

KINROSS

Fort Knox

Fort Knox Mine Plan of Operations Amendment



Gil Satellite Mine

March 31, 2021

Revision 1 – May 17, 2021

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Abbreviations

amsl	above mean sea level
COE	U.S. Army Corps of Engineers
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
APDES	Alaska Pollutant Discharge Elimination System
FEMA	Federal Emergency Management Agency
ft	feet
ft ²	square feet
FGMI	Fairbanks Gold Mining, Inc.
Fort Knox	Fort Knox Mine
Gil	Gil Satellite Mine
gpm	gallons per minute
H	horizontal
hr	hour
MHTLO	Mental Health Trust Land Office
MSGP	Multi-Sector General Permit
NAG	non-acid generating
PAG	potential acid generating
RCP	Reclamation and Closure Plan
SRCE	Standardized Reclamation Cost Estimator
SPCC	Spill Prevention, Control, and Countermeasure Plan
TSF	tailings storage facility
USGS	United States Geological Survey
V	vertical
WOUS	Waters of the U.S.

1.0 Introduction

Fairbanks Gold Mining, Inc. (FGMI) is requesting a Plan of Operations amendment for the construction and operation of the Gil Satellite Mine (Gil), an open-pit mining operation.

1.1 Site Description

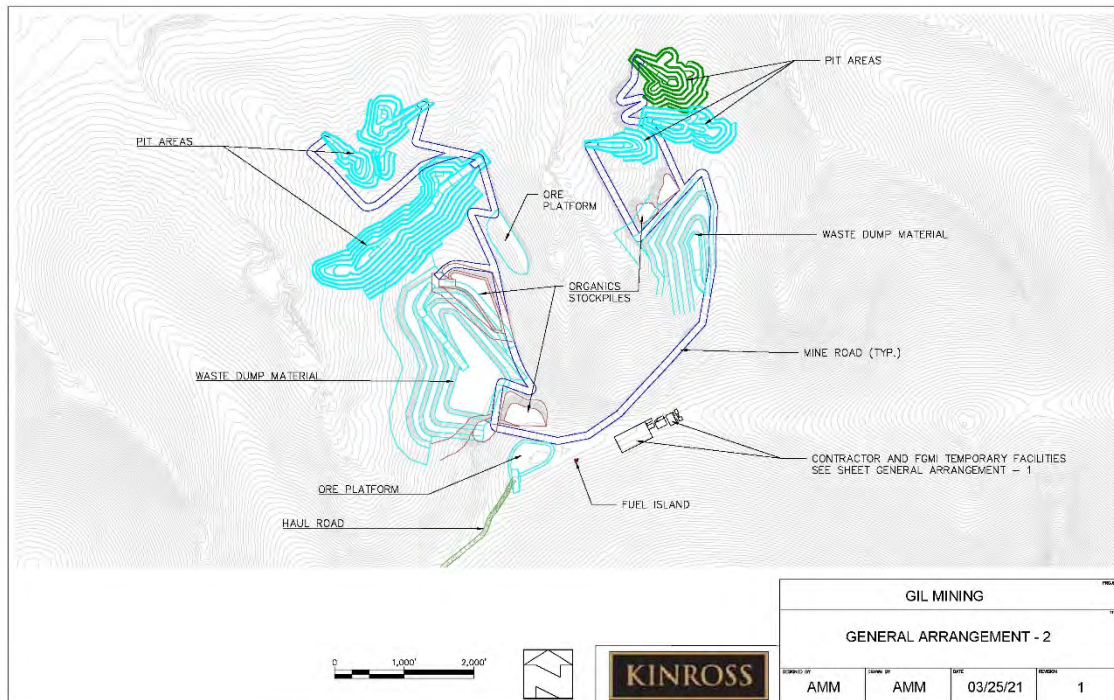
The Gil is owned and operated by FGMI, a wholly owned subsidiary of Kinross Gold USA, Inc. The Gil is located in the Fairbanks North Star Borough, approximately 26-road miles northeast of Fairbanks, Alaska and approximately 10 miles east of the Fort Knox Mine (Figure 1 and Attachment 1). The Gil Satellite Mine is located along a belt of lode and placer deposits that comprise one of the highest gold-producing areas in Alaska. The deposit at the Gil will be mined by conventional open-pit methods on a year-round basis, seven days per week. The Gil ore will be transported to Fort Knox and processed at a carbon in-pulp mill. Major Gil facilities include open pit mining areas, waste rock dumps, infrastructure, and growth-media stockpiles (Figure 2, Attachments 2 and 3).

The lands and mineral properties associated with this project is shown on the Gil Claim Map of Attachment 8.

Figure 1: Site Location



Figure 2: Gil Satellite Mine General Layout



2.0 Gil Satellite Mine

FGMI proposes to construct and operate the Gil Satellite Mine (Gil), which is approximately 10 miles east of the Fort Knox Mine (Attachment 1). Once construction (e.g., land clearing, infrastructure, mine roads, etc.) of the Gil is completed, it is anticipated Gil mining will begin in the 2nd half 2021 and will be completed in the 2nd half 2024. Once mining activities are completed, reclamation activities will commence. The Gil’s infrastructure facilities and mine layout are identified in the figures of Attachments 2, 3, and 4. The facilities include the following:

- Mining contractor support facilities
 - offices
 - maintenance shop
 - warm storage
 - light duty vehicle parking
 - equipment parking
 - portable toilets (sani-cans)
 - generator for electrical power

- FGMI support facilities
 - offices
 - warm storage

- tent for drilling equipment
- light duty vehicle parking
- portable toilets (sani-cans)
- fuel island
- generators for electrical power

