

# U.S. Department of the Interior Bureau of Land Management

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## Placer Testing North Fork Indian Creek *MTM 108068*



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# **CHAPTER 1**

## **INTRODUCTION: PURPOSE OF AND NEED FOR ACTION**

### **INTRODUCTION**

The claimant proposes to excavate 17 test pits on his claim the Gold Rush Placer (MMC 230636) along the North Fork of Indian Creek to test the mineral potential of the area. The claim is located adjacent to the Forest Service boundary in T7N R1W, section 25. This placer claim overlaps the claimants Gold Rush Lode claim (MMC 230635).

### **PURPOSE OF AND NEED FOR ACTION**

The claimant has proposed mining activities as authorized by the Mining Law under 43 CFR 3809. BLM must review a proposed Plan of Operations and determine what, if any, mitigation measures are needed to prevent unnecessary and undue degradation prior to a plan approval.

### **CONFORMANCE WITH BLM LAND USE PLAN(S)**

The Butte Resource Management Plan of 2009, states that Areas of Critical Concern (ACECs) are open to locatable minerals operations under the mining law, with an approved Plan of Operations. This action would be consistent with the management plan.

### **RELATIONSHIPS TO STATUTES, REGULATIONS AND OTHER PLANS**

This plan is consistent with the Mining Law of 1872, the 318 Stream Authorizations of the Department of Natural Resources and Conservation, State Water Laws (Montana Use Act under Title 85 Chapter 2, Montana Codes Annotated) and guidelines from the Montana Department of Environmental Quality.

The claimant would operate under DEQ Exploration Permit 00799. This permit number has been assigned, but would not be authorized until the bond for the project has been received.

## **CHAPTER 2 DESCRIPTION OF ALTERNATIVES**

### **INTRODUCTION**

This EA analyses the Proposed and No Action alternatives. The claimant originally requested to mine the area without testing for mineral potential; however the BLM and DEQ suggested that he test the area first to minimize impacts. The mining law and BLM regulations do not allow unnecessary or undue degradation and require all water quality laws to be followed. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action.

### **NO ACTION**

This is a mining proposal on federal lands open to the location of mining claims. The No Action alternative provides a basis for impact analysis, but is only an option if the proposed activities do not meet the regulatory requirement to prevent unnecessary or undue degradation.

### **PROPOSED ACTION**

The claimant proposes to excavate up to 17 test pits for the purpose of evaluating the potential of the area to produce economic placer gold. See Figures 1 and 2 in Appendix A.

Access to the claim is on a county road along Indian Creek road to the North Fork Indian Creek road and then through an existing gate. These are open county roads up to BLM / FS boundary after which the road is under FS jurisdiction.

Equipment on site would include a Porta-Potty, a job site trailer (16 foot long), a fuel tank mounted on a trailer (300 gallons), a 25 KW generator mounted on 4 x 8 foot trailer, a Cat 255 Excavator, a 20-30 TPH wash plant and 4-inch Honda water pump.

The staging area for the storage trailer and fuel would be located on BLM land near the SW gate to the claim at Test Site # 1. The fuel tank would be placed on containment which would be able to hold 1.5 X the amount of fuel on site at any time. The containment would be excavated and lined with a 30 mil impermeable geomembrane.

The trommel and excavator would move from site to site working their way northward.

#### Exploration Process:

Seventeen test pits have been staked on the east and west side of the North Fork of Indian Creek. The first phase of exploration would be to test sites on the east side of the creek, the second phase would be conducted on the west side. Test sites along the old road may not be excavated until they have been surveyed by a BLM archeologist. The claimant has obtained a 318 permit

from the DEQ for short term turbidity associated with creek crossings. All creek crossings would be limited to the old road across the creek.

Exploration testing would consist of digging a pit no bigger than 30 x 20 x 14 feet. The spoil pile and stockpile disturbances would increase disturbances at each test site to ~60 x 40 feet. All pits would be located at least 50 feet from the active stream. In all cases topsoil would be salvaged. Groundwater, which would be used for washing gravels, would infiltrate into the pit. Approximately 2,100 gallons per hour would be recirculated to process gravels. Excavated pay gravel would be washed using the trommel and returned to the pit. It would be necessary to remove a few small trees. A water right permit with Montana DNRC would be obtained prior to actual use of the water during processing.

