

## FACT SHEET

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

Permittee Name: **Desert Mineral Exploration LLC**  
Project Name: **Olson Exploration Project**  
Permit Number: **NEV2015105 (New Permit 2015, Fact Sheet Revision 00)**

### A. Location and General Description

**Location:** The Olson Exploration Project (the Project) is a placer mining and physical separation operation located entirely on public land administered by the BLM (Carson City District-Sierra Front Field Office).

The Project is located in Washoe County, Nevada, within Township 21 North, Range 23 East, Section 34, Mount Diablo Baseline and Meridian, in the historic Olinghouse Mining District (also referred to as the White Horse District) on the eastern slope of the Pah Rah Range. The district extends from Big Mouth Canyon in the Pah Rah Range on the north to the Truckee River Canyon on the south.

The nearest community is Wadsworth, Nevada, located approximately seven (7) miles southeast of the proposed Project site.

**General Description:** Desert Mineral Exploration LLC (the Permittee) is proposing to utilize surface mining methods and gravity separation techniques to produce up to 1,000 tons of gold-bearing concentrate annually from alluvial gravels. The Project is expected to operate year round (weather permitting) with no set schedule. No chemicals will be utilized in any part of the mining or physical separation process.

The Project is designed to be 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.

**Site Access:** Proceed on Interstate-80 east from Reno or west from Fernley to Exit 46—Fernley/Wadsworth, State Road (S.R.)-447. Proceed north on S.R.-447, through the town of Wadsworth, approximately 4.0 miles to Olinghouse Road. Proceed west on Olinghouse Road, approximately 3.3 miles to the junction of an un-named dirt road. Proceed southwest on the dirt road a distance of 0.4 miles to the Project site.

## **B. Synopsis**

***Background/History:*** The Olinghouse District was first surveyed and prospected during the early 1860's and in 1864 the first appreciable gold and silver discoveries were made in the White Horse and Olinghouse canyons. By 1899, the District was officially organized as the White Horse District (later renamed Olinghouse District after Olinghouse Canyon) with the Green Hill area (located north of Olinghouse) becoming the center of mining activity within the District.

Small-scale hard rock gold and silver mining began in 1874 and by 1898 when production reached its peak in the District; three mills were in operation supporting over a dozen small underground operations. Placer gold deposits were first discovered in several tributaries of Olinghouse Canyon Creek in 1897 and placer mining has occurred intermittently in the area since then on a limited basis.

Mining and exploration in the district remained dormant until after the Second World War. In 1946, hard rock underground mining returned to the Olinghouse District with the development of a small underground mine (Green Hill Mine) and the construction of a gravity separation/mercury amalgamation mill which operated for a short time until the mine closed due to declining ore grades.

In the late 1970's, the Nevada Pacific Mining Company conducted drilling programs to define the extent and grade of the historic Green Hill Mine area and from 1979 until 1988 conducted hardrock underground mining operations and operated a 300 ton per hour (tph) gravity wash plant. In the early 1990s, Phelps Dodge Mining Company (PD) began an extensive exploration program at the site until Alta Gold Company (Alta) purchased the PD claims in 1994. Alta conducted additional exploration and began active mining in 1998. By the time Alta filed for bankruptcy and ceased operations in 1999, over 1,000,000 tons of ore had been mined.

In 2001, Target Minerals, Inc. acquired a portion of the Alta claims and continued underground development work (e.g. the 327 Apex Mine Project) until the Project was sold in its entirety to Lake Minerals LLC in 2010.

Placer deposits have been sporadically worked in the Olinghouse area since its first discovery. Between 1939 and 1954 the Natomas Company explored the alluvial fans at the mouth of Olinghouse and Frank Free Canyons through 4 shafts and numerous churn drill holes. The exploration program outlined a minimum of 10,391,000 cubic yards of auriferous gravels to a depth of 75 feet. Unsuccessful attempts were made in the 1960s to work the eluvial deposits on Green Hill.

The Alta placer claims were allowed to lapse and remained inactive until 2014 when the Permittee acquired four (4), 20-acre claims, identified as "Olson Claim-A", "Olson Claim-Olson B", "Olson Claim-C", and "Olson Claim-D".

**Geology and Mineralogy:** Mesozoic metasedimentary and metavolcanic rocks that have been intruded by granodiorite in the Derby Mine area are the oldest rocks in the Olinghouse area. These rocks are overlain unconformably by the Hartford Hills Rhyolite of Tertiary age which is in turn overlain unconformably by basaltic and andesitic volcanics and associated sediments of the Chloropagus Formation. Granodiorite porphyry dikes and irregularly shaped bodies intrude both the Hartford Hills Rhyolite and the Chloropagus Formation. Younger flows, breccias, and intrusives of the Kate Peak Formation also outcrop in the Olinghouse area. Pliocene basalt flows and associated sedimentary rock unconformably overlie the Kate Peak Formation.

The productive mines in the district are on properties located in the footwall block of the Olinghouse fault. This major structure strikes northeast and dips steeply to the east. Economic mineralization occurs in and adjacent to granodiorite porphyry intrusions that cut the Hartford Hills Rhyolite and Chloropagus Formation. However, production has been confined to veins in the Chloropagus Formation and the intrusive granodiorite porphyry. Ore bodies occurred in small, high-grade chutes or tabular stock works along fault zones in or adjacent to the porphyry dikes and intrusives. Typical vein material consists of quartz and calcite with native gold, pyrite and chalcopyrite.

Underground workings in the Olinghouse District are deep, thus suggesting that economic orebodies are restricted to the zone of oxidation and the gold and silver concentrations decrease with depth. Due to the mode of mineralization, the properties have been of little interest to larger mining companies because of inadequate reserves. Prospecting activities continue in the area with intermittent production of gold and silver expected to continue from mines worked by small operators.

