

Elko County, Nevada, USA Report for NI 43-101 First Majestic Silver Corp. SLR Project No: 233.03396.R0000 April 30, 2021





Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA

SLR Project No: 233.03396.R0000

Prepared by
SLR Consulting (Canada) Ltd.
55 University Ave., Suite 501
Toronto, ON M5J 2H7
for

First Majestic Silver Corp. 1800 – 925 West Georgia Street Vancouver, BC V6C 3L2

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Prepared by: Ryan Rodney, C.P.G. Gordon L. Fellows, P.E. Chelsea Hamilton, P.Eng. Andrew P. Hampton, M.Sc., P.Eng.

Jeremy Scott Collyard, MMSA QP

Peer Reviewed by: Luke Evans, M.Sc., P.Eng. Jason J. Cox, P.Eng. Lance Engelbrecht, P.Eng. Deborah A. McCombe, P.Geo. Approved by:

Project Manager Grant A. Malensek, M.Eng., P.Eng.

Project Director Richard J. Lambert, P.E., P.Eng.

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1.0 SUMMARY

1.1 Executive Summary

SLR Consulting Ltd. (SLR) was retained by Jerritt Canyon Gold LLC (JCG) to prepare an independent Technical Report (the Technical Report) on the Jerritt Canyon Gold Mine (Jerritt Canyon or the Mine), located in northeast Nevada, USA. The purpose of this Technical Report is to support the disclosure of Mineral Resource and Mineral Reserve estimates for the underground portion of the Mine. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. SLR qualified persons visited the Mine on April 20, 2021. On April 30, 2021, First Majestic Silver Corp. (First Majestic) acquired all of the issued and outstanding shares of JCG. As such, First Majestic now indirectly owns and operates Jerritt Canyon, through the owner and operator JCG.

First Majestic is a publicly traded company with a portfolio of operating mines and projects. Jerritt Canyon is a long term producer, currently with two mines planning to produce, on average, 2,300 tons per day (stpd) from underground operations primarily using the cut and fill mining method. The two mines include the SSX-Steer Complex (SSX) and Smith. The existing processing plant is operating at a rate of 826,230 tons of ore per annum in 2020 (with capacity for more) and includes primary crushing, drying, secondary and tertiary crushing, dry grinding, roasting and thickening, using a carbon in leach (CIL) for gold recovery and electrowinning for gold refining.

Table 1-1 and Table 1-2 lists the Mineral Resources summary for Jerritt Canyon with an effective date of December 31, 2020, in Imperial and Metric units, respectively. The Mineral Resource and Mineral Reserve estimates conform to Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition and Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions). Mineral Resources are exclusive of Mineral Reserves.

Table 1-1: Summary of Mineral Resources (effective date December 31, 2020, Imperial Units)

Jerritt Canyon

Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)
Measured	4,811	0.159	767
Indicated	406	0.160	65
Measured and Indicated	5,217	0.160	832
Inferred	1,950	0.171	334

Notes:

- 1. CIM (2014) definitions were followed for Mineral Resources.
- 2. Mineral Resources are exclusive of Mineral Reserves.
- 3. Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 0.11 oz/st Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.
- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.



Table 1-2: Summary of Mineral Resources (effective date December 31, 2020, Metric Units)

Jerritt Canyon

Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Measured	4,365	5.47	767
Indicated	368	5.49	65
Measured and Indicated	4,733	5.47	832
Inferred	1,769	5.87	334

Notes:

- 1. CIM (2014) definitions were followed for Mineral Resources.
- 2. Mineral Resources are exclusive of Mineral Reserves.
- 3. Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- 4. Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 3.77 g/t Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.
- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.

The QP is not aware of any other environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate aside from those identified in Section 20 of this Technical Report which are being mitigated by further work by JCG.

Table 1-3 and Table 1-4 present the Mineral Reserves summary as of December 31, 2020 in Imperial and Metric units, respectively. Mineral Reserves are reported based on their elevation relative to the natural water table which is found approximately 6,600 feet above sea level (FASL) or 2,012 metres above sea level (MASL).

Table 1-3: Summary of Mineral Reserves (effective date December 31, 2020, Imperial Units)

Jerritt Canyon

Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)
	Above 6,60	00 FASL	
Proven	1,059	0.18	187
Smith	193	0.17	33
SSX	866	0.18	154
Probable	689	0.19	129
Smith	54	0.18	10
SSX	635	0.19	119
Subtotal Proven + Probable	1,748	0.18	316



Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)
	Below 6,60	0 FASL	
Proven	915	0.22	200
Smith	808	0.22	180
SSX	107	0.19	20
Probable	897	0.21	186
Smith	380	0.26	101
SSX	516	0.17	86
Subtotal Proven + Probable	1,811	0.21	387
Total Proven	1,974	0.20	388
Total Probable	1,585	0.20	316
Total Proven +Probable	3,559	0.20	703

Notes:

- 1. CIM (2014) definitions were followed for Mineral Reserves.
- 2. Mineral Reserves are estimated at a cut-off grade of 0.128 oz/st Au which assumes \$102/st mining cost, \$45/st processing cost, \$18/st G&A cost and 86% metallurgical recovery.
- 3. Mineral Reserves are estimated using an average long term gold price of US\$1,500/oz Au.
- 4. A minimum mining width of 15 ft was used assuming a cut and fill mining method.
- 5. Bulk density is 0.0794 t/ft³.
- 6. Numbers may not add due to rounding.

Summary of Mineral Reserves (effective date December 31, 2020, Metric Units) Table 1-4: Jerritt Canyon

Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
	Above 2,012	2 MASL	
Proven	961	6.1	187
Smith	175	5.9	33
SSX	786	6.1	154
Probable	625	6.4	129
Smith	49	6.2	10
SSX	576	6.4	119
Subtotal Proven + Probable	1,585	6.2	316



Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
	Below 2,012	MASL	
Proven	830	7.5	200
Smith	733	7.7	180
SSX	97	6.4	20
Probable	813	7.1	186
Smith	345	9.1	101
SSX	468	5.7	86
Subtotal Proven + Probable	1,643	7.3	387
Total Proven	1,791	6.7	388
Total Probable	1,438	6.8	316
Total Proven +Probable	3,229	6.8	703

Notes:

- 1. CIM (2014) definitions were followed for Mineral Reserves.
- 2. Mineral Reserves are estimated at a cut-off grade of 4.39 g/t Au which assumes \$112/t mining cost, \$50/t processing cost, \$20/t G&A cost and 86% metallurgical recovery.
- 3. Mineral Reserves are estimated using an average long-term gold price of US\$1,500/oz Au.
- 4. A minimum mining width of 4.6 m was used assuming a cut and fill mining method.
- 5. Bulk density is 2.544 t/m³.
- 6. Numbers may not add due to rounding.

The QP is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate, aside from those identified in Section 20 of this Technical Report which are being mitigated by further work by JCG.

1.1.1 Conclusions

The QPs offer the following conclusions:

1.1.1.1 Geology and Mineral Resources

- JCG geologists have a good understanding of the regional, local, and deposit geology and controls on mineralization.
- Exploration and development sampling and analysis programs involve industry standard practices, providing generally reasonable results. The drill hole database was verified by the QP and is suitable for Mineral Resource estimation work. The resulting data can effectively be used for the estimation of Mineral Resources and Mineral Reserves.
- The methods and procedures utilized to gather geological, assaying, density, and other information are reasonable and meet generally accepted industry standards.



- Sampling and assaying have been carried out using industry standard quality assurance/quality control (QA/QC) practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, secure sample storage, use of third-party laboratories, and use of standards, blanks, and duplicates.
- Since 2015, Jerritt Canyon has made considerable advances in the compilation and interpretation of historical geophysical and geochemical datasets resulting in the identification of 17 high priority target areas. The property holds significant exploration potential, particularly in the southern portion.
- Since January 1, 2015 through December 31, 2020, JCG has drilled a total of 18,533 holes between reverse circulation (RC) and core from underground drilling sites, comprising 2,800,695 ft. This has enabled Jerritt Canyon to increase the size and confidence of the existing resources.
- The geological wireframes are reasonable and plausible interpretations of the drill results.
- The resource model has been prepared using appropriate methodology and assumptions, including:
 - Treatment of high grade assays
 - Compositing length
 - Customized search parameters
 - Bulk density
 - Cut-off grade
 - Classification
- As of December 31, 2020 and at a cut-off grade of 0.11 oz/st Au, the Measured and Indicated Mineral Resources at Jerritt Canyon total 5.217 Mst grading 0.160 oz/st Au containing approximately 832,000 ounces of gold (oz Au). In addition, Inferred Mineral Resources are estimated at 1.950 Mst grading 0.171 oz/st Au containing approximately 334,000 oz Au.
- Mineral Resource estimates have been prepared utilizing acceptable estimation methodologies in accordance with CIM MRMR Best Practice Guidelines. The classification of Measured, Indicated, and Inferred Mineral Resources conforms to CIM (2014) definitions.

1.1.1.2 Mining and Mineral Reserves

- Mining operations at Jerritt Canyon are well established and carried out by an experienced mining contractor at Smith and SSX using the cut and fill mining method.
- A significant portion of the Mineral Reserves are located below the current water table. There is a dewatering plan in place for the mine below the 6,600 FASL water table, which allows for the inclusion of Mineral Reserves below this elevation.
- Groundwater flows in the Roberts Mountain and Hanson Creek formations (the principle aquifers) are controlled primarily by the openness and continuity of fractures and joints with the primary water bearing strata being the ore zones. Faulting and tectonic displacement of the materials in the Jerritt Canyon District is extensive.
- The main faults trend west northwest east southeast, and in general are permeable water conduits. Complementary faults and displacement sets at right angles, south southwest - north



- northeast, are generally highly myolinitized, and tend to form a barrier to groundwater flow and compartmentalize groundwater.
- Dewatering goals of the current operation are to reduce the water level to the pre 2008 level of approximately 6,535 FASL. Currently, pumping is underway to dewater the existing workings. This consists of the operation of two dewatering wells and a barge to dewater Zones 2 and 4. The wells are each pumping at approximately 700 gallons per minute (gpm) while the barge pumps at approximately 400 gpm. Two additional, 500 ft deep underground dewatering wells have been designed.
- It is anticipated that over time Smith will be dewatered at a rate of 2,100 gpm. All pumped groundwater will continue to be conveyed to the water treatment plant (WTP) which has a capacity of 1,400 gpm. Any flows over 1,400 gpm will be routed to Zone 9 prior to treatment. Following treatment, the water is pumped to an underground injection well field consisting of three 1,200 ft deep injection wells located on USFS land.
- Another aspect of Jerritt Canyon mine water/groundwater management is pollution control from Tailings Storage Facility 1 (TSF 1). Initially, TSF 1 was lined with compacted native soils. In addition, there are 90 seepage control wells, 14 freshwater recharge wells receiving water from the tailings WTP, and greater than 80 down gradient monitoring wells (Wanner et al, 2017).
- Production is limited by mine capacity, and production forecasting is based on mining rates of 800 stpd for Smith and 1,200 stpd for SSX. There is potential for increased production from Smith once dewatering is advanced and more headings are available.

1.1.1.3 Mineral Processing and Metallurgical Testing

- Historical gold grade-recovery relationships for three different time periods, 1) 1981 to 2020, 2)1989 to 2020 and 3) 1997 to 2020 were plotted. The first period is inception to date, the second period begins when the roaster was commissioned, and the third period begins when chlorination was discontinued. The inception to date line and the 1989 to 2020 lines are essentially the same. The 1997 to 2020 line indicates a slightly higher sensitivity of gold recovery to feed grade. The QP notes that the data are scattered and the correlations of the three lines are low suggesting that variables other than head grade, including sulfide sulfur oxidation, total organic carbon (TOC), and roaster performance contribute to changes in gold recovery.
- SLR notes that the process operating data indicate very consistent plant feed and operational
 performance and, with the low correlation between grade and recovery, the use of near term
 historical averages would provide a reasonable gold recovery value for planning purposes. The
 operation is currently using a constant average gold recovery of 86% for the life of mine (LOM)
 plan and budget. The consistency in recovery could be affected by changes in mineralogical
 characteristics as new ore-types are encountered in the future.
- The design recovery of the whole ore roaster using oxygen instead of air was 87% to 90%. Pilot plant testing of the oxygen roasted calcine by Dorr Oliver (1987) achieved an average gold recovery of 88%. SLR notes that the process continues to operate consistently in the design range depending primarily on roaster performance, as some of the mineralized materials are reported to have zero gold recovery without oxidation.
- The main deleterious elements are arsenic and mercury. The processing plant is designed with the appropriate gas cleaning systems including mercury scrubbing from the gas streams and mercury collection from the refinery retort condenser.



1.1.1.4 Infrastructure

- Jerritt Canyon is a mature operation that has been operating for nearly 40 years, and as a result the requisite infrastructure is in place including:
 - Access Roads
 - Power supply and distribution
 - Office buildings
 - Warehouse facilities
 - Maintenance shops
 - Laboratory facilities
 - Communication networks
 - Onsite security
 - o TSFs
 - Water management systems

1.1.1.5 Tailings and Water Management Facilities

- TSF 1 is currently inactive and in the process of being closed and reclaimed under a Final Plan for Permanent Closure (FPPC) approved by the State of Nevada regulatory agencies. The TSF 1 FPPC consists of regrading the top impoundment surface to promote runoff and preclude surface water impoundment, placing a working cover impoundment surface on which an high-density polyethylene (HDPE) liner will be installed, installing a three foot thick alluvial growth media cover, and revegetating the final surface with an approved seed mix. As of the date of this Technical Report, the following reclamation and closure activities have been completed on TSF 1:
 - Outer embankment slopes have been graded, covered, and revegetated.
 - Working cover and HDPE liner have been installed over 70% of the 300 acre impoundment surface.
 - Growth media has been installed over approximately 30% of the 300 acre impoundment surface.
- For active tailings management, Jerritt Canyon is currently depositing tailings with a 40:60, solids/water, ratio into TSF 2 Phase 2. TSF 2 is an HDPE lined impoundment with a leak collection and recovery system (LCRS), which is designed and constructed to meet or exceed the most current environmental and engineering standards. As part of the TSF 2 monitoring program, Jerritt Canyon measures pumped flows from the LCRS, hydraulic head development above the TSF 2 secondary HDPE liner, and surrounding groundwater depths, and the presence (or absence) of process solution in the vadose zone underlying TSF 2.
- TSF 2 Phase 3 is currently being constructed as an eight foot raise. Construction and commissioning of TSF 2 Phase 3 is expected in May 2021 and will only provide an additional seven months of tailings storage until December 2021, approximately.
- TSF 2 Phase 4 is planned for construction during 2021 and will allow storage of an additional 1.7 Mst of tailings. Due to the short operational life of Phase 3, TSF 2 Phase 4 must be constructed



and commissioned before December 2021. This construction will require approximately 1.5 million cubic yards of compacted fill excavated from approved borrow source over one mile east of TSF 2. Assuming a planned production rate of 2,350 stpd, TSF 2 Phase 4 will be filled to capacity by December 2023. The Jerritt Canyon Water Pollution Control Permit authorizes up to 3.0 Mst of dry tailings to be produced per annum (approximately 8,200 stpd). If the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 2 Phase 4 to capacity will be shortened proportionally.

- Jerritt Canyon plans to convert the existing WSR to TSF 3 for tailings disposal after TSF 2 is filled to capacity. TSF 3 will store approximately of 2.4 Mst of tailings and provide 2.6 years of tailings storage at an assumed average production rate of 2,350 stpd. Since TSF 3 would be commissioned before January 2024, additional tailings storage (beyond TSF 3) would need to be permitted and constructed before the end of 2025 to ensure a new facility is ready for tailings disposal by the middle of 2026. Likewise, if the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 3 and needing additional tailings storage beyond TSF 3 will be shortened proportionally.
- The feasibility of converting the WSR into TSF 3 in a timely manner relies on the removal of 372 million gallons (Mgal) of process solution which is currently stored within the WSR by the end of 2022. Within the next two years, this volume will require removal via active and passive evaporation and/or treatment via the process WTP. If this volume cannot be removed by the end of 2022, other locations or methods of tailings disposal will need to be permitted, approved, and constructed.
- Currently, the process WTP only removes approximately 200 gpm of process solution from the site-wide water balance inventory as permeate. Under these conditions, a significant increase in the WTP capacity is needed to eliminate positive water balances during the winter and spring. At this stage, the exact increase is unknown, but may be three to four times the current treatment rate for costing purposes.

1.1.1.6 Environmental Considerations

- All of the necessary permits and approvals to operate are either in place or in the process of being renewed or modified.
- Jerritt Canyon has multiple violations related to their environmental permits including air quality, water supply, surface water, and Underground Injection Control (UIC).
- Although environmental permitting requirements are being exceeded, JCG is actively mitigating these issues. Persisting exceedances would likely result in corrective actions and/or fines and not result in the revocation of operational permits due to the social and economic considerations of this operation.

1.1.1.7 Safety

The large number of Mine Safety and Health Administration (MSHA) citations and extended shutdowns imposed during 2017 have been resolved and JCG continues to adhere to MSHA's regulations.



1.1.2 Recommendations

The QPs offer the following recommendations:

1.1.2.1 Geology and Mineral Resources

- 1. Explore the 17 high priority exploration targets. The QP concurs with First Majestic's plans to carry out a multi-year exploration program that will include a significant amount of surface and underground drilling that will cost approximately US\$10 million to US\$15 million annually.
- 2. Continue drilling to expand Mineral Resources.
- Continue to convert Inferred Mineral Resources to Indicated Mineral Resources.
- 4. Update the block models on a regular basis.
- 5. Improve mineralized material tracking and reconciliation procedures.

1.1.2.2 Mining and Mineral Reserves

- 1. The dewatering system does not have a backup power supply. Any type of long term power loss can cause the operation to flood and damage infrastructure. A backup power system is recommended for site to keep critical infrastructure running and prevent damage.
- 2. Consider and assess the viability of surface water wells. This could reduce the risk of flooding underground workings in the event of a site power grid interruption.
- 3. Adopt long term planning and Mineral Reserve estimation processes, initiated by a mining method optimization trade-off study, and carry out multiple mining method planning exercises with the intention of reducing operating cut-off grades.
- 4. Adjust mobile mining fleet as necessary to achieve reduced mining heights.
- 5. Review cut-off grades and modifying factors as part of the planning process and optimize them where appropriate.
- 6. Explore and evaluate the old workings of the mines to determine which areas are accessible. Much of the resource of the mine is located in these areas. Determine if new development is required or rehabilitation of old workings is feasible. If areas are not accessible, then the resource/reserves should be adjusted to reflect the update.

1.1.2.3 Mineral Processing and Metallurgical Testing

1. Complete metallurgical testing of samples from the various mining sources that represent the current and future feed to the processing plant in order to develop more accurate estimates for future gold recovery and to provide information to support blending of plant feed with respect to sulfide sulfur, TOC concentrations, and other variables that contribute to plant performance. Metallurgical testing of two main ore bodies is currently planned, including characterization and roast-CIL leach testing at various grind sizes. The estimated cost of the program is US\$150,000.

1.1.2.4 Infrastructure

1. Construction of the additional TSF capacity and increased WTP capacity are critical to operation of the Mine. These projects should be completed as soon as possible, as planned.



1.1.2.5 Tailings and Water Management Facilities

- 1. Accelerate the removal of surplus process water from the system by the process WTP and forcedair (i.e. active) evaporation. The process WTP needs to treat and remove its original design rate of 700 gpm from the water inventory in order to empty the WSR within one year to prepare it for conversion to TSF 3 before the end of 2023 or preferably sooner.
- 2. Explore the feasibility of designing a downstream raise of the TSF 2 embankment (Phase 5 Raise). Depending on results of embankment stability analyses, which will dictate the additional raise height, TSF 2 Phase 5 could provide multiple years of additional tailings storage.
- 3. Investigate and identify 'green field' areas near the existing process facilities and mill site where future TSFs may be permitted, designed, constructed, and operated. Due to the multiple-year lead times for permitting such facilities, investigation and conceptual designs need to be initiated as soon as possible.
- 4. Regardless of which option is eventually selected for future tailings storage, Jerritt Canyon should start the permitting process for additional tailings storage in the near future, before TSF 2 Phase 4 is filled to capacity in 2023 and assuming the WSR cannot be emptied within the next year.

1.1.2.6 Environmental Considerations

- 1. JCG should continue to mitigate the environmental regulatory exceedances and challenges related to air and water quality to achieve compliance with all their environmental permits.
- 2. To maintain a strong working relationship with regulators, JCG should actively develop a permitting strategy and plan that involves seeking permit approvals and modifications on a regular basis.

1.1.2.7 Safety

1. Efforts to alleviate air quality concerns in the processing facilities and provide working areas that can be accessed without wearing respirators should be a top priority and pursued vigorously.

1.2 **Economic Analysis**

This section has been optionally included in this Technical Report although JCG is a producing company, SSX and Smith are currently in production, and there is no planned material expansion.

The economic analysis contained in this Technical Report is based on the Mineral Reserves, economic assumptions provided by JCG for SSX and Smith, and the capital and operating costs as presented in Section 21 of this Technical Report.

1.2.1 Physicals

Mine life: 5 years (between 2021 and 2025):

• Underground ore tonnes mined: 3.559 Mst Gold grade: 0.20 oz/st Au

Processed:

 Total Ore Feed: 3.559 Mst 0.20 oz/st Au Gold grade:



Contained Metal:

o Gold: 703,164 oz Au

Average LOM Recovery:

 Gold recovery 86%

Recovered Metal:

o Gold: 604,721 oz Au

Payable Metal:

o Gold: 604,721 oz Au

1.2.2 Revenue

Revenue is estimated based on the following LOM weighted average metal prices:

US\$1,500/oz Au Gold price:

1.2.3 Capital Costs

• LOM sustaining capital costs of US\$42.8 million, including closure costs.

Closure costs of US\$5.3 million were estimated annually based on US\$1.50/st milled.

1.2.4 Operating Costs

LOM unit operating cost average of:

Mine Development: US\$12.99/st mined Underground Mining: US\$88.69/st mined US\$45.00/st milled Processing: o G&A: US\$18.00/st milled Total unit operating costs: US\$164.68/st milled. LOM operating costs: US\$586.1 million.

1.2.5 Taxation and Royalties

The Corporate Federal income tax rate in Nevada is 21% and State income tax rate is 5% for an average realized effective income tax rate of 24.95%.

Nevada Select (ELY Gold) royalty rate: 0.5% NSR

NouHgt Technologies royalty rate: 0.225% NSR (based on mill throughput and realized gold price)

Leaseholder land royalties: average \$1.05 million/yr

1.2.6 Cash Flow

SLR reviewed the JCG LOM after-tax cash flow model to confirm the economics of the LOM plan. The model is based on JCG's JCG Model Ver2.0 file, which includes Measured and Indicated material, as well



as material from other areas on the Mine site, and credit for tolling. The JCG model does not take into account the following components:

- Financing costs
- Existing working capital
- Insurance
- Overhead cost for a corporate office

SLR has used JCG's model as a reference for capital and operating cost rates but has created a standalone cash flow model to represent only the Mineral Reserve material. The cash flow summary is presented in Table 1-5. All costs are in Q4 2020 US dollars with no allowance for inflation.



