Plan of Operations

PALMER ADVANCED EXPLORATION PROJECT

HAINES, ALASKA

Draft Prepared March 2024

PREPARED FOR

Alaska Department of Natural Resources

CONSTANTINE

Plan of Operations
Palmer Advanced Exploration Project
Haines, Alaska

State Mining Claims

Prepared for:
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Abbreviations

AAC	Alaska Administrative Code
ACOE	Army Corp. of Engineers
ADEC	Alaska Department of Environmental Conservation
ADOT	Alaska Department of Transportation
ADNR	Alaska Department of Natural Resources
AHEA	Alaska Hardrock Exploration Application
AKNHP	Alaska National Heritage Program
ANSI	American National Standards Institute
APMA	Application for Permits to Mine in Alaska
APE	Area of Potential Effect
ARD/ML	Acid Rock Drainage/Metal Leaching
ASBP	Alaska Statewide Bonding Pool
AWAP	Wildlife Action Plan
BLM	Bureau of Land Management
BMP	Best Management Practice (s)
BMRR	Bureau of Mining Regulation and Reclamation
CAN	Canada
CEM	Constantine North, Inc. or Constantine Metal Resources
DMLW	Division of Mining, Land and Water
EPA	Environmental Protection Agency
ESA	Endangered Species Act
HDPE	High Density Polyethylene
JDR	Jurisdictional Determination Report
km	Kilometers
m	Meters
mi	miles
MSGP	Multi-Sector General Permit
MSDS	Material Safety Data Sheet (s)
MSHA	Mine Safety and Health Administration
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NLURA	Northern land Use Research Alaska, LLC
NPDES	National Pollutant Discharge Elimination System

OHA	Office of History and Archaeology
Plan	Mining Plan
Project	Palmer Exploration Project
QAP	Quality Assurance Plan
ROW	Right-of-Way
SPCCP	Spill Prevention Control Countermeasure Plan
SOA	State of Alaska
SOI	Species of Interest
SSOC	State Species of Conservation Concern
SWPPP	Stormwater Pollution Prevention Plan
US	United States
UUD	Unnecessary and Undue Degradation
SOA	State of Alaska
SOI	Species of Interest
SSOC	State Species of Conservation Concern
UUD	Unnecessary and Undue Degradation

Executive Summary

This Plan of Operations (Plan) is submitted to the Alaska Department of Natural Resources (ADNR) by the operator Constantine North, Inc. (Constantine or the Company) on behalf of the state mining claim owner Constantine Mining, LLC, for the Palmer Advanced Stage Exploration Project (Palmer Project or the Project) located in the Porcupine Mining District in Southeast Alaska. The activities described within this Plan are planned for the next 5 year permit cycle and are directed at further evaluation of the mineral deposits located within the Project claim holdings (Palmer Deposit and surrounding area). This is NOT a request to permit resource extraction. The Company is assessing and documenting environmental, social, technical and economic aspects associated with further developing the mineral property.

The proposed activities covered in this Plan would occur on a group of 63 State mining claims, comprising 9,185 acres situated within the Haines State Forest Resource Management Area (Haines State Forest). As such, proposed surface activities would be coordinated with the ADNR Division of Forestry by the ADNR Mining Section as part of the review of this Plan.

All the surface disturbance and reclamation activities proposed in this Plan would occur on State of Alaska Mining Claims. There are no Federal actions associated with permitting the activities proposed in this Plan. As such there is no National Environmental Policy Act (NEPA) analysis required for the activities proposed in the Plan.

The State mining claims discussed throughout this Plan are situated within the Haines State Forest. Alaska Statutes (AS) 41.15.300 established the Haines State Forest in 1982, concomitant with establishing the Alaska Chilkat Bald Eagle Preserve under AS 41.21.611, which is surrounded by the Haines State Forest. This legislation was the result of cooperation among a host of diverse interest groups including: City of Haines, Haines Borough, Schnabel Lumber Company, Lynn Canal Conservation Council, Audubon Society, Southeast Alaska Conservation Council, Alaska Miners Association, and United States Fish and Wildlife Service. AS 41.15.310 instructs the Alaska Division of Forestry to consult the Division of Parks, the Department of Fish and Game (ADF&G) and the Alaska Chilkat Bald Eagle Preserve Advisory Council to promote effective, efficient, and coordinated administration of the Haines State Forest and the Alaska Chilkat Bald Eagle Preserve for the values for which each was established.

Constantine is also currently authorized for surface exploration activities on adjacent lands, including helicopter-supported core drilling under US Bureau of Land Management (BLM) Decision Records dated 8/18/2016 and 9/21/2017, Case File AA-094088; exploration and evaluation activities on Mental Health Trust lands authorized by the Mental Health Trust Land (MHT) Office Plan of Operations Approvals dated 4/19/2018 and 07/23/2019; and ADEC Waste Management Permit 2019DB0001as amended 6/02/2023. This Plan does not incorporate, or discuss further, those activities on adjacent lands that are already authorized under other MHT, ADEC or BLM approvals. Constantine would continue those activities under those existing approvals concurrent with the activities described in this Plan.

Previous work on the State mining claims that are the subject of this Plan was authorized under APMA #5690 which expires December 31, 2023.

Constantine has been performing environmental monitoring, characterization, and mapping programs for the overall Project area, started as early as 2008. The effort has included surface water and groundwater quality and hydrology monitoring, aquatic life surveys, wildlife surveys, terrestrial ecosystem and vegetation surveys (including invasive species), wetlands surveys, cultural resources surveys, meteorological monitoring, snow surveys and monitoring, and development rock characterization studies. The objectives of the expanded environmental program detailed in this Plan remain as they are on the overall Project area; it contributes to a fundamental understanding of the natural environment in the Project area, including a baseline of environmental conditions. They define an environmental backdrop that Constantine can design around, and one against which Constantine can detect changes, over time, including those that might be related to future Project activities.

The purpose of this Plan is to acquire approval from the ADNR for the activities, including reclamation, on State of Alaska mining claims, as described herein.

The activities proposed in this Plan of Operations include:

1. Road Development: Approximately 6.55 miles of road would be developed to allow access for drilling equipment. Approximately 2.75 miles of this road would include re-establishment of a previously established logging road and development of a Plateau Road spur and 3.8 miles of spur road to access new drill sites.
2. Geotechnical Drilling: Sonic and/or diamond drill rigs will be utilized to gather the information necessary to characterize subsurface conditions both west of Glacier Creek and east of Glacier Creek. Up to 33 drill pads would be developed to support this drilling.
3. Engineering Test Sites: Up to 40 test pits would be excavated to gather additional information and further assess ground conditions.
4. Laydown Area: A lay down area approximately one (1) acre in size would be developed for storage and assembly of drilling and seismic equipment.
5. Geophysical Surveys: Up to 5.5 miles of seismic surveys would be conducted to characterize depth to bedrock.
6. Monitoring Wells: Up to 20 groundwater monitoring wells would be installed to further characterize hydrogeologic conditions.
7. Meteorological monitoring stations: Air/meteorological monitoring stations would be installed to assist in characterizing current meteorological conditions.
8. Expansion of an environmental monitoring and characterization program that has been ongoing on adjacent federal and MHT lands.
9. Mineral exploration on all mining claims to include geologic mapping, surface rock and soil sampling.

The activities described in this Plan would create approximately 22.48 acres of new surface disturbance on State lands. Concurrent (annual) reclamation would occur whenever possible with the goal of limiting the total surface area disturbed at any one time. Constantine would

meet its reclamation bonding responsibilities by continuing to participate in the statewide reclamation bond pool.

1.0 LOCATION

This section includes brief descriptions of the location and access to the property, Constantine's land tenure for the overall Project, and the Haines State Forest that affects the surface work on State mining claims.

The Project is in the Porcupine Mining District, 34 miles northwest of Haines, Alaska, on the eastern margin of the Saint Elias Mountain range. The western boundary of the Project is the international border with the Canadian province of British Columbia (Figure 1).

1.1 Access and Property Description

The Project Area is proximal to the paved Haines Highway (Alaska Hwy 7), which leads to the town of Haines, Alaska, 34 miles to the southeast, (Figure 1). Haines (population of approximately 2,400) is a year-round deep-sea port at the northern end of the Alaska Marine Highway System. Klukwan (population of approximately 70 people) is located between Haines and the Project area along the Haines Highway. Haines and Klukwan have been providing services, skilled labor, accommodations, and equipment to support Constantine's exploration activities to date.

The nearest major economic centers are Juneau (4.5 hours by Ferry) and Whitehorse, Yukon (249 miles by Haines/Alaska Hwy 7). Daily scheduled flights connect Haines with Juneau (< 1 hour), which has daily connections with the continental US.

A gravel road, known as "Porcupine Road," connects the Project Area to Alaska Hwy 7 via a bridge across the Klehini River at 26 Mile, -known as Porcupine Crossing, and currently extends to Glacier Creek Road. A portion of Porcupine Road is an RS 2477 right-of-way, maintained by the Haines Borough under the Historic Dalton Trail Road Maintenance Service Area (RMSA). Drill core storage and camp facilities are located on privately-owned land, approximately 7 miles from Porcupine Crossing (Figure 2). Except for Porcupine Road and Glacier Creek Road, practical access to most of the Project is currently by helicopter.

Surface access to the State mining claims Porcupine Road. Constantine previously re-established portions of Porcupine Road leading up to Glacier Creek Road. Glacier Creek Road was originally constructed as a CAT trail in 1977 and enhanced by Constantine under approval from the ADNR and BLM in 2014, 2016, and 2017. As discussed in Section 3, Constantine is proposing to reestablish a portion of a previously established logging road and develop a Plateau Road spur on the far (northern) side of Glacier Creek to provide access for the work described in this Plan.

