FACT SHEET
(Pursuant to Nevada Administrative Code 445A.401)

Permittee: **Au-Reka Gold Corporation**

Facility Name: **Cove Helen Underground Exploration Project**

Permit Number: **NEV2010102**
Review Type/Year/Revision: **Renewal 2016, Fact Sheet Revision 00**

A. Description of Facility

Location: The Cove Helen Underground Exploration Project (Cove Helen Project) is located in the Fish Creek Mountains within the historic McCoy Mining District. The project site is approximately 32 miles southwest of Battle Mountain and 57 miles northwest of Austin, in Lander County, Nevada. The project is located entirely on public land administered by the Bureau of Land Management (BLM), Battle Mountain District-Mount Lewis Field Office.

The Cove Helen Project occupies a portion of the historic McCoy/Cove mine site (now in closure), within all or portions of Sections 1, 2, 11, and 12 of Township 28 North (T28N), Range 42 East (R42E); Sections 5, 6, 7, and 8 of T28N, R43E; Sections 25, 26, 35, and 36 of T29N, R42E; and in Sections 30 and 31 of T29N, R43E, Mount Diablo Baseline and Meridian.

The total disturbance for the Cove Helen Project is approximately 376 acres, including the Rapid Infiltration Basins (RIBs). The disturbance for the underground exploration project and its associated above ground components is 184 acres. The Cove Helen Project is permitted to mine gold-bearing ore at a rate of up to 100,000 tons annually. No processing will be performed on site. All mined ore will be transported off-site to a permitted facility in-state or to an out-of-state facility for processing.

Site Access: From central Battle Mountain, proceed south approximately 32 miles on State Route (SR)-305 to McCoy Mine Road. Turn west on McCoy Mine Road and proceed to the mine site, a distance of approximately 6 miles. From Austin, proceed north approximately 57 miles SR-305 to McCoy Mine Road. Turn west on McCoy Mine Road and proceed to the mine site, a distance of approximately 6 miles.

General Description: The McCoy/Cove facility was initially comprised of two open pits (McCoy and Cove), a tailings storage facility (TSF), three heap leach pads (HLPs): HLP #1, HLP #2, and HLP #3, solution ponds, a mill facility (including Merrill-Crowe and electrowinning circuits), truck and maintenance shops, administration building and other ancillary buildings. In addition, a series of 29 rapid infiltration basins (RIBs) were also constructed to return dewatering water to the aquifer.

The RIBs, HLP #1 and associated process solution ponds have since been reclaimed; HLP #2 and HLP #3 have also been reclaimed, however, their associated solution ponds remain open.

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The majority of the TSF has been reclaimed with the exception of the reclaim solution ponds. A total of nine waste rock dumps were constructed during the life of the mine; all have since been reclaimed. The mill and administration building were demolished in 2005. The truck and maintenance shops were dismantled and relocated to the Newmont Fortitude/Reona (Phoenix Mine) Project (WPCP NEV0087061). Remaining buildings include an office trailer, security building, and two utility shops.

The Cove Helen Project is designed to temporary construct, operate, and be closed without any release or discharge from the fluid management systems except for meteorological events, which exceed the design storm event. The Permittee is not authorized to dispose or treat Petroleum-Contaminated Soil (PCS) on the mine site without first obtaining an approved PCS Management Plan.

The Cove Helen Project is currently permitted for the following components and activities:

- Portal and decline development;
- Dewatering water management and disposal;
- Bulk sample collection (for off-site metallurgical evaluation);
- Ore and waste rock stockpile areas;
- Evaporation basin;
- Stormwater diversion structures; and
- Ancillary support facilities.

B. Synopsis

History: Historical records indicate that gold was first discovered in the McCoy Mining District in 1914 by Joseph H. McCoy. The earliest documented mining of any significance occurred during the early 1930s at the Gold Dome Mine, an underground mining operation located on the northeast side of the present day McCoy Pit.

Summa Corporation (Summa) acquired most of the mining claims in the McCoy Mining District in the 1950s and 1960s. During the 1960's, extensive exploration for copper and gold in the McCoy District was undertaken by Bear Creek Mining Company, Pilot Exploration, and Summa. Summa also undertook geologic mapping program which included the future Cove Helen Project area.