Table 1-5: After-Tax Cash Flow Summary

Jerritt Canyon

	INPUTS	UNITS	TOTAL	2021 Year 1	2022 Year 2	2023 Year 3	2024 Year 4	2025 Year 5	2026 Year 6
AINING	INPUIS	UNITS	IUIAL	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Underground									
Operating Days	365	days	1,770	36	365	365	365	310	
Tonnes milled per day	303	tons / day	2,011	1,99		2,001	2,001	2,001	
Torriles filliled per day		tons / day	2,011	1,55	2,031	2,001	2,001	2,001	
Smith Production		tons	1,434,644	291,08	5 292,022	291,963	291,891	267,681	
Au		oz/t	0.23	0.19		0.21	0.22	0.28	_
				392,410				46,657	
Waste Total Moved		tons	928,101	683,50		181,456 473,419	68,656 360,548	314,338	-
Total Moved		tons	2,362,745	083,30.	2 530,938	4/3,419	300,348	314,338	-
SSX Production		tons	2,124,349	437,99	9 456,743	438,347	438,412	352,848	
Au		oz/t	0.18	0.1		0.18	0.18	0.17	-
Waste		tons	330,794	72,90		66,892	36,296	13,109	_
Total Moved		tons	2,455,143	510,90		505,240	474,708	365,957	-
Total Moveu		tons	2,433,143	310,50.) 330,334	303,240	474,700	303,337	-
Total Production		tons	3,558,993	729,08	748,765	730,310	730,303	620,529	_
Au	1	oz/t	0.20	0.13		0.20	0.19	0.22	-
Waste	1	tons	1,258,894	465,32		248,348	104,952	59,766	
Total Moved	1		4,817,887	1,194,40		978,658	835,255	680,295	-
Total Moved		tons	4,017,007	1,194,40	1,129,271	978,038	833,233	080,295	-
OCESSING									
Mill Feed		tons	3,558,993	729,08	748,765	730,310	730,303	620,529	
Au		oz/t	0.20	0.1		0.20	0.19	0.22	
Contained Au		OZ/C	703,164	131,51		143,550	140,759	133,447	
Contained Au		02	703,104	131,31	133,834	143,330	140,733	133,447	
Mill Recovery									
Au	86%	%	86%	86	% 86%	86%	86%	86%	869
Net Recovery	1	70	5070	66	0 00/0	0070	0070	0070	007
Au		%	86%	86	% 86%	86%	86%	86%	869
Total Average Recovery		% %	86%	86			86%	86%	807
Total Recovered		/0	80%	00	/0 00/0	00/0	8076	80%	
Au		oz	604,721	113,10	132,349	123,453	121,053	114,764	_
Au.		02	004,721	113,10	. 132,343	123,433	121,033	114,704	
VENUE									
Metal Prices		Input Units							
Au	US\$1500 /oz Au	US\$/oz Au	\$ 1,500.00	\$ 1,500) \$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500 \$	1,500
			·	Ŧ -,·	, , , , , , , , , , , , , , , , , , , ,	2,500	2,500	\$ 1,500 ;	_,
Au Pavable Percentage	100%	US\$ '000	100%						
Au Payable Percentage	100%	US\$ '000	100%	100			100%	100%	100%
	100%			100	% 100%	100%	100%	100%	1009
Au Payable Percentage Au Gross Revenue Total Gross Revenue	100%	US\$ '000	\$ 907,081	100 \$ 169,655	% 100% 3 \$ 198,523	100% \$ 185,180	100% \$ 181,580	100% \$ 172,146 \$	100%
Au Gross Revenue	100%		\$ 907,081	100	% 100% 3 \$ 198,523	100% \$ 185,180	100% \$ 181,580	100% \$ 172,146 \$	100%
Au Gross Revenue	100%	US\$ '000	\$ 907,081	\$ 169,653 \$ 169,655	% 100% 3 \$ 198,523	100% \$ 185,180 \$ 185,180	100% \$ 181,580 \$ 181,580	100% \$ 172,146 \$ \$ 172,146 \$	1009
Au Gross Revenue Total Gross Revenue		US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081	\$ 169,653 \$ 169,655	% 100% 3 \$ 198,523 3 \$ 198,523 5 \$ 53	100% \$ 185,180 \$ 185,180 \$ 49	100% \$ 181,580 \$ 181,580	100% \$ 172,146 \$ 172,146 \$ \$ 46 \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport	\$ 0.40	US\$ '000 US\$ '000	\$ 907,081 \$ 907,081 \$ 242 \$ 379	\$ 169,65; \$ 169,65; \$ 4: \$ 7:	% 100% 3 \$ 198,523 3 \$ 198,523 5 \$ 53 3 \$ 78	\$ 185,180 \$ 185,180 \$ \$ 49 \$ 78	100% \$ 181,580 \$ 181,580 \$ 48 \$ 78	\$ 172,146 \$ 172,146 \$ 172,146 \$ \$ 66 \$	100
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees	\$ 0.40	US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ -	\$ 169,65; \$ 169,65; \$ 4: \$ 7: \$ -	% 100% 3 \$ 198,523 3 \$ 198,523 5 \$ 53 3 \$ 78 5 \$ -	\$ 185,180 \$ 185,180 \$ 185,180 \$ 49 \$ 78 \$ -	\$ 181,580 \$ 181,580 \$ 48 \$ 78 \$ -	\$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 66 \$ \$ \$ \$ 66 \$ \$ \$ \$ \$ - \$ \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport	\$ 0.40	US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081 \$ 242 \$ 379	\$ 169,65; \$ 169,65; \$ 4: \$ 7: \$ -	% 100% 3 \$ 198,523 3 \$ 198,523 5 \$ 53 3 \$ 78	\$ 185,180 \$ 185,180 \$ 185,180 \$ 49 \$ 78 \$ -	\$ 181,580 \$ 181,580 \$ 48 \$ 78 \$ -	\$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 66 \$ \$ \$ \$ 66 \$ \$ \$ \$ \$ - \$ \$	1009 5 - 5 - 6 - 6 -
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees	\$ 0.40	US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ -	\$ 169,65; \$ 169,65; \$ 4; \$ 7; \$ - \$ 12;	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 - 3 131	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ - \$ 127	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 66 \$ \$ 5 - \$ \$ \$ 112 \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges	\$ 0.40	US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621	\$ 169,65; \$ 169,65; \$ 4: \$ 7: \$ -	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 - 3 131	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ - \$ 127	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 66 \$ \$ 5 - \$ \$ \$ 112 \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges	\$ 0.40	US\$ '000 US\$ '000 US\$/oz	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621	\$ 169,65; \$ 169,65; \$ 4; \$ 7; \$ - \$ 12;	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 - 3 131	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ - \$ 127	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 66 \$ \$ 5 - \$ \$ \$ 112 \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties	\$ 0.40	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr)	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ - \$ 12: \$ 169,52:	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 - 3 131	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128 \$ 185,052	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ - \$ 127 \$ 181,453	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 66 \$ \$. \$ \$ 112 \$ \$ \$ 172,034 \$	100
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr)	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460	\$ 169,65; \$ 169,65; \$ 4; \$ 7; \$ - \$ 12; \$ 169,52;	100% 100% 198,523 198,523 5 \$ 198,523 5 \$ 53 5 \$ 78 5 . 78 5 . 131 9 \$ 198,392	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128 \$ 128 \$ 128 \$ 128,052	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ - \$ 127 \$ 181,453	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 66 \$ \$ - \$ \$ 112 \$ \$ \$ 172,034 \$ \$	100
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc Nouligt Technologies, LLC	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr)	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460 \$ 4,532 \$ 801	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ 12: \$ 169,52:	100% 100% 198,523 198,523 198,523 5 \$ 53 8 \$ 78 5 78 5 131 9 \$ 198,392	100% \$ 185,180 \$ 185,180 \$ 78	100% \$ 181,580 \$ 181,580 \$ 48 \$ 78 \$ - \$ 127 \$ 181,453 \$ 907 \$ 164	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 46 \$ \$ 66 \$ \$ - \$ \$ 112 \$ \$ \$ 172,034 \$ \$ \$ 860 \$ \$ \$ 140 \$ \$ \$	100
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc NouHgt Technologies, LLC Leaseholder Roylties	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr) US\$ '000 US\$ '000 US\$ '000	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460 \$ 4,532 \$ 801 \$ 5,092	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ 12: \$ 169,52: \$ 84: \$ 166: \$ 1,05:	100% 198,523 198,523 198,523 5 \$ 53 8 \$ 78 5	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128 \$ 128 \$ 185,052 \$ 925 \$ 164 \$ 1,050	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ 127 \$ 181,453 \$ 907 \$ 164 \$ 1,050	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 66 \$ \$ \$ 112 \$ \$ \$ 172,034 \$ \$ \$ 860 \$ \$ \$ 140, \$ \$ 892 \$ \$ 892 \$	100%
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc Nourigt Technologies, LLC	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr)	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460 \$ 4,532 \$ 801	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ 12: \$ 169,52:	100% 198,523 198,523 198,523 5 \$ 53 8 \$ 78 5	100% \$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 128 \$ 128 \$ 185,052 \$ 925 \$ 164 \$ 1,050	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ 127 \$ 181,453 \$ 907 \$ 164 \$ 1,050	\$ 172,146 \$ \$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 66 \$ \$ \$ 112 \$ \$ \$ 172,034 \$ \$ \$ 860 \$ \$ \$ 140, \$ \$ 892 \$ \$ 892 \$	100%
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc NouHgt Technologies, LLC Leaseholder Roylties Total Royalties	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr) US\$ '000 US\$ '000 US\$ '000 US\$ '000	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460 \$ 4,532 \$ 801 \$ 5,092 \$ 10,425	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ 12: \$ 169,52: \$ 84: \$ 1,05: \$ 2,06:	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 \$ 131 9 \$ 198,392 1 \$ 168 0 \$ 1,050 2 \$ 2,210	\$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 78 \$ 128 \$ 185,052 \$ 925 \$ 164 \$ 1,050 \$ 2,140 \$ \$	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ \$ 127 \$ 181,453 \$ 907 \$ 164 \$ 1,050 \$ 2,122	\$ 172,146 \$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 46 \$ \$ 66 \$ \$ - \$ \$ 112 \$ \$ \$ 172,034 \$ \$ \$ 860 \$ \$ \$ 140 \$ \$ \$ 892 \$ \$ \$ 1,892 \$ \$	1009
Au Gross Revenue Total Gross Revenue Treatment Transport Early Settlement fees Total charges Gross NSR Royalties Nevada Select Royalty Inc NouHgt Technologies, LLC Leaseholder Roylties	\$ 0.40 \$ 1,500.00	US\$ '000 US\$ '000 US\$/oz US\$/shipment (12/yr) US\$ '000 US\$ '000 US\$ '000	\$ 907,081 \$ 907,081 \$ 242 \$ 379 \$ - \$ 621 \$ 906,460 \$ 4,532 \$ 801 \$ 5,092	\$ 169,65: \$ 169,65: \$ 4: \$ 7: \$ 12: \$ 169,52: \$ 84: \$ 166: \$ 1,05:	100% 198,523 198,523 198,523 5 \$ 53 5 \$ 78 5 \$ 131 9 \$ 198,392 1 \$ 168 0 \$ 1,050 2 \$ 2,210	\$ 185,180 \$ 185,180 \$ 78 \$ 78 \$ 78 \$ 128 \$ 185,052 \$ 925 \$ 164 \$ 1,050 \$ 2,140 \$ \$	\$ 181,580 \$ 181,580 \$ 181,580 \$ 78 \$ 78 \$ \$ 127 \$ 181,453 \$ 907 \$ 164 \$ 1,050 \$ 2,122	\$ 172,146 \$ 172,146 \$ \$ 172,146 \$ \$ \$ 172,146 \$ \$ \$ 46 \$ \$ \$ 66 \$ \$ \$ - \$ \$ \$ 112 \$ \$ \$ 172,034 \$ \$ \$ 860 \$ \$ \$ 140 \$ \$ \$ 892 \$ \$ \$ 1,892 \$ \$	100



OPERATING COST Mining (Underground) \$ Processing \$ \$ G&A \$ Total Unit Operating Cost Mining (Underground) Processing G&A	101.68 45.00 18.00	UNITS US\$/t milled US\$/t milled	\$	TOTAL		Year 1		Year 2	Year 3	re	ar 4	Year 5	Year	סזי
Mining (Underground) Processing G&A Total Unit Operating Cost Mining (Underground) Processing G&A	45.00		4											
Processing G&A Total Unit Operating Cost Mining (Underground) Processing G&A	45.00			101.68	\$	101.68	4	101.68 \$	101.68	<u>,</u>	101.68	101.68	<u>,</u>	101.68
G&A Total Unit Operating Cost Mining (Underground) Processing G&A		USS/ Lillilleu	\$	45.00	\$ \$	45.00		45.00 \$		\$ \$	45.00			45.00
Total Unit Operating Cost Mining (Underground) Processing G&A	18.00	US\$/t milled	\$	18.00	\$	18.00		18.00 \$	18.00		18.00			18.00
Mining (Underground) Processing G&A			\$	164.68	\$ \$			164.68 \$						164.68
Processing G&A		US\$/t milled	>	164.68	\$	164.68	>	164.68 \$	164.68	>	164.68	164.68	>	164.68
Processing G&A		US\$ '000	\$	361,867	\$	74,131	\$	76,132 \$	74,256	\$	74,255	63,094	\$	-
G&A		US\$ '000	Ś	160,155	Ś	32,809	\$	33,694 \$	32,864		32,864			-
		US\$ '000	Ś	64,062	\$	13,124		13,478 \$	13,146		13,145			-
Total Operating Cost	\$969.18/oz Au	US\$ '000	\$	586,084	\$	120,063		123,304 \$	120,265		120,264			-
Operating Cashflow		US\$ '000	\$	309,950	\$	47,404	\$	72,877 \$	62,647	\$	59,067	67,955	\$	-
CAPITAL COST Direct Cost														
		US\$ '000	_		Ś		Ś	- \$		^		-	\$	
Safety, Health & Environmental			\$	-		-	-			\$				-
Heavy Mobile Equipment		US\$ '000	\$	-	\$	-	\$	- \$		\$		-	\$	-
Expansion		US\$ '000	\$	-	\$	-	\$	- \$		\$		-	\$	-
Modernization		US\$ '000	\$	-	\$	-	\$	- \$		\$		-	\$	-
Other		US\$ '000	\$	-	\$	-	\$	- \$		\$		-	\$	-
Total Direct Cost		US\$ '000	\$	-	\$	-	\$	- \$	-	\$	-	-	\$	-
Sustaining Cost														
Mine Capital		US\$ '000	\$	21,354	\$	4,375	ė	4,493 \$	4,382	ć	4,382	3,723	ė	
•				21,554						\$				-
Exploration Capital		US\$ '000	\$	-	\$	-	\$	- \$				-	\$	-
Tailings Facility		US\$ '000	\$	9,000	\$	9,000		- \$		\$		-	\$	-
Processing Plant		US\$ '000	\$	3,559	\$	729	\$	749 \$	730	\$	730	621	\$	-
Reclamation and closure \$	1.50	US\$ '000	\$	5,338	\$	1,094	\$	1,123 \$	1,095	\$	1,095	931	\$	-
Sustaining Exploration Diamond Drilling \$	1.00	US\$ '000	\$	3,559	\$	729	\$	749 \$	730	\$	730	621	\$	-
Total Sustaining Cost		US\$ '000	\$	42,810	\$	15,926	\$	7,113 \$	6,938	\$	6,938	5,895	\$	-
Working Capital		US\$ '000	\$	(1,284)	\$	(17,519)		(3,668) \$	1,339		236			17,925
All in Sustaining Cost \$	\$1037.85/oz Au	US\$ '000	\$	627,610	\$	118,471	\$	126,750 \$	128,542	\$	127,438	108,485	\$	17,925
CASH FLOW														
Net Pre-Tax Cashflow		US\$ '000	Ś	268,424	\$	48,996	Ġ	69,431 \$	54,371	\$	51,894	61,657	\$	(17,925)
Cumulative Pre-Tax Cashflow		US\$ '000	٦	200,424	\$	48,996		118,428 \$	172,798		224,692			268,424
Cultidative FIE-Tax Castillow		033 000			Ş	40,990	ş	110,420 \$	1/2,/90	Ş	224,032	200,349	۶ ۶	200,424
Depreciation		US\$ '000	\$	42,810	\$	2,979	\$	5,401 \$	7,422	Ś	10,839	16,171	\$	_
Taxes		US\$ '000	Ś	65,319	\$	10,811		16,555 \$	13,505		11,760			
Taxes		033 000	Ş	05,515	ş	10,611	Ş	10,555 \$	13,303	Ş	11,700	2 12,000	Ş	-
After-Tax Cashflow		US\$ '000	Ś	203,105	\$	38,185	4	52,876 \$	40,865	<u>,</u>	40,134	48,969	ċ	(17,925)
			ې	203,103	\$									
Cumulative After-Tax Cashflow		US\$ '000			>	38,185	\$	91,061 \$	131,926	>	172,061	221,029	\$ 4	203,105
All-In Sustaining Cost		US\$/oz	\$	1,041	\$	1,203	\$	986 \$	1,031	\$	1,052	943		
PROJECT ECONOMICS			-											—
PROJECT ECONOMICS			l											
Pre-tax NPV at 5% discounting	5.0%	US\$ '000		\$234,234										
Pre-tax NPV at 7.5% discounting	7.5%	US\$ '000		\$219,617										
Pre-tax NPV at 7.3% discounting	10.0%	US\$ '000		\$206,383										
FIE-LAX NPV AL 10% discounting	10.0%	035 000		3200,383										
After-Tax NPV at 5% discounting	5.0%	US\$ '000		\$177,639										
After-Tax NPV at 7.5% discounting	7.5%	US\$ '000		\$166,719										
After-tax NPV at 10% discounting	10.0%	US\$ '000		\$156,816										
5	/-													



1.2.7 Cash Flow Analysis

Mine economics have been evaluated using the discounted cash flow method, using mid-year discounting convention, and taking into account annual processed tonnages and gold grades. The associated process recovery, metal price, operating costs, royalties, and capital expenditures were also considered.

The economic analysis confirmed that the Jerritt Canyon Mineral Reserves are economically viable. The pre-tax net present value (NPV) at a 5% base discount rate is US\$234 million and the after-tax NPV at a 5% base discount is US\$178 million.

The summary of the results of the cash flow analysis is presented in Table 1-6.

Table 1-6: Cash Flow Analysis Jerritt Canyon

Item	Discount Rate	Units	Value
Pre-tax NPV at 5% discount	5%	US\$ million	234
Pre-tax NPV at 7.5% discount	7.5%	US\$ million	220
Pre-tax NPV at 10% discount	10%	US\$ million	206
After-Tax NPV at 5% discount	5%	US\$ million	178
After-Tax NPV at 7.5% discount	7.5%	US\$ million	167
After-tax NPV at 10% discount	10%	US\$ million	157

The undiscounted pre-tax cash flow is US\$268 million, and the undiscounted after-tax cash flow is US\$203 million. For this cash flow analysis, the internal rate of return (IRR) and payback are not applicable as there is no negative initial cash flow (no initial investment to be recovered).

1.2.8 Sensitivity Analysis

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities on after-tax NPV at a 5% discount rate. The following items were examined:

- Metal price
- Head grade
- Metallurgical recovery
- Operating costs
- Capital costs

After-tax sensitivity over the base case has been calculated for -20% to +20% (for head grade), -10% to +5% (for recoveries), -20% to +20% (for metal prices), and -5% to +15% (operating costs and capital costs) variations to determine the most sensitive parameter of this project. The after-tax NPV is most sensitive to head grade and metal prices, followed by operating costs, and is least sensitive to capital costs.

The sensitivities are presented in Table 1-7 and Figure 1-1.



Table 1-7: After-Tax Sensitivity Analysis
Jerritt Canyon

	Head Grade (oz/st Au)	NPV at 5% (US\$ million)
80%	0.16	58.8
90%	0.18	118.2
100%	0.20	177.6
110%	0.22	237.1
120%	0.24	296.5
	Recovery (% Au)	NPV at 5% (US\$ million)
90%	0.77	118.5
98%	0.82	148.1
100%	0.86	177.6
103%	0.88	192.4
105%	0.90	207.2
	Metal Price (US\$/oz Au)	NPV at 5% (US\$ million)
80%	1,200	59.3
90%	1,350	118.5
100%	1,500	177.6
110%	1,650	236.8
120%	1,800	295.9
	Operating Costs (US\$ million)	NPV at 5% (US\$ million)
95.0%	528.9	221.0
97.5%	557.1	199.6
100.0%	586.1	177.6
107.5%	677.3	107.9
115.0%	775.1	32.4



	Total Capital Costs (US\$ million)	NPV at 5% (US\$ million)
95.0%	40.7	179.0
97.5%	41.7	178.3
100.0%	42.8	177.6
107.5%	46.0	175.5
115.0%	49.2	173.5

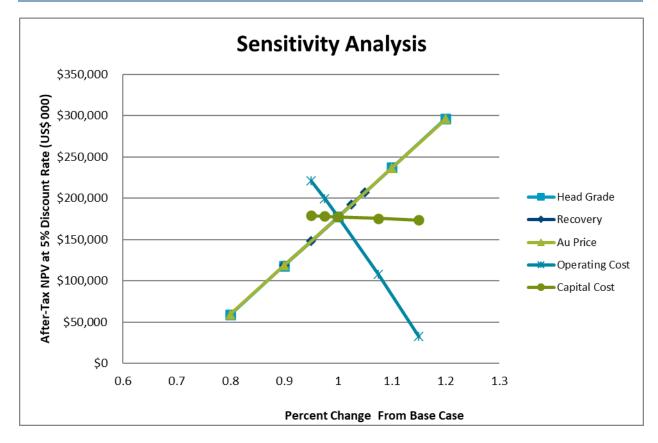


Figure 1-1: After-Tax NPV Sensitivity Graph

1.3 Technical Summary

1.3.1 Property Description and Location

The Jerritt Canyon property is located in Elko County, northeastern Nevada. The mill site, shops, and administration and security buildings are located approximately 50 miles north of the town of Elko. The property forms an irregular area that extends approximately 21 miles north-south and 17 miles east-west at its widest and is approximately 76,160 acres. The property is bounded by 116° 10′ west and 115° 78″ west longitude and 41° 23′ north and 41° 46′ north latitude. The property boundaries have been surveyed and are located in the field with wooden stakes.



The operations are located on a combination of public and private lands, with the deposits and mining related surface facilities being located primarily on mining claims in United States Forest Service (USFS) land within the Humboldt-Toiyabe National Forest. The process facilities, offices, shops, and tailings dams are located on private land owned by JCG. Additional claims in the southern part of the land package are mostly located on private land with some located on land administered by the United States Bureau of Land Management (BLM).

1.3.2 Land Tenure

Land tenure on the Jerritt Canyon property includes patented claims, unpatented claims, and fee land. The property covers a large area that extends approximately 21 miles north-south and 17 miles east-west at its widest and is approximately 76,160 acres.

1.3.3 History

The Jerritt Canyon deposit was discovered by Food Machinery Corporation (FMC) in 1972. In 1976, Meridian Gold LLC (Meridian) and Freeport Minerals Company formed a joint venture to explore and develop the gold deposits in the Jerritt Canyon area and, in 1980, mining commenced with production from the North Generator and Marlboro Canyon open pit mines. The first gold production from the property occurred in July 1981.

Open pit mining was conducted from early 1981 until late 1999, with the mining carried out in the areas of Marlboro Canyon, Alchem, Lower North Generator Hill, Upper North Generator Hill, West Generator, Burns Basin, Mill Creek, Pattani Springs, California Mountains, Dash, Winters Creek, Steer Canyon, and Saval Canyon. The annual production from these areas ranged from approximately 40,000 ounces to 1.4 million ounces.

Underground operations started in 1997 at SSX, and continued until 2008 with production from the Steer, Murray, MCE, Smith, West Generator, and Saval deposits. In 2009, a new mine plan was prepared. Underground mining from the Smith deposit recommenced in late January 2010 and underground mining at SSX recommenced in early October 2010.

From the start of mining in 1980 to the end of December 2020, approximately of 9.7 Moz Au were produced from approximately 49 Mst of ore mined at an average grade of 0.199 oz/st Au.

1.3.4 Geology and Mineralization

The Jerritt Canyon district is located in the Great Basin, north and northeast of the Carlin Trend of gold deposits. Carlin type gold mineralization at Jerritt Canyon is hosted by silty carbonate or carbonaceous siliciclastic rocks originally deposited as shelf sedimentary rocks during the Paleozoic. The Paleozoic host rocks have been imbricated, faulted, and folded through several orogenic events through the Paleozoic and Mesozoic. An early phase of intrusive igneous activity is represented by west-northwest mafic igneous dikes of Paleozoic age. Carlin type gold deposits were emplaced in the Middle to Late Eocene during an initial phase of extensional tectonics at which time high potassium calc-alkaline magmatic rocks were emplaced. Mafic and intermediate igneous dikes were emplaced during this phase of igneous activity and trend north-northeast.

The occurrence and distribution of gold mineralization at Jerritt Canyon is controlled by both lithology and structure. Deposits at Jerritt Canyon are mostly stratabound or fault hosted. Gold occurs as very fine, micron-size, particles in pyrite and arsenian pyrite.



1.3.5 Exploration Status

Exploration completed at Jerritt Canyon has included desktop compilation and interpretation of historical datasets, target identification, and RC and core drilling. Jerritt Canyon is primarily drilled from underground drilling sites. From June 23, 2015 through to December 31, 2020, Jerritt Canyon drilled a total of 279,954 ft in 406 core holes and a total of 2,340,646 ft in 16,773 RC holes underground.

1.3.6 Mineral Resources

The technical work for this report was initiated in March 2020. Wireframe and block modelling for the underground SSX, Smith, WGen, USB, and Saval 4 Deposits were completed by JCG and provided to SLR for verification and audit.

Wireframe and block modelling for Jerritt Canyon were completed by JCG geologists and provided to SLR for verification and audit. A total of five deposits are the focus of this resource update: SSX, Smith, WGen, USB, and Saval 4. Two deposits, Smith and SSX, were broken into separate domains for easier handling in the modelling process. As a result, a total of 17 mineralized wireframe models were built for SSX Zone 1, SSX Zone 2-3, SSX Zone 4, SSX Zone 5, SSX Zone 6, SSX Zone 7, SSX Zone 9, Smith Zone 1, Smith Zone 2-3, Smith Zone 4, Smith Zone 5, Smith Zone 7, Smith Zone 8, Smith Zone 9, Saval 4, USB and WGen. All wireframes are based on approximately a 0.10 oz/st Au cut-off.

Sample information for the diamond drill holes and RC holes was composited into nominal equal lengths of five feet using the run-length compositing algorithm of the Leapfrog Edge modelling software package. Composited assay values were created on an individual zone basis. JCG capped the assays to 1.8 oz/st Au prior to compositing.

A total of 11 different block models were created for each of the different wireframe models. Parent block sizes for all models are 10ft x 10ft x 10ft with sub-block sizes at 2.5ft x 2.5ft x 2.5ft. One interpolation pass was carried out to estimate the grades into the separate block models. Gold grades were estimated into the blocks using Ordinary Kriging interpolation algorithm with Leapfrog Edge.

A 100 ft dilution zone was created around the mineralized wireframe models for all the block models. A single-pass estimation strategy was applied when estimating the grades for the dilution domain in the individual block models.

Block model validation exercises included a comparison of the average grade of the composite samples to the block average grades, visual comparisons of the estimated block grades to the composited gold grades, swath plots, and reconciliation to production statistics.

For reporting of underground Mineral Resources, a 0.11 oz/st Au cut-off grade was estimated using a gold price of US\$1,700 per ounce.

