

**U.S. Department of the Interior
Bureau of Land Management
Eastern Interior Field Office
1150 University Ave
Fairbanks, Alaska 99709**

ENVIRONMENTAL ASSESSMENT

**Golden Summit Project, Plan of Operations
Freegold Recovery Inc. USA**

DOI-BLM-AK-F020-2013-0006-EA

Cleary Summit, near Fox, Alaska

Located in:

Fairbanks Meridian, Township 3 North, Range 1 East, sections 24 and 25
Fairbanks Meridian, Township 3 North, Range 2 East, sections 14, 15, 19-23 and 27-30

Prepared by:

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1. Introduction

1.1. Background, Location, Land Status, and Land Use Plan Conformance

1.1.1 Background

The following Exploration Narrative is designed to summarize planned exploration activities on unpatented Federal mining claims by Freegold Ventures Limited and its Alaska authorized subsidiary Freegold Recovery Inc. USA and Freegold Ventures Limited, USA (Freegold) on the Christina – Hi Yu exploration block on the eastern half of their Golden Summit project in the Fairbanks Mining District, Alaska (Figure 1). This part of the Golden Summit project does not currently have an approved Plan of Operations (POO) and is being submitted separately from the western portion of the Golden Summit project where a previous NEPA review (EA # AK-025-07-019) has already been completed and a POO approved (Figure 1).

1.1.2. Location

The Golden Summit project area is located in Township 3 North, Ranges 1 and 2 East, Fairbanks Meridian and Base, off the Steese Highway north and east of Cleary Summit (Figure 1). Claims covered by this permit include unpatented Federal lode and placer mining claims. The main streams draining the Christina – Hi Yu exploration block include Cleary Creek and its tributaries Wolf Creek and Chatham Creeks along with Fairbanks Creek and its tributaries Too Much Gold Creek and Moose Creek.

The Golden Summit project is located approximately 25 road miles north of Fairbanks, Alaska via the Steese Highway. East of the Steese Highway, the State-maintained Fairbanks Creek road extends along the southern margin of the property. West of the Steese Highway, the State-maintained Pedro Dome Road extends along the southern margin of the property. Numerous seasonal gravel and dirt roads connect the Steese Highway, Fairbanks Creek Road and Pedro Dome Road with most parts of the Golden Summit project. These roads will be utilized for access during exploration of the Golden Summit project. In addition, several now-reclaimed drill roads, excavated by Freegold and previous operators and reclaimed by Freegold prior to 2001, may be re-opened and utilized during the period of this permit. Such use will depend on drilling results from existing access roads.

The proposed permit for unpatented Federal mining claims is designed to cover the five year period extending from January 1, 2012 through December 31, 2016. Previous exploration efforts include unfinished reclamation in the Tolovana and Cleary Hill exploration areas (outside the footprint of this permit). This existing reclamation is covered by Annual Hardrock Exploration Application (AHEA) permit 9726 (2007 through 2011) and have been incorporated into and have become part of this new 2012 to 2016 Hardrock Exploration POO. The State of Alaska Department of Natural Resources (DNR) has issued a new AHEA permit #9726 for the same period sought in this POO (January 1, 2012 through December 31, 2016). In addition, the State Department of Natural Resources has issued a Temporary Water Use Authorization Permit (TWUP) F2011-133, covering the same period as Hardrock Exploration permit #9726.

This part of the Fairbanks Mining District has seen extensive lode and placer gold, tungsten, antimony and base metal exploration and mining since the early 1900's. Over 6.75 million ounces of placer gold have been recovered from streams draining the Golden Summit project, including major production from Cleary Creek, Fairbanks Creek, Eldorado Creek and Goldstream Creek with lesser but still significant production from smaller drainages like Willow, Bedrock, Chatham, Wolf, Too Much Gold and Moose Creeks. In addition, over 506,000 ounces of lode gold were recovered from past producing lode mines on the Golden Summit project, including the four largest historic past-producing mines in the district, the Cleary Hill, American Eagle, Hi Yu and Newsboy mines (Plate 1). More than 50 other lode gold mines, prospects and occurrences have been documented on the Golden Summit project, many of which have remained unexplored since World War Two.

In previous permits submitted on the Golden Summit project, the Golden Summit project has been separated into several exploration prospect areas to facilitate explanation of the proposed activities. To calculate relative acreages of disturbance anticipated by future activity and to quantify reclamation responsibilities related to these past and planned future disturbances, these prospect names are retained in this new permit to maintain clarity and consistency. Plate 1 depicts the current land status and the main exploration prospects within the Christina – Hi Yu exploration block. These include the Christina exploration area, Saddle exploration area, Circle Trail exploration area, Goose Creek exploration area, Too Much Gold exploration area and Hi Yu exploration area (Table 1, Plate 1).

Table 1: Summary of exploration areas in the Christina - Hi Yu block, Golden Summit project, Alaska. Please note: acreage listed is approximate and is not related to proposed disturbances outlined in this document.

Exploration Area	Size (acres)	Unpatented Claims (#)	Drainage Basin	Access Roads
Christina	380	19	Cleary, Chatham and Wolf Creeks	Fairbanks, Chatham and Wolf Creek Roads
Saddle	240	12	Fairbanks, Chatham and Wolf Creeks	Fairbanks Creek, Chatham Creek and Circle Trail Roads
Circle Trail	220	11	Fairbanks, Chatham and Wolf Creeks	Fairbanks Creek, Chatham Creek and Circle Trail Roads
Goose Creek	100	5	Wolf Creek	Wolf Creek and Circle Trail Roads
Too Much Gold	320	16	Fairbanks, Too Much Gold and Wolf Creeks	Fairbanks Creek and Circle Trail Roads
Hi Yu	340	17	Fairbanks, Too Much Gold and	Fairbanks Creek, Moose Creek and

			Moose Creeks	Circle Trail Roads
Totals	1600	80		

Exploration within several of the exploration areas outlined in this POO was conducted during the period 1978 through 1988 by Placid Oil Company and BP Minerals America. Disturbances from most of these activities were reclaimed prior to Freegold’s acquisition of Golden Summit in 1991. Freegold then conducted dozer and backhoe trenching along with reverse circulation and core drilling between 1992 and 1998. All of these disturbances were reclaimed and approved by the DNR prior to 2000. Freegold then conducted intermittent exploration from 2000 through 2011 in the Dolphin – Cleary Hill block to the west of the Christina – Hi Yu block, leaving reclamation liabilities in that area which remain part of AHEA permit 9726 responsibilities. A minor amount of exploration was conducted on the Christina prospect in 2011 however all of the work conducted by Freegold was on patented lands so no Federal reclamation liabilities currently exist on the Christina – Hi Yu exploration block. Plate 2 shows the location and reclamation status of all drill holes completed by Freegold since acquiring the project in 1991.

1.1.3. Land Status

The subject lands within FM T3N R1E and T3N R2E, are Tentatively Approved to the State of Alaska, exclusive of the Mining Claim Recordations.

The specific BLM managed lands affected are: T3N R1E Sections 24 and 25 and FM T3N R2E Sections 14, 15, 19-23, and 27-30.

1.1.4. Conformance with Land Use Plan

The proposed project is located on BLM-managed lands that are not covered by an existing Land Use Plan.

