Bancroft Placer Mine

July 7, 2020

Limited Impact 110(2) Permit Application to the Colorado Division of Reclamation, Mining, and Safety

By:

Gregg Morrill

Represented by:

Greg Lewicki And Associates, PLLC

3375 W. Powers Circle
Littleton, CO 80123

Phone: (720) 842-5321
E-mail: info@lewicki.biz

Fax (303) 346-6934

TABLE OF CONTENTS

Introduction

The Bancroft Placer Mine is located approximately 18 miles northwest of Nucla, CO in Montrose County at an elevation of 4830 feet. The Bancroft Placer Mine will mine placer gold and will be limited to a 10-acre area; therefore, this application is for a Limited Impact 110(2) reclamation permit. The permit boundary is shown on Map E-1.

Prior to this mining effort, the site was used for rangeland and cattle grazing, ~1970s gravel mining, ~1980s gravel mining, and historic late-1800s through early-1900s placer mining. Evidence of historic placer mining can be seen throughout the site. The 1970s gravel mining effort was permitted by the Aurora Mining Company with the Division of Reclamation, Mining, and Safety (DRMS) under identification number M-1974-081 and was known as the Bancroft Pit; this 110c permit has since been terminated. The 1980s 112c gravel mining permit, the Little Louise Pit – M-1980-144, was issued in 1982 and terminated sometime afterwards and included acreage on the west side of State Highway 141 as well. A May 1, 2020 DRMS inspection yielded a possible violation of mining without a permit and the site was assigned DRMS identification number M-2020-025.

The depth of excavation will be approximately 15 feet. Topsoil is expected to range from 0-4 inches with an average of 2 inches depth. The site is bordered by rangeland to the north, south, west, and east and runs along Colorado State Highway 141 to the west. Map A-1 shows the general location of the Bancroft Placer Mine. Currently the site is used for cattle ranging and processed gravel will be stockpiled for the property owners exclusive onsite use.

The surface rights are owned by Weimer Ranches LLLP and mineral rights are split by Weimer Ranches LLLP and Della Long. A lease to mine and sell the gold resource is secured by Gregg Morrill who is also the Operator.

The permit area will include 9.4 acres.

EXHIBIT A LEGAL DESCRIPTION AND LOCATION MAP

The site is approximately 18 miles northwest of Nucla, CO. The property is bounded by dry rangeland in each cardinal direction and Colorado State Highway 141 to the west. The Dolores river runs parallel and just west of Colorado State Highway 141. The main site access is located along the northern perimeter near the northwestern corner of the site with access from Highway 141 and is shown on Map E-1. A legal description is shown on Map E-1 that is included in Appendix 2. A general location map, Map A-1, is enclosed below the legal description detailed here.

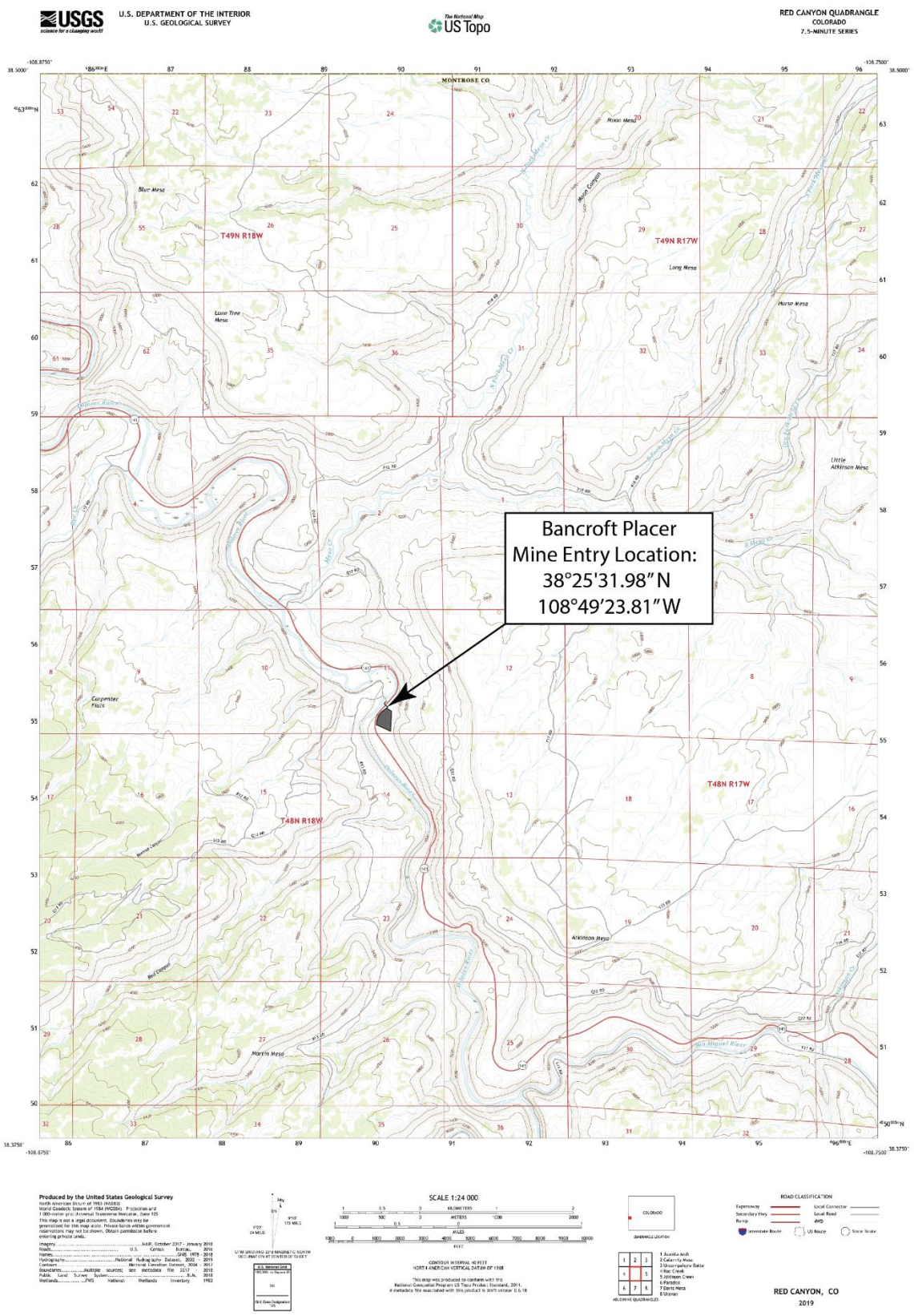
The total permit area is 9.4 acres.

1. Legal Description

A tract of land located within the southwest quarter-quarter of the southeast quarter of Section 11, Township 48 North, Range 18 West of the 6th Principal Meridian of the County of Montrose, State of Colorado and being more particularly described as follows:

Commencing at the True Point of Beginning at Corner 6 of MS 2243, the southeast corner of the site.
Thence N 04°57’29” E a distance of 805.2193’;
thence N 51°41'48"W a distance of 252.06’;
thence S 54°46'12"W a distance of 198.65’;
thence along the same, a curve to the left having a radius of 841.50’, an arc length of 666.80’, a chord bearing of S 27°21'40" W, and a chord length of 649.49 to a point,
thence S 65°36'44" E a distance of 646.6799';
which is the point of beginning, having an area of 408,056.27 square feet, 9.36 acres. The basis of bearing is Corner 6 to Corner 1 of MS 2243.

The mine location can also be described with a mine entry location of:
Latitude 38°25’31.98” N
Longitude 108°49’23.81” W



Location Map.

EXHIBIT B SITE DESCRIPTION

1. Location and General Land Use Information

The site is located along State Highway 141 and is composed of and surrounded by dry rangeland. The Dolores River is approximately 130 feet west of the active mining area. The site is approximately 35 miles northwest of the Nucla City Center. The parcel is currently leased for placer gold mining by the landowner.

2. Site Geology

Site geology consists of 0-4 inches of topsoil over Quaternary aged alluvium and terrace gravels. Adjacent cliff faces are composed of Jurassic sediments and include the Entrada sandstone at the base progressively topped by the Summerville and Morrison formations. Mining will occur to a depth of ~15 feet below the present surface. Highly variably thick overburden is found throughout the site. There are no hazardous or acid forming materials expected to be encountered during excavation. See the Natural Resources Conservation Service (NRCS) soil report in Appendix 1 for more details on surface composition.

3. Surface Hydrology

Prior to mining, the permit area has a shallow slope to the west. Pre-mining topography is shown on Map E-1. All of the runoff on the undisturbed site runs to the west towards State Highway 141 and the Dolores River. The Dolores River floodplain is unmapped in the area and the current river elevation is 20 feet lower than the lowest area within the active mine site.

Stormwater will be kept from entering the site from the east by the shallow ditches and <3-foot-tall berms that surround the site following the perimeter. Stormwater that occurs on site will remain on site by perimeter berms and ditches; however, the porous surface of the site will allow for all stormwater to infiltrate the site and pit floor within 72 hours.

Two monitoring/sampling wells are in place on the BLM land ~1,300 feet north of the site along the Dolores River and have 9- and 12-foot depths with a static water level of 8 feet below the ground surface. Therefore, groundwater is expected to be >~30 feet below the lowest point of the active mining area. As the depth of mining is ~15 feet, groundwater is not expected to be

encountered during any phase or stage of mining. In the event that groundwater is encountered, excavation will be halted and the area will be backfilled with at least two feet of site excavated material. No mining will occur beyond the depth where groundwater is encountered.

