FACT SHEET

(Pursuant to Nevada Administrative Code (NAC) 445A.401)

Permittee Name:	John M. Heizer, Jr.
Project Name:	Rose Gulch Project
Permit Number:	NEV2004101 (Renewal 2015, Revision 00)

A. <u>Location and General Description</u>

Location: The facility, known as the **Rose Gulch Project**, is located on private land in central Pershing County, Nevada, within a portion of Section 9, Township 28 North, Range 33 East, Mount Diablo Baseline and Meridian (MDB&M), approximately 14 air-miles northeast of the town of Lovelock and 54 air-miles southwest of the town of Winnemucca. Access to the Project area is possible by traveling 14 miles east from Lovelock, or 58 miles west from Winnemucca, on Interstate Highway 80 to the Oreana-Rochester interchange exit #119. Exit the Interstate and proceed approximately 3 miles east on the pavement, then turn right and travel approximately ³/₄-mile southwest on a two-track dirt road along the front of the Humboldt Range, then veer left (south) approximately ¹/₂ mile to the mouth of Rose Canyon. The Project area begins about ¹/₄ mile up the canyon.

General Description: The Project consists of a placer mining operation using physical separation methods NAC 445A.414 with a maximum permitted production rate of **5,000 tons of ore per year**. Gold will be extracted from Rose Gulch gravels using a loader/backhoe, a grizzly classifier, two (2) rotating trommels, a portable placer plant with recycle water storage tank/fines bin, a dewatering screw, two (2) process water clarifier tanks, a single-lined process water emergency catch pond, and associated pumps and pipelines. Chemicals are not approved for use in the beneficiation process and make-up water, obtained from Lovelock Meadows Water District Well N^{o.} 45577, is recycled within the process. Facilities are required to be designed, constructed, operated and closed without any discharge or release in excess of those standards established in regulation except for meteorological events which exceed the design storm event. The operation is located on private land (patented mining claims) and is anticipated to disturb fewer than five (5) acres. The facility was constructed during 2010.

B. Synopsis

General: The Rose Gulch Project is located along Rose Canyon, an ephemeral drainage, which drains the west side of the Humboldt Range in response to major precipitation events and snow melt. Small prospecting pits, dating from the late

19th to early 20th centuries, are present but no large-scale mining activity has taken place in the immediate Project area. The Rochester mine, a medium-size, open pit, silver-gold lode mining and heap leach processing operation, is located at a higher elevation in the Humboldt Range, approximately four (4) miles to the southeast.

Mining and Processing: Gold-bearing gravels are excavated from Rose Gulch using a backhoe, loader, and "bobcat" excavator. Excavations are proposed to be a maximum of 15 feet deep or until bedrock is encountered. The gravity separation processing plant is a combination of home-built and pre-fabricated, trailer-mounted, self-contained mobile equipment that will be used to process an average of 1 to 3 tons of ore per hour. The mining and beneficiation circuit is described as follows:

Excavated material is run through a stationary grizzly to remove the 3-inch plus size fraction, which is placed on the oversize waste storage pile. The retained 3-inch minus material is gravity fed to a ³/₄-inch minus vibrating screen to separate ³/₄-inch plus reject material, which is also placed in the oversize waste storage pile. The ³/₄-inch minus material is processed through the first rotating trommel and ³/₈-inch minus material is passed across riffles in the sluice. The ³/₈-inch plus reject material from the first trommel is placed in the oversize waste storage pile. The ³/₈-inch minus material from the sluice passes to a wet shaker table for further classification to ¹/₄-inch minus ore feed material that is run across sluices and discharged into the dewatering screw. The ¹/₄-inch plus reject material is placed in the oversize waste storage pile.

A second, trailer-mounted rotating trammel, measuring approximately 8 feet long, uses water pumped from the recycle water tanks through a spray bar to remove any additional ¹/₄-inch plus reject material from the ore feed. The trommel reject material is placed in the oversize waste storage pile and the ¹/₄-inch minus fines pass through the trommel to the vibrating sluice and then through a pipeline for discharge into the dewatering screw. A 3.5 horsepower gasoline engine powers the trommel, water pump, and sluice.

