FACT SHEET

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

Permittee Name:	**Newmont USA Limited**
Project Name:	**Mule Canyon Mine**
Permit Number:	**NEV0094110**
Review Type/Year/Revision:	**Renewal 2019, Fact Sheet Revision 00**

A. Location and General Description

Location: The Mule Canyon Mine is located in Lander County, approximately 14 miles southeast of the town of Battle Mountain. The Project is located in the historic Argenta Mining District in the Shoshone Mountain Range between the Reese River Valley to the west, Whirlwind Valley to the east, the Humboldt River to the north and the Shoshone Mountains to the south. The facility is located within Sections 1-5, 8-17, Township 31 North (T31N), Range 47 East (R47E), and Sections 32 - 34, T32N, R47E, Mount Diablo Baseline and Meridian.

The Project has a permitted area of 2,746 acres, of which 1,147 are public lands (Bureau of Land Management, BLM Mount Lewis Field Office, administered), 1,168 are private controlled by Newmont USA Limited dba Newmont Mining Corporation (Permittee) and the remaining 431 acres are "split estate" (public surface rights and private mineral rights). Existing disturbance is approximately 1,120 acres of which 507 acres are public, 404 acres are private and 209 are split estate. The open pits and waste rock storage facilities (WRSFs) are located primarily on public and split estate lands with the exception of 20 acres of WRSFs on private land. The ancillary facilities are located primarily on private land. The facility is accessed by taking Airport Road east at Highway 304 and driving approximately 6.6 miles to the turn-off at Beacon Light Road; drive to a sharp right turn for about 1.5 miles after Airport Road; drive to a wye after about 1.8 miles, staying to the left; stay to the left at a second wye. Beacon Light Road ends at the facility.

General Description: The Mule Canyon Mine was initially designed and permitted to process ore by both milling and cyanide heap leaching. However, the proposed processing facilities were never constructed and are no longer authorized under a Closure Permit. The site currently consists of six small open pits, five of which now contain persistent pit lakes, five WRSFs, one shop building, three lined ponds, and associated haul and access roads. The site is in permanent closure.

B. Synopsis

During the 1970s, the discovery of several low-grade gold deposits in the Battle Mountain Range fueled a renewed exploration interest in the Mule Canyon area. In 1986, Gold Fields Mining Corporation discovered an economic gold deposit in Mule Canyon. In 1989, Gold Fields Mining Corporation was purchased by Hanson PLC, a building materials company, which in June 1993 transferred the ownership of the Mule Canyon property to Santa Fe Pacific Gold Corporation (Santa Fe). In July of 1995, Santa Fe began development of the Project. The Mule Canyon Mine was initially designed and permitted to process approximately 7 to 10 million tons of gold-bearing ore by processing 4.1 million tons of low-grade oxide ore by cyanide heap leaching.

In November 1995, the on-site milling option was abandoned in favor of processing the high-grade refractory ores at other existing facilities. In May 1997, the Permittee acquired Santa Fe, including the Mule Canyon Mine. The Permittee continued mining at Mule Canyon through December 2005. During this final phase of mining, site closure and reclamation was initiated and is continuing to date.

Water Pollution Control Permit (WPCP) NEV0094110 (Permit) was issued by the Nevada Division of Environmental Protection (Division) and first became effective on 9 October 1995. The Permittee submitted renewal applications in 2000, 2004, and 2013.

Geology: The Mule Canyon gold deposit is characterized by complex folded, faulted, and interleaved thrust blocks in the upper plate of the Roberts Mountain Thrust. The geology of the site generally comprises sub-horizontal, strongly layered dacites and tuffs. Mineralization is structurally controlled and is hosted in argillized and silicified Tertiary volcanic and volcanoclastic rock. The general dip of the volcanic rocks is about 10 to 15 degrees to the southeast. The mineralization has been controlled by the prominent north to northwest structural orientation, evident in aerial photos. The layered nature of the rock is important as a control in the overall groundwater system.

The ores at Mule Canyon have been oxidized to depths of 15 to 75 feet and no significant zones of secondary enrichment have been recognized at this locality. This oxide material has, in general, a low net neutralizing potential. The underlying unoxidized ores (sulfides) account for approximately 85 percent of the total ore reserve. The bulk of the contained gold appears to be tied up within the crystal lattice of arsenopyrite and other complex sulfides. These sulfides are refractory in nature and require additional treatment (autoclave or flotation) to achieve satisfactory gold recoveries.

Pits (6)

Mining was performed using conventional open pit mining methods. Between 1995 and 2002, six open pit areas were identified for potential development, and by the suspension of mining activity in 2002, five pits (South, Main, Northwest, West, and North) had been developed. Active mining commenced once again in December 2004 with additional mining of the North Pit and the development of the Ashcraft Pit.