In 1977, the Cove Property was purchased by Houston Oil and Minerals Corporation (Houston) and in 1981 leased the property to Gold Fields Mining Corporation (Gold Fields). Gold Fields conducted an extensive exploration drilling and mapping program. With the expiration of the lease in September 1984, the property was returned to Tenneco Minerals Company (Tenneco), which had acquired Houston in 1981. In 1985, Tenneco undertook drilling, metallurgical testing, and engineering and feasibility studies and began mining the McCoy deposit in February 1986.

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In early 1986, Tenneco constructed a Merrill-Crowe circuit, HLP #1 and associated solution ponds at the McCoy/Cove facility. Echo Bay Mines Limited (Echo Bay) purchased the precious metal holdings of Tenneco in October 1986 and continued the exploration program initiated by Tenneco.

The Cove deposit was discovered in early 1987 and in 1988, both open pit and underground mining commenced, utilizing conventional mining methods. Echo Bay constructed the Carbon ADR Plant in 1987; HLP #2 in 1988 (completed in 1990), and HLP Pad #3 in 1992 (completed in 1997). Construction began in March 1988 on a 7,500 ton per day (tpd) mill facility a mill facility containing both gravity and flotation circuits. The mill began operation in July 1989.

From 1988 to 2001, underground mining was used to recover high grade vein-type ore from the Cove, Cove East, and Cove South Deep deposits. In 1991, groundwater was encountered in the Cove Pit at an elevation of 4,660 feet above mean sea level (ft amsl) which required dewatering (Refer to the sub-section *Cove Pit Lake* for additional details). Over the next several years, a total of 23 dewatering wells and two in-pit pumping stations were installed in and around the open pit. Dewatering reached its peak in 1995, with approximately 19,000 gallons per minute (gpm) of water being dewatered. By 2000, the rate had decreased to approximately 13,400 gpm. Except for a small quantity of water used in processing and dust suppression for mining activities, the dewatering water was conveyed to the RIBs located north and downgradient of the site and infiltrated into the alluvial aquifer.

Underground mining at Cove and Cove East was completed in 1993 and 1999 respectively. Mining at McCoy/Cove continued until July 2001, when the last phase of underground mining at Cove South Deep was completed. All dewatering wells have since been abandoned per Nevada Division of Water Resources (NDWR) regulations and all RIBs have been reclaimed.

In February 2003, Newmont assumed ownership of the McCoy/Cove mine site and closure responsibilities following their merger with Echo Bay and TVX Gold Inc. and began overseeing closure of the facility. (For additional details regarding the closure of the McCoy/Cove mine site, refer to WPCP NEV0088009 and Fact Sheet). In 2006, the previous Permittee (Victoria Gold Corporation (U.S.) Inc. entered into an agreement to lease a portion of the McCoy/Cove mine site from Newmont. The agreement allowed Victoria to explore for minerals on the property but does not include the right to erect, construct, maintain or operate any permanent buildings, structures or facilities on or within the McCoy/Cove property.

In 2007, Victoria identified a high grade gold deposit (the Helen Deposit), located approximately 2,000 feet (ft) northwest of the Cove Pit. To further delineate the Helen Deposit and determine its economic viability, the Permittee proposed a phased underground exploration project. A portal and decline was to be constructed to access the Helen Deposit and extract bulk samples for metallurgical testing. Mine production was limited to less than

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100,000 tons annually and no processing was to be performed on site. The expected project life was between three and five years. The underground development required the management and disposal of dewatering water; this will be accomplished by reintroducing the dewatering water back into the local groundwater basin through a rapid infiltration basin (RIB) pursuant to Water Pollution Control Permit (WPCP) NEV2010107.

In April 2012, Victoria sold its interests in the Cove Helen Exploration Project to Au-Reka Gold Corporation, a subsidiary of Premier Gold Mines Ltd.

In May 2015, the Permittee purchased all of the Newmont assets for the McCoy/Cove mine site and is continuing closure activities for Newmont's portion of the site.

Geology and Mineralization: The Cove Helen Project mine site lies west of the central portion of the Battle Mountain Gold Belt along the East Gold Belt. The Cove project includes the previously mined Cove open pit which historically produced 2.3 million ounces of gold and 100 million ounces of silver. The Permittee staked 439 unpatented lode mining claims in 2006 and also has an exploration lease agreement with Newmont that covers an additional 389 unpatented and seven patented lode claims.

