July 26, 2022

The Honorable Mayor Steve Allender and Councilmembers
City of Rapid City
300 Sixth Street
Rapid City, SD 57701

Subject: Proposed F3 Gold Exploration Drilling Project

Dear Mayor and Councilmembers:

We have learned that the Legal and Finance Committee of the Rapid City Council plans to discuss F3 Gold’s Jenny Gulch exploration project during its meeting on Wednesday, July 27. Last evening Alderman Ritchie Nordstrom extended an invitation to us to attend the meeting, but unfortunately, we will not be able to personally attend. Larry Mann will attend on our behalf.

In reviewing the meeting agenda and supporting documents online we noted the inclusion of a PDF from Rapid Creek Watershed Action which makes some allegations and assumptions about our project that are not based on the facts. We are writing this letter because we want to ensure that you have accurate information about our project and its potential impacts for your discussion.

While the definitive source of information on the topic is the Environmental Assessment conducted by the USFS, we understand that not everyone has the time or inclination to thoroughly read a 438-page document. What follows is a summary of the key findings of the EA and the Draft Decision Notice. The full versions of both documents are available on the USFS website at https://www.fs.usda.gov/project/?project=57428. At the end of this document we have also included a few infographics which help illustrate impacts.

If you have any specific questions about our proposed project I would welcome you to reach out to me directly.

Kind regards,

Kristopher Jensen
VP of Corporate Communications, F3 Gold
Proposed Project Summary

- F3 Gold’s original proposal was for diamond core drilling at up to 42 drill sites, as well as access road maintenance, drill pad clearing and reclamation activities. Alternative C proposes up to 47 drilling pads, and relocates 5 drilling pads, one staging area and associated access roads to avoid effects to cultural resources.

- Each drill site would have a maximum footprint of approximately 2,500 square feet (0.06 acres), where the drilling rig, rod tray, support vehicles, portable cutting tank, and water truck would be placed.

- Drill holes would range from 500 to 6,000 feet in depth dependent on the results of each hole. Although depths up to 6,000 feet could be approved, very few holes are planned to extend to this depth; most holes would be drilled to a depth of approximately 1,000 feet.

- The number of holes drilled on each drill pad would depend on the findings in the field, with the average drill pad having one to two holes and some having up to four holes. Depending on the results of preceding drill holes, some of the drill sites may not end up being required and would ultimately not be constructed.

- Between one and four holes would be drilled at a time, with drilling operations taking place 24-hours per day divided between two 12-hour shifts (except where noted in Alternative C). Two Project staging areas (approximately 0.25 acres each) would be used to store equipment and tools. Drill pad locations were selected based on local geology, subsurface target concepts, and surface conditions that allow F3 to best test its scientific theories while minimizing surface disturbance.

- The drilling process proposed by F3 would use water mixed with industry standard drilling additives such as bentonite clays and muds or other natural and/or biodegradable additives to more efficiently and safely drill and seal boreholes. No other chemicals or solvents would be used in drilling. Any water used for the drilling would be sourced from an approved municipal or industrial source; no water would be sourced from Rapid Creek or other local surface waters. As summarized in Appendix E of the EA, water would be trucked from the municipal or industrial source to storage holding tanks either at a drill site and/or one of the staging areas.

- During drilling activities, water would be circulated using a water pump with water lines transporting water from the storage tanks to the drill site. At the end of drilling operations, excess water would be dispose of at a municipal wastewater disposal location, in agreement with the municipality. Drill cuttings and used water would be recovered and collected in tanks at the drill site. Settlement would be used to separate the cuttings, allowing the water to be reused in the drilling process.

- Upon completion of a drill hole, the cuttings would be either thin-spread and buried beneath the topsoil (which is the industry standard for low-sulfur cuttings management in the western U.S.) or transported off-site to an approved disposal location, as described in Section 2.2.1 of the EA. Spread drill cutting depth would be dependent on hole depth with most sites resulting in a spread drill cuttings depth of 0.25 inches; however, some sites (holes up to 6,000 feet deep) may result in up to approximately 1.50 inches of drill cuttings spread across the drill pad. Topsoil would be placed over the cuttings and reseeded/replanted to match surrounding vegetation. Burying cuttings on-site allows the cuttings to be protected from erosion until vegetation is re-established. Drill pads would be reclaimed upon completion of use.
Key Issue Areas Identified
During the scoping period of this project USFS received 339 comments. USFS analyzed those comments and identified the following list of issues for careful review during the environmental assessment:

- Access and Transportation
- Botanical Resources
- Cultural/Heritage Resources
- Fisheries and Wildlife
- Geology, Geohydrology, Geochemistry, and Soils
- Hydrology – Water Quality/Quantity
- Recreation and Travel Management
- Public health and safety

For the purposes of this summary F3 Gold has organized the remainder of this document by these issue areas. For each issue we have included a summary of the impact mitigation measures that we have proposed as a company, and have noted any additional mitigation measures that have been required by USFS as a part of Alternative C. Alternative C is the action alternative developed by USFS to address key issues identified in scoping, and, with an additional modification for Big Horn Sheep, is the alternative for which a Finding of no Significant Impact (FONSI) was determined. The table below, which summarizes the additional impact minimization measures of Alternative C, can be found on page 14 of the Draft Decision Notice.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Additional Impact Minimization Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botanical Resources/Reclamation</td>
<td>• Each drill pad and temporary overland access route would be reclaimed immediately upon completion of use rather than upon completion of all drilling activities.</td>
</tr>
<tr>
<td>Cultural/Heritage Resources</td>
<td>• Relocates drilling pads and access roads to avoid potential cultural resources conflicts.</td>
</tr>
<tr>
<td>Public Health and Safety</td>
<td>• Drilling pads within 500 feet of a residence would limit drilling to one, 12-hour daytime shift (7:00am – 7:00pm) to mitigate nighttime noise potential. This applies to drill pads SCP-012 and SCP-020.</td>
</tr>
<tr>
<td>Hydrology – Water Quality/Water Supply</td>
<td>• Alternative C includes a provision that the WIZ may be crossed during frozen conditions to access certain sites; however, if seasonal conditions indicate the WIZ is impassable without causing considerable damage to soils, wetlands, and other resources, the three drilling pads immediately adjacent to the WIZ (SPC-045, SPC-046, and SPC-047) would be shifted to alternate locations to avoid traversing the WIZ. The use of alternate drill pad and access road locations would require coordination with and authorization by USFS engineers and the District Ranger.</td>
</tr>
</tbody>
</table>
| Recreation and Travel Management | • Alternative C relocates three drill pads from MA 8.2, which is managed for recreational opportunities and visual qualities adjacent to developed recreation sites and bodies of water.  
• Alternative C relocates three drill pads (SPC-45, SPC-45, and SPC-47) from WIZ areas in the interest of maintaining WIZ integrity and minimizing water quality and recreation concerns. |
Access and Transportation
Impact mitigation measures proposed by F3 Gold:
• Overland trails used for access would be regraded and reseeded as directed by USFS.
• Any road damage would be repaired as soon as possible based on contractor availability.
• Contractor equipment would not exceed local road weight restrictions without prior approval by applicable authorities.
• Traffic to and from the drill sites would be limited to site set-up, driller shift changes, management oversight, sample pickup, and site restoration.
• Additional safety signage (construction use, warning signs, drill signs, trucks entering signs, etc.) would be posted throughout the work area to communicate construction equipment use of the road.

Botanical Resources/Reclamation
Impact mitigation measures proposed by F3 Gold:
• Tree removal would be minimized by only removing what is absolutely necessary. In areas where tree removal is unavoidable, the affected area would be reseeded/replanted as part of reclamation with Black Hills seed mix.
• Disturbed areas would be reclaimed and reseeded according to USFS standards.

Additional impact mitigation measures included in Alternative C:
• Each drill pad and temporary overland access route would be reclaimed immediately upon completion of use rather than upon completion of all drilling activities.

Cultural/Heritage Resources
Additional impact mitigation measures included in Alternative C:
• Relocation of drilling pads and access roads to avoid potential cultural resources conflicts.

Fisheries and Wildlife
Impact mitigation measures proposed by F3 Gold:
• Drilling activities that stem off of Sunnyside Gulch Road in the southern part of the Project area could be restricted from April 15 – August 31 to avoid disturbance during the bighorn sheep lambing season should lambing be observed. Any potential restrictions would be coordinated and implemented at the direction of the USFS Wildlife Biologist and District Ranger.
• Drill sites would not be located in limestone areas to avoid potential vertigo snail habitat disturbance. In addition, protection of the water influence zone (WIZ) surrounding streams/seeps/springs would also provide protection for vertigo snails.
• Drilling within 500-feet of a known bat roost location would occur outside the pup-rearing season (June 1 through July 31). Any potential restrictions would be coordinated and implemented at the direction of the USFS Wildlife Biologist and District Ranger.