4. Vegetation

Vegetation on site is typical sparse rangeland shrubs and grasses for this area. Common plant species on site include: rabbit brush, sage brush, prickly pear cactus, mountain mahogany, juniper, pinyon pine, and rangeland grasses of the area. The NRCS non-irrigated Land Capability Classification of 7e describes the site as composed of soils with severe limitations, unsuitable for cultivation, and restricted use of grazing, woodland, or wildlife grazing.

5. Wildlife

Forage and cover for wildlife is very limited due to the arid climate. Small animals (rabbits, foxes, etc.) make use of the surrounding environment. The site is within range for elk, mule deer, prairie dog, wild turkey, various fox, and various reptiles. Peregrine falcon nesting areas may be found in the cliffs adjacent to the eastern edge of the mine site and well outside the active mining area, but falcons have not been observed on site. Impacts to wildlife will be mitigated through a weed management plan and reseeding all mined areas with a diverse and native rangeland seed mix. Also, the site will only be disturbed for a short time.

6. Structures

Structures are shown on Map E-1. A list of structures within 200 feet of the permit area can be found in Exhibit L. Damage waivers for these structures can also be found in Exhibit L. The structures will remain unchanged throughout mining and reclamation.

7. Soils

The NRCS soil map is included in Appendix 1. The site contains one soil type: Clapper-Ustic Torriorthents complex.

EXHIBIT C MINING PLAN

1. General Mining Plan

Map E-1 shows the current conditions of the Bancroft Placer Mine. Mining will disturb most of the 9.4 acres delineated on Map E-1. Mine access is via State Highway 141 which is a paved road with gravel shoulders. Map E-2 shows the site access location. The southern and eastern borders of the property parcel are fenced with four strand barbed wire fencing.

Mining of the ~15 foot thick gravel deposit will progress in a nondirectional pattern throughout the site and potential higher grade areas will be preferentially targeted. Due to various past mining efforts on the site, unmined areas will be targeted first. Only two acres will be disturbed and out of reclamation at any given time in the active mining area. An additional 0.5-acre processing and tailings area will extend through the mine's life. The gravel deposit will be excavated via front end loader and either directly fed into the processing plant or placed within a dump truck for transport to the processing area.

Diesel-hydraulic equipment will be used to mine and transport material to trommels and/or horizontal deck wash plants. No chemical processing treatments will be used on site; only water is used in processing gold and gravel. The undersize material (<5/8") will pass through a series of sluice boxes to gravity concentrate recoverable gold. Sluice boxes concentrate gold similarly to how a stream channel would and is termed 'hindered settling.' Hindered settling allows particles to settle by decreasing terminal velocity.

The classic sluice box is an open channel with a flat riffled bottom (Figure 1). Riffles are generally formed by expanded metal. Gravels to be processed are mixed with water in the screening process and flow across the riffles. Riffles generate fluidized beds that allow the hindered settling process to occur. Denser particles such as gold then work their way into the riffles and are trapped. Riffles will be regularly cleared, and the collected material will be further processed for gold. Water used in on site sluice will be discharged into the processing area settling pond adjacent to the sluice box. The oversize portion of the material flow is rejected by the trommel/wash plant and rehandled by a front-end loader or backhoe.

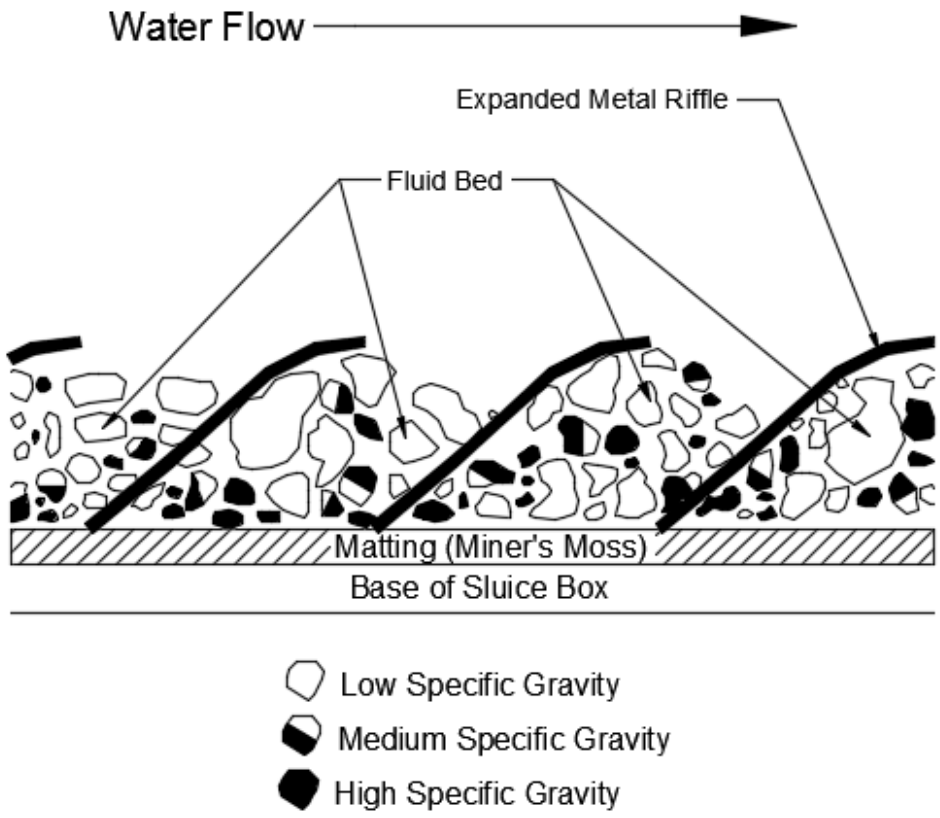


Figure 1. Conceptual Section of a Sluice Box.

Oversize tailings will be stockpiled for use by the landowner at their request or utilized as backfill for existing and future pits throughout the site. The undersize fraction flows across the sluices and is deposited in an alluvial fan which forms along the receiving edge of the settling pond. The processing plant will be located at a higher elevation relative to the remainder of the operation to allow for good depositional flow into a previously excavated pit without significant rehandling, see Map E-2.

As portions of the site are already mined, very little overburden and topsoil will be recovered from these areas. However, undisturbed mining areas will have limited topsoil and overburden. Any topsoil, overburden, and separated waste fines from the unmined areas will be used during phased reclamation as mining progresses through the site, see Map E-3. Reclamation will occur concurrently with mining and is detailed in Exhibit D.

In unmined areas, topsoil from 0 to 4 inches is salvageable and will be redistributed in already graded previously mined areas. The expected average depth of topsoil is less than 4" based on existing cuts in the permit area. If stockpiling of overburden and topsoil becomes necessary to prevent erosion of topsoil and overburden stockpiles, piles will be seeded within 180 days of establishment with the rangeland seed mix or quick oats. Stockpiles will be constructed to 2.5H:1V slopes for topsoil and overburden and will be located in the northwest portion of the site.

Aggregate material from any step may be separated and stockpiled for the landowners use at their request. See the enclosed affidavit, following Exhibit C, signed by the landowner ensuring excavated gravel shall remain stockpiled on the site after mining. Excess gravel may be used as backfill in previously mined areas prior to reclamation. No explosives will be used in conjunction with mining and reclamation operations. No saleable secondary commodities or incidental products will be mined in this operation.

2. Mining Timetable

The life of the mine is anticipated to not extend beyond ten years from the start of mining. Exact timing will be based on initial recovery values and market conditions. Mining is planned to begin in the summer of 2020.

3. Mine Facilities and Operation

It is extremely unlikely that any toxic or acid-producing materials will be encountered during the mining operation as the site was historically mined for gravel and placer gold and more recently was used as rangeland. However, in the event that such materials are encountered, they will be covered with overburden and topsoil from onsite stockpiles to the same depths outlined in the reclamation plan and no more mining will occur in the area. No blasting or explosives will occur/be used during mining nor on site.

Fuel will be brought to the site by a mobile fueling truck and will be housed in the cattle tanks detailed below. No permanent structures will be built within the permit area as part of this operation. Water will be used to control dust on the excavation and disturbed areas of the site via hose. Water for this operation will be pumped from the Dolores River which is under

appropriated. Water will be pumped from the area southwest of the R 13 Road within the County Right-of-Way on the east side of the Dolores River. A hose will run along the ground surface, through a 48" culvert under State Highway 141, and onto the site. The pump hose will enter the site at the site entrance. A totalizing flow meter will be used to track all water pulled from the river and to be reportable to the Water Commissioner. It is estimated that the operation will consume < 0.5 acre-feet of water per day for dust suppression and for use in the processing plant.

Gold processing equipment is portable; however, the processing area will remain in the northeast corner of the site. An APEN will not be required as the site will not mine >70,000 tons of material per year and is therefore exempt. Portable mining equipment such as loaders, trucks and excavators will be serviced on an as-needed basis onsite. Upon reclamation, all portable equipment will be removed from the site. A summary of equipment and related tanks that may exist on site at any given time is listed below.