- Six individual pits
 - Main Gil Pit
 - Northwest Gil Pit
 - North Gil Pit
 - Sourdough Pit 1
 - Sourdough Pit 2
 - Sourdough Pit 3

- Two ore stockpiles
 - Ore Stockpile 1
 - Ore Stockpile 2

- Two waste rock dumps
 - Gil Waste Rock Dump
 - Sourdough Waste Rock Dump

- Four growth-media stockpiles
 - Gil GM Stockpile 1
 - Gil GM Stockpile 2
 - Gil GM Stockpile 3
 - Gil GM Stockpile 4

The area of disturbance for the Gil is approximately 411.1 acres as shown on the Attachment 4 figure and includes:

- 18.4 acres for Miscellaneous Pads & Yards
- 162.8 acres for mine roads
- 100.0 acres for waste rock dumps
- 93.7 acres for pits
- 20.4 acres for growth-media stockpiles
- 15.7 acres for ore stockpiles

Access to the Gil will be on the existing road to the Gil Exploration Project from the Fort Knox Mine as shown on the figure of Attachment 5. Improvements to the existing road is required for safe ingress and egress of mining equipment, ore hauling trucks, supply delivery vehicles, and light duty vehicles. Construction of the access road improvement project will occur upon approval of the proposed Miscellaneous Land Use Permit (MLUP) No. 9156 Amendment 1 by Alaska Department of Natural Resources (ANDR). MLUP 9156 Amendment 1 application was submitted to the ADNR on March 23, 2021. The access road will be limited to mine traffic and will be closed to the public throughout the mining and reclamation activities of the Gil.

It is not anticipated a waste management permit will be required for the Gil. Based upon previous analytical data for the first year of mining, the waste rock is non-acid generating (NAG) and does not have metal leaching constituents that would require a waste management permit. Additional waste rock is currently being analyzed and will be analyzed throughout the life of the mine for potential acid-generating (PAG) and metal leaching NAG. FGMI will provide waste rock analytical data upon receipt. Should analytical data determined that PAG or metal leaching NAG waste rock is present, a waste management permit will be applied for with the ADEC.

Ore stockpiles will be managed appropriately as determined by analytical results for PAG and metal leaching NAG ore.

Water management for the Gil will be performed in accordance with the following ADEC Alaska Pollutant Discharge Elimination System APDES permits.

- **Construction Storm Water Control.** During construction of the access road improvements and the Gil, co-permittee applications (contractor and FGMI) as specified by the APDES Construction General Permit Number AKR100000 will be submitted to the ADEC, and construction during breakup and non-winter months will not begin until authorization has been approved. A storm water pollution prevention plan (SWPPP) will be prepared and implemented to control storm water during construction activities.
- **Mining Storm Water Control.** During mining of the Gil, an APDES storm water discharge authorization application as specified by the APDES Multi-Sector General Permit (MSGP) Number AKR060000 will be submitted to the ADEC, and mining will not begin until an authorization has been approved. It is anticipated the existing MSGP Authorization Number AKR06AB39 for the Gil Exploration Project will be amended for the Gil mining activities. The existing SWPPP for the Gil Exploration Project will be amended and implemented for the Gil mining activities.
- **Mine Waste Water and Mine Drainage.** An APDES discharge permit will be authorized by the ADEC before commencing effluent discharge.

Fugitive dust from ore and waste rock hauling will be managed with dust suppression water and applied by water trucks. It is anticipated dust control water will be provided from the Fort Knox fresh water reservoir or from treated water at the Fort Knox treatment systems.

Management of petroleum will comply with requirements specified 40 CFR Part 112, Oil Pollution Prevention. A Spill Prevention, Control, and Countermeasure Plan (SPCC) will be developed and implemented for the Gil. The SPCC will also include measures for the Gil access road.

2.1 Reclamation and Closure

The reclamation and closure will be performed in accordance with the Gil's reclamation and closure plan (RCP) *Fort Knox Mine Reclamation and Closure Plan Amendment 2, Gil Project Addition, March 2021, Revision 1*. The Gil RCP is an amendment to the approved Fort Knox RCP. The RCP Amendment 2 is submitted as a separate submittal to the ADNR, ADEC, and MHTLO.

2.2 Financial Assurance

The Fort Knox Mine RCP, Amendment 2 Revision 1 includes the closure costs associated with the proposed Gil Satellite Mine. The Gil RCP includes the SRCE model estimated costs for reclamation and closure, which will be used for amending the financial assurance amount provided to ADNR as an amendment to the Irrevocable Standby Letter of Credit No. S18572/260177.

2.3 Wetlands

A wetlands delineation was performed for the Gil area in 2020 to supplement a 2019 Preliminary Jurisdictional Determination Report. The *Fort Knox Gil Project Supplement to the 2019 Preliminary Jurisdictional Determination Report, January 7, 2021* identifies the delineation activities and results. The 2020 Supplement to the 2019 Preliminary Jurisdictional Determination report presents the findings of the baseline (current existing conditions) to include the extent of vegetation cover and Waters of the U.S. within the Gil study area. The Waters of the U.S. (WOUS) include wetlands, streams, and ponds (Attachment 6). Before Gil construction activities impacting WOUS begin, 404 wetland permitting and mitigation will be approved by the US Army Corps of Engineers. The PJD is provided as a separate document with this Plan of Operations Amendment request submittal.

2.4 Cultural Resources

A cultural resources investigation of the Gil area was performed in 2020. The investigation report, *Gil Prospect Cultural Resources Investigation, Revised February 19, 2021*, details investigation activities and results for the Gil area. The cultural resources investigation report provides details to the identified sites identified in the Attachment 7 figure. The report is provided as a separate document with this Plan of Operations Amendment request submittal.