1.2. Purpose and Need

1.2.1. Applicant’s Purpose and Need for Proposed Action

Freegold has submitted a Plan of Operations (POO) for hardrock mineral exploration on the Christina – Hi Yu exploration block on the eastern half of their Golden Summit project to outline a mineral resource within the Cleary Hill exploration block. Significant exploration work has already been completed on Federal and Patented claims, however; additional exploration drilling will be required to reach this goal. Proposed activities include 10,000 meters of diamond core drilling from 55 to 95 drill pads with multiple holes drilled from each pad. This work consists of an additional 6 acres of proposed drill pads and 3.5 acre of access roads on unpatented Federal claims

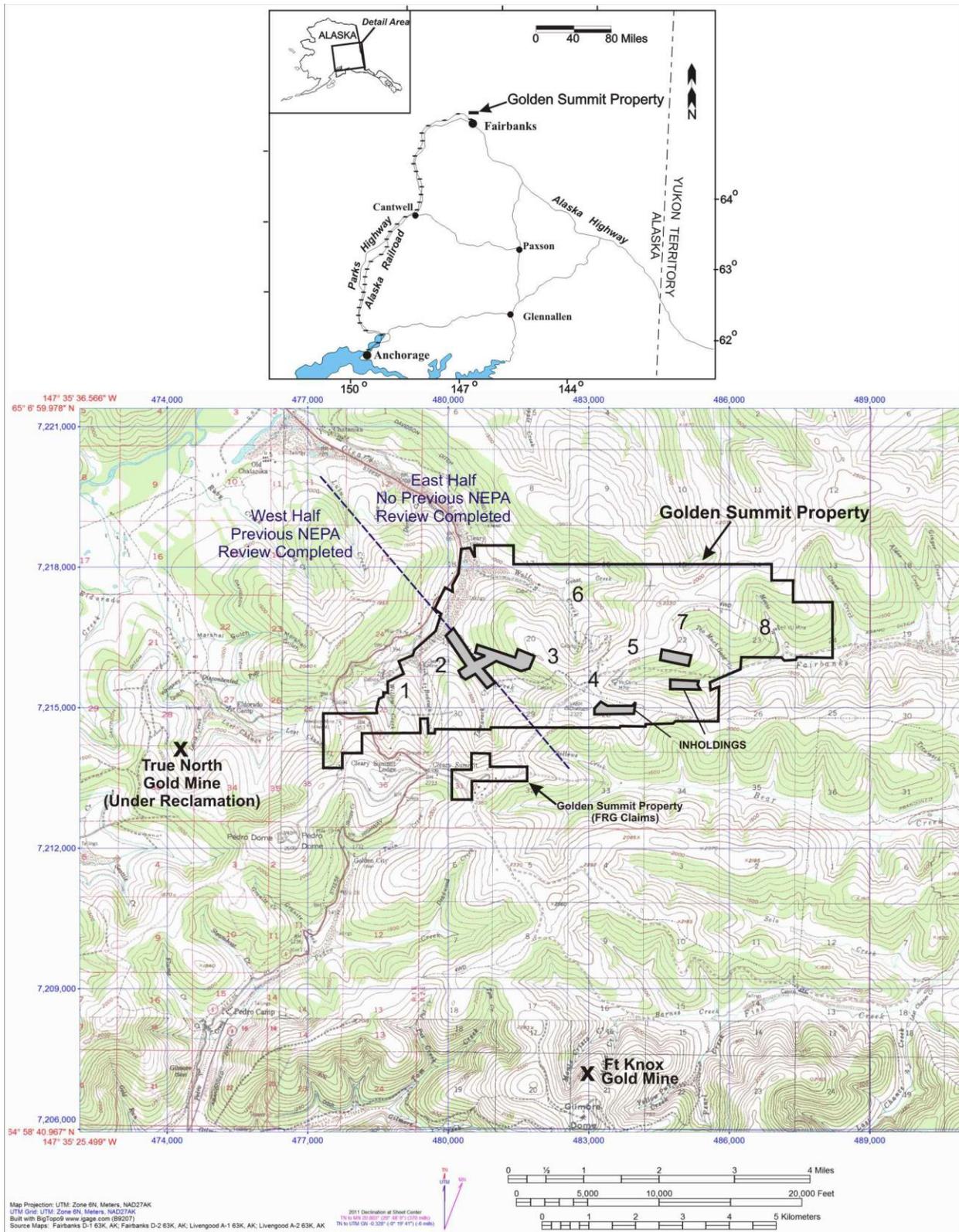


FIGURE 1: Location map for the Golden Summit property, Fairbanks Mining District, Alaska. Exploration Areas shown include: 1 = Tolovana; 2 = Cleary Hill; 3 = Christina; 4 = Saddle; 5 = Circle Trail; 6 = Goose Creek; 7 = Too Much Gold and 8 = Hi Yu.

1.2.2. BLM's Purpose and Need

The purpose of the proposed action is to provide an opportunity for planned exploration activities on unpatented Federal mining claims by Freegold Ventures Limited and its Alaska-authorized subsidiary Freegold Recovery Inc. USA and Freegold Ventures Limited, USA (Freegold) on the Christina – Hi Yu exploration block on the eastern half of their Golden Summit project. The need for the action is established by the Sec. 302(b) of the Federal Land Policy and Management Act (1976) and by BLM's Surface Management regulations 43 CFR 3809.

1.2.3. BLM Decision to be Made

The BLM will make a decision whether or not the proposed plan meets the requirement to avoid unnecessary and undue degradation of public lands, and if so authorize the action. The BLM could allow the proposed action to occur in its entirety or in part. If a decision to approve the Plan of Operations is made, the BLM will also determine if mitigation measures are needed to minimize adverse impacts to the environment, including scenic and aesthetic values and fish and wildlife habitat, and to prevent unnecessary or undue degradation of the lands.

1.3. Scoping Issues (Potential Issues)

1.3.1. Internal Scoping

Internal scoping involved the Eastern Interior Field Office Interdisciplinary Team. The Valued Environmental Components (VEC) matrix was used to identify issues for analysis. The following components were evaluated: access/travel management; air quality; areas of critical environmental concern; cultural resources; environmental justice; essential fish habitat; farm lands; fire management; floodplains; invasive, nonnative species; mineral resources; Native American religious concerns; recreation; socioeconomic; soils; subsistence; threatened or endangered species; vegetative resources; visual resources; wastes, hazardous or solid; water quality, surface or ground; wetlands/riparian zones; wild and scenic rivers; wilderness characteristics; aquatic wildlife; and terrestrial wildlife. Of the components evaluated, the following components were identified for analysis: cultural resources, invasive, nonnative species, and vegetative resources. See Section 4, Environmental Effects, for analysis of impacts identified and mitigation measures proposed. Internal scoping also identified nine components where minerals exploration would have a negligible impact. These areas were discussed during the interdisciplinary team process and determined to not warrant further analysis for this action.

Wetland and riparian vegetation will likely be encountered on north facing slopes and lowlands in the project area. The applicant has applied for an individual permit under Section 404 of the Clean Water Act, and additional environmental analysis on wetland impacts is being undertaken by the US Army Corps of Engineers which should sufficiently address potential impacts.

1.3.2. External Scoping

The proposed action is not likely to cause any public concern or controversy given the long-standing history of mining in the Cleary Summit area; therefore, no external scoping was

conducted beyond posting a description of the proposed action on the BLM National Environmental Policy Act (NEPA) Register, which allows the public the ability to review the proposed action.

2. Proposed Action and Alternatives

2.1. Proposed Action

The following is a description of Freegold's exploration plans for unpatented Federal mining claims in the Christina – Hi Yu exploration block. Work is anticipated starting as soon as the required Environmental Assessment required by NEPA is completed and final permits issued. Details relating to cumulative past disturbances, proposed new disturbances and total disturbances on unpatented Federal mining claims on specific prospects are discussed in the text below.