- Overflow resource stockpiling
- Tailings pond serving as a stormwater settling pond
- 500-gallon diesel fuel tank in secondary containment (110% of tank capacity)
- Off camper (includes hygiene facilities)

The following list is the best estimate of equipment that will be used onsite throughout the mine life:

- 1 Front end loaders
- 1 Backhoe
- 1 Dump truck
- Portable gold-bearing gravel wash plant and gold processing equipment

All fuel tanks will have secondary containment. The current 500-gallon tank is within a steel cattle tank. Fuel tanks will be located in the processing area; see Map E-2. Several hazardous materials may be stored and used onsite throughout the project. These materials include products that are associated with diesel motors.

Unimproved on-site roads may change as mining progresses throughout the site; however, a main ~10 foot-wide northeast-southwest trending road will be kept in place at the landowner's request. See the enclosed affidavit, following Exhibit C, signed by the landowner ensuring onsite mining roads will remain on the site after mining. Support equipment will come to the site on an as-needed basis. No night mining activity is scheduled for the operation; however, portable lighting may be used within the pit from time to time. Portable lights will only be used for the purpose of equipment maintenance activities within permitted hours in the winter months while the days are shorter. All mining structures on site are shown on Map E-2.

The Operator commits to clearly marking the permit boundary on all sides. No problems are expected with vandalism.

Stormwater drainage on the onsite disturbed areas will be managed to direct all stormwater to either the active working area or the processing area tailings ponds by berms and ditches that border all disturbed areas of the site. No chemicals, including flocculant, will be used in the tailings pond and no impact to groundwater will occur from the use of the tailings pond. Surface stormwater in the immediate area surrounding the tailings pond may drain into eh pond but the majority of surface stormwater will flow to other areas of the site, as shown on Map E-2, or will infiltrate into the porous ground surface within 72 hours.

No formal sump will be located on site; however, the nature of mining leads to a depressed mined basin surrounded by site perimeter and pit specific isolation berms. Therefore, no stormwater or process water will leave the site and all runoff from a 100 year 24-hour rain event will be trapped on site and waters will infiltrate the mine floor within 72 hours. Onsite drainages will not be directed off any highwall into the mine. Excepting the highwall, slopes in the area of drainages will be maintained at or shallower than 3H:1V. As no stormwater will leave or is anticipated to leave the site, a CDPHE Storm Water Discharge permit is not required.

4. Topsoil and Overburden Handling

Topsoil will be salvaged from the mined area and placed in a stockpile in the northwest extent of the site. Piles are shown at the perimeter of the permit boundary on Map E-2, the maximum disturbance limit. Topsoil stockpiles will be created by stripping the minimum required disturbed

area for that phase of mining. Topsoil is expected to range from 0-4 inches. The topsoil berm will be used during reclamation, will be constructed to 2H:1V slopes or shallower, and will be seeded within 180 days of pile establishment with native rangeland grasses to stabilize the topsoil stockpile until reclamation is in process. Variably thick overburden will be handled in the same fashion throughout the mine's life as topsoil detailed above.

5. Schedule of Operations

Mining and processing will be conducted with portable equipment at various times of the year. Mining operations will be dictated by initial recovery values and market conditions. Mining may take place 7 days per week. Night mining will not occur, although minor truck activity or repairs may occur after daylight hours.

6. Montrose County Impacts and Environmental Impacts

The impacts to Montrose County will be limited. No dust is expected from the operation as the active mine area and roads are watered as needed. In the event that airborne dust is observable, immediate action to mitigate dust via roadway wetting and a slowdown of production will be initiated and sustained until airborne dust is mitigated. Water used is pumped from the Dolores River and applied on an as-needed basis to control dust within the mine area.

Noise and traffic will not significantly increase as the result of mining but will be mitigated to produce the lowest possible impact while continuing to operate. Noise will be limited to gold-bearing gravel processing and equipment backup alarms. As processing will be ongoing, noise from washing activities may exist; however, processing plant noise will only occur during hours of operation. No residential use properties are within 500 feet of the pit.

On-site Road Affidavit

Bancroft Placer Mine on Weimer Ranches LLLP land

I hereby certify the on-site mining road used by Gregg Morrill may and shall remain intact post-mining the Bancroft Placer Mine. It is my wish as the landowner to utilize the road in post-mining operations on Weimer Ranches LLLP lands.

Zone of Weimer Weimer Ranches LLP
Signature (Weimer Ranches LLLP)

Gregg Morrill
Signature (Gregg Morrill)

Zone of Weimer
Signer's Position in Company

Owner
Signer's Position in Company

Date: 6-21-2020

Post-mining Gravel Affidavit

Bancroft Placer Mine on Weimer Ranches LLLP land

I hereby certify the processed gravel shall be stockpiled on-site following mining by Gregg Morrill may and shall remain intact post-mining the Bancroft Placer Mine. It is my wish as the landowner to utilize the gravel in post-mining operations on Weimer Ranches LLLP lands.

Gene Weimer Weimer Ranches LLP
Signature (Weimer Ranches LLLP)

Gregg Morrill
Signature (Gregg Morrill)

Gene Weimer
Signer's Position in Company

Owner
Signer's Position in Company

Date: 6-21-2020

EXHIBIT D RECLAMATION PLAN

1. General Reclamation Plan

The maximum disturbed area to be reclaimed under this permit is 2.5 acres out of the 9.4-acre permit area. Reclamation plans can be viewed on Map E-3. Post-mining land use will return the entire disturbed site back to dry rangeland with native grasses on all slopes and is consistent with existing land use in the area. Areas designated as gravel storage areas by the landowner will remain as such and will not be reclaimed. All slopes will be reclaimed to 3H:1V or shallower. As described in the mining plan, reclamation will occur concurrently with mining.

2. Topsoil and Overburden Replacement

Overburden throughout the site is variably thick and recovered overburden from each new mining area will be used to backfill, as needed, the previous mining area. Topsoil on site is anticipated to range from 0-4 inches thick. During mining, all excess topsoil and overburden will be stored in stockpiles in the northwest extent of the site as shown on Map E-2. Topsoil will be replaced over each mined area after the next mining area is stripped of its topsoil and overburden. Topsoil thickness upon replacement is expected to be 2 inches thick, the pre-mine average depth for the site.

3. Haul Roads and Access

One access road will connect the site to State Highway 141. County R 13 Road will be used to access the water pump. Onsite haul roads will be flexible as mining moves throughout the site. See the enclosed affidavit, following Exhibit C, signed by the landowner ensuring onsite mining roads will remain on the site after mining. See Map E-3 for the layout of roads after mining and reclamation.

4. Reclamation Timetable

Reclamation earthworks will occur as mining progresses throughout the site. Reclamation seeding will occur after each previously mined phase is retopsoiled.

5. Revegetation Plan

Each mine area will be reseeded once that area is retopsoiled. Prior to seeding, the soil may be disked to loosen surficial soils. Due to the mild grade, seed can be drilled in most areas, but broadcast seeding will be utilized where reclaimed perimeter slopes do not allow drilling. Broadcast seeding will be done at double the drill rate.

The seed mix listed below will be used to revegetate the site with a native grass mix on all surfaces. This seed mix was recently reviewed and accepted in December 2020 by the NRCS to revegetation of dry rangeland areas. Certified weed free mulch may be crimped into the surface at 2000 lbs. per acre. Fertilizer may be added as determined by a soil test at the time of seeding. Heavy furrows will be left in the tilled topsoil to provide moisture concentration and shade areas in order to promote better conditions for successful vegetation establishment. Seeding will take place during the fall following retopsoiling of slopes. Slopes will be regraded, and retopsoiled as soon as they are able to be reclaimed and as additional mining areas become active.

5.1 Native Grass Seed Mix

Species	**Pounds of pure live seed per acre (drilled)**
Blue grama	1.8
Western wheatgrass	9.6
Sideoats grama	1.8
Needle and thread	2.2
Indian ricegrass	1.2
Little bluestem	0.7
Galleta grass	0.4
Green needlegrass	1.0
Total	**18.7**

6. Post-Reclamation Site Drainage

Map E-3 shows arrows indicating the approximate direction of drainage throughout the site. Final reclamation surfaces will be graded such that onsite drainage waters flow in a similar path to the original pre-mining path; however, the majority of surface water will infiltrate the porous

and dry landscape within 72 hours. All water originating from outside the mined and reclaimed pit will continue to be diverted from entering the permit area by the drainage ditches which will remain in reclamation.

7. Weed Control

Measures will be employed for the control of any noxious weed species and the objective is to control undesirable plants on the Bancroft Placer Mine site. Plants identified through the Colorado Noxious Weed Act (C.R.S. 35-5.5) and the Montrose County Noxious Weed List as undesirable and designated for management within the County will be removed. Plants identified as noxious weeds will be managed by control measures. A Weed Control Plan will be utilized as follows:

1) Each April, a weed survey will be taken of the permit area.

2) If any weedy patches or noxious plants are identified, chemicals approved for use by the weed control staff of Montrose County will be sprayed by backpack sprayer or 4-wheeler.

3) After reclamation, weed surveys and spraying will continue until perennial cover and production of the site meets DRMS requirements and bond release is obtained.

The Division and Montrose County staff will be consulted regarding any weed infestation areas and control measures to be implemented prior to their initiation. The plan does not contemplate total weed removal on the property. Past experience shows that some initial weed cover in the first year following retopsoiling is beneficial to reclamation efforts in rangeland sites. Weeds provide shade for new grasses, are a means of holding snow on the seedbed longer, and protect seedlings from wind and water erosion until the planted species firmly take hold.