Process water exiting the dewatering screw is conveyed by gravity through a halfpipe measuring 60 inches wide, 30 inches deep, and 19 feet long, to a weir to calm the flow and initiate clarification. The clarified process water skimmed from the weir is pumped to the #1 clarifier tank then skimmed by gravity to the #2 clarifier tank from which the clarified process water is recycled into the process circuit.

A 10,000 gallon, single-lined emergency catch pond is located downgradient of the clarifier tanks to accommodate spill solution in the event of a process upset.

Collected solution can be pumped from the catch pond back into the process circuit.

Fines collected in the sluice are fed to a 36-inch diameter spiral concentrator/classifier to recover a precious metal concentrate. A portable gasoline-powered electric generator provides electricity for the concentrator/classifier motor. The recovered concentrate is shipped off site for custom processing. All reject material located in the oversize waste storage pile is mixed with solids periodically removed from the clarifier tanks and placed back into the original excavation.

Make-up Water: Make-up water is obtained from the Lovelock Meadows Water District Well N^{o.}45577, located in Section 33, Township 29 North, Range 33 East, MDB&M, approximately two (2) miles north of the Project area. Water is transported to the site in a tanker truck and stored in a 2,500 gallon polyurethane storage tank. The Permittee agreed to the use of a synthetic make-up water storage tank, steel clarifier tanks, and a lined emergency catch pond in lieu of additional characterization work and to minimize operating fluid loss. The emergency catch pond will be relocated from time-to-time as mining proceeds along the Rose Canyon drainage channel and, unless authorized otherwise in writing by the Division, the pond must be lined at all times.

Ore Characterization: The host rocks for the ore consist of slate, phyllite, schist, and hornfels. A 32-element inductively-coupled plasma (ICP) analysis of the ore identified naturally occurring, geochemically anomalous concentrations of manganese, nickel, antimony, strontium, arsenic, chromium, vanadium, and zinc, which are normal for the rock types and mineralization style found in the project area. Although mobilization of the anomalous metals is not expected, the make-up water is stored in tanks or a single-lined emergency catch pond and the process water will be routinely sampled at the #2 clarifier tank and analyzed for Division Profile I water quality constituents.

C. <u>Receiving Water Characteristics</u>

Analysis of the water supply well water for Division Profile I water quality constituents indicates the water is a bicarbonate type. The water is of good quality and all constituents meet the Division Profile I water quality reference values.

No boreholes exist in the immediate Project area and surface flow is restricted to ephemeral flow along the Rose Canyon drainage in response to major precipitation events or snowmelt. The closest water well, recorded with the Division of Water Resources (DWR), is located in the alluvium at the foot of the Humboldt Range, approximately one-half $(\frac{1}{2})$ to one (1) mile downgradient from

the Project area. The well is capped and no water quality data is available, but drilling records indicate the static water table elevation in this well was 108 feet below ground surface (bgs) when constructed. The static water table elevation in the water supply well, located approximately two (2) miles north of the Project area, is 110 feet bgs according to DWR records.

D. <u>Procedures for Public Comment</u>

The Notice of the Division's intent to issue a Permit authorizing the facility to construct, operate, and close, subject to the conditions within the Permit, is being sent to the **Lovelock Review-Miner** for publication. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed Permit can do so in writing within a period of 30 days following the date of public notice. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected intrastate agency, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406.

E. <u>Proposed Determination</u>

The Division has made the tentative determination to issue the Permit.

F. <u>Proposed Limitations, Schedule of Compliance, Monitoring, Special</u> <u>Conditions</u>

See Section I of the Permit.

G. <u>Rationale for Permit Requirements</u>

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S. Code 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations 10, 15 April 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (e.g., by covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of the toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

Prepared by:Joe SawyerDate:03 June 2015Revision 00:Permit Renewal 2015