The overall Project land package is defined by 340 federal unpatented lode mining claims, which cover an area of approximately 6,567 acres; 63 state mining claims that cover an area of approximately 9,185 acres and approximately 42,237 acres under lease from the MHT (Figure 3; Table 1). The surface rights are managed by the BLM, the State of Alaska and the MHT,

respectively; all the work proposed in this Plan of Operations is limited to the 63 State mining claims on which ADNR manages both the surface and subsurface estates. Appendix A contains a list of the State mining claims where activities described in this Plan are proposed.

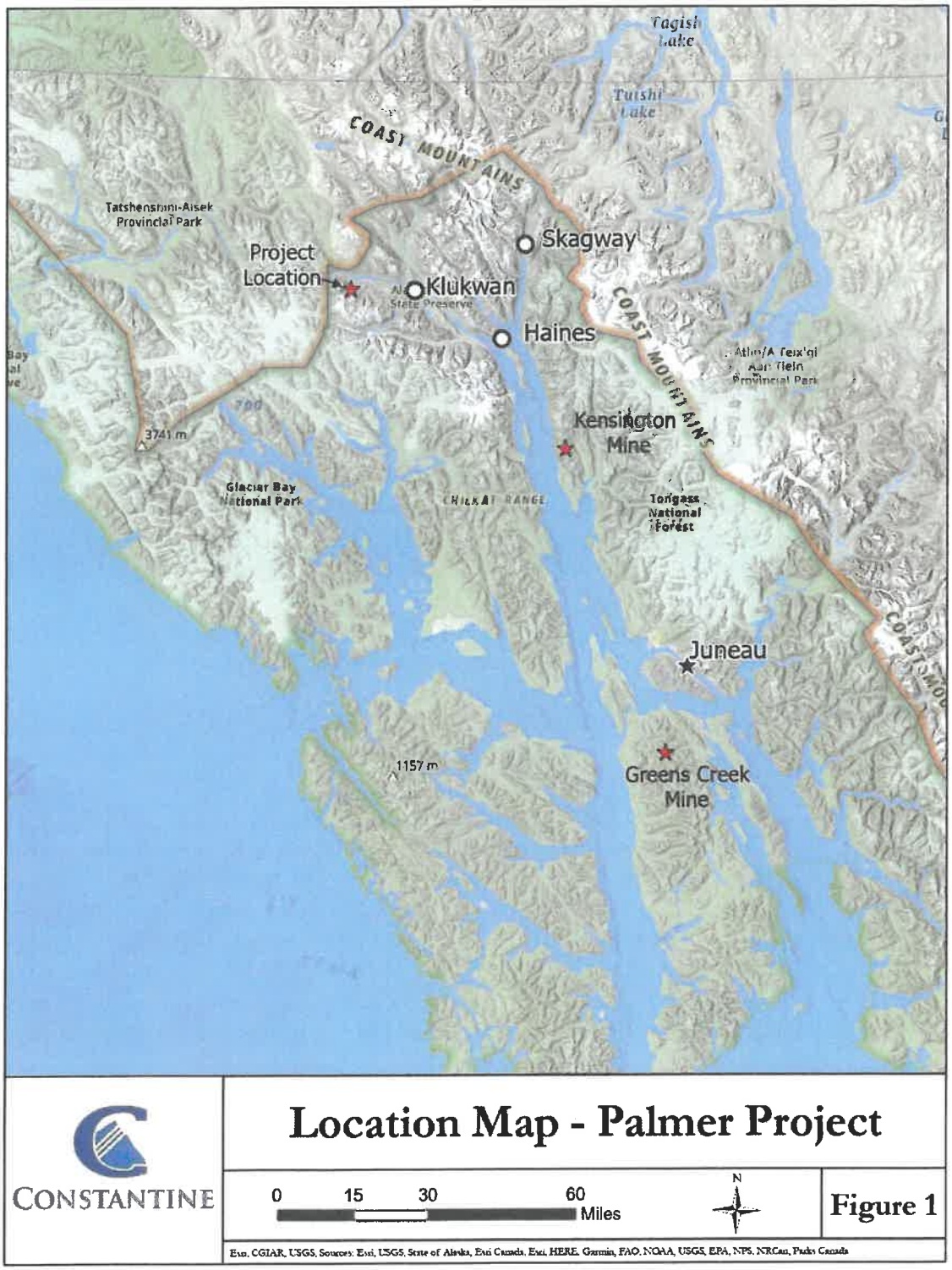

Figure 1 - Location Map – Palmer Exploration Project

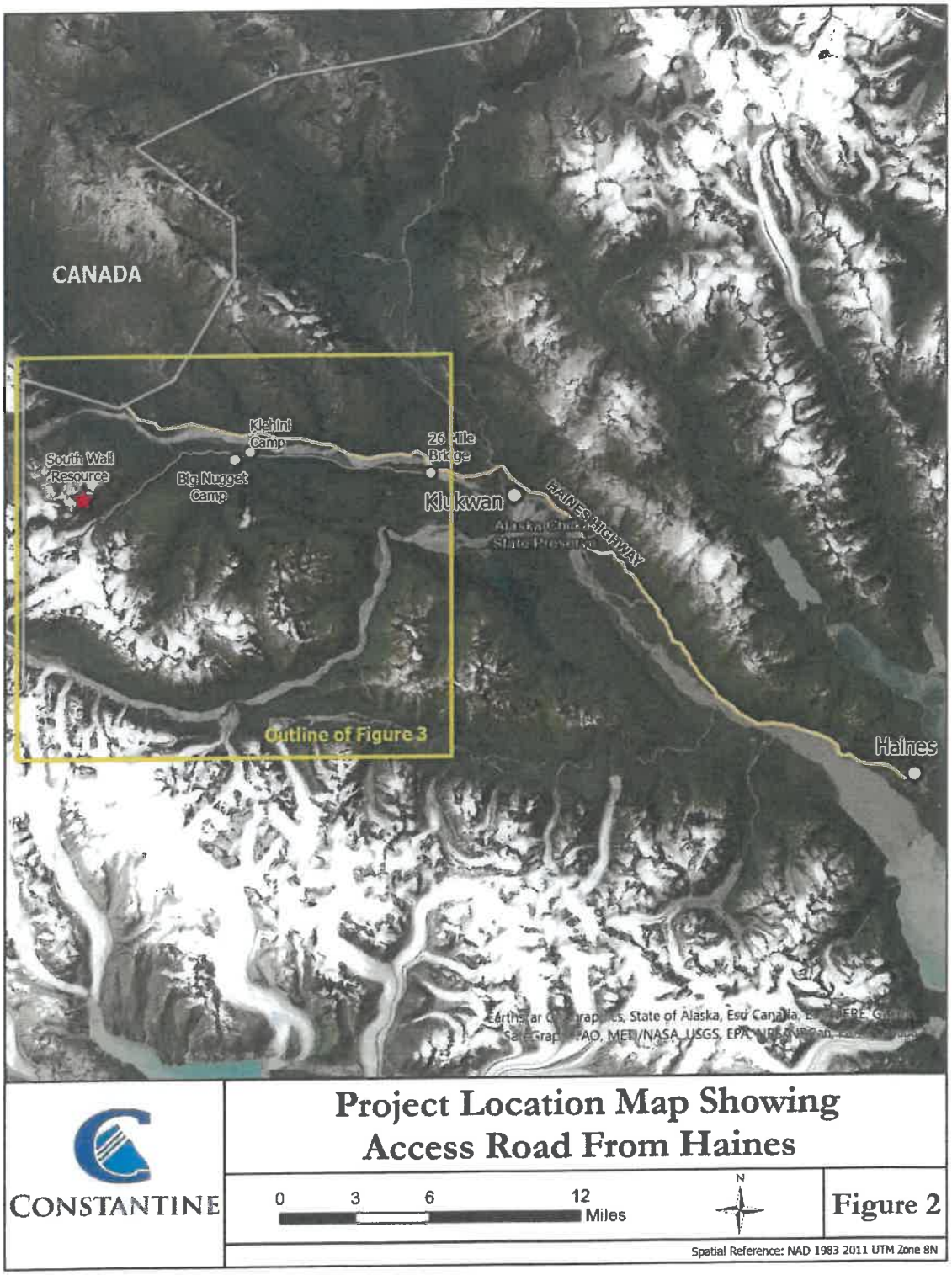

Figure 2 - Project Location Map Showing Road Access from Haines

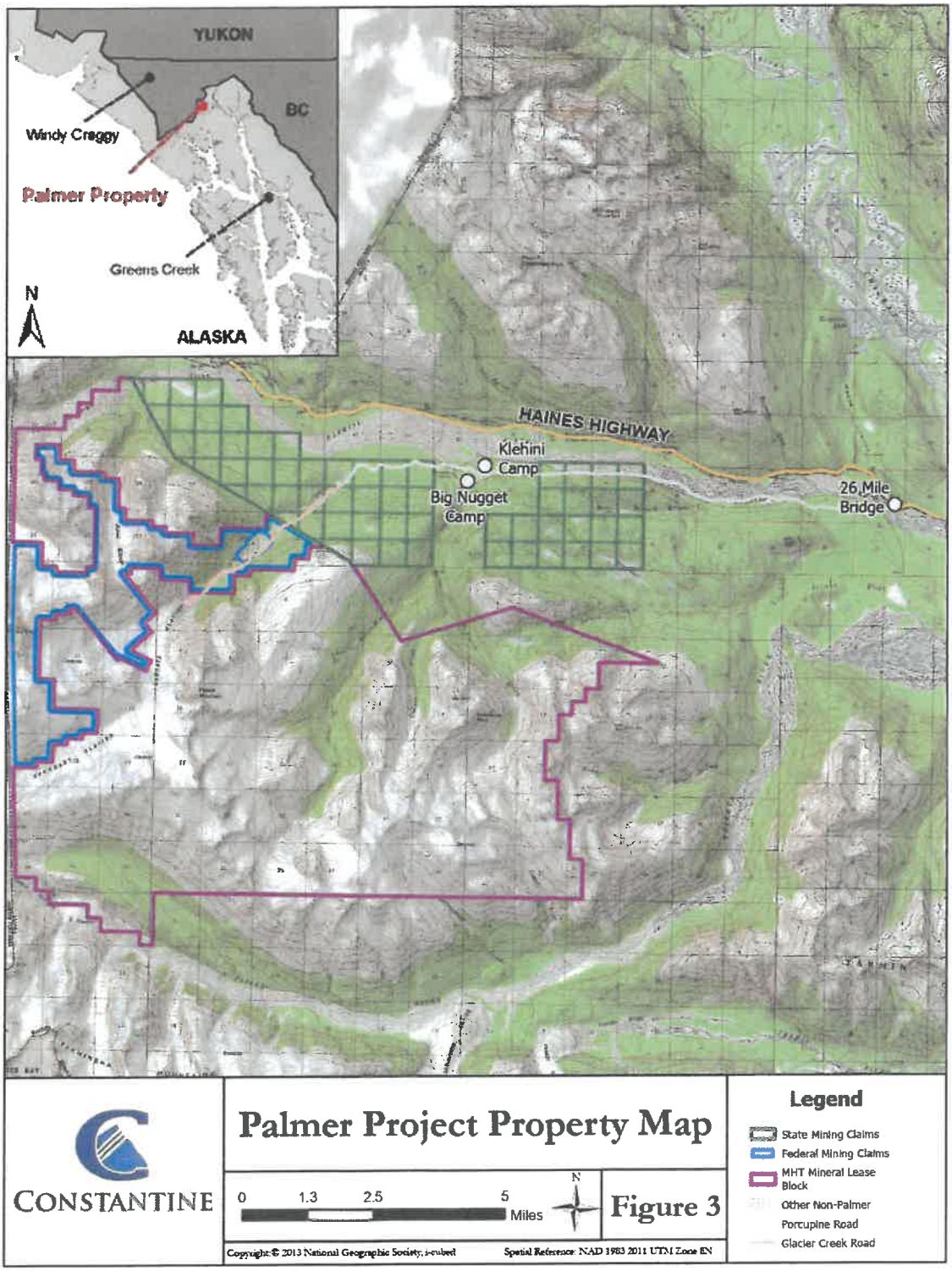

Figure 3 - Palmer Project Property Map

Land Owner	Land Right Instrument	Acreage
State of Alaska	63 State Mining Claims	9,185
Alaska Mental Health Trust	Surface and Subsurface Lease	1,465
Alaska Mental Health Trust	Subsurface Lease	40,772
U.S. Bureau of Land Management	340 Federal Mining Claims	6,567

Table 1 - Mining Claims and Mineral Leases

1.2 Haines State Forest Resource Management Area

The State mining claims discussed throughout this Plan are situated within the Haines State Forest Resource Management Area. Alaska Statutes (AS) 41.15.300 established the Haines State Forest in 1982, concomitant with establishing the Alaska Chilkat Bald Eagle Preserve under AS 41.21.611, which is surrounded by the Haines State Forest. This legislation was the result of cooperation among a host of diverse interest groups including: City of Haines, Haines Borough, Schnabel Lumber Company, Lynn Canal Conservation Council, Audubon Society, Southeast Alaska Conservation Council, Alaska Miners Association, and United States Fish and Wildlife Service. AS 41.15.310 instructs the Alaska Division of Forestry to consult the Division of Parks, the Department of Fish and Game (ADF&G) and the Alaska Chilkat Bald Eagle Preserve Advisory Council to promote effective, efficient, and coordinated administration of the Haines State Forest and the Alaska Chilkat Bald Eagle Preserve for the values for which each was established.

The legislature intended the Haines State Forest to be a 'working forest' to include multiple uses such as timber harvest, recreation, mining, traditional uses, fish and wildlife habitat protection, and tourism. The type, intensity, and location of these uses was, under AS 38.04.005, to be derived from a planning process that would determine the best balance of these uses. Multiple use management could include a mix of those uses identified under AS 38.05.112(c) and varying levels of use, depending on the results of the planning analysis.

The Chilkat Bald Eagle Preserve in contrast has an 'exclusive use' management intent, rather than multiple use. Its management focuses on the protection of bald eagles and their habitat, including the spawning and rearing areas of the anadromous streams that provide food for the bald eagle population. The traditional lifestyle of the Haines community is recognized as an important value and its continuation is included in the management of the Preserve. AS 41.21.60 (c) also includes language that the legislature determines that there is no need for legislation expanding or contracting the boundary of the Alaska Chilkat Bald Eagle Preserve in the future.

2.0 REGULATORY REQUIREMENTS

This section provides a discussion of the regulatory requirements that apply to the activities proposed in this Plan. Constantine has reviewed the applicable State, Federal and local statues and regulations and believes that the activities proposed in the Plan require the following submittals, regulatory reviews and approvals, and plans;

- Review and approval of this Plan by the ADNR, including a multi-state agency review.
- An updated Storm Water Pollution Prevention Plan (SWPPP) for Constantine's existing Construction General Permit that includes the new roads on State mining claims proposed in this Plan.
- Maintain a current self-certified EPA-compliant Tier 1 Spill Prevention Control and Countermeasure (SPCC) Plan for their fueling operations, that meets all the requirements of 40 CFR part 112.7.
- Temporary Water Use Authorizations

The basis for the identified regulatory requirements is described in the following Sections 2.1 and 2.2.

2.1 State of Alaska Regulations

2.1.1 Plan of Operations Regulations

All the lands (surface and subsurface estates) included in this Plan are State of Alaska lands. Per 11 AAC 86.150 a person intending to conduct mineral exploration or development activities that would require a land use permit may file a plan of operations for approval instead of applying for a land use permit. Constantine is filing this Plan of Operations for formal approval, rather than renewing their miscellaneous land use permit (MLUP). A Plan of Operations Approval is consistent with the use of Plan Approvals on the adjacent Mental Health Trust and BLM lands and is consistent with the advanced exploration stage of the Project.