Best Management Practices for this placer project include testing the area instead of mining, not taking the water directly from the creek or discharging back into the creek, and keeping all sediment out of the creek. If necessary, barriers would be established to ensure that no water or sediment enters the creek.

The job trailer and porta-potty would be permitted as occupancy under the regulations at 43 CFR 3715. There would be no residential trailer on the site. Camping would not be allowed beyond the standard 16 day allowance.

Disturbances:

Staging area~	<u>0.5 acre</u>
Maximum test pit and water hole ~60 x 40 ft disturbance	
17 pits @ 60 x 40 ft. =	<u>0.9 acres</u>
Tracking areas between pits (user made road) =~1000 ft x 6 ft. =	<u>0.14 acre</u>
Total acres =	<u><b>1.5 acres</b></u>

Reclamation Process:

Processed gravels and overburden would be returned to the pit as soon as the site had been sampled. Sediment would be placed on top of washed gravels, silt on top of the sediment and topsoil on top of the silt. All disturbed areas would be reshaped to original contour and seeded as soon as possible. Any trees that had to be removed would be used in reclamation. All disturbed areas would be seeded at the end of the season to ensure effective erosion control. Weeds would be sprayed using one of the 2-4D herbicides on the BLM approved list. Weeds would be sprayed annually for 3 years after final reclamation is completed.

Required Seed Mix:

- Bluebunch wheatgrass 4 lb/acre
- Western wheatgrass 2 lbs/acre
- Idaho fescue 2 lbs/acre
- Lewis blue flax 1/2 lb/acre

The working season would be from mid May 2015, or after the bond has been posted and accepted, to October 30, 2015. At the end of this season all equipment and materials would be removed from site.

## **CHAPTER 3**

### **AFFECTED ENVIRONMENT & ENVIRONMENTAL IMPACTS**

#### **INTRODUCTION AND GENERAL SETTING**

##### General Setting

The North Fork of Indian Creek is located on the east side of the Elkhorn Mountains at approximately 5800 feet in elevation. The area is predominantly Douglas Fir forest.

##### Mining History

These claims are located on the North Fork of Indian Creek. They are located in the Indian Creek Mining District north of the Diamond Hill Mine and the town of Hassel, and south of the Park Mine. This ground has a rich mining history and strong mineral potential. The following information has been taken from the Department of Environmental Quality website (<http://www.deq.mt.gov/abandonedmines/linkdocs/35tech.mcp.x>).

Placer gravels along Indian Creek were first worked in 1866. Veins and scarns in the Diamond Hill are located in and adjacent to mineralized porphyry. In the Park Mine veins in andesite and diorite produced primarily pyrite, with some arsenopyrite and galena. Near Hassel at least two intrusions of mineralized granite are located in andesite porphyry. Mines in these areas have yielded gold, silver, copper and lead. Open pit mining and long tunnels in these large bodies and veins produced approximately \$500,000 in gold.

Significant claims in the vicinity of Hassel included Little Giant and W. A. Clark claims, located on Giant Hill, the Diamond Hill, the Blacksmith group, the Cyclone group. The Park district listed the Clipper, the Gold Dust, Switzerland, Uncle Ed, Silver Bell, Jaw Bone and Hard Cash claims. In the 1890's two 20-stamp mills and one 5-stamp mill were active. At the Park Mine, a mill and cyanide plant were built, but the process was not suited to the ore. Estimates of total production for the district by 1911 were between \$2 and 8 million, however, a more modest estimate made in 1933 of not less than \$1 million is probably more likely (Stone 1911; Hill 1912; Pardee and Schrader 1933; Lyden 1948).

In the early 1900's difficulties in processing the sulfide ore curtailed activity, the district produced only \$15,000 in ore between 1908 and 1910.

In the midst of the Great Depression high gold prices spurred the development of a number of small "family" mines. The Blacksmith group was most intensively worked in the 1930s (McCormick 1990; Fairchild 1987; Ferguson 1906; Swallow 1891)..

Around 1940 the stream gravels on lower Indian Creek were reworked by dry land dragline dredges, in three years two dredges recovered a total of \$595,000 in gold. These dredges were closed by Federal order during World War II, but resumed operations in 1946 (Lyden 1948).