All areas of the mining operation will be monitored closely throughout the year allowing the Operator to determine if any additional weeds become present. If any new weed species are found, Montrose County and the Division will be consulted to formulate the best plan to mitigate the new infestation.

8. Revegetation Success Criteria

Areas will be deemed adequate when vegetation is established to control erosion and noxious weeds are not present in any significant amounts and all of the conditions of Rule 3.1.10 are met.

9. Monitoring Reclamation Success

Monitoring reclamation on an ongoing basis will allow minor revisions to assure efficient and successful reclamation. The Operator plans to use the local NRCS office to assist in determining the ability of the reclaimed land to control erosion. If minor changes or modifications are needed to the seeding and reclamation plan, revision plans will be submitted to the Division, as required. It is hoped that the Division will provide assistance in evaluating the success of ongoing reclamation processes. All areas disturbed and reclaimed and any other important items regarding reclamation will be submitted in the required annual reports to the Division.

10. Reclamation Bond

Reclamation activities during the worst-case scenario include highwall knock-down and grading the active mining area, topsoiling and seeding the active working areas (mining and processing), and seeding the tailings pond once the area is completely dried out. At the landowner's request, the gravel stockpiling area and site roads will remain un-reclaimed. Highwall knock-down will occur to a maximum 15-foot depth over 100 feet of highwall in the active mining area and will result in ~1,250 CY of material movement and grading. ~670 CY of topsoil applied at a 2-inch depth will be laid across the maximum 2.5 acres of reclaimable disturbed area. Reclaimable disturbed area includes open mining areas, the processing area, and tailings pond. Fertilizer and weed-free mulch may be applied, as needed.

The bond for the site will be based upon $2,500 per acre. As the site will have two acres open to mining plus an additional 0.5 acres of processing and tailings area, the site will have 2.5 acres of disturbance at any given time. Additional acreage may be disturbed but, at the landowner's request, will not be reclaimed and is not included in the disturbance area used to calculate a bond. Since a fraction of an acre is counted a whole acre by the Division, the bond will be 3.0 acres x $2,500.00 per acre = $7,500.00.

EXHIBIT E MAPS

All maps can be found in Appendix 2.

Map E-1 Current Conditions Map

Map E-2 Mine Plan Map

Map E-3 Reclamation Plan Map

EXHIBIT F OTHER PERMITS REQUIRED

The following permits are necessary for the full operation of the Bancroft Placer Mine:

1. CDOT Access Permit – as needed.

EXHIBIT G RIGHT OF ENTRY

The surface rights are owned by Weimer Ranches LLLP and mineral rights are split by Weimer Ranches LLLP and Della Long. A lease to mine and sell the gold resource is secured Gregg Morrill who is also the Operator.

MINING LEASE

This Mining Lease is made effective as of the 15th day of March, 2020, between Zeni Weimer LLP Weimer Ranches whose address is 29489 Rd 2700 Box 590 Nucla, Co 81424 (the "Lessor") and **GREGG MORRILL**, whose address is 12207 Road 29.4, Dolores, Colorado 81323 (the "Lessee").

WITNESSETH:

In consideration of the sum of [redacted] in hand paid to Lessor by Lessee, the receipt and sufficiency of which is hereby acknowledged, and of the covenants and promises hereinafter expressed, Lessor and Lessee agree as follows:

1. **DEFINITIONS** The following terms shall have the following meanings:

1.1. The term "Property" shall mean the Bancroft Placer Mining Claim M.S. 2243, the Index Placer Mining Claim M.S. 2246 and the Little Louise Placer Mining Claim M.S 2247 in Montrose County, State of Colorado.

1.2. The term "Leased Substances" shall mean all gold, silver, platinum, palladium and other precious minerals in, upon or under the Property.

1.3. The terms "Primary Term," "Extended Term" and "Production Royalty" shall have the respective meanings set forth below.

2. **GRANT** Lessor herby grants, demises, leases and lets exclusively unto Lessee, his successors and assigns, the Property, together with the right to explore for and mine Leased Substances by any method, and to process or treat by any means, sell or otherwise dispose of Leased Substances, subject to the Production Royalty obligations set out in Section 4, below.

3. **TERM** This Lease is granted for a "Primary Term" of two (2) years from the effective date hereof, and for a "Extended Term" lasting for so long thereafter as Lessee is conducting continuous exploration, development, mining, processing, concentrating or beneficiating operations on a deposit of Leased Substances. During the Extended Term, operations shall be deemed conducted on a continuous basis unless and until a period of three hundred (300) consecutive days elapses during which no exploration, development, mining, processing, concentrating or beneficiating operations are conducted on a deposit of minerals, which includes Leased Substances and which lies at least in part within the Property, but excluding any period of Force Majeure as hereinafter provided.

4. **PRODUCTION ROYALTY** Lessee shall pay to Lessor, on a semi-annual basis, a "Production Royalty" of [redacted] of the gross value of the Leased Substances mined, produced, derived and sold or taken by Lessee from any portion of the Property. Said semi-annual periods shall be the months of January through June and the months of July through December of each year during the Primary Term or any Extended Term hereof. Payment of Production Royalty to Lessor will be made, by Lessee's check, within thirty (30) days after the end of each six month period. The gross value of Leased Substances will be determined by multiplying the weight, in ounces, of each salable mineral constituent of Leased Substances produced during each six month period times the average spot market price for that mineral constituent, as reported by a recognized exchange, for the same time period, with no deductions taken. Each such payment will be accompanied by an explanation of the calculation of the Production Royalty due, together with any available supporting documentation.

4.1. Books and Records. Lessee shall maintain and keep books and records and accounts to reflect the mining, storage and shipment of all Leased Substances and of all calculations relative to Production

Royalty hereunder. Said records will be retained by Lessee for a period of at least three (3) years. Said records may be inspected by Lessor or by a duly authorized representative of Lessor at any reasonable time.

4.2. Inspection Rights. Lessor, or its duly authorized agent, shall have the right to enter upon the Property and to go through any of the workings of Lessee thereon at her own cost, risk and expense in order to examine, inspect or survey the Property and any of Lessee's operations thereon.

5. MANNER OF MINING

5.1. Compliance With Laws and Regulations. All work performed by Lessee hereunder shall be in compliance with all applicable environmental, reclamation, safety, health and other requirements of federal, state and local governments, and shall be undertaken in accordance with good mining practices. Lessee shall apply for and maintain at all times Worker's Compensation Insurance pursuant to the laws of the State of Colorado covering its employees working on the Property, and shall comply in all respects with all state and federal laws pertaining to the employment of persons in mining operations.

5.2. Lessee's Discretion. The timing, nature, manner and extent of any exploration, development or mining operations on the Property shall be within the sole discretion of Lessee, and Lessee shall have complete and absolute control with respect to the manner and nature of work performed and with respect to whether work, if any, is undertaken. Lessee may use and employ such methods of mining as he may desire or find most profitable. Lessee shall not be required to mine, preserve or protect in his mining operations any Leased Substances which, under good mining practices, cannot be mined, shipped, and recovered at a reasonable profit to Lessee at the time encountered.

5.3. Indemnification. Lessee shall pay when due all claims for work done, services rendered or materials furnished to the Property. Lessee shall defend at its own expense any suits or claims resulting from its operations under this Lease, and shall keep the Property free from any liens. In the event a lien is placed on the Property directly or indirectly arising out of Lessee's operations hereunder, Lessee shall cause such lien to be removed within sixty (60) days. In the event Lessee disputes any such lien and it is not removed within sixty (60) days, Lessee shall post a bond assuring payment in full of the amount in dispute in the event the claimant is successful. Lessee shall protect, defend, indemnify and hold harmless Lessor from any liability or expenses asserted or incurred by Lessee as a result of any accident or injury arising out of Lessee's operations on the Property, except for any accidents or injuries caused by the sole negligence of Lessor.

6. WARRANTY AND LESSER INTEREST Lessor does not own any interest in the surface of the Property. Lessor hereby warrants title to her undivided interest in the Leased Substances in, upon or under the Property and the quiet and peaceful possession of the Leased Substances and will do everything lawfully within her power to defend title against all persons who may claim an interest in the same. Lessor agrees that Lessee, at its option, may pay and discharge, if overdue, any taxes, mortgages or other liens existing, levied or assessed on or against the Property and that upon such payment Lessee may, at Lessee's option, be subrogated to the rights of the holder or holders whom he has paid, or may reimburse himself for such expenditures out of any payment thereafter due Lessor under this Lease and otherwise accruing to Lessor.

6.1 Lesser Interest. If Lessor owns a lesser interest in the Property than the entire and undivided fee simple mineral estate therein, then the Production Royalties herein provided to Lessor shall be determined based on the proportion which Lessor's interest bears to the whole and undivided fee.

6.2. Title Defects. If title to the Property or any part thereof, in the opinion of Lessee's counsel, is defective, Lessor shall cooperate fully with Lessee in curing any such defects promptly, including executing all documents and doing any and all things which may be reasonably necessary or desirable to assist in eliminating any defect in Lessor's title.

6.3. Further Assurances. Lessor, at the request of Lessee, shall execute and deliver to Lessee any instruments, agreements, documents, permits or applications, or any other papers reasonably required by Lessee, and Lessor shall do such other acts as may be reasonably requested by Lessee, all to effect the purposes of this Lease.