The requirements for a Plan of Operations are defined in 11 AAC 86.800. This Plan is written to meet all the applicable requirements for a Plan of Operations defined under 11 AAC 86.800.

2.1.2 Temporary Water Use Authorizations

Constantine would require water to complete the drilling activities on State lands as described in this Plan. Water would be withdrawn from natural sources including streams, ponds or wells for this purpose. Constantine anticipates using water in volumes that would require authorization from the ADNR-Water Section under 11 AAC 93.035 and 11 AAC 93.220. Prior Temporary Water Use Authorizations (TWUA) on the lands included in this Plan will expire December 31, 2023. As a

result, Constantine will be applying for new TWUA's prior to withdrawing any water for activities approved under this Plan.

2.1.3 Haines State Forest Authorizations

Constantine is not aware of the need for any authorization from the ADNR Division of Forestry for activities Constantine is proposing on State mining claims within the Haines State Forest. Constantine maintains open dialogue with the Haines area State Forester and discusses plans and proposed activities. In the absence of any authorizations from ADNR Division of Forestry, Constantine would formally rely on the ADNR Plan of Operations approval process, with the Mining Section as lead state agency, to solicit any formal input from the Division of Forestry on the activities proposed in this Plan. Constantine assumes that DNR's approval of this Plan includes review and concurrence by the Division of Forestry.

2.1.4 Reclamation Bonding Regulations

The activities proposed in this Plan are limited to surface disturbance activities that would require conventional reclamation including recontouring, replacement of the organic material including woody debris, and reseeding. Constantine proposes continuing to participate in the State of Alaska bond pool to meet all reclamation bonding responsibilities for work described in this Plan.

2.1.5 Stormwater Regulations

Stormwater on the Project site is regulated by ADEC under the APDES Program. Stormwater is managed under the terms of the Construction General Permit (CGP, Permit No. AKR100000) for stormwater discharges associated with industrial activity. Stormwater discharges associated with industrial activities are defined by 40 CFR 122.26(b) (14) (i-ix and xi). The CGP authorizes and sets conditions on the discharge of pollutants from certain industrial activities to waters of the United States. To ensure protection of water quality and human health, the permit establishes control measures and best management practices (BMPs) that must be used to control the types and amounts of pollutants that can be discharged from certain industrial activities. This general permit is intended to regulate stormwater (rain and snowmelt) runoff which encounters industrial activities and materials which have the potential to cause contamination. The quantities and types of stormwater discharged are dependent on many variables, including the type of industrial activity that the facility is engaged in (sector of industry), pollutants of concern, and the type and intensity of the runoff event.

To obtain authorization to operate under the CGP the permittee must develop a SWPPP according to the requirements of permit Part 5 and submit the SWPPP to ADEC. Further, the permittee must select, design, install and implement control measures (BMPs) to meet effluent limits. Finally, the permittee must submit a complete and accurate Notice of Intent (NOI) to operate under the CGP to ADEC and pay the general permit authorization fee in accordance with 18 AAC 72.

Beginning in 2014 Constantine has been operating under the CGP and maintaining a SWPPP and installed BMPs to meet the pollution minimization requirements of the CGP along the segments of the Glacier Creek access road that it constructed through 2017. Constantine will be updating their SWPPP to accommodate any new road construction on the State mining claims described in this Plan.

2.2 Federal Government Regulations

2.2.1 Waters Of The US

Surface disturbance associated with the activities in this Plan would affect Waters of the US (WOTUS), including wetlands and streams. Constantine has taken steps to minimize wetlands disturbance to less than one-tenth of an acre (0.1 acres). To operate under a Section 404 permit from the US Army Corps of Engineers (USACE), Constantine has determined that this Plan can operate under the terms of Nationwide Permit #14 authorizing the loss of up to 0.5 acres of wetlands. Constantine estimates that the total loss of wetlands would be less than one-tenth of an acre (0.1 acres) disturbance, therefore filing a Pre-Construction Notice with USACE is not required.