While much of the area has been mined out, there is potential for future mineral extraction as indicated by the many placer and lode claims in the area that are still active today. Gold has recently been found in the placer material along the creek and hard rock mines in the area. Mining could become active again should the economics of the sites be sufficient to generate a profit. The historic mining activity occurred at a time when reclamation was not required and many mines were abandoned without being cleaned up or closed. The DEQ, FS and BLM have been conducting mine reclamation since the mid 1990's. The largest clean-up project in this area was the Park Mine and Mill. Streamside tailings were dug up and placed in a repository in the late 1990's. This mining project covers an area where streamside reclamation has been conducted.

A remnant access/haul road is located on the west side of the creek. Its' path and condition have not been assessed to date, but those issues, along with its' eligibility will be resolved before disturbance will occur.

CRITICAL ELEMENTS		
Determination*	Resource	Rationale for Determination
NI	Air Quality	Only minimal temporary dust would be produced from excavation of the test pits. No dust would be produced from the wash plant as it uses water for processing the placer gravels
PI	Areas of Critical Environmental Concern	This area is within an ACEC, however mining is allowed as long as conducted under a Plan of Operations and evaluated through an EA
PI	Cultural Resources	This area has experienced multiple phases of mining and reclamation; no historic features remain adjacent to the creek. Road status is undermined, but this will be resolved before any disturbance can occur.
NP	Environmental Justice	No issues
NP	Farmlands (Prime or Unique)	There is no farm land present.
PI	Floodplains	The test pits are within the maximum high water area, impacts would be minimized by reclaiming each pit as soon as possible. Reclamation would ensure that all fines and topsoil are salvaged and used in reclamation. Seed would be applied as soon as each site is reclaimed and again in fall.
NI	Invasive, Non-native Species	Weed control would be required as part of the operations and reclamation. Weeds would be controlled with BLM certified spray.
NP	Native American Religious Concerns	No issues.
NP	Threatened, Endangered or Proposed Animal Species	The Canada Lynx is the only species listed under ESA by the U.S. Fish and Wildlife Service as potentially occurring in Broadwater County. Surveys have not documented lynx in the Elkhorn Mountains, and if present, they would not be impacted by the action.
NP	Threatened, Endangered or Proposed Plant Species	Ute ladies-tresses are the only species listed under ESA by the U.S. Fish and Wildlife Service as potentially occurring in Broadwater County. This species has not been found in the action area.
NI	Wastes (hazardous or solid)	The claimant would have a porta-potty on site, all hydrocarbons would be stored in secondary containment, all trash would be removed from site.
NI	Water Quality (surface/ground)	Each test pit would act as a water source, supplying water which has infiltrated into the pit for processing, and as a settling pond for water that is discharged from the wash plant. Water returned to the pit would have subsequent filtration through subsurface strata before returning to the water table or becoming creek recharge.
PI	Wetlands/Riparian Zones	Project is adjacent to riparian areas, some impacts are expected. Mitigation measures have been established, therefore impacts are minor and short term and after reclamation.
NP	Wild and Scenic Rivers	None present
NP	Wilderness	None present

\*Possible determinations:

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present and may be impacted to some degree. Would be analyzed in affected environment and environmental impacts.

(NOTE: PI does not mean impacts are likely to be significant in any way).

## **RIPARIAN AREA**

The North Fork of Indian Creek consists of a perennial stream with some willows and dogwoods with a large herbaceous component of sedges and rushes. The stream is mostly bound by large rock with some fine sediment. The riparian area is in a narrow valley bottom and currently extends from toe slope to toe slope. Historic down cutting is evident from placer and reclamation activities. The riparian area is being encroached by Douglas Fir. There is moderate livestock use in the area.

In the late 1800's and early 1990's there was likely placer activity along this area of the North Fork of Indian Creek. In the late 1990s the streamside tailings were removed and the area was reclaimed as part of the Park Mine project. This proposed activity would likely be at least the third disturbance of the riparian area.

### **Direct and Indirect Impacts of No Action**

There are no impacts from the No Action alternative.

### **Direct and Indirect Impacts of the Proposed Action**

This project would result in some loss of fines and a setback of the disturbed vegetation would decrease the filtration of fines should surface flow occur. The loss of some woody riparian plants, especially on the east side of the stream, may reduce the root binding capacity of the woody riparian plants (willows/dogwoods) which may reduce bank stability. Excavation and disturbances would not increase soil load in stream because the claimant is not allowed to discharge any sediment into the stream. There would be short term increase in stream turbidity associated with the vehicle and equipment crossings.

