dumps will be recontoured and reclaimed as contemporaneously as practicable during the mine life.

4.1.4.3 Temporary Closure

Temporary closure means the cessation of the mining operations for a period of not more than one-year. If conditions require temporary closure to extend beyond one-year, final reclamation will begin with a final closure notice submitted to the ADNR, unless an extension accompanied by full justification is requested by the company and approved by ADNR. Temporary closure scenarios, which require modifications to the plan of operation, reclamation plan, or 404 Permit, will be coordinated with and submitted to the appropriate Federal and State agencies for approval.

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

1. Interruptions in the active beneficiation processes at the Fort Knox Mill to provide planned periods of quiescence for metallurgical or operating reasons.

2. Any other planned condition, which will interrupt the active beneficiation process at the Fort Knox Mill including modification to process components or suppressed metal market conditions.

3. 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:

1. Closure because of unforeseen weather events.

2. The cessation of operations because of litigation.

Temporary Closure will comply with the following four reclamation practices:

1. Maintain the site;

2. Maintain all site monitoring, reporting and all reclamation work already completed;

3. Increase bond amounts for any additional disturbed acreage; and

4. Identify areas of reclamation affected by closure and how they will be influenced.

4.1.4.4 Final Reclamation

Construction of the True North Project is scheduled to begin the fourth quarter of 2000. Under the current permitting, engineering, economic scenario, and mine plan, production will continue for approximately 2.5 to 3 years. Final reclamation will be initiated as activity on the Hindenburg and East pits are completed (Figure 3-1). Reclamation will be as concurrent as mining activities allow. Final reclamation (final contouring of the Spruce Creek, East Pit, Louis Creek and Shop development rock dumps, facility sites, and seed bed preparation) will be initiated immediately and completed within 2 to 5-years of cessation of mining operations where affected land cannot practicably be reclaimed concurrently. Notification, in writing to initiate final closure will be given to the ADNR and COE within 90 days after cessation of mining operations. The notice will provide the date on which final reclamation activities will begin.

Once mining ceases, reclamation will begin on the Hindenburg and East pit (remaining portions not concurrently reclaimed), the Spruce Creek, East Pit, Louis Creek and Shop development rock dumps, and portions of the mine roads. The four trailers serving as office buildings and lineout facilities for mine crews and the 80-foot x 120-foot prefabricated maintenance complex will be decommissioned and those sites reclaimed.

4.1.5 Public Safety

Public safety is a goal in closure and reclamation of mining operations.
The True North Project pit high wall interceptor ditches and safety berms will remain in place to restrict access to the Hindenburg pit area. Four (4) to six (6) foot vegetated berms will be utilized to restrict access to the steeper highwall sections of the Hindenburg pit and other potentially hazardous areas to be identified in the Closure Notification. Signs will also be posted to provide additional warning of potentially hazardous areas. Final signage and placement will be coordinated with the ADNR.

4.1.6 Post-Mining Topography

Post-reclamation topography on the True North Project site will consist of a rolling, diversified landform that blends with the hills and surrounding landscape.

4.1.6.1 Drainage

The ridgelines drain into Murray Creek, a tributary of Dome Creek to the south; and Louis Creek, Whiskey Gulch, and Spruce Creek, tributaries of Little Eldorado Creek drain to the north.

Post-mining drainage patterns will be similar in overall gradient and direction. Diversion ditches around the Hindenburg pit will channel spring breakup and storm runoff into Spruce Creek. The East pit will have been backfilled and a 2-million ton rock dump placed over the pit location with runoff directed toward Louis Creek.

4.1.6.2 Pit Slope Stability

The goal is to maximize backfilling of pit(s); however, it is understood that the amount of backfilling done at a given site will be determined using the following three-step approach:

1. Preferred option is to complete backfilling to a surface configuration that will achieve the designated post-mining land use and to the extent possible conform to the surrounding landscape;

2. Mine plans and sequence of mining activities will be conducted in such a manner that potential backfill options are maximized; and

3. The actual amount of backfill that occurs at a site will be based on post-mining land use, the potential to adversely impact water quality, wildlife habitat and economics.

Engineering analysis, geologic interpretation which will be ongoing, and mine planning has determined that an adequate catch bench width of 25-feet will be to provide effective protection against rock fall and maintain access to the benches (Figure 4-1). The effectiveness of narrower benches is frequently lost due to a combination of incomplete excavation of bench toes, back break, and local bench scale failures. The increase in overall slope angle that results from decreasing catch bench widths below 25-feet is not usually worth increasing the overall slope angle.

Additional stabilization of the final pit may be enhanced as FGMI's mine planning to accommodate sequential backfilling of portions of the Hindenburg pit. FGMI will provide justification to the agencies if this cannot be implemented.

4.1.6.3 Development Rock Dump Slope Stability

The goal of construction and reclamation of the development rock dumps is to achieve stable, naturally revegetated land forms that meet the objectives of the designated post-mining land use consistent with the Tanana Basin Area Plan and do not adversely affect down-gradient surface or ground water quality. To accomplish this goal, the following approach will be used:

1. Growth medium will be stripped prior to establishing the development rock dumps unless removal would decrease the stability of the dump;

2. Stripped growth medium will be placed along the lateral parameter of the

development rock dumps to facilitate reuse of material for placement on the dump where required to achieve revegetation;

3. Diversification of wildlife habitats within development rock dumps will be considered;

4. Natural revegetation is preferred;

5. Development rock dumps will be covered with at approximately six inches of growth medium, if needed to facilitate revegetation; and

6. Water (runoff and seepage) from development rock dumps will be sampled (as required by the Storm Water Pollution Prevention Plan) to ensure protection of downstream waters.

An engineering and geotechnical contractor, Golder Associates, Inc., has recommended that the dumps be constructed in a series of benches (Figure 4-2). This will maximize the capacity of the dumps within the constraints of the space available and the requirement to limit base shear stresses. Reduction of the amount of recontouring for reclamation in the future will also occur.

Estimated development rock volumes and tonnages (at a density of 140 pounds per cubic foot) that can be stored at each site are as follows in Table 2:

Table 2.
Estimated Development Rock Volume and Tonnage

Location	Volume	Tonnage
East Pit & Dump	7.6 million cubic yards	4 million tons
Louis Creek Dump	0.5 million cubic yards	1 million tons
Shop Dump	5.7 million cubic yards	3 million tons
Spruce Creek Dump	3.8 million cubic yards	2 million tons

Development rock dumps and those portions of growth medium stockpiles not utilized during concurrent of final reclamation will have a 2.5H:1V – 3.0H:1V overall slope. These slopes will be reclaimed at this angle or flatter to ensure stability, as described in Section 4.2.3. Multiple benching will occur in order to achieve this overall slope angle.

4.1.6.4 Permafrost Conditions

Golder Associates, Inc., assessed permafrost conditions at the project site during site investigation work. Their studies concluded that permafrost occupies the upper part of the site and is associated with the black spruce forest. Areas free of permafrost, or with a lowered permafrost table, are associated with the birch forest that occupies the lower slope area. No massive ice was encountered while drilling the site. No development

rock dumps, growth medium stockpiles or facilities will be constructed in these areas.

4.1.7 General Reclamation Procedures

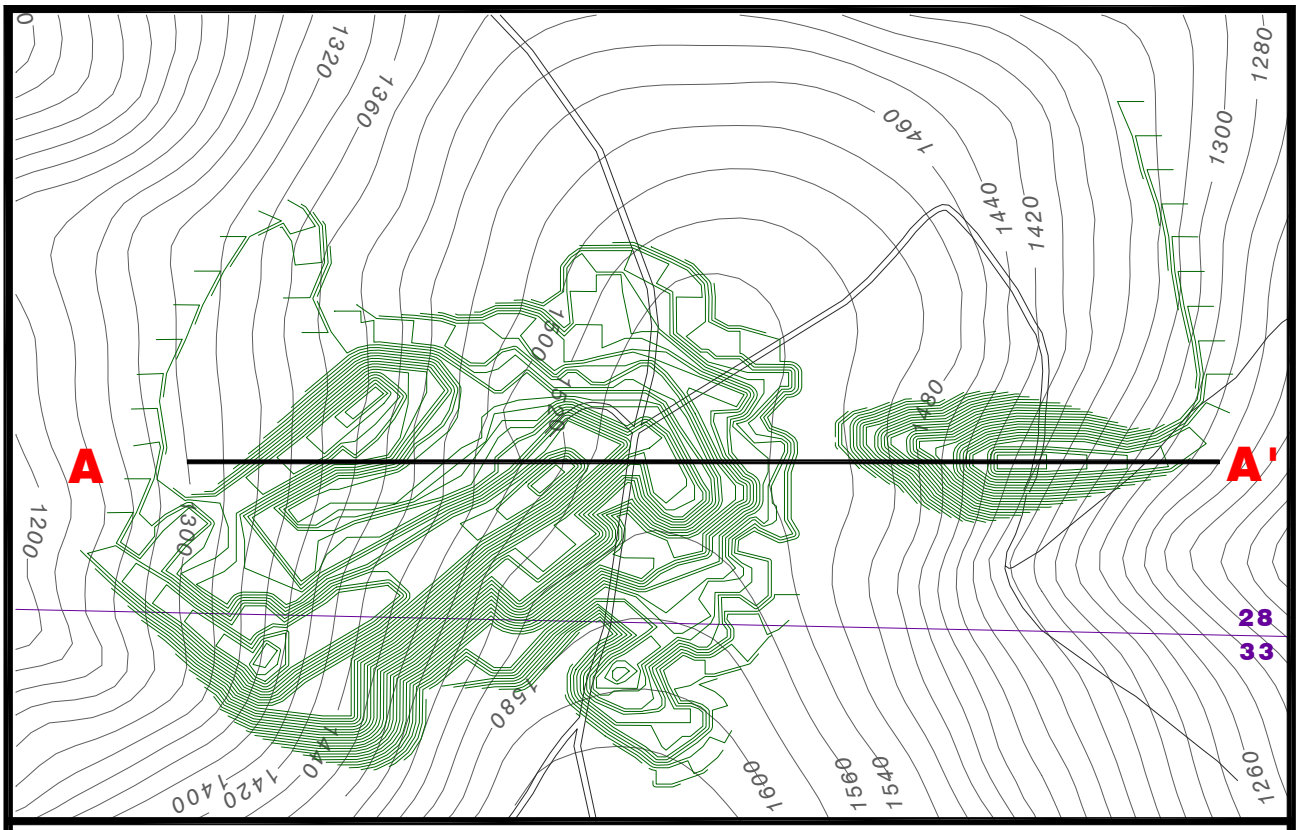
General procedures for physical stabilization and revegetation of mined land disturbances are well documented and proven. These proven techniques are incorporated throughout this True North Reclamation Plan and, in coordination with ADF&G and ADNR, will continue to be used during the implementation phase of final reclamation.

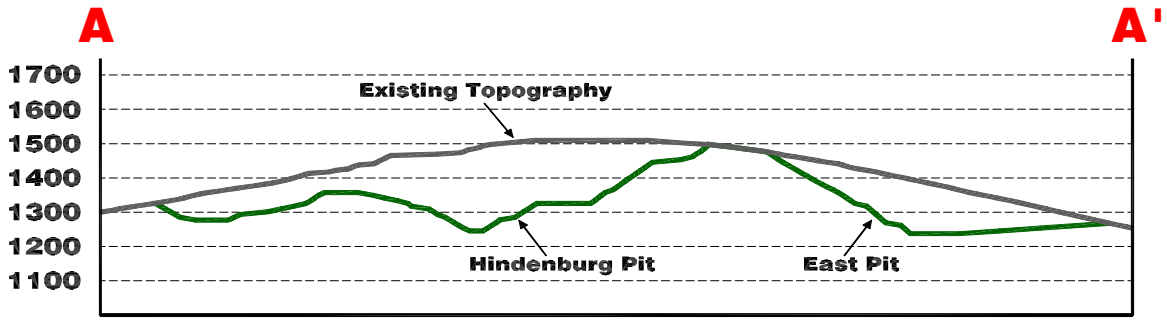
4.1.7.1 Earthwork

Reclamation of the True North Project will require extensive earthwork. Development rock dumps, and those portions of the Hindenburg pit designed to allow recreational access will require grading, contouring, and possible growth medium application. Generally, slopes will be constructed to 2.5H:1V – 3.0H:1V or shallower where feasible.

Earthwork will utilize industry standard heavy equipment. The equipment list will include (or equivalents thereof): D10N Cat., D9N Cat., D8L Cat., rubber-tired scraper, RT dozer, 10,000 gallon water truck, motor graders, hydro seeder, broadcast seeder, straw blower, and disk harrow. Other equipment such as (but not limited to) front-end loaders, track and tire mounted backhoes, and haul trucks may be substituted for or included with this general equipment list. As specific conditions require during implementation of the plan, equipment needs and use must and will remain dynamic. However a minimum of a D10N Cat. (or equivalent), a rubber-tired scraper and a RT dozer will remain available to accomplish reclamation at any given time.

