USDA. Forest Service

PLAN OF OPERATIONS FOR MINING ACTIVITIES ON NATIONAL FOREST SYSTEM LANDS

FS-2800-5 (Rev. 12/11) OMB NO. 0596-0022

USE OF THIS FORM IS OPTIONAL! 1st TIME USERS SHOULD DIRECT QUESTIONS REGARDING THIS FORM OR REGULATIONS (36 CFR 228A) TO THE FOREST SERVICE DISTRICT OFFICE NEAREST YOUR AREA OF INTEREST. Submitted by: Date Title (mm/dd/vy) Date Title Signature (mm/dd/yy) Plan Received by: Signature (mm/dd/yy) I. GENERAL INFORMATION JJ Collecting Project Name of Mine/Project: A. Claim exploration + Type of Operation: B. Is this a (Mnew/Continuing) operation? (check one). C. If continuing a previous operation, this plan (□replaces/□modifies/□supplements) a previous plan of operations. (check one) Proposed start-up date (mm/dd/yy) of operation: D. Expected total duration of this operation: E. If seasonal, expected date (mm/dd/yy) of annual reclamation/stabilization close out: F. 2022 Expected date (mm/dd/yy) for completion of all required reclamation: G II. PRINCIPALS Name, address and phone number of operator: Jeff Schinel, 10174 87 Street, Edmonton, Alberta, Canada Tim Reed, 14454 Cottage Grove Dr., Baxter, Minn esota 56425
Name, address, and phone number of authorized field representative (if other than the operator). Attach authorization to act on behalf of operator. NA Name, address and phone number of owners of the claims (if different than the operator): Same as above

D. Name, address and phone number of any other lessees, assigns, agents, etc., and briefly describe their involvement with the operation, if applicable:

N/A

III. PROPERTY OR AREA

(Name of claim, if applicable, and the legal land description where the operation will be located.)

MC#	Name	Section	Township	Range
288179	New Hawk	10	128	71W
288116	Wildcat	10	128	71W

IV. DESCRIPTION OF THE OPERATION

A. Access. Show on a map (USGS quadrangle map or a National Forest map, for example) the claim boundaries, if applicable, and all access needs such as roads and trails, on and off the claim. Specify which Forest Service roads will be used, where maintenance or reconstruction is proposed, and where new construction is necessary. For new construction, include construction specifications such as widths, grades, etc., location and size of culverts, describe maintenance plans, and the type and size of vehicles and equipment that will use the access routes.

See attached location map #1 and map #2 for all access routes. Forest service roads used for access are indicated in black ink, whereas temporary access trails are indicated by light blue ink.

- 1) No new roads will be created for this mining operation. Pre-existing roads will be used for mining access (FS roads 201, 752, 752A, 754, & 754A). As such, all mechanized equipment (mid-sized backhoe) will be "walked in" from nearby 4wd forest service roads and along the access trails marked in blue on location map#2. To minimize disturbance, these "blue" access trails will only be used to transport mechanized equipment to the claim sites in the beginning of the mining season, and then walk the equipment out at the end of the season.
- 2) There will be 3 access routes (blue ink trails, map#2), totalling 965 feet in length X 12 feet in width. Access #1 will be 365 feet X 12 feet; Access #2 will be 200 feet X 12 feet, and Access #3 will be 400 feet X 12 feet. Each of these access trails will be temporary and will be recaimed when mining to that site is complete. Grade of the access routes will be less than 10% in each case. No culverts will be required, although water bars could be constructed if necessary.
- 3) Trash generated at each site will be picked-up and transported out on a routine basis, when vehicles return to town depending on the work schedule and the site.
- 4) We do not anticipate significant road disturbance, though minor maintenance (water bars) may be necessary to prevent significant disturbance of existing USFS roads to the claim sites (e.g., after a heavy rain). Any erosion that results from work performed on the claims will repaired and mitigated when found.
- 5) Reseeding of recontoured ground will be implemented as part of seasonal reclamation or "close-out".
- 6) Two one ton pick-up trucks, will be used for access.