The Helen Zone is located about 2,000 ft northwest of the Cove open pit. The Permittee believes the Helen Zone is not an extension of the Cove open pit but an entirely new gold discovery. The Helen Zone is classified as a Carlin-style deposit with structurally controlled epigenetic, disseminated, auriferous pyrite that is hosted in calcareous sedimentary rocks.

The Carlin-style alteration and mineralization within the Helen Zone occur in two distinctive groups; the central Fluidized Breccia zones and the outboard Bedding Parallel zones. The Fluidized Breccias occur within the Plunge Line Zone, which is a highly fractured zone, and outline a polygonal shaped "tube" that extends down the Intersection Zone. Outboard of this zone, the Bedding Parallel zones develop as bedding parallel, leakage zones whose geometry is defined by the geometry of the strata-bound mineralization.

The gold in Carlin-type deposits is usually sub-micron in size and generally occurs in pyrite and arsenical pyrite. Native gold is common locally. An envelope characterized by decalcification, silicification, and argillization accompanied by anomalous amounts of silver, arsenic, antimony, and mercury. The Carlin-style mineralization beneath the Cove site is relatively rich in silver compared to similar deposits elsewhere in northern Nevada. Despite this, the high grade mineralization at the Helen Zone is deficient in silver and is characterized by mostly gold mineralization.

Cove Pit Lake: Dewatering of the Cove Pit ceased in July 2001 and within a short time, a lake formed in the pit. Groundwater inflow into the pit is approximately 335 gpm and 540 acre-feet per year (acre-ft/yr). The current evaporation rate is estimated at 323 gpm and 520 acre-ft/yr. The Cove Pit water is analyzed quarterly at three separate locations (North, Middle and South) with samples collected from three discreet depths. The pit water quality

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generally meets Profile I reference values with the exception of sulfate, TDS, and antimony, which have on occasion exceeded the Profile I reference values. The Permittee is proposing to utilize a small portion of the Cove Pit water (approximately 22 gpm) for non-potable purposes.

A pit lake study was first performed in 1997, and last updated in 2002. Based on the pre-mining groundwater elevation and predicted steady-state conditions, the Cove Pit is expected to form a sink and not discharge to the groundwater system. By 2057, the pit lake will rebound to its final elevation of 4,660 ft amsl (685 ft deep) and will occupy a surface area of approximately 163 acres. Predicted pit water chemistry 100 years after the cessation of dewatering will not have an adverse effect on human, terrestrial, or avian life and will not degrade any surrounding ground or surface waters. As of September 2010, the pit lake elevation was 4,564 ft amsl (589 ft deep) and the lake occupied a surface area of approximately 150 acres. The drawdown associated with the lake does not appear to have affected any local water resources.

In the spring of 2005, the northwest highwall of the Cove Pit experienced a rotational failure resulting in approximately 1 million tons of material sliding toward the pit lake and an indeterminate amount of material entering the lake. Pit lake samples were collected following the wall failure and data indicate no impacts to overall water quality. Currently, the southeast side of the pit is sliding toward the pit lake at a rate of approximately one foot per month. In certain areas of the pit ramp, the floor has also dropped approximately 8 ft. None of the material that has entered or may enter the lake at a future date has a negative or low NNP, since all sulfide materials were submerged during the initial filling of the lake.

Cove Helen Underground Exploration Project: In 2007, the Permittee discovered a high-grade gold deposit (the Helen Zone), approximately 2,000 ft northwest of the Cove Pit. The Helen Deposit is a gold ore deposit with a number of small, high-grade gold bearing zones that appear to be either flat or steep dipping. A preliminary evaluation of the deposit indicates that it has potential for and that it might be amenable to underground mining. In order to further delineate the deposit and verify the deposit's economic viability, the Permittee is proposing an underground exploration project to be referred to as the Cove Helen Project.

Portal and Decline Development: All underground exploration and decline development work will be performed by mining contractors coordinated by the Permittee. Development work will begin with the construction of a13-ft by 13-ft entry portal at the 4,700 ft level of the Cove Pit on the northeast side. A bench will be constructed above the portal to minimize rock fall and the portal collar will be reinforced with shotcrete (where necessary) to minimize spalling and potential surface failure. The portal area will have electrical service and be equipped with ventilation and a dewatering pump system. Underground sumps will collect dewatering water during decline and drift development and then pump the water to the surface for sedimentation and ultimately infiltration. Refer to the section *"Dewatering Water Management and Disposal"* for additional details.