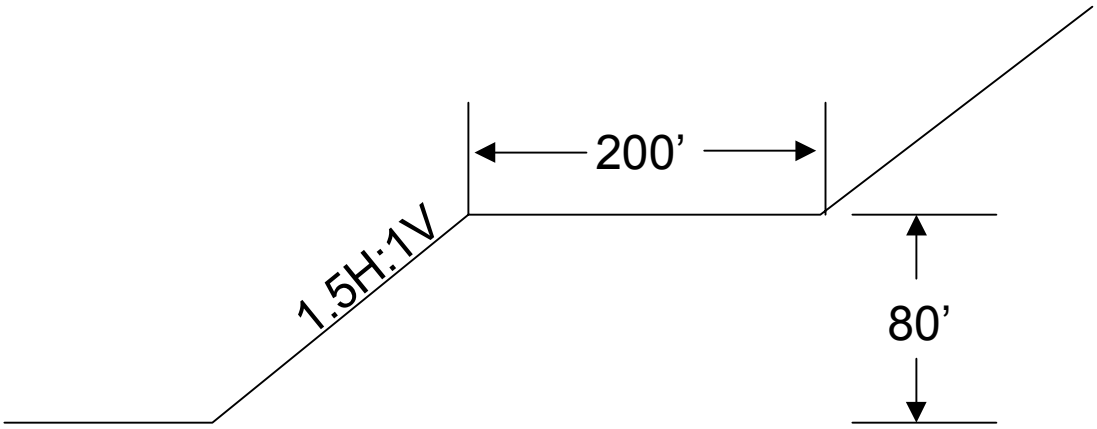
Runoff and erosion control are handled by the Storm Water Pollution Prevention Plan as required by the National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities. Long-term Best Management Practices (BMP) for runoff and erosion control emphasizing site contouring and other low maintenance features are preferred over more maintenance intensive measures. Establishment of native species, as mentioned in the Revegetation Section 4.1.7.3, will be emphasized components of erosion control; non-native species (e.g. annual grasses) may be used in areas where erosion potential may be significant.



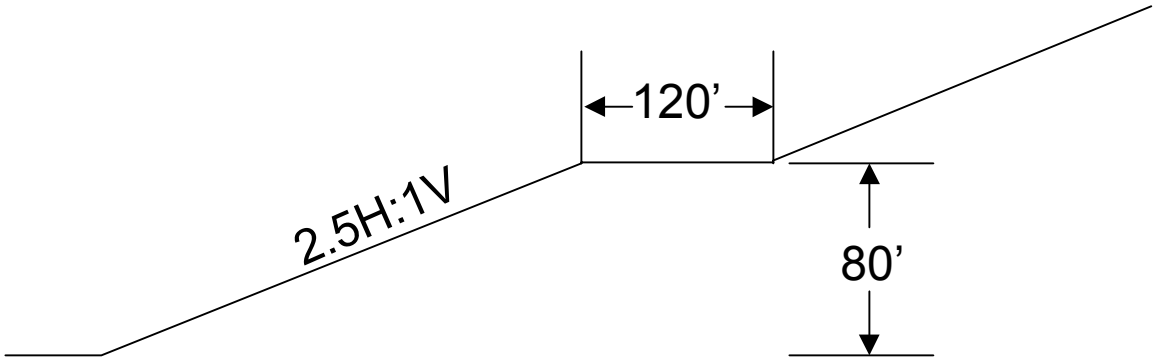


True North Project
Reserve Pit Profile

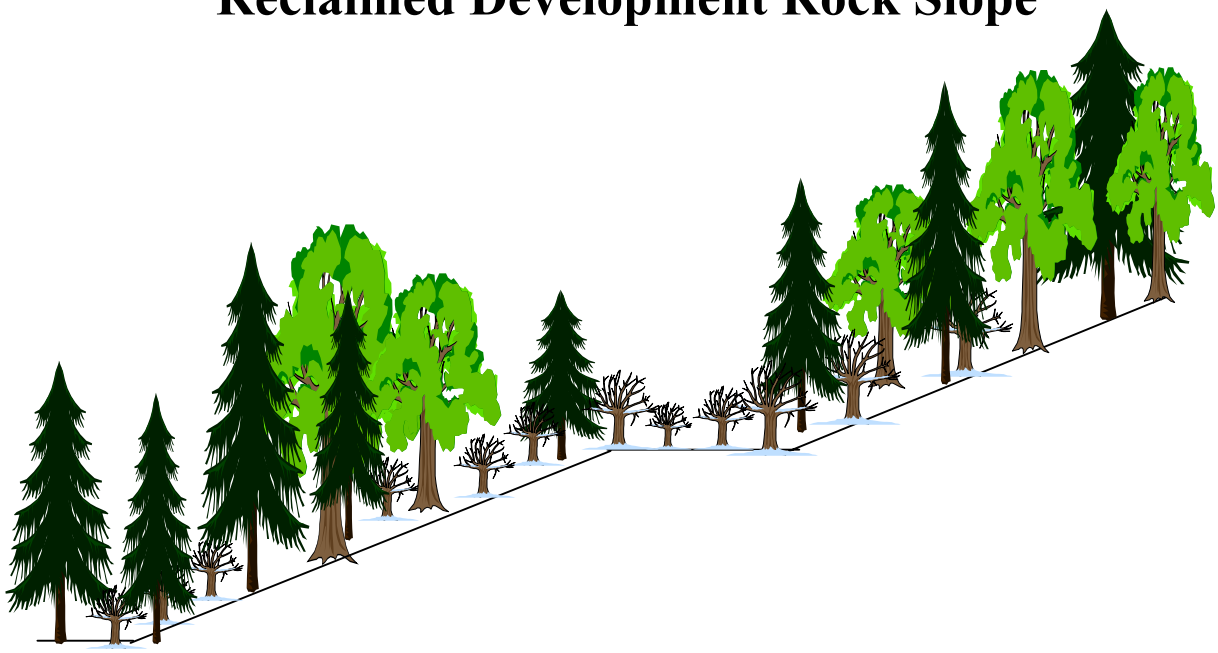
Figure 4-1



Active Development Rock Slope



Reclaimed Development Rock Slope



Revegetated Development Rock Slope

FAIRBANKS GOLD MINING, INC.	PROJECT TRUE NORTH	TITLE Cross Sectional View of Conceptual Reclaimed Development Rock Dump DATE 3/27/00 FIGURE 4-2

4.1.7.3 Revegetation

4.1.7.3.1 Growth Medium

Growth medium is defined herein as all native soil (in-place) material with the physical and chemical properties capable of germinating and sustaining vegetation growth with or without amendments. At the True North Project site, the term "growth medium" is interchangeable with the terms "topsoil" and "overburden". Overburden material, suitable for use as growth medium, is the unconsolidated material, which lies between the topsoil horizon (where present), and bedrock.

Growth medium (topsoil and overburden) and organic materials (muskeg and woody species) where feasible will be separated and stockpiled at the True North Project in anticipation of future reclamation. From initial development up to anticipated cessation of mining in 2003, an estimated 185,371 cubic yards of possible growth medium will be available for use in reclamation. This stockpiled amount far exceeds the total that would provide a 6-inch cover (87,963 cubic yards) if needed for the total True North Project disturbed areas excluding the Hindenburg pit. Figure 3-1 shows the locations of these stockpiles. Table 3 provides specific volumes.

Table 3
Estimated Growth Medium Volumes

Location Name	Volume (cy)
East Pit & Dump Site	63,482
Louis Creek Site	37,205
Spruce Creek Site	58,564
Shop Site	26,120
Total	185,371 cubic yards

Approximately 6 inches of growth medium will be applied generally to those sites requiring additional growth medium to be revegetated or to promote natural re-invasion by native plant species. However, application depth will vary depending upon the facility. Development rock dumps that contain mixed overburden and high levels of fines will require less growth medium than rockier dumps to be identified at the first annual meeting. Roads and building sites will require little, if any, growth medium, but each site will be individually evaluated on a site-specific bases. Growth medium will be applied by scraper or dump truck and spread by a D10N Cat. or an equivalent.

4.1.7.2.2 Seedbed Preparation

Mine and mine related disturbances would result in compacted surfaces unsuitable for revegetation. Thus, preparation of a seedbed suitable for plant germination and growth may be the most critical reclamation task. Growth medium (whether applied or insitu) and the underlying subsurface will be prepared in a manner as to retain moisture and

allow adequate root development and penetration.

Using a D10N (or equivalent) Cat with a 2 or 3 shank ripper, the method of primary seedbed preparation at the True North Project will be ripping or scarifying. If necessary, ripping will occur along contours of sloped areas. Highly compacted areas including the equipment lot and mine roads will be ripped in a linear fashion. Following the application of growth medium, areas including the equipment lot and mine roads will be prepared to roughen the surface just prior to seeding. The purpose of roughing the surface is to trap moisture, reduce wind shear, minimize surface erosion by increasing infiltration, and create micro-habitats conducive to seed germination and development.

4.1.7.2.3 Fertilizer and Fertilization

Prepared seedbeds will be fertilized prior to, after, or during (when a hydroseeder is used) the seeding operation. Specific fertilization requirements will be determined in the field if necessary and will be dependent on the quality of growth medium applied. If necessary, growth medium will be tested for standard soil agricultural constituents including nitrogen (N), phosphorus (P), and potassium (K) to determine appropriate application of fertilizer.

The True North Project can produce mixed results. Fertilizer may, indeed, enhance the initial establishment of desirable species. However, because of the low nutrient retention capacity of the waste rock, N and K may be leached from the materials or be tied up in the biomass within several years. Fertilizer may also increase the establishment and growth of undesirable colonizing species and species existing as dormant ruderals in the growth medium. Therefore, application of fertilizer will be managed carefully by FGMI.

Based on results at other locations within Interior Alaska and concurrent reclamation at Fort Knox, the general recommended rate of fertilizer application is 50 to 100 pounds per acre of 20N-20P-10K or comparable blend.

Final fertilizer and application rates will be determined from information acquired from concurrent reclamation at the True North Project and from experience gained from concurrent reclamation at Fort Knox. Mine revegetation research and monitoring will be conducted in cooperation with ADNR and ADF&G. Proper documentation of Fort Knox fertilization practices, annual site visits, and annual meetings will be included in assessing the fertilization rates.

4.1.7.2.4 Seed and Seeding

The general grass seed mix that will be used at the True North Project site is listed in Table 4. This mix has been approved by ADNR Plant Materials Center and is the preferred seed mix, but this may vary depending on availability of specific seeds.

Table 4
Seed Mix

ARCTARED RED FESCUE	***Festuca Rubra***	50%
GRUENING ALPINE BLUEGRASS	***Poa Alpina***	20%
TUNDRA GLAUCOUS BLUEGRASS	***Poa Glauca***	20%
NORTRAN TUFTED HAIRGRASS	***Deschampia Caespitosa***	10%

As with any seed mix, a degree of flexibility is necessary. The mix will change over time to include forbs and woody species depending upon such factors as internal and external research results, changes in technology, changes in land management philosophy, and commercial availability. Native species will be the preferred mix, unless information developed by the ADNR-Plant Materials Center and on-site test plots indicate other more desirable species will better meet the post-mining land use criteria. Seeding will be done via drill seeding, broadcast seeding, and limited hydroseeding. The preferred method for the concurrent reclamation at the True North Project will be broadcast seeding. Broadcast seeding will continue to be used on terrain considered too steep or rocky for seed-drill equipment. Hydroseeding may be employed around the edge of the pit and on steep slopes where safety is a primary consideration. The application rate for seeding using the presently proposed grass seed mix will be 11 pounds of pure live seed (PLS) per acre.

4.1.7.2.5 Mulch

Mulches may be 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 1-2 tons per acre is cost-effective. Slopes too steep for equipment generally require an application of hydromulch via a hydroseeder at an approximate rate of 1 ton per acre. Commercial hydromulch generally consists of wood fiber byproducts or other forms of cellulose. To date successful concurrent reclamation activities at the Fort Knox Mine have not required the use of mulch. True North Project mulch activities will directly correlate to the Fort Knox results. Therefore, mulching will occur where standard reclamation activities are unsuccessful.

Prior to initial topsoil and overburden stripping for construction of facilities, timber ($\geq$6-inches DBH) will be cut and decked or chipped where feasible and taken to the Shop Growth Medium Stock Pile. All other woody plant material will be hydro-axed or broken up and incorporated as a soil amendment. Organic material will be windrowed near the areas of disturbance or the Shop Growth Medium Stock Pile for later use as mulch (Figure 3-1).