It is anticipated that development of the Glacier Creek Road spur would require crossing Plateau Creek at approximately three locations. Each crossing would require the installation of culverts. The number of creek crossings would be kept to a minimum, and after ground truthing the road may be re-aligned to reduce the number of crossings where possible.

2.2.2 Fuel Spill Prevention

Fuel spill prevention is regulated under EPA's Oil Spills Prevention and Preparedness Regulations under 40 CFR Part 112. Constantine is already operating under an EPA-compliant Tier 1 SPCC Plan and would continue to do so. Under CFR 112.6 Tier I-qualified facilities must either: comply with the requirements of paragraph 112 (a)(3) of this section; or prepare and implement an SPCC Plan that meets all requirements of paragraph (b) of this section; or prepare and implement a plan meeting the general plan requirements in §112.7 and applicable requirements in subparts B and C, including having the plan certified by a Professional Engineer as required under §112.3(d)). Paragraph 112 (a)(3) lists the requirements that must be met in the SPCC plan and describes a template that may be used as the SPCC Plan, once completed, and certified by the facility owner.

2.2.3 Migratory Bird Treaty of 1918 and Bald Eagle Protection Act

The goal of both the Migratory Bird Treaty of 1918 and the Bald Eagle Protection Act is to protect migratory bird species. Constantine would continue to integrate pre-disturbance surveys into their field programs on State land to identify and avoid impacts to nesting Bald Eagles and other migratory birds.

2.2.4 BLASTING

Constantine will be using explosives as part of its proposed geophysical surveys. Explosives are regulated by the US Bureau of Alcohol, Tobacco and Firearms. Constantine will rely on licensed contractors including a licensed blasting technician in the field to perform all aspects of the blasting operations, including ensuring public safety and will rely on that contractor(s) to ensure compliance with all federal regulation pertaining to the transportation, storage, and use of explosives.

2.2.5 NATIONAL HISTORIC PRESERVATION ACT

Constantine recognizes its obligation to protect potentially significant historic properties, including sites, buildings, structures, and/or objects. As part of its expanding environmental baseline program, Constantine will engage a qualified archeology contractor to perform pedestrian cultural resource clearance surveys of areas that Constantine intends to disturb, prior to that disturbance. Constantine understands that those surveys will be coordinated by the contractor with the Alaska Office of History and Archeology.

3.0 DESCRIPTION OF PROPOSED OPERATIONS

This section describes the activities being proposed under this Plan of Operations to allow Constantine to conduct exploration and geotechnical investigations on State mining claims.

The major activities proposed in this Plan of Operations include:

1. Road Development: Approximately 6.55 miles of road would be developed to allow access for drilling equipment. Approximately 2.75 miles of this road would include re-establishment of a previously established logging road and development of a Plateau Road spur and 3.8 miles of spur road to access new drill sites.
2. Geotechnical Drilling: Sonic and/or diamond drill rigs will be utilized to gather the information necessary to characterize subsurface conditions both west of Glacier Creek and east of Glacier Creek. Up to 33 drill pads would be developed to support this drilling.
3. Engineering Test Sites: Up to 40 test pits would be excavated to gather additional information and further assess ground conditions.
4. Laydown Area: A lay down area approximately one (1) acre in size would be developed for storage and assembly of drilling and seismic equipment.
5. Geophysical Surveys: Up to 5.5 miles of seismic surveys would be conducted to characterize depth to bedrock.
6. Monitoring Wells: Up to 20 groundwater monitoring wells would be installed to further characterize hydrogeologic conditions.
7. Meteorological monitoring stations: Air/meteorological monitoring stations would be installed to assist in characterizing current meteorological conditions.
8. Expansion of an environmental monitoring and characterization program that has been ongoing on adjacent federal and MHT lands.
9. Mineral exploration on all mining claims to include geologic mapping, surface rock and soil sampling.

3.1 GLACIER CREEK / DRILL ROAD SPURS

Constantine proposes reestablishing a portion of a previously established logging road as well as developing a Plateau Road spur for approximately 2.75 miles on the western side of Glacier Creek (Figure 4). The Plateau Road spur is anticipated to continue onto MHT claim lands and appropriate approvals would be obtained from MHT. Additionally, 3.8 miles of drill pad spur roads would be developed to access drill pad sites (Figure 4, 5). This development would provide access for mechanized equipment on the State mining claims. In 2023 an independent logging contractor, under permit with ADNR/Forestry, constructed a new bridge across lower

Glacier Creek on Constantine's mining claims. This bridge would be used to mobilize equipment across Glacier Creek to accomplish the work proposed in this Plan.

Any new roads, spurs or trails would be constructed using cut and fill construction. Road driving surfaces would be approximately 15 ft. wide. In areas, the road surface may approach up to 30 ft wide to allow safe passage of two-way traffic. Cut and fill volumes for roadbed material, surfacing material, and berm material are anticipated to be net zero. Any additional material needed for surfacing would be sourced from previously existing, active borrow sources and coordinated with DNR if necessary. Constantine would continue to follow BLM requirements to minimize invasive species introduction along the existing access road. Constantine requires that all outside vehicles are pressure washed prior to entering the Glacier Creek access road to reduce the likelihood of introducing invasive plant material from the tires and wheel wells. Constantine's continued diligence with this requirement would have the effect of reducing the introduction of invasive species on MHT and Haines State Forest lands as well.

Ditches would be constructed along the uphill/cut sides of roads to manage stormwater. The stormwater ditches would typically terminate near road curves and discharge stormwater to uplands where it would naturally seep into the ground and vegetation would filter settleable solids. Where conditions warrant, BMP's including energy dissipaters, relief culverts, and sediment basins, or similar, would also be installed to reduce sediment transport and encourage sedimentation. All BMP's will be maintained throughout the life of the permit.

The following is a representative list of mobile equipment used for road and pad construction:

- One excavator approximately CAT 320 to CAT 335 size
- One excavator approximately CAT 335 to CAT 345 size
- One front end loader approximately CAT 980 size
- One dozer approximately CAT D-6 size
- One dozer approximately CAT D-8 size
- Three center articulated trucks approximately CAT 725 size
- One vibratory roller approximately CAT 563 size
- One road grader approximately CAT 14G size
- One air-track drill
- Four pickup trucks

3.1.1 TIMBER CLEARING

Timber clearing is likely to be required as part of road development as well as development of drill pad sites and the laydown area (Section 3.2). Regulation 11 AAC 86.800(6) specifies that the Plan of Operations must include information that defines the area of timber to be cleared, amount to be used and clearing methods. To appropriately manage timber, the following process would be followed:

- Under the direction of the Haines State Forester, the trees would be felled in line with trail layout and bucked to desired length.
- Limbed tops may be used as decking material for salvaged logs.

- A skidder would be used to move economic logs onto decks spaced at nominal ¼ mile intervals.
- Logs would later be recovered by timber industry interests.

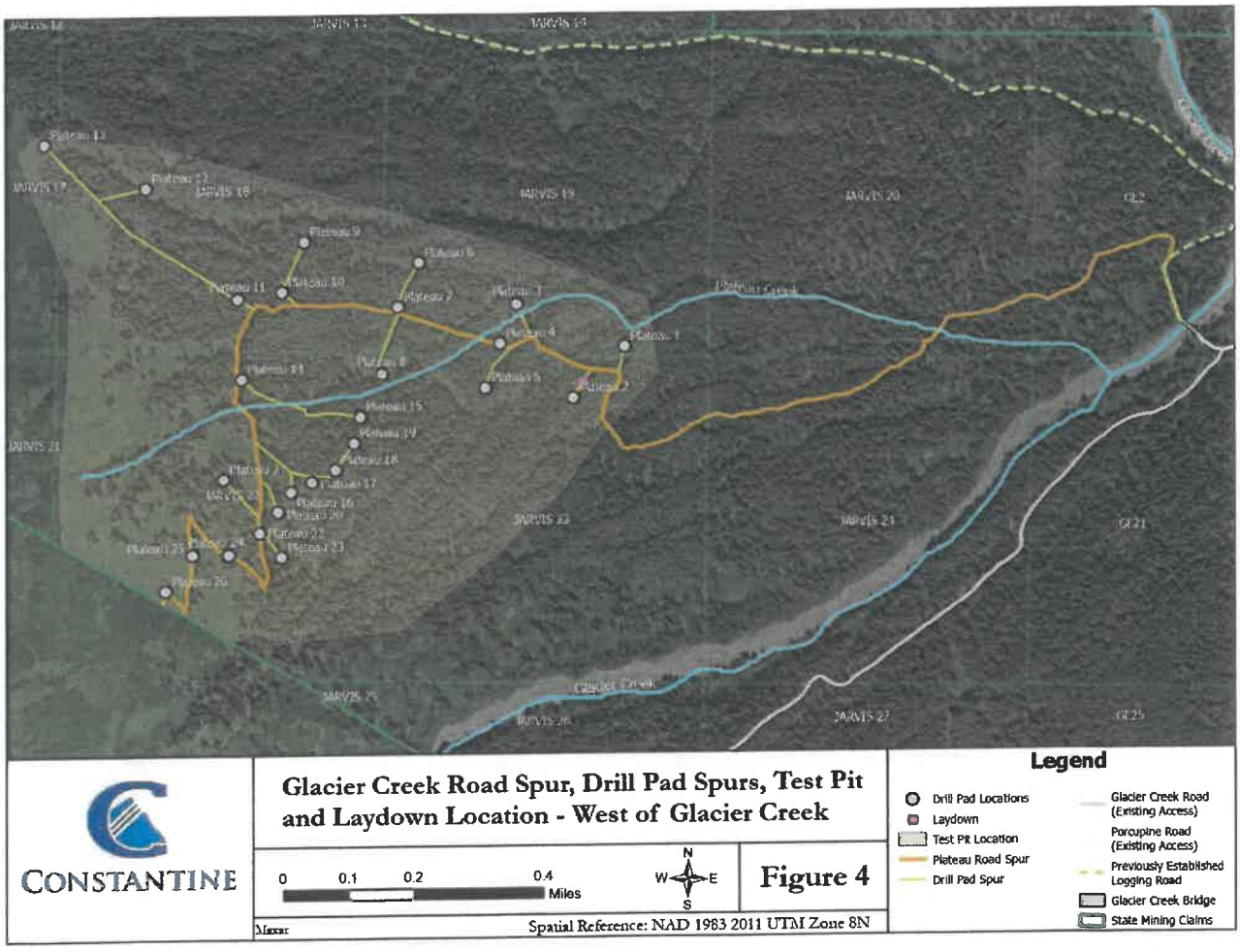

Figure 4 – Plateau Road Spur, Drill Pad Spurs, Drill Pads, Test Pit and Laydown Location – West of Glacier Creek