B. Map, Sketch or Drawing. Show location and layout of the area of operation. Identify any streams, creeks or springs if known. Show the size and kind of all surface disturbances such as trenches, pits, settling ponds, stream channels and run-off diversions, waste dumps, drill pads, timber disposal or clearance, etc. Include sizes, capacities, acreage, amounts, locations, materials involved, etc.

See attached location maps #1 and #2. Areas of proposed disturbance, that will consist mainly of open pits are labeled and marked by red rectangles on location map #2. Areas of proposed access routes are marked in blue ink on location map #2. Existing roads are marked by black ink (traced from USGS topo maps).

- C. Project Description. Describe all aspects of the operation including mining, milling, and exploration methods, materials, equipment, workforce, construction and operation schedule, power requirements, how clearing will be accomplished, topsoil stockpile, waste rock placement, tailings disposal, proposed number of drillholes and depth, depth of proposed suction dredging, and how gravels will be replaced, etc. Calculate production rates of ore. Include justification and calculations for settling pond capacities, and the size of runoff diversion channels.
 - 1) Four dig sites across two nearby lode claims will be prospected (see location map#2). Each of these sites had varying levels of disturbance from previous digs. These dig sites were chosen because they reveal the presence of pegmatite structures. The larger timbre that survived the Hayman fire on each site will not be cleared in this operation.
 - 2) Mechanized equipment such as a standard (mid-sized) backhoe will be used to dig an open pit at each of the four sites over the next five years. Each pit will go to a depth of approximately 15-20 feet. There will be no new construction. The purpose of this mining operation is mainly to explore/prospect these four sites to determine their level of productivity. If a given site shows no evidence of good production, that site will not be prospected further, resulting in much less disturbance than what is proposed for that site herein. Tailings and topsoil will be stockpiled and secured for later redistribution at each dig site (see section "H" below).
 - 3) Small open pit mining will consist of enlarging the existing areas of disturbance at each of the proposed sites. Waste rock/overburden will be stockpiled near each pit. Benching at each pit will be no more than 4 feet, with no more than 4 benches per pit. The maximum dimensions are approximate, as they will be irregular in size. Only 1-2 pits will be opened at a time, as the disturbance will be recontoured prior to moving to the next site. Though the sites are numbered, they will not necessarily be opened in that particular order. The proposed operation is small, but the excavation methods will nevertheless conform to MSHA standards and will maintain the safety of those working in or near the pits.

Site 001 is a rectangular area of approximately 140 X 100 feet (.32 acres), which will include enough area for the tailings and storage of topsoil. The access to this site will be 365 feet X 12 feet (4380 square feet). Sites 002 and 003 are contained within a rectangular area of approximately 220 X 120 feet (.60 acres), which will include enough area for the tailings, topsoil and a few test holes between and around the actual dig sites. Specifically, Site 002 is a large, and very old disturbance on the West end of this rectangular area that was previously dug by hand (see location map #2 and photos). Site 003 is a small pit on the east end of this rectangular area that was previously dug by hand (see location map #2 and photos). Some test holes between and around these two dig sites will be dug to assess the existence of new pegmatites. Thus, we have included both dig sites within a larger area of proposed disturbance. Therefore, the actual area that will be disturbed will likely be much less than the proposed .60 acres. The access to these sites will be 200 feet X 12 feet (2400 square feet). Site 004 is a small pit previously dug with hand tools (see location map #2 and photos). We plan to dig a pit at this location roughly 100 X 86 feet (.197 acres), which will include enough area for the tailings and storage of topsoil. The access to this site will be 400 feet X 12 feet (4800 square feet).

- 4) Estimated production rates should not exceed 400 yards/day, with less than 5 yards per day of "ore" material.
- 5) Recontouring and seeding of disturbed areas will be conducted as part of annual reclamation and close-out.
- 6) Reclamation will include back-filling new prospects and pits that show no potential for further development, recontouring the surface, replacing topsoil, and seeding (generally as part of year end close-out). Seeding will take place at the conclusion of each season using a seed mixture recommended by the USFS.
- 7) During interim periods no additional sediment control/erosion measures will be taken other than those detailed in 5) and 6) above. All excavations will be backfilled, recontoured, and seeded prior to close out. Other sediment control measures implemented during excavation will be left in place where installed.
- 8) Only small aspens and shrubs will be cleared at site 001, and a few shrubs will be cleared near each of the other sites. No larger, mature conifers will be cleared by this mining operation.