Mitigation measures include a 50 foot buffer between the stream and proposed disturbances. The claimant would salvage topsoil and would reclaim back to the original contour. If any pits are in a boggy/ wet area, the claimant would plant aspen, willows, and sedge plugs. If aspen or willows are disturbed, a portion of them should be salvaged for site reclamation (save in 5 gallon buckets full of water). The claimant has obtained a 310 permit for turbidity before crossing the stream.

## **FISH AND WILDLIFE**

Brook trout, a nonnative species, are the only fish species known to occur in Indian Creek in the project area. Surveys for mussels in 2005 and 2007 indicated mussels do not occur in Indian Creek (Montana Fisheries Information System 2015). Mammal species present in the project area are typical of southwestern Montana; deer, elk, black bear, and many smaller species are present or can be expected to use the project area. Beaver are not present in this reach of Indian Creek. Reptile and amphibian species that can be expected include western toad, plains spadefoot, terrestrial garter snake, racer, and western rattlesnake. Bird species in riparian areas bordered by conifer forests are numerous. Wildlife surveys specific to this site have not been conducted. However, BLM state-listed sensitive species likely to occur in the project area would include veery and western toad.

## **Direct and Indirect Impacts of No Action**

There are no impacts from the No Action alternative.

## **Direct and Indirect Impacts of the Proposed Action**

Sedimentation caused by equipment crossing the creek could negatively impact brook trout spawning and their aquatic invertebrate prey base. However, creek crossings are a brief and distinct activity which would only cause short-term limited turbidity.

Disturbance caused by exploration activities would likely cause other species to avoid the project area, and possibly hinder the movements of riparian-dwelling species from traveling through the Indian Creek corridor. Reclamation would prevent long-term habitat alterations.

## **AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) & ELKHORNS COOPERATIVE MANAGEMENT AREA (ECMA)**

The project area is within the Elkhorn Mountains ACEC. ACEC designations highlight areas where special management attention is needed to protect important historic, cultural, and scenic values, fish or wildlife resources or other natural systems or processes. ACEC designation indicates to the public that an area has significant values and has established special management measures to protect those values. In addition, designation serves as a reminder that significant value(s) or resource(s) exist which must be accommodated when future management actions and land use proposals are considered within or near an ACEC (USDI-BLM 1988). Management of the Elkhorn Mountains ACEC is focused primarily on the following values as described on pages 54-55 of the Butte RMP (2009):

- Important cultural/historic sites
- Diverse upland and aquatic habitat for wildlife and fish
- Unique national management area (referring to USFS lands being designated as a Wildlife Management Unit and cooperative management of the area with BLM, USFS, and FWP).

The ACEC designation dovetails with ECMA designation. In 1992, the BLM and FWP entered into a Memorandum of Understanding (MOU) with the Helena and Deerlodge National Forests to manage the Elkhorns as a contiguous ecosystem across administrative boundaries with an emphasis on healthy wildlife and fish habitats. This MOU has been periodically updated, most recently in 2014. Within the agencies, there is an Elkhorn Steering Committee made up of USFS Regional Supervisors, the BFO Manager, and the FWP Regional Supervisor. There is an Elkhorn Implementation Group composed of agency specialists. Also there are two citizen's groups, the Elkhorn Working Group and the Elkhorn Restoration Committee, dedicated to the ecological health of this mountain range.

## **Direct and Indirect Impacts of No Action**

There are no impacts from the No Action alternative.

## **Direct and Indirect Impacts of the Proposed Action**

The Elkhorn Mountains ACEC is composed of 50,431 acres within the ECMA, which also includes approximately 160,000 acres of USFS land. The temporary disturbance followed by reclamation of 1.5 acres within this area would result in a negligible impact on the overall ecosystem.

## **SOILS**

### **Direct and Indirect Impacts of No Action**

There would be no impact associated with the No Action alternative.

### **Direct and Indirect Impacts of the Proposed Action**

In the late 1800's and early 1990's there was likely placer activity along this area of the North Fork of Indian Creek. In the late 1990s the streamside tailings were removed and area was reclaimed as part of the Park Mine project. This proposed activity would be likely at least the third disturbance of the riparian area.

Ecf-Ess-Cheadle complex soils dominate the Indian Creek riparian areas that would be affected by the exploration. These are stony-loam soils, typically found on slopes between 30-60%. The soils are rated as having severe erosion potential. Equipment use and vehicle use on these soils frequently result in surface erosion and compaction. Impacts to soils from exploratory pits and sorting would include some loss of fine material from the excavations and reclaimed areas may be more stratified. Erosion could occur as a result of equipment mobilization and transport between sites.