The six pits are generally oriented on a north to south axis and are ordered as follows: North Pit, Ashcraft Pit (approximately 1,000 feet southeast of the North Pit), Northwest Pit (approximately 1,000 feet southwest of the Ashcraft Pit), West Pit (approximately 1,000 feet south of the Northwest Pit), Main Pit (approximately 1,000 feet east of the West Pit), and finally the South Pit which is approximately 1,500 feet south of both the West and Main Pits. The distance between the North and South Pits is approximately 1 mile.

Pit Lake Water Balance: Water balance models were submitted for each pit in the *Mule Canyon Final Permanent Closure Plan* (Schlumberger Water Services, 2010). The models concluded that for each pit, there would be a slow recovery of water levels following the completion of mining. As of the 2017 Permit renewal, five pits had exhibited persistent pit lakes. Three of these pit lakes, North, Northwest, and Main, are predicted to stabilize below their current rims. The South Pit Lake and the Ashcraft Pit Lake will stabilize above their current rims. Table 1 includes pit parameters.

Table 1 – Parameters of the Mule Canyon Pits

CRITERIA	Ashcraft Pit	Main Pit	North Pit	Northwest Pit	South Pit	West Pit
Mining Completion Date	2005	1999	2005	2002	1999	1998
Pit Footprint (acres)	9	19	20	23	32	17
Pit De-Watering Required	Yes	Yes	Yes	Yes	Yes	No
Floor Elevation Prior to backfill (feet AMSL)[(a)]	6,360	6,090	6,465	6,285	5,955	6,315
Floor Elevation Following Pit Backfill[(b)] (feet AMSL)	No Backfill	6,305	6,560	6,400	No Backfill	6,375
Floor Depth Below Rim (feet bgs)[(c)]	200	50	40	150	275	5
Estimated Pre-Mining Groundwater Elevation (feet AMSL)	6,560	6,360	6,600	6,550	6,230	6,380
Pit Geometry- Lowest Rim Elevation (feet AMSL)	Side-cut 6,494	Fairly symmetric 6,352	Side-cut 6,612	Symmetric 6,487	Side-cut 6,051	Fairly symmetric 6,517
Predicted Pit Lake Final Elevation (feet AMSL)	6,490	6,312	6,580	6,415	>6,051	6,375
Pit Lake Elevation as of 12/2016 (feet AMSL)	6,495[(d)]	6,305	6,566	6,433	6,036	Dry
Actual or Potential Pit Lake Outflow	Yes	No	No	No	Yes	No

(a) AMSL= above mean sea level
(b) Only oxide material was used as pit backfill.
(c) bgs = below ground surface
(d) The Ashcraft spillway is at this elevation.

Pit Lake Water Quality: Geochemistry models were also developed for each pit lake. The pits, with the exception of the South Pit, are developed in predominantly oxide bedrock. Most of the sulfide zones occur in the lower benches below predicted final water levels, although some residual zones occur in the upper walls of the South, Northwest, and North Pits. Table 2 displays recent pit lake chemistry. Most of the pit lakes are believed to be part of a flow-through groundwater system, especially the Ashcraft, Main, and South Pit lakes.

Table 2 – Pit Lake Chemistry, Third Quarter 2018

Constituents of Concern	Division Profile I/III Reference Values (mg/L)[(a)]	Ashcraft Pit (mg/L)[(b)]	Main Pit (mg/L)[(b)]	North Pit (mg/L)[(b)]	Northwest Pit (mg/L)[(b)]	South Pit (mg/L)[(b)]	West Pit (mg/L)[(b)]
Alkalinity (total)	...	69.3	80.5	36.9	48.5	<1.0	22.2
Arsenic	0.01/ 0.20	0.103	<0.025	0.041	0.029	<0.025	0.006
Cadmium	0.005/ 0.05	<0.002	<0.002	<0.002	0.0021	<0.002	<0.002
Manganese	0.10/ 377	<0.008	0.066	0.017	0.057	11.7	0.027
Mercury	0.002/ 0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Constituents of Concern	Division Profile I/III Reference Values (mg/L)[a]	Ashcraft Pit (mg/L)[b]	Main Pit (mg/L)[b]	North Pit (mg/L)[b]	Northwest Pit (mg/L)[b]	South Pit (mg/L)[b]	West Pit (mg/L)[b]
Nitrogen, Total (as N)	10/ 100	<0.55	0.64	<0.55	<0.55	<0.05	1.04
pH SU[c]	6.5 – 8.5	8.2	7.9	8.4	7.6	4.0	8.9
Selenium	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	0.003
Sulfate	500 /...	115	1,230	228	1,840	4,520	962
Total Dissolved Solids (TDS)	1,000/ 7,000	260	1,820	382	2,650	7,040	1,480

(a) mg/L = milligrams per liter
(b) Unfiltered total recoverable fraction, excepting pH.
(c) SU = Standard Units

North Pit: The Schlumberger water chemistry model used the industry-standard code PHREEQ-C to simulate mixing and reactions. The model predicted that the average sulfate values will increase to just over 1,000 mg/L in 25 years post-mining and 3,700 mg/L after 100 years. As of the 2017 Permit renewal, the sulfate was 285 mg/L (12 years post-mining). The model further predicts that arsenic will remain relatively stable at approximately 0.05 mg/L; magnesium and selenium will remain fairly stable. The model indicates that North Pit is part of a groundwater flow through system but acts as a weak sink during the summer months.