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A drift will be driven east from the portal entry approximately 100 ft beyond the mining-induced fracturing of the pit. At this location, a decline will be driven northwest for a distance of approximately 4,300 ft at a minus 15-percent grade to the 4,170 ft amsl elevation level. From this location, a crosscut will be driven to cut the mineralized zones and to provide a platform for additional exploratory drilling. Cut and fill mining methods will be used for the exploration areas using small to mid-sized mechanized equipment. The mined areas will be backfilled with cemented rock fill. Stopes will be developed at the upper levels of a mining interval and mining will proceed downwards with successive lifts taken while working beneath the cemented rock fill.

Decline development is projected to continue further to the 3,950 ft level at a minus 15-percent grade and in a "figure-8" pattern. This will permit crosscuts to be developed into the mineralized zone at various levels to provide additional information regarding the extent of the deposit, allow the collection of additional bulk samples and create platforms for additional exploratory drilling.

Depending on the success of the underground exploration program the final stage will involve full scale underground development. The Cove Helen Project is permitted to mine gold-bearing ore at a rate of up to 100,000 tons annually. No processing will be performed on site. All mined ore will be transported off-site to a permitted facility in-state or to an out-of-state facility for processing.

The project is expected to last between three and five years, however this may be extended and the scope of the project expanded based on the outcome of the exploration activities.

Dewatering Water Management and Disposal: From 1988 until about 2001, Echo Bay operated a series of RIBs at the McCoy/Cove site to dispose of up to 23,000 gpm of dewatering water. With the exception of mounding occurring during active infiltration (as predicted), no negative impacts have been reported as a result of the dewatering and/or infiltration.

Based on the known lithology, hydrology and historical dewatering data for the Cove Pit and adjoining areas, the Permittee estimates that between 550 and 790 gpm of dewatering water will need to be managed. However, as additional dewatering data from the underground development is collected, characterized, and evaluated, the volume and quality of dewatering water requiring management will be further refined and updated.

Dewatering water will be collected in a series of collection sumps and then pumped to the surface, treated, and infiltrated back into the groundwater aquifer. The Permittee intends to accomplish this by constructing and operating a single RIB with a footprint of approximately 800,000 square feet (sq ft) and capable of managing up to 2,500 gpm of dewatering water. The RIB will be located at the historical site of the Echo Bay RIBs and sufficient infiltration area is available within this location to add additional RIBs if necessary.

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Dewatering water quality data collected during Echo Bay's thirteen years of active dewatering indicated good water quality with no exceedences of the Profile I reference values reported. Elevated concentrations of fluoride, TDS, aluminum and iron were observed on occasion. The Permittee anticipates that dewatering water quality will remain good during their active dewatering operations.

The decline dewatering water will be collected in a dewatering sump and pumped via an 18-inch (in) diameter HDPE pipe to a booster pump station near the temporary shop area where it will then be discharged to a mechanical sand/oil separator vault (Vortechs® or similar device) equipped with oil absorbent pads. Clean water from the vault is then discharged via an 18-in diameter HDPE pipe into a trapezoidal shaped channel, lined with 60-mil HDPE and overlain with a layer of rock (d_{50}=8 inch). The lined channel is graded to convey treated dewatering water to the RIB. In the 2016 permit renewal has indicated that the de-nitrification and sediment basins will not be constructed but replaced with an engineered water treatment plant. An EDC will need to be submitted to the Division for review and approval.

Refer to WPCP NEV2010107 Fact Sheet for additional design and operational details for the Cove Helen RIB Project.

In the event groundwater inflows are too great to be effectively pumped from the decline, the Permittee will implement a program to reduce groundwater flows and/or install dewatering wells outside the underground workings. In the event discharge water quality from the decline exceeds Profile I reference values, a treatment system will be implemented by the Permittee.