If additional organic material such as mulch is necessary, it will be applied following seeding and fertilization with a standard straw (or hay) blower mounted behind a truck or tractor. If necessary the mulch will then be crimped into the seedbed using a cultipacker or shallow-set disk harrow to prevent wind-blow and increase microhabitat for seed

germination.

Around the Hindenburg pit and steep slopes where a hydroseeder is used, hydromulch will be incorporated into the seed and fertilizer mix for one-time application. The hydromulch will contain a tackifier to help hold the mulch mix in place. Application and location will be discussed with ADNR in the field.

4.1.7.2.6 Revegetation Timing

Seeding will be conducted as soon as possible following seedbed preparation (Section 4.1.7.2.2). Mine revegetation test plot research and experience with concurrent reclamation will be used to determine the most productive planting time. Otherwise seeding will be implemented after spring break-up until mid-July. Such seeding will allow the seed to take advantage of the summer moisture period. However, actual experience has shown that all seedbed preparation on large-scale mine reclamation projects cannot and does not occur at one point in time. Thus, while every effort will be made to conduct the majority of seeding in between spring break-up and mid-July, seeding actually may occur at any time during the year.

4.1.7.2.7 Revegetation Cover Criteria

A vegetative cover criterion of at least 70 percent will be achieved prior to requesting bond release and/or final abandonment of the project site for those areas not specifically exempted from the criterion (i.e. pit walls and special wildlife habitat areas). Reclaimed areas will meet the aforementioned criteria prior to FGMI requesting bond release.

As an interim action level criteria to insure a viable approach to the establishment of a vegetative cover FGMI will, upon completion of seedbed preparation, revegetate areas by seeding and/or by natural recolonization. After three years at least 30 percent vegetative cover should be established as an indicator that the insitu growth media is viable. Percent live foliar cover can be determined by several methods described in the U.S. Fish & Wildlife publications *Estimating Wildlife Habitat Variables* (see Appendix C). Other more suitable methods to determine percent cover may become available and will be used upon approval from ADNR.

The reclamation standard of at least 30 percent vegetative cover over a three-year period is an action level criterion, which will indicate to FGMI that additional reclamation action must be taken to assure a viable vegetative cover is established and natural succession of plant species will continue. Additional action will include reseeding the area, fertilization, and/or incorporation of additional growth medium on the site. FGMI will be responsible for determining the cause and solution to the substandard revegetation cover. Further specifics for the control of sedimentation, determining vegetative cover and remedial action are discussed in Sections 4.2.6.

4.1.7.2.8 Public Access

Public access to the True North Project site will be restricted within the Millsite Lease area until final closure and bond release. As with any similar mining operation, pits have potentially unstable crests and steep walls, which will place limits on safe foot accessibility. Therefore, the partially reclaimed mine road entry points are proposed as the primary access points to the Hindenburg pit even though all pit walls are to be left in a stable condition.

4.2 Area Specific Reclamation

Successful reclamation of the True North Project will require specific reclamation of seven (7) elements and the implementation of the True North Project Reclamation Plan. These elements include roads of various types and uses, the open pit, development rock dumps, ore stockpile, building and equipment sites, miscellaneous, and well closure.

Discussion of specific reclamation procedures and techniques in the following sections are correlated to Section 4.1.6 General Reclamation Procedures. To minimize redundancy, the reviewer should refer to that section regarding procedural specifics.

4.2.1 Action Plan for Reclamation of Mining Roads within Millsite Lease

Four types of mine-related roads will be found at True North: haul roads, utility roads, access roads, and exploration roads. Although these roads differ somewhat in width and construction, reclamation essentially will be the same for all. At the end of the proposed mine life, approximately 54 acres of roads will be present. These roads will require specific evaluation by FGMI and the State to determine which roads should be reclaimed and which roads should be maintained for long-term monitoring and public access to the site.

These roads will be individually analyzed by the State and FGMI to determine which will be reclaimed dependent on post mining land use and site access requirements. Reclamation procedures will be similar for all types of roads that are to be reclaimed. Culverts will be removed; natural drainage areas restored or stabilized and roadbeds will be graded where necessary to provide adequate drainage. Following grading, roadbeds will be scarified/ripped depending upon the degree of compaction and seeded and mulched if needed. Water bars to divert run-on and run-off and control erosion and berms to restrict human access will be incorporated where necessary and as approved by ADNR.

4.2.2 Action Plan for Reclamation of Pits

During active mining, reclamation activity in and around the open pit will be limited to controlling erosion on the mine roads. Upon final mine closure, mine roads in and around the pit will be smoothed of all berms except those necessary for erosion control and safety. Road cuts and fills will be recontoured as much as feasible, and the

roadbeds will be ripped and scarified where necessary.

The East pit will be backfilled with a 2 million ton development rock dump placed directly over the pit site

The Hindenburg pit will encompass 67.21 acres in final configuration. The preferred option is backfilling the pit to allow free drainage to prevent formation of a lake. If a pit lake were to occur, FGMI will provide predictions and supporting data concerning long-term pit water quality, and potential outflow from the pit lake.

Maximization of pit backfilling is the goal; however the amount of backfilling done at a given site will be determined using the following three-step approach:

1. Completing backfilling to a surface configuration that will achieve the designated post-mining land use and to the extent possible conform to the surrounding landscape is the preferred option.

2. Sequence of mining activities and mine plans will be conducted in such a manner that potential backfill options are maximized.

3. The actual amount of backfill that occurs at a site will be based on the potential to adversely impact water quality, post-mining land use, and economics.

Within the pit, seedbeds will be prepared on selected benches and flat areas. Necessity, logistics, and safety will dictate growth medium placement and seeding. The Hindenburg Pit highwalls will be stabilized where practicable based on FGMI engineering recommendations. Stable highwalls, which are suitable for raptor nesting will be left in place. However, the main goal is to maximize reduction of pit highwall to stable slopes that may provide for greater options for long term designated post-mining land use and enhance safety at the site following mining. The amount of highwall reduction at a given site will be determined using the following four-step approach:

1. Reduce highwalls through placement of development rock along the face or through blasting of the face to produce angle of repose slopes that will achieve the designated post-mining land use and to the extent possible conform to the surrounding landscape.

2. Sequence of mining activities and mine plans will be conducted in such a manner that potential highwall reduction options are maximized (e.g. backfilling).

3. Options for restricting access to remaining pit highwall areas include berms and fencing; the preferred option for limiting human access and limiting safety concerns will be one that minimizes long-term maintenance.

4. Mechanisms shall be established to provide for long-term maintenance of pit wall safety structures.

Specific Criteria:

1) The pit slopes will be left in a stable condition by the completion of active reclamation work (Phase I).

2) Upon cessation of mining, safety berms will be constructed and warning signs posted along steep or developing stable slopes and areas with limited access in and about the pit.

3) Flat benches will be overlaid with topsoil or suitable growth medium and revegetated to the best extent practicable.

4) Design of mine roads to the pit for recreational use and safe access areas (entry and egress) for terrestrial wildlife will be coordinated with the ADNR and ADF&G.

4.2.3 Action Plan for Reclamation of Development Rock Dumps

Upon cessation of mining at the True North Project development rock dumps containing approximately 8 million tons of overburden and development rock will require reclamation. Since termination of mining likewise will eliminate the need for these facilities, final reclamation will be initiated immediately after mining ceases. Alternative habitat options will be considered throughout concurrent and final reclamation but shall require the approval of ADNR and ADF&G.

Reclamation of the development rock dumps will require a large amount of grading and contouring. Dumps will be constructed by end dumping. Thus, slopes generally will be at angle-of-repose. Those dumps that initially are overburden stockpiles will have one or more lifts. Where lifts are terraced, lift slopes will be angle-of-repose but overall dump slopes generally will be shallower.

Grading and sloping of the dumps will entail rounding of the crests and pushing material outward to establish a slope of approximately 2.5H:1V – 3.0H:1V. Since most dump side slopes will be constructed with multiple lifts, each lift will be sloped individually to partially fill the next lower bench. Aesthetically, multiple-lift dumps will have an overall "rolling" appearance (Figure 4-2). The tops of the dumps will be rounded to minimize impoundment of storm waters and snowmelt. Large boulders that are uncovered during grading will 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.

Following grading and contouring, approximately 6 inches of growth medium will be applied to promote establishment of a vegetative cover if required. The development rock dumps at the True North Project will contain variable amounts of finer grained material and/or overburden material, which may require less growth medium than other facilities (see Section 4.1.7.2.1). The fine fraction of dump material will be evaluated for growth medium characteristics. When final grading, contouring, and application of growth

medium have been completed, dumps may require ripping along contours. Intervals between contour rips will be based upon best engineering judgment and length of slope. Contour ripping will reduce erosion potential by reducing smooth slope length, increase infiltration, provide micro-habitats for increased moisture retention and seed germination, and help break linear aspects relative to aesthetics. On multiple-lift dumps, the contours around the toe area of each lift will be ripped, if necessary, for the stated reasons as well as to reduce the potential for ponding on the bench areas. Brush berms and/or sedimentation berms, constructed at the toe of each dump, will remain until a vegetative cover is established and the potential for erosion is minimized.

Dumps will be seeded and mulched, (if needed), following physical preparation. Due to the rocky, irregular nature of the final slopes broadcast-seeding methods will be utilized.

The final reclamation goal is to achieve stable and naturally revegetated development rock dumps that do not adversely affect downstream water quality. To accomplish this goal the following approach will be used:

1. Growth medium and organic cover material will be stripped prior to development of rock dumps unless removal of these materials would decrease the stability of the development rock dump.

2. Stripped growth medium materials will be placed along the lateral perimeter of the development rock dump to facilitate reuse of material for placement on the development rock dump where required to achieve revegetation.

3. Diversification of habitats within development rock dumps will be considered.

4. Natural revegetation is preferred.

5. Development Rock Dumps will be covered with approximately six inches of topsoil or suitable growth medium, if needed to facilitate revegetation.

6. Water (runoff) from development rock dumps will be sampled to ensure protection of down gradient surface and ground waters.

7. Concurrent reclamation on rock dumps is difficult to anticipate due to changes in mine plans and the inherent danger of reclamation crews working below active dumpsites. FGMI will concurrently reclaim inactive dumps that will not be re-disturbed and pose no threats to the health and safety of personnel performing the reclamation.

4.2.3.1 Development Rock Potential For Acid Rock Drainage (ARD)

FGMI has evaluated overburden, ore and development rock as to their potential to generate ARD. The Acid/Base Accounting (ABA) analysis for the proposed Hindenburg and East pits during baseline studies indicate minimal potential for acid generation. 20%

of the exploration holes drilled in 1999 and reviews of geologic logs from past exploration drilling programs since 1992 were used to make this determination. The ABA static testing of drill holes and results of analysis found in Appendix D indicate minimal potential for acid formation in the development rock or exposed surfaces of the Hindenburg and East pits. The ABA testing was used to characterize the potential of both ore and waste material to adversely impact either surface or ground water.

Water quality will continue to be monitored quarterly and quarterly ABA characterization of development rock and ore will continue over the life of the operation and at final reclamation. Annual characterization of development rock and disturbed areas shall be evaluated for mine leachate at neutral pH using the Meteoric Water Mobility Procedure (MWMP). Predictions of potential metals available in leachate shall be developed. Assessments of the neutralization potential of surrounding rock will be ongoing. If FGMI becomes aware of acid formation occurring or the potential thereof, this issue will be managed according to Best Management Practices (BMP) specific to ARD. If routine characterization of material indicates a potential for acid rock drainage, then a specific management plan for material handling will be immediately developed by FGMI. This plan will be submitted to ADNR and ADEC for approval, and the reclamation plan modified according to 11 AAC 97.240. The plan will detail the method or methods for segregating sulfides for encapsulation or mixing oxide and sulfides to neutralize acid generating potential. The plan will list specific BMP's to manage storm water run-on and runoff during and after final reclamation.

4.2.4 Action Plan for Reclamation of Building and Equipment Sites

Four main reclamation components for the True North Project buildings and equipment sites are as follows:

1. As facility components of the site are decommissioned, materials, equipment, and buildings will be removed from the True North Project.

2. Non-hazardous and nontoxic solid waste such as lumber and non-salvageable metal scrap will be burned on-site and/or disposed in satellite dumpsters

3. Hazardous and toxic materials such as petroleum products, acids, and solvents will be moved off-site by licensed transporters and either returned to the vendor or disposed at licensed facilities.

4. Equipment and piping not needed for the reclamation and monitoring process will be utilized at another mining site, sold or salvaged, or disposed in a manner approved by ADNR and other appropriate agencies. Past experience indicates that most equipment will be either utilized at other facilities or sold. Disposition of fencing and power facilities are discussed in Section 4.2.5.