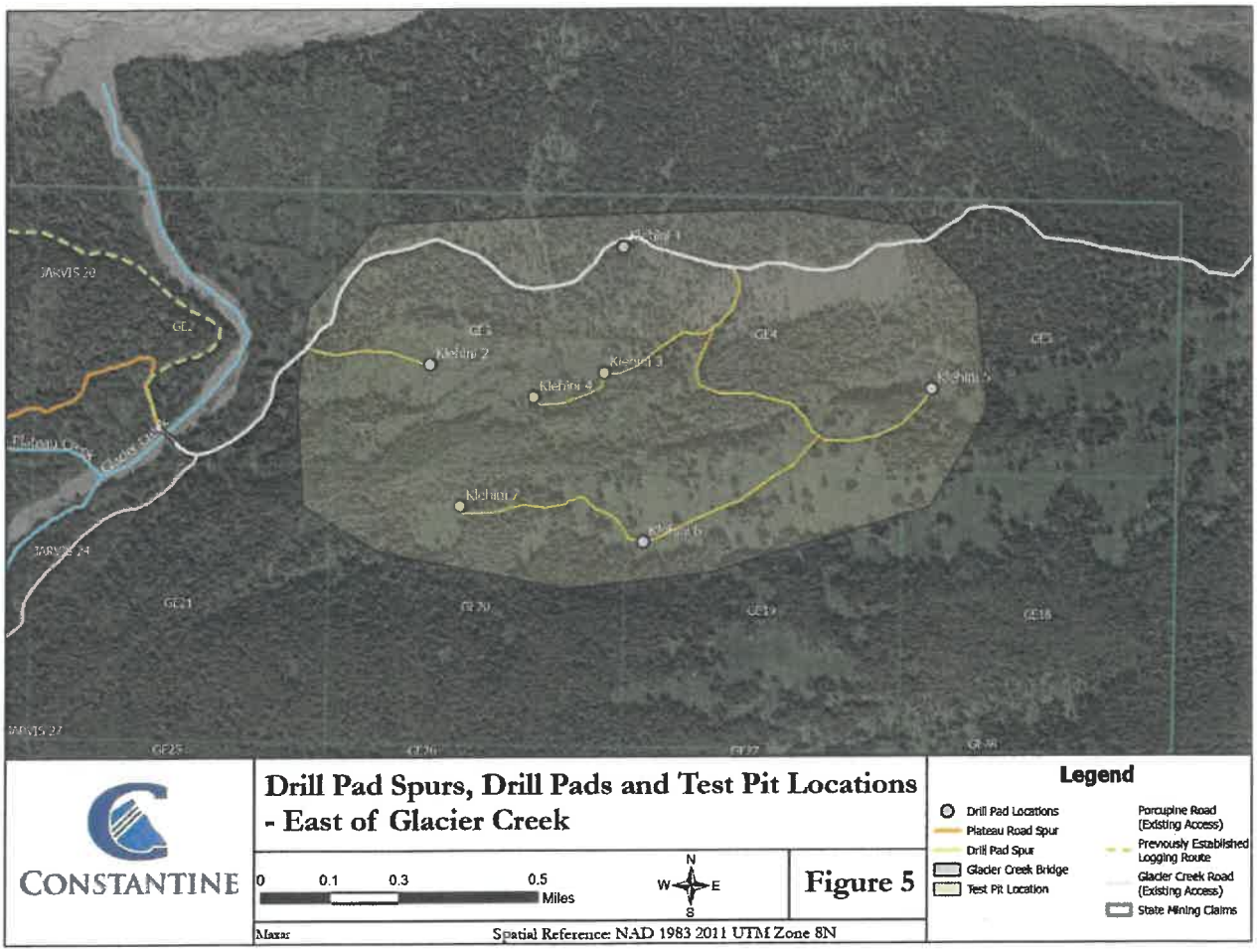

Figure 5 – Drill Pad Spurs, Drill Pads and Test Pit Locations – East of Glacier Creek

3.2 Geotechnical Drilling

An estimated 33 total drill pads to support geotechnical drilling are planned on State mining claims. Drill pads are estimated to be 30' x 60' to facilitate movement of drilling equipment and support vehicles and increase worker safety by allowing visibility for wildlife, setbacks from potential treefall, and adequate space for equipment movement. The location of drill pads is not exact and would require field fit to minimize disturbance due to topography and minimize timber removal; however, the anticipated locations are generally depicted in Figures 4 and 5.

Geotechnical drillholes would be advanced via a sonic or diamond drill rig (Figure 6), generally using 5-inch inner diameter core barrel and 6-inch outer diameter casing. The shallower holes will target overburden, rather than bedrock, and the bulk of these holes would be unlined and would naturally close after the required samples are collected. The top of completed holes would be filled with bentonite clay or grout. Geotechnical holes drilled using a diamond drill rig would inform structural stability analysis, allow for hydrologic planning, and samples of the core would be subject to geochemical characterization. The total number of holes to be subject to geochemical characterization is anticipated to be 10 – 15. Historical drilling at the Palmer project has required very little use of sumps due to the fractured nature of the rock; however, if sumps are required to support diamond drilling, hand-dug sumps will be constructed to encourage drill solid settling before the overflow is allowed to seep into the ground. Should any drilling fluids be necessary to complete diamond drilling, a list of additives has been provided in Appendix B.

Up to 20 monitoring wells are planned to be installed and would be located in the same location as one of the drill pad locations identified in Figure 4 or Figure 5 to the greatest extent practicable. Monitoring wells serve as long-term data collection infrastructure and would remain in use for the life of the permit. Holes identified for an environmental monitoring well would be drilled through overburden to bedrock and then developed for their intended use. The wells would consist of a 5-inch hole, approximately 65 - 265 ft deep, and developed using schedule-80 PVC pipe. A well consists of a pre-packed well screen and a silica sand filter pack installed within the annulus between the screen and hole wall (Figure 7). A bentonite seal is installed above the filter pack near surface to prevent surface water from entering the well. Figure 7 shows a flush mounted well; however, for the purposes of sampling, it is anticipated that a monument approximately 2 ft. tall would remain. Figure 8 shows an example of a monument which would be constructed to protect the well. Additionally, a visual identifier (flagging, reflective tape, snow poles) would be used to mark the wells to avoid safety incidents or damage from timber or recreational vehicles. Nested shallow and deep wells may be installed at select sites. Prior to abandonment, the wells would be plugged and capped.

A laydown area approximately 1 acre in size would be developed west of the Plateau Road spur (Figure 4) and be used for storage and staging of equipment and supplies, including a 500-gallon fuel tank (Section 3.7). The laydown would also serve as a temporary holding area for construction waste materials until they can be removed and disposed of offsite.

Figure 6 - Example of Track Mounted Sonic Drill Rig (Palmer Project, 2021)

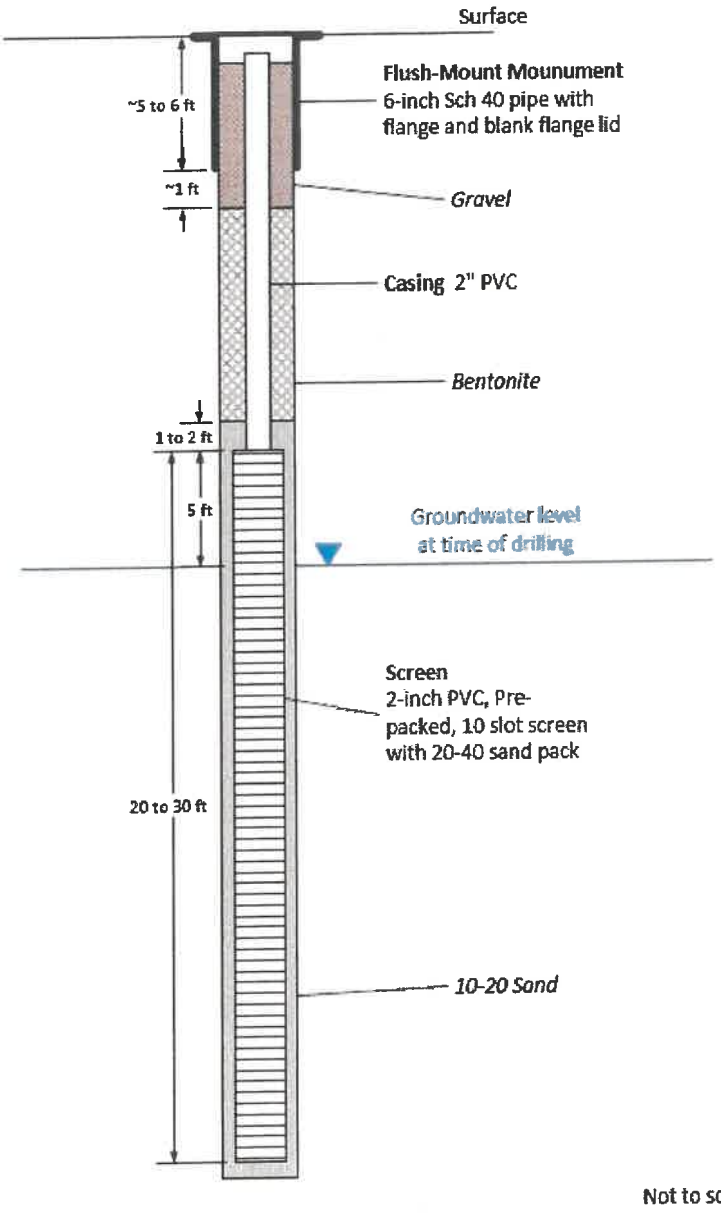

Figure 7 - Example Schematic of Monitoring Well Construction

Figure 8 - Example of Environmental Monitoring Well (Palmer Project, 2021)