Mitigation measures include the salvage of all topsoil and fines, and reclaiming the area to original contour. No sediment would be allowed to enter the creek. To eliminate / minimize the potential impact of a hydrocarbon spill, the fuel storage area would be lined with 30 mil geomembrane and all fueling will be conducted on containment when possible. It is recommended that mobilization of equipment reuse of the same temporary access points on the shallowest slopes where possible. Access points would be limited to the shallowest slopes and equipment would be moved as few times to limit the potential for erosion from equipment and vehicle use along Indian Creek.

## **CUMULATIVE IMPACTS**

The proposed action is not anticipated to result in cumulative impacts. The only other dominant activities in this area are recreation and grazing. Because this project is small and temporary there would be no cumulative impacts.

### **Conditions of Approval:**

- 1) The operator would clean the undercarriage of all off-road or construction equipment prior to entering the area to reduce the chances for noxious weed infestations.
- 2) The operator would be responsible for weed control on the access road, the mine site, topsoil stockpile, overburden pile, and any waste sites for the life of the project and three years following. Monitoring must begin prior to disturbance. The operator must use BLM approved herbicides on public land. The Butte Field Office staff shall be responsible for approval for weed control programs.
- 3) If aspen or willows are disturbed a portion of them should be salvaged for reclamation (save in 5 gallon buckets full of water).
- 5) Topsoil is to be removed and stockpiled. Operator would be required to cover the topsoil pile to prevent the loss of topsoil to wind erosion. Operator must cover the topsoil with a biodegradable mesh fabric that allows water and air to circulate through the topsoil. Operator cannot cover the topsoil with any type of impermeable fabric. The soil stockpile shall be seeded.
- 6) All disturbed areas would be resloped and revegetated to stabilize the soil and reduce the chances for noxious weed infestations.
- 7) Seed would be approved by the BLM prior to seeding. All seed must have a valid seed test, within one year of the acceptance date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts).
- 8) The historic road would be unavailable for disturbance until the road has been recorded and consultation with SHPO has been completed.
- 7) Access points would be limited to the shallowest slopes and equipment would be moved as few times to limit the potential for erosion from equipment and vehicle use along Indian Creek.

#### Reference:

**U.S. Department of the Interior Bureau of Land Management (USDI BLM). 1996.** Partners Against Weeds: An Action Plan for the Bureau of Land Management. Washington, D.C.

## CHAPTER 4 PERSONS, GROUPS, AND AGENCIES CONSULTED

**Table 4.1. List of Persons, Agencies and Organizations Consulted**

<b>Name/Agency</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>	<b>Findings &amp; Conclusions</b>
Bob Cronholm, DEQ	MOU between DEQ and BLM	Checklist EA under MEPA, 318 permit
Hans Oaks, FS	Claim extends onto FS	No authority for BLM project, helpful input

### List of Preparers

**Table 4.2. List of Preparers**

<b>Name (and agency, if other than BLM)</b>	<b>Title</b>	<b>Responsible for the Following Section(s) of this Document</b>
Joan Gabelman	Geologist	EA
MaryLou Zimmerman	Forester	Forestry
Scott Franklin	Biologist	ACEC, Fish and Wildlife
Roger Olsen	Rangeland Specialist	Riparian
Lacy Decker	Weed Specialist	Weeds

### Public Comments and Responses

## Appendix - Figures

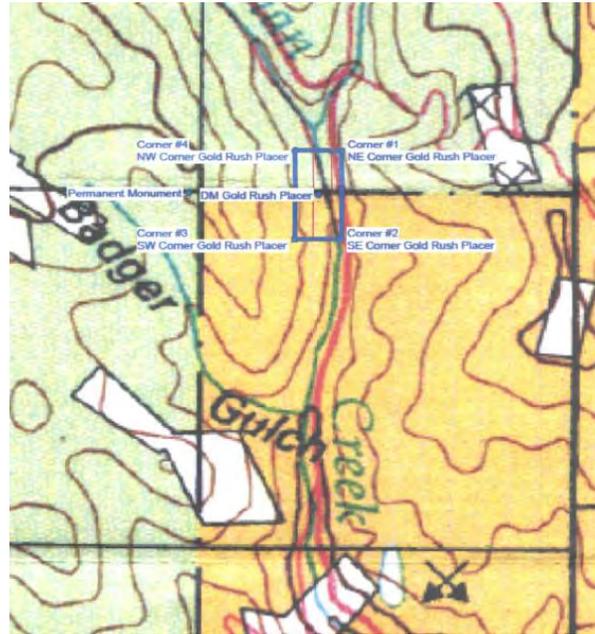


Figure 1: Location Map.