Buildings remaining at the True North Project when the mine ceases production will be portable office buildings, and the maintenance complex. As various site components

cease operation, associated buildings will be emptied, dismantled, and removed from the True North Project site for utilization at other operations, sold, or salvaged. If sold or salvaged, it is likely that the purchaser or salvager will do removal. FGMI will continue to be responsible for the facilities until the buildings are removed. Remaining structures (Table 5) on the site and foundations will be reduced to rubble and disposed in a manner approved by the ADNR and ADEC. Disposal alternatives include insitu burial or disposal. FGMI proposes insitu burial of the foundations.

Reclamation of building and equipment sites will follow procedures outlined previously. Sites will be graded lightly for proper drainage, ripped and scarified, seeded, and if necessary mulched. Although it is not likely that growth medium will be needed, each site will be so evaluated following final grading. If growth medium is needed it will be applied at approximately a 6 -inch cover layer.

Table 5
List of Buildings at Completion of Mining

Building or Site ID	Foundation Area (sq. ft)	Site Acres
Maintenance Bays 1-3	4,320	0.10
Electrical Building	1,440	0.03
Wash/Aprons	3,000	0.07

4.2.5 Action Plan for Reclamation of Miscellaneous Sites

Aside from building and equipment sites discussed in Section 4.2.4, miscellaneous sites or issues for discussion at the True North Project include well closure and electrical power facilities. All structures will be removed unless otherwise decided with the concurrence of ADNR.

4.2.5.1 Action Plan for Reclamation of Wells and Well Closure

All wells will be plugged and surface casing removed when abandoned. At the present time nine-baseline monitoring wells are in place (Figure 4-3 shows well locations). When mining ceases, additional wells may require abandonment. This issue will be revisited at each annual meeting as additional operating data becomes available and during development of final closure plans. Final closure and monitoring plans will require approval from ADEC and the ADNR.

Well abandonment will be conducted according to ADEC regulations (18 AAC 80.015). FGMI will follow the abandonment procedures including removal and disposal of pumps and piping, removal of the casing where possible or perforation, plugging of the well with an approved sealing material at total depth, removal of the surface casing, minor grading around the well site, and seeding and mulching.

4.2.5.2 Action Plan for Reclamation of Fence Removal

Any fencing established on the True North Project site shall be removed upon closure.

4.2.5.3 Action Plan for Reclamation of Electrical Power Facilities

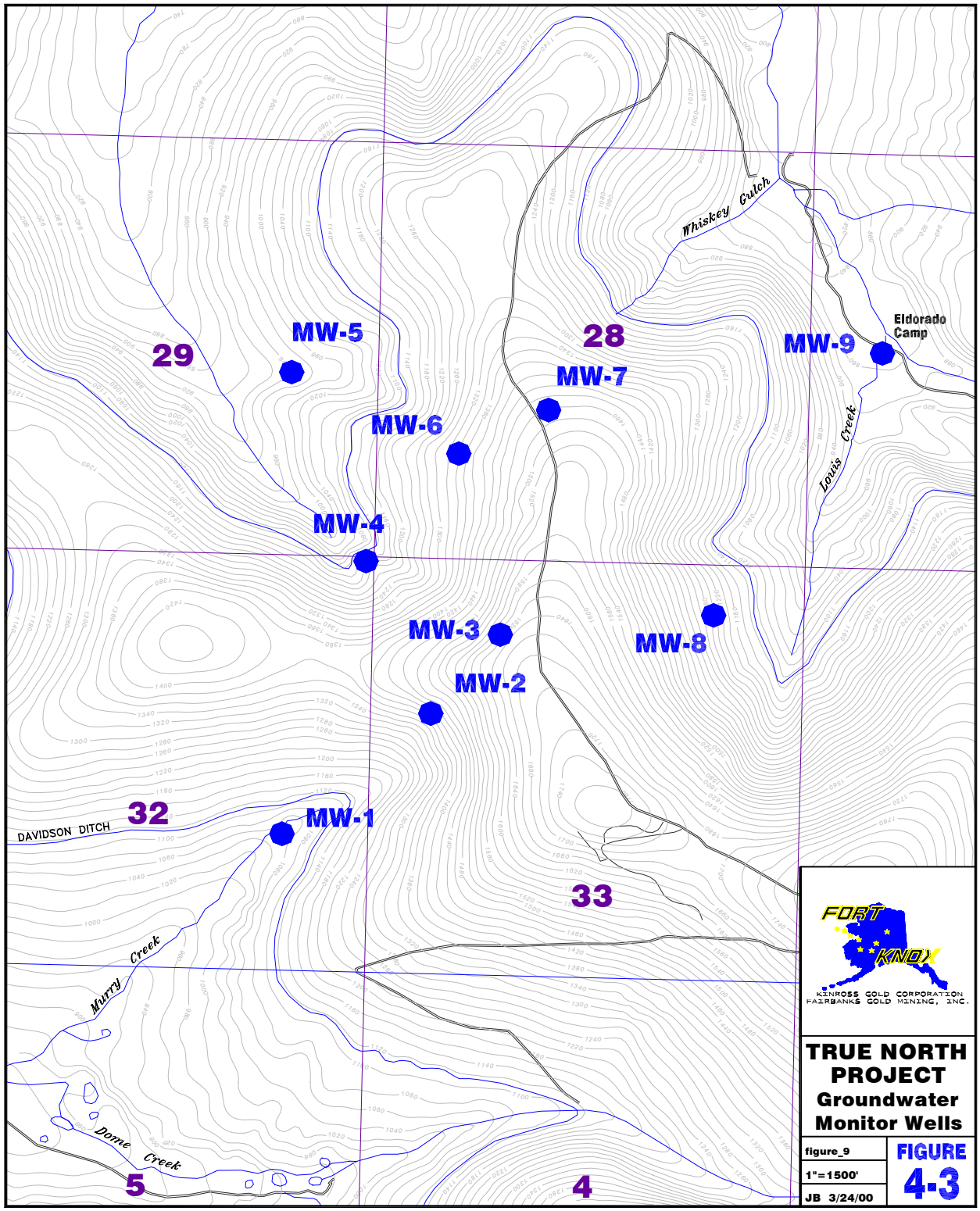
One primary electrical power substation will service the True North Project. When electrical power requirements are no longer necessary, substations and associated facilities will be removed from the site, unless approved otherwise by the ADNR.

4.2.6 Surface Water and Groundwater Protection Plans

Implementation of Best Management Practices (BMP) to control erosion during active mining will be designed to minimize re-disturbance during reclamation and active reclamation. The BMPs will be consistent with those measures and practices identified in EPA's *Storm Water Pollution Prevention for Industrial Activities* and the approved True North Project Storm Water Pollution Prevention Plan. Temporary control devices will be removed when the site-specific threat of erosion has been minimized through earthwork or revegetation.

5.0 APPLICANT STATEMENT OF RESPONSIBILITY

FGMI recognizes its responsibility in the use of public (State) lands and accepts that responsibility in agreeing to reclaim the True North Project site. FGMI will 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. FGMI will meet required local, State, and Federal regulations regarding reclamation of any surface area affected by the mining operation. Reclamation activities and post-reclamation maintenance of remaining structures are FGMI's responsibility. In the event a new operator/land owner assumes control of the True North Project, the new operator or land owner will 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/land owner will request transfer of all applicable State and Federal permits. The new operator/land owner will provide surety acceptable to the U.S. Army Corps of Engineers and with ADNR as allowed by **11 AAC 97.420 (c)** that will cover reclamation of disturbed land.



KENNECOTT GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.

TRUE NORTH PROJECT
Groundwater Monitor Wells

figure_9	FIGURE 4-3
1"=1500'	
JB 3/24/00	

6.0 ESTIMATE OF RECLAMATION COSTS AND LONG-TERM POST RECLAMATION MAINTENANCE OBLIGATIONS THROUGH 2003

6.1 Reclamation Cost Estimates and Bond Adjustment

The total estimated costs to reclaim the True North Project site are **$261,554.00** (Year 2000 dollars). True North end of mine life reclaimed cost estimates, map, and volume of material information are contained in Appendix E. FGMI will reclaim affected land as contemporaneously as practicable.

Under the provisions of 11 AAC 97.320. (a), FGMI will file an annual report that includes the volume of material mined in that year, the total acreage reclaimed in that year, and a statement as to whether the reclamation plan is on schedule.

General assumptions used in constructing the cost estimates are as follows:

- Wage rates are based on the Davis Bacon Wages determination for Alaska. Wage rates include; base salary, fringe, Alaska Workmen's Compensation, FICA, and unemployment.

- Equipment and productivity rates are based upon 29th Edition of the Caterpillar Performance Handbook.

- Estimates for material costs (seed, fertilizer, mulch, and cement) are based on vendor quotes, contractor estimates, and actual experience with concurrent reclamation at Fort Knox and other operations within interior Alaska.

- Fencing and replacement of growth medium costs are all inclusive of labor, equipment, and materials and are based on actual experience and contractor estimates.

- Well abandonment costs are premised on actual cost of cement and all-inclusive cost for labor and equipment based on extensive experience at the Fort Knox Mine, Sleeper Mine, Ryan Lode Mine, and well drilling contractor estimates.

Cost estimates for surety determination assume work being completed by a qualified Alaska contractor.

Since the various facilities such as the pit and development rock dumps, have different reclamation requirements, successful reclamation will be achieved much more rapidly for some facilities than others. Therefore, FGMI will seek incremental surety release on each facility or affected acreage as successful reclamation is completed as required in 11 AAC 97.435.

6.2 Reclamation Plan and Performance Bond Evaluation

This reclamation plan and a performance evaluation will be conducted at the end of the first year of operation during the first annual meeting. Further evaluations will be conducted at each annual meeting during operation and final closure phases of the project.

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 reclamation 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 will be required before this plan can be approved. Bonding and any bond reduction amounts will be set on a site-specific basis by ADNR 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” will be treated by the agency in accordance with that agency's laws, rules, and regulations.

E. FGMI will conduct an Environmental Closure Audit to determine if any previously unknown environmental liabilities exist as a direct or indirect result of the proposed True North Project.

Fairbanks Gold Mining, Inc. has reviewed and agrees to comply with all conditions in the reclamation plan. Fairbanks Gold Mining, Inc. understands that the bond will not be released until ADNR gives written approval of the reclamation work.

FAIRBANKS GOLD MINING, INC.

By: _____

Title: _____

Signature: _____

Date: _____

REFERENCES

ABR, Inc.-Environmental Research & Services (1998). Reconnaissance Evaluation of threatened and Endangered Species in the True North Joint Venture Project Area, 1998. Fairbanks, AK.

Golder Association Inc. (2000). True North project Waste Dump Site Investigation and Stability Evaluations. Anchorage, AK.

Hill, J.M. (1933). Lode Deposits of the Fairbanks District, Alaska. USGS Bulletin 849-B. U.S. Government Printing Office, Washington, D.C., 163 pp.

Joesting, H.R. (1942). Antimony and Tungsten Deposits in Fairbanks and Adjacent Areas, MR-194-11.

Parker, G.A. (1929). The evolution of Placer Mining Methods in Alaska. B.S. Thesis, Geology and Mining, Alaska Agricultural College and School of Mines, College, Alaska, 64 pp.

APPENDIX A

KINROSS GOLD CORPORATION
ENVIRONMENTAL POLICY

KINROSS GOLD CORPORATION
ENVIRONMENTAL POLICY

OBJECTIVE

Kinross Gold Corporation recognizes that maintenance of environmental quality is vital to the Company's existence**,** progress, and continued development. The Company will maintain high environmental standards limited only by technical and economic feasibility. The Company will take positive action to protect the safety of its workers, conserve natural resources, and minimize the impact of its activities on the environment through diligent application of appropriate technology and responsible conduct at all stages of exploration, mine development, mining, mineral processing, decommissioning, and reclamation.

The purpose of Kinross Gold Corporation's Environmental Policy is to provide a measurable framework for the performance of the Company's activities in an environmentally responsible manner, ensuring compliance by the Company and its employees with all applicable environmental regulations and commitments.

IMPLEMENTATION

Kinross Gold Corporation will:

Evaluate, plan, construct, and operate all projects and facilities to reduce adverse environmental impacts and to meet or exceed applicable environmental laws, regulations, and standards. In the absence of applicable regulations, the Company will apply cost effective best management practices to protect the environment.

Require managers of all projects and operations to adhere to the Company Environmental Policy and to identify, evaluate, and minimize risks to the environment.

Continuously review environmental achievements and technology to seek and implement methods for further improvement.

Require all operations to have site-specific emergency response plans, which meet or exceed all applicable regulations.

Conduct regular audits of environmental performance and emergency response plans to verify compliance with the Company's policy and applicable regulations. Identify revisions or improvements to current practices in order to minimize environmental impacts. Report findings quarterly to the Board of Directors.

Educate employees in environmental matters and responsibilities relating to performance of their assigned tasks. Entrust all employees to maintain necessary environmental performance for their activities.

Foster communication with shareholders, the public, employees, and government to enhance understanding of environmental issues affecting the Company's activities.