Ashcraft Pit: The Ashcraft Pit Lake drains into the Ashcraft Pit Water Collection and Conveyance System (APWCCS). This drain was constructed in 2007 to address the potential for this pit lake to overtop the existing rim. The system collects overflow water from the Ashcraft Pit through a spillway that transitions into a prefabricated flume for flow rate measurement and then continues downgradient along an existing ditch into an unnamed ephemeral drainage that flows into Mule Canyon and, eventually, Whirlwind Valley. The outflow water infiltrates and evaporates rapidly once exiting the pit. Weekly inspections during pit lake outflow are required. See the Permit Part I.D. Monitoring Requirements for APWCSS sampling obligations. According to the 2010 closure plan, any effects of the discharge from the APWCCS have not been observed in the downgradient monitoring well MU-1365; however, this well has been dry for an extended period and no recent data are available. Hence, the 2017 Permit renewal included a Schedule of Compliance (SOC) item requiring the installation of a monitoring well downgradient of the Ashcraft Pit discharge. This well, WMU-26, was installed in June 2018 and produced good water returns during the pump test. It was added to the Permit via an engineering design change on 23 July 2018. This well will monitor any groundwater impacts from the Ashcraft Pit discharge.

The Ashcraft Pit contains less exposed sulfide wall rocks than all other pits with the exception of the West Pit. Predictions made by the 2010 Schlumberger model include a gradual increase in TDS, with calcium, magnesium, sodium, chloride, and sulfate. Trace metals will slowly increase, including arsenic and manganese. The variations in future pit lake chemistry will be dependent on flow pathways along pit walls and the outflow at the APWCCS. Arsenic has exceeded Profile I reference values but not Profile III. Arsenic is elevated in wells in the area (figures are results averaged over four quarters of 2016):

elevated in wells in the area (figures are results averaged over four quarters of 2016): WMU-12 (0.018 mg/L), MU-1336 (0.008 mg/L), MU-1338 (0.03 mg/L), MU-1356 (0.0115 mg/L), MU-1358 (0.009 mg/L), and MU-1351 (0.013 mg/L).

The Permitted discharge of excess Ashcraft Pit Lake water continues to be conditional. Pit lake water meeting Division Profile I reference values may be discharged without restriction. However, should future pit lake water quality fail to meet Profile I reference values, then either: 1) The pit water discharge shall cease; 2) The operator shall treat the pit water to Profile I reference values prior to discharge; or 3) The operator shall provide evidence that groundwater in the areas of the discharge will not be degraded as stipulated under NAC 445A.424. The Schlumberger model indicates that the values for manganese (1.5 mg/L), sulfate (781 mg/L), arsenic (0.12 mg/L), and antimony (0.01 mg/L) will all exceed Profile I reference values by year 100 post-mining.

The Pit Dewatering Pond monitoring wells are downgradient of the Ashcraft Pit. Several of these wells may be of use with respect to NAC 445A.424 requirements.

Northwest Pit: Between 2005 and 2006, the Northwest Pit was partially backfilled with non-reactive rock to approximately 6,410 foot elevation. A portion of the pit on the eastern side was backfilled to 6,445 feet AMSL. The pit intersects a number of interflow zones causing seeps, some of which appear year round. The seeps are too inaccessible to monitor. However, a flow rate of 1 gallon per minute was used in the PHREEQ-C model based on field observations.

The closest downgradient monitoring well is MU-1357. The water level in the well fluctuates around 6,360 feet AMSL. According to the Schlumberger closure plan, the presence of north-south trending structures in the Northwest Pit area suggests that this well is not in hydraulic communication with the pit. Three possible closure alternates were proposed in the closure plan: 1) Complete backfilling to above the predicted final lake elevation; 2) Increase the partial pit backfill to bring the pit floor up to close to the predicted long-term stabilized water elevation (6,437 – 6,439 feet AMSL); and 3) Do no additional backfill beyond the current condition. Per the closure plan, the preferred course is alternative 3 as the pit lake chemistry does not exceed Profile III reference values.

Predictions made in the closure plan include the formation of aluminum hydroxide, magnesium sulfate, gypsum, and other evaporates. At 100 years post-mining, the 2010 model predicts an increase of magnesium (1,005 mg/L), manganese (2.70 mg/L), and sulfate (7,064 mg/L).

