August 7, 2017

Greg Moon

District Ranger

Warner Mountains Ranger District

Modoc National Forest

225 West 8Th Street

Alturas, CA 96101

**RE: Plan of Operations to Conduct Limited-Scale Small Mining Activities on The Broken Pick Mine lode mining claim (CAMC 316444)** **in the Warner Mountains Ranger District, Modoc National Forest, Modoc County, California.**

Dear Mr. Moon:

The claimant for The Broken Pick Mine lode mining claim (CAMC 316444) in the Warner Mountains Ranger District, Modoc National Forest, Modoc County, California, is planning to conduct a minimal impact, limited-scale small mining activity. Pursuant to the National Forest Service 36 CFR 288, sub part A, section 2817 rules and regulations, the following Plan of Operations is presented.

In general, the operator is planning to mine the subsurface material for obsidian. He plans on using low-impact techniques (hand tools) in defined target areas. Reclamation will be conducted concurrently with mining procedures, therefore, minimizing environmental exposure. The exploration operation proposed is for a one-year term and will commence upon receipt of the National Forest Service’s approval.

Thank you for the opportunity to submit this Plan of Operations to your attention. If you have any questions or I can be of further assistance, please feel free to contact me at your convenience.

Sincerely,

Advanced Geologic Exploration, Inc.



Charles P. Watson

President, Chief Geologist

California Professional Geologist No. 7818

**List of Appendices**

**Appendix A**

Figure 1: Regional Map

Figure 2: Vicinity Map

Figure 3: Detail Claim Map1

Figure 4: Detail Claim Map2

Figure 5: Satellite Claim Map 1

Figure 6: Satellite Claim Map 2 Access Map

Figure 7: Access Map

Figure 8: Site Photos 1

Figure 9: Site Photos 2

Figure 10: Site Photos 3

**Appendix B**

The Broken Pick Mine Notice of Location

BLM Serial Record Page for the Broken Pick Mine

1. **GENERAL INFORMATION**

The Broken Pick Mine mining project is a new activity in which the operator proposes to mine the subsurface for valuable rainbow obsidian. The colors of the obsidian are the result from varying oxidation states of a unique combination of chemical elements contained within the volcanic glass. When the obsidian was hot and flowing, the entrapped elements became banded and now have a pleochroic appearance when light passes through the glass. This “rainbow” appearance is rare and valuable. The Broken Pick Mine federal lode claim (CAMC 316444) secures the mineral rights of land that contains the rainbow obsidian. The claimant plans to mine small amounts of the obsidian from existing pits on the claim.

This Plan of Operations is designed to comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., Surface Mining and Reclamation Act (SMARA), and other relevant environmental laws, as well as public health and safety laws and other laws relating to the site, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

The proposed start-up date is September 1, 2017, or upon approval of this Plan of Operations by the National Forest Service. The expected duration of the operation is one year. Seasonal closure will be completed by November 15, or by the onset of winter weather. The expected date of completion of all exploration activities and final reclamation is September 1, 2018.

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| **PRINCIPALS**  Project Operator:  Outlaw Rocks, LLC  Troy Newman  2005 North 4th Street  Lakeview, OR 97630  (541) 417-1655  [outlawrocksllc@gemail.com](mailto:outlawrocksllc@gemail.com) | Permitting Representative:  Charles Watson, PG #7818  Advanced Geologic Exploration  P.O. Box 1956  Chester, CA 96020  (530) 258-4228  [cwatson@advancedgeologic.com](mailto:cwatson@advancedgeologic.com) |

1. **PROPERTY OR AREA**

The Broken Pick Mine lode mining claim is located in the Modoc National Forest in Modoc County, California, Township 45 North, Range 14 East, Sections 23, 24, 25 and 26, Mount Diablo Base & Meridian (Appendix A, Figures 1 – 6; Appendix B, Location Notices). Mr. Newman is the operator and will be the responsibility party for the reclamation bond. Mr. Watson prepared this permit application and is the point of contact for any questions about the mining claim and any compliance issues as a result of this permit.

1. **DESCRIPTION OF THE OPERATION**

**Access.**

The Broken Pick Mine is located about three miles east of Davis Creek along the range front to the Warner Mountains, between the Middle and South Forks of Davis Creek, near the Plum Valley Forest Service Campground. From the town of Davis Creek, take Modoc County Road 11 (a.k.a. NFS Road 45N05) and follow it for about four miles east to a two-track road that leads up to The Broken Pick Mine. Parking is available along side the open pit.

**Map of Operations.**

See Site Maps, Appendix A, Figures 1 - 7. Figure 7 is a close up satellite view of the existing pit on the claim.

**Dates of Operations.**

Estimated start date: September 1, 2017.

Estimated completion date: September 1, 2018

**Surface Disturbance and Processed Materials Totals.**

The total amount of surface disturbance will be less than one acre.

The total amount of processed material will be less than 1,000 tons, and more likely in the range of 200-300 tons.

**Project Description.**

The operator is planning to mine the subsurface material for obsidian. He plans on using low-impact, limited-scale in defined target areas. All mining will be preformed with hand tools, such as picks, shovels, pry bars, electric impact hammers, etc. The impact hammer will be powered by a portable 2,000 Honda generator or similar. Water will be brought to the site in plastic containers and will be sprayed on the excavation areas to minimize dust, reduce the fire hazard, and aid in mining activities. The water will be pumped by small, 1-3 hp portable water pumps with garden hoses. As the excavation is enlarged, any topsoil will be stockpiled for later use in reclamation.