3.0 Supporting Documents

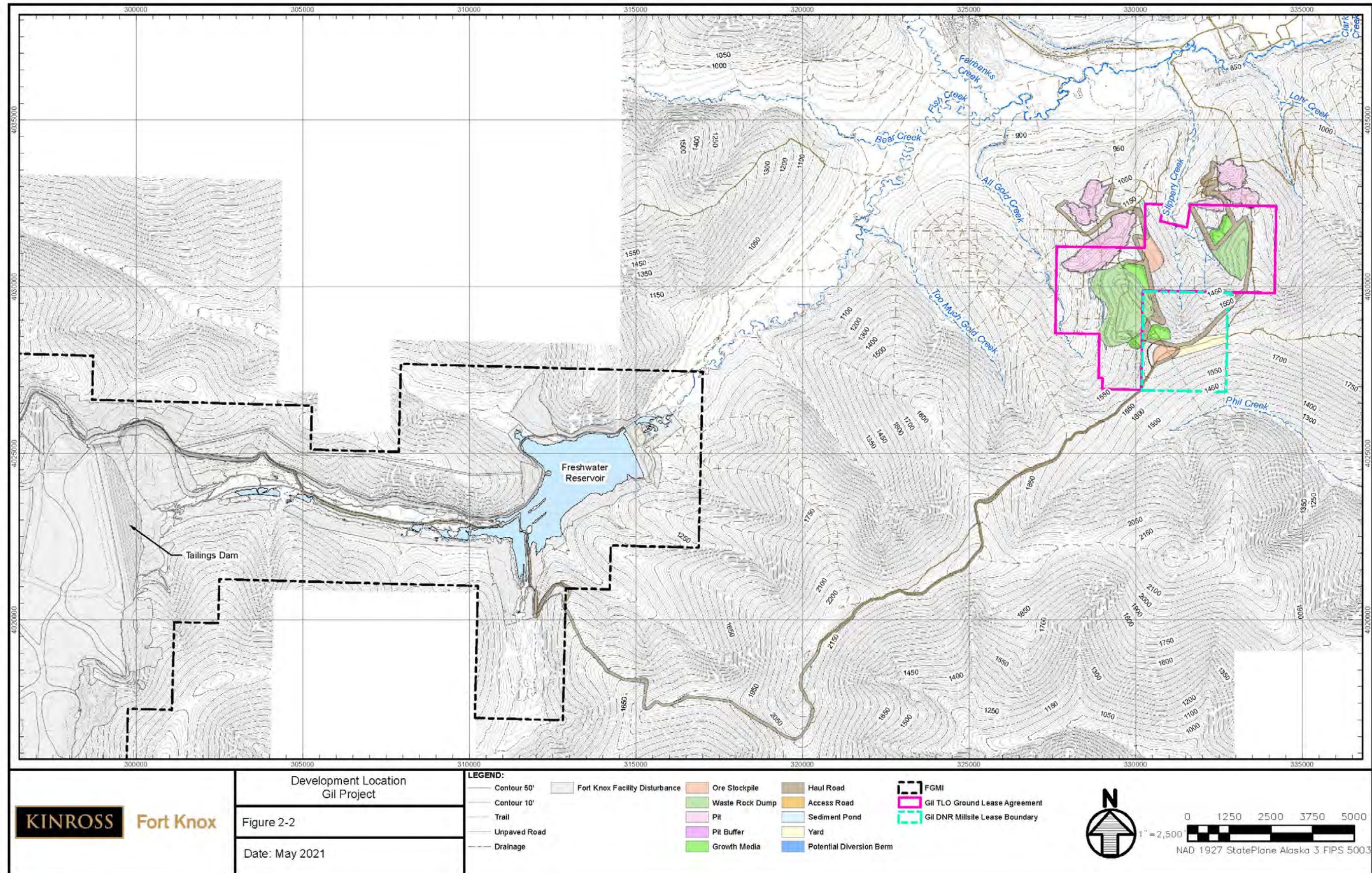
3.1 Fort Knox Mine Plan of Operations

The Fort Knox Mine Plan of Operations No. F20209852POOA approval was issued March 25, 2020 and is effective through March 24, 2025. The Plan of Operations describes the facilities and operations of the Fort Knox Mine.