1.3.7 Mining and Mineral Reserves

Jerritt Canyon has been in operation since 1980. Between 1981 and 1999, mining was by open pit. Underground operations began in 1993 with the opening of the Murray Mine and/or West Gen Underground. Underground operations started in 1997 at SSX, and continued until 2008 with production from the Steer, Murray, MCE, Smith, West Generator, and Saval deposits. In 2009, a new mine plan was prepared. Underground mining from the Smith deposit recommenced in late January 2010 and underground mining at SSX recommenced in early October 2010.



Mining is by the cut and fill mining method at Smith and SSX. A significant portion of the Mineral Resources and Mineral Reserves at Smith and SSX are located below the water table and will require dewatering. Dewatering infrastructure, including pumps, dewatering wells, and a water treatment facility, is partially completed.

SLR generated the Jerritt Canyon underground Mineral Reserves by filtering Deswik stope optimizer (DSO) shapes, as provided by JCG, and applying mine designs to the March 31, 2020 as-built survey solids. The design methodology uses both cut-off grade estimation and economic analysis to design and validate the Mineral Reserves.

Stopes and development tasks were classified in the Mineral Resource classification based on the majority of material in the task. For the majority of the orebody the material for each task was one classification type. In areas of mixed classification the Measured or Indicated material accounted for 70% or more of the stope material.

SLR selected stopes to be used in Mineral Reserves first by filtering or identifying stopes based primarily on their proximity to existing historical mine workings, open pits, and infrastructure, and secondly, by identifying large and continuous regions of stopes, until approximately five years of Mineral Reserves were accumulated for each mine. Stopes within 15 ft of historical mine workings were identified and flagged due to a lack of knowledge or confidence in the quality or type of backfill used in those workings. At SSX, a risk factor was applied to these stopes. Measured stopes with a risk factor were classified as Probable, and measured stopes with no risk classified as Proven. At Smith, any material within 15 ft of existing workings was excluded from the Mineral Reserves and material classes were based on block model output.

For reporting of underground Mineral Reserves, a 0.128 oz/st Au cut-off grade was estimated using a gold price of US\$1,500 per ounce.

1.3.8 Mineral Processing

The processing facilities at Jerritt Canyon are designed to operate at a rate of 4,500 stpd with an operating availability of 90% and are permitted to operate at 6,000 stpd. The plant operated at an average rate of 2,265 stpd during 2020. The facilities include:

- Primary crushing
- Ore drying
- Secondary crushing
- Tertiary crushing
- Dry grinding
- Roasting
- Thickening
- Carbon stripping
- Carbon reactivation
- Electrowinning
- Electrowinning sludge refining
- Oxygen plant



- Cooling pond
- Water evaporation pond
- Tailing Impoundment

1.3.9 Project Infrastructure

The Mine has been in commercial production for approximately 39 years and the infrastructure to support a mining and milling operation is established. Surface rights to sustain mining operations on the Mine property are secured through current ownership and claim holder rights. The current infrastructure includes:

- Access roads
- Power supply and distribution
- Office buildings
- Warehouse facilities
- Maintenance shops
- Laboratory facilities
- Communication networks
- Onsite security
- TSFs
- Water management systems

The main access road is approximately seven miles long and is a 22 ft wide paved road between Nevada highway 225 and the mill site. A 100 ft wide haul road provides access between the major mines and the mill site. This road network is approximately 17 miles long.

Power to the Mine is purchased from Nevada Energy through a 125 kV, three-phase transmission line. Monthly power consumption is approximately 8.0 MWh.

Water available on site is sufficient to support all mining and milling operations. All water used at the Mine is from permitted and certificated water rights held by JCG and regulated by the Nevada Division of Water Resources.

1.3.9.1 Tailings and Water Management Facilities

For the management and disposal of tailings and reduction of surplus process solutions, Jerritt Canyon operates one active tailings storage facility (Tailings Storage Facility-2 (TSF 2)) and two main process water storage facilities which include the WSR and the Evaporation Pond. Jerritt Canyon also operates a process WTP to remove process water contaminates to reduce process water inventories and maintain an overall negative site water balance. Jerritt Canyon is currently in the process of closing and reclaiming TSF 1, which was the first TSF constructed and continuously operated at Jerritt Canyon between 1980 and 2014.

TSF 2 was originally commissioned in 2013 as TSF 2 Phase 1 to store approximately 3.7 Mst of tailings. In 2018, TSF 2 was expanded (Phase 2) to store an additional 1.5 Mst of tailings. Tailings is delivered to the TSF 2 in a slurry consisting of 40% solids to 60% water by weight. At the time of writing this Technical Report, TSF 2 Phase 3 was under construction and has been designed to contain an additional 1.1 Mst of tailings. Because Phase 2 has been filled beyond planned operating capacity, TSF 2 Phase 3's operational



life has shortened and will be filled to capacity within approximately seven months (i.e. by the end of November 2021).

TSF 2 Phase 4 has been designed and awaits approval from the State of Nevada regulatory agencies. TSF 2 Phase 4 will allow storage of an additional 1.7 Mst of tailings. Even with the shortened operational life of Phase 3, TSF 2 Phase 4 must be constructed in 2021. Assuming a planned production rate of 2,350 stpd, TSF 2 Phase 4 will be filled to capacity by December 2023; however, this date will vary depending on actual mine plan and production rates determined by operations.

After TSF 2 Phase 4 is filled to capacity, Jerritt Canyon plans to dispose of future tailings in the previously designed and approved TSF 3, which is the existing WSR that will be converted to accept tailings disposal. The WSR's conversion to TSF 3 will allow disposal of approximately of 2.4 Mst of tailings. At an assumed average production rate of 2,350 stpd, TSF 3 would provide approximately 2.6 years tailings storage. If the average deposition rate is increased for the 2021 mine plan and following, the timeline for creation of additional tailings management area will be shortened proportionally.

The process WTP was constructed to eliminate the surplus process water inventory located in the Jerritt Canyon WSR and Evaporation Pond and to create additional storage capacity for future tailings storage. The process WTP's treated permeate is disposed of in injection wells while its brine concentrate is disposed of in the Evaporation Pond.

1.3.10 Environmental, Permitting and Social Considerations

Jerritt Canyon has been in operation since 1981. Prior to and during operation, numerous environmental studies and evaluations have been conducted to support permit applications and operations. An Environmental Impact Statement (EIS) was completed and the Record of Decision (ROD) was issued in 1980. Operating permits are in place and current.

The historical operation of Jerritt Canyon resulted in a number of environmental concerns, including seepage from the TSF, limited TSF capacity, lack of water treatment facilities, etc. JCG inherited this legacy and worked diligently to mitigate the concerns when operator. JCG intends to continue to mitigate these concerns.

Jerritt Canyon is located in Elko County, Nevada which is a mining-friendly jurisdiction. Numerous other mining operations are located in the same area and the site has a good relationship with the local community.

Approved closure and reclamation plans are in place for Jerritt Canyon. The total reclamation costs, as updated in 2019, estimated from the 2019 Annual Work Plan (AWP) are approximately \$86.6 million.

1.3.11 Capital and Operating Cost Estimates

Sustaining capital costs were estimated by JCG, with the majority of the costs consisting of mine development and heavy mobile equipment needed to replace the aging fleet. Sustaining capital costs for Jerritt Canyon are summarized in Table 1-8.



Table 1-8: Sustaining Capital Cost Estimate
Jerritt Canyon

Category	Sustaining Costs (US\$ millions)	Sustaining Cost Basis (US\$/st milled)
Mining	21.4	6.00
Tailings Facility	9.0	\$9M in 2021
Processing Plant	3.6	1.00
Reclamation and closure	5.3	1.50
Sustaining Exploration Diamond Drilling	3.6	1.00
Total	42.8	-

SLR notes that reclamation costs have not been estimated for the end of mine life, though a progressive annual reclamation cost has been applied based on a rate of \$1.50/st milled.

Operating costs estimated by JCG, averaging US\$121.5 million/yr or \$164.68/st ore were estimated for mining, processing, and G&A. Operating cost inputs such as labour rates, consumables, and supplies were based on JCG operating data. A summary of Jerritt Canyon operating costs is provided in Table 1-9.

Table 1-9: Operating Cost Estimate

Jerritt Canyon

Parameter	Total LOM (US\$ millions)	Average Year (US\$ millions/yr)	LOM Unit Cost (US\$/st milled)
Mining	315.6	65.6	88.69
Labor	133.5	27.5	37.50
Variable Costs	93.4	19.3	26.25
Maintenance Cost	14.9	3.1	4.20
Fixed Costs	57.1	11.8	16.05
Dewatering Phase 1	1.4	1.4 in 2021	0.38
Dewatering Phase 2	8.4	8.4 in 2021	2.36
Dewatering Phase 3	1.6	1.6 in 2022	0.45
Other costs	5.3	1.1	1.50
Development	46.2	9.5	12.99
Labor	20.6	4.3	5.80
Primary Development, Horizontal	14.4	3.0	4.06
Maintenance Cost	2.3	0.5	0.65
Fixed Costs	8.8	1.8	2.48
Processing	160.2	33.1	45.00



Parameter	Total LOM (US\$ millions)	Average Year (US\$ millions/yr)	LOM Unit Cost (US\$/st milled)
Labor	56.9	11.8	16.00
Variable Costs	35.6	7.3	10.00
Maintenance Cost	32.0	6.6	9.00
Fixed Costs	35.6	7.3	10.00
G&A	64.1	13.2	18.00
Total	586.1	121.5	164.68



2.0 INTRODUCTION

SLR was retained by Jerritt Canyon Gold LLC (JCG) to prepare an independent Technical Report on the Jerritt Canyon Gold Mine (Jerritt Canyon or the Mine), located in northeast Nevada, USA. The purpose of this Technical Report is to support the disclosure of Mineral Resource and Mineral Reserve estimates for the underground portion of the Mine. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. On April 30, 2021, First Majestic Silver Corp. (First Majestic) acquired all of the issued and outstanding shares of JCG. As such First Majestic now indirectly owns and operates Jerritt Canyon, through the owner and operator JCG.

First Majestic is a publicly traded mining company with a portfolio of operating mines and projects. Jerritt Canyon is a long term producer, currently with two mines planning to produce, on average, 2,300 tons per day (stpd) from underground operations primarily using the cut and fill mining method; SSX-Steer Complex (SSX) and Smith – which are located 50 miles north of Elko, Nevada.

Since mining began at Jerritt Canyon, more than 9.0 million contained ounces of gold have been produced. Gold was first discovered in 1972, with the first gold poured in 1981. Between 1981 and 1999, mining was by open pit. Underground operations began in 1993 with the opening of the West Gen Underground, followed by the Murray Mine, and MCE Mine.

Sources of Information 2.1

A site visit was carried out on April 20, 2021 by Ryan Rodney, C.P.G., SLR Associate Geologist, and Jeremy Collyard, MMSA QP, SLR Principal Environmental Specialist.

Discussions were held with the following JCG and Small Mine Development LLC (SMD) personnel:

- Kevin Small, President and CEO, JCG
- Gary Nassif, Senior Vice President, JCG
- Gordon L. Fellows, Mining Manager, JCG
- Taylor Vieira, Consulting Mineral Resources Specialist, JCG
- Steve McMillin, Senior Mine Geologist, JCG
- John Braaten, Mill Manager, JCG
- Mirinda Jones, Environmental Manager, JCG
- Shaun Rose, Safety Coordinator, JCG
- Ramon A. Beltran, Underground Operations Engineer, SMD
- John Featherston, Senior Engineer, SMD

The following JCG employees provided information to SLR for the indicated sections of this Technical Report:

Name	Title	Section
Kevin Small	President and CEO	
Gary Nassif	Senior Vice President	Sections 4 and 6
Gordon L. Fellows	Mining Manager	Sections 16, 21, and 22
Taylor Vieira	Mineral Resources Specialist	Section 14



Name	Title	Section
Steve McMillin	Senior Mine Geologist	Sections 6 and 10
Jeffrey Phinisey	Consulting Geologist	Sections 6 and 8
Mirinda Jones	Environmental Manager	Sections 16, 18, and 20
Hector Casapia	Chief Metallurgist	Sections 13, 17, and 20

Phillip E. Brown, C.P.G., R.P.G, SLR Associate Principal Hydrogeologist, assisted the mining QPs in reviewing the hydrogeologic assumptions and David Wanner, P.Eng., Principal Engineer, SRK Consulting (U.S.), Inc. provided an update on the Tailings Storage Facilities at Jerritt Canyon for this Technical Report. The technical work for this Technical Report was initiated in March 2020. Wireframe and block modelling for the SSX, Smith, Saval 4, USB and West Gen mines was completed by JCG. All resource wireframes and block models were verified and audited by Ryan Rodney, C.P.G., SLR Associate Geologist.

This Technical Report was prepared by the following SLR personnel: Ryan Rodney, C.P.G., Associate Geologist, Chelsea Hamilton, P.Eng., Project Mining Engineer, Andrew P. Hampton, M.Sc., P.Eng., Principal Metallurgist, and Jeremy Scott Collyard, MMSA QP, Principal Environmental Specialist and Gordon L. Fellows, P.E., Jerritt Canyon, Mining Manager. Mr. Rodney is responsible for Sections 2 to 12, 14, 23, and 24. Mr. Fellows is responsible for Sections 15, 16, and 18. Ms. Hamilton is responsible for Sections 19, 21, and 22. Mr. Hampton is responsible for Sections 13, and 17. Mr. Collyard is responsible for Section 20. All authors share responsibility for Sections 1, 25, 26, and 27.

The reviewed documentation and other sources of information are listed at the end of this Technical Report in Section 27 References.

Dates in the Technical Report

- Cut-off date for exploration information in Mineral Resources April 29, 2020
- Cut-off date for production, costs, and depletion December 31, 2020
- Effective date Mineral Resources and Mineral Reserves December 31, 2020
- Signature date April 30, 2021



2.2 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US\$) unless otherwise noted.

μ	micron	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
а	annum	kWh	kilowatt-hour
Α	ampere	L	litre
bbl	barrels	lb	pound
Btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C\$	Canadian dollars	М	mega (million); molar
cal	calorie	m²	square metre
cfm	cubic feet per minute	m³	cubic metre
cm	centimetre	MASL	metres above sea level
cm ²	square centimetre	m³/h	cubic metres per hour
d	day	mi	mile
dia	diameter	min	minute
dmt	dry metric tonne	μm	micrometre
dwt	dead-weight ton	mm	millimetre
°F	degree Fahrenheit	mph	miles per hour
ft	foot	MVA	megavolt-amperes
ft ²	square foot	MW	megawatt
ft ³	cubic foot	MWh	megawatt-hour
ft/s	foot per second	OZ	Troy ounce (31.1035g)
g	gram	oz/st, opt	ounce per short ton
G	giga (billion)	ppb	part per billion
Gal	Imperial gallon	ppm	part per million
g/L	gram per litre	psia	pound per square inch absolute
Gpm	Imperial gallons per minute	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gr/ft³	grain per cubic foot	S	second
gr/m³	grain per cubic metre	st	short ton
ha	hectare	stpa	short ton per annum
hp	horsepower	stpd	short ton per day



hr	hour	t	metric tonne
Hz	hertz	tpa	metric tonne per annum
in.	inch	tpd	metric tonne per day
in ²	square inch	US\$	United States dollar
J	joule	USg	United States gallon
k	kilo (thousand)	USgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
km²	square kilometre	wt%	weight percent
km/h	kilometre per hour	yd³	cubic yard
kPa	kilopascal	yr	year



3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by SLR for First Majestic. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this report, SLR has relied on ownership information provided by JCG. For fee lands, patents, etc., JCG has relied on an opinion by Harris & Thompson (an association of attorneys), entitled "April 2014 Update Title Opinion on Jerritt Canyon Project, Elko County, Nevada" dated April 17, 2014, completed for Veris Gold USA. For unpatented claims, JCG has relied on an opinion by Erwin Thompson Faillers dated April 20, 2021 entitled "2021 Title Opinion Update on Jerritt Canyon Project (Unpatented Claims Only), Elko County, Nevada". Both these opinions are relied on in Section 4.0 and the Summary of this Technical Report. SLR has not researched property title or mineral rights for Jerritt Canyon and expresses no opinion as to the ownership status of the property.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.



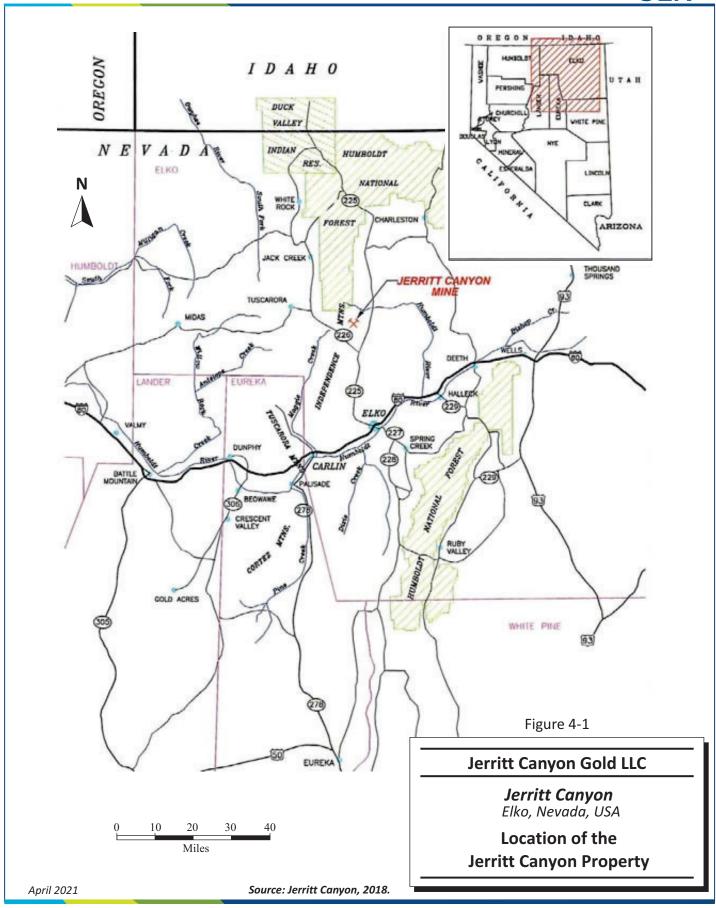
4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Description and Location

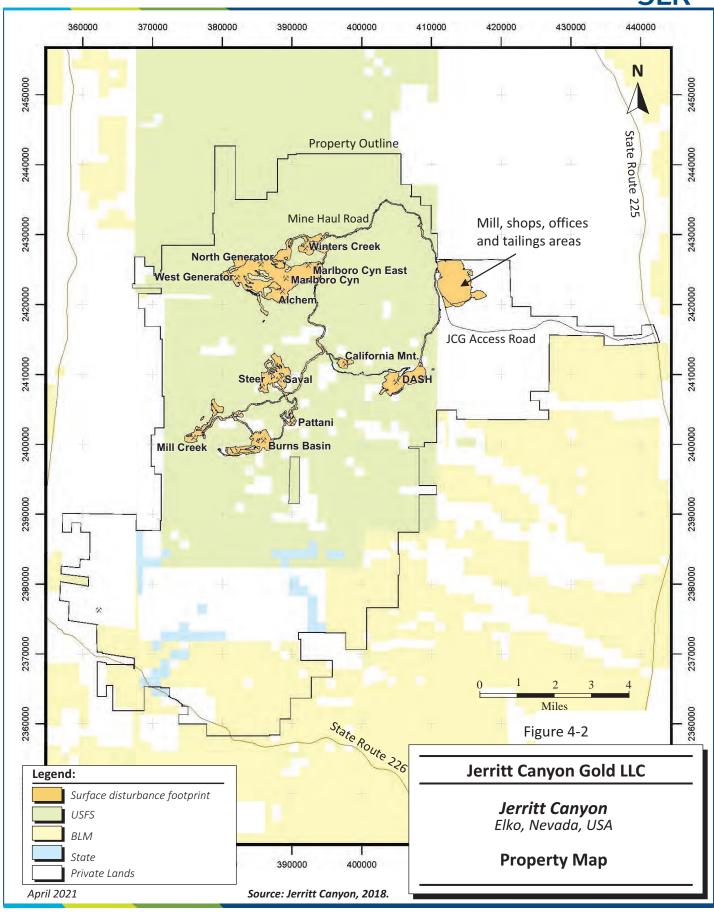
Jerritt Canyon is located in Elko County, northeastern Nevada (Figure 4-1). The mill site, shops, administration, and security buildings are located approximately 50 miles north of the town of Elko. Jerritt Canyon covers a large area that extends approximately 21 miles north-south and 17 miles east-west at its widest and is approximately 119 square miles (Figure 4-2). The property is bounded by 116°10′ west and 115° 78′W longitude and 41°23′N and 41° 46′N latitude. The property boundaries have been surveyed and are identified in the field with wooden stakes.

The Jerritt Canyon operations are located on a combination of public and private lands, with the mines and mining-related surface facilities being located primarily on United States Forest Service (USFS) and mining claims within the Humboldt-Toiyabe National Forest (Figure 4-2). The processing facilities, offices, shops, and tailings dams are located on private land owned by JCG. Additional claims in the southern portion of the land package are predominantly located on private land with some located on land administered by the United States Bureau of Land Management (BLM).











4.2 Land Tenure

Jerritt Canyon land tenure types include patented claims, unpatented claims, and fee land. Claims and fee land comprising the Jerritt Canyon property are both owned and leased and are summarized in Table 4-1. The total land package for the Jerritt Canyon property totals 76,160 acres.

Table 4-1: Summary of Claims

Jerritt Canyon

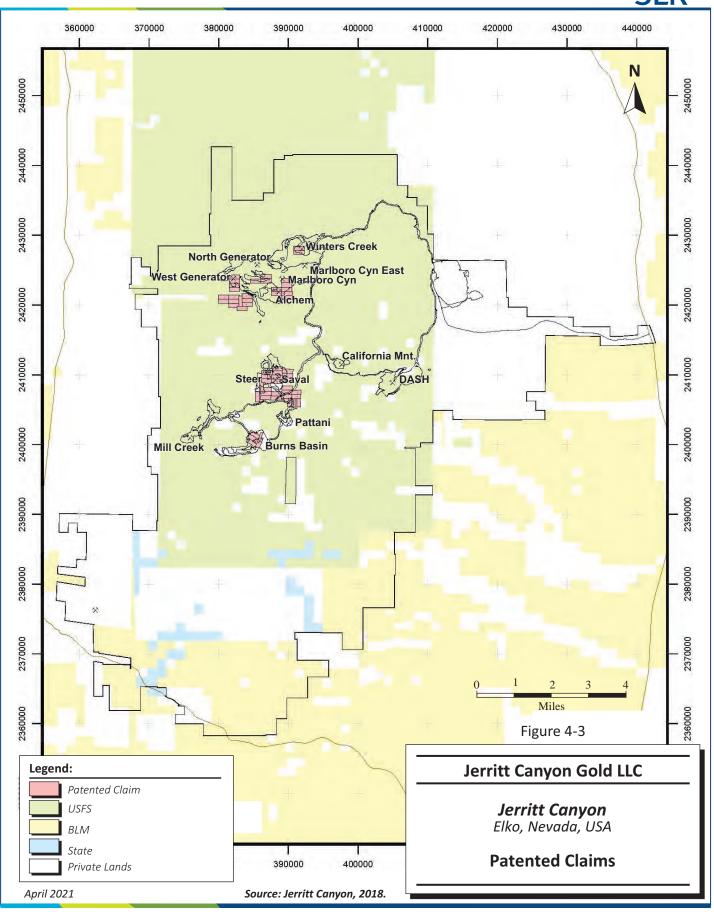
Title Type	No. Claims
Unpatented Owned Claims	2,910
Unpatented Leased Claims	278
Patented Claims Owned	54

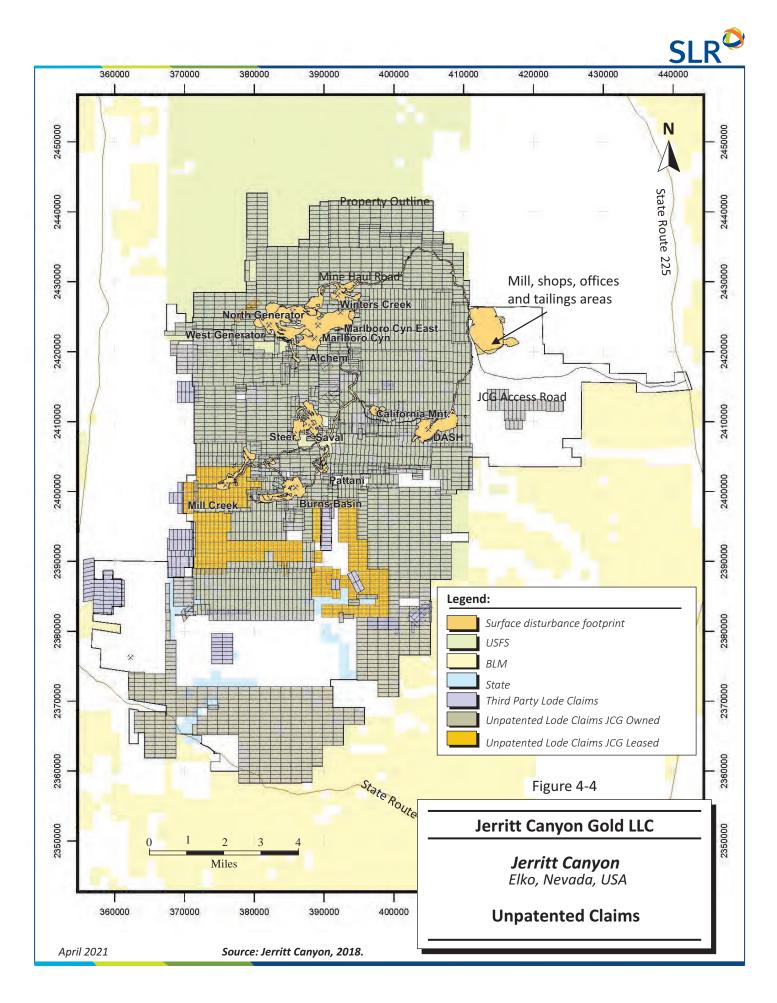
The distribution of patented claims, unpatented claims, and fee land are illustrated in Figure 4-3 to Figure 4-5, respectively. The rights associated with the fee land include mineral and surface rights and are different for the various land packages (agreements) (Figure 4-5). Yearly fees to maintain the unpatented claims in good standing consist of \$165 per claim payable to the BLM and \$12 per claim payable to the Elko County Recorder. Each document submitted to the Elko County Recorder also requires a one-time document fee of \$12. The claim payments for 2020 to 2021 are summarized in Table 4-2. The annual BLM renewal date is September 30. The payment of fees and filing of documents (indicating the intent to maintain unpatented mining claims and the completion of the BLM maintenance fee payment) with the Elko County Recorder are due annually on November 1.