The Permittee has obtained water rights allowing the use of up to 22 gpm (35 acre-ft/yr) of Cove Pit water for non-potable consumptive uses. In addition to the pit water, the Permittee plans to acquire additional water rights authorizing the use of dewatering water to meet additional consumptive use requirements. The total estimated usage for the Project for the first year of operations (construction, decline and drift development) is 235.93 acre-ft (148 gpm). For subsequent years the estimated usages are as follows: Year 2 (exploration) - 118.39 acre-ft/yr (75 gpm), Year 3 (exploration) – 108.39 acre-ft/yr (68 gpm), Year 4 (exploration) – 98.39 acre-ft/yr (62 gpm), and Year 5 (reclamation and closure) – 31.19 acre-ft/yr (20 gpm).

Bulk Sample Collection: Bulk samples will be collected for metallurgical evaluation and ore deposit delineation. Bulk sample material obtained will be shipped off site to approved laboratories or permitted facilities for metallurgical and related testing and analysis.

Ore and Waste Rock Stockpile Areas: Stockpile areas for ore, waste rock, topsoil, excavated overburden and gravel/aggregate will be constructed at the Cove Helen Project site, south of the Cove Pit. The proposed areas will require grubbing and a minimal amount of soil

removal and grading. Refer to the Table 1 for additional details.

The ore and waste rock stockpiles are excavated basins with a nominal depth of 15 ft below grade to accommodate the topography and are graded to drain to the evaporation pond. The single-lined ore and waste rock stockpiles are designed to collect meteoric run-off and direct it via a lined channel to the double-lined evaporation pond. Refer to the section entitled "Evaporation Pond" for additional details.

Table 1.--Ore and Waste Rock Stockpile Areas

Stockpile	***Approximate Footprint***		***Capacity (tons or cubic yards)***
	Length (feet)	***Width (feet)***	
Ore	*190*	*120*	*30,000 tons*
Waste Rock	*350*	*120*	*125,000 tons*
Removed Topsoil (From Stockpile and Pond Construction)	*880*	*560*	*230,000 cubic yards*
Excavated Overburden (From Stockpile and Pond Construction)	*1,760*	*640*	*650,000 cubic yards*
Gravel/Aggregate (For Use in Backfilling)	*400*	*240*	*40,000 cubic yards*

The ore and waste rock liner systems are each comprised of a 12-in thick prepared subgrade of low-permeability soil, placed in two 6-in lifts, and compacted to a minimum 90 percent of maximum dry density American Society for Testing and Materials (ASTM) 1557, with a coefficient of permeability less than or equal to $1x10^{-6}$ centimeters per second (cm/sec). The prepared subgrade is overlain by 60-mil HDPE liner covered by a 24-in thick protective layer of crushed rock. The HDPE liner is keyed into an anchor trench surrounding the perimeter of each pad.

The lined channels are graded to drain to the evaporation pond. The channels are trapezoidal shaped with a nominal depth of 15 ft below grade because of the topography. Each channel is comprised of a 12-inch thick prepared subgrade of low-permeability soil, placed in two 6-inch lifts, and compacted to a minimum 90 percent of maximum dry density (ASTM 1557), with a coefficient of permeability less than or equal to $1x10^{-6}$ cm/sec. The prepared subgrade is overlain by 60-mil HDPE liner welded to the waste rock or ore pad liner systems and keyed into an anchor trench.

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Evaporation Basin: The evaporation pond is an excavated basin with a nominal depth of 25 ft below grade. The double-lined pond occupies a footprint of 180 ft by 240 ft and has a maximum capacity of 1.93 million gallons (gal) at 2 ft of freeboard. The pond is comprised of 60-mil HDPE primary and secondary liners with a layer of geonet in between, all overlying a 12-in thick prepared subgrade of low-permeability soil, placed in two 6-in lifts. Each lift is compacted to a minimum 90 percent of maximum dry density (ASTM 1557), with a coefficient of permeability less than or equal to $1x10^{-6}$ cm/sec.

The pond is equipped with a leak collection and recovery sump (LCRS) with a working capacity of approximately 1,000 gal. Any solution collected in the LCRS will be returned to the evaporation pond.

Stormwater Diversion Structures: Stormwater diversion structures will be constructed to convey flows resulting from the 100-year, 24-hour storm event away from the project site into natural drainage channels. The structures have been designed as rip-rap lined channels with a maximum depth of three feet as dictated by the predicted flow velocities and volumes.

