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:	Signature	Vice President Title	08/15/2022 Date (mm/dd/yy)
	Signature	Title	Date (mm/dd/yy)
Plan Received by:	Jonathan Manning Signature	Geological Engineer Title	8/30/2022 Date (mm/dd/yy)

I. GENERAL INFORMATION

A. Name of Mine/Project: F3 Newark 2020 Exploration Project

B. Type of Operation: Exploratory Drilling
(lode, placer, mill, exploration, development, production, other)

C. Is this a (☒new/☐continuing) operation? *(check one).*
If continuing a previous operation, this plan (☐replaces/☐modifies/☐supplements) a previous plan of operations. *(check one)*

D. Proposed start-up date *(mm/dd/yy)* of operation: May 2023

E. Expected total duration of this operation: 1 years

F. If seasonal, expected date *(mm/dd/yy)* of annual reclamation/stabilization close out: May 2024

G Expected date *(mm/dd/yy)* for completion of all required reclamation: May 2024

II. PRINCIPALS

A. Name, address and phone number of operator:

F3 GOLD LLC, 1620 Central Ave NE, Suite 104, Minneapolis, MN 55413 P: (612) 246-4562

B. Name, address, and phone number of authorized field representative (if other than the operator). Attach authorization to act on behalf of operator.

BIG ROCK EXPLORATION LLC, 1620 Central Ave NE, Suite 104, Minneapolis, MN 55413 P: (763) 347-4473

C. Name, address and phone number of owners of the claims (if different than the operator):

(If more space is needed to fill out a block of information, use additional sheets and attach form)

III. Property of Area (*Name of claim and the legal land description where the operation will be located.)*

The operation will be located on active BLM Lode Mining Claims owned by F3 Gold LLC:

Claim Serial Number (Range)	
MMC237827-MMC237830	MMC241370
MMC237834	MMC241372
MMC237088-MMC237094	MMC237121-MMC237127
MMC237095-MMC237102	MMC237131-MMC237132
MMC237108- MMC237116	MMC241464-MMC241466

The legal description of the location of the operations includes the following in the Black Hills Meridian, South Dakota:

County	Township	Range	Section
Custer	3S	3E	24,25
Custer	3S	4E	29,30,31,32,33

IV. Description of the Operation

F3 Gold LLC proposes to explore its Federal land package through an exploratory boring program. This program may involve the location of 39 drill pads, 3 laydowns/drill pads, the use of existing USFS, federal, state and county roads, and the development of new temporary access alignments. Total anticipated surface impact for this program is tabulated below in Table 1. Each line item and accompanying program details are discussed in greater detail in this Plan of Operations, below.

Infrastructure Component	Total Anticipated Surface Use (Acres)
Drill pads (n=39)	2.24
Laydowns/drill pads (n=3)	0.75
New temporary access alignments	1.50
Total Program Impact	**4.49**

Table 1 – Anticipated maximum area of surface use for the project described in this Plan of Operations.

A. Access

The attached map (Map 1) shows the following: (1) access routes which include existing roads and trails as well as proposed new temporary access alignments, (2) claim boundaries and (3) exploration drill sites and laydowns. Existing Forest Service Roads that will be utilized are summarized in Table 2, below:

Route ID	U.S. Forest Service Designation	Intended Usage
FS 781, Wabash Spring Rd	Public Road	Primary access
Cty 286, Upper French Creek Rd	Public Road	Primary access
FS 504	Highway legal, seasonal	Pads access
FS 654 (Wabash)	All vehicle, seasonal	Pads access
FS 654.1A (Wabash Br 1A)	Highway legal, seasonal	Pads access
FS 654.1B (Wabash Br 1B)	Highway legal, seasonal	Pads access
FS 781.1G	Highway legal, seasonal	Pads access

Table 2 – Proposed access route usage for the Project, and corresponding U.S. Forest Service system designations.

Generally, drill sites will be accessed using established Forest Service Roads off County, State, or US Highways. The proposed routes were selected to minimize both social and environmental impacts wherever possible, and provide flexibility for multiple avenues of ingress and egress. Primary access to the project area will be County 286 (Upper French Creek Rd) via Highway 16, and FR 781 (Wabash Spring Road) via Highway 16.