The work program will progress as proposed on a seasonal basis (during June and/or July), up to a max of 60 days per season, but only 30 days per year on average. No blasting is expected for this mining operation. Each of the 4 sites will be completely reclaimed at the end of 5 years. If exploration of a dig site warrants further exploration, then additional work will be proposed, a revised plan of operations will be filed, and approval of the revised plan would precede any further work on the New Hawk or the Wildcat lode claims.

The total area of disturbance for this project is estimated as follows: Site 001 (excavation area + access) = 18380 square feet; Sites 002 and 003 (excavation area + access) = 28800 square feet; and Site 004 (excavation + access) = 13400

square feet. Thus, the total estimated disturbance is 60580 square feet, or 1.39 acres, with a max of .35 acres affected at any one time.

of 60 dyas per year

D. Equipment and Vehicles. Describe that which is proposed for use in your operation (Examples: drill, dozer, wash plant, mill, etc.). Include: sizes, capacity, frequency of use, etc.
Vehicles to be used on site could include up to two one-ton 4WD pick-up trucks, and one mid-sized AWD backhoe (John Deere 580 case 4wd) with 30" - 32" bucket. Powered excavation equipment would be used on a regular basis up to 7 days per week, for likely not more than 3 weeks per year. Other tools and equipment might include various hand tools (picks, shovels, pry bars, sledge hammers), impact hammers (electically, battery, or air operated), and possibly a generator (e.g., Honda), and/or portable air compressor.

Unless crews camp on the claims (in appropriate areas per Forest Service guidleines) all hand tools, the ATV, etc. will be removed by the crew daily prior to leaving the sites. Powered equipment will remain on site for the duration of the season.

E. Structures. Include information about fixed or portable structures or facilities planned for the operation. Show locations on the map. Include such things as living quarters, storage sheds, mill buildings, thickener tanks, fuel storage, powder magazines, pipelines, water diversions, trailers, sanitation facilities including sewage disposal, etc. Include engineering design and geotechnical information for project facilities, justification and calculations for sizing of tanks, pipelines and water diversions, etc.

No temporary or permanent structures, sheds, storage, or other facilities exist or are planned/ proposed on site.

The work crew may camp on site, to prevent mineral trespass in the open pit area in order to protect mineral products and equipment against vandalism or theft. Otherwise, the crew (2-3 persons) would commute to the claim daily when open pit mining is underway. Camping on site by the crew will likely be limited to 10 days or less, possibly intermittently. A possible campsite location is shown on the attached location map #2. Vehicles will be parked adjacent to the existing roads that will be use for access, it having been permitted, bonded, and scheduled for reclamation at the end of the project period.

Solid waste from camping will be burried in cat holes as prescribed in Leave No Trace camping guidelines. Camping equipment will consist of a small 8 X 8 feet tent, and trucks outfitted to sleep 1 man per truck, with sleeping bags, propane stove, folding chairs, etc.

V. ENVIRONMENTAL PROTECTION MEASURES (SEE 36 CFR 228.8)

A. Air Quality. Describe measures proposed to minimize impacts on air quality such as obtaining a burning permit for slash disposal or dust abatement on roads.

We will not burn slash or make campfires. Instead, slash will be composted near top-soil storage to ensure good quality topsoil upon reclamation. This project will not create significant dust, though dust will be controlled near the dig sites, if necessary, with water via hand pump sprayers. The sprayers would also serve as part of our fire control measures on site, together with hand tools and the backhoe when on site.