3.2 Fort Knox Mine Reclamation and Closure Plan

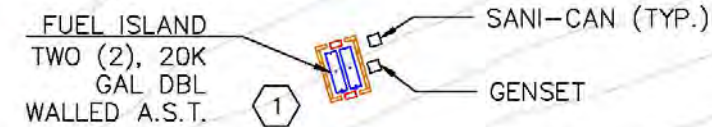
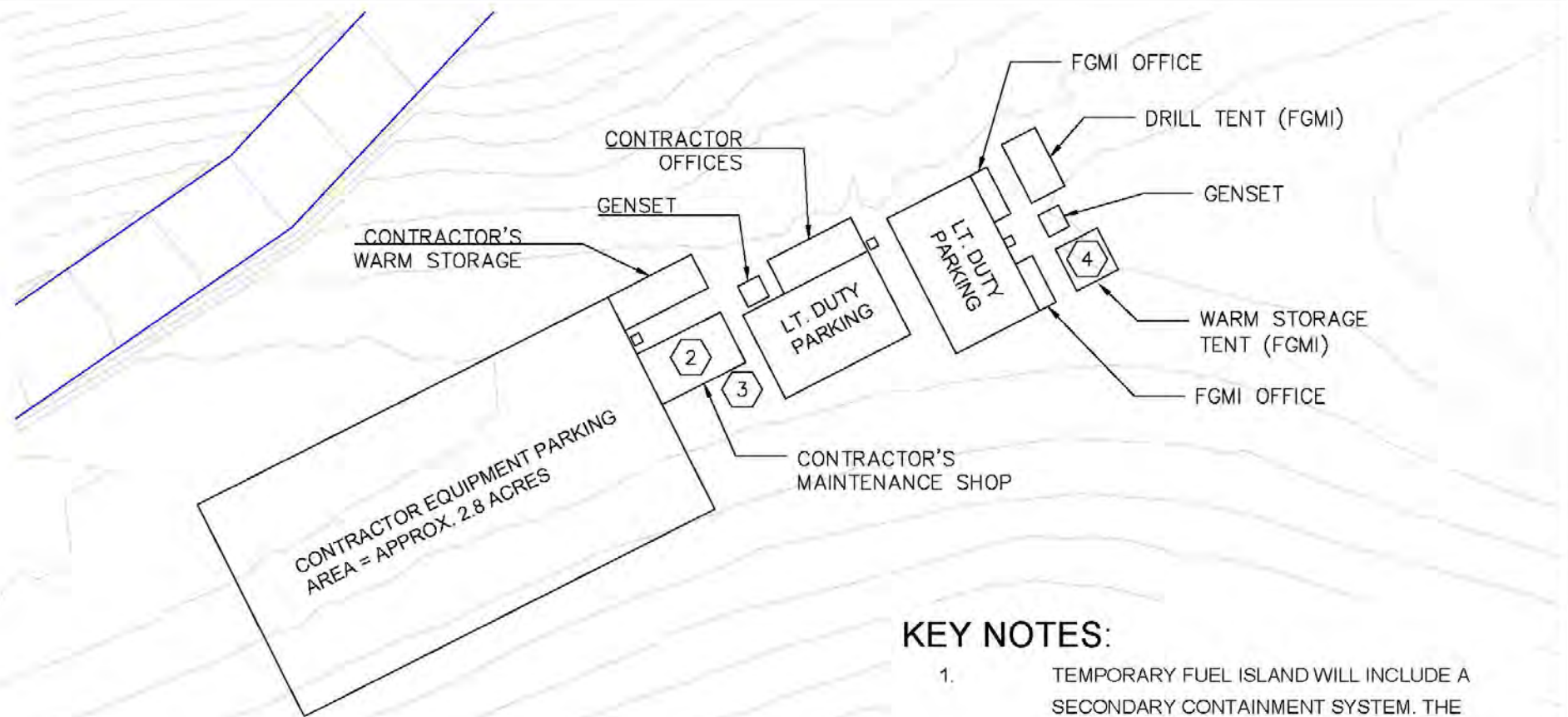
The Fort Knox Mine Reclamation Plan No. F20209852RPA approval was issued March 25, 2020 and is effective through March 24, 2025. The RCP includes the estimated costs associated with reclamation and closure of the Fort Knox Mine. The RCP describes the procedures and processes to return land disturbed by mining and ore processing operations to a stabilized condition that will provide long-term protection of land and water resources. Additional goals include: reducing the effects of disturbance during mining, implementation of concurrent reclamation where appropriate, reducing or eliminating long-term management requirements, management of dams for the protection of life and property, and meeting state and federal regulatory requirements. The RCP describes the schedule for reclamation, general reclamation procedures, and the methods for achieving the final closure requirements and

objectives. In addition, the RCP serves as the basis for calculating reclamation costs and the amount of the financial assurance.



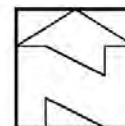
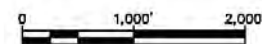
GENERAL NOTES:

1. GENERATOR SIZES TO BE DETERMINED AND WILL BE SUBJECT TO A SEPARATE AIR PERMIT.
2. STORM WATER CONTROL BMPs WILL BE IMPLEMENTED IN ACCORDANCE WITH AN APPROVED SWPPP.
3. DUST WILL BE CONTROLLED USING WATER TRUCKS.
4. NO SEPTIC SYSTEMS. PORTABLE SANI-CANS WILL BE USED.
5. NO TRASH DUMPSTERS. TRASH WILL BE REGULARLY COLLECTED AND HAULED TO FT. KNOX FOR PROPER DISPOSAL.
6. ALL STRUCTURES WILL BE REMOVED AT THE END OF THE PROJECT.