Minor modification and/or maintenance of existing U.S. Forest Service infrastructure will be coordinated directly with the Forest Service on an as-needed basis. Anticipated modification and/or maintenance may include:

- Minor brush cutting to provide adequate clearance for vehicles
- Grading/back blading existing and/or developed rutting
- Snow clearing/plowing as needed during winter months
- Restoration to pre-existing conditions and/or closure as required by U.S. Forest Service following completion of drilling program

In order to minimize new impact for the proposed Project, areas of prior disturbance are heavily favored for drill pad and laydown placement, as well as drill pad access. Areas of prior disturbance include:

- Clearings/deforested areas from prior logging operations
- Existing trails and access routes that are not identified in the Forest Service System network
- Other areas of prior disturbance (e.g., powerline service roads)

An estimated ~5,500 linear feet of temporary new access alignments for drill site access are proposed as shown on the attached map (Map 1). These alignments are planned as minimum width

temporary access routes for a select number of sites, designed at a nominal width of 12 feet. The footprint of the proposed temporary access totals approximately 1.50 acres.

As much as possible, project activities will avoid the utilization of roads and access routes that are heavily traveled by the public to minimize overall impact to the community members within the area of operation.

No new culverts are anticipated for this program.

Vehicles that will be utilizing these access routes are identified in section III (D) – Equipment and Vehicles and include: a track- or tire-mounted diamond core drilling rig, a water truck, 4x4 Utility Terrain Vehicles, and 4x4 pickup trucks for shuttling drill core, boxes, materials, and fuel to the active drill pad as well as associated equipment such as skid-steer, grader, backhoe, etc. utilized during the construction, maintenance, and reclamation of the proposed operations.

B. Map / Sketch / Drawing

There is one map attached hereto displaying the location, size, and areas of potential surface disturbance related to the proposed project.

All proposed drill site locations have been identified based on the geology, subsurface target concepts, and surface conditions aiming to test F3 Gold's scientific theories, while also minimizing both social and environmental impacts, including surface disturbance. For instance, F3 Gold has placed drill pads in areas that require minimal clearing of trees and have verified these proposed locations in the field to ensure limited overall impact throughout the proposed operations.

Drill sites may vary in location by up to 75 feet in any direction, without increasing the proposed pad sizes. This allows flexibility to limit the removal of trees or other environmental or social impacts encountered in the field, while allowing appropriate alignment to test F3 Gold's exploration concepts.

Thirty-nine drill sites are proposed for this Project (Map 1). Each drill site will have a maximum surface occupancy footprint of approximately 2500 square feet (0.057 acres), reflecting maximum dimensions ranging from approximately 50 feet x 50 feet to 70 feet x 35 feet. This range is predicated on drill rig orientation requirements, surface conditions (e.g., topography) and drill contractor requirements. Included within this footprint is a space for the drill rig, rod tray, support vehicle(s), portable cuttings tank, and water truck**.** The total potential surface disturbance of the 39 proposed drill pads is 2.24 acres.

In addition, 3 laydowns are proposed for this project and are illustrated on the attached (Map 1). The staging areas may also be utilized as drill pad locations to maximize exploration efforts while minimizing overall surface impact. The staging areas will be utilized to store equipment and tools. The proposed disturbance for each site is 0.25 acres, for a total disturbance of approximately 0.75 acres. Therefore, the total surface footprint of the proposed 39 drill pads and 3 laydowns areas is 2.99 acres.

All proposed new temporary access alignments, drill pads and laydowns have been assessed for potential surface impact or encroachment into wetlands, streams, creeks and/or open water *(National Wetlands Inventory Center data source; geospatial information data set available from United States Fish and Wildlife Service: www.fws.gov*). All drill pads, laydowns and new temporary access alignments have been confirmed by on-the-ground field verification and have been located away from potentially sensitive areas.

Placement of project infrastructure has favored areas of prior surface impact such as former timber sales and cuts, clearings and/or pull offs along existing roads aimed at minimizing overall impact.

Available cultural data sets (*State Historical Preservation Organization CRGRID*) have been overlain with proposed drill pad locations to ensure that proposed operations are outside of any potential cultural preservation site.

Tree or brush removal will be limited as the proposed sites and access are generally located in existing cleared areas or alongside existing roads.

Generally, all proposed sites have factored in a buffer of approximately 100 feet to known intermittent streams and water bodies where possible.

C. Project Description

There is no mining, milling, or processing for this proposed operation. The only mechanized activities to be conducted for this Project include diamond core drilling, access route maintenance, new temporary access alignment creation, pad clearing, and reclamation activities.

There is no proposed construction of structures associated with this Amendment to the Plan of Operations.