7. TAXES

7.1 Taxes on Lessee's Operations. Lessee shall pay when due all severance, production or similar taxes assessed or levied upon Leased Substances mined from the Property by Lessee during the term of this Lease and shall also pay when due all personal property taxes assessed and levied on Lessee's equipment, structures or improvements on the Property.

7.2 Real Property Taxes. Lessor shall pay when due all real property taxes, special improvement district assessments, or other governmental levies assessed against the Property. Beginning with such taxes due in 2021, each year during the Primary Term and during any Extended Term hereof Lessee will reimburse Lessor for the payment of such taxes. Specifically, each year Lessor will provide the Lessee with copies of Property Tax Statements and/or related documents concerning such taxes, assessments and levies; and, within thirty (30) days of receipt Lessee will pay to Lessor the full amount of such taxes, assessments and levies.

7.3 Income Taxes. Lessor and Lessee shall be responsible for state and federal income taxes resulting from their respective portions of the income resulting from this transaction.

8. FORCE MAJEURE Lessee shall not be deemed in default in the performance of operations hereunder during any period in which such performance is prevented by any cause reasonably beyond Lessee's control, each of which cause is called "Force Majeure". Force Majeure shall include, without limitation, fire, floods, storms, other damage from the elements, strikes, labor disputes, inability to obtain competent workmen, riots, unavailability of transportation or necessary equipment, action of governmental authorities, failure to receive required governmental approvals, inability to obtain water for Lessee's operations, lack of access, litigation, acts of God, and acts of the public enemy. The term of this Agreement shall be extended for a period equal to the period of Force Majeure. All such periods shall be deemed to begin at the time Lessee is prevented from performing its operations hereunder by reasons of Force Majeure. Lessee shall promptly advise Lessor of the occurrence of any event of Force Majeure, and thereafter keep Lessor advised of all efforts by Lessee to deal with such event. Nothing in this Section 8 shall limit in any way Lessee's obligation to make any payment of Production Royalty due under Section 4, above.

9. ASSIGNMENT The rights and obligations of Lessor and Lessee hereunder may be assigned, in whole or in part, without the consent of the other party and, in such event, the provisions hereof shall extend to and be binding upon the assigning party's successors and assigns. No change or division in the ownership of the Property, or in the ownership of the Leased Substances, however accomplished, shall operate to enlarge the obligations or to diminish the rights of Lessee hereunder.

9.1. Notice of Assignment. Written notice of any such assignment shall be given to the other party within thirty (30) days. No such change or division in the ownership of the Property and Production Royalties hereunder shall be binding upon Lessee for any purpose until the person acquiring any interest has furnished Lessee with original or certified copies of the recorded instrument or instruments which evidence such assignment and transfer of title.

10. TERMINATION

10.1. Default. In the event Lessee fails to perform or comply with any of the terms, provisions or

conditions of this Lease, such default shall not cause a forfeiture, termination or reversion of the leasehold estate created hereby. In such event Lessor shall give Lessee written notice specifying the default giving Lessee thirty (30) days to respond to such default. In the event that within thirty (30) days of such notice Lessee has not commenced activities which will cure the noticed default if pursued diligently, then Lessor may terminate this Lease by written notice to Lessee. Other than such a termination, Lessor's sole remedy for any default by Lessee shall be the recovery from Lessee of actual compensatory damages, if any.

10.2. Partial Release. Lessee may surrender this Lease or release all or any portion of the Property by giving Lessor thirty (30) days written notice thereof at any time and from time to time. Any such surrender shall terminate all obligations of Lessee hereunder with respect to the acreage terminated, except for fixed Production Royalty or reclamation obligations which accrued prior to the effective date of the surrender. Upon any such surrender, or on the expiration or other termination of this Lease, Lessee will promptly prepare, execute and record in the office of the Montrose County Clerk and Recorder a Release which complies with C.R.S. section 38-42-104.

10.3. Pre-Existing Obligations. The termination or expiration of this Lease shall not relieve Lessee of any obligation to perform any obligations actually incurred as of the effective date of such termination or expiration, such as the payment of any outstanding Production Royalties owed for any previous periods or the performance of any additional reclamation work which may be required by law. With respect to the latter requirement, after the termination or expiration of this Lease, Lessee shall have continued access to the Property for the limited purpose of performing any such required reclamation work until such work has been satisfactorily completed.

11. MISCELLANEOUS

11.1. Entire Agreement. This Lease is the entire agreement between the parties, and no modification hereof or additions hereto shall be effective unless in writing and agreed to by the parties hereto. All negotiations and agreements and earlier drafts, if any, relative to the matters contained in this Lease are merged herein. Lessor and Lessee acknowledge and warrant that no representations, covenants or other matters inducing or regarding the execution of this Lease exist other than those expressly set out in this Lease.

11.2. Titles. The titles to the respective sections hereof shall not be deemed to be part of this Lease but shall be regarded as having been used only for the convenience of the parties.

11.3. Colorado Law. This Lease shall be construed in accordance with and governed by the laws of the State of Colorado.

11.4. Severability. If any clause or provision of this Lease is illegal, invalid or unenforceable under the applicable present or future laws, then it is the intention of the parties that the remainder of this Lease shall not be affected, and that in lieu of such illegal, invalid or unenforceable clause or provision there shall be added as a part hereof a substitute clause or provision as similar in operation as may be possible to any such unenforceable clause or provision.

11.5. Attorney's Fees. In any action brought to enforce the rights or obligations of either party under this Lease, the prevailing party shall be entitled to recover all of its reasonable costs and expenses, including attorney's fees, incurred in prosecuting or defending such action.

11.6. Confidential Matters. All data and information obtained or developed by Lessee relating to the Property shall be the sole property of Lessee, and Lessor shall not have access to any such data or information, except as otherwise provided herein.

11.7. Execution. This Agreement may be executed in one or more counterparts, each of which shall be as fully binding on the signatory parties as if executed by all parties, and all of which shall constitute a single document.

11.8. Relationship of the Parties. The relationship of the parties hereto is contractual only, and shall not be interpreted as creating or implying any form of partnership, mining partnership, joint venture or similar business arrangement between the parties, and shall not result in either party being deemed to be an agent of the other. Lessee has acquired or may hereafter acquire interests in other lands and minerals in the vicinity of the Property or may conduct operations in the vicinity of the Property. Nothing contained in this Lease shall give Lessor any interest in such other lands, minerals or operations.

11.9. Recording. Lessor will not record a copy of this Lease in the real property records maintained by the Montrose County Clerk and Recorder. If requested by Lessee, the parties shall execute a memorandum or short form of this Lease, which document shall be in a form sufficient to constitute constructive notice to third parties but which shall not contain the amounts or rates of royalty, or other terms of this Lease which Lessee may elect not to disclose of record. The execution and recording of such memorandum or short form shall not limit, decrease or increase, or in any manner affect, any of the terms, rights, interests or obligations of the parties under this Lease.

11.10. Notices. All notices required or permitted to be given hereunder shall be deemed properly given upon delivering the same to the party to be notified by prepaid certified mail, return receipt requested, addressed to the party to be notified at the address set forth above; provided, however, that all routine reports and all payments due hereunder may be delivered by ordinary first class United States mail, with postage prepaid and addressed to the Lessor. Either party may change its address for the purpose of notices or other communications hereunder by furnishing written notice thereof to the other party.

IN WITNESS WHEREOF, the parties have executed this Mining Lease effective as of the day and year first above written.

LESSOR: Jane L Werner Werner Ranches LLLP

LESSEE: Thomas Morrill

[Acknowledgements are on the following page 6]

ACKNOWLEDGEMENT

STATE OF COLORADO)
) ss.
COUNTY OF Montrose)

Before me the undersigned authority personally appeared Della C. Long, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 2nd day of ~~March,~~ July 2020.

My commission expires 8/17/2021

DARLA JOSEPH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20054002724
MY COMMISSION EXPIRES AUGUST 17, 2021

Darla Joseph
Notary Public

ACKNOWLEDGEMENT

STATE OF COLORADO)
) ss.
COUNTY OF Montrose)

Before me the undersigned authority personally appeared Gregg Morrill, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 2nd day of ~~March,~~ July 2020.

My commission expires 8/17/2021

Darla Joseph
Notary Public

DARLA JOSEPH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20054002724
MY COMMISSION EXPIRES AUGUST 17, 2021

MINING LEASE

This Mining Lease is made effective as of the 15th day of March, 2020, between **DELLA C. LONG,** whose address is 9280 Yarrow Street, #4204, Westminster, Colorado 80021-8679 (the "Lessor") and **GREGG MORRILL**, whose address is 12207 Road 29.4, Dolores, Colorado 81323 (the "Lessee").

WITNESSETH:

In consideration of [redacted] in hand paid to Lessor by Lessee, the receipt and sufficiency of which is hereby acknowledged, and of the covenants and promises hereinafter expressed, Lessor and Lessee agree as follows:

1. **DEFINITIONS** The following terms shall have the following meanings:

1.1. The term "Property" shall mean the Bancroft Placer Mining Claim M.S. 2243, the Index Placer Mining Claim M.S. 2246 and the Little Louise Placer Mining Claim M.S 2247 in Montrose County, State of Colorado.

1.2. The term "Leased Substances" shall mean all gold, silver, platinum, palladium and other precious minerals in, upon or under the Property.