Ancillary Support Facilities: Ancillary support facilities at the Cove Helen Project site will include a lined equipment ready line and laydown yard, employee offices, a temporary maintenance shop, pump house, equipment wash bay and the fuel/lubricant storage and dispensing areas. These facilities will be located near the decline portal.

The single-lined equipment ready line and laydown yard is a bermed pad occupying a 50 ft by 100 ft footprint. The ready line and laydown yard will consist of a single 60-mil HDPE liner placed over a 12-in thick prepared surface which will be graded to drain to the ready line sump. An 18-in thick layer of aggregate base material will overly the HDPE liner.

Adjacent to the ready line and laydown yard will be the fuel/lubricant storage and dispensing areas. The overall area will be approximately 34 ft by 76 ft and will consist of a single 60-mil HDPE liner placed over a 12-in thick prepared surface. The 34-ft by 40-ft dispensing area is graded to drain to the 34-ft by 36-ft fuel/lubricant storage area and collection sump. Containment volume within the fuel/lubricant storage area is approximately 27,500 gal. A 10,000-gal fuel diesel storage tank and lubricants will be placed within this contained area. Any storm runoff and spilled fluids collected by the ready line and fuel/lubricant storage area sumps will be pumped to a 2,000-gal sand/oil separator and then a 6,500-gal holding tank for temporary storage until it is disposed of at an off-site permitted facility.

The temporary maintenance shop and wash bay will be constructed on a reinforced concrete pad, approximately 100-ft by 80-ft and surrounded by a 24-in stem wall. Embedded water stop material will be installed at all floor and stem wall joints and the concrete floor will be graded to drain toward the wash bay and floor sump located inside the building. Wash water and spilled fluids will be collected in a floor sump and then pumped to the previously discussed 2,000-gal sand/oil separator and then the 6,500-gal holding tank for temporary storage until it is disposed of at an off-site permitted facility.

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Sewage from the facility is collected in a dedicated 6,500-gal black water holding tank for temporary storage until it is disposed of at an off-site permitted facility.

C. Receiving Water Characteristics

Surface Water: There are no surface water bodies, seeps or springs within one mile of the Cove Helen site.

Groundwater: Two groundwater systems, a deep, confined bedrock aquifer and an unconfined shallow aquifer, have been identified in the vicinity of the Cove Pit. Current (September 2010) groundwater elevation is estimated at 4,564 ft amsl (589 ft bgs).

The deep aquifer appears to be the most significant contributor to the formation of the Cove Pit Lake and is characterized by relatively low hydraulic conductivity. Intense fracturing within the pit area has also increased the hydraulic conductivity of some hydrogeologic units.

There are five main faults (Light House, Hidden Valley, Cay, Bay, and Dome) within the Cove Helen Project area, each with their own unique hydrogeologic characteristics. In addition, two range-front faults east of the Lighthouse Fault form barriers to flow from the alluvium to the Lower Reese River Valley. The faults are approximately ½ mile east of the Cove Pit and are covered by the Tertiary alluvium. The shallow alluvial groundwater gradient at the Cove Helen site is from west to east toward the Reese River Valley. Bedrock groundwater gradient is also toward the Reese River Valley and generally follows topography in a northeast direction.

In general, the north-south striking, steeply dipping faults and fractures in the vicinity of the Cove Pit area provide a localized decrease in horizontal hydraulic conductivity, but provide a moderate north-south to west-east lateral hydraulic conductivity.

The north-south trending Lighthouse Fault, flanks the east side of the Cove Helen Project, but becomes less of a barrier on the northern part of the project site. The portion of the fault that serves as a barrier is most likely the result of clay gouge along the fault. Rocks along the footwall (west) side of the fault are more fractured and consequently have a greater hydraulic conductivity. The hydraulic conductivity ranges from 0.08 to 0.5 feet per day on the hanging wall side and 0.05 to 2.5 feet per day on the footwall side of the fault.

A set of northeast trending faults occurs in the Project area perpendicular to the proposed decline path that influences groundwater flow. The Hidden Valley Fault forms a significant barrier to flow on the west side of the Cove Pit. Exploration boreholes drilled into the fault indicate that there is a thick gouge zone along the fault. The hydraulic conductivity of the Hidden Valley Fault is estimated to be about 0.1 feet per day.