- B. Water Quality. State how applicable state and federal water quality standards will be met. Describe measures or management practices to be used to minimize water quality impacts and meet applicable standards.
 - 1. State whether water is to be used in the operation, and describe the quantity, source, methods and design of diversions, storage, use, disposal, and treatment facilities. Include assumptions for sizing water conveyance or storage facilities.
 - 2. Describe methods to control erosion and surface water runoff from all disturbed areas, including waste and tailings dumps.
 - Describe proposed surface water and groundwater quality monitoring, if required, to demonstrate compliance with federal or state water quality standards.
 - Describe the measures to be used to minimize potential water quality impacts during seasonal closures, or for a temporary cessation of operations.
 - If land application is proposed for waste water disposal, the location and operation of the land application system must be described. Also describe how vegetation, soil, and surface and groundwater quality will be protected if land application is used.
 - 1) Water, other than for minor dust control and fire control equipment, will not be used in this operation.
 - 2) Installation of sediment controls such as rice-straw batting, staw bales, or geotextile material, as warrented. Recontouring and seeding of disturbed areas will be conducted as part of annual relcamation and close-out. Soil erosion controls will be used in according to USFS standards and Colorado State regulations (i.e., DRMS rules and regulations: e.g., Rule 3.1.9 Topsoiling).
 - 3) None are anticipated nor required for this operation.
 - 4) Water quality will not be impacted during winter closure due to the small size of the operation and the erosion/sediment controls in #2 from above, and from annual reclamation and close out.
 - 5) No wastewater disposal is necessary.
- C. Solid Wastes. Describe the quantity and the physical and chemical characteristics of solid waste produced by the operation. Describe how the wastes will be disposed of including location and design of facilities, or treated so as to minimize adverse impacts.

Refuse will be transported out on a regular schedule, whenever vehicles return to town based on the work schedule for a given day. If the work crew decides to camp on site for short periods of time, cat holes will be used to bury human feces, while bagging and removing toilet paper from the site to a proper disposal area. Leave no Trace camping principles will be followed.

D. Scenic Values. Describe protection of scenic values such as screening, slash disposal, or timely reclamation.

Slash generated by clearing trees and shrubs around each dig site will be placed in and around the topsoil storage piles as mulch and compost to ensure topsoil remains in good condition for the final reclamation. The topsoil piles will be placed on flat ground, out of view by anyone traveling on nearby USFS roads. Recontouring and seeding of disturbed areas will be conducted as part of annual reclamation at close-out to maintain scenic values throughout the year. Photographs will be taken of the area prior to excavation at each site to facilitate restoration of the area to its original contour and form upon final reclamation.

Some reconouring and re-seeding of some disturbed areas may be delayed if an area is to be opened up again the next season for further development.

E. Fish and Wildlife. Describe measures to maintain and protect fisheries and wildlife, and their habitat (includes threatened, endangered, and sensitive species) affected by the operations.

There are no streams, bogs, or other riparian areas within the proposed areas of operation. Sediment/erosion controls installed as described above as well as recontouring and seeding of excavations/open pit areas will minimize impact to any disturbed browsing or foraging areas.

F. Cultural Resources. Describe measures for protecting known historic and archeological values, or new sites in the project area. No historic or archeological sites are known or have been located in or around the proposed areas of disturbance. Any evidence found or archeological or historical sites or artifacts will prompt an immediate shut down of work and notification of the District Ranger.

G. Hazardous Substances.

- 1. Identify the type and volume of all hazardous materials and toxic substances which will be used or generated in the operations including cyanide, solvents, petroleum products, mill, process and laboratory reagents.
 The only potential sources of pollutants, including hazardous materials and toxic substances, will come from vehicles, the backhoe, or generator. These pollutants are limted to fuel residue, lubricating or hydraulic oils and grease. These materials are not expected to be released or come into contact with soil, rock, or organic life. Best management practices will be employed to prevent any release of pollutants. No contaminants will be stored on site, except in vehicle or equipment tanks designed for such purpose or in OSHA/MSHA approved safety cans for refueling the
 - vehicle or equipment tanks designed for such purpose or in OSHA/MSHA approved safety cans for refueling the generator; or within a pick-up truck mounted tank used for refueling the backhoe. Depending on the duration of the work in a given season, up to 70 gallons of diesel fuel and 50 gallons of gasoline may be stored in the appropriate storage tanks and delivery systems of the backhoe and support vehicles. Roughly 25 pounds of grease and 25 gallons of hydraulic fluids will be contained in the backhoe. MSDS information will be available on site during operations.
- For each material or substance, describe the methods, volume, and frequency of transport (include type of containers and vehicles), procedures for use of materials or substances, methods, volume, and containers for disposal of materials and substances, security (fencing), identification (signing/labeling), or other special operations requirements necessary to conduct the proposed operations.