Once the material is excavated from the ground, it will be put in stockpiles and hand sorted for mineral grade. Water will be used to wash the specimens for better identification. The desirable material will be conveyed to the vehicles with a motorized 4-wheeled drive wheelbarrow and removed from the site. There will be no overnight camping on the claim and all tools and equipment will be removed from the claim each night. Reclamation will be conducted concurrently with exploration procedures, therefore, minimizing environmental exposure. Any excavation exposures that pose a hazard to the public health and/or wildlife will be fenced with commercial hazard fencing.

Once the mining is complete, the excavation will be backfilled, any stockpiled topsoil will be re-applied, and the site will be groomed as much as possible to conform to the surrounding natural topography. Native, weed free vegetative debris (branches, twigs, pine needles, etc.) will be scattered over the disturbed area.

The operators will keep the site neat and orderly. No chemicals will be used in material processing.

The site will be reclaimed for seasonal closure by November 15, or before the onset of winter weather conditions.

Final reclamation will include the removal of all mining and processing equipment, fencing, trash, vehicles, etc.

1. **OCCUPANCY**

No overnight occupancy is expected.

**E. VEHICLES AND EQUIPMENT**

**Vehicles.**

Motorized 4-wheeled drive wheelbarrow – 1 yard capacity

Personal vehicles to get to and from the site each day. Parked in designated parking area.

**Mining Equipment.**

All work will be conducted with hand tools, such as picks, shovels, pry bars, electric impact hammers.

Water pump – Honda 1-3 hp or similar.

Electrical generator – Honda 2,000 watt or similar.

**F. ENVIRONMENTAL PROTECTION MEASURES**

**Erosion Prevention and Control.**

Operations will be conducted to minimize soil erosion. Equipment will not be operated when ground conditions are such that excessive damage (wheel rutting) will result. Erosion control efforts will be kept current, and work will be suspended if periods of heavy precipitation or runoff are expected.

During the summer months, within a 72-hour notice of a National Weather Service forecast of a 30% chance of rain, erosion control measures will be established. Within 24 hours of the forecasted event, processing will cease, allowing contained water to percolate into the ground providing space for storm water. Heavy equipment will not be used during or following rain storms to prevent excessive soil disturbance. Prior to these events, stockpiles will be tarped or surrounded with straw wattles to prevent soil movement. Diversion rills and berms will be constructed to keep storm water from entering the pits.

If operations continue beyond October 15, erosion control measures will be in place at all times. The measures will include, but will not be limited to, fiber rolls, silt fencing, runoff berms, and hand dug diversion rills.

**Fire Prevention and Control.**

Mobile equipment and vehicles will be equipped with, and carry at all times, a size 0 or larger shovel, with an overall length of not less than 46 inches, and a 2-1/2 pound axe, or larger, with an overall length of not less than 28 inches.

Water pumps will be used for fire suppression if necessary.

No smoking will be allowed during fire season, except in an area cleared to mineral soil at least three feet in diameter, as per CPRC 4423.4.

Equipment storage and fueling area, fuel storage area, and pump sites will be cleared of all flammable material for a radius of a least 10 feet.

A campfire permit will be obtained and kept on site if a campfire is desired. All campfire burn restrictions will be expressly followed.

**Water Quality.**

Water will be used in the mining process. It will be brought to the site in personal vehicles. No turbid water from, or caused by, these activities will leave the site.

No chemicals will be used in the processing system.

**Wastes.**

Normal trash will be collected in trash containers and hauled off site to a disposal facility as necessary. The site will be kept clean, neat and orderly.

**Fuel and Hazardous Material.**

No fuel, oil or other petrochemicals will be stored on National Forest Service lands. The generator and water pump will be fueled from 5 gallon approved fuel containers or in an approved pick-up bed transfer tank. Fuel will be kept in the bed of the pick-up truck or on fuel-resistant-plastic tarps during operations.

No chemicals will be used in the processing activities. No hazardous materials will be stored at the claim site.

**Plants and Wildlife.**

Measures to maintain and protect wildlife and their habitat include avoiding site disturbance where possible and minimizing the area when it must be disturbed, using existing roads, trails and areas of little vegetation, ramping and fencing of open pits, and concurrent reclamation practices. No trees larger than 4” diameter at breast height will be removed in the activities.

**Noxious Weeds.**

All equipment and vehicles will be cleaned of all attached mud, dirt and plant parts prior to entering the site to prevent the spread of noxious weeds. No off site sand, gravel, rock, or organic matter will be brought to the site.

**Cultural Resources.**

Due to the presence of Native Americans in the Warner Mountains, it is possible that there may be cultural resources present on the claim. Any archaeological controlled areas will not be disturbed and if any other resources are encountered, the Forest Service will be notified immediately and the area will be protected from any disturbance until a qualified Forest Service personnel can review the site.

**Reclamation.**

Concurrent reclamation of the test sites will be accomplished by refilling each pit as tailings are being produced from processing, allowing water to percolate, covering with topsoil, grading the surface ground to the natural topography, and scattering with native vegetative debris.

Seasonal and final reclamation will include the removal of all exploration and processing equipment, fencing, trash, vehicles, etc., and scarifying the access road.

This Plan of Operations was prepared by Advanced Geologic Exploration, Inc. If you have any questions or if you need further assistance, please feel free to contact Charles Watson at your convenience (530) 258-4228 or cwatson@advancedgeologic.com.

**Certification.**

The operators certifies that the reclamation of all areas disturbed under this Notice will be completed to National Forest Service 36 CFR 288, sub part A, section 2817 standards and that reasonable measures will be taken to prevent undue or unnecessary degradation of Federal lands during operations.

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| Sincerely,  cpw sig color  Charles P. Watson, Chief Geologist  California Professional Geologist #7818 | Prof Stamp |

**Appendix A**

**Figures and Photographs**

**Appendix B**

**Notices of Location**

**BLM Serial Record Page**