West Pit: This pit was backfilled in 1999 following completion of mining in 1998. Seasonal meteoric water ponding has occurred. Pond sampling results indicate a neutral pH with slightly elevated TDS, sulfate, and manganese concentrations. The vast majority of exposed West Pit host material is oxide; all backfill is also oxide. Under these circumstances, past empirical experience would indicate that high concentrations of metals in solution, into the long-term, should not be a concern. As such, predictive water quality modeling was not conducted. Other than elevated pH, West Pit water quality meets Division Profile III reference values (see Table 2).

Main Pit: Mining in this pit occurred from 1996 to 1999. Pit de-watering was done via sumps in the pit floor. The pit was backfilled with approximately 215 feet of oxide material to 6,304 feet AMSL. A piezometer, MU-1341, was installed to monitor pit water elevation. The water rose to just above the backfill surface between 6,307 and 6,311 feet AMSL, resulting in a persistent pit lake.

Pit lake modeling by Schlumberger predicts that the pit lake will remain above the backfill at no less than 6,306 feet AMSL. Two closure scenarios have been proposed: complete backfill and partial backfill. The complete backfill would involve placing non-reactive material to an elevation well above the highest estimated pit lake level. It is anticipated that outflow would occur at around 7 to 8 gpm. Partial backfill with oxide material is the current scenario with sulfide exposures in the pit wall under water to minimize oxidation (Schlumberger, 2010). It is estimated, based on modeling predictions, that the Main Pit Lake has reached its maximum elevation and is stabilizing; however, seasonal fluctuations in chemistry have been observed. Seasonal variability in water level is predicted to be between 6,306 and 6,309 feet AMSL on average. Long term chemistry predictions show an increase in sodium, calcium, magnesium, manganese, sulfate, and chloride, but no constituents are forecast to be above Division Profile III reference values.

In April 2016, the Permittee submitted an Action Plan for investigating a sulfate plume located near the Main Pit and the Pit Dewatering Pond. The proposal included using bromide tracers applied to the Main Pit Lake; nearby monitoring wells, particularly new wells WMU-24 and WMU-25, will be analyzed for tracer presence to determine hydrologic pathways. Application of the bromide tracer was completed in 2018; the resulting report confirmed the probability that Main Pit was part of a flow-through system and was most likely contributing sulfate to the groundwater. The 2019 Permit renewal includes an SOC item requiring the submittal of a corrective action plan by the end of April 2019.

South Pit: The South Pit was mined from 1997 to 1999 to a final pit floor elevation of 5,955 feet AMSL. The pit was dewatered via sumps in the floor. Water began filling the pit in August 2000 when the pumps were turned off. A maximum water elevation of 6,049 was reached in May 2005. A minor amount of lime and soda ash was added to the lake in August 2004 and late 2005 with limited results in pH stabilization, presumably due to low mixing. The pit was never backfilled. According to the closure plan, backfill was considered impractical due to the loss of evaporative removal of material from the water balance. The pit would continue filling and outflow would require water management downstream of the pit. A reverse osmosis system was used in 2005 and 2006 to treat the outflow but has since been discontinued. The current management plan consists of the use of evaporators to keep the pit lake level low and prevent the outflow of poor quality water.

South Pit Lake Management Program: This program has the following long-term goals: 1) reduce meteoric and groundwater inflows to prevent pit lake outflow; 2) improve pit lake water quality. As part of the first goal (reducing inflows), the Permittee has constructed upgradient stormwater diversion structures. With respect to the second goal (improving pit lake water quality), the Permittee has taken steps to reduce pit lake inventory.

In order to reduce pit lake inventory, the Permittee has conducted an evaporation regimen. In 2007 and early 2008, the in-situ snowmaker system was modified (larger piping and pump) and relocated to upper pit benches with the intent of increasing evaporation efficiency. The Division included an SOC item in the 2017 Permit renewal to either eliminate or neutralize the pit lake. The work will take several years and an updated Final Plan for Permanent Closure (FPPC) for the South Pit will most likely be necessary. On 13 September 2018, the Permittee submitted a request to extend the deadline for the South Pit FPPC to the end of March 2019. The request was approved on 21 September 2018. The SOC item was included with the 2019 Permit renewal.

Groundwater Monitoring Wells (20)

There are currently 12 groundwater monitoring wells adjacent to the six pits and one pit backfill piezometer (MU-1341). The piezometer is completely submerged in the Main Pit Lake and is not accessible; it will remain in the Permit should the pit lake recede and sampling becomes possible. Table 3 depicts monitoring wells associated with the pit lakes.