Best management practices will be employed to prevent release of contaminants. No pollutants will be stored on site, except in vehicle or equipment tanks designed for such purpose or in OSHA/MSHA approved 5 gallon safety cans for refueling the generator if need be. If need be, up to 50 gallons of diesel fuel may be stored within a pick-up truck mounted tank used for refueling the backhoe or excavator.

Approximately 70 gallons of diesel fuel and 50 gallons of gasoline may be stored in fuel tanks and delivery systems in the backhoe and pick-up trucks. Roughly 25 pounds of grease and 25 gallons of hydraulic fluids will be contained in the backhoe.

Fuel for the backhoe will be transported daily during operations.

Because no pollutants will be stored on site, except as noted above, no special containment area or fencing will be needed. The storage tank mounted on the truck and smaller storage cans will be labeled as flammable and safety signs will be posted to indicate no smoking or fire in the area.

Vehicles will be equipped with fire extinguishers and other fire fighting equipment will be on site including hand pump water sprayers, together with hand tools and the backhoe when on site.

Describe the measures to be taken for release of a reportable quantity of a hazardous material or the release of a toxic substance. This includes plans for spill prevention, containment, notification, and cleanup. Best management practices will be employed to prevent any release of pollutants. No contaminants will be stored on site, except in vehicle or equipment tanks designed for such purpose or in OSHA/MSHA approved safety cans for refueling the generator; or within a pick-up truck mounted tank use for refueling the backhoe. In the event of a reportable spill, the USFS will be notified, all contaminated soils will be excavated and removed from Forest Service lands, and treated or disposed of according to NEPA regulations.

H. Reclamation. Describe the annual and final reclamation standards based on the anticipated schedule for construction, operations, and project closure. Include such items as the removal of structures and facilities including bridges and culverts, a revegetation plan, permanent containment of mine tailings, waste, or sludges which pose a threat of a release into the environment, closing ponds and eliminating standing water, a final surface shaping plan, and post operations monitoring and maintenance plans.

Annual reclamation will include back-filling any new prospects and pits as permitted within this POO (pre-existing disturbances not included), recontouring the surface area, replacing topsoil and seeding as part of year-end close out.

All topsoil will be scraped, along with a small amount of subsoil to a depth of approximately 8 inches. The topsoil will be placed uphill from the excavation site on flat areas and buttressed with deadfall for redistribution. Slash from cleared shrubs will be mixed with the topsoil as compost to keep the topsoil in good condition. Regolith and substratum will be piled adjacent but separated from the topsoil. When the excavation is reclaimed, the substratum and rock will be placed first into the excavation, followed by the soil. The soil will be distributed evenly to a maximum depth allowed by the amount of soil initially present. The site will be re-contoured to match the original contour, except where prudent to terrace the surface to prevent erosion and to hold the soil. Silt fences or deadfall from the Hayman fire will also be used on slopes to prevent erosion and will remain in place until vegetation is reestablished. Some seeding of the topsoil with perenials may be necessary to maintain the condition of the topsoil and as a measure to prevent erosion.

All sites will be prepared by raking with the backhoe or excavator bucket to break up the soil and provide small furrows for trapping and holding seeds and water. Seed will be broadcasted by hand to ensure good placement and even distribution.