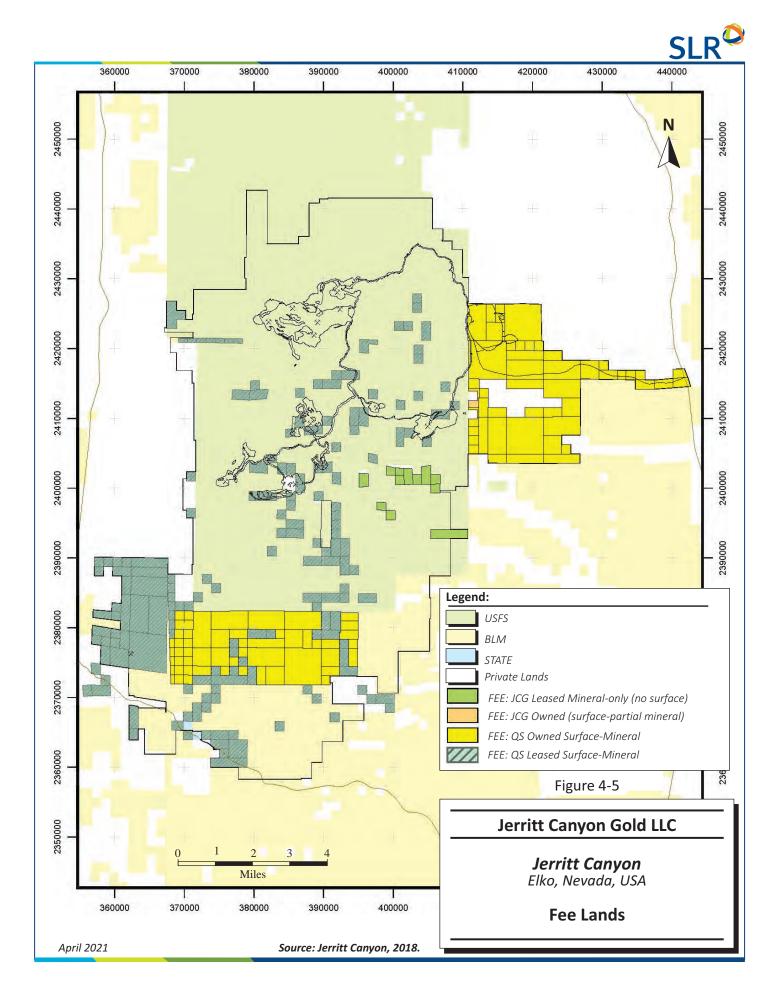
Table 4-2: Summary of Claim Payments
Jerritt Canyon

Claim Type and Lease	No.	BLM Maintenance Fees (\$165/claim)	Elko County Recorder (\$12/claim)	Elko County Technology and Foster Care Fees (\$12/document)	Elko County Total
Owned Unpatented Lode Claims - Total	2,910	480,150	34,920	12	34,932
Lease NV 10101 - SONA Claims	141	23,265	1,692	12	1,704
Lease NV 10105 - ED Claims	121	19,965	1,452	12	1,464
Lease NV 10120 - BIRDS EYE Claims	10	1,650	120	12	132
Lease NV 10125 - ARANA Claims	6	990	72	12	84
Leased Claims Total	278	45,870	3,336	48	3,384











SLR notes that some of the Jerritt Canyon claims and fee lands are subject to a Net Smelter Return (NSR) royalty which varies from 1.5% to 6% depending upon the lease agreements with various property owners. The fee land, which was originally purchased to secure access from State Route 225, is subject to a 33% NSR, however, future gold production from this land is unlikely. The distribution of claims and fee lands subject to royalty payments is illustrated in Figure 4-5.

There are currently three Nevada (NV) lease file agreements (files NV-10106, NV-10110, NV-10113) that cover land that has mine production. As a result, the lease holders of the producing land are entitled to receive production royalty payments that range from 2.5% to 5%.

Other land held by lease holders may be subject to annual or semi-annual land payments that include advance royalties, land use payments, rentals, loss of grazing, and the use of land for a communications tower. The advance royalties are the minimum amounts the lease holders are entitled to annually. On producing land, these advance royalties may be recovered by JCG if certain production royalty thresholds are met or surpassed during the production year. Some of the land payments may be adjusted annually based on consumer/producer price indexes or annual increases.

The QP is not aware of any environmental liabilities on the Jerritt Canyon property other than those identified in Section 20 of this Technical Report. JCG has all required permits to conduct the proposed work on the property. The licences and permits required as well as government authority and description of the application are summarized in Section 20 of this Technical Report.

On September 9, 2019, Ely Gold closed the purchase of 100% of all rights and interests in a Per Ton Royalty Interest ("PTR") on the Jerritt Canyon Processing Facilities from an arms-length third party (Behre Dolbear, 2020). On May 13, 2020, Ely Gold closed the purchase of a 0.5% net smelter returns royalty on the entire Jerritt Canyon property from Mr. Eric Sprott. Sprott originally acquired the royalty from Veris Gold USA Inc. in 2014, pursuant to an April 9, 2014 agreement (Behre Dolbear, 2020).

SLR is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.



5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Mine is located in Elko County, Nevada approximately 50 miles north of the town of Elko. Access to the Jerritt Canyon property is via Nevada State Route (SR) 225 and an approximately seven mile mine access road which leads to the main gate where the administrative offices, processing plant, warehouse, maintenance shops, and tailings impoundment areas are located (Figure 4-1 and Figure 4-2). The access road is asphalt and in good condition. The mines are accessed via a main haul road which is maintained on a regular basis (Figure 4-2). Historical mines, active reclamation sites, and exploration sites are accessed through lesser or unmaintained roads and trails.

5.2 Physiography

The Mine is located in the Independence Mountain Range in the Basin and Range Province of northern Nevada. The mill and associated buildings and facilities are located in the eastern foothills of the range at an elevation of approximately 6,400 ft. All past and present mining operations are located at various elevations within the mountain range. The main haul road reaches a maximum elevation of approximately 8,000 ft. The vegetation is typical of the Basin and Range Province with sagebrush dominant at lower elevations. Small stands of aspen and isolated fir trees grow in canyons and drainages.

5.3 Climate

The climate is temperate with winter temperatures between 0°F and 40°F and summer temperatures between 35°F and 90°F. Average annual precipitation at the tailings impoundment is 14 in. and average annual evaporation is 43 in. A significant amount of precipitation falls as snow and increases with elevation towards the mining areas. Mine operations are rarely halted by weather conditions, although ore haulage from the mines may take longer at times. The mill, warehouse, shop, and administrative facilities are at a lower elevation and therefore less exposed to extremes in weather. Snowfall is generally common from December to May.

5.4 Local Resources

With a population of approximately 20,500, Elko is the closest town to Jerritt Canyon. Elko straddles Interstate 80 and is serviced by daily commercial flights from/to Salt Lake City, Utah, situated approximately 230 miles west of Salt Lake City, Utah and 290 miles east of Reno, Nevada. Most of the Jerritt Canyon workforce reside in Elko and the adjacent town of Spring Creek. Other communities in northern Nevada and Utah provide a labour force to support mining at Jerritt Canyon and other operations in northern Nevada. Elko is a supply centre for the mining industry of northern Nevada, sourcing most equipment, supplies, and services. All supplies and equipment can be transported over Nevada SR 225, the mine access road, and the mine haul road.



5.5 Infrastructure

Jerritt Canyon has been in commercial production for approximately 39 years and the infrastructure to support a mining and milling operation is well established. Surface rights to sustain mining operations on the Mine property are secured through current ownership and claim holder rights.

Power to the Mine site is purchased from Nevada Energy through a 125 kV, three-phase transmission line. Power is supplied to the property via a station located in the processing plant area and is distributed to the mines and other necessary facilities through a grid of surface lines.

Water available at Jerritt Canyon is sufficient to support all mining and milling operations. Approximately 700 gallons per minute (gpm) of water is required to operate the mill with two primary water sources: (1) a "dirty" water source consisting of the tailings storage facility 1 (TSF 1) seepage collection system that has contributions from 90 small diameter water wells around TSF 1, four seepage collection trenches, and three embankment blanket drains that collectively produce 1,000 gpm, and (2) a cleaner water source from two deep water wells that are each capable of producing 500 gpm. All water used at Jerritt Canyon is from permitted and certificated water rights held by JCG and regulated by the Nevada Division of Water Resources (NDWR).

Surface rights owned by JCG around the existing TSFs provide sufficient space for additional tailings storage and water storage to support future mining.

Additional details on infrastructure are presented in Section 18 of this Technical Report.



6.0 HISTORY

6.1 Prior Ownership

In 1972, Food Machinery Corporation (FMC) discovered a disseminated gold deposit at Jerritt Canyon. The subsequent ownership history of the Jerritt Canyon property is summarized as follows:

- In 1976, FMC, later Meridian Gold LLC (Meridian) formed a joint venture (JV) with Freeport Minerals Company, later Freeport McMoRan (Freeport), to explore and develop the Jerritt Canyon property. Mining at Jerritt Canyon commenced in 1980.
- In 1990, Freeport sold its interest in the Jerritt Canyon JV to Minorco SA (Minorco). This purchase allowed Minorco (through its wholly-owned subsidiary Independence Mining Company) to attain a 70% ownership of the Jerritt Canyon property and become the operator. Meridian retained its 30% ownership of the Jerritt Canyon property.
- In 1998, Minorco sold its 70% interest in the Jerritt Canyon JV to AngloGold Ltd. (AngloGold).
- In 2003, Queenstake Resources USA Inc. (Queenstake) (a subsidiary of Queenstake Resources Ltd.) purchased a 100% interest in the Jerritt Canyon property from the JV partners Meridian and AngloGold.
- In June 2007, Queenstake became a wholly-owned subsidiary of Yukon-Nevada Gold Corp. (Yukon-Nevada) which was formed by the merger of Queenstake Resources Ltd. and YGC Resources Ltd.
- In October 2012, Yukon-Nevada changed its name to Veris Gold Corp. (Veris).
- In January 2013, Queenstake, now a wholly-owned subsidiary of Veris, changed its name to Veris Gold USA Inc. (VUSA). In 2014, Veris declared bankruptcy.
- In 2015, JCG acquired an 80% interest in the Jerritt Canyon property. The remaining 20% was held by WBOX 2014-1 Ltd. which had an outstanding balance on a loan made to Veris.
- In June 2020, JCG acquired the remaining 20% from WBOX 2014-1 Ltd., acquiring a 100% interest in the Jerritt Canyon property.
- On April 30, 2021, First Majestic acquired all of the issued and outstanding common shares of JCG.

6.2 Production History

Gold mineralization discovered in the Jerritt Canyon area in 1972 was found to share similar metallurgical challenges to the mineralization discovered by Newmont Corporation (Newmont) elsewhere in the Carlin Trend. Subsequent advances in processing technologies for gold deposits of the Carlin Trend, however, resulted in this style of mineralization becoming economically viable. In 1976, Meridian and Freeport formed a joint venture to explore and develop the gold deposits in the Jerritt Canyon area and in 1980 mining commenced with production from the North Generator and Marlboro Canyon open pit mines. The first gold production from Jerritt Canyon occurred in July 1981.

From early 1981 until late 1999, open pit mining was conducted in the areas of Marlboro Canyon, Alchem, Lower North Generator Hill, Upper North Generator Hill, West Generator, Burns Basin, Mill Creek, Pattani Springs, California Mountains, Dash, Winters Creek, Steer Canyon, and Saval Canyon. Open pit production from these areas ranged from approximately 40,000 ounces of gold (oz Au) (Pattani Springs) to 1.4 million ounces of gold (Moz Au) (Marlboro Canyon) and totalled 5.2 Moz Au.



In 1993, underground operations commenced at West Gen Underground, and continued until 2008 with production from the Steer, Murray, MCE, Smith, SSX, and Saval deposits. In 2008 the operating company, Queenstake, made the decision to cease mining operations due to increasing costs associated with infrastructure expenditures, in addition to an inability to secure required environmental permits in a timely manner.

In 2009, the Nevada Division of Environmental Protection (NDEP) approved plans for the recommencement of Jerritt Canyon production. Queenstake also completed major modifications to the key components of the roaster, leach circuit, thickener, and other sections of the mill.

In 2009, a new mine plan was prepared, and in 2010 underground mining from the Smith deposit restarted using contract miner Small Mine Development (SMD). Underground mining at SSX recommenced using Queenstake staff.

From the commencement of mining in 1980 to the end of 2020, approximately 9.7 Moz Au were produced from approximately 49 million tons (Mst) of ore mined at an average grade of 0.199 oz/st Au (Table 6-1). Open pit mining at Jerritt Canyon produced a total of approximately 5.2 Moz Au from approximately 29.8 Mst of ore at an average grade of 0.175 oz/st Au. The underground mines produced a total of approximately 4.5 Moz Au from approximately 19.2 Mst of ore at an average grade of 0.237 oz/st Au. Since 2010, the majority of production has come from the SSX and Smith deposits, as detailed in Table 6-1.

From June 2015 to December 2020, JCG mined approximately 5.2 Mst at an average grade of 0.155 oz/st Au containing a total of approximately 0.81 Moz Au (Table 6-2). The locations of the historical (and current) mines are illustrated in Figure 6-1.

Table 6-1: Mine Production History Jerritt Canyon

	Production Period	Tons Mined	Grade (oz/st Au)	Contained Metal (oz Au)
Open Pit Deposits				
Marlboro Canyon	1981-1990	5,798,600	0.241	1,400,045
Alchem	1991-1994	1,657,600	0.098	162,621
L. North Gen. Hill	1980-1993	1,226,000	0.192	235,461
U. North Gen. Hill	1980-1993	7,636,300	0.170	1,298,308
West Generator	1986-1993	3,979,000	0.155	616,647
Burns Basin	1988-1998	2,441,800	0.169	412,328
Mill Creek	1992-1994	895,700	0.121	108,270
Pattani Springs	1988-1990	387,000	0.108	41,896
California Mountain	1993-1994	410,300	0.162	66,341
Dash	1996-1999	1,906,100	0.221	420,789
Winters Creek	1992-1995	1,243,700	0.126	156,317
Steer Canyon	1994-1997	477,300	0.132	63,004

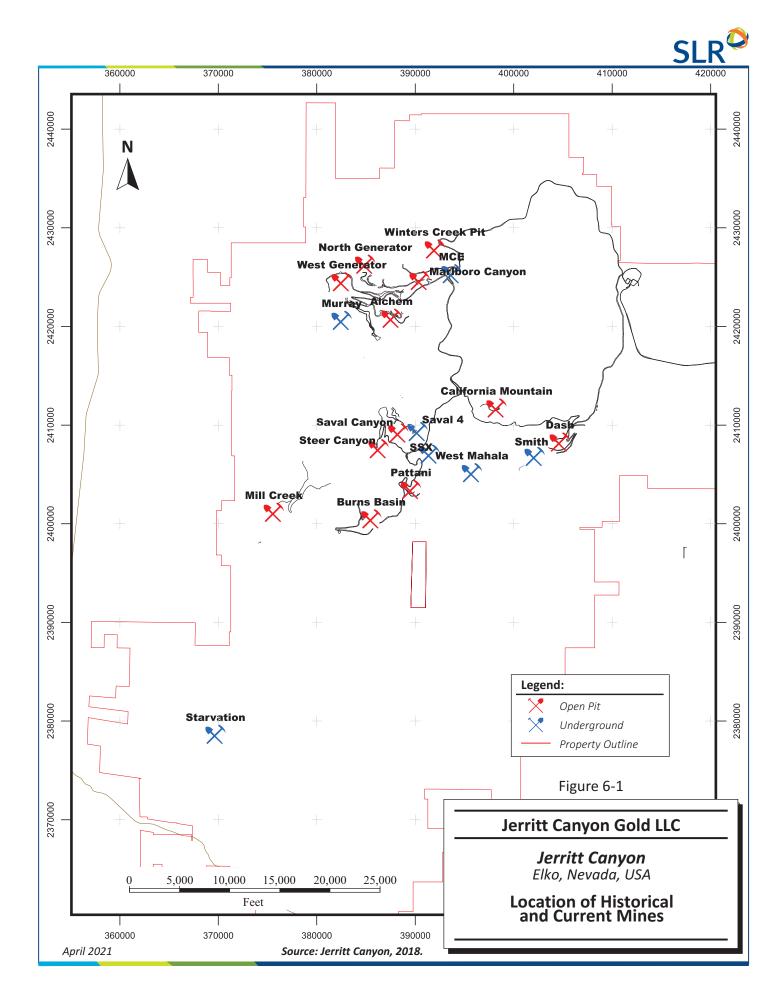


	Production Period	Tons Mined	Grade (oz/st Au)	Contained Metal (oz Au)
Saval Canyon	1994-1997	1,741,900	0.126	218,682
Subtotal – Open Pit	1980-1999	29,801,300	0.175	5,200,709
Underground Deposits				
SSX	1997-2008; 2011; 2012-2020	7,969,243	0.229	1,825,969
Steer	2004-2006	68,174	0.233	15,879
MCE (formerly Papillion)	1997-2004	258,295	0.369	95,359
Murray	1997-2006	3,780,795	0.330	1,248,777
Smith	1999-2008; 2010-2020	5,525,953	0.187	1,033,520
West Generator	1993-1997	460,100	0.235	108,108
Saval	2004-2006	3,500	0.495	1,730
Saval 4	2014-2015; 2017-2019	271,420	0.147	39,856
Starvation	2013-2016	845,490	0.198	167,819
Subtotal - UG	1993-2020	19,182,970	0.237	4,537,017
Total - All Mines	1980-2020	48,984,270	0.199	9,737,726

Table 6-2: Production by JCG from 2015 to December 2020

Jerritt Canyon

Mine	Tons Mined	Grade (oz/st Au)	Contained Metal (oz Au)
Smith	2,244,973	0.152	342,207
SSX	2,524,542	0.154	388,837
Starvation	193,573	0.215	41,531
Saval 4	250,149	0.148	36,946
Total	5,213,237	0.155	809,521





Total mill production for Jerritt Canyon from the start of operations in 1980 to the end of 2020 is approximately 9.1 Moz Au from 57.5 Mst of ore at an average head grade of 0.179 oz/st Au and average recovery of 88.3% (Table 6-3). In addition to mine production, the Jerritt Canyon mill processed ore from the Barrick Cortez mine during the period 2000 to 2002 and stockpiles from Newmont's Carlin operations during the period from 2006 to 2010. Details of this throughput are not available and detailed reconciliation of mine and mill production during these periods is not possible. The difference between mine production and mill throughput during JCG ownership through to 2017 is also attributable to the processing of stockpiles present at the time of acquisition.



Table 6-3: Jerritt Canyon Process Plant Production Jerritt Canyon

Mine Company Owners	Year	Tons Processed (All Sources)	Daily Tonnage (stpd)	Mill Head Grade (oz/st Au)	Calculated Contained Metal (oz Au)	Recovery (%)	Production (oz Au)
70 Freeport/30FMC	1980	0	0	0	0	0	0
70 Freeport/30FMC	1981	333,768	914	0.08	26,701	87	23,000
70 Freeport/30FMC	1982	1,241,940	3,403	0.18	223,549	87	196,100
70 Freeport/30FMC	1983	1,093,200	2,995	0.277	302,816	86.5	261,900
70 Freeport/30FMC	1984	1,206,600	3,297	0.22	265,452	91.2	243,100
70IMC/30FMC	1985	1,284,500	3,519	0.22	282,590	89.2	255,400
70IMC/30FMC	1986	1,339,200	3,669	0.227	303,998	87.4	269,600
70IMC/30FMC	1987	1,512,400	4,140	0.215	325,166	91.8	315,900
70IMC/30FMC	1988	1,574,500	4,300	0.212	333,794	91.5	310,100
70IMC/30FMC	1989	1,825,800	4,983	0.178	324,992	89.8	236,700
70IMC/30FMC	1990	2,513,500	6,982	0.148	371,998	88.0	329,800
70IMC/30FMC	1991	2,882,200	7,897	0.147	423,683	88.7	374,400
70IMC/30FMC	1992	2,952,120	8,088	0.132	389,680	89.3	353,300
70IMC/30FMC	1993	3,024,390	8,286	0.126	381,073	89.6	340,200
70IMC/30FMC	1994	3,006,870	8,238	0.122	366,838	85.6	323,400
70IMC/30FMC	1995	2,945,915	8,071	0.129	380,023	86.1	327,900
70IMC/30Meridian Gold	1996	2,667,593	7,308	0.13	346,787	88	310,000



Mine Company Owners	Year	Tons Processed (All Sources)	Daily Tonnage (stpd)	Mill Head Grade (oz/st Au)	Calculated Contained Metal (oz Au)	Recovery (%)	Production (oz Au)
70IMC/30Meridian Gold	1997	1,539,561	4,218	0.22	338,703	91	320,000
70 AngloGold/30Meridian Gold	1998	1,484,445	4,067	0.25	371,111	91	350,000
70 AngloGold/30Meridian Gold	1999	1,609,374	4,409	0.25	402,344	91	363,333
70 AngloGold/30Meridian Gold	2000	1,499,143	4,107	0.24	359,794	90	316,667
70 AngloGold/30Meridian Gold	2001	1,469,000	4,014	0.31	455,390	89.2	403,000
70 AngloGold/30Meridian Gold	2002	1,467,000	4,076	0.26	381,420	87.9	339,000
Queenstake Resources	2003	1,496,441	4,100	0.23	336,699	88.3	302,096
Queenstake Resources	2004	1,305,833	3,578	0.21	274,225	86.7	243,333
Queenstake Resources	2005	1,106,937	3,033	0.22	243,526	86.6	204,091
Queenstake Resources	2006	973,593	2,667	0.21	204,455	86.2	169,851
Yukon-Nevada Gold Corp.	2007	968,130	2,652	0.206	199,435	88.2	175,646
Yukon-Nevada Gold Corp.	2008	338,350	2,128	0.16	54,136	87.3	44,732
Yukon-Nevada Gold Corp.	2009	0	-	-	-	86.3	9,770
Yukon-Nevada Gold Corp.	2010	599,555	1,862	0.123	73,745	88.2	65,104
Yukon-Nevada Gold Corp.	2011	628,418	1,853	0.142	89,235	85.8	67,748
YNG/Veris Gold Corp.	2012	978,262	3,929	0.130	127,174	82.7	105,626
Veris Gold Corp.	2013	1,084,131	3,288	0.154	166,956	85.5	139,556
Veris Gold Corp.	2014	1,106,524	3,040	0.166	183,683	87.8	160,451
Veris Gold Corp.	2015	573,810	3,284	0.172	98,742	84.7	83,497



Mine Company Owners	Year	Tons Processed (All Sources)	Daily Tonnage (stpd)	Mill Head Grade (oz/st Au)	Calculated Contained Metal (oz Au)	Recovery (%)	Production (oz Au)
Jerritt Canyon Gold, LLC	2015	584,775	3,074	0.174	101,307	86.3	89,094
Jerritt Canyon Gold, LLC	2016	1,191,674	3,765	0.144	171,333	85.4	140,989
Jerritt Canyon Gold, LLC	2017	1,143,530	3,585	0.135	154,187	83.9	129,335
Jerritt Canyon Gold, LLC	2018	1,213,609	3,325	0.137	165,670	85.7	141,963
Jerritt Canyon Gold, LLC	2019	883,582	2,420	0.154	135,736	85.5	116,060
Jerritt Canyon Gold, LLC	2020	826,234	2,265	0.160	131,830	85.5	112,749
Total	1980 - 2020	57,476,407	4,121	0.179	10,269,976	88.3	9,064,491



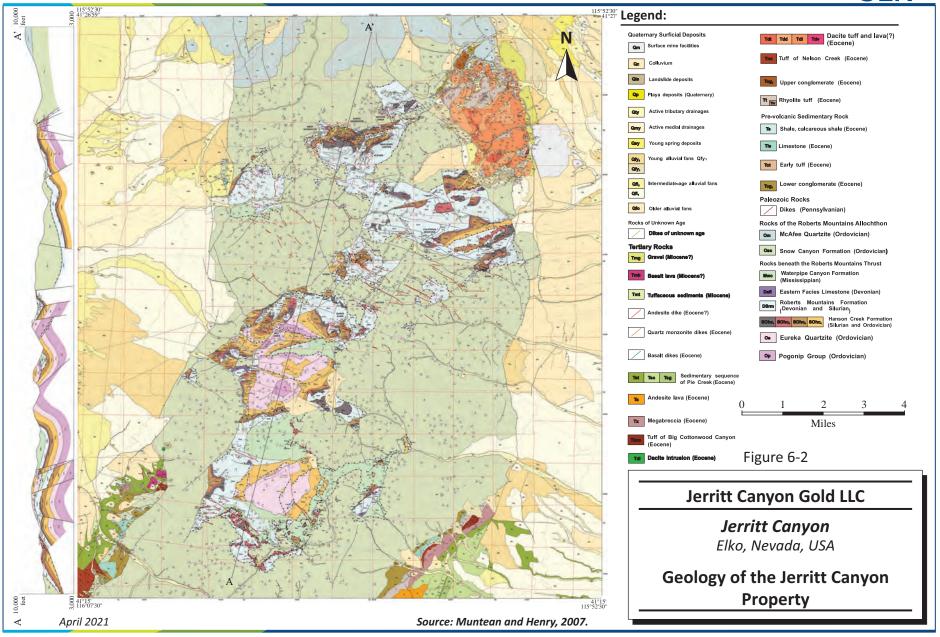
6.3 Exploration

Early, major discoveries in the Jerritt Canyon district were made by following predominantly northeast and northwest trending structures, within and bounding the Lower Plate windows found in the area. Exploration activities completed at Jerritt Canyon have included prospecting, geological mapping, various types of geophysical surveys, and geochemistry.