1.3. The terms "Primary Term," "Extended Term" and "Production Royalty" shall have the respective meanings set forth below.

2. **GRANT** Lessor herby grants, demises, leases and lets exclusively unto Lessee, his successors and assigns, the Property, together with the right to explore for and mine Leased Substances by any method, and to process or treat by any means, sell or otherwise dispose of Leased Substances, subject to the Production Royalty obligations set out in Section 4, below.

3. **TERM** This Lease is granted for a "Primary Term" of two (2) years from the effective date hereof, and for a "Extended Term" lasting for so long thereafter as Lessee is conducting continuous exploration, development, mining, processing, concentrating or beneficiating operations on a deposit of Leased Substances. During the Extended Term, operations shall be deemed conducted on a continuous basis unless and until a period of three hundred (300) consecutive days elapses during which no exploration, development, mining, processing, concentrating or beneficiating operations are conducted on a deposit of minerals, which includes Leased Substances and which lies at least in part within the Property, but excluding any period of Force Majeure as hereinafter provided.

4. **PRODUCTION ROYALTY** Lessee shall pay to Lessor, on a semi-annual basis, a "Production Royalty" of [redacted] of the gross value of the Leased Substances mined, produced, derived and sold or taken by Lessee from any portion of the Property. Said semi-annual periods shall be the months of January through June and the months of July through December of each year during the Primary Term or any Extended Term hereof. Payment of Production Royalty to Lessor will be made, by Lessee's check, within thirty (30) days after the end of each six month period. The gross value of Leased Substances will be determined by multiplying the weight, in ounces, of each salable mineral constituent of Leased Substances produced during each six month period times the average spot market price for that mineral constituent, as reported by a recognized exchange, for the same time period, with no deductions taken. Each such payment will be accompanied by an explanation of the calculation of the Production Royalty due, together with any available supporting documentation.

4.1. Books and Records. Lessee shall maintain and keep books and records and accounts to reflect the mining, storage and shipment of all Leased Substances and of all calculations relative to Production

Royalty hereunder. Said records will be retained by Lessee for a period of at least three (3) years. Said records may be inspected by Lessor or by a duly authorized representative of Lessor at any reasonable time.

4.2. Inspection Rights. Lessor, or its duly authorized agent, shall have the right to enter upon the Property and to go through any of the workings of Lessee thereon at her own cost, risk and expense in order to examine, inspect or survey the Property and any of Lessee's operations thereon.

5. MANNER OF MINING

5.1. Compliance With Laws and Regulations. All work performed by Lessee hereunder shall be in compliance with all applicable environmental, reclamation, safety, health and other requirements of federal, state and local governments, and shall be undertaken in accordance with good mining practices. Lessee shall apply for and maintain at all times Worker's Compensation Insurance pursuant to the laws of the State of Colorado covering its employees working on the Property, and shall comply in all respects with all state and federal laws pertaining to the employment of persons in mining operations.

5.2. Lessee's Discretion. The timing, nature, manner and extent of any exploration, development or mining operations on the Property shall be within the sole discretion of Lessee, and Lessee shall have complete and absolute control with respect to the manner and nature of work performed and with respect to whether work, if any, is undertaken. Lessee may use and employ such methods of mining as he may desire or find most profitable. Lessee shall not be required to mine, preserve or protect in his mining operations any Leased Substances which, under good mining practices, cannot be mined, shipped, and recovered at a reasonable profit to Lessee at the time encountered.

5.3. Indemnification. Lessee shall pay when due all claims for work done, services rendered or materials furnished to the Property. Lessee shall defend at its own expense any suits or claims resulting from its operations under this Lease, and shall keep the Property free from any liens. In the event a lien is placed on the Property directly or indirectly arising out of Lessee's operations hereunder, Lessee shall cause such lien to be removed within sixty (60) days. In the event Lessee disputes any such lien and it is not removed within sixty (60) days, Lessee shall post a bond assuring payment in full of the amount in dispute in the event the claimant is successful. Lessee shall protect, defend, indemnify and hold harmless Lessor from any liability or expenses asserted or incurred by Lessee as a result of any accident or injury arising out of Lessee's operations on the Property, except for any accidents or injuries caused by the sole negligence of Lessor.

6. WARRANTY AND LESSER INTEREST Lessor does not own any interest in the surface of the Property. Lessor hereby warrants title to her undivided interest in the Leased Substances in, upon or under the Property and the quiet and peaceful possession of the Leased Substances and will do everything lawfully within her power to defend title against all persons who may claim an interest in the same. Lessor agrees that Lessee, at its option, may pay and discharge, if overdue, any taxes, mortgages or other liens existing, levied or assessed on or against the Property and that upon such payment Lessee may, at Lessee's option, be subrogated to the rights of the holder or holders whom he has paid, or may reimburse himself for such expenditures out of any payment thereafter due Lessor under this Lease and otherwise accruing to Lessor.

6.1 Lesser Interest. If Lessor owns a lesser interest in the Property than the entire and undivided fee simple mineral estate therein, then the Production Royalties herein provided to Lessor shall be determined based on the proportion which Lessor's interest bears to the whole and undivided fee.

6.2. Title Defects. If title to the Property or any part thereof, in the opinion of Lessee's counsel, is defective, Lessor shall cooperate fully with Lessee in curing any such defects promptly, including executing all documents and doing any and all things which may be reasonably necessary or desirable to assist in eliminating any defect in Lessor's title.

6.3. Further Assurances. Lessor, at the request of Lessee, shall execute and deliver to Lessee any instruments, agreements, documents, permits or applications, or any other papers reasonably required by Lessee, and Lessor shall do such other acts as may be reasonably requested by Lessee, all to effect the purposes of this Lease.

7. TAXES

7.1 Taxes on Lessee's Operations. Lessee shall pay when due all severance, production or similar taxes assessed or levied upon Leased Substances mined from the Property by Lessee during the term of this Lease and shall also pay when due all personal property taxes assessed and levied on Lessee's equipment, structures or improvements on the Property.

7.2 Real Property Taxes. Lessor shall pay when due all real property taxes, special improvement district assessments, or other governmental levies assessed against the Property. Beginning with such taxes due in 2021, each year during the Primary Term and during any Extended Term hereof Lessee will reimburse Lessor for the payment of such taxes. Specifically, each year Lessor will provide the Lessee with copies of Property Tax Statements and/or related documents concerning such taxes, assessments and levies; and, within thirty (30) days of receipt Lessee will pay to Lessor the full amount of such taxes, assessments and levies.

7.3 Income Taxes. Lessor and Lessee shall be responsible for state and federal income taxes resulting from their respective portions of the income resulting from this transaction.

8. FORCE MAJEURE Lessee shall not be deemed in default in the performance of operations hereunder during any period in which such performance is prevented by any cause reasonably beyond Lessee's control, each of which cause is called "Force Majeure". Force Majeure shall include, without limitation, fire, floods, storms, other damage from the elements, strikes, labor disputes, inability to obtain competent workmen, riots, unavailability of transportation or necessary equipment, action of governmental authorities, failure to receive required governmental approvals, inability to obtain water for Lessee's operations, lack of access, litigation, acts of God, and acts of the public enemy. The term of this Agreement shall be extended for a period equal to the period of Force Majeure. All such periods shall be deemed to begin at the time Lessee is prevented from performing its operations hereunder by reasons of Force Majeure. Lessee shall promptly advise Lessor of the occurrence of any event of Force Majeure, and thereafter keep Lessor advised of all efforts by Lessee to deal with such event. Nothing in this Section 8 shall limit in any way Lessee's obligation to make any payment of Production Royalty due under Section 4, above.

9. ASSIGNMENT The rights and obligations of Lessor and Lessee hereunder may be assigned, in whole or in part, without the consent of the other party and, in such event, the provisions hereof shall extend to and be binding upon the assigning party's successors and assigns. No change or division in the ownership of the Property, or in the ownership of the Leased Substances, however accomplished, shall operate to enlarge the obligations or to diminish the rights of Lessee hereunder.

9.1. Notice of Assignment. Written notice of any such assignment shall be given to the other party within thirty (30) days. No such change or division in the ownership of the Property and Production Royalties hereunder shall be binding upon Lessee for any purpose until the person acquiring any interest has furnished Lessee with original or certified copies of the recorded instrument or instruments which evidence such assignment and transfer of title.

10. TERMINATION

10.1. Default. In the event Lessee fails to perform or comply with any of the terms, provisions or

conditions of this Lease, such default shall not cause a forfeiture, termination or reversion of the leasehold estate created hereby. In such event Lessor shall give Lessee written notice specifying the default giving Lessee thirty (30) days to respond to such default. In the event that within thirty (30) days of such notice Lessee has not commenced activities which will cure the noticed default if pursued diligently, then Lessor may terminate this Lease by written notice to Lessee. Other than such a termination, Lessor's sole remedy for any default by Lessee shall be the recovery from Lessee of actual compensatory damages, if any.

10.2. Partial Release. Lessee may surrender this Lease or release all or any portion of the Property by giving Lessor thirty (30) days written notice thereof at any time and from time to time. Any such surrender shall terminate all obligations of Lessee hereunder with respect to the acreage terminated, except for fixed Production Royalty or reclamation obligations which accrued prior to the effective date of the surrender. Upon any such surrender, or on the expiration or other termination of this Lease, Lessee will promptly prepare, execute and record in the office of the Montrose County Clerk and Recorder a Release which complies with C.R.S. section 38-42-104.