Seeding rate will be based on USFS recommendation of 40 lbs live seed per acre. However, the actual live rate amount could change slightly in a given season depending on the availability of seed and the tested germination rate for a given season. Each site will be reseeded until adequate growth is achieved. If a site does not show good growth the following spring it will be reseeded. Progress will be tracked in yearly prospecting reports. The seed mixture to be used is detailed below:

Plant Name	Seeding Rate (PLS/Acre)	
Elymus lanceolatus (thickspike wheatgrass var. Critana)	23% 9.2 lbs	
Bromus marginatus (mountain brome var. Bromar)	20% 8.0 lbs	
Festuca ovina (sheep fescue var. Covar)	15% 6.0 lbs	
Koeleria cristata (prairie junegrass)	15% 6.0 lbs	
Leymus cinereus (great basin wildrye)	10% 4.0 lbs	
Bouteloua gracilis (blue gramma var. Hachita)	10% 4.0 lbs	
Poa canbyi (canby bluegrass var. Canbar)	5% 2.0 lbs	
Trifolium fragiferum (strawberry clover)	2% .8 lbs	

VI. FOREST SERVICE EVALUATION OF PLAN OF OPERATIONS

A. Required changes/modifications/special mitigation for plan of operations:

Bond. Reclamation of all disturbances connected with this plan of operations is covered by Reclamation Performance Bond No. ___, dated (mm/dd/yy) ___, signed by ___ (Principal) and ___ (Surety), for the penal sum of ___. This Reclamation Performance Bond is a guarantee of faithful performance with the terms and conditions listed below, and with the reclamation requirements agreed upon in the plan of operations. This Reclamation Performance Bond also extends to and includes any unauthorized activities conducted in connection with this operation.

The bond amount for this Reclamation Performance Bond was based on a bond calculation worksheet. The bond amount may be adjusted during the term of this proposed plan of operations in response to changes in the operations or to changes in the economy. Both the Reclamation Performance Bond and the bond calculation worksheet are attached to and made part of this plan of operations. Acceptable bond securities (subject to change) include:

- Negotiable Treasury bills and notes which are unconditionally guaranteed as to both principle and interest in an amount equal at their par value to the penal sum of the bond; or
- Certified or cashier's check, bank draft, Post Office money order, cash, assigned certificate of deposit, assigned savings
 account, blanket bond, or an irrevocable letter of credit equal to the penal sum of the bond.

VII. TERMS AND CONDITIONS

- A. If a bond is required, it must be furnished before approval of the plan of operations.
- B. Information provided with this plan marked confidential will be treated in accordance with the agency's laws, rules, and regulations.
- C. Approval of this plan does not constitute certification of ownership to any person named herein and/or recognition of the validity of any mining claim named herein.
- D. Approval of this plan does not relieve me of my responsibility to comply with other applicable state or federal laws, rules, or regulations.
- E. If previously undiscovered cultural resources (historic or prehistoric objects, artifacts, or sites) are exposed as a result of operations, those operations will not proceed until notification is received from the Authorized Officer that provisions for mitigating unforeseen impacts as required by 36 CFR 228.4(e) and 36 CFR 800 have been complied with.
- F. This plan of operations has been approved for a period of 5 Very or until (mm/dd/yy) 12/31/2025

 A new or revised plan must be submitted in accordance with 36 CFR part 228, subpart A, if operations are to be continued after that time period.

P							
VIII. OPERATING PLAN ACCEPTANCE IV We have reviewed and agreed to comply with all conditions in this plan of operations including the required changes, modifications, special mitigation, and reclamation requirements. We understand that the bond will not be released until the Authorized Officer in charge gives written approval.							
						Deth Solice	EL 19 2000
						Signature of Operator (or Authorized Representative)	Feb 19, 2020 (Date)
organization of Experiment (or Examinatized Nepresentative)	(mm/dd/yy)						
IX. OPERATING PLAN APPROV	AL						
Joshua Voorhis	District Ronger						
(Name)	(Title)						
Julia S Vocahur	2/25/2020 (Date)						
Signature of (Authorized Officer)	(Date)						

Burden and Non-Discrimination Statement

(mm/dd/yy)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0022. The time required to complete this information collection is estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.