Table 3A: Pit Lake Monitoring Well Chemistry, Third Quarter 2018

Constituents of Concern	Division Profile I Reference Values (mg/L)	WMU-2A (mg/L)	WMU-12 (mg/L)	MU-1336 (mg/L)	MU-1337 (mg/L)	MU-1338 (mg/L)
Depth to water (ft. bgs)[a]	-	48.8	153.4	416.4	124.4	99.7
Alkalinity (total)	-	140	13.2	141	144	137
Arsenic	0.01	<0.003	0.008	0.008	0.005	0.029
Cadmium	0.005	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.10	<0.008	0.158	<0.008	0.073	0.043
Mercury	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nitrogen, Total (as N)	10	6.9	<0.55	<0.05	<0.55	<0.55
pH (SU)	6.5 – 8.5	7.7	7.4	7.9	7.9	8.0
Selenium	0.05	0.005	<0.003	<0.003	<0.003	<0.003
Sulfate	500	632	827	36.2	299	154
TDS	1,000	1,130	1,150	255	639	409

(a) Ft. bgs = feet below ground surface

Table 3B: Monitoring Well Chemistry, Third Quarter 2018

Constituents of Concern	Division Profile I Reference Values (mg/L)	MU-1343 (mg/L)	MU-1356 (mg/L)	MU-1357 (mg/L)	MU-1358 (mg/L)
Depth to water (ft. bgs)	-	222.3	61.3	260.6	27.7
Alkalinity (total)	-	200	131	78.6	109
Arsenic	0.01	0.006	0.016	0.007	0.004
Cadmium	0.005	<0.002	<0.002	<0.002	<0.002
Manganese	0.1	0.01	<0.008	<0.008	0.81
Mercury	0.002	<0.0002	<0.0002	<0.0002	<0.0002
Nitrogen, Total (as N)	10	<0.55	0.57	<0.55	<0.55
pH (SU)	6.5 – 8.5	8.2	7.7	8.1	7.0
Selenium	0.05	<0.003	0.017	<0.003	<0.003
Sulfate	500	88.5	126	48.1	540
TDS	1,000	438	477	206	944

Two additional pit lake area groundwater monitoring wells, MU-1364 and MU-1365 have been dry and no recent data are available.

The monitoring wells are associated with the pits as follows (some are shared between several pits):

- North Pit Lake: MU-1336, MU-1337;
- Ashcraft Pit Lake: MU-1339A, MU-1351, MU-1352B, MU-1354A, MU-1355, MU-1361B, MU-1362, MU-1363, MU-1364 (dry), MU-1365 (normally dry), and WMU-26;
- Northwest Pit Lake: MU-1337, MU-1357, WMU-12;
- West Pit: MU-1357, WMU-12;
- Main Pit Lake: WMU-12, MU-1338, MU-1339A, MU-1341, MU-1351, MU-1352B, MU-1354A, MU-1355, MU-1356, MU-1357, MU-1361B, MU-1362, MU-1363, WMU-24, and WMU-25;
- South Pit Lake: WMU-2A, MU-1343, MU-1358.

Some of these wells overlap the Pit Dewatering Pond (PDP) monitoring area and are associated with both the pit lakes and the PDP.

In addition to the 12 wells associated with the pits, there are eight monitoring wells adjacent to the Pit Dewatering Pond: MU-1339A, MU-1351, MU-1352B, MU-1354A, MU-1355, MU-1361B, MU-1362, and MU-1363. The chemistry in these wells show exceedances in Division Profile I reference values for MU-1352B in sulfate (654 mg/L) and TDS (1,230 mg/L); MU-1354A also in sulfate (601 mg/L) and TDS (1,130 mg/L); MU-1355 in TDS (1,210 mg/L) and MU-1361B also in TDS (1,190 mg/L) per the Third Quarter 2018 monitoring report. As noted in the discussion of the Main Pit, an investigation is being undertaken by the Permittee to determine options for remediation of the groundwater contamination plume.

In September and November 2014, nine additional wells were constructed to further delineate groundwater impacts around the pits. A number of these wells showed neat cement incursion into the screening levels and have been providing suspect data; they have not been included for Permit-required monitoring. See Figure 1 for site-wide map.