6.3.1 Geology

As expected for a property with more than 35 years of production, geological maps, sections, and sketches pertaining to the property are abundant and are located in an on-site data archive. In 1984, Freeport established a map system where individual map sheets, referred to as plates, at a scale 1":500' and extending 14,000 ft in the east-west direction and 10,000 ft in the north-south direction were formalized and covered the entire Jerritt Canyon property. Since 1984, all geological mapping has been recorded using the plate maps reference system. In 1984, the "Jerritt Gold Study" was undertaken as a collaboration between Freeport and the United States Geological Survey (USGS). Digital compilation of historical geological mapping completed by the Nevada Bureau of Mines and Geology (NBM) was followed by new geological mapping completed by NBM from 2005 to 2007. This resulted in the publication of a comprehensive geological map for Jerritt Canyon (NBM Open File 07-3) (Figure 6-2).







6.3.2 Geophysics

Considerable geophysical work has been completed throughout the Jerritt Canyon property since the early 1970s by numerous contract geophysical companies. This includes numerous ground surveys utilizing magnetic, electric, and electromagnetic (EM) methods, gravity surveys, and airborne magnetic, radiometric, and EM surveys. During 2015, JCG contracted consulting geophysicist R.B. Ellis to compile and interpret historical geophysical survey data. The description of the historical surveys and some comments on results below have been taken from the report by Ellis (2016). Interpretation and recommendations made by Ellis are described and discussed in Section 9 of this Technical Report.

6.3.2.1 Early Ground Geophysical Surveys (1972 to 1992)

Early ground geophysical surveys were focused on local surveys to understand the physical properties of various lithologies or testing methods to trace intrusive dikes and structures. The focus on characterizing the lithologies was to try to separate Upper and Lower plate rocks. Complex resistivity measurements were made in-situ on nine lines at Mahala, East Mahala, and in the Waterpipe II area by Zonge Engineering. Complex resistivity is an induced polarization (IP) method where data is collected at multiple frequencies to determine whether different polarization species can be differentiated.

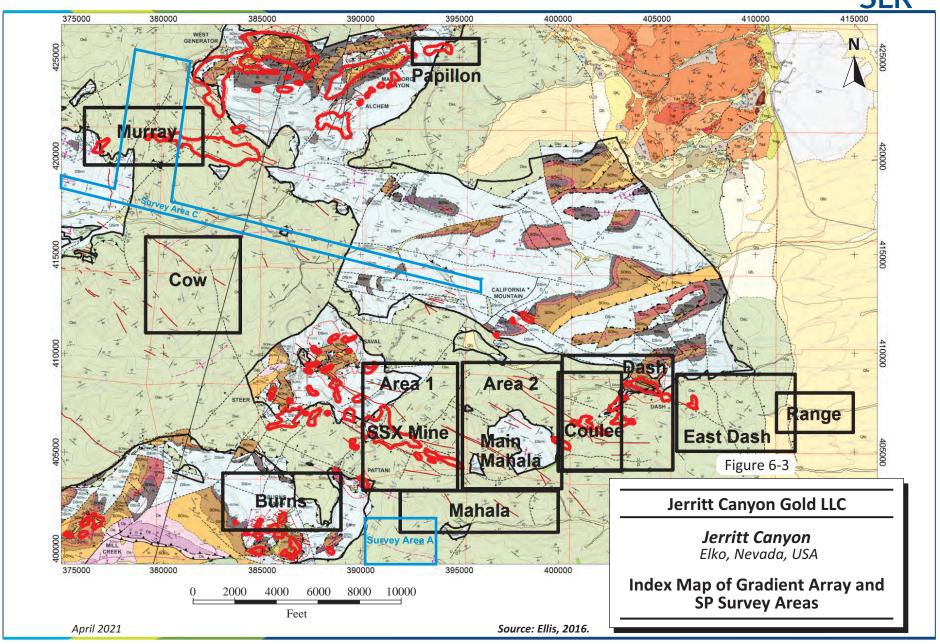
IP and resistivity survey results acquired by Zonge Engineering at Saval, Prego, and Pattani Creek confirmed an IP signature associated with mineralization. Similarly, a summary of various geophysical surveys (seismic, Crone electromagnetics (CEM) and very low frequency (VLF or RADEM)) at Jerritt Canyon by Smith (1972 and 1987) alludes to the value of IP and complex resistivity to separate various Jerritt Canyon lithologies. These results support the potential value of conventional IP surveys on the property consistent with the Starvation Canyon result in 2011 (TITAN survey).

Ground magnetics and VLF test lines acquired in the Saval/Prego and Burns Basin areas have been described by Smith (1990).

6.3.2.2 Gradient Array and Self Potential

Gradient array and self-potential (SP) data were collected by Dick Fox between 1994 and 1998. An index map of this survey is presented in Figure 6-3. The data was critically reviewed by the Jerritt Canyon exploration team in 1994 before and after the terrain corrections and no consistent correlation with mineralization was found. Use of the dataset for targeting was discouraging and considered unlikely to be an important exploration tool.







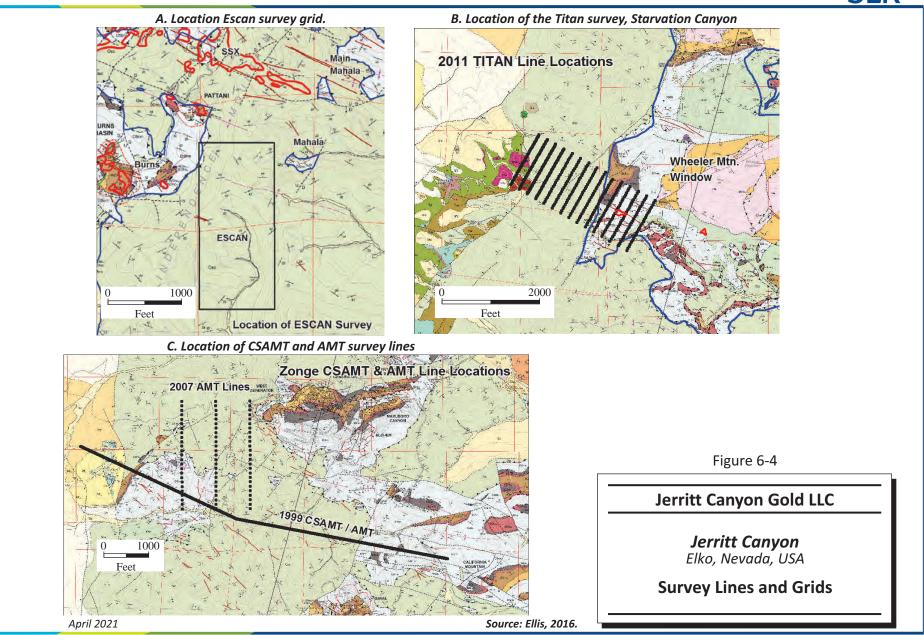
6.3.2.3 ESCAN

ESCAN data was acquired in a grid south of the SSX deposit and southeast of Burns Basin in 1996 by Premier Geophysics Inc. (Figure 6-4). ESCAN is a trade name for a DC resistivity survey utilizing the polepole array and a mesh of receiver electrodes (300 ft and 600 ft) where current is transmitted inside and outside the grid to produce a 3D set of data, which is then inverted. The objective of the survey was to "determine the presence of geo-electric signatures related directly or indirectly to ore mineralization". SLR notes that IP data was apparently collected, however, never processed (Shore, 1999).

6.3.2.4 Audio-frequency Magnetotellurics

Audio-frequency magnetotellurics (AMT) is a DC resistivity-sounding method that measures variations in the Earth's natural EM fields to detect electrical resistivity variations at shallow to intermediate depths. The surveys were completed by Zonge Engineering in 1999 and 2007 to estimate the depth to the presumed higher resistivity Hanson Creek Formation. The locations of survey lines are presented in Figure 6-4 and images of the model section have been recreated. The 1999 survey was Zonge Engineering's first attempt at collecting AMT data with their GDP-32 receiver. While it was common to collect controlled source audio-frequency magnetotelluric (CSAMT) data in the high-frequency band to improve the signal to noise ratio of these soundings, this was not acquired for the 2007 lines. A comparison of 2D inversion lines to drill-controlled surfaces of the Saval discontinuity indicates no consistent change from the low-resistivity Roberts Mountain to the high-resistivity Hanson Creek Formation.







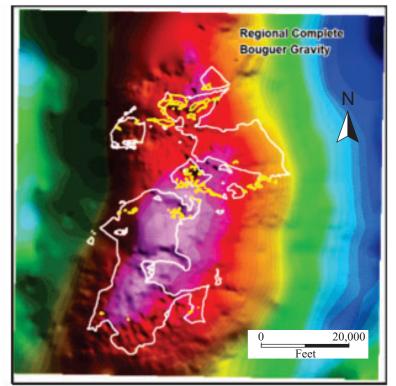
6.3.2.5 Gravity Surveys

Gravity data has been collected at Jerritt Canyon since 1999, with the latest survey completed in 2007. Data has been either collected or purchased for 16 separate survey areas. The objective of the gravity data was to identify the dense carbonate lithologies and identify low density decalcification commonly associated with mineralization. SLR notes that processing and reporting for each survey has been cumulative; as such, the 2007 report by Ellis (Ellis, 2007) is the most comprehensive record of the datasets. Ellis (2007) contains both details of the data reduction and images as well as some comments on the interpretation of the data. All images and products were re-created in the Jerritt Canyon grid. The 3D inversion modelling of the complete Bouguer gravity anomaly for the Jerritt Canyon area is presented in Figure 6-5 along with the station locations. High-precision survey control for the gravity base station elevations was established at 21 points on the Jerritt Canyon property as described by K. E. Schaaf (2000).

The tilt derivative (Figure 6-5) shown adjacent to the complete Bouguer gravity anomaly is a filter operator that enhances the higher frequency signatures in the data and efficiently identifies the horizontal location of the source. A northerly trend of density lows shows correlation with deposit areas and has been attributed to areas of decalcification extending to depth.



Regional Complete Bouguer Gravity



Tilt derivative of gravity data

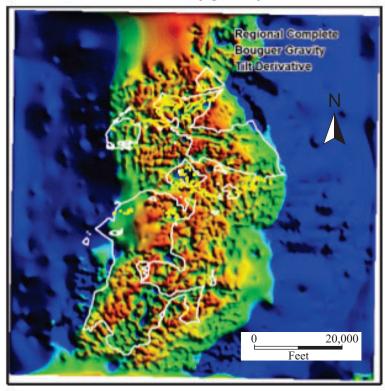


Figure 6-5

Jerritt Canyon Gold LLC

Jerritt Canyon Elko, Nevada, USA

Bouguer Gravity Survey

April 2021

Source: Ellis, 2016.



6.3.2.6 Airborne Surveys

Seven airborne surveys have been flown over the Jerritt Canyon property.

Applied Geophysics Inc. flew the earliest magnetic survey in 1976 for Freeport. The 1976 survey was flown on 0.25-mile spaced lines in a north-south direction using a helicopter platform at an average terrain clearance of 500 ft.

A subsequent 1988 Aerodat Ltd. (Aerodat) survey consisted of four regional test lines. The location of three extensive surveys is shown in Figure 6-6. No digital data for the 1988 survey is available and the coverage of this survey has been superseded by other aeromagnetic surveys.

In 1993, Newmont Exploration Inc. flew a 400-m (0.25-mile) spaced magnetic survey along east-west lines. This was a helicopter survey with terrain clearance in the range of 50 m to 400 m above topography.

In August 1995 and October 1996, DIGHEM Surveys Ltd. flew a helicopter-platform magnetic, radiometric, and electromagnetic survey for the Jerritt Canyon Joint Venture. The survey consisted of three survey areas (Figure 6-6). Line spacing was 200 m except for a small area on the east side that had a line-spacing of 100 m, and a sensor height of 50 m. The focus of the 1995/1996 aeromagnetic surveys was to map structure and identify intrusive rocks that appear spatially coincident with mineralization at Jerritt Canyon.

During the fall of 2000, AngloGold initiated a hyperspectral survey over the Independence Range, including coverage of the Jerritt Canyon Joint Venture tenement. No digital data for the 2000 survey is available, however, coverage of this survey has been superseded by the 2019 survey.

In 2019, Wright Geophysics of Elko, Nevada, in conjunction with MWH Geo-Surveys of Reno, Nevada conducted a low level (17 m above ground level) program over a select area of the Jerritt Canyon property (Upper Stump Basin) using a drone with a suspended magnetometer. The primary objective of the 2019 survey was to detect and delineate dikes and intrusive rocks in the mine site environment that would ultimately lead to drill targets. Based on the results of the test program, a high resolution, airborne magnetic survey was completed over two areas from September 24 to December 1, 2019. A total of 1,727 line kilometres of magnetic data were acquired using a GEM Systems GSMP-35U Potassium optically pumped magnetometer. Measurements of the total magnetic intensity were taken in the continuous mode at 0.05-second intervals along lines spaced 10 m apart and oriented north-south. This sample rate yielded a station interval of approximately 0.25 m along the flight lines. A base magnetometer was operated during all periods of data acquisition. A DJI Matrice 600 Pro drone with WAAS-enabled GPS navigation transported the magnetometer.

Figure 6-6 shows the locations of the airborne surveys prior to 2019.



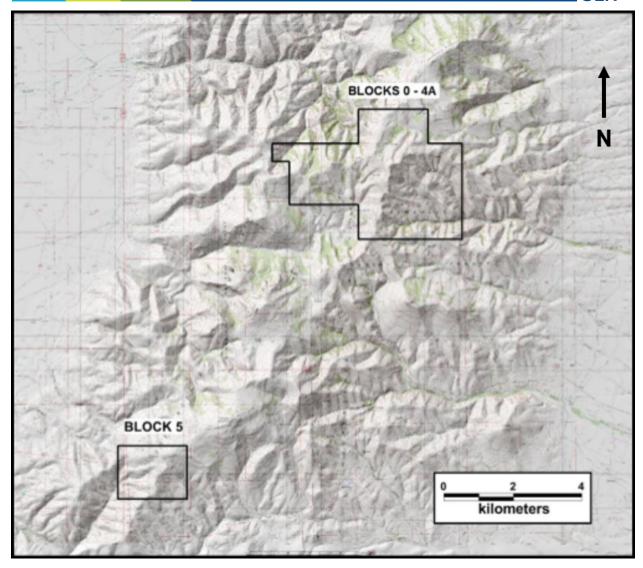


Figure 6-6: Location of Airborne Surveys

In August 2019, SpecTIR completed an airborne shortwave infrared (SWIR) and visible-near infrared (VNIR) hyperspectral survey for 675 km² over the Jerritt Canyon District. An AisaFENIX sensor was flown at a mean altitude of 1.4 km above ground level with one-metre ground resolution. Specific mineral species under investigation include a suite of clay minerals including kaolinite and montmorillonite, variations in aluminum content of illite, ammonium-bearing minerals including ammonium illite, and variations in silica minerals.

6.3.3 Geochemistry

Geochemical surveys completed at Jerritt Canyon include soil and stream sediment sampling and outcrop, trench, and road cut bedrock sampling. In addition, exploration/research-oriented geochemical studies have been completed on the Saval discontinuity and mafic dikes.

The soil geochemical database for Jerritt Canyon consists of 65,840 samples collected over a span of over 30 years. Most samples (56,761) were collected by Independence Mining Company (Independence



Mining) staff and contractors (and predecessors). Prior to 1997, Independence Mining acquired data for 1,399 samples from another company. Queenstake compiled the soil data in 1999 and subsequently collected 7,283 samples from the northern and southern limits of the Jerritt Canyon land position and acquired data for an additional 407 samples to the north from Vista Gold. A total of 18,691 rock samples have been taken from surface exposures on the Jerritt Canyon property, including outcrop, road cuts, and trenches. Chip sampling of road cuts and exposures was completed over selected target areas. A total of 145 chip sampling traverses have been completed (Table 6-4). The Saval Discontinuity geochemical data set consists of gold assays for 10,170 intercepts of which, 6,441 Saval Discontinuity intercepts also have multi-element analyses by inductively coupled plasma (ICP) methods.

Table 6-4: Summary of Chip Sampling on Jerritt Canyon Property Jerritt Canyon

Project (prefix)	Chip Traverses
Bidart (ZBI)	4
Burns Basin (ZBB)	10
California Mountain (ZCM)	5
East Mahala (ZEM)	17
Lost Mine (ZLM)	23
Mahala (ZMAH)	21
Pie Creek (ZPC)	2
Sheep (ZSH)	21
SSX/Spaghetti (ZSP)	1
Stump (ZSM)	14
Upper Stump Basin (ZUSB)	1
Winters Creek (ZWC)	8
Wright Window (ZWW)	12

6.3.4 Drilling

Numerous drilling campaigns have been executed at Jerritt Canyon since its discovery in the 1970s. Historical surface drilling and underground drilling are described below.

6.3.4.1 Surface Drilling

Early surface exploration drilling programs typically consisted of vertical reverse circulation (RC) drilling over target areas at approximately 200-ft centres. The spacing was then reduced to approximately 140 ft and further to 100 ft or less to delineate open pit resources. Surface core drilling typically made up approximately five to ten percent of the total drilling.

The Jerritt Canyon surface drilling database contains 15,058 holes for a total of 8,591,902 ft drilled between the start of exploration until December 2011. There was no surface drilling completed between 2011 and the acquisition of the property by JCG in 2015. Surface drilling completed by JCG is described in Section 10 of this Technical Report.



In the 1970s and 1980s, only open pit targets were pursued. Most of the surface drill holes were drilled to a maximum depth of 600 ft below the surface and stopped regardless of the encountered geological rock unit or alteration because this depth was assumed to be the lower limit of economically viable open pit mining.

6.3.4.2 Underground Drilling

In the underground mines up to December 31, 2011, definition drilling included core drilling on 50-ft centres from underground stations, using NQ-sized (1.875-in. diameter) core. In mid-2011, drilling with HQ core (2.5-in. diameter) was used locally. Underground RC drilling (Cubex) was used for resource confirmation and was generally completed on 20-ft to 40-ft centres. Underground RC drill holes were generally less than 150 ft in length but occasionally up to 300 ft. Up to August 2008, underground production sample drilling consisted of Cubex and rotary percussion drilling. In 2010 and 2011, a 5200 DRC Cubex (RC) drill, owned and operated by SMD, was used primarily for underground production sample drilling at the Smith mine. These production drill holes were generally short, less than 60 ft, and were drilled on close centres of 10 ft to 20 ft. Most drill holes, other than the production holes, have been measured for downhole deviation. A used Cubex drill rig was purchased in 2011 by Queenstake to conduct underground production drilling at SSX.

The Jerritt Canyon database contains a total of 42,253 historical underground holes from the period predating June 23, 2015, the effective date of the acquisition of the property by JCG (Table 6-5).

Table 6-5: Historical Underground Drilling by Deposit

Jerritt Canyon

Deposit	No. Holes	Footage
Murray	7,677	394,198
Saval	113	18,695
Smith	11,281	1,231,216
Starvation	562	91,347
SSX	22,620	2,139,889
Total	42,253	3,875,345



7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional and Local Geology

The Jerritt Canyon district is located in the Great Basin, north-northeast of the Carlin Trend of gold deposits (Figure 7-1). The Great Basin records a protracted geological history from Proterozoic through to recent. Continental rifting of the Archean-Proterozoic craton resulted in the deposition of rift facies Neoproterozoic and Cambrian clastic sedimentary rocks and the establishment of a passive continental margin on the western edge of North America. A miogeoclinal sequence developed on the passive margin with deposition of Ordovician to Devonian shallow carbonates and shales in the shelf-slope environment (e.g., Hanson Creek, Roberts Mountain, Popovich, and Rodeo Creek Formations) and Cambrian to Ordovician deep siliciclastic sedimentary rocks on the slope floor environment to the west (e.g., Vinini and Snow Canyon Formations). During the Late Devonian to Early Mississippian Antler Orogeny, the deep water siliciclastic sedimentary and minor basaltic rocks were thrust over the shallow shelf slope shallow carbonates and shales.

The regional thrust fault is referred to as the Roberts Mountain Thrust. A foredeep basin formed to the east in front of the thrust belt resulting in deposition of Early Mississippian syn-orogenic and Pennsylvanian post-orogenic sedimentary rocks including conglomerate, siltstone, and limestone (Antler Overlap Sequence). Northeast Nevada was further subject to compressional tectonism in the Pennsylvanian through to the Permian Humboldt and the Early Triassic Sonoma Orogenies. East-dipping subduction was established along the western margin of North America by the Middle Triassic. The main magmatic arc attributed to this subduction is the Sierra Nevada batholith located to the west of northeast Nevada. Related magmatism in northern Nevada includes Middle Jurassic back arc volcanic-plutonic complexes. Early Cretaceous S-type granites to Late Cretaceous I-type granites emplaced in northern Nevada are related to progressive crustal thickening during the Cretaceous Sevier and Laramide Orogenies. Numerous regional extensional basins started to develop in northeastern Nevada and western Utah in the Middle Eocene and a distinctive high potassium calc-alkaline magmatism was emplaced at approximately 42 Ma. Eocene extension is interpreted to have been largely accommodated by the reactivation of earlier structures. Middle Eocene magmatic rocks include the deposition of volcaniclastic rocks, ash-flow tuffs, and flows in newly formed basins, subsequent basin fill volcanic rocks, small flowdome complexes, and high-level intrusions and dikes. Regionally, Eocene dikes range in composition from porphyritic dacite, basalt-andesite, and rhyolite.

Carlin-type gold mineralization is preferentially hosted by Ordovician to Devonian shallow shelf-slope carbonate shale sequences. These rocks are commonly referred to as "Lower Plate" rocks owing to their position in the footwall of the regional Roberts Mountain Thrust. The deep water siliciclastic dominant rocks forming the hanging wall of the Roberts Mountain Thrust are commonly referred to as "Upper Plate" rocks. This sequence of less reactive and less permeable upper plate rocks, acting as an aquitard over variable to highly permeable lower plate rocks, is regarded as a primary control on the deposition of Carlin-type gold mineralization. The Carlin-type gold deposits in northeastern Nevada formed in the Middle to Late Eocene during the period 42 Ma to 36 Ma. Deposition is regarded as part of a magmatic-hydrothermal event related to regional extension utilizing reactivated, variably oriented pre-Eocene structures.

Figure 7-2 shows the general stratigraphic section of the Jerritt Canyon district and Figure 7-3 shows the local geology.