Work pro-actively with government and the public to define environmental priorities. Participate in the development of responsible laws for the protection of the environment.

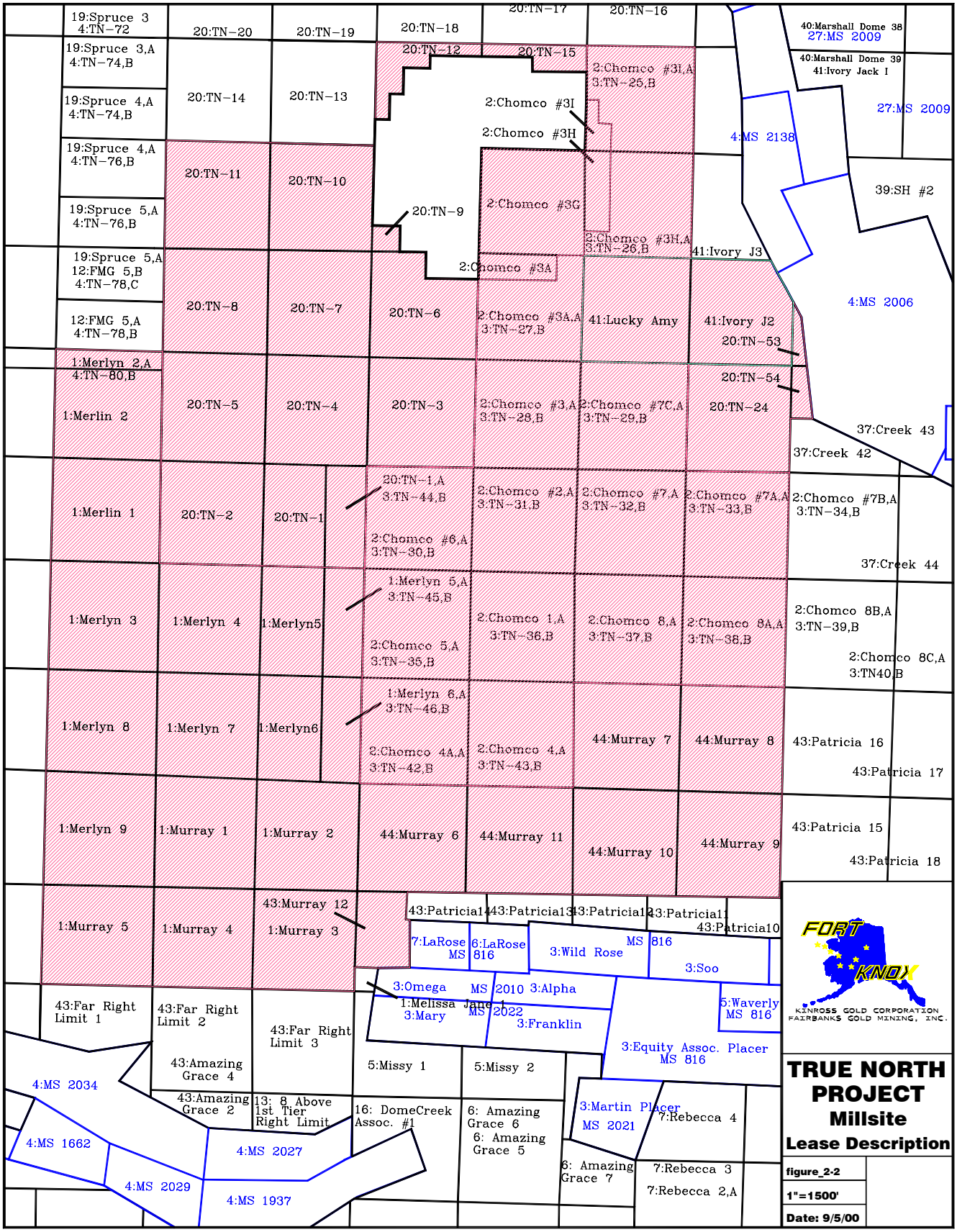
Allocate sufficient resources to meet the Company's environmental goals. Annually assess the projected costs of decommissioning and reclamation while funding "off balance sheet" an appropriate amount to ensure that there are sufficient cash reserves to pay for these costs upon closure.

Robert M. Buchan
Chairman and CEO

Ned Goodman
Chairman, Environmental Committee
Kinross Board of Directors

APPENDIX B

TRUE NORTH PROJECT
MILLSITE LEASE MAP
&
MILLSITE LEASE LOCATION DESCRIPTION


19:Spruce 3
4:TN-72
20:TN-20
20:TN-19
20:TN-18
20:TN-17
20:TN-16
40:Marshall Dome 38
27:MS 2009
19:Spruce 3,A
4:TN-74,B
20:TN-12
20:TN-15
2:Chomco #3I,A
3:TN-25,B
40:Marshall Dome 39
41:Ivory Jack 1
19:Spruce 4,A
4:TN-74,B
20:TN-14
20:TN-13
2:Chomco #3I
2:Chomco #3H
27:MS 2009
4:MS 2138
19:Spruce 4,A
4:TN-76,B
20:TN-11
20:TN-10
39:SH #2
19:Spruce 5,A
4:TN-76,B
20:TN-9
2:Chomco #3G
2:Chomco #3H,A
3:TN-26,B
41:Ivory J3
19:Spruce 5,A
12:FMG 5,B
4:TN-78,C
2:Chomco #3A
12:FMG 5,A
4:TN-78,B
20:TN-8
20:TN-7
20:TN-6
2:Chomco #3A,A
3:TN-27,B
41:Lucky Amy
41:Ivory J2
4:MS 2006
20:TN-53
1:Merlyn 2,A
4:TN-80,B
20:TN-54
1:Merlin 2
20:TN-5
20:TN-4
20:TN-3
2:Chomco #3,A
3:TN-28,B
2:Chomco #7C,A
3:TN-29,B
20:TN-24
37:Creek 43
37:Creek 42
20:TN-1,A
3:TN-44,B
2:Chomco #2,A
3:TN-31,B
2:Chomco #7,A
3:TN-32,B
2:Chomco #7A,A
3:TN-33,B
2:Chomco #7B,A
3:TN-34,B
1:Merlin 1
20:TN-2
20:TN-1
2:Chomco #6,A
3:TN-30,B
37:Creek 44
1:Merlyn 5,A
3:TN-45,B
2:Chomco 1,A
3:TN-36,B
2:Chomco 8,A
3:TN-37,B
2:Chomco 8A,A
3:TN-38,B
2:Chomco 8B,A
3:TN-39,B
1:Merlyn 3
1:Merlyn 4
1:Merlyn5
2:Chomco 5,A
3:TN-35,B
2:Chomco 8C,A
3:TN40,B
1:Merlyn 6,A
3:TN-46,B
1:Merlyn 8
1:Merlyn 7
1:Merlyn6
2:Chomco 4A,A
3:TN-42,B
2:Chomco 4,A
3:TN-43,B
44:Murray 7
44:Murray 8
43:Patricia 16
43:Patricia 17
1:Merlyn 9
1:Murray 1
1:Murray 2
44:Murray 6
44:Murray 11
44:Murray 10
44:Murray 9
43:Patricia 15
43:Patricia 18
43:Murray 12
1:Murray 3
1:Murray 5
1:Murray 4
43:Patricia14
43:Patricia13
43:Patricia12
43:Patricia11
43:Patricia10
7:LaRose
MS 816
6:LaRose
MS 816
3:Wild Rose
MS 816
3:Soo
3:Omega
MS 2010
3:Alpha
1:Melissa Jane 1
3:Mary
MS 2022
3:Franklin
5:Waverly
MS 816
3:Equity Assoc. Placer
MS 816
43:Far Right
Limit 1
43:Far Right
Limit 2
43:Far Right
Limit 3
5:Missy 1
5:Missy 2
4:MS 2034
43:Amazing
Grace 4
43:Amazing
Grace 2
13: 8 Above
1st Tier
Right Limit
16: DomeCreek
Assoc. #1
6: Amazing
Grace 6
6: Amazing
Grace 5
3:Martin Placer
MS 2021
7:Rebecca 4
4:MS 1662
4:MS 2027
6: Amazing
Grace 7
7:Rebecca 3
4:MS 2029
4:MS 1937
7:Rebecca 2,A
FORT KNOX
KINROSS GOLD CORPORATION
FAIRBANKS GOLD MINING, INC.
TRUE NORTH
PROJECT
Millsite
Lease Description
figure_2-2
1"=1500'
Date: 9/5/00

TRUE NORTH PROJECT LOCATION AND MILLSITE LEASE DESCRIPTIONS

The True North Project is within the Chatanika River watershed located on the northwest flank of Pedro Dome, approximately 25-miles northeast of Fairbanks. The ridgelines drain into Murray Creek, a tributary of Dome Creek to the south; and Louis Creek, Whiskey Gulch, and Spruce Creek, tributaries of Little Eldorado Creek drain to the north. More specifically, the Millsite Lease is located in portions of Section 21, 27, 28, 29, 32 & 33, Township 3N, Range 1E, Fairbanks Meridian.

APPENDIX B
State Mining Claims Included in the Millsite Lease

Block Name: Chomco
Total Count for Claim Block: 16

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
310719	Chomco Number 1	33	283	3N	1E	33	NW
310720	Chomco Number 2	33	284	3N	1E	28	SW
310721	Chomco Number 3	33	285	3N	1E	28	SW
310722	Chomco #3A	34	104	3N	1E	28	NW
310723	Chomco #3G	34	110	3N	1E	28	NW
310724	Chomco # 3H	34	111	3N	1E	28	NE
310725	Chomco #3I	34	112	3N	1E	21	SE
310726	Chomco Number 4	33	286	3N	1E	33	NW
310727	Chomco Number 4A	33	319	3N	1E	33	NW
310728	Chomco Number 5	33	287	3N	1E	33	NW
310729	Chomco Number 6	33	290	3N	1E	28	SW
310730	Chomco Number 7	33	289	3N	1E	28	SE
310731	Chomco Number 7A	34	44	3N	1E	28	SE
310733	Chomco #7C	34	114	3N	1E	28	SE
310734	Chomco Number 8	33	288	3N	1E	33	NE
310735	Chomco #8A	34	138	3N	1E	33	NE

Block Name: Murray # 6-11
Total Count for Claim Block: 6

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
515902	Murray # 6	549	84	3N	1E	33	SW
515903	Murray # 7	549	86	3N	1E	33	NE
515904	Murray # 8	549	87	3N	1E	33	NE
515905	Murray # 9	549	88	3N	1E	33	SE
515906	Murray # 10	549	89	3N	1E	33	SE
515907	Murray # 11	549	90	3N	1E	33	SW

Block Name: Archmedes et al
Total Count for Claim Block: 14

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
500110	Merlin # 1	376	27	3N	1E	29	SW
500111	Merlin # 2	376	154	3N	1E	29	SW
506783	Merlyn # 3	438	476	3N	1E	32	NW
506784	Merlyn # 4	438	477	3N	1E	32	NE
506785	Merlyn # 5	438	478	3N	1E	32	NE
506786	Merlyn # 6	438	479	3N	1E	32	NE
506787	Merlyn # 7	438	480	3N	1E	32	NE
506788	Merlyn # 8	438	481	3N	1E	32	NW
506789	Merlyn # 9	438	482	3N	1E	32	SW
512206	Murray # 1	504	89	3N	1E	32	SE
512207	Murray # 2	504	90	3N	1E	32	SE
512208	Murray # 3	504	91	3N	1E	32	SE
512209	Murray # 4	504	92	3N	1E	32	SE
512210	Murray # 5	504	93	3N	1E	32	SW

Block Name: TN 25-46
Total Count for Claim Block 18

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR

558528	TN-25	834	379	3N	1E	21	SE
558529	TN-26	834	381	3N	1E	28	NE
558530	TN-27	834	382	3N	1E	28	NW
558531	TN-28	834	383	3N	1E	28	SW
558532	TN-29	834	384	3N	1E	28	SE
558533	TN-30	834	385	3N	1E	28	SW
558534	TN-31	834	386	3N	1E	28	SW
558535	TN-32	834	387	3N	1E	28	SE
558536	TN-33	834	388	3N	1E	28	SE
558538	TN-35	834	390	3N	1E	33	NW
558539	TN-36	834	391	3N	1E	33	NW
558540	TN-37	834	392	3N	1E	33	NE
558541	TN-38	834	393	3N	1E	33	NE
558545	TN-42	902	943	3N	1E	33	NW
558546	TN-43	834	398	3N	1E	33	NW
558547	TN-44	834	399	3N	1E	29	SE
558548	TN-45	834	401	3N	1E	32	NE
558549	TN-46	834	402	3N	1E	32	NE

Block Name: Patricia # 8 et al
Total Count for Claim Block 1

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
526454	Murray #12	599	516	3N	1E	33	SW