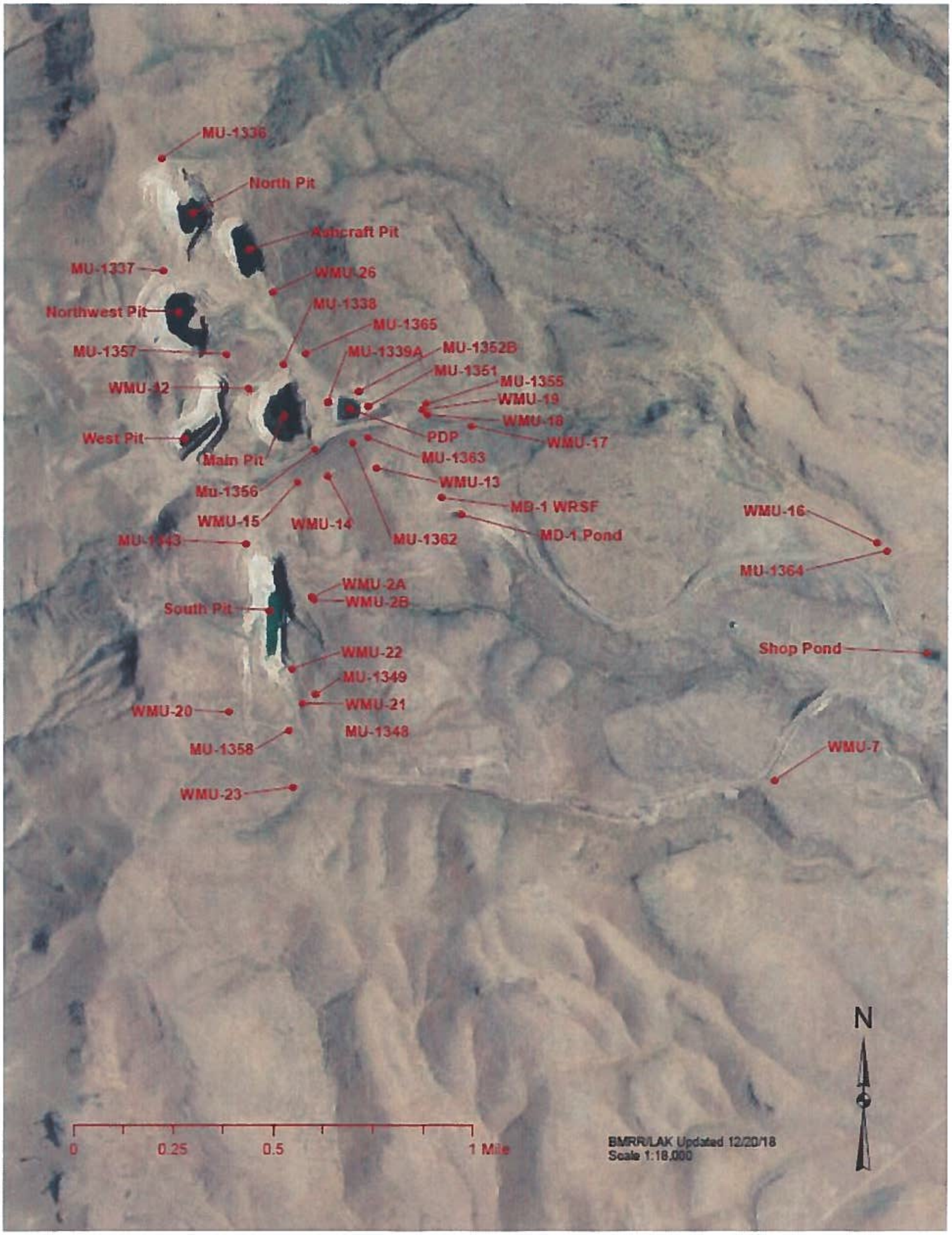

Figure 1: Locations of facilities and monitoring wells.

Waste Rock Storage Facilities (6)

Mining at Mule Canyon generated approximately 39,700,000 tons of waste rock overburden. Approximately 30.7 million tons of overburden was deposited into six WRSFs: MD-1, Upper MD-1, MD-2, NWD, SD-4, and WD-1. The remaining 9 million tons of oxide overburden was used for pit backfill and road construction.

All WRSFs contain sulfide waste rock, much of which was classified as potentially acid-generating (PAG) material. All PAG material is isolated within the WRSF. The PAG waste rock closure and reclamation work consisted of encapsulating the material within a minimum of 5-feet of non-reactive (inert or acid neutralizing) cover followed by 1-foot of growth medium. All WRSFs are monitored quarterly for physical stability and the presence of seepage. Table 4 below provides individual WRSF parameters.

Table 4: Mule Canyon Waste Rock Storage Facilities

WRSF	Surface Area (acres)	Maximum Elevation (feet AMSL)	Approximate Volume of Material (tons)	Approx. Volume % of PAG Material (ANP/AGP <1.2)
MD-1	22	6,360	3,400,000	78%
MD-1 (Upper)	7	6,400	440,000	>50%
MD-2	60	6,275	1,400,000	64%
NWD	72	6,640	12,000,000	38%
SD-4	60	6,250	6,700,000	91%
WD-1	55	6,550	6,800,000	38%

Upper MD-1 WRSF: In early 2005, a low pH seep was detected at the toe of the Upper MD-1 WRSF. The stormwater diversion channels were improved and in December 2006, the Permittee installed a gravity-fed, Seepage Collection Pond just below the toe of the WRSF. The MD-1 pond is double-lined with an 80-mil high-density polyethylene (HDPE) primary liner, a 60-mil secondary liner and an HDPE geonet leak detection layer in between the liners. The pond holds approximately 88,000 gallons with 2-feet of freeboard.