No dredging or removal of soils is proposed. Any soils scraped for pad clearing will be stockpiled for later use in reclamation.

Diamond drill holes are planned as vertical and angled holes. Anticipated length of holes will average 1000-2000 feet, with a maximum length of 3000 feet. The actual drilling plan will be dependent upon the results of each hole and may be amended accordingly. Each drill site may host multiple holes that would be drilled at variable directions (azimuth) and inclinations (dip) from the drill pad. Drill program progression is predicated on drill results; it is possible that some drill sites may not be constructed or utilized for the program. The actual number of holes drilled is dependent upon the results with a maximum of the 39 drill pad sites and 3 laydown/drill sites proposed herein.

Diamond core drilling operations will take place 24 hours per day broken up between two 12-hour shifts.

Timber and brush clearing will be limited and conducted only when necessary. All other timber, slash or brush will be removed and disposed of as directed by the District Ranger.

Water will be used for the diamond core drilling operations. No water will be sourced from surface water source under this Amendment to the Plan of Operations. All water will be sourced from an approved Municipal or Industrial source. Water will be trucked from the source to storage holding tanks either at the drill site and/or the staging area. Water will be circulated via water pump and water lines from water storage tanks to the drill site.

Drill cuttings and water used to flush the drill hole will be collected in tanks at the drill site. Cuttings and fines will settle out and the water can be recycled and reused for drilling. Upon completion of each drill hole, cuttings and fines will be dispersed in the disturbed area. Topsoil will be placed on the cuttings for reclamation including reseeding and planting as necessary.

The entirety of the project and all related work will result in minimal disturbance. All affected drill pad sites will be reclaimed upon completion of all drilling activities.

There will be no mining, dredging, or production of ore under this Amendment to the Plan of Operations.

D. Equipment and Vehicles

A. One to four (1 – 4) Diamond drill rigs equipped for coring HQ, NQ, or similar size
B. Drill rod racks with drill pipe and casing pipe
C. Six to Eight (6-8) 4x4 pickup trucks
D. Four (4) UTVs
E. Two (2) snowmobiles (as needed in winter months)
F. One (1) water truck
G. One (1) excavator
H. One (1) dozer
I. One (1) Skid-steer
J. One to Three (1-3) water storage tanks (up to 10,000 gallons per tank)
K. Up to four (4) water supply pumps
L. Water line/hose, Mud pump and mixing tanks for grouting/cementing of drill holes

The diamond drill rigs, drill rods, casing, and rod rack storage will be used to conduct the exploratory drilling. This equipment will be used continuously throughout the project until the project is completed.

The water truck will be used to haul water as needed to fill the water storage tanks at the drilling and staging areas.

4x4 Trucks and UTVs will be used by both the Company and its contractors to access the drill sites.

The excavator, dozer, and skid-steer will be utilized on an as-needed basis for clearing drill sites, maintenance, and reclamation. This equipment will be stored at the staging site when not in use.

E. Structures

No structures are planned for this project.

A port-a-potty (porta-john) will be at the staging area for use by the contract workers.

v. ENVIRONMENTAL PROTECTION MEASURES (36 CFR 228.8)

A. Air Quality

No burn permit or burning will be required for this Plan of Operations.

All vehicles will comply with exhaust regulations.

All vehicles will be operated as to limit dust dispersion.

No other activities proposed within this Plan of Operations are known to have any impact on Air Quality.

B. Water Quality

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.*

   Water will be used for the exploration drill coring. The quantity of water used is estimated to average in the range of 5,000 – 10,000 gallons per day per drill rig. Water will be sourced from an approved municipal or industrial water source. Water will be transported using a water truck. Water will be pumped from the water truck into water storage tanks at the drill site, and/or at the staging area. When needed, water will be pumped through water lines/hoses from the water storage tank to the drill site. Whenever possible, water will be re-circulated and captured into holding tanks at the drill site. Drill cuttings will be captured in the settling tanks and water will be recycled whenever possible.

2. *Describe methods to control erosion and surface water runoff from all disturbed areas, including waste and tailings dumps.*

Careful considerations of topography and slope for surface water runoff and erosion control has been assessed for all proposed drill pad locations.

The size of the drill pads is relatively small (average 50 feet x 50 feet) which will limit overall surface disturbance, thus the pads will not significantly impact surface water runoff from average rainfall or other normal weather events.

Appropriate erosion control measures will be used as needed or directed by the U.S. Forest Service and State to maintain safe and stable site conditions.