Block Name: TN 1-24
Total Count for Claim Block 14 **Location Fairbanks Meridian**

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
556342	TN-1	720	566	3N	1E	29	SE
556343	TN-2	720	567	3N	1E	29	SE
556344	TN-3	720	568	3N	1E	28	SW
556345	TN-4	720	569	3N	1E	29	SE
556346	TN-5	720	570	3N	1E	29	SE
556347	TN-6	720	571	3N	1E	28	NW
556348	TN-7	720	572	3N	1E	29	NE
556349	TN-8	720	573	3N	1E	29	NE
556350	TN-9	952	928	3N	1E	28	NW
556351	TN-10	720	575	3N	1E	29	NE
556352	TN-11	720	576	3N	1E	29	NE
556505	TN-12	722	703	3N	1E	21	SW
556508	TN-15	952	931	3N	1E	21	SW
556517	TN-24	722	716	3N	1E	28	SE

Block Name: TN 47 ETAL
Total Count for Claim Block 2

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
559580	TN-53	885	758	3N	1E	27	NW
559581	TN-54	885	759	3N	1E	27	SW

Block Name: Whiskey Gulch
Total Count for Claim Block 2

ADL#	Claim Name	Book	Page	TWP	RGE	SEC	QTR
315221	Lucky Amy	167	232	3N	1E	28	NE
	(amended 1/28/80)	167	860				
523232	Ivory J2	582	518	3N	1E	28	NE

APPENDIX C

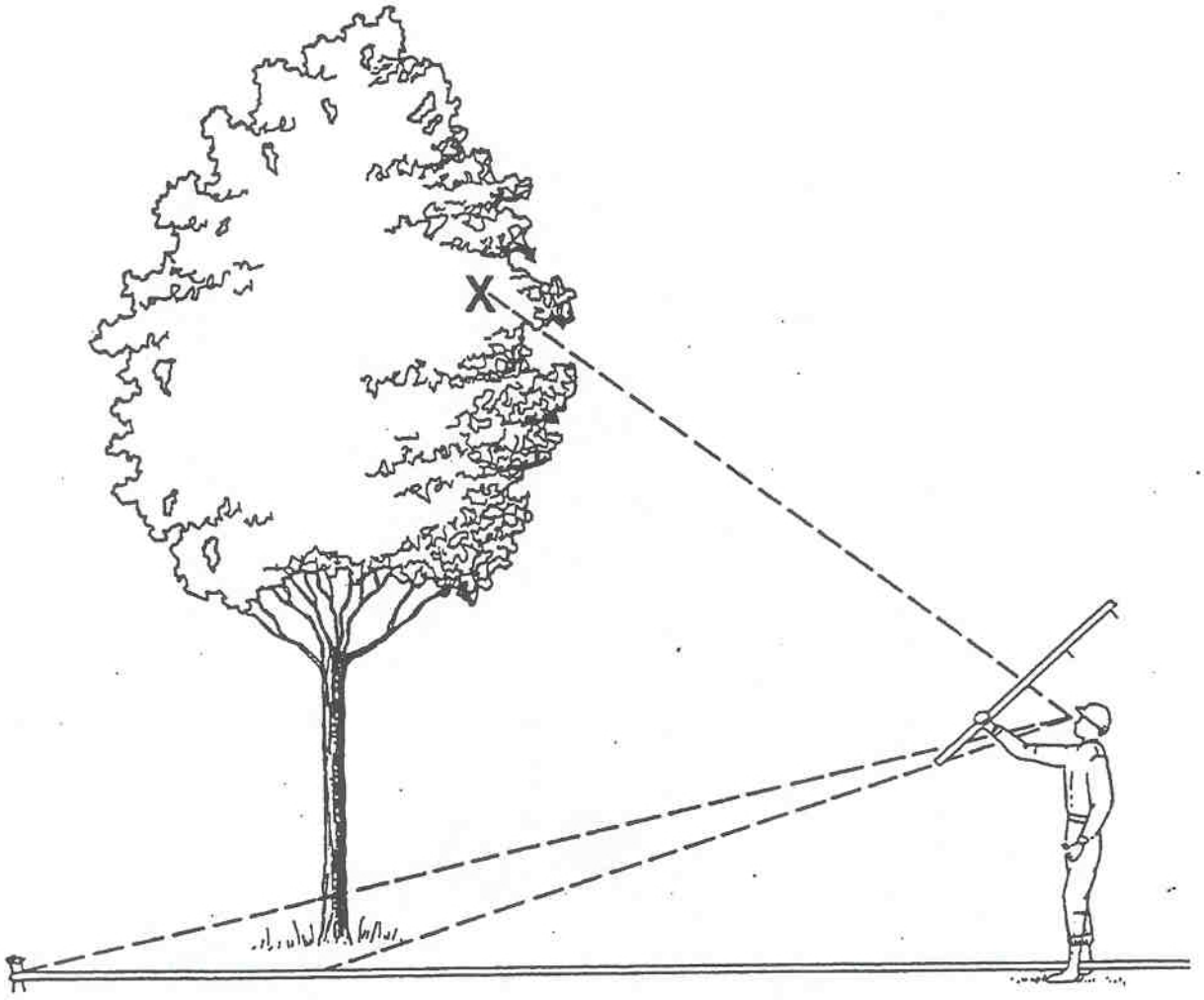
U.S. FISH & WILDLIFE SERVICE

ESTIMATING WILDLIFE HABITAT VARIABLES@

Biological Services Program

FWS/OBS-81/47
September 1981

ESTIMATING WILDLIFE HABITAT VARIABLES



Fish and Wildlife Service

U.S. Department of the Interior

FWS/OBS-81/47
September 1981

ESTIMATING WILDLIFE HABITAT VARIABLES

by

Robert L. Hays
Western Energy and Land Use Team
U.S. Fish and Wildlife Service
Fort Collins, Colorado 80526

and

Cliff Summers and William Seitz
Colorado Cooperative Wildlife Research Unit
Colorado State University
Fort Collins, Colorado 80523

Western Energy and Land Use Team
Office of Biological Services
Fish and Wildlife Service
U.S. Department of the Interior
Washington, D.C. 20240

Use: In forestry to calculate total volume of harvestable wood on the site.

Suggested techniques: Line Intercept (p. 40); Bitterlich Method (p. 43); Calculated Cover (p. 50); Point Intercept - Step Point (p. 50); Point Intercept - Pin Frame (p. 52). See Table 3 for a comparison of these techniques' suitability under various study conditions.

2.3.3 Canopy Cover (and Brushpile Cover and Bare Ground)

The projection used in the definition of cover (section 2.3.1, above), is the general outline of plants, ignoring minor gaps between branches and holes in the center of the plant. This is typically used for single strata (layers) in the vegetation. It is hard to define the general outlines when plants have overlapping branches. Hence, it is used most when plants do not overlap much. It is also called "crown closure." Brushpiles can be treated with this concept. Bare ground is sometimes calculated by subtracting absolute cover values for all the plants in the community from 100%. Under this approach, litter is often treated as "bare ground", and patches of bare soil underneath trees and shrubs are not counted as "bare ground" (see also Foliar Cover, section 2.3.4). Canopy cover is used in forestry to calculate total volume of wood on a site from aerial photos, and in wildlife management as an indication of the amount of vegetation in various strata (and, hence, to indicate the availability of food and cover).

Suggested techniques: Line Intercept (p. 40); Bitterlich Method (p. 43); Calculated Cover (p. 50); Point Intercept - Step Point (p. 50); Point Intercept - Pin Frame (p. 52); Point Intercept - Spherical Densiometer (p.)55; Point Intercept - Canopy Camera (p. 56); Ocular Estimation of Cover (p. 58); and RS: Crown Density Scale; Bitterlich Method; Ocular Estimation of cover. See Table 4 for a comparison of these techniques' suitability under various study conditions.

2.3.4 Foliar Cover (and Litter Cover and Bare Ground)

The projection used in the definition of cover (section 2.3.1, above) is for each separate plant part. Thus, gaps between leaves or branches do not contribute to the measured cover. As usually applied, "foliar" also includes stems, flowers, and all other plant parts. Litter on the ground, e.g., dead leaves and branches, is usually treated with this concept. What constitutes "litter" must be clearly defined, because there is a continuum between freshly fallen plant parts and highly decomposed material whose source can no longer be recognized. Bare ground is sometimes measured directly in terms of this concept. However, bare ground is also sometimes measured wherever there are no plant parts or litter close to (above) the surface, even though taller plant parts (e.g., a tree's branches are present above the point) (see also Canopy Cover, section 2.3.3). Foliar and litter cover are used in forestry and range management to predict erosion rates; foliar cover is used in ecology to predict primary production.

Suggested techniques: Point Intercept - Step Point (p. 50); Point Intercept - Pin Frame (p. 52); Point Intercept - Spherical Densiometer (p. 55); Point Intercept - Canopy Camera (p. 56); Ocular Estimation of Cover (p. 58).

3.14 CALCULATED COVER

3.14.1 Variable Estimated

Canopy or Basal Cover of trees or shrubs(pp. 5, 7).

3.14.2 Description

In summary, the results of a measurement of density and of mean canopy area or basal area for the same site are used to calculate cover.

If data are available on density (Techniques 3.20 or 3.21) and mean canopy or basal area for plants (Techniques 3.1 and 3.23) on the same site, these estimates can be combined to estimate cover. The following formula applies:

$$C = 100\ AD$$

where C = cover (%)
A = mean area per plant (area)
D = density of plants (number per unit area, where the area units are the same as area for A, above)

3.14.3 Accuracy

The accuracy of the calculated cover is a function of the accuracies of the constituent measurements of density and mean area . For basal area of trees, it is usually medium to low in accuracy. For canopy cover, it tends to have low accuracy, due to deviations of canopy shape from circular.

3.14.4 Application Notes

This technique is most appropriate where the separate measures of density and canopy or basal area are required for other purposes. A convenient sampling approach is to combine T-square Nearest Neighbor Sampling (p. 62) for density with Crown Diameter (p. 15) or Diameter Tape (p. 18) and Averaging (p. 69). Each plant measured for the T-square sampling can also be used for area measurement. If the average area per plant is not required, it is usually preferable to measure cover with the Line Intercept (p. 40), Bitterlich Method (p. 43), Point Intercept-Spherical Densiometer (p. 55), or RS: Crown Density Scale at the same time density is being measured. One convenient way to do this is by combining a Line Intercept (p. 40) for measuring cover with a belt Quadrat (p. 65) for measuring density. The line transect forms one side of the belt quadrat.

3.15 POINT INTERCEPT-STEP POINT

3.15.1 Variables Estimated

Canopy cover of herbs, shrubs or trees, basal cover of herbs, foliar cover of low herbs, litter cover, or bare ground (pp. 5, 7).

3.15.2 Description

In summary, data are collected by recording what is present at (or directly above) the toe of a boot as one walks a line transect.

A V-shaped notch is cut in the sole at the toe of one boot of the person that makes the measurements (see Equipment section, below). Within the site, one or more line transects are laid out (see Appendix A). The observer walks along the transect and records a sample point each time the notched boot is placed on the ground. It is essential to walk straight and maintain a constant step length irrespective of barriers, briar patches, change in slope, and other factors. For each sample point, the observer records the item which occupies the line of sight for the majority of the notch. The observer must take care to exclude litter and vegetation which is pushed out of its undisturbed position. It is often desirable to record separately for each point the data for herbs, shrubs less than eye height, and taller trees and shrubs. The taller plants can be sampled by visual estimation of the location of a vertical line above the notch, or using the Vertical Rod (p. 39), which is more accurate.

General calculations are as follows for each category (X) recorded (e.g., plant species):

$$\% \text{ ground cover} = \frac{\text{no. hits on X}}{\text{total no. sample points}} \times 100$$

This method has been modified by the addition of a pointed pin or rod (R. Francis, pers. comm.). The toe of the boot is lifted upward, and the pin or rod can be slid through the notch and used to select the sample point.

3.15.3 Accuracy

This technique is rather crude. Errors in pacing the transect invariably occur, usually resulting in underestimation of shrubs and other obstacles. In addition, it is often hard to eliminate errors caused by moving vegetation out of its original position. The pointed rod may alleviate some of this bias (R. Francis, pers. comm.). Estimation of taller vegetation (e.g., trees) by line of sight is even less accurate than the results for low grasses and forbs, but using the Vertical Rod (p. 39) will give results whose accuracy is comparable to those for herbs. Error can also result from the uniform spacing of points. This can be minimized by using several short transects, rather than one or two long ones.

3.15.4 Application Notes

This technique permits collection of many data points quickly. This is an advantage if the site is relatively heterogeneous. One person can easily apply this alone. It is best in grasslands, savannas, and open forests on even terrain. If conditions make it difficult to walk in a straight line, or if accuracy is needed, an alternative technique should be used such as: Line Intercept (p. 40); Bitterlich Method (p. 43); Point Intercept-Pin Frame (p. 52), Spherical Densiometer (p. 55), or Canopy Camera (p. 56); or RS: Crown Density Scale.