Drill Summary:

Anticipated exploration activities on the Golden Summit project primarily will be diamond core drilling using wheel or skid-mounted drill rigs similar to the Longyear LF70 or Atlas-Copco CS10 drill rigs. Where possible, drilling will be conducted off of existing roads and/or drilling pads or on previously constructed and reclaimed drilling pads or access roads. Where drilling cannot be conducted from existing roads and pads, Freegold intends to clear drill pads approximately 25 by 50 feet in diameter from which one or more holes will be drilled. Approximately 50% of this drilling will be on previously undisturbed lands. New access roads to support drilling will be required in some parts of the exploration area (see individual exploration area summaries below).

Diesel fuel for drilling rigs and support equipment is supplied from each drill's on-board fuel tanks. Replenishment of fuel is conducted daily from 100 gallon fuel tanks on drill rig support pick-up trucks supplied by the drilling contractor. No other fuel storage is present at the drill pad or on the Golden Summit project. Limited use of other fuels, such as gasoline or propane is anticipated.

Drilling fluids used on the Golden Summit project are primarily water drawn from ponds approved under TWUP F2011-133 with commercial drill additives that are added at the drill hole site where rock properties require such fluid. All drill pads will include a 10-foot diameter, 4 foot deep fluid sump where drill fluids that return to the surface can be impounded and reclaimed. Where possible, water from these sumps will be recirculated down-hole to reduce water demand and drill additive use.

Drilling rigs anticipated for use at Golden Summit will be either wheel or track mounted or will be constructed on metal skids to allow easy movement from pad to pad. Wheel and track mounted drills are supported by hydraulic outriggers that allow stabilization and self-leveling of the drilling unit. Skid mounted drills are stabilized and leveled using rough-cut timbers of various sizes designed for this purpose. Following completion of drilling at each drill hole, all drill holes will be plugged from termination depth to surface using Benseal or equivalent commercial hole plugging mixture. All surface casing, if any is used, will be removed prior to reclamation. All

timber used to stabilize the rig will be removed and re-used. All refuse, drill supplies and materials brought to the site will be removed prior to reclamation of the site (see "Reclamation").

Water Management:

Water for drilling purposes will be drawn from existing ponds in Cleary, Wolf, Fairbanks and Too Much Gold Creeks under TWUP F2011-133 acquired for the period 2012 through 2016. All of these water source sites currently are accessible via existing roads. None of these streams are considered anadromous streams by the State of Alaska. Maximum anticipated water use is approximately 15 gallons per minute (21,600 gallons per day) from any specific pond however water recirculation at the drill site will be conducted where possible, reducing water use by up to 50% in competent rock. Drill water and cuttings that do return to the surface are impounded in purpose-built pits at each drill site and reclaimed when drill pads are reclaimed. Material Safety Data Sheets (MSDS) data are available for all drilling fluids used and all are designed for use in potable water well drilling.

Ponds that have been used in the past are remnants of previous placer gold mining, either as old settling ponds or as natural ponds left after completion of reclamation. These ponds vary in size from 25 to 50 feet in diameter and range from 4 to 12 feet deep, averaging 6-8 feet deep. Water is pulled from the ponds using a floating platform designed to suspend the intake of the hose at least one foot above the bottom. The intake openings will not exceed 0.25 inches in diameter. The ponds are designed to be utilized in both summer and winter months. During summer months, the water is pulled from the pond via a stationary diesel-powered water pump. Fuel for this pump is provided by a 55 gallon drum. The pump and fuel drum are surrounded by a containment system to prevent leakage of petroleum products. Water from the drill is then pumped to the drilling rig using two-inch diameter high pressure (+1,000 psi) water hose. During winter months the water is pumped from the pond into a wheeled purpose-built water truck of 3-5,000 gallon capacity. This truck then transports the water to the drill, returning as required to refill. Both the stationary water pumps and the water trucks are provided with a petroleum spill containment kit.

Exploration activities anticipated under this permit do not include any permanent water storage or delivery systems (such as water tanks or metal water lines). High pressure water hose is laid to each drill pad as required but does not remain on-site during winter months or when not in use. Water trucks are hired from private contractors and remain on site only when drilling is in progress.

Environmental Summary:

An Environmental Assessment is required by NEPA for proposed exploration on unpatented Federal mining claims covered by this Plan of Operations. All activities anticipated under this proposed permit will remain in compliance with its findings. Freegold is assuming that all or some of its new disturbances will occur on typical north-facing black spruce forest with ericaceous-shrub/moss understory. No riparian wetland disturbance is proposed under this permit application.

Exploration activities proposed for areas south of Fairbanks Creek Road and the Circle Trail (Plate 1) are on south-facing slopes within the Fairbanks Creek, Too Much Gold Creek and Moose Creek basins. Forest cover on these slopes is predominantly deciduous in nature and extensive top of bedrock soil sampling conducted by Freegold during the period 1996 through 1998 indicated that aeolian loess-dominant soils on this part of the property are thawed.

Exploration activities proposed for areas north of Fairbanks Creek Road and the Circle Trail (Plate 1) are mostly on northeast, northwest and north-facing slopes within the Cleary Creek, Chatham Creek and Wolf Creek basins. Forest cover on these slopes is mixed deciduous and black spruce in composition. Extensive top of bedrock soil sampling conducted by Freegold during the period 1996 through 1998 indicated that aeolian loess-dominant soils on this part of the property are thin to non-existent in some areas and locally frozen, particularly on steep north facing slopes. Access to some of these areas is more efficiently done in winter months (October through March).

A number of methods will be utilized to mitigate or prevent erosional processes resulting from excavations created as part of the exploration activities planned at the Golden Summit project. During initial road, trench or drill pad construction, humic material will be distributed in such a manner as to mitigate sheet and/or channel erosion down-slope from such excavations. Silt fences of natural organic materials or man-made materials will be placed as required to minimize sedimentation and channel erosion and its impacts to adjacent wetlands and streams. In the event of seasonal closure of drill access roads, water bars will be constructed to allow run-off to be channeled into the humic-matter berms or silt fences/dams placed along the roads for this purpose. In the event temporary road culverts are required to maintain current surface drainage patterns, culverts will be constructed. Such culverts will be removed as part of the reclamation closure process. Aufeis forms along poorly drained areas on several creeks in the Golden Summit project area. With few exceptions, historic roads that cross or run along valley bottoms were placed in areas where auf ice conditions normally are minimal or not present. Winter exploration programs conducted by Freegold since 1992 have not been adversely affected by aufeis formation and exploration efforts proposed in this permit will be largely unaffected by aufeis formation. In the event exploration is planned in areas where auf ice commonly forms, such as lower Willow Creek or near the Wolf Creek – Goose Creek confluence, exploration in these areas will be rescheduled to summer months.

Due to the project's close proximity to Fairbanks, no permanent warehouse, man-camp or storage facilities will be required on the Golden Summit project. Drilling rods not required for immediate use may be stored on upper Cleary Creek or upper Wolf Creek on Patented mining claims that are owned or controlled by Freegold Ventures. Such storage is limited to the footprint of a commercial wheeled trailer (12 by 40 feet) and is temporary in nature.

Limited mill and camp structures from historic mining exist on this part of the Golden Summit project. Timber-frame buildings constructed on the ridge between Chatham and Wolf Creeks by Placid Oil during their exploration of the property (1978-1985) were burned in March 2012 at the request of the BLM's Central Yukon Field Office. Final removal of items not consumed by fire

will be conducted in the summer of 2012. The only other significant structure on unpatented Federal mining claims is the Hi Yu mill and cookhouse on Moose Creek (Hi Yu Millsite claim F45645 and Helen S claim F45643). Several years ago the Central Yukon Field Office provided funds to construct a chain link fence around the mill building to mitigate public safety concerns. The old cook house, approximately 500 feet east of the mill, was not fenced. By terms of its lease with property owner Keystone Mines Partnership, Freegold does not own or control historic structures on Keystone-owned mining claims. The ownership and management of these structures remains with Keystone.