10.3. Pre-Existing Obligations. The termination or expiration of this Lease shall not relieve Lessee of any obligation to perform any obligations actually incurred as of the effective date of such termination or expiration, such as the payment of any outstanding Production Royalties owed for any previous periods or the performance of any additional reclamation work which may be required by law. With respect to the latter requirement, after the termination or expiration of this Lease, Lessee shall have continued access to the Property for the limited purpose of performing any such required reclamation work until such work has been satisfactorily completed.

11. MISCELLANEOUS

11.1. Entire Agreement. This Lease is the entire agreement between the parties, and no modification hereof or additions hereto shall be effective unless in writing and agreed to by the parties hereto. All negotiations and agreements and earlier drafts, if any, relative to the matters contained in this Lease are merged herein. Lessor and Lessee acknowledge and warrant that no representations, covenants or other matters inducing or regarding the execution of this Lease exist other than those expressly set out in this Lease.

11.2. Titles. The titles to the respective sections hereof shall not be deemed to be part of this Lease but shall be regarded as having been used only for the convenience of the parties.

11.3. Colorado Law. This Lease shall be construed in accordance with and governed by the laws of the State of Colorado.

11.4. Severability. If any clause or provision of this Lease is illegal, invalid or unenforceable under the applicable present or future laws, then it is the intention of the parties that the remainder of this Lease shall not be affected, and that in lieu of such illegal, invalid or unenforceable clause or provision there shall be added as a part hereof a substitute clause or provision as similar in operation as may be possible to any such unenforceable clause or provision.

11.5. Attorney's Fees. In any action brought to enforce the rights or obligations of either party under this Lease, the prevailing party shall be entitled to recover all of its reasonable costs and expenses, including attorney's fees, incurred in prosecuting or defending such action.

11.6. Confidential Matters. All data and information obtained or developed by Lessee relating to the Property shall be the sole property of Lessee, and Lessor shall not have access to any such data or information, except as otherwise provided herein.

11.7. Execution. This Agreement may be executed in one or more counterparts, each of which shall be as fully binding on the signatory parties as if executed by all parties, and all of which shall constitute a single document.

11.8. Relationship of the Parties. The relationship of the parties hereto is contractual only, and shall not be interpreted as creating or implying any form of partnership, mining partnership, joint venture or similar business arrangement between the parties, and shall not result in either party being deemed to be an agent of the other. Lessee has acquired or may hereafter acquire interests in other lands and minerals in the vicinity of the Property or may conduct operations in the vicinity of the Property. Nothing contained in this Lease shall give Lessor any interest in such other lands, minerals or operations.

11.9. Recording. Lessor will not record a copy of this Lease in the real property records maintained by the Montrose County Clerk and Recorder. If requested by Lessee, the parties shall execute a memorandum or short form of this Lease, which document shall be in a form sufficient to constitute constructive notice to third parties but which shall not contain the amounts or rates of royalty, or other terms of this Lease which Lessee may elect not to disclose of record. The execution and recording of such memorandum or short form shall not limit, decrease or increase, or in any manner affect, any of the terms, rights, interests or obligations of the parties under this Lease.

11.10. Notices. All notices required or permitted to be given hereunder shall be deemed properly given upon delivering the same to the party to be notified by prepaid certified mail, return receipt requested, addressed to the party to be notified at the address set forth above; provided, however, that all routine reports and all payments due hereunder may be delivered by ordinary first class United States mail, with postage prepaid and addressed to the Lessor. Either party may change its address for the purpose of notices or other communications hereunder by furnishing written notice thereof to the other party.

IN WITNESS WHEREOF, the parties have executed this Mining Lease effective as of the day and year first above written.

LESSOR: Della C Long
Della C. Long

LESSEE: Gregg Morrill
Gregg Morrill

[Acknowledgements are on the following page 6]

ACKNOWLEDGEMENT

STATE OF COLORADO)
) ss.
COUNTY OF Jefferson)

Before me the undersigned authority personally appeared Della C. Long, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 17 day of March, 2020.

My commission expires 10/21/2023.

Barbara J Miley
Notary Public

BARBARA J. MILEY
Notary Public
State of Colorado
Notary ID # 20034035053
My Commission Expires 10-21-2023

ACKNOWLEDGEMENT

STATE OF COLORADO)
) ss.
COUNTY OF Montezuma)

Before me the undersigned authority personally appeared Gregg Morrill, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 9 day of March, 2020.

My commission expires 9/16/23.

TAYLOR HILL
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20154036711
MY COMMISSION EXPIRES SEPT. 16, 2023

Taylor Hill
Notary Public

EXHIBIT H MUNICIPALITIES WITHIN TWO MILES

This mining operation is within the limits of Montrose County and the Nucla city center is about 35 miles southeast of the Bancroft Placer Mine. There are no municipalities within a two-mile radius of the mining site.

EXHIBIT I PROOF OF FILING WITH COUNTY CLERK

Greg Lewicki And Associates, PLLC
3375 W. Powers Circle
Littleton, CO 80123
Phone: (720) 842-5321
E-mail: info@lewicki.biz
Fax (303) 346-6934

July 7, 2020

Tressa Guynes
Montrose County Clerk and Recorder
320 South First Street – Room 103
Montrose, CO 81401
(970) 249-3362

Dear Ms. Guynes:

Enclosed is a notice for an amendment application to the Colorado Division of Reclamation, Mining, and Safety for the Limited Impact (110(2)) Hard Rock/Metal Mine Reclamation Permit for the mine known as the Bancroft Placer Mine, located approximately 18 miles northwest of Nucla, CO off State Highway 141, Montrose County, CO. The applicant is Gregg Morrill. The Colorado Division of Reclamation, Mining, and Safety (DRMS) requires evidence that the application has been filed with your office. Therefore, please sign and date the box below. Return via mail, email or fax your signed acknowledgement of this application and we will forward your acknowledgement to the DRMS. Thank you.

Sincerely,

Katie Todt
Greg Lewicki and Associates, PLLC
(314) 704-4505
katie@lewicki.biz
Fax: (303) 346-6934

The application was received on the following date: _____

by:_____

EXHIBIT J PROOF OF MAILING OF NOTICES TO THE BOARD OF COUNTY COMMISSIONERS AND SOIL CONSERVATION DISTRICT

Greg Lewicki And Associates, PLLC
3375 W. Powers Circle Phone: (720) 842-5321 Fax (303) 346-6934
Littleton, CO 80123 E-mail: info@lewicki.biz

July 7, 2020

Montrose County Board of County Commissioners
317 South 2nd Street
Montrose, CO 81401

Dear Commissioners:

Enclosed is a notice of application for a Limited Impact (110(2)) Hard Rock/Metal Mine Reclamation Permit from the Division of Reclamation, Mining and Safety for the mine to be known as the Bancroft Placer Mine operated by Gregg Morrill. C.R.S. dictates that the County has twenty (20) days from the published notice in the local newspaper to submit written comments on the application. The Colorado Division of Reclamation, Mining and Safety requires evidence that you received this notice. Therefore, please sign and date the box below and return a mail or fax copy to our offices. Thank you.

Sincerely,

Katie Todt, Consultant
Greg Lewicki and Associates
(314) 704-4505
Katie@lewicki.biz
Fax: (303) 346-6934

The application was received on the following date: _____

by: _____

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR **LIMITED IMPACT (110(2)) HARD ROCK/METAL MINING OPERATION**

NOTICE TO THE MONTROSE COUNTY BOARD OF COUNTY COMMISSIONERS

Gregg Morrill has applied for a Limited Impact (110(2)) Reclamation permit from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of placer gold in Montrose County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk or recorder.

The applicant/operator proposes to reclaim the affected land to rangeland. Pursuant to Section 34-32-116(7)(m),.C.R.S., the Board may confer with the local Board of County Commissioners before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within twenty (20) days after the date of the applicant's newspaper publication.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567.

Greg Lewicki And Associates, PLLC
3375 W. Powers Circle
Littleton, CO 80123
Phone: (720) 842-5321
E-mail: info@lewicki.biz
Fax (303) 346-6934

July 7, 2020

San Miguel Basin Soil Conservation District
40835 Colorado State Highway 145
PO Box 29
Norwood, CO 81431-0029
(970) 327-4245

Enclosed is a notice of application for a Limited Impact (110(2)) Hard Rock/Metal Mine Reclamation Permit with the Colorado Mined Land Reclamation Board for the mine known as the Bancroft Placer Mine operated by Gregg Morrill. The Colorado Division of Reclamation, Mining and Safety requires evidence that you received this notice. Therefore, please sign and date the box below and return via mail, email, or fax. Thank you.

Sincerely,

Katie Todt, Consultant/Geologist
Greg Lewicki and Associates
(314) 704-4505
Katie@lewicki.biz
Fax: (303) 346-6934

The application was received on the following date: _____

By: _____
SIGNATURE

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR **LIMITED IMPACT (110(2)) HARD ROCK/METAL MINING OPERATION**

NOTICE TO THE SAN MIGUEL BASIN CONSERVATION DISTRICT

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If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567.