3.15.5 Training

This technique can be learned in less than 1 hr. A 1/2 hr practice session in the field is usually adequate (J. Hagihara, pers. comm.). Complex communities may require 4 hr of practice (R. Francis, pers. comm.).

3.15.6 Equipment

Pointed rod (option). One notched boot (The notch should be in the tip of the toe, 0.3 cm (1/8 in) wide and 0.15 cm (1/16 in) deep.

3.15.7 Cost

One-half to 1 hr per 200 m transect.

3.15.8 References

USDA Forest Service 1970.

3.16 POINT INTERCEPT-PIN FRAME

3.16.1 Variables Estimated

Basal, canopy, or foliar cover of low shrubs and herbs (pp. 5, 7).

3.16.2 Description

In summary, a frame is repeatedly set up in the site. The frame is used to identify specific points on the ground. Each point is scored for what is present.

A random point is selected within the site (see Appendix A). This point locates one end of the frame. Next, a random direction is selected (see Appendix A) to determine the location of the other end of the frame. The frame is erected by pushing the points into the ground or by using the support rod (see equipment section below).

A sample point is determined either by sighting through the frame's crosshairs, or by lowering a pin until its tip first contacts a plant or the ground (Fig. 14). What is contacted is recorded for each point. For basal cover, it may be necessary to look beneath the first contact (or extend the pin) until it is clear what is contacted at the specified height for measurement. For canopy cover, it must be decided whether or not the point lies within a plant canopy's projection. After reading all the points in the frame, a new location is selected and the process is repeated.

Cover is calculated by:

$$\text{Cover of X (\%)} = \frac{\text{Number of hits on X}}{\text{Total number of points}} \quad (100)$$

APPENDIX D

ACID BASE ACCOUNTING RESULTS OF ANALYSIS FOR THE 1999 EXPLORATION DRILLING PROGRAM (20% OF ALL HOLES DRILLED) & LOCATION DRAWING

True North Mine Project

ABA Sample #99-TN-744

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	<0.01	0.00	48.4	48.4					
10	20	0.05	1.56	56.6	55.0					
20	30	<0.01	0.00	238.0	238.0					
30	40	<0.01	0.00	232.0	232.0					
40	50	<0.01	0.00	229.0	229.0					
50	60	0.04	1.25	220.0	218.8					
60	70	<0.01	0.00	235.0	235.0					
70	80	0.07	2.19	185.0	182.8					
80	90	0.09	2.81	28.9	26.1					
90	100	0.03	0.94	157.0	156.1					
100	110	0.07	2.19	166.0	163.8					
110	120	0.03	0.94	116.0	115.1					
120	130	0.04	1.25	27.0	25.8					
130	140	0.02	0.62	21.4	20.8					
140	150	0.05	1.56	21.4	19.8					
150	160	0.06	1.87	24.9	23.0					
160	170	0.02	0.62	17.1	16.5					
170	180	0.05	1.56	6.6	5.0					
180	190	0.24	7.50	54.6	47.1					
190	200	0.13	4.06	48.1	44.0					
200	210	0.28	8.75	37.1	28.4					
210	220	0.10	3.12	127.0	123.9					
220	230	0.61	19.10	244.0	224.9					
230	240	0.31	9.68	154.0	144.3					
240	250	0.19	5.94	164.0	158.1					
250	260	0.19	5.94	95.7	89.8					
260	270	0.65	20.30	129.0	108.7					
270	280	0.14	4.37	53.9	49.5					
280	290	0.16	5.00	174.0	169.0					
290	300	0.46	14.40	175.0	160.6					

True North Mine Project

ABA Sample #99-TN-744

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
300	310	0.63	19.70	172.0	152.3					
310	320	1.36	42.50	166.0	123.5					
320	330	0.75	23.40	228.0	204.6					
330	340	0.70	21.90	219.0	197.1					
340	350	1.19	37.20	220.0	182.8					
350	360	3.23	101.00	174.0	73.0					
360	370	0.76	23.70	234.0	210.3					
370	380	2.15	67.20	217.0	149.8					
380	390	0.28	8.75	227.0	218.3					
390	400	0.85	26.60	239.0	212.4					
400	410	0.78	24.40	218.0	193.6					
410	420	3.94	123.00	218.0	95.0					
420	430	4.34	136.00	222.0	86.0					
430	440	1.16	36.20	225.0	188.8					
440	450	0.60	18.70	221.0	202.3					
450	460	3.76	117.00	234.0	117.0					
460	470	1.32	41.20	229.0	187.8					
470	480	2.40	75.00	222.0	147.0					
480	490	3.35	105.00	222.0	117.0					
490	495	3.20	100.00	221.0	121.0					

True North Mine Project

ABA Sample #99-TN-749

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.01	0.31	32.9	32.6					
10	20	<0.01	0.00	311	311					
20	30	<0.01	0.00	496	496					
30	40	<0.01	0.00	459	459					
30	40	<0.01	0.00	458	458					
40	50	0.16	5.00	282	277					
50	60	0.24	7.50	143	135					
60	70	0.01	0.31	14.1	13.7					
70	80	0.02	0.62	9.58	8.96					
80	90	0.01	0.31	9.66	9.35					
90	100	<0.01	0.00	13.6	13.6					
100	110	<0.01	0.00	6.10	6.10					
110	120	0.01	0.31	5.12	4.81					
120	130	<0.01	0.00	3.84	3.84					
120	130	<0.01	0.00	3.46	3.46					
130	140	<0.01	0.00	2.41	2.41					
140	150	<0.01	0.00	3.32	3.32					

True North Mine Project

ABA Sample #99-TN-750

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.01	0.31	7.29	6.98					
10	20	0.01	0.31	10.2	9.87					
20	30	0.01	0.31	10.5	10.2					
20	30	<0.01	0.00	10.9	10.9					
30	40	<0.01	0.00	9.47	9.47					
40	50	0.01	0.31	11.1	10.8					
50	60	<0.01	0.00	11.4	11.4					
60	70	<0.01	0.00	1.85	1.85					
70	80	<0.01	0.00	3.05	3.05					
80	90	<0.01	0.00	3.79	3.79					
90	100	<0.01	0.00	3.41	3.41					
100	110	<0.01	0.00	4.16	4.16					
110	120	0.11	3.44	387	383					
120	130	0.07	2.19	532	530					
130	140	<0.01	0.00	464	464					
140	150	<0.01	0.00	467	467					
150	160	<0.01	0.00	472	472					
160	170	<0.01	0.00	493	493					
170	180	<0.01	0.00	526	526					
		0.27	8.43	45.5	37.1					

True North Mine Project

ABA Sample #99-TN-752

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
34	40	0.01	0.31	66.9	66.6					
40	50	<0.01	0.00	78.1	78.1					
50	60	0.01	0.31	80.4	80.0					
60	70	<0.01	0.00	284	284					
70	80	<0.01	0.00	214	214					
80	90	0.02	0.62	115	115					
90	100	<0.01	0.00	145	145					
100	110	0.07	2.19	211	209					
110	120	<0.01	0.00	363	363					
120	130	0.01	0.31	114	114					
120	130	0.01	0.31	113	113					
130	140	<0.01	0.00	189	189					
140	150	<0.01	0.00	172	172					
150	160	<0.01	0.00	244	244					
160	170	0.02	0.62	188	187					
170	180	0.09	2.81	178	175					
180	190	0.06	1.87	155	153					
190	200	<0.01	0.00	221	221					
200	210	0.02	0.62	476	476					
210	220	0.47	14.7	243	229					
210	220	0.46	14.4	241	227					
220	230	0.47	14.7	238	224					
230	240	0.46	14.4	232	217					
240	250	0.11	3.44	201	197					
240	250	0.10	3.12	200	197					
250	260	<0.01	0.00	36.6	36.6					
260	270	0.24	7.50	51.4	43.9					
270	280	0.03	0.94	44.1	43.1					
280	290	0.05	1.56	46.6	45.1					
290	300	0.24	7.50	60.2	52.7					
300	310	0.10	3.12	191	187					
310	320	0.35	10.9	209	198					
320	330	0.01	0.31	208	208					
330	340	0.23	7.19	183	176					
340	350	0.21	6.56	183	177					

True North Mine Project

ABA Sample #99-TN-754

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.01	0.31	4.07	3.76					
10	20	0.01	0.31	159	158					
20	30	<0.01	0.00	204	204					
30	40	<0.01	0.00	239	239					
30	40	<0.01	0.00	238	238					
40	50	0.03	0.94	19.4	18.5					
50	60	<0.01	0.00	156	156					
60	70	<0.01	0.00	108	108					
70	80	0.01	0.31	41.4	41.1					
80	90	0.05	1.56	2.80	1.24					
90	100	0.04	1.25	91.8	90.6					
90	100	0.03	0.94	91.6	90.6					
100	110	0.14	4.37	141	137					
110	120	<0.01	0.00	196	196					
120	130	<0.01	0.00	108	108					
130	140	<0.01	0.00	145	145					
140	150	0.02	0.62	111	110					
150	160	0.06	1.87	105	103					
160	170	1.90	59.4	135	75.6					
170	180	0.36	11.2	115	103					
180	190	0.03	0.94	139	138					
190	200	0.14	4.37	139	135					
200	210	0.03	0.94	142	141					
200	210	0.04	1.25	142	140					
210	220	0.17	5.31	139	133					
220	230	0.48	15.0	181	166					
230	240	0.45	14.1	183	169					
240	250	0.36	11.2	186	175					

True North Mine Project

ABA Sample #99-TN-755

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	<0.01	0.00	162	162					
10	20	<0.01	0.00	152	152					
20	30	<0.01	0.00	165	165					
30	40	<0.01	0.00	91.7	91.7					
40	50	0.31	9.68	113	103					
50	60	<0.01	0.00	64.9	64.9					
60	70	0.01	0.31	11.2	10.9					
70	80	0.18	5.62	243	238					
80	90	0.02	0.62	2.01	1.39					
90	100	<0.01	0.00	45.1	45.1					
100	110	0.03	0.94	87.9	87.0					
110	120	0.06	1.87	7.53	5.66					
120	130	0.27	8.43	210	202					
130	140	0.10	3.12	42.2	39.1					
140	150	0.01	0.31	235	234					
150	160	<0.01	0.00	234	234					
150	160	<0.01	0.00	235	235					
160	170	0.03	0.94	140	139					
170	180	0.48	15.0	197	182					
180	190	0.11	3.44	222	218					
190	200	0.01	0.31	226	226					
200	210	0.30	9.37	190	180					
210	220	0.11	3.44	203	200					
220	230	0.16	5.00	238	233					
230	240	0.18	5.62	239	234					
240	250	0.25	7.81	232	224					
250	260	1.37	42.8	228	186					
250	260	1.39	43.4	227	184					
260	270	0.03	0.94	196	195					
270	280	1.41	44.0	235	191					
270	280	1.41	44.0	236	192					
280	290	2.15	67.2	230	162					
290	300	1.69	52.8	227	174					

True North Mine Project

ABA Sample #99-TN-759

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
8	10	<0.01	0.00	202	202					
10	20	<0.01	0.00	237	237					
20	30	<0.01	0.00	274	274					
30	40	<0.01	0.00	233	233					
30	40	<0.01	0.00	233	233					
40	50	0.02	0.62	233	232					
50	60	<0.01	0.00	200	200					
60	70	<0.01	0.00	212	212					
70	80	<0.01	0.00	219	219					
80	90	0.22	6.87	229	222					
90	100	0.20	6.25	221	215					
100	110	0.01	0.31	237	237					
110	120	<0.01	0.00	233	233					
120	130	<0.01	0.00	244	244					
130	140	0.01	0.31	237	237					
140	150	0.07	2.19	290	288					
150	160	0.06	1.87	244	242					
160	170	0.04	1.25	289	288					
160	170	0.03	0.94	286	285					
170	180	0.26	8.12	230	222					
180	190	0.03	0.94	236	236					
190	200	0.01	0.31	143	143					
		0.31	9.68	45.5	35.8					

True North Mine Project

ABA Sample #99-TN-782

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	<0.01	0.00	128.0	128.0					
10	20	<0.01	0.00	156.0	156.0					
20	30	<0.01	0.00	118.0	118.0					
30	40	<0.01	0.00	79.6	79.6					
40	50	<0.01	0.00	5.1	5.1					
50	60	<0.01	0.00	6.9	6.9					
60	70	<0.01	0.00	4.7	4.7					
70	80	0.01	0.31	75.5	75.2					
80	90	<0.01	0.00	204.0	204.0					
90	100	<0.01	0.00	152.0	152.0					
100	110	<0.01	0.00	15.7	15.7					
110	120	0.04	1.25	119.0	117.8					
120	130	<0.01	0.00	99.3	99.3					
130	140	<0.01	0.00	46.5	46.5					
140	150	<0.01	0.00	41.6	41.6					
150	160	<0.01	0.00	87.1	87.1					
160	170	<0.01	0.00	4.4	4.4					
170	180	0.08	2.50	129.0	126.5					
180	190	<0.01	0.00	254.0	254.0					
190	200	0.01	0.31	19.1	18.8					