Risk Monitoring and Management:

When work programs and budgets are approved, drilling and related exploration activities on the Golden Summit project occur on a 24 hour per day, 7 day per week basis. In order to prevent undue and unnecessary degradation of the surrounding environment, risk monitoring is done at multiple levels on a daily basis. Risk monitoring, including safety and environmental monitoring, are conducted by drill contract supervisors (one is on site at all times during drilling) and by contract geological consulting personnel (at least one is on-site daily). Daily risk monitoring is done at water source sites, drill fluid impoundment sites, at the drilling rig and immediate confines and along drill access roads. A daily progress report is prepared by Freegold's contract on-site drilling coordinator. This report is distributed to Freegold Ventures upper management and its geological contractor and includes summaries of all activities in progress at Golden Summit. Potential risk management issues identified during daily monitoring are discussed in this forum and a summary is presented of actions taken or recommended.

Emergency response plans (ERPs) are also in place for health, safety and environment emergencies, including petroleum product spill management, vehicular accidents, wild fires and similar matters. Emergency contact phone numbers and procedures are updated regularly to insure that in-site emergencies are managed immediately and reported as per State and/or Federal regulations.

Seasonal (Temporary) Suspension of Exploration:

During the period of this permit, we anticipate that there may be periods when no exploration is being conducted on the Golden Summit project. Such temporary hiatuses fall into two groups, seasonal and long-term.

Seasonal hiatuses refer to temporary work stoppages caused by seasonal thaw, seasonal freeze-up, holidays like Christmas and New Year, etc. During the period of such planned seasonal stoppages, all petroleum products are transported off of the Golden Summit project, all water source sites are secured and equipment removed from the water source sites and drill rig equipment is converted to "move-ready" status (drill rods removed from hole, hole plugged, hoses drained and disconnected, etc.). Monitoring of the equipment is conducted on a regular basis by both drilling contractors and by Freegold geological contractors.

For longer term work stoppages, all drilling and support equipment are removed from the Golden Summit project. Drill pads, roads and other excavations are left in a condition that will

allow reclamation to be completed at the earliest possible time and which will mitigate or prevent undue erosional processes from affecting the surrounding environment (see “Reclamation”).

CHRISTINA EXPLORATION AREA

The unpatented Federal lode mining claims of the Christina exploration area are located in the headwaters of Chatham, Wolf and Fairbanks Creeks. These claims contain several historic mines and prospects, including the past-producing Christina, Kawalita and Homestake mines. Access is via Fairbanks Creek Road as well as on numerous roads and all-weather trails extending to the prospect via upper Chatham, Wolf and Fairbanks Creeks (Table 1).

Diamond core drilling is proposed for the Christina exploration area beginning as soon as permits are approved. Proposed activities include 5,000 meters of diamond core drilling from 10-20 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 1.5 acres of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

Table 2: Past and proposed future disturbances on unpatented Federal mining claims on Christina – Hi Yu block on the Golden Summit project, Alaska. Details from Freegold, 2012.

Exploration Area	Total Unreclaimed Federal Acres (as of 31Dec11)	Federal Claims Proposed Drill Pad Acres	Federal Claims Proposed Access Road Acres	Total Acres All Federal Claims
Christina	0	1.5	0.5	2
Saddle	0	1.5	0.5	2
Circle Trail	0	1	0.5	1.5
Goose Creek	0	0.5	0.5	1
Too Much Gold	0	1	0.5	1.5
Hi Yu	0	1	0.5	1.5
Totals	0	6.5	3	9.5

SADDLE EXPLORATION AREA

The Southern end of the Christina exploration area adjoins the western edge of the Saddle exploration area. The Saddle exploration area extends along both sides of the ridge between upper Wolf Creek and upper Fairbanks Creek and encompasses several historic lode gold mines and prospects, including the past-producing American Eagle, McCarty, Pioneer, Pennsylvania, Ebberts and Henry Ford mines. Exploration dating from the 1969 through 1988 consisted of trenching and drilling (rotary and core) but no work has been conducted in this part of the Golden Summit project by Freegold. Access is via the Fairbanks Creek Road and the Circle Trail Road as well as several seasonal roads extending into Fairbanks, Chatham and Wolf Creeks (Table 2).

Diamond core drilling is proposed for the Saddle block beginning as soon as permits are approved. Proposed activities include 5,000 meters of diamond core drilling from 10-20 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 1.5 acres of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

CIRCLE TRAIL EXPLORATION AREA

The eastern end of the Saddle block overlaps the western edge of the Circle Trail block. The Circle Trail block extends along both sides of the ridge between upper Wolf Creek and upper Fairbanks Creek/Too Much Gold Creek and encompasses several lode gold mines and prospects, including the past-producing Stringer, Mayflower, Mizpah and Black Joe. Exploration dating from the 1969 through 1988 consisted of trenching and drilling (rotary and core) but no work has been conducted in this part of the Golden Summit project by Freegold. Access is via the Fairbanks Creek Road and the Circle Trail Road as well as several seasonal roads extending into Fairbanks, Too Much Gold and Wolf Creeks (Table 1).

Diamond core drilling is proposed for the Circle Trail block beginning as soon as permits are approved. Proposed activities include 5,000 meters of diamond core drilling from 10-15 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 1 acre of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

GOOSE CREEK EXPLORATION AREA

The Goose Creek block is located in upper Wolf Creek and Goose Creek adjacent to the northern edges of the Saddle and Circle Trail blocks and encompasses several lode gold mines and prospects, including the past-producing Goose Creek, Rexall, Solomon, Banner and Homestake mines. Exploration dating from the 1969 through 1996 consisted of trenching and drilling (rotary and core). Freegold drilled and reclaimed its drill pads on the Goose Creek prospect after the 1998 field season. Access is via the Wolf Creek Road, Fairbanks Creek Road, the Circle Trail Road and several seasonal roads extending into Wolf and Goose Creeks (Table 1).

Diamond core drilling is proposed for the Goose Creek block beginning as soon as permits are approved. Proposed activities include 3,500 meters of diamond core drilling from 5-10 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 0.5 acres of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

TOO MUCH GOLD EXPLORATION AREA

The Too Much Gold Creek block is located immediately south of the Goose Creek block and immediately east of the Circle Trail block. The Too Much Gold block is located primarily in the Too Much Gold Creek basin but also extends north of the ridge between upper Wolf Creek and upper Fairbanks Creek/Too Much Gold Creek. The block encompasses several lode gold mines and prospects, including the past-producing Excelsior, Too Much Gold, McNeil, Nars Anderson, Rob Roy and Governor mines. Exploration dating from the 1969 through 1998 consisted of trenching and drilling (rotary and core). Freegold completed reclamation on this part of the Golden Summit project prior to 2000 and has conducted no exploration there since that time. Access is via the Fairbanks Creek Road and the Circle Trail Road as well as several seasonal roads extending into Fairbanks, Too Much Gold, Wolf Creeks and Moose Creeks (Table 1).