Total solution collected in 2006 was 216,500 gallons over four months, averaging 1.3 gpm. This was from the toe of the WRSF and from surface water that infiltrated into diversion channels along the eastern edge. In 2007 the total seepage collected was 126,000 gallons over three months averaging approximately 1.0 gpm.

In 2016 and 2017, a synthetic liner was installed over the PAG-containing area of the Upper MD-1 WRSF. Past reclamation efforts to eliminate the seepage were not successful so the liner installation was a final alternative. For the cover, 80-mil low-linear density polyethylene ("Super Gripnet"™) was overlain with 12 ounce geotextile. The cap includes 2 feet of fill material above the geotextile and 18 inches of growth media. Per the Third Quarter 2018 monitoring report, the MD-1 Pond is dry.

Ancillary Facilities

- Maintenance Shop Sediment Pond
- Main Pit Dewatering Pond
- Support Facilities: maintenance shop, fuel station, warehouse, fuel tanks, lay down areas, weather stations, and former ore stockpile areas.

Maintenance Shop Sediment Pond: The Maintenance Shop Sediment Pond (Shop Pond) is located northwest of the Maintenance Shop and downgradient of the former sulfide ore stockpiles. The 1.8 million gallon capacity pond was initially designed to collect sediment and run-off from the sulfide ore stockpiles (since removed), the Maintenance Shop, the proposed Mill Facility area, wash bay water, and treated sewage.

In 2006, the Shop Pond was upgraded to a double lined facility. A 60-mil HDPE liner was installed over the existing liner, followed by a layer of HDPE geonet with 80-mil HDPE as the primary liner. There is no evidence that the Shop Pond has ever leaked in either configuration. It is possible that this pond may be of use in future closure activities and so will remain available at least into the short term. The Shop Pond leak detection will continue to be monitored quarterly.

Main Pit Dewatering Pond: The PDP was initially constructed in 1996 as a single-lined pond for the purpose of storing up to 5.4 million gallons of water from the Main Pit dewatering operation. In late 2004, elevated constituents (TDS, sulfate, and nitrate) in monitoring well MU-1351, downgradient of both the Main Pit and the Pit Dewatering Pond, were reported and an investigation commenced.

Nine additional monitoring wells (MU-1339A, MU-1352B, MU-1353A, MU-1353B, MU-1354A, MU-1355, MU-1361B, MU-1362, and MU-1363) were completed in 2005. Monitoring data confirmed that the PDP was leaking. A corrective action plan was developed and implemented. As part of this plan, the pond was emptied. A Risk Assessment was performed by JBR Environmental Consultants, Inc. in 2006. The conclusions of the Risk Assessment indicate that elevated levels of the constituents of concern would not leave Newmont property, there would be no permanent impacts to local groundwater conditions, and there was no presumed risk to the public health or to the ecology.

The PDP was subsequently upgraded to a double lined pond. In 2006, a new 60-mil HDPE secondary liner was installed over the existing liner, followed by a layer of HDPE geonet and finally by an 80-mil HDPE primary liner. The pond was also retrofitted with a leak detection system. Since the retrofit completion, this pond has only impounded limited meteoric water, with Profile I analyses showing all constituents within reference values except arsenic (0.016 mg/L in 2016). On 20 June 2018, the Permittee submitted an FPPC for the PDP. The FPPC detailed that the pond would be closed via dewatering, sampling of the remaining pond sludge, folding the liner over the dried sludge, and burying the pond in place. The plan was approved by the Division on 5 October 2018, following several revisions. As of the 2019 Permit renewal, the closure work was still pending, although an SOC item required an action plan by the end of April 2019.

Support Facilities: A maintenance shop, fuel station, warehouse, fuel tanks, lay down and borrow areas will remain at least through the short term. The oxide ore stockpile was closed and reclaimed in 2006 and the sulfide ore stockpile area in 2007. In 2005 and 2006, Newmont installed two onsite weather stations. One is located near the South Pit and the other on the NWD WRSF. As of the 2017 Permit renewal, data collected included pan temperature, pan evaporation, solar irradiance, wind speed, wind direction, ambient temperature, relative humidity, precipitation and barometric pressure. The 2019 Permit renewal required ambient temperature (minimum/maximum), relative humidity (percent), wind speed (miles per hour), wind direction (azimuth degree), total precipitation (inches), solar irradiance (watts per square meter), and snow water equivalent. These two stations will remain operational.