The placer deposits in the alluvial fans at the mouth of Olinghouse and Frank Free Canyons represent a potentially large gold reserve. Several uranium claims are in the area, but their economic significance or potential, is unknown at this time.

**Proposed Placer Exploration and Mining Operation:** The Permittee has identified two separate areas for exploration within Olson Claim-B, identified as "Plot-A" (2.39 acres) and "Plot-B" (2.37 acres). Bulk Sampling will disturb less than 5 acres and the Permittee intends to have reclaimed areas released from the BLM bond prior to moving to a new area.

The Plot-A area has been identified as the starting phase for exploration. Gold-bearing alluvial material will be removed using small mechanical excavation equipment, to a nominal depth of 20 feet below ground surface (bgs). The excavation will be benched to provide stability and will be reclaimed following the completion of excavation sampling. Once exploration in the initial pit has

been completed and the pit has been reclaimed, the exploration area and associated topsoil berms will be moved to another location within the Project area. The processing area and stockpile area for waste rock and topsoil berm will not be moved. Overburden will be stockpiled and used to reclaim areas once the Project is finished.

Characterization results indicate that both the ore and waste rock are non-acid generating, meet the Profile I reference values, and do not pose any potential to degrade waters of the State.

**Ore Stockpiling:** Gold-bearing ore will be transported to stockpiles lined with 45-mil ethylene propylene diene monomer (EPDM), a synthetic rubber material used primarily in the manufacture of passenger car and light-vehicle tires. Until recently, EPDM was used primarily as a roofing material; however it has since found wide acceptance by residential and commercial landscapers and by farmers and ranchers for pond construction due to its ability to inhibit the propagation of algae and certain types of bacteria. EPDM is comparable to HDPE in unit cost and overall performance and is often obtained from home improvement stores. This is the first known mining-related application of EPDM in Nevada.

**Ore Processing:** A small, portable screening and gravity separation plant (wash plant) is proposed for construction at the Project site. Projected throughput is less than 30 tons per hour. Stockpiled ore is fed into a dry trommel to remove plus one (1)-inch material, which will be collected and stockpiled for future reclamation. The minus one (1)-inch material is fed via conveyor to the wash plant where recycled and fresh make-up water is added at a rate of 480 gallons per minute. The fresh make-up water will be obtained from the City of Fernley and hauled on site via water truck or water trailer and fresh water consumption is predicted to be approximately 1,000 gallons per day.

The wash plant is designed to remove the plus ½-inch and minus one (1)-inch size fraction, which will also be collected and stockpiled for future reclamation. The wash plant and sluice are on a 45-mil EPDM liner surrounded by a containment berm to capture any fugitive gold-bearing material and conserve water.

The minus ½-inch material will be discharged to a sluice box to recover the coarse gold. The fines will be discharged to the 10-foot by 20-foot by three (3)-foot deep primary settling pond, lined with 45-mil EPDM. Decant solution from the primary settling pond overflows to the 10-foot by 20-foot by three (3)-foot deep secondary settling pond, which is also lined with 45-mil EPDM. A fence surrounds both ponds to exclude wildlife entry. Clean water from the secondary settling pond is recycled to the wash plant. Sediment from the primary settling pond is dewatered and then discharged to a stockpile for future reclamation; dewatering water is recycled to the wash plant.

***Stormwater Diversion Structures:*** Waste rock and tailings will be mixed together and used to form a berm around the active exploration area to prevent up gradient stormwater from entering the site. Berms will be set back 10 feet from the pit, and during reclamation the material in these berms will be knocked down and used to fill the pit.

***Fuel Storage:*** All fuel will be delivered to the site when needed using a light vehicle equipped with a transfer tank. All equipment refueling will take place in the equipment storage area. This area will be lined with 45-ml EPDM to prevent any leaks or spills from contacting surface or groundwater.

### C. Receiving Water Characteristics

***Surface Water:*** The Project site lies approximately one-half mile north of and is upgradient to, Gardella Canyon Creek. The Creek exhibits ephemeral flow and is dry most of the year. The confluence of Gardella Canyon Creek with the Truckee River appears to be six (6) miles downstream from the Project site. The creek's confluence with the Truckee River is approximately 14 miles upstream of Pyramid Lake, the terminus of the Truckee River. The nearest spring or seep (Sheehan Spring) is located three (3) miles northwest and upgradient of the Project site.

***Groundwater:*** As stated above, potable make-up water for the wash plant is obtained from the City of Fernley and transported to the Project site. The closest well to the site is identified as Nevada Division of Water Resources (NDWR) well log # 73679, located 1.8 miles northeast and downgradient of the Project site. Groundwater elevation is 4,365 feet above mean sea level (175 feet below ground surface). There are no documented drinking water wells within a 2-mile radius of the Project site. Groundwater from well #73679 meets the Profile I reference values for all constituents.

### D. Procedures for Public Comment

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 Reno-Gazette Journal 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. Proposed Determination**

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

**F. Proposed Limitations, Schedule of Compliance, Monitoring, Special Conditions**

See Section I of the Permit.

**G. Rationale for Permit Requirements**

The facility is located in an area where annual evaporation is greater than annual precipitation.

The primary method for identification of escaping process solution will be placed on required routine monitoring. Specific monitoring requirements can be found in the Water Pollution Control Permit.

**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.

<i>Prepared by:</i>	<i>Rob Kuczynski, P.E.</i>
<i>Date:</i>	<i>XX May 2015</i>
<i>Fact Sheet Revision 00: (Permit Revision 00)</i>	<i>New Permit and Fact Sheet for placer mining and physical separation facility located in the historic Olinghouse District, near Wadsworth, Nevada.</i>