Diamond core drilling is proposed for the Too Much Gold block beginning as soon as permits are approved. Proposed activities include 5,000 meters of diamond core drilling from 10-15 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 1 acre of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

HI YU EXPLORATION AREA

The Hi Yu block is located immediately east of the Too Much Gold Creek block. The Hi Yu block is located primarily in the Moose Creek basin but also extends west of the ridge crest between upper Moose Creek and Too Much Gold Creek. The block encompasses several lode gold mines and prospects, including the past-producing Hi Yu, Eton and Basham mines. Exploration dating from the 1969 through 1998 consisted of trenching and drilling (rotary and core). Freegold completed reclamation on this part of the Golden Summit project prior to 2000 and has conducted no exploration there since that time. Access is via the Fairbanks Creek Road, Circle Trail Road and the Moose Creek Road as well as several seasonal roads extending into Moose Creek basin (Table 1).

Diamond core drilling is proposed for the Hi Yu block beginning as soon as permits are approved. Proposed activities include 5,000 meters of diamond core drilling from 10-15 drill pads with multiple holes from some pads. Drill holes will average 500 to 1,500 feet depth with average hole depths of approximately 750 feet. This work consists of an additional 1 acre of proposed drill pads and 0.5 acres of access roads on unpatented Federal claims (Table 2).

RECLAMATION

Freegold has conducted significant exploration in the Cleary Summit area since 1992 and has acquired and closed hardrock exploration permits acquired from the State of Alaska Department of Natural Resources and the Bureau of Land Management. Freegold still has one outstanding permit with existing reclamation liabilities at the Tolovana and Cleary Hill exploration areas (AHEA 9726); however, none of those reclamation liabilities are on unpatented mining claims covered by this Plan of Operations. Future reclamation of disturbances proposed in this permit

will occur in an on-going fashion as soon as it can be determined that disturbed lands will not be re-disturbed by subsequent exploration activities.

During initial disturbance, all humic material covering drill pads, trenches and/or access roads will be stockpiled adjacent to one side of the disturbed area, preferably the low-side of the site, to allow this berm to act as a natural silt-fence for run-off from the excavation. All soil overburden will be stockpiled in a separate but adjacent area. All rock and rubble from bedrock excavation will be stockpiled in a different area from the soil and humic stockpiles.

Following completion of a drill hole but before the drilling rig is moved from the pad, all drill holes will be plugged from termination depth to surface using Benseal or equivalent commercial hole plugging mixture. All surface casing, if any is used, will be removed prior to reclamation.

Once the planned work at a drill pad, trench and/or access road has been completed in these newly excavated areas, a backhoe and/or crawler dozer will be used to backfill the disturbed area in the reverse order of excavation. Humic material will be distributed in such a manner as to mitigate sheet and/or channel erosion. Silt fences of natural organic materials or man-made materials will be placed as appropriate to minimize impacts to adjacent wetlands and streams. No artificial reseeding is planned unless it is required for seasonal stabilization prior to natural regrowth of indigenous plant species. In such event, seed mixtures approved by the State DNR and the BLM will be utilized. In the event temporary road culverts are required to maintain current surface drainage patterns, culverts will be constructed as required by DNR/BLM standards. Such culverts will be removed as part of the reclamation closure process.

Freegold recently completed reclamation at the bulk sample plant site on Cleary Creek (patented MS 805, No. 1 Above Discovery on Cleary Creek) and completed additional reclamation of 2007-2008 rotary air blast (RAB) drill lines and 1980's vintage (pre-Freegold) trenches on the Tolovana prospect (Willow Creek #1 through #3 claims F24963-24965 and New York Mineral claim F45613, Plate 1). As of the date of this permit application, inspection and approval of this reclamation has not been conducted by the Central Yukon Field Office. Because this area underwent a previous NEPA review, details related to this part of the Golden Summit project are presented under a separate Plan of Operations for the Tolovana – Cleary Hill exploration block.

There currently is no unreclaimed acreage on unpatented Federal mining claims on the Christina – Hi Yu block (Table 2). Current State of Alaska roads (Fairbanks Creek Road) as well as historic RS2477 roads (Circle Trail, Chatham Creek Road, Wolf Creek Road, Moose Creek Road, etc.) will be utilized for access to the Christina – Hi Yu drilling prospects but these roads will not be reclaimed due to their historic nature and heavy use by third party recreationalists and mining claim owners.

Based on the planned activities summarized above Freegold is anticipating a maximum acreage of new disturbance of approximately 9.5 acres (Table 2). Freegold intends to keep total reclamation acreage under 10 acres during the term of this Plan of Operations. This will require

concurrent reclamation efforts, concentrated primarily during the period May 1 through September 30 of each year. Unless extraordinary circumstances require it, reclamation efforts will not be attempted during the winter months of October 1 through March 31.

NON-FREEGOLD DISTURBANCE

During the summer and fall of 2010 and 2011 a limited amount of exploration work was conducted by Christina Mining LLC on their unpatented Federal mining claims (Christina claim, FF#58503 and Carrie A claim, FF58507) and State mining claims (RAM3, ADL# 303368 and RAM4, ADL# 303369). This work was conducted under a separate Hardrock Exploration Permit issued to Christina Mining LLC. Freegold subsequently acquired a leasehold interest in the Christina Mining LLC claims in December 2010 and granted Christina Mining LLC limited rights to continue exploration on the above-mentioned claims. However, Freegold is contractually not liable for any activities carried out by or on behalf of Christina Mining LLC on their mining claims. As a consequence, Christina Mining LLC remains liable for reclamation responsibilities on the claims mentioned above. The outer limits of their disturbances were determined by GPS traverse and are shown on Plate 1 through 3.

2.2 Alternative B: Winter Drilling

Alternative B is identical to the Proposed Action, however it only allows for the planned exploration activities to occur during winter months with significant snowcover in the project area.

2.3. Alternative C: No Action

The no action alternative would result in the applicant not being able to pursue mineral exploration as proposed on BLM-managed lands within the Golden Summit Project Area. This does not mean no mining indefinitely, but that the Plan as proposed could not be approved because it fails to prevent unnecessary or undue degradation. The No Action Alternative is used to help identify baseline conditions and is used as the basis for comparing the impacts of the proposed action, and the alternative action with the current conditions, and expected future conditions in the absence of the project. Mineral exploration activities as described in the Proposed Action would likely occur on adjacent private and State of Alaska-managed lands.

3. Affected Environment

3.1. Proposed Action

3.1.2. Impacts requiring analysis. Internal scoping identified three components where mineral exploration activities would have an impact and requires further analysis.

3.1.2.1. Cultural Resources

Until 2010, the Alaska Heritage Resources Survey (AHRs) database, maintained by the Alaska State Historic Preservation Office, indicated only four cultural sites on the unpatented federal mining claims identified in the proposed action, these being large mining-related buildings (Cleary Hill Mine, LIV-115; McCarty Mine and Mill, LIV-098; Hi-Yu Mine, LIV-097; and the Hi-Yu Stamp Mill, LIV-404). Since that time, the BLM has contracted with archaeologists at Michigan Technological University (MTU) to conduct pedestrian survey on federal claims in the Fairbanks Creek / Golden Summit project area. In 2011, the MTU crew surveyed 28 unpatented claims along Bedrock Creek (in between the Tolovana [#1] and Cleary Hill [#2] exploration areas) and portions of the Christina (#3) and Goose Creek (#6) explorations area. A total of 448 cultural features on the landscape were recorded, resulting in 16 new historic cultural sites in the AHRs (LIV-626 through LIV-641). In 2012, MTU work continued in the Fairbanks Creek area, and an additional 79 unpatented federal mining claims were surveyed. This work resulted in 903 cultural features recorded. In sum, **every** unpatented federal mining claim in the Fairbanks Creek / Golden Summit project area has been 100% pedestrian surveyed for cultural resources, resulting in 1351 cultural features (not every one of them historical in nature) identified on the ground. All of these features have been recorded, and exact locational information stored in ArcGIS databases. None of these sites in the project area has been evaluated for eligibility to the National Register of Historic Places.