True North Mine Project

ABA Sample #99-TN-786

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
5	10	<0.01	0.00	9.8	9.8					
10	20	<0.01	0.00	19.1	19.1					
20	30	<0.01	0.00	97.4	97.4					
30	40	<0.01	0.00	6.6	6.6					
40	50	0.04	1.25	19.3	18.1					
50	60	0.04	1.25	2.0	0.7					
60	70	0.03	0.94	3.0	2.0					
70	80	<0.01	0.31	6.1	5.8					
80	90	<0.01	0.00	4.5	4.5					
90	100	0.01	0.31	12.1	11.8					
100	110	<0.01	0.00	7.4	7.4					
110	120	0.15	4.69	123.0	118.3					
120	130	<0.01	0.00	154.0	154.0					
130	140	0.15	4.69	11.5	6.8					
140	150	<0.01	0.00	264.0	264.0					

True North Mine Project

ABA Sample #99-TN-787

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
10	20	<0.01	0.00	75.0	75.0					
20	30	<0.01	0.00	43.9	43.9					
30	40	<0.01	0.00	72.9	72.9					
40	50	<0.01	0.00	134.0	134.0					
50	60	<0.01	0.00	86.1	86.1					
60	70	<0.01	0.00	100.0	100.0					
70	80	0.07	2.19	4.7	2.5					
80	90	0.01	0.31	146.0	145.7					
90	100	0.37	11.60	306.0	294.4					
100	110	<0.01	0.00	240.0	240.0					
110	120	<0.01	0.00	253.0	253.0					
120	130	<0.01	0.00	257.0	257.0					
130	140	<0.01	0.00	119.0	119.0					
140	150	0.11	3.44	76.9	73.5					
150	160	<0.01	0.00	88.2	88.2					
160	170	<0.01	0.00	138.0	138.0					
170	180	0.02	0.62	8.9	8.3					
180	190	0.12	3.75	50.1	46.4					
190	200	0.01	0.31	5.6	5.3					

True North Mine Project

ABA Sample #99-TN-789

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.01	0.31	31.1	30.8					
10	20	0.01	0.31	158.0	157.7					
20	30	<0.01	0.00	180.0	180.0					
30	40	<0.01	0.00	3.7	3.7					
40	50	<0.01	0.00	18.0	18.0					
50	60	<0.01	0.00	90.7	90.7					
60	70	0.01	0.31	3.7	3.4					
70	80	0.01	0.31	6.9	6.6					
80	90	0.01	0.31	15.6	15.3					
90	100	<0.01	0.00	38.7	38.7					
100	110	<0.01	0.00	52.0	52.0					
110	120	<0.01	0.00	19.3	19.3					
120	130	<0.01	0.00	18.6	18.6					
130	140	0.01	0.31	18.0	17.7					
140	150	<0.01	0.00	218.0	218.0					
150	160	0.01	0.31	199.0	198.7					
160	170	0.33	10.30	189.0	178.7					
170	180	0.03	0.94	180.0	179.1					
180	190	<0.01	0.00	210.0	210.0					
190	200	0.07	2.19	222.0	219.8					
200	210	<0.01	0.00	98.4	98.4					
210	220	<0.01	0.00	107.0	107.0					
220	230	<0.01	0.00	165.0	165.0					
230	240	0.11	3.44	192.0	188.6					
240	250	0.11	3.44	223.0	219.6					
250	260	0.23	7.19	179.0	171.8					
260	270	0.06	1.87	241.0	239.1					
270	280	0.13	4.06	245.0	240.9					
280	290	<0.01	0.00	234.0	234.0					
290	300	0.42	13.10	246.0	232.9					
300	310	0.85	26.60	220.0	193.4					
310	320	0.01	0.31	236.0	235.7					
320	330	0.02	0.62	221.0	220.4					
330	340	<0.01	0.00	202.0	202.0					
340	350	<0.01	0.00	242.0	242.0					
350	360	1.08	33.70	235.0	201.3					
360	370	0.09	2.81	220.0	217.2					
370	380	0.01	0.31	243.0	242.7					
380	390	0.17	5.31	239.0	233.7					
390	400	0.01	0.31	247.0	246.7					

True North Mine Project

ABA Sample #99-TN-799

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	<0.01	0.00	9.8	9.8					
10	20	0.01	0.31	7.4	7.1					
20	30	<0.01	0.00	74.0	74.0					
30	40	<0.01	0.00	82.4	82.4					
40	50	<0.01	0.00	34.7	34.7					
50	60	<0.01	0.00	125.0	125.0					
60	70	<0.01	0.00	85.4	85.4					
70	80	<0.01	0.00	45.0	45.0					
80	90	<0.01	0.00	5.3	5.3					
90	100	<0.01	0.00	145.0	145.0					
100	110	<0.01	0.00	204.0	204.0					
110	120	<0.01	0.00	53.9	53.9					
120	130	<0.01	0.00	147.0	147.0					
130	140	<0.01	0.00	192.0	192.0					
140	150	0.24	7.50	488.0	480.5					
150	160	0.36	11.20	476.0	464.8					
160	170	0.06	1.87	53.3	51.4					
170	180	0.19	5.94	184.0	178.1					
180	190	0.06	1.87	160.0	158.1					
190	200	<0.01	0.00	188.0	188.0					

True North Mine Project

ABA Sample #99-TN-817

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.15	14.40	388.0	373.6					
10	20	0.02	0.62	195.0	194.4					
20	30	0.02	0.62	195.0	194.4					
30	40	0.01	0.31	191.0	190.7					
40	50	<0.01	0.00	189.0	189.0					
50	60	<0.01	0.00	190.0	190.0					
60	70	0.01	0.31	187.0	186.7					
70	80	0.03	0.94	18.1	17.2					
80	90	0.01	0.31	130.0	129.7					
90	100	<0.01	0.00	236.0	236.0					
100	110	0.01	0.31	186.0	185.7					
110	120	0.14	4.37	173.0	168.6					
120	130	0.12	3.75	180.0	176.3					
130	140	0.36	11.20	187.0	175.8					
140	150	0.01	0.31	380.0	379.7					
150	160	0.01	0.31	180.0	179.7					
160	170	<0.01	0.00	186.0	186.0					
170	180	0.28	8.75	244.0	235.3					
180	190	0.01	0.31	245.0	244.7					
190	200	0.01	0.31	423.0	422.7					

True North Mine Project

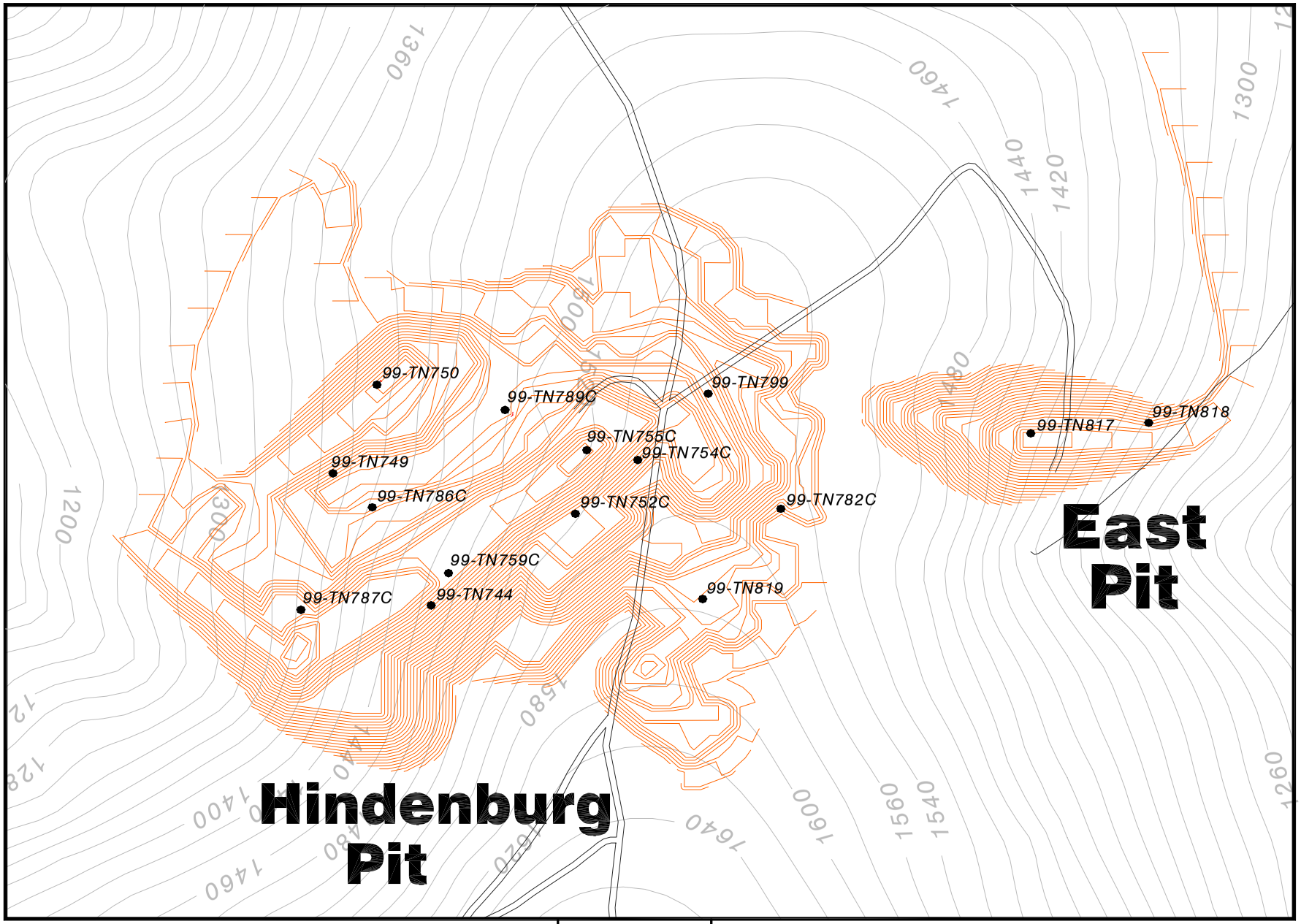
ABA Sample #99-TN-818

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	0.03	0.94	464.0	463.1					
10	20	<0.01	0.00	527.0	527.0					
20	30	0.01	0.31	387.0	386.7					
30	40	<0.01	0.00	470.0	470.0					
40	50	0.01	0.31	190.0	189.7					
50	60	0.02	0.62	191.0	190.4					
60	70	0.04	1.25	187.0	185.8					
70	80	0.39	12.20	188.0	175.8					
80	90	<0.01	0.00	164.0	164.0					
90	100	0.07	2.19	234.0	231.8					
100	110	<0.01	0.00	239.0	239.0					
110	120	0.01	0.31	386.0	385.7					
120	130	<0.01	0.00	244.0	244.0					
130	140	0.17	5.31	471.0	465.7					
140	150	0.02	0.62	244.0	243.4					
150	160	0.29	9.06	191.0	181.9					
160	170	0.26	8.12	135.0	126.9					
170	180	0.08	2.50	148.0	145.5					
180	190	0.29	9.06	242.0	232.9					
190	200	0.02	0.62	377.0	376.4					

True North Mine Project

ABA Sample #99-TN-819

Upper Depth	Low Depth	Total Sulfur %	Total Sulfur Acid Base t/1000t	Neutral. Pot. t/1000t	Acid Base Pot. t/1000T	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Pyritic Sulfur Acid Base t/1000t	Pyritic Sulfur Acid Base POT t/1000t
0	10	<0.01	0.00	2.7	2.7					
10	20	0.02	0.62	2.9	2.2					
20	30	0.01	0.31	3.4	3.1					
30	40	0.03	0.94	4.2	3.3					
40	50	0.03	0.94	14.5	13.6					
50	60	0.16	5.00	7.5	2.5					
60	70	0.10	3.12	5.0	1.8					
70	80	0.01	0.31	273.0	272.7					
80	90	0.51	15.90	463.0	447.1					
90	100	<0.01	0.00	23.8	23.8					



FAIRBANKS GOLD MINING, INC. **A SUBSIDIARY OF KINROSS GOLD CORPORATION**	**TRUE NORTH PROJECT**	**ROCK CHARACTERIZATION DRILL SITE LOCATIONS**

APPENDIX E

RECLAMATION COST ESTIMATE & DRAWING