PUBLIC NOTICE

Gregg Morrill; whose address is 12207 Road 29.4, Dolores, CO 81323, and phone number is (970) 317-8673, has filed an application for a Limited Impact (110(2)) Hard Rock/Metal Mine Reclamation Permit with the Colorado Mined Land Reclamation Board under provisions of the Colorado Mined Land Reclamation Act.

The proposed mine is known as the Bancroft Placer Mine and is located at or near Section 11, Township 48 North, Range 18 West, 6th Prime Meridian.

The proposed date of commencement is June 2020, and the proposed date of completion is ~10 years in the future, with an approximate completion date in 2030. The proposed future use of the land is rangeland. Additional information and tentative decision date may be obtained from the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567, or at the Montrose County Clerk and Recorder's office; 320 South First Street – Room 103, Montrose, CO 81401, or the above named applicant. A complete copy of the application is available at the above-named County Clerk and Recorder's office and at the Division's office.

Comments concerning the application and exhibits must be in writing and must be received by the Division of Reclamation, Mining, and Safety by 4:00 p.m. twenty days from the last publication date of this notice.

Please note that under the provisions of c.r.s. 34-32.5-101 et seq. comments related to noise, truck traffic, hours of operation, visual impacts, effects on property values and other social or economic concerns are issues not subject to this office's jurisdiction. These subjects, and similar ones, are typically addressed by your local governments, rather than the division of reclamation, mining and safety or the mined land reclamation board.

EXHIBIT K TERMS OF GOVERNMENT CONTRACT

Not applicable for a 110 DRMS permit application.

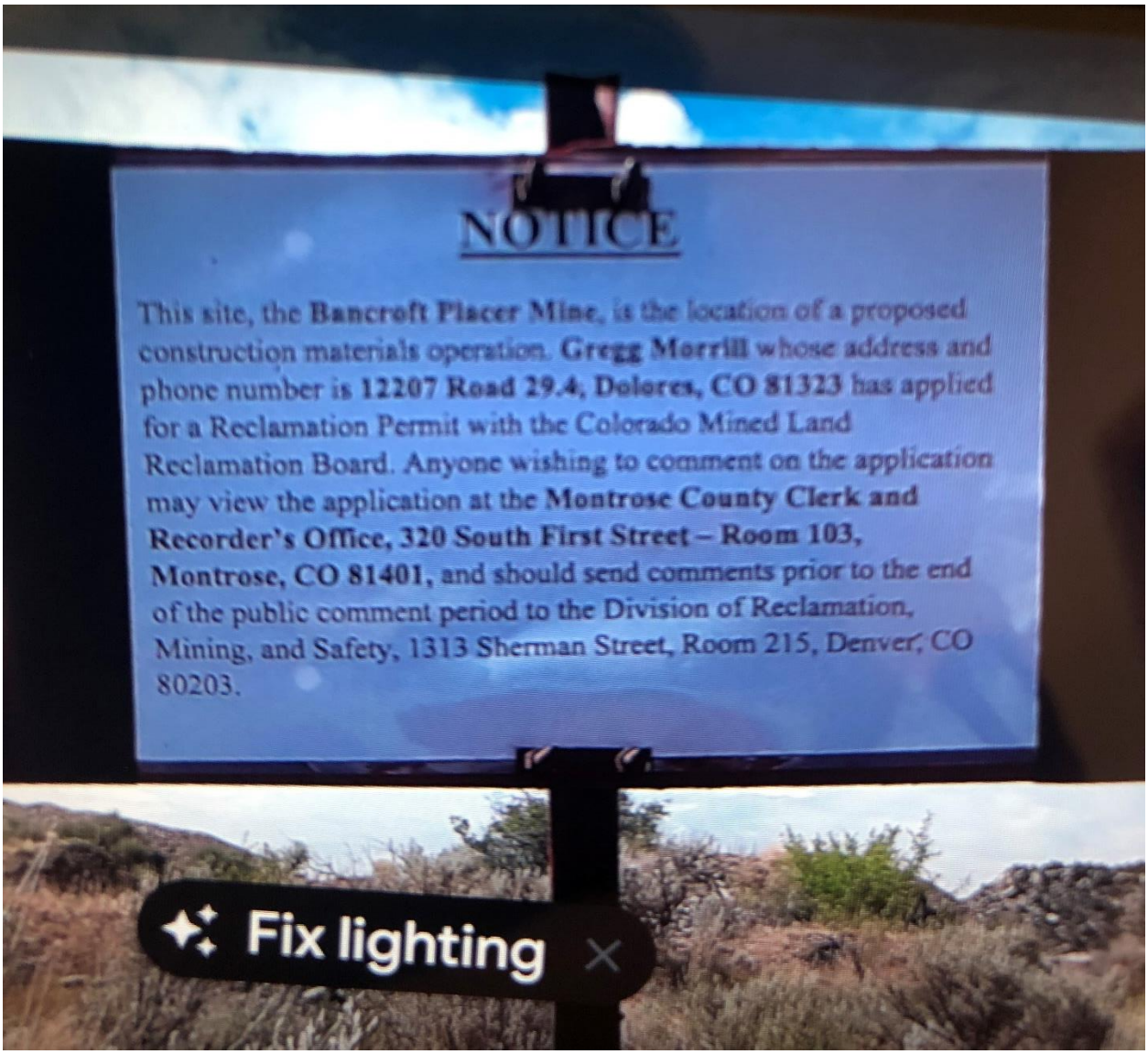
EXHIBIT L PERMANENT MAN-MADE STRUCTURES

The following is an inventory of man-made structures within 200 feet of the disturbed area. All of these structures are shown on Map E-1.

1. State Highway 141
2. Montrose County Roads – R 13 Road
3. Culvert within the State Highway 141 ROW

RULE 1.6.2(1)(B)

Prior to the submittal of the application, a sign was erected at the entrance to the site which contained all the required information regarding Rule 1.6.2(1)(b). Please see enclosed sign certification.



NOTICE

This site, the **Bancroft Placer Mine**, is the location of a proposed placer gold mining operation. **Gregg Morrill** whose address and phone number is **12207 Road 29.4, Dolores, CO 81323**, has applied for a Reclamation Permit with the Colorado Mined Land Reclamation Board. Anyone wishing to comment on the application may view the application at the **Montrose County Clerk and Recorder's Office, 320 South First Street – Room 103, Montrose, CO 81401**, and should send comments prior to the end of the public comment period to the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203.

Certification:

I, Katie Todt, hereby certify that a sign containing the above notice for the proposed permit area known as the Bancroft Placer Mine was posted on July 6, 2020.

SIGNATURE

DATE July 6, 2020

APPENDIX 1 – SOIL REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Miguel Area, Colorado, Parts of Dolores, Montrose, and San Miguel Counties

June 9, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey 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 a part of an individual's income is derived from any public assistance program. (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 to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,230 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Miguel Area, Colorado, Parts of Dolores, Montrose, and San Miguel Counties
Survey Area Data: Version 13, Sep 13, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Aug 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
36	Clapper-Ustic Torriorthents complex, 5 to 40 percent slopes	22.5	86.8%
43	Fluvaquents, 0 to 6 percent slopes, frequently flooded	0.5	2.1%
87	Rock outcrop	1.2	4.7%
112	Water	1.7	6.4%
Totals for Area of Interest		**25.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Miguel Area, Colorado, Parts of Dolores, Montrose, and San Miguel Counties

36—Clapper-Ustic Torriorthents complex, 5 to 40 percent slopes

Map Unit Setting

National map unit symbol: jvdy
Elevation: 5,500 to 6,800 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 110 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Clapper and similar soils: 45 percent
Ustic torriorthents and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Clapper

Setting

Landform: Breaks, mesas, terraces
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous rock

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 11 inches: loam
H3 - 11 to 20 inches: cobbly loam
H4 - 20 to 60 inches: very cobbly loam

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 50 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 10.0
Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Ustic Torriorthents

Setting

Landform: Breaks, mesas, terraces
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 4 inches: very bouldery clay loam
H2 - 4 to 31 inches: cobbly clay loam
H3 - 31 to 35 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: 10 to 80 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Barx

Percent of map unit: 10 percent
Hydric soil rating: No

Bond

Percent of map unit: 5 percent
Hydric soil rating: No

43—Fluvaquents, 0 to 6 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: jvfg
Elevation: 5,100 to 6,200 feet

Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 47 to 49 degrees F
Frost-free period: 120 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains, terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Stratified alluvium derived from mixed sources

Typical profile

H1 - 0 to 11 inches: variable
H2 - 11 to 60 inches: stratified very gravelly sand to clay loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 12 to 48 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Available water storage in profile: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C
Hydric soil rating: Yes

Minor Components

Aquolls

Percent of map unit: 10 percent
Landform: Sloughs
Hydric soil rating: Yes

87—Rock outcrop

Map Unit Setting

National map unit symbol: jvj2
Elevation: 4,700 to 10,000 feet
Mean annual precipitation: 10 to 22 inches
Mean annual air temperature: 40 to 49 degrees F
Frost-free period: 65 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Setting

Landform: Mesas, canyons
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from sandstone

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 40 to 120 percent
Depth to restrictive feature: 0 to 4 inches to lithic bedrock
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Orthents

Percent of map unit: 10 percent
Landform: Draws
Hydric soil rating: No

112—Water

Map Unit Composition

Water: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Minor Components

Aquolls

Percent of map unit: 5 percent
Landform: Marshes
Hydric soil rating: Yes

References

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APPENDIX 2 - MAPS