All of the above-mentioned sites are historic in nature, and most of them are related to mining. None of the unpatented federal claims in the Proposed Action has been evaluated or tested for their prehistoric site potential.

3.1.2.2 Invasive, Nonnative Species

Cortes-Burns et al. (2008) summarizes the status of invasive plants relative to disturbance in Alaska: While invasive plants constitute a major problem in the Lower 48 states (cf. Randall 1996), Alaska has been considered relatively immune to their deleterious impacts. In the past five years, however, this perception has changed (Shephard 2004, Carlson and Shephard 2007). More and more non-native species and populations are being recorded and, disturbingly, a number of species have moved off of the anthropogenic footprint and have overrun natural areas, clearly damaging the area's ecology (Carlson 2006, Conn et al. in press). Even so, invasive plants in this state are still mainly restricted to the regions of greatest anthropogenic disturbance. Consequently, land managers in Alaska have the unique opportunity to be proactive in managing exotic and invasive plants. Invasive plants are often opportunistic species that thrive under the types of conditions created by disturbances: increased light and nutrient availability, reduced interspecific competition, and increased bare soil (Rejmánek 1989, Harrod and Reichard 2001). Forest and grassland fires are a well-known disturbance and have accelerated non-native plant establishment in the Lower 48, through both increase in availability of disturbed habitat and due to inadvertent dispersal during firefighting activities (Hobbs and Huenneke 1992, Brooks 2001, Harrod and Reichard 2000). (See Cortes-Burns et al. 2008 for references). Carlson and Shephard (2007) argue that the spread of non-native plants in Alaska

may be shifting from a lag phase to an exponential growth phase, similar to patterns in the rest of the U.S. 60-100 years ago.

The status of invasive plants in the project area is unknown, because surveys have not been conducted. In surveys of the Steese Highway from Fox to Circle in 2007 (Cortes-Burns et al. 2008), 33 non-native plant species were recorded, including smooth brome, bird vetch, white sweetclover, narrowleaf hawksbeard, and white and alsike clovers. One location visited off the Steese Highway on dirt roads leading to the project area, included a record of narrowleaf hawksbeard.

A search of the AKEPIC database for the area of the Steese Highway between Fox and the project area resulted in 31 records of 19 non-native plant species, including white and yellow sweetclover, perennial sowthistle, bird vetch, narrowleaf hawksbeard, narrowleaf hawkweed.

Non-native plant records In Alaska Exotic Plants Information Clearinghouse (AKEPIC) database for Steese Highway between Fox and Cleary Summit, January 28, 2013.		
Scientific Name	Common Name (# records)	Invasive-ness Score
Bromus inermis Leyss.	smooth brome	62
Chenopodium album L.	lambsquarters	37
Crepis tectorum L.	narrowleaf hawksbeard (2)	56
Hieracium umbellatum L.	narrowleaf hawkweed (2)	51
Hordeum jubatum L.	foxtail barley (2)	63
Lepidium densiflorum Schrad.	common pepperweed	25
Lolium perenne L.	perennial ryegrass	52
Matricaria discoidea DC	pineappleweed (2)	32
Melilotus alba Medikus	white sweetclover (5)	81
Melilotus officinalis (L.) Lam.	yellow sweetclover	69
Plantago major L.	common plantain (2)	44
Poa annua L.	annual bluegrass	46
Polygonum aviculare L.	prostrate knotweed	45
Poa pratensis L. ssp. irrigata (Lindm.) H. Lindb. or Poa pratensis L. ssp. pratensis	spreading bluegrass or Kentucky bluegrass	52
Sonchus arvensis áL.	perennial sowthistle (2)	73
Stellaria media (L.) Vill.	common chickweed	42
Taraxacum officinale F.H. Wigg.	common dandelion (2)	58
Trifolium hybridum L.	alsike clover (2)	57
Vicia cracca L. ssp. cracca	bird vetch	73

The project area has a long history of mining-related disturbance and likely contains numerous infestations of non-native plant species of low concern (species with low potential to invade

native ecosystems). The abundance of non-native plant species of moderate and high concern is unknown, but likely similar to or lower than that seen along the Steese Highway.

The northeast portion of the project area was burned in the 2004 Boundary Fire. Although considerable regrowth of native vegetation in this project area, the burned area likely continues to be more susceptible to introduction and spread of non-native plants than un-burned plant communities.

3.1.2.3 Vegetative Resources

The vegetation in the project area is typical of interior Alaska boreal forest. In the project area, forests of deciduous birch and white spruce dominate on the southerly exposures, while black and white spruce forests dominate on northerly exposures. Much of the north-aspects are underlain by permafrost and support plants adapted to saturated soil conditions, and as a result are classified as wetlands. Although the extent and distribution of these wetlands are unknown, an assumption made in the wetland permit application to the Army Corps of Engineers was that ½ of the project disturbance will disturb wetlands. Riparian wetlands in the project area are typically along headwater streams and so are narrow and easily avoided. Previous exploration and mining activity in the project area has resulted in extensive linear disturbances in various states of re-vegetation and succession. However, the vegetation on the Federal mining claims in the project area appears in 2007 imagery to be (on an area basis) predominantly undisturbed by past mining and exploration.

3.2 Alternative B: Winter Drilling

3.2.2. Impacts requiring analysis. Internal scoping identified three components where mineral exploration activities would have an impact and requires further analysis.

3.2.2.1 Cultural Resources

Same as 3.1.2.1. The same cultural resources are present on the landscape, whether there is significant snow cover or not.

3.2.2.2 Invasive, Nonnative Species

Same as the Proposed Action.

3.2.2.3 Vegetative Resources

Same as the Proposed Action.

4. Environmental Effects

4.1. Proposed Action

4.1.1. Cultural Resources

4.1.1.1. Indirect and Direct Effects

Freegold Ventures is looking to conduct exploratory drilling on previously disturbed ground (i.e., existing drill pads and access roads). There is no likelihood of impacting cultural archaeological sites in these previously disturbed areas. Freegold Ventures is also looking to conduct exploratory drilling on undisturbed unpatented mining claims. Recent intensive archaeological surveys in 2011 and 2012 on all of the federal unpatented claims in the Fairbanks Creek drainage discussed above have identified 1351 cultural features (not all of them historic) on the landscape. There is a high likelihood of direct impacts to cultural archaeological sites and features by the Proposed Action on undisturbed ground.

There are no indirect effects to cultural resources by the proposed action – either cultural resources are directly and adversely impacted by the drilling operations, or they are not.

4.1.1.2. Cumulative Effects

Cumulative adverse effects to cultural resources are likely to occur if Freegold builds new access roads into previously undisturbed and (previously) largely inaccessible areas. Even if Freegold successfully avoids directly impacting cultural resources by their drilling, by easing access to areas with cultural resources, their actions will likely increase visitor (i.e., recreationists; hunters) access to these areas in the long run, which will increase visitation to cultural resources that are superficially evident. The loss/theft of artifacts from archaeological sites by visitors, and their intentional or unintentional damaging of the site (e.g. ATV activity), can, over time, result in large-scale adverse impacts.

4.1.1.3. Mitigation and Residual Effects

Freegold Ventures seeks to conduct exploratory mineral drilling on both disturbed ground (existing drill pads and access roads) and undisturbed ground on dozens of unpatented federal mining claims in the Fairbanks Creek / Golden Summit project area.

First, there are **no potential impacts to cultural sites by drilling on existing reclaimed and un-reclaimed drill pads and access roads.** There are no further cultural or archaeological concerns with these previously disturbed areas.