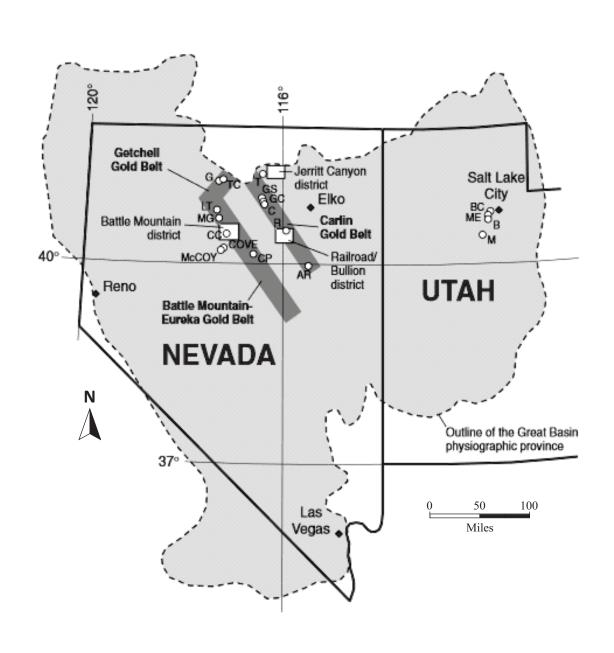


Figure 7-1

Jerritt Canyon Gold LLC

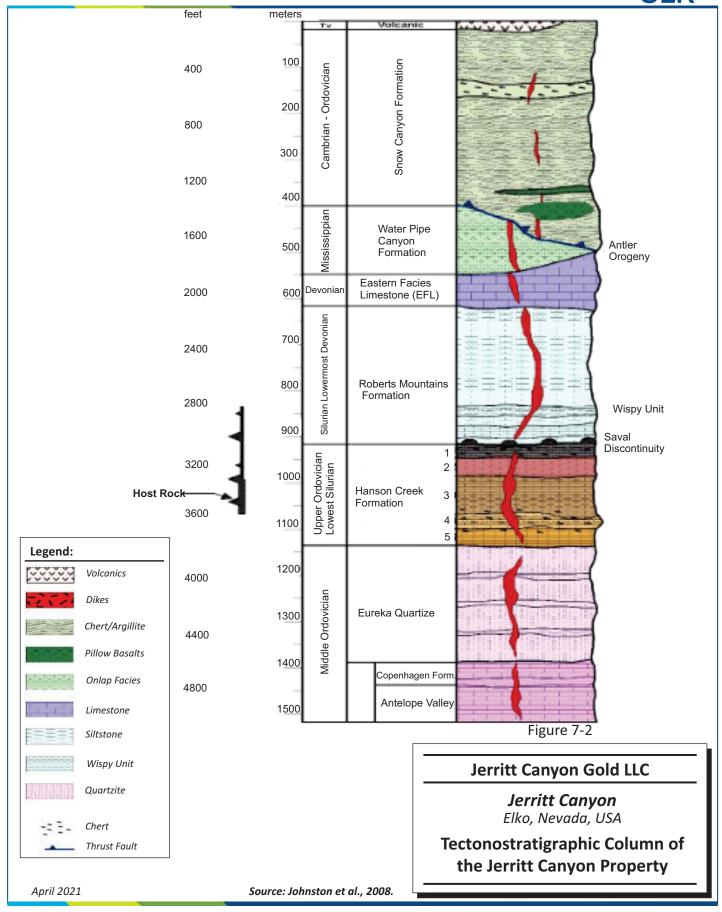
Jerritt Canyon Elko, Nevada, USA

Location of the Jerritt Canyon Property and Nevada Gold Belts

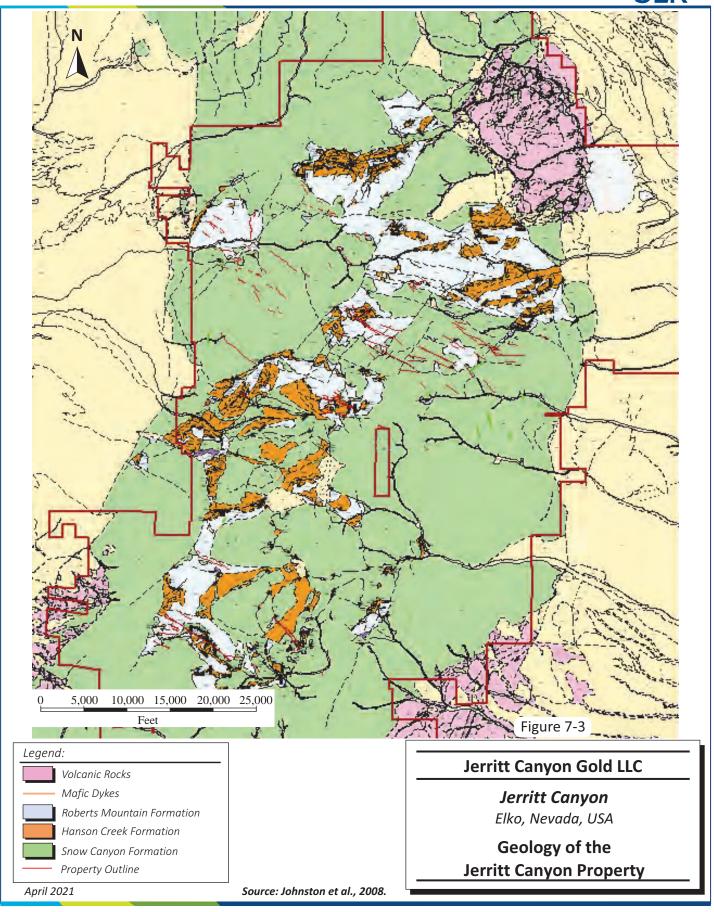
April 2021

Source: Johnston et al., 2008.











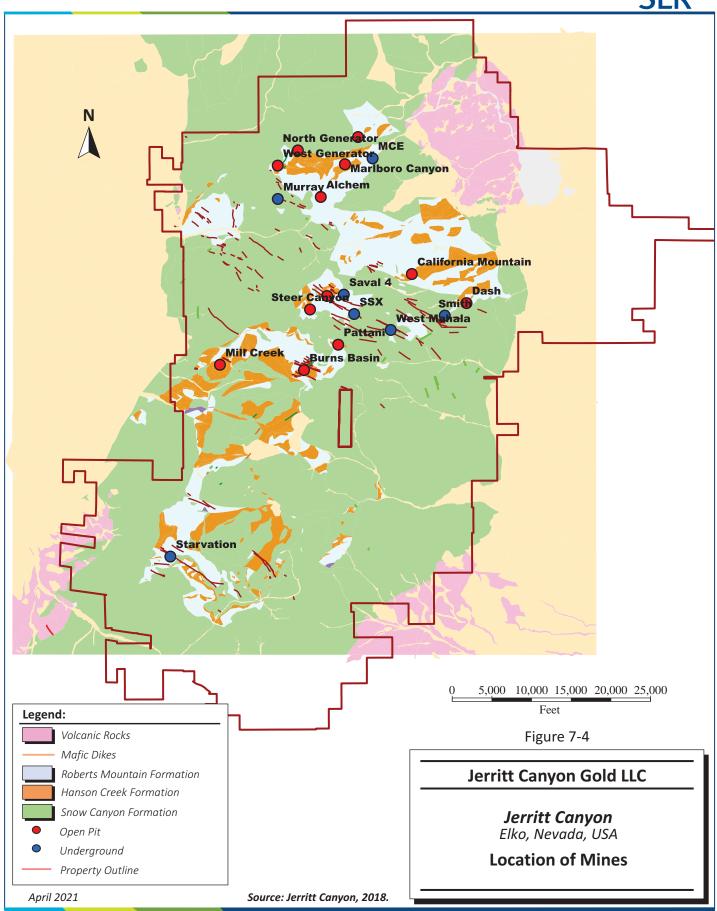
7.2 Mineralization

The occurrence and distribution of gold mineralization at Jerritt Canyon is controlled both by lithology and structure. Gold mineralization at Jerritt Canyon is hosted by Hanson Creek Formation units I to III (Table 14-3) and the lower part of the Roberts Mountains Formation. The Saval discontinuity, being the contact between the Hanson Creek and the Roberts Mountain Formations, is interpreted as a primary control on gold mineralization at Jerritt Canyon. Gold mineralization is hosted by, or spatially associated, with high angle west-northwest- and north-northeast-trending structures. Much of the more continuous gold mineralization occurs within the favourable stratigraphic intervals along the limbs or hinge zones of large anticlinal folds, and at the intersection of the two sets of high angle structures. The mineralized zones form along well defined structural and mineralization trends as stratigraphically controlled tabular pods that are locally stacked upon one another resulting from the presence of more than one favourable stratigraphic unit and/or local thrust and/or high angled fault intersection controls. The deposits are Carlin type, sediment-hosted gold mineralization within carbonaceous sediments. Gold occurs as very fine-grained micron-sized particles as grain boundaries or inclusions in pyrite, and as free grains in carbonaceous-rich and fine-grained, calcareous, clastic sedimentary rocks.

Alteration in the Jerritt Canyon district includes silicification, dolomitization, remobilization, and reconstitution of organic carbon, decalcification, argillization, and pyritization (typically containing elevated arsenic). The rocks also exhibit hypogene and supergene oxidation and bleaching. The most important alteration types relative to gold deposition are silicification, remobilization, and reconstitution of organic carbon, pyritization, and decalcification.

The locations of past and currently producing open pit and underground mines on the Jerritt Canyon property are illustrated in Figure 7-4.







7.2.1 SSX

The drift connecting the SSX and Steer mines was completed in the latter half of 2005 and the mines have been operated as a single unit referred to in this Technical Report as the SSX mine.

The SSX deposit was discovered in the early 1990s following the northeast structural trends between the Burns Basin and California Mountain deposits and the west-northwest trends from the Steer/Saval deposits. Mining at SSX began in 1997.

While the resource wireframes indicate a distinct northwest trend in the eastern portion of the SSX area, a generally more east-west trend is exhibited in the Steer Domain (Figure 7-5). Additionally, the mineralized zones are more continuous in the SSX area ranging from 200 ft to 2,000 ft in length along the northwest strike and 50 ft to 200 ft in width, with thickness ranging from 10 ft to 100 ft. Mineralization at Steer is less continuous ranging from 50 ft to 500 ft in strike length and 50 ft to 300 ft in width, with thickness ranging from 20 ft up to 100 ft. The depth to mineralization ranges from near surface at the west end of Steer to a depth of approximately 800 ft below the surface for most of the SSX deposit. Most of the mineralization occurs between 600 ft and 1,000 ft below the surface.

SSX mineralization occurs predominantly in the micritic unit III of the Hanson Creek Formation. A smaller portion of the mineralization occurs in calcareous siltstone at the base of the Roberts Mountains Formation or in the upper two cherty and dolomitic members of the Hanson Creek Formation. Mineralized zones are localized in and near west-northwest-trending steeply dipping dikes (e.g., South Boundary Dike); however, dike material is a minor component of the mineralized material at SSX. Mineralization is also localized along cross-cutting northeast-trending faults. Folding of the mineralized horizons is apparent along axes parallel to the west-northwest dike trend and, more prominently, parallel to the northeast fault set. Gold occurs in decarbonatized rock, commonly in association with variable amounts of orpiment and realgar. Silicification with stibnite can also be associated with gold in portions of the upper cherty member of the Hanson Creek Formation.

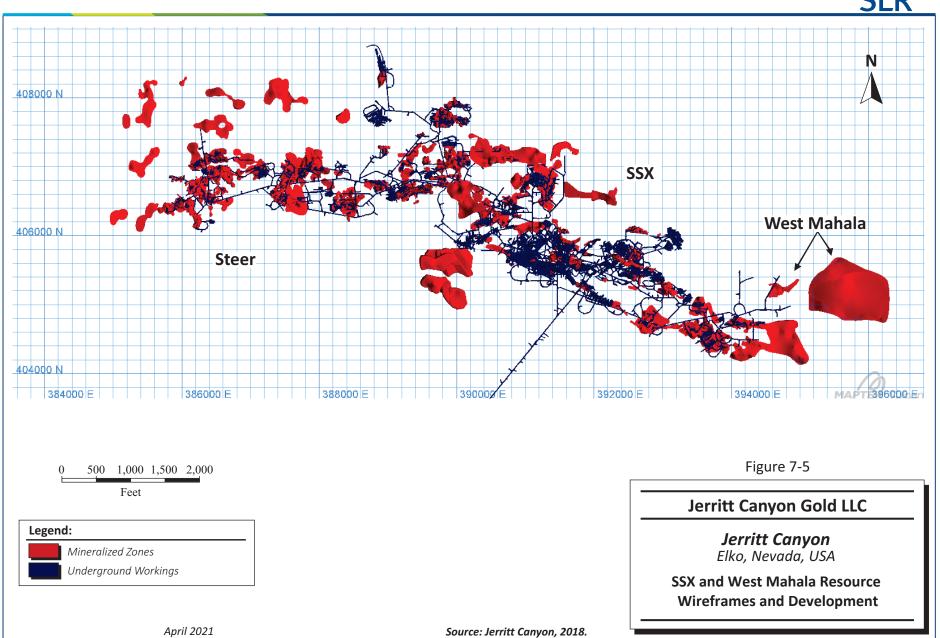
Gold mineralization in the Steer portion of the SSX complex has been identified in an area stretching approximately 3,000 ft east from the old Steer pit to halfway along the connection drift to SSX Zone 5. Most gold mineralization at Steer is associated with gently dipping structures cutting through Hanson Creek unit III. These structures strike northeast and dip southeast, offsetting strata. Zones of mineralization typically follow the structures and tend to be broad and relatively thin. The mineralized zones are usually at the contact between Hanson Creek Formation units III and IV and occasionally follow the structures up through unit III. Both within the Steer portion and the western side of SSX, several low angle features have been observed. These features are at least partly responsible for the gold mineralization at the contact of Hanson Creek Formation units III and IV.

In the eastern portion of the Steer area, high grade mineralization is associated with the Husky Fault, a major northeast trending normal fault with approximately 300 ft of normal dip-slip displacement to the southeast. Major northwest trending dikes appear to have locally compartmentalized high grade mineralization. The intersection of these dikes with Hanson Creek Formation unit III and the Husky Fault and its related structures offers excellent exploration potential. One of these dikes is interpreted to be the western extension of the South Boundary dike, which is an important ore-controlling structure at SSX to the east.

At Steer and SSX, the structural intersections are the primary targets for resource expansion, as well as the westward extension of the South Boundary dike.

The resource wireframes for the SSX mine are illustrated in Figure 7-5.





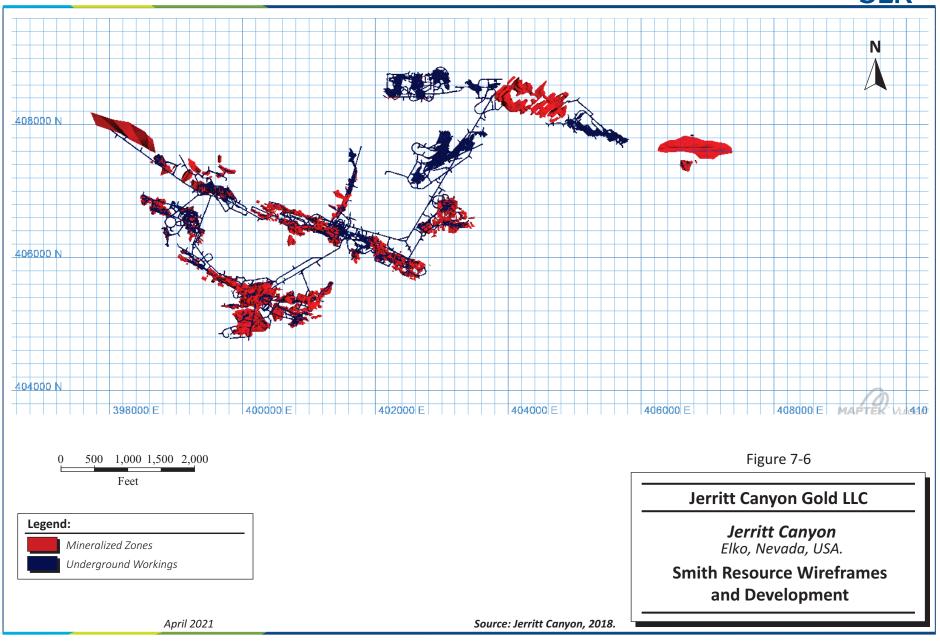


7.2.2 Smith Mine

The Smith mine, accessed from near the bottom of the Dash open pit, began operations in 1999 as the Dash open pit was being mined out. Gold mineralization in the Smith, Mahala, and West Dash deposits is associated with the northeast-trending Coulee Fault and west-northwest-trending faults and dikes. The mineralization at Smith generally trends northwest with minor northeast trends along minor structures. Mineralization is continuous along the northwest trend ranging from 200 ft to 2,500 ft. The width of the mineralization ranges from 20 ft to 400 ft and the thickness ranges from 10 ft to 100 ft. The depth of the mineralization ranges from near surface at the Dash open pit to 1,200 ft below the surface to the south and east.

In Smith Zone 1, high-grade gold mineralization is hosted in the upper and middle portions of Hanson Creek Formation unit III within a northwest-trending horst block between the South Graben Fault and the 170 fault. Mineralization in Zones 2 and 3 is directly associated with west-northwest-trending dikes. High-grade mineralization occurs within Hanson Creek Formation units II and III along the steeply dipping dikes. Lesser amounts of mineralization exist at higher levels where the dikes intersect favourable beds in the Roberts Mountains Formation. An exception to the tight elevation controls on mineralization is observed at the intersection of the west-northwest-trending dikes and the Coulee Fault. Here, high-grade mineralization blows out into Hanson Creek Formation unit III along the west plunging intersection of the dikes and the fault for a down-dip depth of 600 ft. The resource wireframes for the Smith deposit are illustrated in Figure 7-6.







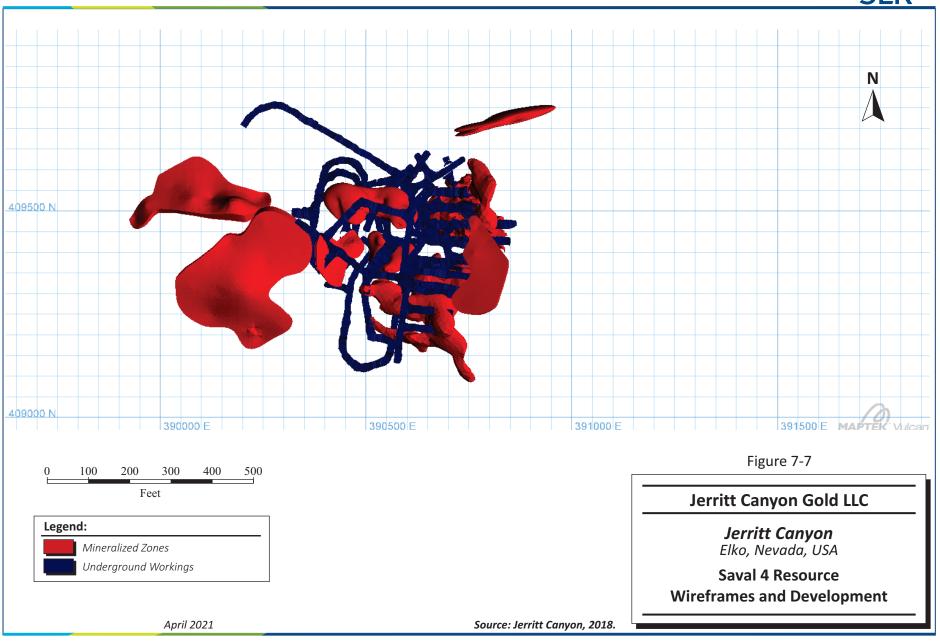
7.2.3 Saval 4

Previous mining at Saval has included open pit mining from 1994 to 1997 and small-scale underground mining from 2004 to 2006 in the high wall of the Saval 2 pit. Gold mineralization in the Saval Basin area, located to the west of the SSX mine, is primarily hosted in Hanson Creek Formation unit III where it has been intersected by faults and has locally been compartmentalized by northwest trending dike systems. In this area, a series of west-northwest trending structures have been cut by northeast trending faults. Notable structural features include the west-northwest trending Saval horst and the northeast trending Husky Fault, which cuts across the older Saval horst and down-drops it to the southeast. Mineralization is predominantly hosted in Hanson Creek Formation unit III in the vicinity of structural intersections, often forming relatively steep, narrow, plunging bodies. Dikes, such as the Saval 3 pit dike can be traced for thousands of feet. High grade gold mineralization has been concentrated along the Saval 3 dike in several locations, most prominently in the Saval 3 pit and in the north part of Zone 5 at SSX.

Mineralization at Saval generally trends east-west from 200 ft to 1,000 ft, with width ranging from 50 ft to 200 ft and thickness from 10 ft to 50 ft. The depth of the Saval mineralization is from surface to approximately 400 ft below the surface.

The Saval 4 underground resource (Figure 7-7) is a relatively steep and vertically extensive high grade zone that lies within the Saval horst beneath a splay fault of the Sheep Tank Fault. The intersection of west-northwest trending faults that bound the horst with northeast trending faults are interpreted to have played an important role in formation of this resource.







8.0 DEPOSIT TYPES

Jerritt Canyon is a Carlin-type gold deposit, hydrothermal in origin and usually structurally controlled. Current models attribute the genesis of Carlin-type gold deposits to:

- Epizonal plutons that contributed heat and potentially fluids and metals.
- Meteoric fluid circulation resulting from crustal extension and widespread magmatism.
- Metamorphic fluids, possibly with a magmatic contribution, from deep or mid-crustal levels.
- Upper-crustal orogenic-gold processes within an extensional tectonic regime.

Jerritt Canyon is hosted by silty carbonate or carbonaceous siliciclastic rocks originally deposited as shelf sedimentary rocks during the Paleozoic age. The Paleozoic host rocks have been imbricated, faulted, and folded through several orogenic events in the Paleozoic and Mesozoic. An early phase of intrusive igneous activity is represented by west-northwest mafic igneous dikes of Paleozoic age.

Carlin-type gold deposits were emplaced during the Middle to Late Eocene during an initial phase of extensional tectonics at which time high potassium calc-alkaline magmatic rocks were emplaced. Mafic and intermediate igneous dikes were emplaced during this phase of igneous activity and demarcate north-northeast-oriented structures. The primary controls on the occurrence, distribution, and form of the deposits are:

- Favourable host rocks (formation units)
- The reactivation of Paleozoic and Mesozoic structures
- Eocene syn-mineralization normal faults

In general terms, the intersection of structures with favourable host rocks is the primary control and the form of mineralization ranges from apparently stratabound to fault hosted where the faults can be either highly discordant to bedding or bedding-parallel. Deposits at Jerritt Canyon are mostly stratabound or fault hosted. Gold occurs as very fine, micron sized, particles in pyrite and arsenian pyrite. Other sulfides are orpiment, realgar, and stibnite. Alteration includes decarbonatization, decalcification, and silicification (jasperoid).



9.0 EXPLORATION

Exploration completed by JCG has included desktop compilation and interpretation of historical datasets, target identification, and RC and core drilling. Drilling completed at Jerritt Canyon by JCG includes two phases of surface drilling and on-going underground drilling and is described in Section 10 of this Technical Report. In the fall of 2015, JCG initiated a comprehensive compilation of all historical geophysical data for Jerritt Canyon (Ellis, 2016) as well as a compilation of past surface geochemistry including soil, stream sediment, and bedrock sampling, completed to 2015. Interpretation of these compilations incorporated geology, gold distribution, and past surface exploration drilling and resulted in the identification of exploration targets and development of a surface RC exploration program, which was executed in the fall of 2016.

Conclusions from the geophysical review taken from Ellis (2016) are as follows:

- The SP, gradient array, early AMT survey, and ESCAN surveys are not expected to provide consistently useful targeting information in the future. The SP and gradient array have uncertain depth information making them of little value. The AMT and ESCAN were acquired in specific areas to estimate the depth to more resistive lower plate rocks. If these survey areas undergo further exploration, the datasets are in a format where they can be easily reviewed and may provide value when combined with geochemistry and geological mapping.
- The radiometric and airborne electromagnetic resistivity data collected as part of the DIGHEM survey do not show a consistent signature with known mineralization. These datasets have been reviewed over the years in their present form and there is little probability that some general correlation with mineralization has gone unrecognized.
- There is evidence that elevated IP values (due to increased abundances of sulfide minerals) occur within and proximal to areas of gold mineralization. Additional IP surveying in prospective areas is worth consideration.
- Inversion of the gravity data provides a 3D picture of the distribution of the density of the various rock types located at Jerritt Canyon. High density rocks are seen to flank the Independence Range with a north-south trending lower density core present that may be dominated by less dense intrusive rocks or deeper low density sediments. Locally, a correlation exists between low density anomalies and mineralization trends (e.g. the SSX deposit) that may identify areas of decalcification. This correlation should be examined in well known areas to understand the extent to which decalcification is being identified and can be used for broader targeting. While the use of density contrasts to identify areas of low-density readings that may represent areas of decalcification is complicated by the terrain correction factor, the results have identified areas of density lows that have not been tested by drilling.
- Inversion of the DIGHEM aeromagnetic data shows a good correlation of magnetic susceptibility highs with known intrusive rocks. Intrusive rocks interpreted to be present at Starvation Canyon are shown to extend northeast across the core of the mineralized area at depth. There is an observed correlation of intrusive rocks with mineralization at Starvation Canyon and along the northwest SSX deposit trend. The source of the magnetic susceptibility highs is interpreted to be an infusion of intrusive dikes. These dikes increase the total magnetic susceptibility of the nonmagnetic host lithologies that extend to depth into more coherent intrusive stocks. Similar susceptibility signatures to those at SSX, Burns, and Starvation Canyon may identify other areas for more detailed examination by geologic mapping and geochemical methods.



Based on the new gravity and magnetic inversion modelling, there is strong evidence for the
presence of intrusive rocks on the east flank of the Independence Range adjacent to and beneath
the Tertiary Mill Creek volcanic rocks and gravel.

In early 2017, JCG commissioned further detailed evaluation of the historical gravity data, inversion and examination of DIGHEM EM and magnetic data, inversion and examination of the ground magnetic data, and examination of the Titan survey results. This work has been completed by Condor Consulting (Witherly, 2017) and the main observations and conclusions are summarized below.