Additional impact mitigation measures included in Alternative C:
• Proposed drill pad sites SCP-016, SCP-017, and SCP-019) are located in an area identified as bighorn sheep summer range. Alternative C Modified restricts construction and operation of
these drill pads from May 1 to June 15 to further minimize potential effects to bighorn sheep during the lambing season.

**Geology, Geohydrology, Geochemistry and Soils**

**Impact mitigation measures proposed by F3 Gold:**

- Holding tanks would be used to store drilling water rather than sumps to minimize potential for sedimentation and infiltration.
- All fuels and oils would be stored in appropriate and labeled containers or tanks with secondary containment to minimize any spill hazards.
- Materials used for the Project would be stored either at staging areas or at the drill sites; materials would not be stored along access roads or other locations.
- Any soils that may need to be removed for clearing drill pads or staging areas would be stockpiled on-site for later use in site reclamation.
- Upon completion of a drill hole, the drill cuttings and fines would be dispersed in the disturbed area.
- Topsoil would be placed on cuttings and reseeded/replanted as necessary to match surrounding vegetation.
- Drill pads, staging areas and temporary overland trails would be reclaimed upon completion of all Project activities.
- Drilling would primarily require the use of water. In addition to water, F3 may also use industry standard drilling additives such as bentonite clays and muds, or other natural and/or biodegradable additives, during drilling to more efficiently and safely drill and seal boreholes. No other chemicals or solvents would be used in drilling. Rock core, water, and fine-grained rock drill cuttings generated by drilling would be stored in holding tanks. Water would be recycled back into the drilling process, and drill cuttings would be disposed as noted above.

**Hydrology – Water Quality/Quantity**

**Impact mitigation measures proposed by F3 Gold:**

- The only fluids used for the Project are fuel (for vehicles/machinery), oil (for vehicles/machinery), water, and industry standard drilling additives such as bentonite clays and muds or other natural and/or biodegradable additives.
- All fuels and oils would be stored in appropriate and labeled containers or tanks with secondary containment to minimize any spill hazards.
- Water would not be extracted from local surface waters; any water used for the drilling would be sourced from an approved municipal or industrial source.
- Upon completion of drilling at each hole, the hole would be capped, sealed, and plugged per Administrative Rules of South Dakota 74:11:08. Drill holes would be sealed within 24 to 48 hours of drilling completion prior to moving the drill rig.
- Casing will be used, when necessary, to protect groundwater in unconsolidated, surficial geologic units. The need for casing is expected to be minimal as most drilling is proposed directly on bedrock with little to no soil or surficial geologic units.
Additional impact mitigation measures included in Alternative C:

- Alternative C includes a provision that the WIZ may be crossed during frozen conditions to access certain sites; however, if seasonal conditions indicate the WIZ is impassable without causing considerable damage to soils, wetlands, and other resources, the three drilling pads immediately adjacent to the WIZ (SPC-045, SPC-046, and SPC-047) would be shifted to alternate locations to avoid traversing the WIZ. The use of alternate drill pad and access road locations would require coordination with and authorization by USFS engineers and the District Ranger.

Recreation and Travel Management

Additional impact mitigation measures included in Alternative C:

- Alternative C relocates three drill pads from MA 8.2, which is managed for recreational opportunities and visual qualities adjacent to developed recreation sites and bodies of water.
- Alternative C relocates three drill pads (SPC-45, SPC-46, and SPC-47) from WIZ areas in the interest of maintaining WIZ integrity and minimizing water quality and recreation concerns.

Public Health and Safety

Impact mitigation measures proposed by F3 Gold:

- Residences in close proximity to drilling activities would be notified prior to Project initiation.
- An emergency response plan would be developed for the Project and would be provided to local first responders in advance of Project initiation. This plan would be developed in coordination with local first responders and would address a number of emergency situations (i.e., fire, injury, etc.).
- All drilling sites and staging areas would be equipped with spill kits to immediately address any fuel or oil spill. All fuels and oils would be stored in appropriate containers or tanks with secondary containment to minimize any spill hazards.
- All vehicles, drill rigs, and other on-site equipment would be inspected as part of daily safety checks and will be equipped with more than one fire extinguisher, which would also be inspected routinely.
- A site security plan would be developed prior to PO approval to maintain site safety and limit risk of public interference.