Second, in regards to historic cultural remains, recent intensive archaeological surveys in 2011 and 2012 on all of the unpatented federal mining claims in the Golden Summit project area have identified 1351 individual cultural features, many of which are more than 50 years old. As a result, there is a high likelihood of impacting known and unknown historic archaeological sites and features by the Proposed Action on previously undisturbed ground. All archaeological features and sites in the project area on undisturbed ground on unpatented federal mining claims must be avoided by the proposed drilling operations.

These 2011-2012 data are available for use on this project by qualified cultural resource specialists once it is available for dissemination for the contractors who gathered it. It is recommend that the applicant hire a qualified private consultant cultural resource management

(CRM) firm to either (1) locate and flag the features and sites that are present in the precise areas that Freegold Ventures wishes to work, or else to (2) evaluate the features through the regular Section 106 process, in consultation with appropriate land managers and the State Historic Preservation Office. Thereby, significant features will be avoided by the drilling crews. If Freegold Ventures feels that they must impact any of these features or sites that are agreed by the concurring parties are culturally significant,, then we will need to move on to the next phase of the Section 106 cultural resource consultation process, involving Determinations of Eligibility on those impacted features, defining a list of historic properties affected by the undertaking, and, if necessary, agreeing upon any desired mitigative measures to address those adverse impacts. If necessary, a qualified private consultant CRM firm would also be able to perform this duty in a timely manner for the applicant.

And third, the Area of Potential Effect for the proposed undertaking must be evaluated for prehistoric archaeological site potential. This usually involves a predictive modeling exercise to locate specific types of landforms that hold greater potential for prehistoric sites, which can then be ground proofed through subsurface testing. As above, Freegold can hire a qualified CRM firm to perform this duty in the exact areas that they wish to drill.

Finally, the creation of a Programmatic Agreement, while not absolutely necessary, is highly desirable in order to formalize the cultural resource review process in the project area. This is prompted by the large size of the area of potential effect, and the necessity of the applicant hiring a private cultural resource consultant. If the involved parties determine that a PA is not advisable, then another agreed upon process that protects cultural resources, and which follows the Section 106 process as outlined in appropriate federal regulations, will be followed.

4.1.2. Invasive, Nonnative Species

4.1.2.1. Indirect and Direct Effects

The applicant proposes to construct between 55 and 95 drill pads (and roads necessary to access those drill pads) on Federal mining claims in the project area, and proposes in the process disturbing (removing vegetation and soil) from 9.5 acres. Reclamation will occur after sites are no longer needed for access.

In the absence of disturbance, most upland habitats have been resistant to invasion by non-native plant species. Most non-native species occur in or near disturbed habitat. Surface disturbance creates sites conducive to colonization by non-native species, and motorized vehicles can transport seeds of non-native species. The likelihood of colonization depends in part on the likelihood of seed transport (which is increasing as non-native invasive species become more common along the road system in AK) and length of time that the site remains open to motorized vehicle travel and/or without native vegetation cover. The length of time that drill pads and access roads will remain un-vegetated depends on the reclamation schedule and success of reclamation. The time between disturbance and beginning of reclamation of drill pads is likely to be at least four years, based on inspection reports of the adjacent Golden Summit project. Some access roads needed for long-term use will remain un-reclaimed longer. Establishment and growth of native vegetation is highest when reclamation is immediate, and deteriorates through time due to death of seeds, vegetative parts, and soil microflora in stored soil. Revegetation may also be delayed at sites of potential soil instability, such as permafrost

sites. In addition, erosion can remove topsoil, organic material, and fine soil material, further delaying recovery of native vegetation.

The proposed action will result in some increase in risk of establishment and spread of invasive plant species. Factors affecting this risk include: type and extent of disturbance, speed and effectiveness of reclamation and revegetation, levels of continued motorized use, the availability of seed for potential transport to the site, and detection and rapid control by permittee.

4.1.2.2. Cumulative Effects

Disturbance and use of native habitats by adjacent exploration and mining operations will increase the likelihood of invasive plant establishment in the area, as will a regional increase in numbers of non-native plant species and their abundance. Both will increase likelihood of invasive plant establishment on lands disturbed by this proposed action, and the proposed action will add to the increased likelihood of invasive plant establishment in the general Cleary Summit area. The proposed ground disturbance is relatively small in area in comparison to recent and near future disturbances (eg. disturbance on Federal mining claims by this project is approximately half that of the project disturbance on private land and state claims), therefore the relative contribution to Cleary Summit area invasive species is likely relatively small.

4.1.2.3. Mitigation and Residual Effects

One objective of the 2010 BLM - Alaska Invasive Species Management policy is to: *Integrate invasive species prevention, detection and control activities into all on-the-ground activities conducted on BLM administered land in the State.*

Preventive measures to be considered and included in permitted actions when practical include:

- *Minimize soil disturbance, salvage vegetative mat and reseed where appropriate to reduce the likelihood of weed establishment.*
- *Monitor project sites to detect new infestations when risk of weed spread is moderate to high.*
- *Retain bonds for weed control on all mineral activity until site is successfully revegetated, when appropriate.*

Recommended mitigation measures for this proposed action and alternative:

1. Require post-reclamation survey of invasive plant populations and require control of any populations of species of moderate or high concern.
2. Prevent public motor vehicle access to disturbed areas, prior to reclamation (eg. through gates or trail blockages) and/or post-reclamation (eg. via stockpiled trees and brush returned to surface or physical blockage of trail entrances).
3. A more detailed reclamation plan might better enable BLM to ensure that effective reclamation occurs. For example, post-reclamation diagrams could be included, recontouring to approximate original surface could be specified, as could leaving sufficient trees and brush to make road and trails impassible by motor vehicles.

Residual Effects:

Implementation of mitigation measures would greatly reduce potential for establishment of invasive plants. And the requirement to survey and control infestations (mitigation measure

one) by itself would encourage the permittee to implement other actions (such as mitigation measures two and three) to reduce potential infestations. However, even with all mitigation measures implemented, the large extent of disturbance (scattered over several square miles) and possible establishment of invasive plants post-survey would create a somewhat higher risk than under both the no-action alternative, and alternative B (winter exploration). This risk would be much smaller than the risk from other mining and exploration in the Cleary Summit vicinity.

4.1.3. Vegetative Resources

4.1.3.1. Indirect and Direct Effects

Vegetation and soils on 55-95 drill sites and associated access roads (totaling an estimated 9.5 acres) will be removed. Roughly half of this acreage will be wetlands, primarily black spruce/moss wetlands. According to the applicant's proposal, disturbance of riparian wetlands will be avoided. Riparian wetlands are typically of higher ecological value than black spruce wetlands.

Speed of re-vegetation and trajectory of the post-disturbance vegetation recovery sequence will be determined by the factors discussed in the Invasive Species section, including the quality and speed of reclamation efforts and post-reclamation use by motorized vehicles. Slight to major changes in vegetation at disturbed sites may result. Sites of winter exploration which do not disturb the vegetation mat will undergo little change other than loss to tree cover. Sites with minimal change in soil structure post-reclamation may soon recover with vegetation similar to the surrounding forest. Others may recover with stages of thick alder or other shrubs. All sites will be susceptible to erosion and non-native species establishment until fully revegetated. Some sites, such as permafrost wetlands can be susceptible to thermokarst and erosion following disturbance of the vegetation mat and/or soil which can result in very long term changes to vegetation. The applicant may choose to avoid construction in most wetland sites, but where roads and pads are constructed, wetland species will remain absent for long periods. On some disturbed sites, grasses and/or "weedy" native and non-native vegetation may dominate for years. Sites that continue to receive vehicle use will be altered for at least the duration of that use.