- DIGHEM EM: Over much of the Jerritt Canyon property, there is a good relationship between the
 high resistivity and Lower Plate rocks. In some areas, however, there is high resistivity and no
 Lower Plate rocks, and the reason for the high resistivity is unclear. Additionally, in some areas
 mapped as Lower Plate, the resistivity has moderate values, and it is not clear whether this is due
 to a soil cover or change in the physical properties of the Lower Plate rocks.
- DIGHEM EM magnetics: The magnetic results show mostly low response which is inconclusive.
 The major feature is a strong magnetic high wrapping along the eastern margin of the range that
 appears to be associated with Tertiary volcanics, much of it being located under Quaternary cover.
 While there are limited exposures of Tertiary volcanics on the western margin of the range, these
 do not appear to be magnetic. There could be significant structural information contained in the
 magnetic data which could be defined with suitable processing.
- DIGHEM EM radiometrics: Potassium is relatively low over two major Lower Plate areas, the Burn's Creek/Charlies Hill and Wheeler Mt. There are a series of lows across the top of the survey area where no significant Lower Plate rocks occur. The apparent resistivity values are high in the same areas, which suggests that there is a specific rock unit that is part of the Upper Plate package being mapped.
- Gravity Survey: The reasons for the gravity pattern described in Ellis (2016) are not well
 understood. The Lower Plate rocks are expected to be of higher density; however, this is not clear
 from the images examined. Given the cost of acquisition of the primary data, the survey results
 should be reviewed in detail and it should be ensured that the most suitable form of terrain
 correction has been applied.
- IP-Titan Resistivity: The resistivity results show that the Lower Plate rocks (eastern 40% of the survey block) are quite resistive at all depths. The western part of the block over Upper Plate rocks is medium-conductive at a shallow depth, however, a strong conductive zone is noted in the central part of the block at depths of approximately 1,500 ft.
- IP-Titan Chargeability: The chargeability shows a strong response from surface to a depth of 2,500 ft, where the contact between the Upper Plate and Lower Plate rocks is assumed to be located. The chargeability zone can be seen to extend over 4,000 ft (sections are 2,000 ft apart) whereas the resistivity low only goes to depth on one section. Based on resistivity and chargeability data, the contact between the Upper Plate and Lower Plate rocks cannot be defined with certainty.
- IP-Titan MT: The modelled MT results were visually examined and while they appeared to show some strong subvertical features, there was little evidence that any layering between the UP and LP rocks was being mapped.

In the spring of 2017, JCG commissioned Goldspot Discoveries Inc. (Goldspot) to complete a machine learning (AI) compilation, interpretation, and targeting study. The 2017 Goldspot study incorporated several datasets from Jerritt Canyon including drilling (lithology and assay), surface geology, topography,



soil geochemistry, gravity, DIGHEM EM, magnetic, and radiometric data. Goldspot incorporated hyperspectral data into the compilation and interpretation. Based on the 2017 study, Goldspot generated target areas, planned drill holes, and completed a 3D geological model incorporating structural and lithological information in Leapfrog software.

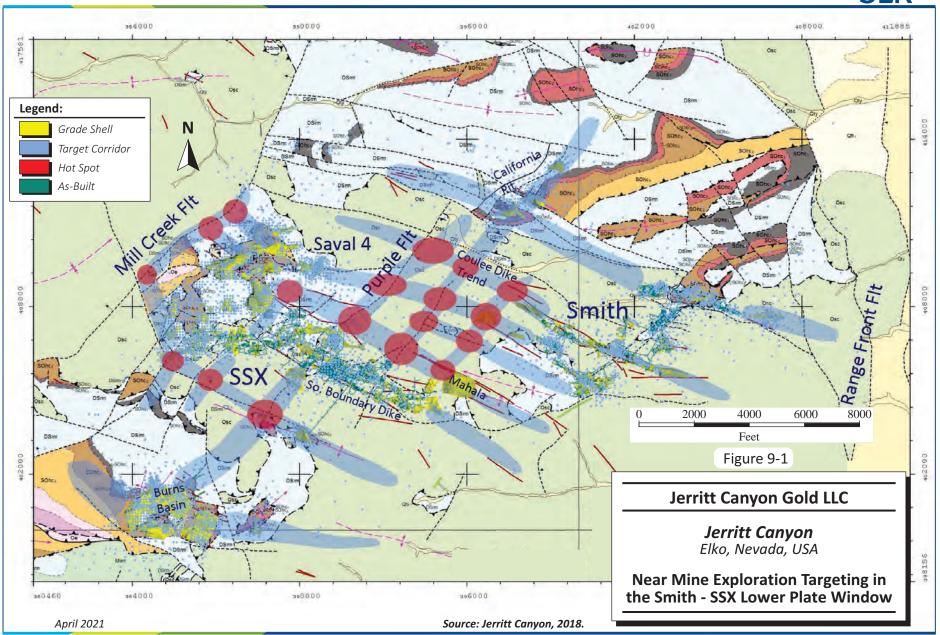
9.1 Exploration Potential

The Jerritt Canyon property is believed to hold significant potential for the discovery of additional gold-bearing mineralization. JCG has successfully expanded the Mineral Resources directly associated with the mining operation.

Historically, the primary exploration tool at Jerritt Canyon has been the mapping and projection of north-northeast faults, west-northwest faults, the intersections of these faults, and the intersections of these faults with the favourable host rocks such as the upper Hanson Creek Formation and the lower part of the Roberts Mountain Formation. Eocene mafic dikes demarcate the west-northwest and north-northeast structures and therefore are also considered. This approach is the basis for targeting of on-going underground drilling.

In particular, this strategy has been used to explore along the extension of well established west-northwest and northeast structural trends in the Smith and SSX mines. This has resulted in the delineation of Mineral Resources at Mahala, SSX Zone 5, Smith Zone 8, and Smith Zone 4. JCG geologists have completed a compilation and targeting exercise to target structural intersections in the SSX-Smith-Saval 4 Lower Plate domain (Figure 9-1).







Over the long mining and exploration history at Jerritt Canyon, past operators have generated a considerable amount of geoscience data and information for Jerritt Canyon. Based on the assessment of regional datasets and review of exploration and development history, First Majestic is of the opinion that there is district-scale exploration potential at Jerritt Canyon. Based on work to date, the following targets are considered to be high priority:

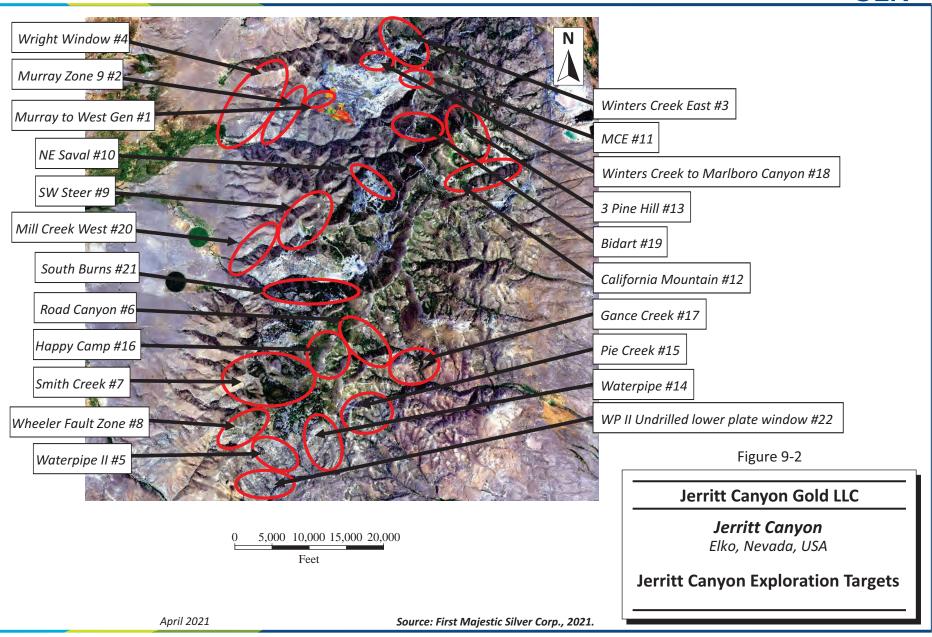
- Murray to West Generator
- Murray
- Waterpipe II
- Northeast Saval
- Road Canyon
- California Mountain
- Gance Creek
- Wheeler Fault Zone
- Pie Creek
- Waterpipe
- Pie Creek Goldspot
- Snake Goldspot
- Smith Creek
- Happy Camp
- Burns Basin
- Bidart
- Winters Creek

Figure 9-2 shows the general location of the targets listed above.

The entire property is approximately 119 square miles in size and has approximately 25 known exploration targets in various stages of exploration. Based on past mining and exploration data, JCG and the QP are of the opinion that the Jerritt Canyon District holds significant exploration potential that warrants further exploration work.

The QP recommends exploring the 17 high priority exploration targets. The QP concurs with First Majestic's plans to carry out a multi-year exploration program that will include a significant amount of surface and underground drilling that will cost approximately US\$10 million to US\$15 million annually.







10.0 DRILLING

This section discusses underground and surface drilling completed from January 2015 through December 2020 at Jerritt Canyon. Drilling completed prior to JCG's acquisition of Jerritt Canyon is described in Section 6 of this Technical Report.

10.1 Underground Drilling

Starting January 1, 2015 through December 31, 2020, JCG has drilled a total of 18,533 holes between reverse circulation (RC) and core from underground drilling sites, comprising of 2,800,695 ft of drilling (Table 10-1).

Underground Drilling by JCG Table 10-1: Jerritt Canyon

Mine	Туре	No. Holes	Footage (ft)
Smith	Core	192	130,648
SSX	Core	217	14,569
Saval 4	RC	299	46,335
Smith	RC	9,388	1,170,309
SSX	RC	8,279	1,269,744
Starvation	RC	158	35,090
Total	Core and RC	18,533	2,800,695

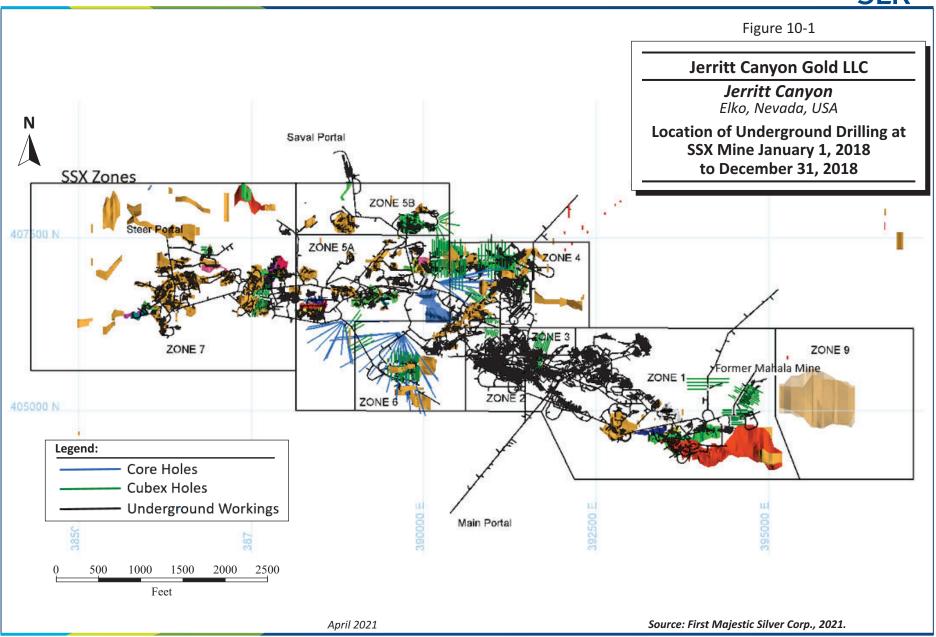
Underground core drilling is used for exploration to delineate Inferred Resources defined by surface drilling at a spacing of 100 ft or greater. It is also used to test anomalous areas, or areas of exploration potential, at depth defined by surface hole intercepts; and targets defined by JCG geologists based on the interpretation of stratigraphy, structures and dikes, and the associated distribution of mineralization.

Underground core drill holes have a maximum length of approximately 1,200 ft. Generally underground drilling tests a given target to a depth of 1,000 ft from the drill set-up location. If successfully intersected, the target is delineated with core drilling only to the extent that sufficient confidence exists to complete development to the target. This drilling is generally spaced at 100 ft to 150 ft and results in definition of an Inferred Resource. In some instances, JCG carried out development based on wider drill spacing results, which would be considered as exploration potential.

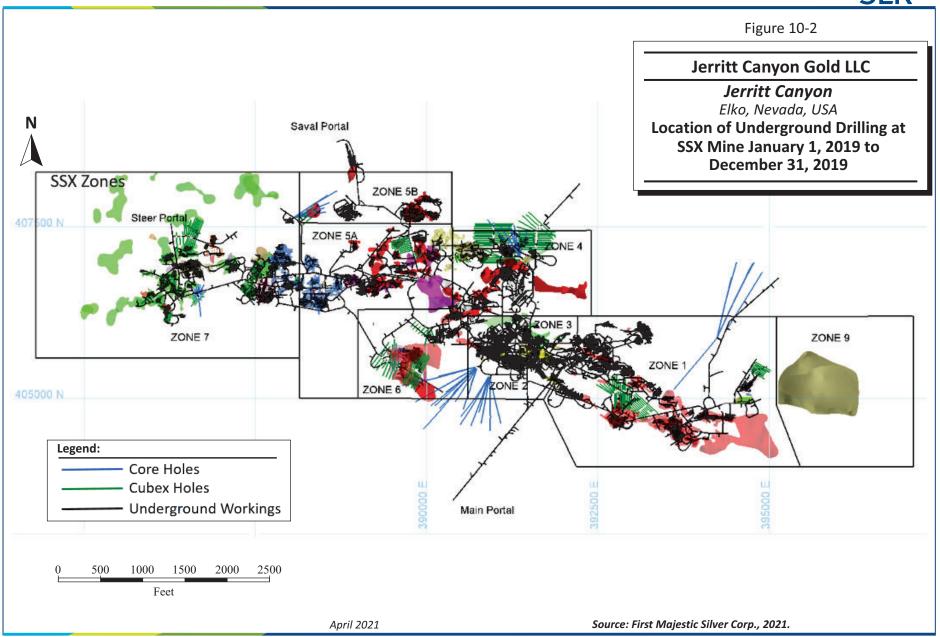
Cubex holes are drilled for delineation, definition, and extension of resources to support mine planning and near-mine exploration. Cubex holes have a maximum length of approximately 300 ft. Development is completed to a depth where a Cubex drill is set up and the target delineated. Delineation drilling is completed on 25 ft centres along drifts with fans planned to intercept the target at 25 ft centres, depending on the distance and angle from the drift. This will result in resource definition of sufficient detail to support mine planning and development.

The following maps of SSX and Smith (Figure 10-1 through Figure 10-6) show the progression of core and RC drilling in both mines from January1, 2018 to December 31, 2020. Mine as-builts and current wireframes are provided for reference. JCG has been successful in converting resources and extending active mining areas with RC drilling while targeting farther out from defined mineralization and infrastructure with core drilling.

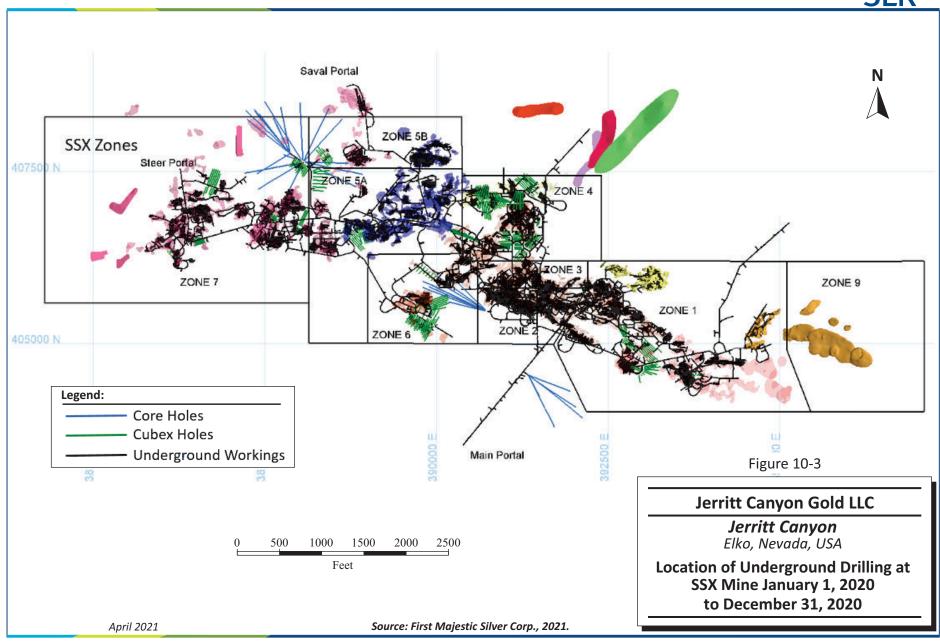




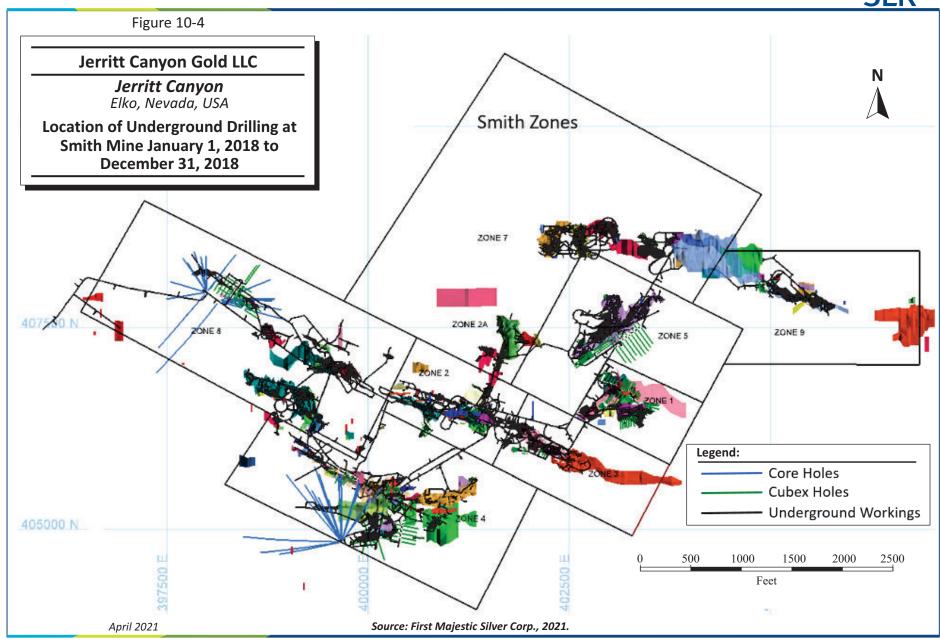




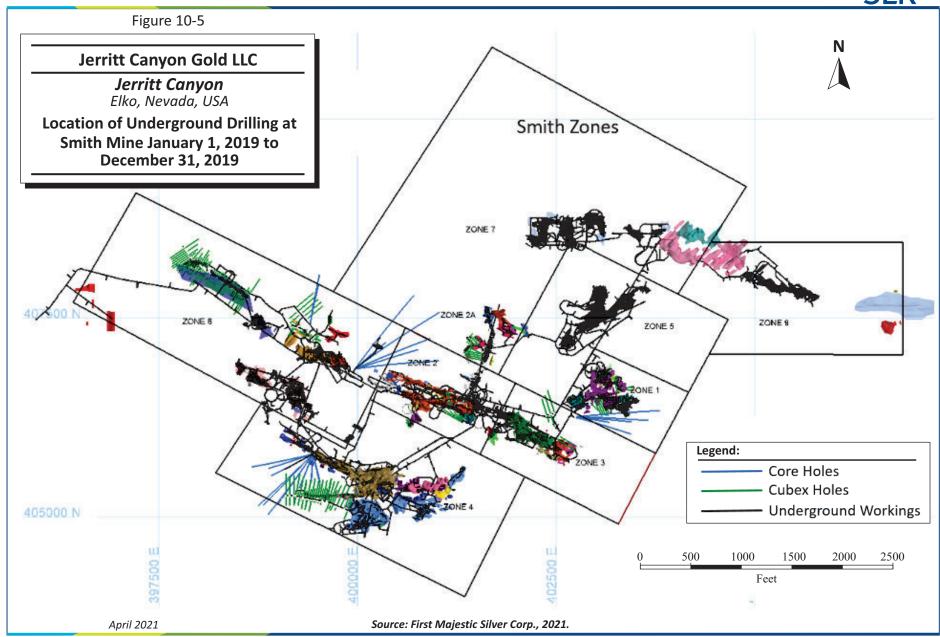




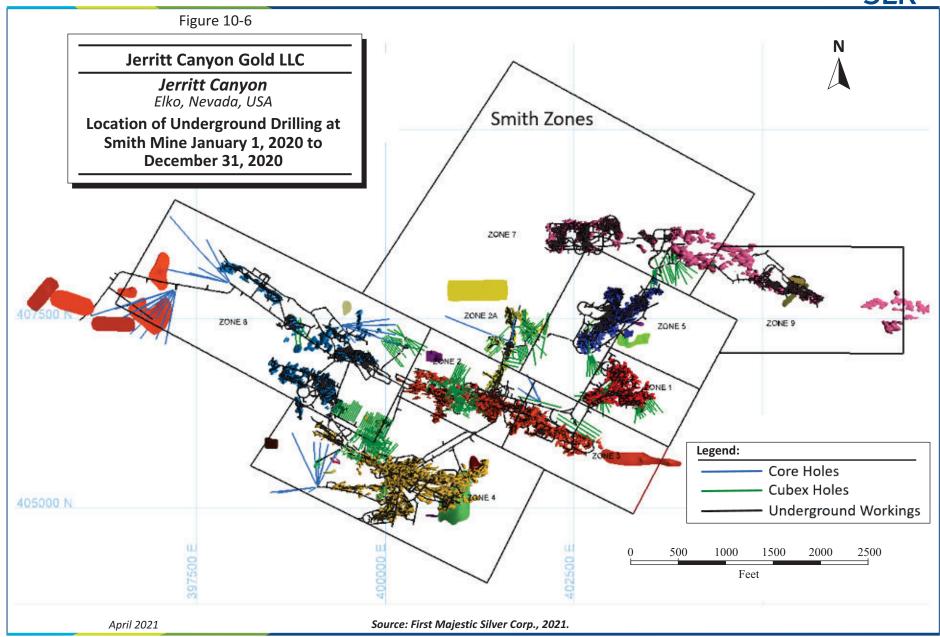














Drilling results were composited on assay intervals and analyzed for grades greater than or equal to 0.12 oz/st and greater than or equal to 15 ft thick. (grade x thickness \geq 1.8 oz*ft/st). Fifteen feet represents a minimum mining width. Table 10-2 comprises the grade x thickness intercepts by mine and by year showing total positive intercepts and weighted average grades.

Table 10-2: Composited Intercepts for Underground Drilling Results (2018-2020)

Jerritt Canyon

Year	Mine	Drill Type	Total Footage (ft)	Composite Intercepts (ft)	% of Feet total	Weighted Avg. Grade
2018	SSX	RC	221,786	15,975	7.2	0.235
	SSX	Core	45,135	1,133	2.5	0.307
	Smith	RC	156,330	20,065	12.8	0.216
	Smith	Core	36,809	612	1.7	0.195
2019	SSX	RC	242,730	14,150	5.8	0.238
	SSX	Core	39,616	742	1.9	0.241
	Smith	RC	165,625	20,810	12.6	0.248
	Smith	Core	19,141	441	2.3	0.244
2020	SSX	RC	266,018	21,640	8.1	0.251
	SSX	Core	28,806	919	3.2	0.250
	Smith	RC	287,849	23,486	8.2	0.197
	Smith	Core	29,518	882	3.0	0.196

10.2 Surface Drilling

Starting from January 1, 2016 through December 31, 2020, JCG has drilled a total of 230 RC holes from surface drilling sites, comprising of 178,872 ft of drilling (Table 10-3). No surface drilling was done in 2015.

Table 10-3: 2016-2019 Surface Exploration Drilling Totals

Jerritt Canyon

Exploration Target	Туре	No. Holes	Year	Footage (ft)
Mahala Variscite	RC	4	2016	5,360
SSX Variscite	RC	2	2016	2,300
Smith Variscite	RC	6	2016	7,050
SW Steer	RC	2	2016	2,550
Lost Mine	RC	4	2016	4,735
Bidart Anticline	RC	3	2016	3,640
Marlboro Canyon Projection	RC	1	2016	1,100



Exploration Target	Туре	No. Holes	Year	Footage (ft)
Winters Creek	RC	3	2016	1,420
Saval 4	RC	6	2016	3,685
2016 Total	RC	31	2016	31,840
Winters Creek	RC	14	2017	6,780
Greenstone Draw	RC	1	2017	1,420
2017 Total	RC	15	2017	8,200
Starvation Canyon	RC	2	2018	2,805
Waterpipe II	RC	1	2018	1,035
2018 Total	RC	3	2018	3,840
Upper Stump Basin	RC	34	2019	36,205
Variscite Hill	RC	1	2019	1,475
2019 Total	RC	35	2019	37,680
West Generator	RC	26	2020	1,900
North Generator	RC	5	2020	1050
Murray/West Gen	RC	36	2020	25,090
Northeast Saval	RC	8	2020	6950
Burns Basin	RC	9	2020	7,595
Winters Creek	RC	5	2020	5,490
Starvation Canyon	RC	19	2020	19,790
Wheeler Fault Zone	RC	14	2020	12,515
Waterpipe II	RC	17	2020	13,652
Waterpipe I	RC	2	2020	2,330
Pie Creek	RC	5	2020	1,970
2020 Total	RC	146	2020	98,332
Total	RC	230	2015-2020	178,872

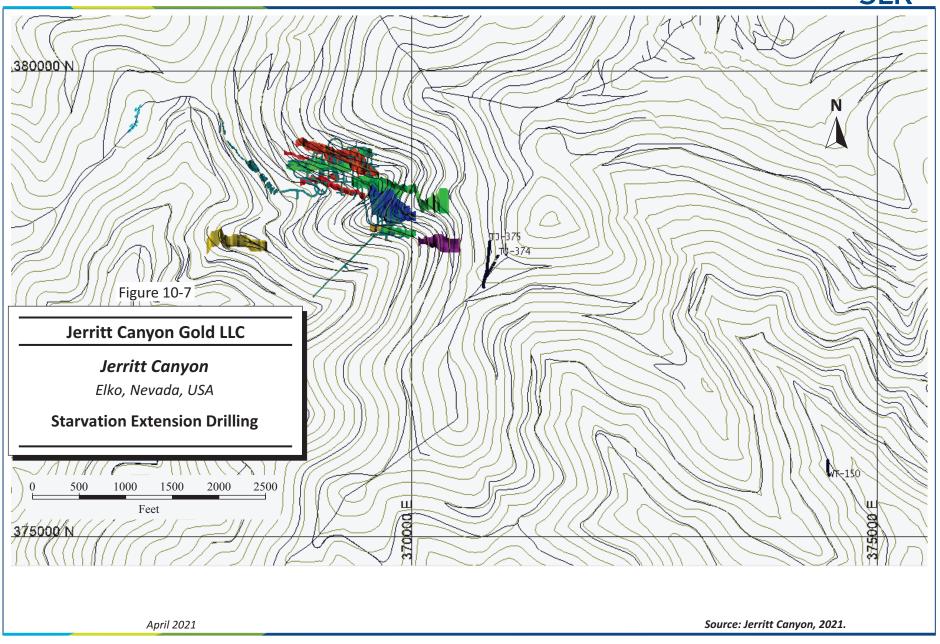
From November 27, 2018 to December 7, 2018, three RC holes targeting possible mineral extensions from Starvation grade shells and previous holes were drilled in the Starvation and Waterpipe 2 areas (TJ-374 (1,500 ft), TJ-375 (1,305 ft), and WT-150 (1,035 ft)). The only significant intercept was in TJ-374: 1,235 ft to 1,240 ft at 0.110 oz/st Au. Figure 10-7 shows the location of these holes.