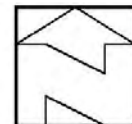
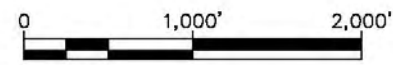
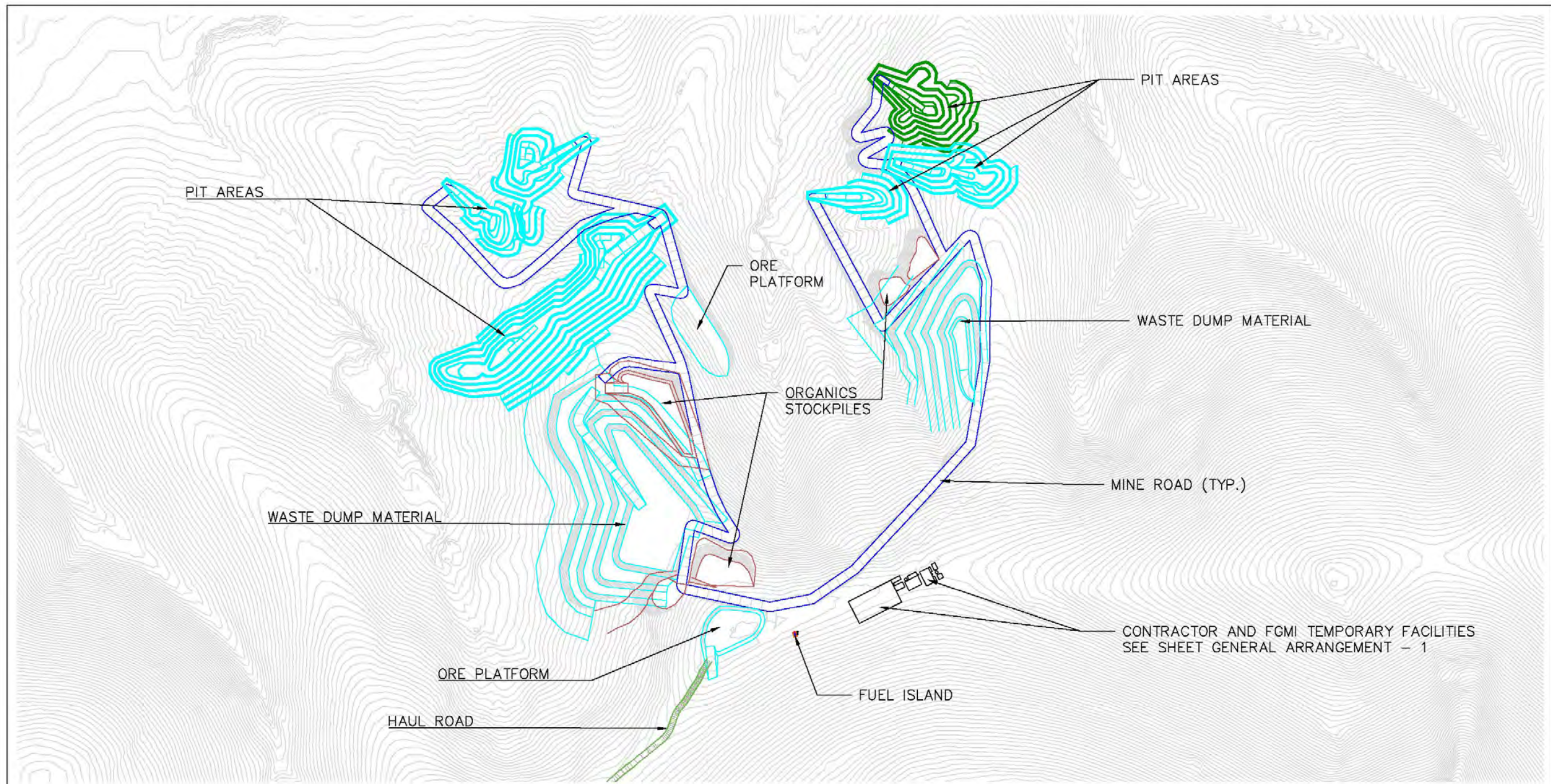


KEY NOTES:

1. TEMPORARY FUEL ISLAND WILL INCLUDE A SECONDARY CONTAINMENT SYSTEM. THE DOUBLE-WALLED ABOVE GROUND STORAGE TANKS WILL STORE DIESEL FUEL. TANKS ARE EQUIPPED WITH FOOT VALVES, MECHANICAL GAUGES AND METERS, FLOAT STOPS AND ANTI-SIPHON VALVES.
2. CONTRACTOR'S MAINTENANCE SHOP FOUNDATION WILL BE SLAB ON GRADE.
3. HAZARDOUS MATERIALS STORAGE AREA WILL BE INSIDE OF THE CONTRACTOR'S MAINTENANCE SHOP.
4. HAZARDOUS MATERIALS WILL NOT BE STORED WITHIN FGMI WARM STORAGE TENT.