3.3 Engineering Test Sites

Constantine estimates excavating and rehabilitating approximately 40 test pits to assess ground conditions. Test pits will remain as small as possible and will be preferentially sited in areas disturbed by other activities outlined as part of the Plan (i.e., within road development areas, drill pads, or seismic line locations). Test pits will generally be 5-15 ft. long and as wide as the natural angle of repose dictates. Test pits would be excavated until refusal (bedrock or maximum excavator reach). During excavation, a record of soil horizons and material competency would be logged and samples would be collected. Material not removed for analysis would be piled next to the excavation until the test pit is completed. After completing the test pit, the excavated material would be replaced into the excavation and any vegetation removed would be placed back on top. It is Constantine's intention that test pits dug during any given season are also reclaimed that same season. The precise location of test pits is yet to be identified but would occur within the areas outlined in Figures 4 and 5.

3.4 Geophysical Surveys

An estimated 5.5 miles of shallow refraction seismic surveys would be conducted (Figure 9). The purpose of the work is to broadly map overburden depth and bedrock type, with results calibrated by the overburden drilling program. Prior to the seismic survey, lines must be brushed to allow access. Surveyed lines would be brushed roughly 5 ft. wide by hand or mechanical brusher with the intended goal of minimizing ground disturbance. Survey lines may be up to 15 ft.

wide where necessary for safe passage due to local vegetation. Minimal earthwork is expected for geophysics lines. Once cleared, the geophysics team would access work points along the brushed lines by foot. Helicopter support may also be required for deployment of personnel and equipment.

Along each cleared line geophones would be placed at predetermined intervals. Seismic energy would be provided from small charges buried in hand-excavated holes. Charges would be transported by helicopter, truck and finally by hand. A licensed blaster would be on site to supervise the transportation, handling, and detonation of the explosives. Minimal surface disturbance is expected from the explosives due to the ½ pound charge size and the fired charge being buried.

3.4.1 BLASTING

3.4.1.1 Blast Design

Electric detonators would be used to set off the charges. Typically, the smallest 10-foot leads are used, but contractors will use longer leads if deemed necessary.

Cables and geophones are expected to be laid out in 755 feet increments. Each charge is triggered by one detonator. Approximate average explosives use is 5.5 pounds per 330 feet of seismic line.

3.4.1.2 Explosive Handler and Certification

Constantine would use a licensed explosive handler. Certifications and ATF Permit Number(s) would be provided upon request. All explosives handling and storage would comply with applicable state and federal regulations.

3.4.1.3 Type and Amount of Explosives

Explosive type is anticipated to be ½ pound dynamite sticks. Approximately 500 pounds is estimated for this Project. Any leftover explosives would be consumed via detonation or returned to the supplier. Storage of explosives would be controlled by the explosives handler and located entirely on private lands.

3.4.1.4 Public Safety

- Before a charge is connected the blaster would confirm that all non-crew personnel are outside of the 330 feet buffer zone, and the blasting apprentice would visually confirm the immediate area is clear of personnel and wildlife.
- Members of the trained geoscience crew would take guarding positions to ensure that no public, personnel, or wildlife encroaches upon the blast area.
- Additionally, the general public would be notified through the Haines Borough, advertisements in the Chilkat Valley News, social media posts, and signage present in the work area.

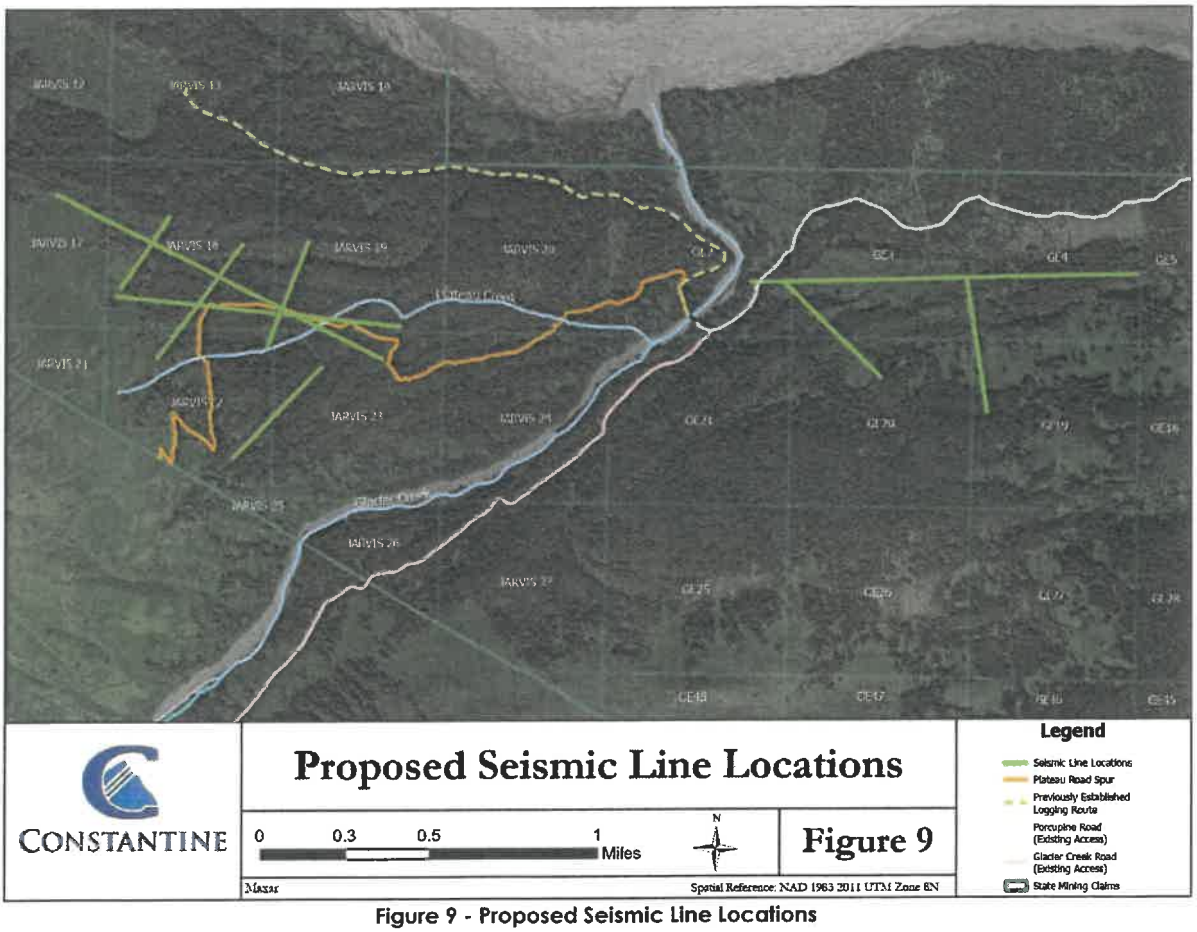

Figure 9 - Proposed Seismic Line Locations

3.5 Meteorological / Ambient Air Monitoring Stations

Constantine plans to install up to two meteorological / ambient air monitoring stations as part of this Plan. The exact locations of the monitoring stations are subject to further review and will be within state claims with a surface footprint not anticipated to exceed 40 ft. x 40 ft. each. Air monitoring stations are likely to be located in one or more of the following state claim areas: Jarvis 17, 18, 19, 21, 22, 23. Additional road development to these locations is not anticipated. If the monitoring stations are located outside of the additional road development proposed as part of this Plan, development of the monitoring stations would be supported via helicopter. Information collected from these stations would include precipitation, snowpack, wind direction, wind speed, and other meteorological data. If Constantine identifies the need for these stations to collect air quality samples, instrumentation to collect that information would be installed. The data collected by such stations would further Constantine's baseline data collection efforts and continue to inform the understanding of the local environment.

3.6 Surface Mineral Exploration

Constantine staff and/or consultants would complete geologic mapping and surface rock and soil sampling throughout the State mining claims during the period of this Plan approval. Access would include use of the proposed access road and helicopter. If required, limited vegetation hand clearing may be performed to allow safe landing for the helicopter in order to provide surface access to the more remote portions of the State mining claims.

3.7 Fuel Management

Fuel and fuel-related substances that would be used for activities contemplated under this Plan include gasoline, diesel, and lubricating grease and oils.

Constantine has a permitted fuel storage facility on BLM land adjacent to the lower section of the Glacier Creek Road at 2.4 mile. It consists of a 5,000-gallon diesel fuel storage tank and a 3,000-helicopter fuel (Jet A) storage tank. Transient 70-gallon fly tanks are also stored and refilled within the secondary containment here.