C. Receiving Water Characteristics

The Mule Canyon Mine is located on relatively steep southeast sloping topography near the northern end of the Shoshone Mountain Range. Elevations range from approximately 5,500 to 7,000 feet AMSL. Annual precipitation in the area of the pits is approximately 12 inches per year. The estimated pan evaporation rate is approximately 65 inches per year (*Mule Canyon Pit Lake Water Balance Report*, HDR, April 2017).

There are no perennial streams located within the Mule Canyon Mine boundary or in the surrounding areas. Ephemeral drainages occur that convey meteoric runoff from areas east of Whirlwind Valley. Intermittent flows also occur in some of the drainages immediately downstream of discharging springs. In 2011, the U.S. Army Corps of Engineers issued a Jurisdictional Determination, dated 16 November 2011, to the Permittee. The letter stated that the ephemeral drainages around the Mule Canyon Mine were not considered Waters of the U.S. This determination was renewed in August 2018; there are no U.S. jurisdictional waters within the Project area. Additionally, no drainages around the Mule Canyon Mine have surface water quality standards per Nevada Administrative Code.

Groundwater in the vicinity of the Mule Canyon Mine generally flows in a southeastern direction from the crest of the Shoshone Mountain Range through bedrock aquifers to lower elevations in Whirlwind Valley. Virtually all groundwater movement at Mule Canyon is fracture controlled, and occurs in joints and fracture zones associated with the principal geologic structures within the volcanic layers. Prominent north-trending cross structures cause the groundwater system to be strongly compartmentalized and stair-stepped to the southeast. Recharge to the groundwater system is low due to the steep topography, miniscule porosity, and strongly layered nature of the volcanic rocks. Due to the lack of sufficient onsite groundwater, the facility's production well is located 4 miles to the east in Whirlwind Valley. See section on groundwater monitoring wells for local aquifer chemistry.

D. Procedures for Public Comment

The Notice of the Division's intent to issue a Permit authorizing the facility to 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, the regional administrator of EPA Region IX, 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 renewed Permit.

F. Pathway to Final Closure and Permit Termination

In accordance with NAC 445A.409 and 445A.446, for final closure and Permit termination the Permittee must demonstrate to the Division that: 1) all sources at the facility have been stabilized, removed, or mitigated; 2) any applicable requirements in NAC 445A.429, 445A.430, and 445A.431 have been achieved; and 3) sufficient post-closure monitoring has occurred to verify the adequacy of these actions to ensure the long-term protection of waters of the State, human health, and wildlife under the physical, chemical, and climatic conditions reasonably expected to occur at the site. If the facility includes a long-term trust and/or requires perpetual treatment or maintenance, post-closure monitoring may never be reached and the Division may not be able to terminate the Permit.

The pathway to final closure and Permit termination at this facility includes the following specific actions:

- Submit the Final Closure Report for the Pit Dewatering Pond;
- Submit the FPPC for the South Pit Lake and implement the approved plan;
- Confirm stabilization of the chemistry of the South Pit Lake;
- Submit the remedial action plan for the groundwater plume that exists in the vicinity of the Pit Dewatering Pond and implement the approved plan;
- Submit all required studies and complete approved remedial work on pit lakes and associated groundwater;
- Perform post-closure monitoring on all components to ensure successful stabilization;
- Discuss with the Division whether the facility is ready for final closure and Permit termination. If so, submit for review and approval a request for final closure and Permit termination including a demonstration of compliance with all applicable closure requirements (e.g., NAC 445A.379, 445A.409, 445A.424, 445A.429, 445A.430, 445A.431, 445A.446, 445A.447).

The Division may require additional actions if warranted in accordance with applicable statutes, regulations, orders, or Permit conditions.

G. Rationale for Permit Requirements

Long-term pit lake water quality will not be fully understood until groundwater and pit lake levels have stabilized. All pit lakes will continue to be monitored quarterly. Individual pit lake water balance and predictive water quality models will be updated as required. The South Pit Lake management activities, including evaporation, treatment and/or backfill, are subject to modification; the 2019 Permit renewal requires that this pit lake's chemistry be stabilized. In addition, the groundwater plume associated with the Main Pit and/or the Pit Dewatering Pond is required to be remediated; see the discussion regarding the Main Pit above.

No further closure actions, other than routine monitoring, were proposed for the North Pit Lake in the 2010 closure plan. The permitted discharge of excess Ashcraft Pit Lake water is conditional and is dependent upon the effluent water quality posing no threat to waters of the State; an SOC item was included in the 2017 Permit renewal for the purpose of confirmation. With respect to the Northwest and Main Pits, the long-term closure plan goal envisions that backfill, placed at stabilized pit lake elevations, would be seeded to enhance evapotranspiration while minimizing the potential for a persistent pit lake. At this time, this overall approach will continue to be the long-term management plan, although subject to modification dependent on the stabilized pit lake elevations and water quality.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S.C. 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 (50CFR10, April 15, 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service are 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. 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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