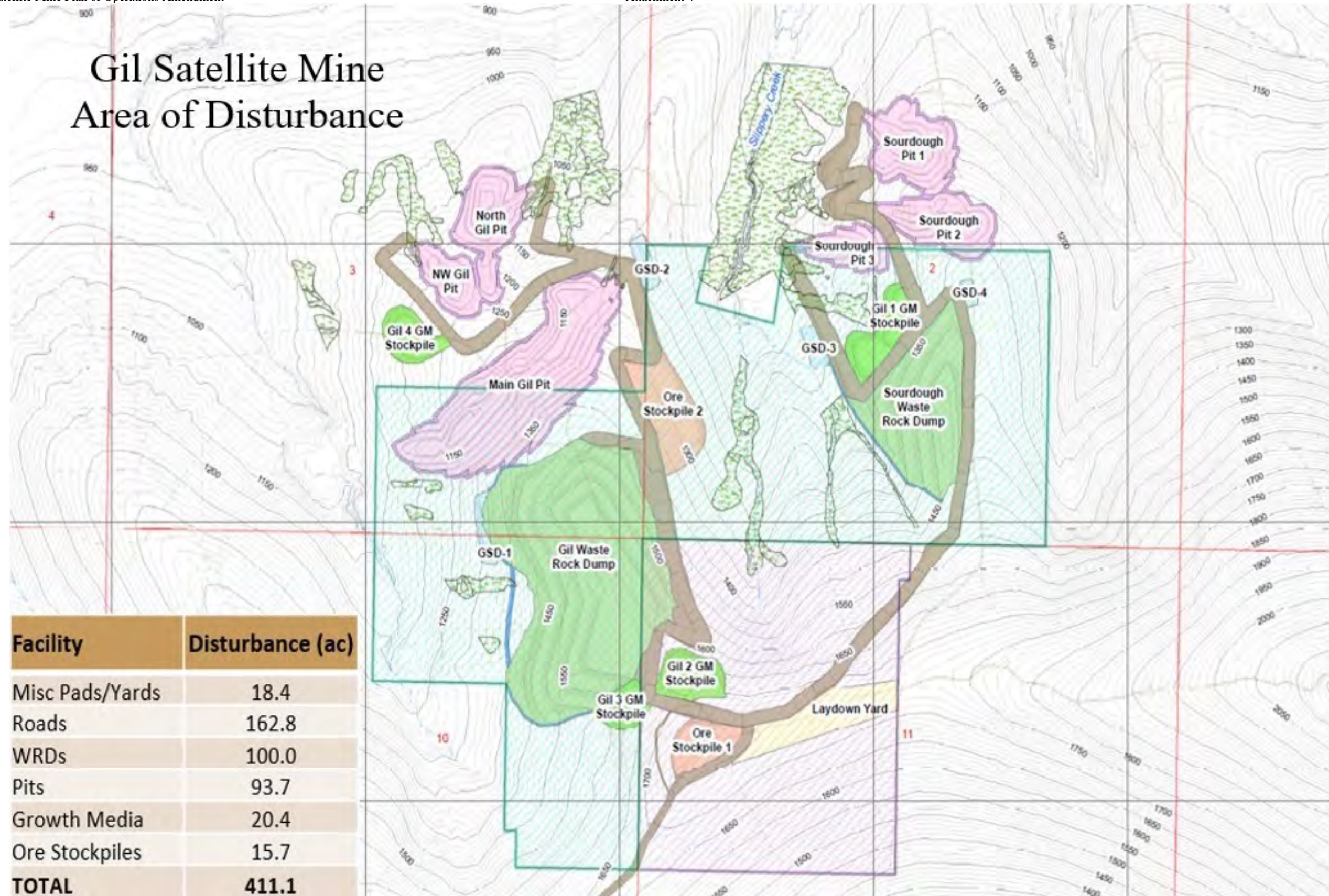


GIL MINING			
GENERAL ARRANGEMENT - 1			
DESIGNED BY	DRAWN BY	DATE	REVISION
AMM	AMM	03/25/21	1



GIL MINING			
GENERAL ARRANGEMENT - 2			
DESIGNED BY	DRAWN BY	DATE	REVISION
AMM	AMM	03/25/21	1

Gil Satellite Mine Area of Disturbance

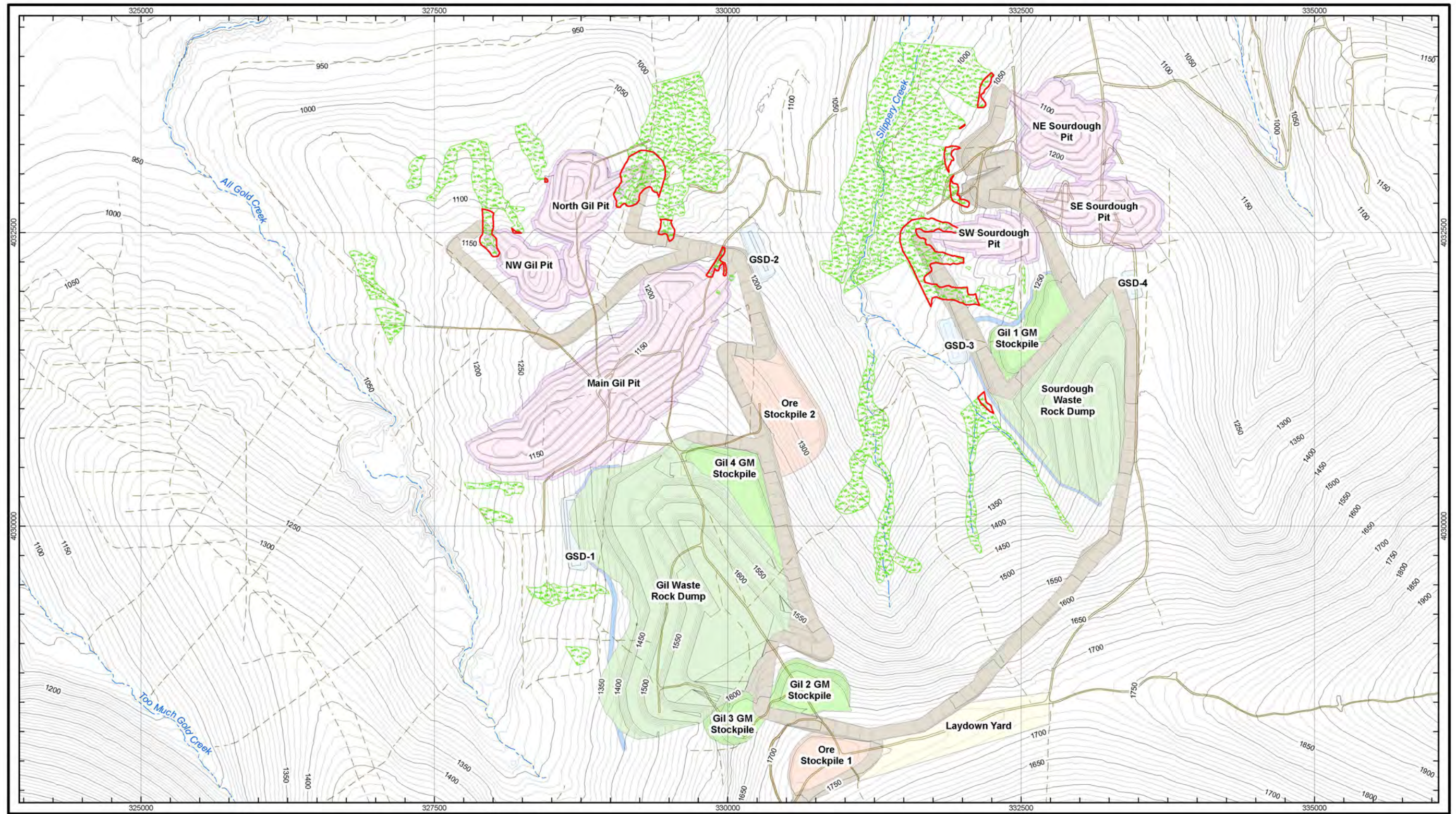


Facility	Disturbance (ac)
Misc Pads/Yards	18.4
Roads	162.8
WRDs	100.0
Pits	93.7
Growth Media	20.4
Ore Stockpiles	15.7
TOTAL	411.1