Constantine would continue to use this facility as the primary fuel storage and transfer facility. All fuel storage containers greater than 55-gallons would be double-walled or stored within secondary containment capable of holding at least 110% of the largest container within the containment. Smaller containers (e.g., fuel drums and jerry cans) would be stored in containment where practicable. Fuel transfer would take place within containment or over drip pans where practicable. Absorbent pads and spill kits would be readily available at fuel storage and transfer sites.

Fuel levels in the storage tanks would be maintained by local (Haines)fuel service providers. The entire fuel tank area at 2.4 mile employs secondary spill containment measures that meet or

exceed State and Federal regulations. Secondary containment is designed to hold 110% of fuel volume of the largest container.

Light-duty vehicles and heavy equipment will be utilized on the Project. Approximately 500 gallons of diesel would be stored in a portable diesel tank located at the laydown. This tank would be placed in temporary secondary containment and berms would be placed around the containment for additional protection. Constantine would ensure the location of the portable diesel tank is greater than 100 ft. from natural occurring water bodies as is required by DNR.

Constantine personnel are trained in spill prevention and spill response procedures. Spill kits are maintained in key areas. An assigned worker inspects spill kits weekly to check equipment serviceability and ensure that kits are fully stocked. Select Constantine personnel complete documented task-training in fuel handling, fuel storage, and fuel transferring procedures at least once a year. This includes training in visual inspections of fuel containers. All new personnel to the Project must complete the same training before they are authorized to carry-out any fuel-related tasks.

Fuel storage containers are visually checked weekly (or more frequently, as required) by an assigned worker either with a dip-stick or by viewing the liquid level through the fill. Fuel levels (and volumes) are also checked in the same manner before storage tanks are re-filled. On a weekly basis, an assigned and qualified worker visually inspects all tanks, couplings, valves, fittings, filter housings, nozzles, and other fittings for signs of deterioration, damage, or leakage. On a weekly basis, or after heavy rainfalls, an assigned worker would also conduct inspections of containments checking for signs of damage, deterioration, discharge, or fuel accumulation.

3.8 Expansion of Environmental Baseline Program

Constantine has been performing environmental monitoring, characterization, and mapping programs for the overall Project area, started as early as 2008. The effort has included surface water and groundwater quality and hydrology monitoring, aquatic life surveys, wildlife surveys, terrestrial ecosystem and vegetation surveys (including invasive species), wetlands surveys, cultural resources surveys, meteorological monitoring, snow surveys and monitoring, and development rock characterization studies.

The data from these efforts contribute to a fundamental understanding of the natural environment in the Project area, including a baseline of environmental conditions. They define an environmental backdrop that Constantine can design around, and one against which Constantine can detect changes, over time, including those that might be related to future Project activities.

Constantine intends to expand aspects of the baseline program onto the State mining claims including, but not limited to:

- Wetland delineations

- Surface water flow measurements and quality monitoring
- Fish surveys and wildlife surveys
- Meteorological/Ambient air quality monitoring
- Cultural resource surveys
- Geochemical characterization of bedrock that might be part of any future development and material sites

The objectives of the expanded environmental program remain as they are on the overall Project area; it contributes to a fundamental understanding of the natural environment in the Project area, including a baseline of environmental conditions. They define an environmental backdrop that Constantine can design around, and one against which Constantine can detect changes, over time, including those that might be related to future Project activities.

3.9 Minimizing Detrimental Effects on Fish and Wildlife and Their Habitats

Constantine would execute the proposed work in this Plan with an emphasis on avoiding or minimizing the effects of that work on fish and other wildlife. All stream crossing in fish-bearing streams would be pre-approved by ADF&G. Constantine would minimize land clearing activities during sensitive migratory bird nesting seasons or conduct bird nest surveys in advance of any land clearing activities with the intent of avoiding nests. Constantine currently conducts annual eagle nest surveys to understand active and historic eagle nest locations and also supports Alaska Department of Fish and Game's fish monitoring work within the Project area. Constantine has a no-hunting policy for employees on the overall Project lands. Constantine would adhere to best practices in all its activities to avoid contamination of surface waters by fuels, drilling additives or other substances. Constantine would continue to implement its invasive species policies aimed at minimizing the introduction of invasive plant species along any newly constructed roads.

3.10 SCHEDULE

Constantine's tentative schedule is presented in Table 2 below. The schedule is subject to change due to field conditions, contractor availability, funding availability and new project information. In developing this Plan, Constantine has done its best to anticipate activities to be included in the 5-year period and would submit an amendment for any future activities that may be required but are not captured in this initial Plan.

Table 2 – Proposed Activity Schedule

Activity	2024	2025	2026	2027	2028
Road Construction and Use	X	X	X	X	X
Geotechnical Drilling	X	X	X	X	X
Seismic Surveys	X	X			
Laydown Construction and Use	X	X	X	X	X
Air Monitoring Station Installation and Use	X	X	X	X	X
Monitoring Well Installation and Data Collection	X	X	X	X	X
Surface Mineral Exploration	X	X	X	X	X
Reclamation (largely concurrent)	X	X	X	X	x

4.0 RECLAMATION

Since all activities proposed in the Plan are surface activities and do not include construction of any permanent facilities, Constantine will follow applicable reclamation requirements set forth in 11 AAC 97.200 that define the reclamation performance standards and include(paraphrased):

- Reclaiming areas disturbed so that any surface that would not have a stream flowing over it is left in a stable condition.

- Stable is defined a condition the "allows for the reestablishment of renewable resources on the site within a reasonable period of time by natural processes" means a condition that can reasonably be expected to return waterborne soil erosion to pre-mining levels within one year after the reclamation is completed, and that can reasonably be expected to achieve revegetation, where feasible, within five years after the reclamation is completed, without the need for fertilization or reseeding. If rehabilitation of a mined site to this standard is not feasible because the surface materials on the mined site have low natural fertility or the site lacks a natural seed source, the department recommends that the miner fertilize and reseed or replant the site with native vegetation to protect against soil erosion; however, AS 27.19 does not require the miner to do so. Rehabilitation to allow for the reestablishment of renewable resources is not required if that reestablishment would be inconsistent with an alternate post-mining

land use approved under AS 27.19.030(b) on state, federal, or municipal land, or with the post-mining land use intended by the landowner on private land.

- Segregating topsoil for reuse and protecting it from erosion and contamination while stored.
- Recontouring disturbed ground to be conducive to natural revegetation.

Constantine can meet all reclamation requirements by employing standard practices with equipment that is readily available and proposes participating in the Statewide Bond Pool to meet reclamation bonding requirements for the activities proposed in this Plan.

All drill hole casings would be removed or cut off at, or below, ground level, except for those maintained as monitoring well locations. All drill holes would be plugged by the end of the exploration season with bentonite hole plug or equivalent slurry, for a minimum of 10 feet within the top 20 feet of the drill hole. The remainder of the hole would be backfilled to the surface with drill cuttings. If water is encountered in any drill hole, a minimum of 7 feet of bentonite hole plug or equivalent slurry would be placed immediately above the static water level in the drill hole. Drill holes would be completely filled, from bottom to top, with bentonite hole plug or equivalent slurry, unless communicated otherwise by ADNR.

Constantine would perform drill site reclamation on a concurrent basis, performing that reclamation as soon as practical after the site is no longer needed. Drill holes would be closed before the site is reclaimed except for those drillholes that are developed into monitoring wells or otherwise require reentry.

Constantine would collaborate with the Haines State Forester in determining the long-term plans for new roads constructed by Constantine. Constantine understands that ADNR-Forestry may want some of the new road to remain in place long-term to accommodate public access and timber access.

The area of expected disturbance has been calculated in Table 3. This calculation is representative of the disturbance that can be expected from the proposed activities. It is understood that State bonding obligations for mining disturbances do not include drill roads when calculating total disturbance acreages.

Table 3 – Anticipated Surface Disturbance

Activity	Disturbance Area (acres)	Note
Plateau / Drill Road Spur Development	Plateau Road Spur Drill Spurs *Total = 19.85 acres*	For disturbance calculation, trail width is estimated conservatively at an average of ~25 feet with a total expected length of 6.55 miles.
Drill Pads	*Total = 1.36 acres*	An estimated 33 drill pads are proposed. Disturbance area is for 33 pads at 30 ft. x 60 ft.
Test Pits	Total = ~0.17 acres	An estimated 40 test pits are proposed. Disturbance area for each is anticipated at 15 ft. x 12ft.
Laydown	*Total = ~1 acre*	Laydown footprint anticipated at 175 x 250 ft.
Air/Meteorological Monitoring Stations	*Total = >0.1 acre*	Includes two air monitoring stations at 40 x 40 ft. each.
Total	22.48 acres	Reclamation of trails to be discussed with Haines State Forester.