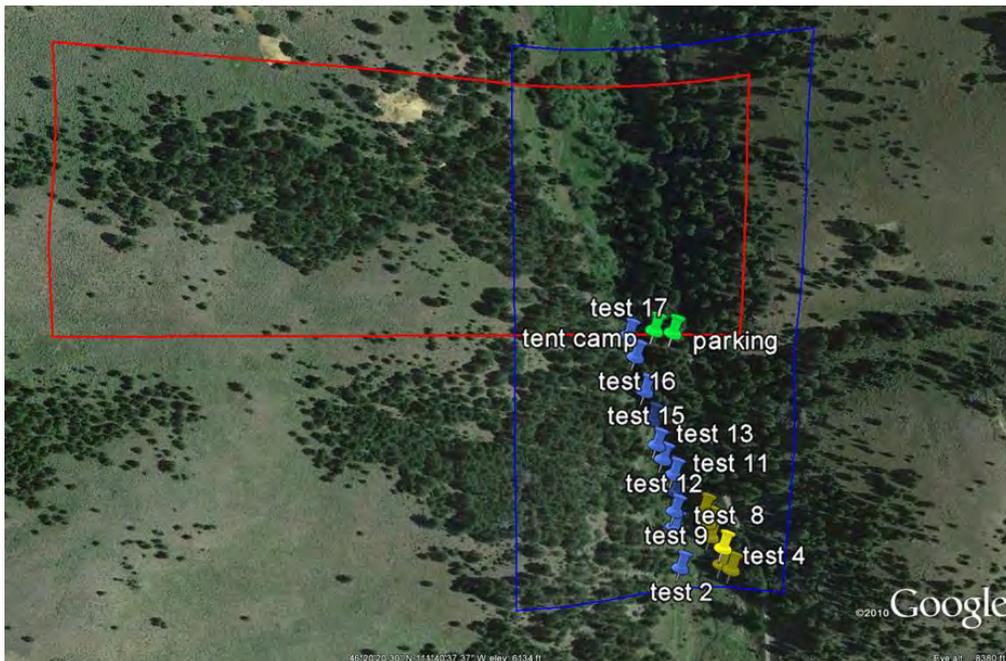


Figure 2: Test site location

- 5 When moving forward place sediment on top to tailings, then the silt on top of the sediment, then topsoil. look at seeding at this time is advised by the agency.
- 6 Near the end of the season, prepare and seed any unseeded areas, staging, roads, piles.
- 7 Fuel tank will be place in a lined pit to hold up to 800 gal.
- 8 Generator will be running the trommel, water pump and job trailer.
- 9 Water pump will be running up to 36 gal per minute.

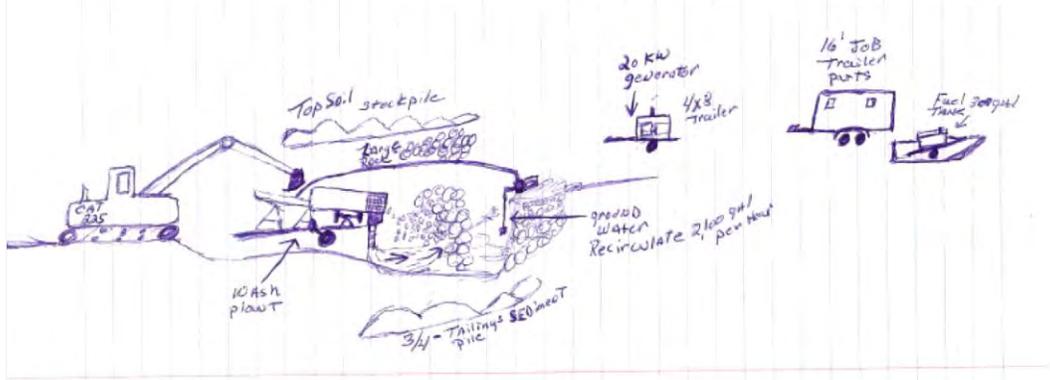


Figure 3: Explanation of test process.