Previously disturbed sites have already undergone a shift in vegetation community and changes to soil conditions. Re-disturbance of these sites under this proposed action will result in less change than disturbance of previously undisturbed sites. Re-disturbance will likely recreate the conditions that existed following original disturbance. At many of these sites it is likely that little organic material is present, which may hamper reclamation and slow re-vegetation. However, moderately rapid shrub recolonization may occur if adequate fine soil material remains.

Sites with high mineral values may later be mined and all vegetation and soil removed.

4.1.3.2. Cumulative Effects

This proposed action will likely add a small level of disturbance and shift in vegetative communities relative to that already present in the area as a result of considerable exploration and development and associated disturbance which has occurred (and will likely continue) on private, state, and other federal lands in the Cleary Summit area.

4.1.3.3. Mitigation and Residual Effects

Recommended mitigation measures for this proposed action and alternative:

1. Prevent public motor vehicle access to disturbed areas.
2. Require post-reclamation survey of non-native, invasive plant populations and require control of any populations of species of moderate or high concern.
3. A more detailed reclamation plan might better enable BLM to ensure effective reclamation occurs. For example, post-reclamation diagrams could be included, recontouring to approximate original surface could be specified, as could leaving sufficient trees and brush to make road and trails impassible by motor vehicles.
4. Conduct exploration and access at wetland sites only during winter.

Residual effects: Enactment of these mitigation measures would reduce long-term impacts to vegetation communities. Exploration and access conducted during winter at wetland sites would result in little long-term impacts to wetland vegetation--relative to summer access requiring road or pad construction. Other mitigation measures would result in faster revegetation and reduced likelihood of invasive plant establishment. Residual effects would be long-term shifts in vegetation composition at road and pad construction sites.

4.2. Alternative B: Winter Only

4.2.1 Cultural Resources

4.2.1.1 Indirect and Direct Effects

The Indirect and Direct Effects to cultural resources are the same as indicated in Section 4.1.1.1. Note, that the number of impacts to cultural resources is likely to be lessened because less actual ground disturbing activity will be occurring; that is, since access roads will not be constructed, there is a less likely overall impact to cultural resources. However, since the presence of snow cover on the ground largely precludes the identification of most types of cultural resources because of lack of visibility and lack of access to excavate subterranean test pits, the client would have to work very closely with the hired cultural resource consultant well ahead of time to identify cultural resources during those snow-free months when cultural resources *can* be identified. That is, if Freegold wishes to perform winter drilling in specific areas, they will need to identify those specific areas well ahead of time, during the snow-free months, to their consultant. This will of course require a depth of planning 6-9 months ahead of time on the part of the client and their consultant.

4.2.1.2 Cumulative Effects

There will be less Cumulative Impacts to cultural resources with Alternative B. Since access roads will not be constructed in this alternative, there will be no additional likelihood of other future users (e.g., hunters, recreators) accessing previously inaccessible areas to impact cultural resources.

4.2.1.3 Mitigation and Residual Effects

The Mitigation and Residual Effects to cultural resources are the same as indicated in Section 4.1.1.3.

First, there will still be no potential impacts to cultural sites by drilling on existing reclaimed and un-reclaimed drill pads and access roads.

Second, the same number of known cultural resources on federal mining claims will be known and will have to be avoided until such a time as Determination of Eligibility to the National Register of Historic Places can be made on them. There is still a high likelihood of impacting known and unknown historic archaeological sites and features. As above (Section 4.2.1.1.), the job of identifying these resources by drilling crews will now have to be done months ahead of time, from close coordination by Freegold and their cultural resources consultant.

And third, the Area of Potential Effect must still be evaluated for prehistoric archaeological site potential. As above, any winter drilling activity in these areas will need to be assessed by the hired cultural consultant ahead of time, in all likelihood by excavating shovel tests to assess subsurface prehistoric site potential. Again, close coordination by Freegold and their cultural resources consultant months ahead of time would be required.

Finally, the creation of a Programmatic Agreement is even more highly desirable in order to formalize the cultural resource review process in the project area, now that all cultural resource identification needs to be evaluated and identified months ahead of actual drilling. As above (Section 4.1.1.3), if the involved parties determine that a PA is not advisable, then another process which follows the Section 106 process as outlined in appropriate federal regulations will be followed.

4.2.2. Invasive, Nonnative Species

4.2.2.1. Indirect and Direct Effects

Exploration during winter periods with adequate snow cover would result in very little disturbance of ground covering vegetation and result in negligible increase in potential for establishment of NIP above that of the no-action alternative.

4.2.2.2. Cumulative Effects

Considerable exploration and mining activity has occurred in the Cleary Summit area, including several major lode mines, and this is likely to continue. This alternative would add negligibly to cumulative effects of other land uses. Limited road construction for summer access to adjacent state claims (if allowed) could be monitored more effectively for NIP than 55-95 drill sites and associated access roads.

4.2.2.3. Mitigation and Residual Effects

- Prevent public motor vehicle access to exploration trails and sites.

This would limit disturbance of vegetation and soils by subsequent summer motor vehicle use and retain the intended benefits of this alternative. Residual effects would be negligible.

4.2.3. Vegetative Resources

4.2.3.1. Indirect and Direct Effects

This alternative would minimize soil and vegetation disturbance through winter exploration. The tree and tall shrub component of the vegetation would be cleared for access, but low and ground-level vegetation would mostly remain intact. Soils would remain largely unaffected and potential for erosion minimized. Post-use vegetation would be little changed and recovery would be much less variable and would begin immediately following drilling if subsequent use by motorized vehicles is prevented. Impacts to wetland vegetation and potential for thermokarst and subsequent erosion would be largely eliminated.

4.2.3.2. Cumulative Effects

This alternative would add negligibly to cumulative effects of other land uses.

4.2.3.3. Mitigation and Residual Effects

- Prevent public motor vehicle access to exploration trails and sites.

This would limit disturbance of vegetation and soils by subsequent summer motor vehicle use and retain the intended benefits of this alternative. Residual effects would be negligible.

4.3. Alternative C: No Action

4.3.1. Cultural Resources

4.3.1.1. Indirect and Direct Effects

There are no direct or indirect effects to cultural resources if the project is not permitted.

4.3.1.2. Cumulative Effects

There are no cumulative effects to cultural resources if the project is not permitted.

4.3.1.3. Mitigation and Residual Effects

There would be no need for mitigation measures to address cultural resources if the project is not permitted.

4.3.2. Invasive, Nonnative Species

4.3.2.1. Indirect and Direct Effects

There are no direct or indirect effects if the project is not permitted.

4.3.2.2. Cumulative Effects

Due to past disturbance, continued private and public access to Federal lands in the project area, and continued exploration and mining activities at other claims in the area, some increase in invasive plant abundance would be possible at previously disturbed sites that remain not fully revegetated and in the Cleary Summit area generally.

4.3.2.3. Mitigation and Residual Effects

No mitigation identified.

4.3.3. Vegetative Resources

4.3.3.1. Indirect and Direct Effects

There are no anticipated direct or indirect effects if the project is not permitted.

4.3.3.2. Cumulative Effects

Considerable exploration and mining activity has occurred in the Cleary Summit area, resulting in a network of trails, disturbed sites, and several major lode mines, and this is likely to continue. No additional cumulative effects (beyond those identified in the Invasive, Non-native Species section) are anticipated to result from this alternative..

4.3.3.3. Mitigation and Residual Effects

No mitigation identified.

5. Tribes, Individuals, Organizations, or Agencies Consulted

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6. List of Preparers

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5/8/2013
Date

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