PERMIT

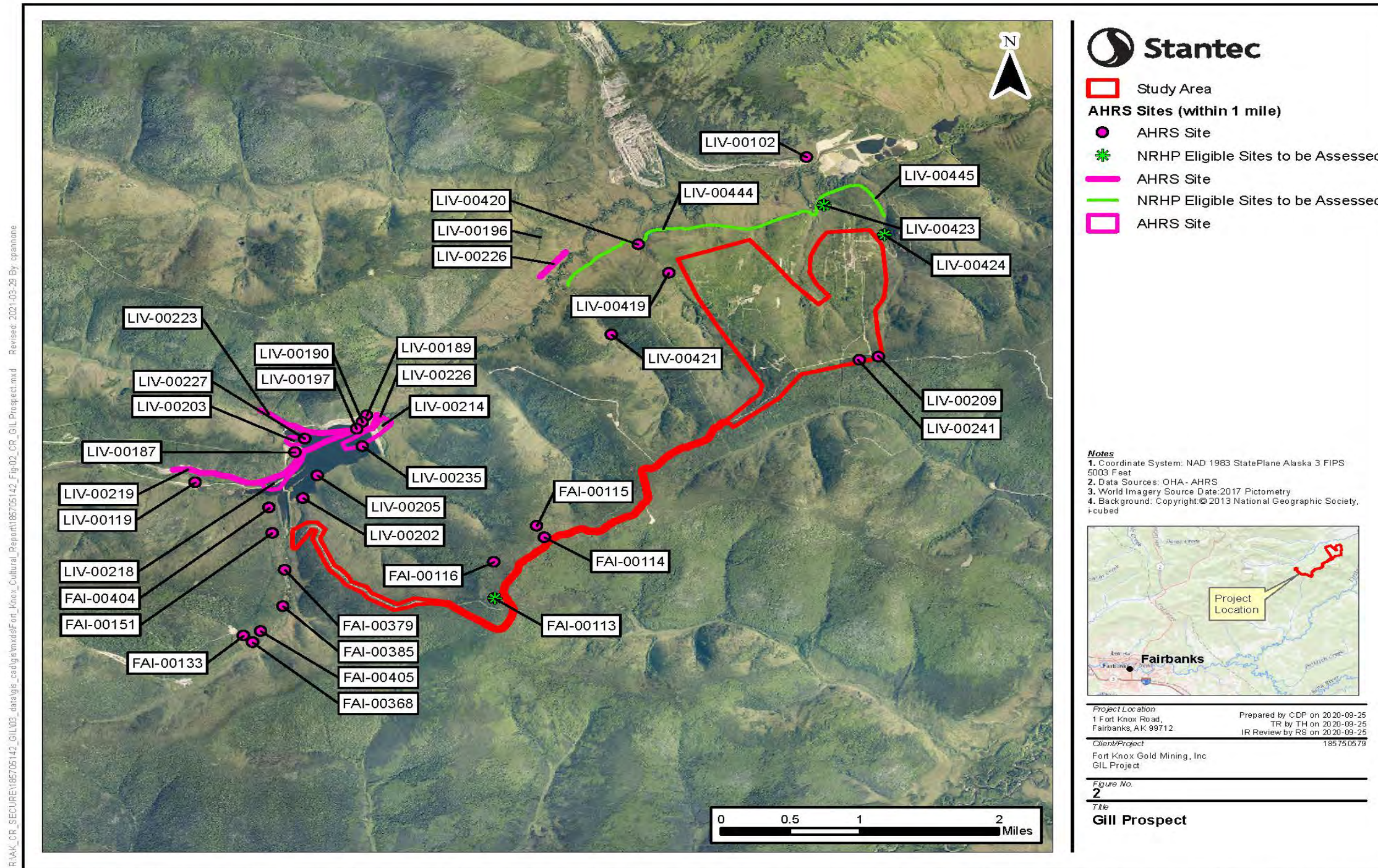
<p>VERIFY SCALE! THESE PRINTS MAY BE REDUCED. LINE BELOW MEASURES ONE INCH ON ORIGINAL DRAWING.</p> <p>MODIFY SCALE ACCORDINGLY!</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				NO.	DESCRIPTION	DATE	BY														<p>1055 Mount Avenue, Missoula, MT 59801 406.542.8880 www.m-m.net</p> <p>engineers • surveyors • planners • scientists</p> <p><small>COPYRIGHT © MORRISON-MAIERLE, INC., 2021</small></p>	<p>DRWN BY: MDH DSGN BY: DAJ APPR BY: DAJ DATE: 3/2021</p> <p>Q.C. REVIEW BY: _____ DATE: _____</p>	<p>FAIRBANKS</p> <p>GIL ROAD IMPROVEMENTS KINROSS GOLD CORPORATION</p>	<p>ALASKA</p> <p>ROAD ACCESS PLAN</p>	<p>PROJECT #: 3924.126</p>	<p>AREA CODE: ###</p>	<p>DISCIPLINE CODE: ###</p>	<p>DRAWING NUMBER: 1</p>	<p>REVISION: </p>
	NO.	DESCRIPTION	DATE	BY																										
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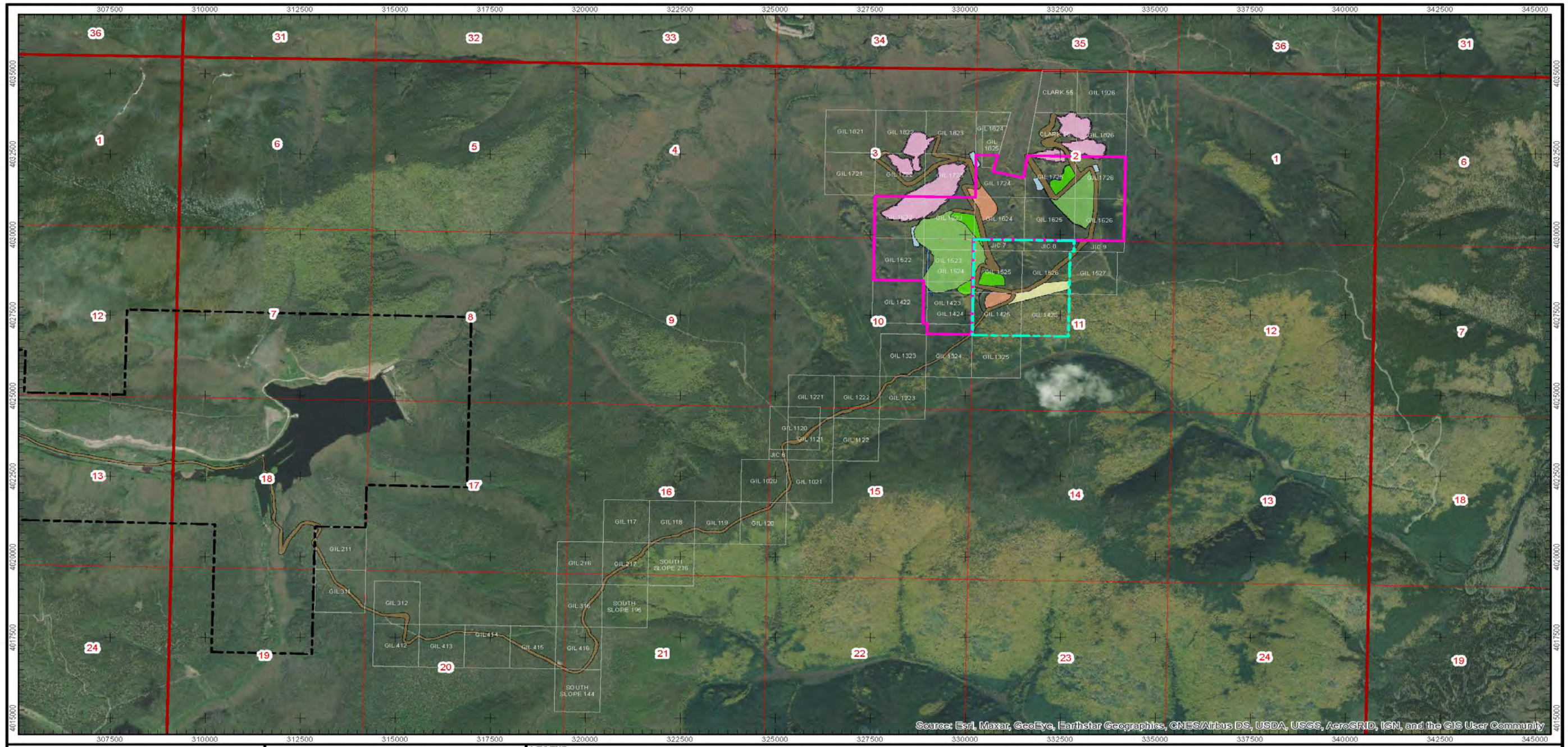
	Wetlands Gil Project	LEGEND: Contour 50' Contour 10' Drainage Trail Unpaved Road Wetland Impacted Wetlands Ore Stockpile Waste Rock Dump Pit Pit Buffer Growth Media Ore Stockpile Waste Rock Dump Pit Pit Buffer Growth Media Haul Road Access Road Sediment Pond Yard Potential Diversion Berm
	Figure 3-1	
	Date: March 2021	

1" = 750'
 0 375 750 1125 1500
 NAD 1927 StatePlane Alaska 3 FIPS 5003

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Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

	Gil Claims Map Gil Project	LEGEND: Ore Stockpile Waste Rock Dump Pit Pit Buffer Growth Media Haul Road Access Road Sediment Pond Yard Potential Diversion Berm FGMI Gil TLO Ground Lease Agreement Gil DNR Millsite Lease Boundary	 1" = 2,500' 0 1250 2500 3750 5000 NAD 1927 StatePlane Alaska 3 FIPS 5003
	Figure 1-2 (Appendix A)		
	Date: May 2021		

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Note:
A 200' wide TLO Easement Agreement is required along the access road between the FGMI Millsite Lease boundary and Gil lease boundaries. The location of the easement is dependent upon the final as-built location of the access road.