Erosion from drilling operations or water usage is not anticipated due to the nature of the water recycling measures that will be applied at the drill sites.

There are no waste or tailings dumps proposed as part of this Plan of Operations.

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3. *Describe proposed surface water and groundwater quality monitoring, if required, to demonstrate compliance with federal or state water quality standards.*

   Ongoing visual inspection of water used during the drilling operations will be conducted by both the General Contractor and Drill Contractor to ensure proper capture and flow into the holding and settling tank circuit.

   Each exploratory boring drill hole will be grouted/cemented and plugged after the completion of drilling in accordance with State regulations.

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4. *Describe the measures to be used to minimize potential water quality impacts during seasonal closures, or for a temporary cessation of operations.*

   There is currently no seasonal closure planned. In the event of a temporary cessation of operations, the drill site and staging areas will be stabilized and waterlines, hoses, and tanks will be stored in such a way as to minimize all potential water quality impacts.

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5. *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 used.*

   There is no proposed land application for waste water disposal with this Plan of Operations.

C. Solid Wastes

All refuse, solid waste, garbage, or trash associated with this Plan of Operations will be removed from site on a regular basis and disposed of in proper disposal containers or sites. Human waste will be contained in the Porta-Potty/Porta-John located at the staging area and subsequently transported and disposed of at the proper sites.

D. Scenic Values

F3 Gold has taken precaution in planning to limit disturbance to scenic value. The drill sites and staging areas are relatively small (50 feet x 50 feet) and located along current roadways or remote areas to limit disturbance of scenic values. After the culmination of the drilling operations, all sites will be reclaimed to the approval of the U.S. Forest Service District Ranger.

E. Fish and Wildlife

There are no known threatened or endangered species that would be affected by this exploration activity. Planned drill holes are not anticipated to intersect any known historical mine shafts, holes, adits, or workings.

F. Cultural Resources

The F3 Newark drill project will not interfere with or impact any known historical sites. Proposed drill pads will be at least 500 feet from all known historical locations.

There are no known cultural resources within the project area. F3 Gold will coordinate with the U.S. Forest Service and State of South Dakota to ensure proper buffers or avoidance of cultural resources areas is observed.

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*.

   Hazardous materials and toxic substances are not used for the actual drilling or coring in the ground.

   The only hazardous materials utilized under this plan are only for refueling the drill rig and lubricating the mechanical parts, and are listed as follows:

   - Petroleum products, oils, lubricants and fuels including diesel and gasoline

2. *For each material or substance, describe the methods, volume, and frequency of transport, 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.

Refueling and relubrication of the drill rig and its components will occur on an as-needed basis. Transportation of fuel and materials to an active drill rig will occur using DOT-compliant fuel tanks mounted on 4x4 pickup truck support vehicles. All storage of fuel and lubricant materials at the proposed laydown will be in DOT-compliant containers that are properly labeled and signed as necessary. Additional containment will be in accordance with EPA SPCC regulations as necessary. Petroleum product-specific spill kits will be available at all sites where petroleum products are stored or utilized.

3. *Describe the measure to be taken for the 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*.

In the event of a reportable quantity spill, F3 Gold and its contractors will report the spill immediately to the U.S. Forest Service and the SD Department of Environment and Natural Resources. Active containment and cleanup will be initiated and coordinated as necessary.

H. Reclamation

F3 Gold and its contractors will strive to minimize the surface impact of the exploratory drilling program through constant vigilance and open communication with regulatory authorities. As indicated throughout this Plan of Operations, all contractors working on this project will be employing low-impact methodology aimed at minimizing the surface occupancy, the generation of new surface disturbance, and the creation of permanent visual changes to the project area.

All drill holes will be capped, sealed and plugged per ARSD 74:11:08 regulations following the completion of each drill hole.

All drill pads and staging areas will be reclaimed following the completion of this Amendment to the Plan of Operations. Reclamation will constitute smoothing and contouring to pre-existing conditions, spreading of brushed materials and reseeding with Black Hills reclamation mix (*as directed by the U.S. Forest Service and District Conservationist*). Safety signage will be removed from the area, and stockpiled materials will be either spread over the pad clearing area, stacked in soil-free piles or removed and disposed of offsite.

New temporary access alignments used for access to drill pads for this Amendment to the Plan of Operations will be reclaimed to recontoured (as needed), re-seeded and brought back to pre-existing conditions as directed by the U.S. Forest Service.