Additional impact mitigation measures included in Alternative C:

- Drilling pads within 500 feet of a residence would limit drilling to one, 12-hour daytime shift (7:00am – 7:00pm) to mitigate nighttime noise potential.
- This applies to two drill pads (SCP-012 and SCP-020).
The following chart can be found on page 18 of the Draft Decision Notice.

<table>
<thead>
<tr>
<th>Feature or Issue</th>
<th>Alternative A (No Action)</th>
<th>Alternative B (Proposed Action)</th>
<th>Alternative C (Modified Proposed Action)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Number of Drill Pads</td>
<td>n/a</td>
<td>42</td>
<td>47</td>
</tr>
<tr>
<td>Number of Staging Areas</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Drill Pad and Staging Area Disturbance Footprint</td>
<td>n/a</td>
<td>3.0 acres</td>
<td>3.3 acres</td>
</tr>
<tr>
<td>Access Parameters</td>
<td>n/a</td>
<td>1 miles of existing local roadways</td>
<td>1.1 miles of existing local roadways</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.89 miles of 8-foot wide temporary overland trails and/or temporary access road</td>
<td>1.88 miles of 12-foot wide temporary overland trails and/or temporary access roads to accommodate terrain</td>
</tr>
<tr>
<td>New Access Disturbance</td>
<td>n/a</td>
<td>0.86 acres</td>
<td>2.73 acres</td>
</tr>
<tr>
<td>Cultural Resources Conflicts</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Forest Plan Conflicts</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>WIIZ Conflicts</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Bighorn Sheep Lambing</td>
<td>n/a</td>
<td>No restrictions</td>
<td>*Construction and operations at drill sites SCP-016, SCP-017, and SCP-019 restricted from May 1 to June 15</td>
</tr>
<tr>
<td>Reclamation</td>
<td>n/a</td>
<td>Upon completion of all drilling</td>
<td>Upon completion of drilling at each site</td>
</tr>
</tbody>
</table>

*This additional measure was added by the District Ranger as part of the decision.

Summary:

- F3 Gold submitted its initial plan of operation on this project in 2018; In the years since, this project has been thoroughly and robustly reviewed by USFS for environmental and cultural impacts.
- Public comments were solicited for project scoping and for the draft EA; Those comments were considered and led directly to the changes made in Alternative C Modified, for which a determination of a FONSI has been made by USFS.
- This proposal is for a limited scale, limited timeframe exploration drilling project.
- No mining, milling or processing is proposed as a part of this project.
- No water will be taken from or discharged to Rapid Creek as a part of this project.
- Only potable water from a municipal source will be used for drilling operations.
- Drilling will use potable water mixed with industry standard drilling additives such as bentonite clays and muds or other natural and/or biodegradable additives to more efficiently and safely drill and seal boreholes. No other chemicals or solvents would be used in drilling.
- At the completion of drilling operations excess water will be treated at a wastewater treatment facility.
- F3 Gold will not drill into the Madison or Minnelusa aquifers, which are the source of drinking water for Rapid City.
Exploration Drill Site, Before and After

These photos are from a project in Minnesota.

Drill site at project start  Drill site after 1 year

F3 G O L D  DID YOU KNOW?

WITH PROPER NOISE MITIGATION

AT 400 FEET AWAY
CORE DRILLING
IS ABOUT AS LOUD AS
A KITCHEN FRIDGE.

38.2 DECIBELS.

500 FOOT BUFFER ZONE
BY THE NUMBERS
EXPLORATORY DRILLING IN PRACTICE

A drill pad is the physical space occupied by all equipment, materials, and personnel needed to perform the exploration. For scale, the figure below illustrates the approximate size of a drill pad in comparison to a regulation soccer field.

![Diagram of a soccer field and a drill pad size comparison]

**DRILL PAD SIZE**

50' x 50'

1 ACRE

2,500 SQ FT. ≈ .057 ACRES

(1/20 of 1 acre)

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**DID YOU KNOW?**

A drill core sample is approximately the diameter of a baseball.

~ 3” INCHES IN DIAMETER

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**CORE SAMPLE**

ACTUAL SIZE

10 FEET

10 INCHES

AVERAGE DEPTH OF TARGET

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**CORE SAMPLE**

CROSS SECTION

AVERAGE SAMPLE SEGMENT

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Examp