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The Cay, Bay, and Dome faults, which transect the Cove Pit in a northeast-southwest direction, moderately compartmentalize the groundwater flow system. The hydraulic conductivity of these faults is about 0.5 feet per day.

The bedrock units near the Project portal entrance (north highwall of the Cove Pit) are affected by intense faulting and fracturing and by hydrothermal alteration. This area is characterized by argillization of the limestones, by northwest-southeast faulting, and by local karstification. This area has a high hydraulic conductivity of about 10 to 20 feet per day.

During previous operations at the Cove Mine, groundwater flow direction was primarily from the west to the east and flows into the mine occurred primarily along faults and fracture systems and to a lesser degree from the hydrogeologic units. As a result of the high dewatering rates required at the Cove Mine, a preliminary groundwater inflow analysis was completed on the proposed Cove Helen Underground Exploration decline and exploration development.

The estimated groundwater inflow to the decline and workings is based on hydrologic testing and groundwater model calibration efforts, hydrogeologic and geologic information compiled by the Permittee and discussions with Newmont personnel. To analyze the inflow along the known geologic structures and hydrogeologic units, the hydraulic conductivities of the water-bearing zones were calculated based on hydraulic parameters developed pumping tests and groundwater modeling calibrations and discussions with the Permittee and Newmont personnel.

A purpose of the Cove Helen Project will be to collect additional hydrogeologic data so that the groundwater inflow calculations can be further refined and the dewatering system optimized. During exploration decline development, long-hole hydrogeologic testing will be completed ahead of decline development to evaluate groundwater conditions including pressure head, flow, and hydraulic conductivity. In the case of potentially high groundwater inflows, a cover grouting program will be applied to control the groundwater flows.

Groundwater Quality and Monitoring: There are seven groundwater monitoring wells (IM-2, IM-3, LP-2D, LP-5B, TM-3, TM-4, and TM-5) at the McCoy/Cove Mine site, pursuant to WPCP NEV0088009.

Groundwater monitoring wells IM-2 and IM-3 are located downgradient of the Cove Pit and monitor the shallow alluvial groundwater. Both wells are currently dry and have had insufficient water to sample for several years. Groundwater monitoring wells LP-2D and LP-5B are also downgradient of the Cove Pit and monitor deep bedrock flow. Groundwater monitoring wells TM-3, TM-4, and TM-5 monitor the shallow alluvial groundwater flow and are located downgradient of the historic McCoy/Cove tailings impoundment. All wells are monitored annually.

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Data provided by the Permittee show similarities in groundwater quality of the bedrock and alluvial aquifers. The pH of both sources is distinctly alkaline, with bicarbonate concentrations generally higher in the bedrock groundwater than the alluvial groundwater.

Water quality in the alluvial and bedrock wells is good and generally meets the Profile I reference values for all constituents. Groundwater monitoring wells LP-2D and LP-5B were used to establish background water quality for WPCP NEV2010102 and typically show fluoride concentrations between 5.0 and 5.8 milligrams per Liter (mg/L), above the 4.0 mg/L Profile I reference value. The Permittee will continue to monitor these wells quarterly. Groundwater monitoring well TM-4 had slight exceedences of the Profile I reference values for aluminum and iron on occasion. BMRR is not aware of any reported impacts to the alluvial or bedrock groundwater quality from the McCoy/Cove closure activities and mining activities do not appear to have adversely impacted groundwater quality in the Cove Helen Project area.

The Permittee will install four dedicated groundwater monitoring wells for the Cove Helen Project. MW-1 will be located downgradient of the ore stockpile-evaporation basin-waste rock stockpile area and Cove Pit. Two monitoring wells (MW-2 and MW-3) will be located downgradient of the proposed RIB site. A monitoring well (MW-4) will be located up-gradient of the ore stockpile-evaporation pond-waste rock stockpile area, Cove Pit, and RIB site to provide data to effectively monitor the potential impacts of the RIB operations on shallow alluvial groundwater elevation and quality.

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 **Battle Mountain Bugle** 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.

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E. Proposed Determination

The Division has made a tentative determination to issue the renewed water pollution control 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. 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.

The primary method for identification of escaping process solution will be placed on required routine monitoring of leak detection systems as well as routinely sampling downgradient monitoring wells. 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 (covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of 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.

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