APPENDIX A – MAP AND LIST OF STATE MINING CLAIMS COVERED IN THIS PLAN OF OPERATIONS

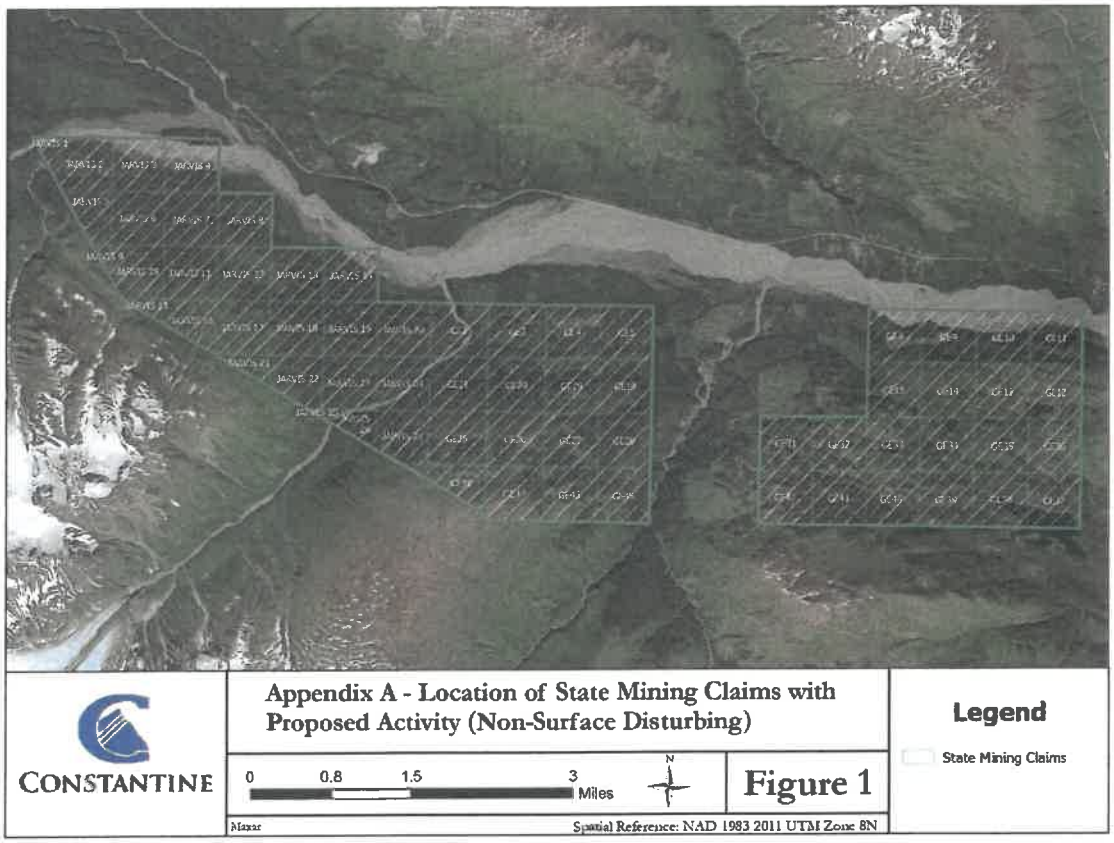

FIGURE 1 – STATE MINING CLAIMS WITH PROPOSED ACTIVITY

TABLE 1 – LIST OF STATE MINING CLAIMS WITH PROPOSED ACTIVITY (INCLUSIVE OF NON-SURFACE DISTRUBING WORK)

Claim Name	Claim Number	Claim Owner
GE2	662062	Constantine Mining LLC
GE3	662063	Constantine Mining LLC
GE4	662064	Constantine Mining LLC
GE5	662065	Constantine Mining LLC
GE8	662068	Constantine Mining LLC
GE9	662069	Constantine Mining LLC
GE10	662070	Constantine Mining LLC
GE11	662071	Constantine Mining LLC
GE12	662072	Constantine Mining LLC
GE13	662073	Constantine Mining LLC
GE14	662074	Constantine Mining LLC
GE15	662075	Constantine Mining LLC
GE18	662078	Constantine Mining LLC
GE19	662079	Constantine Mining LLC
GE20	662080	Constantine Mining LLC
GE21	662081	Constantine Mining LLC
GE25	662082	Constantine Mining LLC
GE26	662083	Constantine Mining LLC
GE27	662084	Constantine Mining LLC
GE28	662085	Constantine Mining LLC
GE31	662088	Constantine Mining LLC
GE32	662089	Constantine Mining LLC
GE33	662090	Constantine Mining LLC
GE34	662091	Constantine Mining LLC
GE35	662092	Constantine Mining LLC
GE36	662093	Constantine Mining LLC
GE37	662094	Constantine Mining LLC
GE38	662095	Constantine Mining LLC
GE39	662096	Constantine Mining LLC
GE40	662097	Constantine Mining LLC
GE41	662098	Constantine Mining LLC
GE42	662099	Constantine Mining LLC
GE45	662102	Constantine Mining LLC
GE46	662103	Constantine Mining LLC

GE47	662104	Constantine Mining LLC
GE48	662105	Constantine Mining LLC
JARVIS 1	661267	Constantine Mining LLC
JARVIS 3	661269	Constantine Mining LLC
JARVIS 4	661270	Constantine Mining LLC
JARVIS 5	661271	Constantine Mining LLC
JARVIS 6	661272	Constantine Mining LLC
JARVIS 7	661273	Constantine Mining LLC
JARVIS 8	661274	Constantine Mining LLC
JARVIS 9	661275	Constantine Mining LLC
JARVIS 10	661276	Constantine Mining LLC
JARVIS 11	661277	Constantine Mining LLC
JARVIS 12	661278	Constantine Mining LLC
JARVIS 13	661279	Constantine Mining LLC
JARVIS 14	661280	Constantine Mining LLC
JARVIS 15	661281	Constantine Mining LLC
JARVIS 16	661282	Constantine Mining LLC
JARVIS 17	661283	Constantine Mining LLC
JARVIS 18	661284	Constantine Mining LLC
JARVIS 19	661285	Constantine Mining LLC
JARVIS 2	661268	Constantine Mining LLC
JARVIS 20	661286	Constantine Mining LLC
JARVIS 21	661287	Constantine Mining LLC
JARVIS 22	661288	Constantine Mining LLC
JARVIS 23	661289	Constantine Mining LLC
JARVIS 24	661290	Constantine Mining LLC
JARVIS 25	661291	Constantine Mining LLC
JARVIS 26	661292	Constantine Mining LLC
JARVIS 27	661293	Constantine Mining LLC

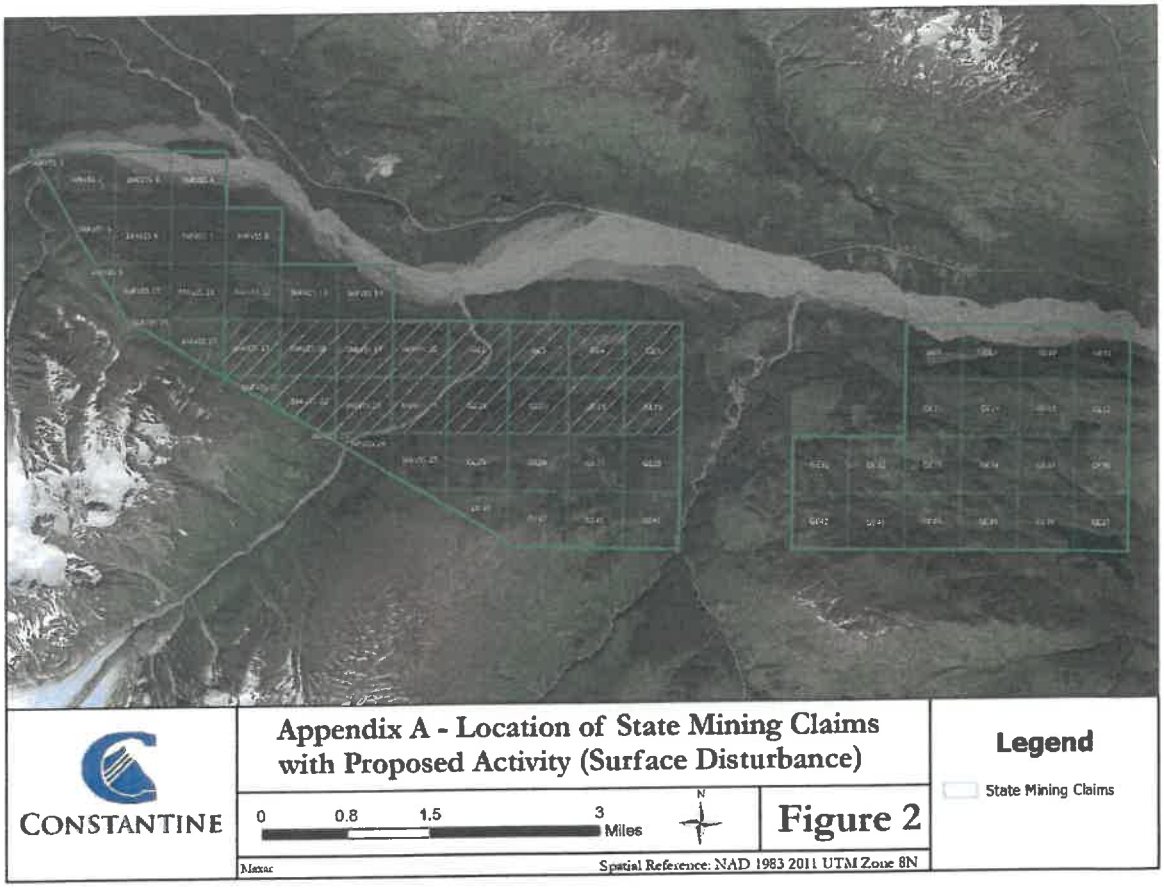

FIGURE 2 – STATE MINING CLAIMS WITH PROPOSED SURFACE DISTURBANCE

TABLE 2 – LIST OF STATE MINING CLAIMS WITH PROPOSED SURFACE DISTRUBANCE

Claim Name	Claim Number	Claim Owner
GE2	662062	Constantine Mining LLC
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GE4	662064	Constantine Mining LLC
GE5	662065	Constantine Mining LLC
GE18	662078	Constantine Mining LLC
GE19	662079	Constantine Mining LLC
GE20	662080	Constantine Mining LLC
GE21	662081	Constantine Mining LLC
JARVIS 17	661283	Constantine Mining LLC
JARVIS 18	661284	Constantine Mining LLC
JARVIS 19	661285	Constantine Mining LLC
JARVIS 20	661286	Constantine Mining LLC
JARVIS 21	661287	Constantine Mining LLC
JARVIS 22	661288	Constantine Mining LLC
JARVIS 23	661289	Constantine Mining LLC
JARVIS 24	661290	Constantine Mining LLC