In March 2019, a 127-hole RC drill program was conducted in the North Generator Pit area where aggregate is mined for use as cement backfill at the Smith and SSX mines. Aggregate is mined on 30-ft benches in a pre-existing pit and blastholes are routinely sampled. In February 2019, sample results suggested there was a possible resource that extended from the dig-face to the east or southeast that could be direct shipped to the mill. Figure 10-8 shows the location of the drill pattern with respect to surrounding previous operations, while Figure 10-9 shows the drill pattern in detail.

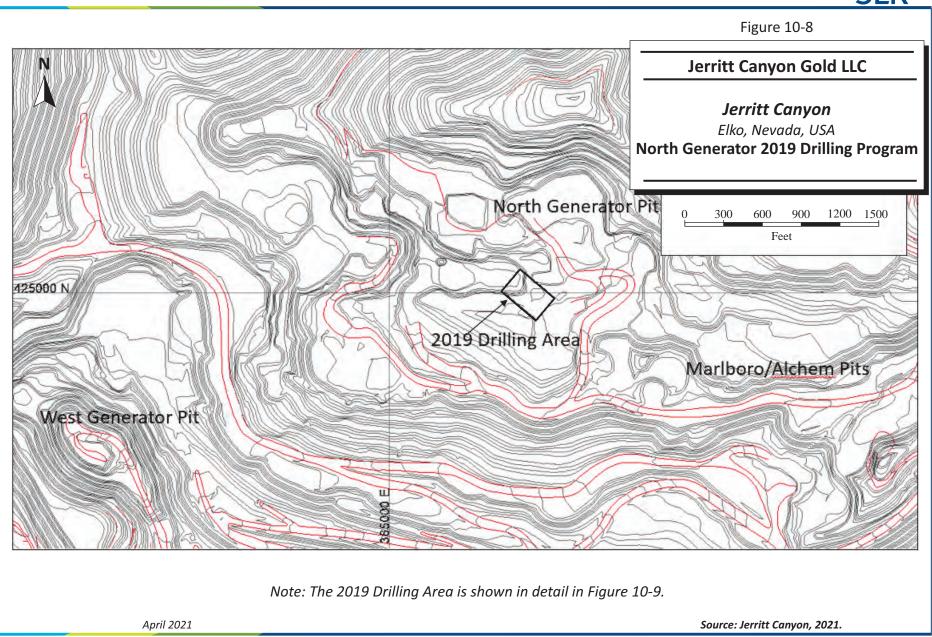


Results from this program are shown as colored discs in Figure 10-10. Units are in oz/st Au and feet. Figure 10-11 is a cross section along Section A-A' (facing northwest) presenting a geologic interpretation of the constraints on mineralization. Table 10-4 lists intercepts in the labeled holes.

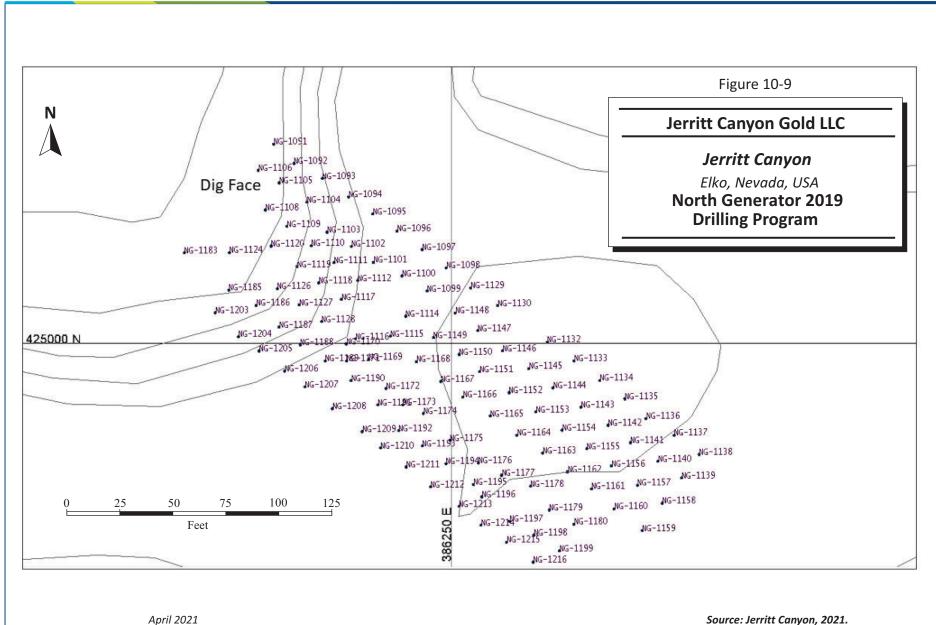




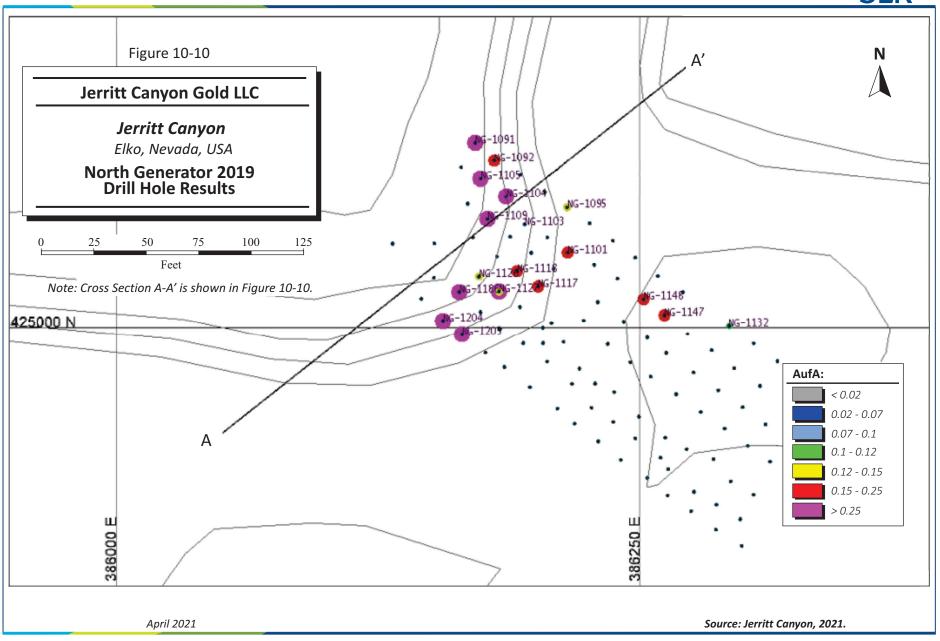














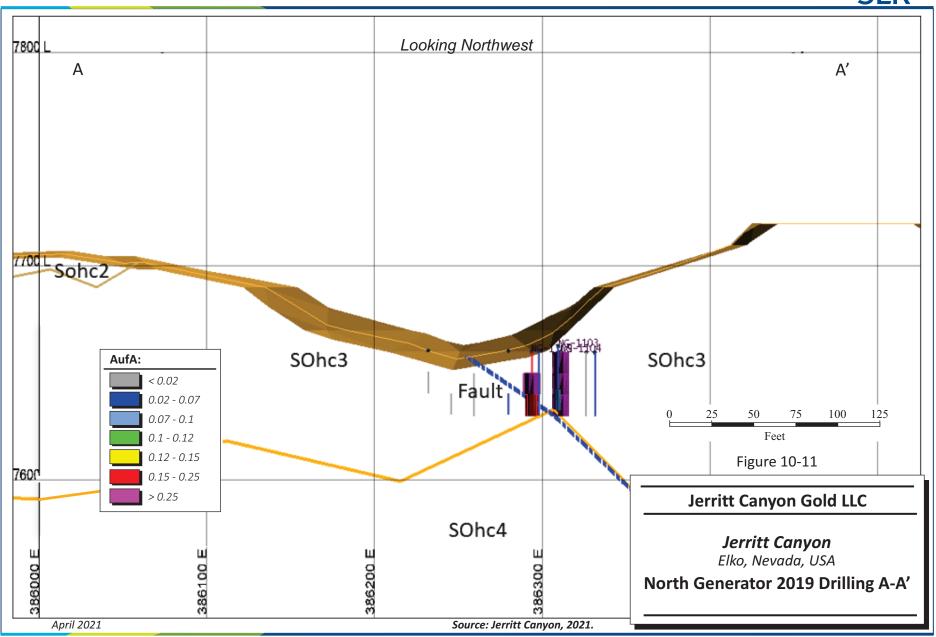




Table 10-4: 2019 North Generator Drilling Results
Jerritt Canyon

From (ft)	To (ft)	Thickness (ft)	Grade (oz/st Au)
10	30	20	0.184
0	30	30	0.175
20	30	10	0.125
10	30	20	0.155
20	30	10	0.072
0	30	30	0.814
0	30	30	0.192
0	30	30	0.248
0	10	10	0.166
20	30	10	0.206
0	30	30	0.123
10	30	20	0.209
10	30	20	0.099
20	30	10	0.176
20	30	10	0.162
10	30	20	0.97
0	20	20	0.181
0	30	30	0.489
	(ft) 10 0 20 10 20 0 0 0 20 0 10 20 2	(ft) (ft) 10 30 0 30 20 30 10 30 20 30 0 30 0 30 0 10 20 30 10 30 20 30 20 30 10 30 20 30 10 30 20 30 10 30 20 30 10 30 20 30 10 30 20 20	(ft) (ft) (ft) 10 30 20 0 30 30 20 30 10 10 30 20 20 30 10 0 30 30 0 30 30 0 10 10 20 30 10 0 30 30 10 30 20 10 30 20 20 30 10 20 30 10 20 30 10 10 30 20 0 20 20

From September 4, 2019 to November 7, 2019 a 34 hole drilling program was completed to test a northwest extension and some modelled grade-shells of the Coulee dike zone at the Smith mine. A total of 36,205 ft were drilled. Figure 10-12 shows the locations of these holes with respect to the Smith Mine Zone 8, resource shells defined by previous surface drilling, and the Purple Fault and R- Fault which are district-scale mineralizing structures. Significant intercepts from the 2019 extension drilling program are presented in Table 10-5.



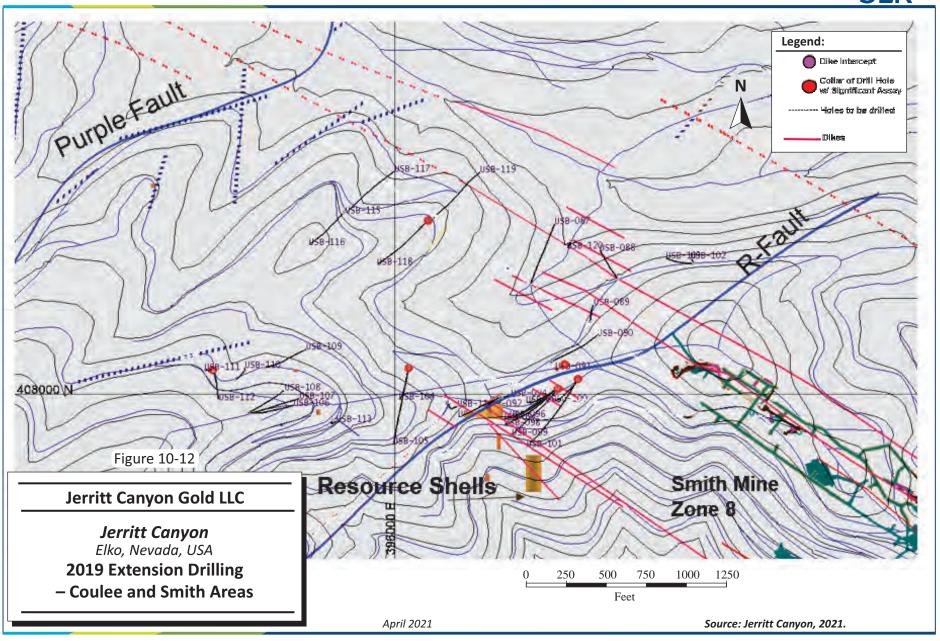




Table 10-5: 2019 Extension Drilling Results – Coulee and Smith Areas

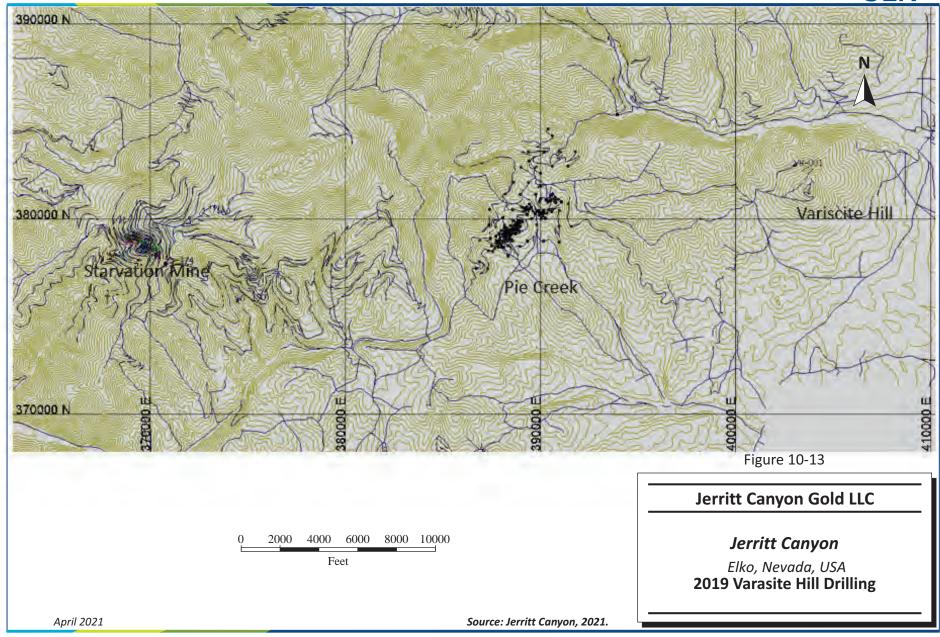
Jerritt Canyon

Drill Hole ID	TD (ft)	Sample Depth (ft)	Sample Length (ft)	Grade (> 0.08 oz/st Au)
USB-091	975	920-965	45	0.081
including		925-930	5	0.101
including		945-955	10	0.151
USB-094	1100	1020-1025	5	0.091
USB-099	1550	1165-1180	15	0.083
including		1170-1175	5	0.126
USB-100	1250	1060-1100	40	0.083
including		1080-1095	15	0.144
USB-105	1235	1095-1125	30	0.140
including		1095-1110	15	0.252
USB-111	940	710-715	5	0.082
		865-885	20	0.100
including		870-880	10	0.157
USB-118	1000	765-770	5	0.077

On November 7, 2019, hole VH-001 was drilled at Variscite Hill, located east of the Starvation Mine. While VH-001 was drilled to 1,475 ft, it never penetrated favorable units below the Snow Canyon Formation. The hole was terminated due to budget limitations and weather. The Variscite Hill location is presented in Figure 10-13. SLR notes that no significant intercepts were obtained.

No surface drilling was conducted from January 1 to April 29, 2020.







10.3 Drilling After April 29, 2020

This subsection discusses drilling programs and results, provided by JCG, which have occurred on the Jerritt Canyon property after the cut-off date for the resource model drilling data (April 29, 2020). A total of 146 RC drill holes were completed from April 30, 2020 through December 31, 2020 totaling 98,332 ft. Figure 10-14 depicts these exploration targets. Figure 10-15 presents a cross section of the Murray Mine/West Generator Connection with significant intercepts. Table 10-6 lists some of the notable intercepts from these drilling programs. None of these holes have been included in the current Resource Estimate.

Table 10-6: Exploration Drilling Results April 30, 2020 through December 31, 2020

Jerritt Canyon

Area	Drill Hole ID	Total Depth (ft)	Sample Depth	Sample Length	Grade (oz/st Au)
		(,	(ft)	(ft)	(02,000 00,
West Generator Pit	GH-1094	140	85-90	5	0.078
West Generator Pit	GH-1106	225	175-180	5	0.09
West Generator Pit	GH-1112	260	215-245	30	0.089
Murray Mine/West Generator Connection	GH-1123	650	455-585	130	0.082
Murray Mine/West Generator Connection	including		455-490	35	0.102
Murray Mine/West Generator Connection	including		535-550	15	0.177
Murray Mine/West Generator Connection	including		560-580	20	0.113
Murray Mine/West Generator Connection	GH-1124	650	415-440	25	0.254
Murray Mine/West Generator Connection	GH-1132	800	575-585	10	0.102
Murray Mine/West Generator Connection	GH-1133	600	555-560	5	0.072
Murray Mine/West Generator Connection	GH-1134	1200	1,050-1,095	45	0.073
Murray Mine/West Generator Connection	Including		1,055-1,070	15	0.149
Murray Mine/West Generator Connection	GH-1140	600	490-495	5	0.106
Murray Mine/West Generator Connection	GH-1143	700	470-485	15	0.079

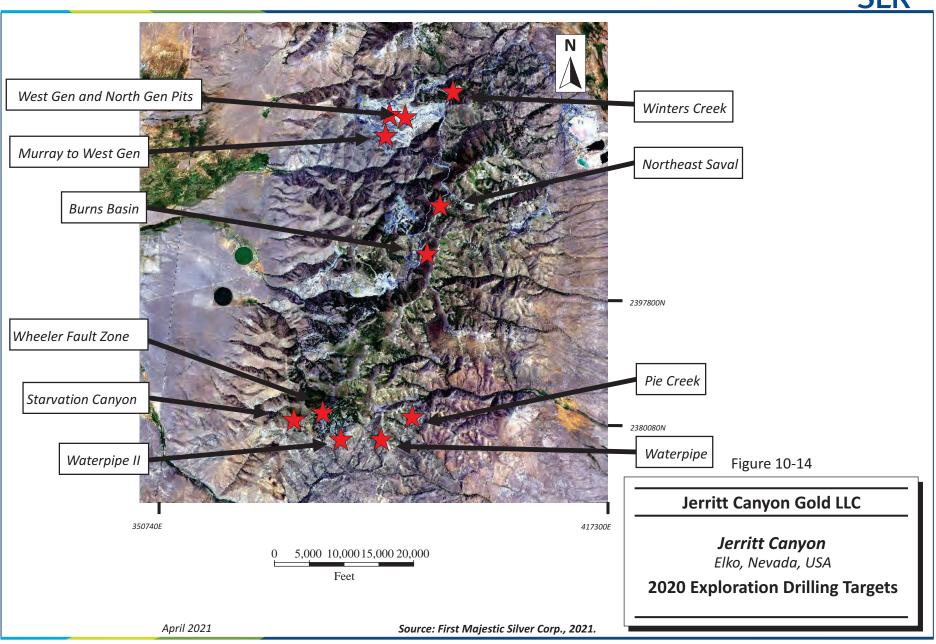


Area	Drill Hole ID	Total Depth (ft)	Sample Depth (ft)	Sample Length (ft)	Grade (oz/st Au)
Murray Mine/West Generator Connection	Including		475-480	5	0.155
Murray Mine/West Generator Connection	GH-1143	700	495-510	15	0.078
Murray Mine/West Generator Connection	GH-1144	600	315-340	25	0.126
Murray Mine/West Generator Connection	Including		320-330	10	0.222
Murray Mine/West Generator Connection	GH-1152	800	540-545	5	0.073
Northeast Saval	SC-1404	700	475-555	80	0.039
Northeast Saval	including	700	480-495	15	0.071
Burns Basin	BB-1510	1050	240-255	15	0.055
Burns Basin	including		250-255	5	0.092
Burns Basin	BB-1511	950	335-355	20	0.021
Burns Basin	WC-568	1250	740-840	100	0.01
Burns Basin	WC-569	1295	235-245	10	0.029
Starvation Canyon	TJ-393	1375	720-750	30	0.059
Starvation Canyon	including		725-735	10	0.11
Wheeler Fault Zone	WH-037	1140	630-690	60	0.043
Wheeler Fault Zone	Including		630-635	5	0.16
Wheeler Fault Zone	Including		685-690	5	0.072
Wheeler Fault Zone	WH-040	1000	465-480	15	0.048
Wheeler Fault Zone	Including		470-475	5	0.082
Water Pipe II	WT-163	645	300-420	120	0.052
Water Pipe II	including		300-310	10	0.073
Water Pipe II	Including		350-355	5	0.132
Water Pipe II	including		370-405	35	0.084
Water Pipe II	WT-166	495	410-415	5	0.088
Water Pipe II	WT-167	765	545-565	20	0.047
Water Pipe II	Including		555-560	5	0.095
Water Pipe II	WT-167	765	690-715	25	0.032
Water Pipe II	WT-168	805	765-785	20	0.033

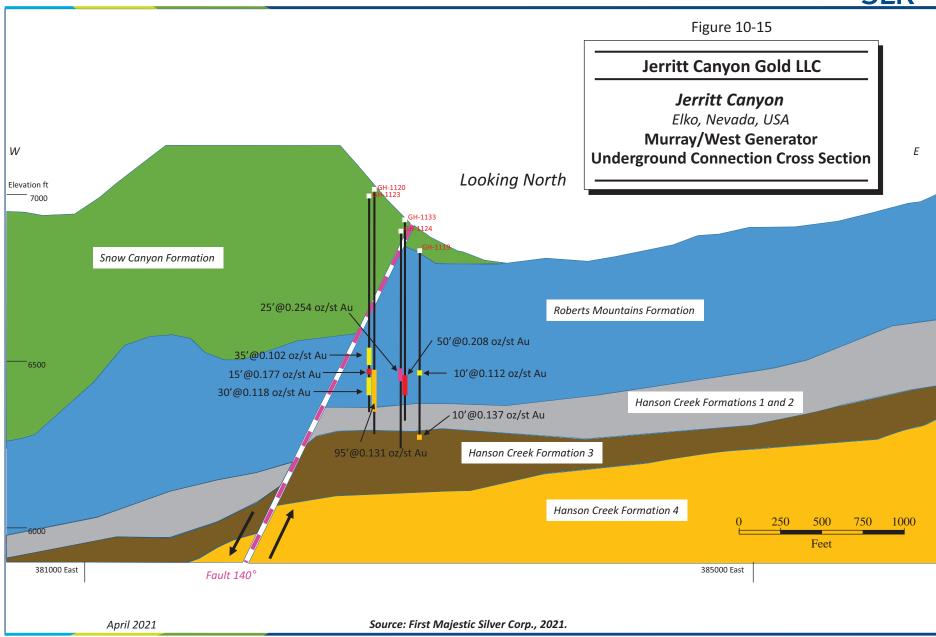


Area	Drill Hole ID	Total Depth (ft)	Sample Depth (ft)	Sample Length (ft)	Grade (oz/st Au)
Water Pipe II	WT-176	1015	410-500	90	0.017
Pie Creek	PC-166	525	125-165	40	0.023
Pie Creek	Including		160-165	5	0.088











11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Procedures for sample preparation, analysis and security were initiated in 2008 by Queenstake, the previous operator, and continued by JCG upon acquisition. The quality assurance/quality control (QA/QC) data has a cut-off date of April 29, 2020. The QP has not reviewed any of the QA/QC data after the cutoff date. None of the assay data produced after the cut-off date has been used in the Mineral Resource Estimate stated in Section 14 of this Technical Report. Notwithstanding, JCG has a history of following industry standard protocols for analyses and that data produced by its onsite laboratory is of good quality. The QP is of the opinion that these procedures and results will continue to be of good quality.

11.1 Drill Sample Handling and Logging Procedures

Drill core is placed in core boxes at the drill site by the drillers. Core is then cleaned, core boxes marked with the hole number and length, and core blocks placed in the boxes at the end of each core retrieval run. Core boxes are kept under the control and supervision of the drill site crew until they are transported to the locked and secured core logging facility by JCG geologists or drilling personnel at the end of each drill shift.

At the logging facility, core is placed on the logging tables and reassembled to the extent possible, with the geology logged in detail by JCG geologists. Core recovery is measured and recorded at this time. Geologists mark intervals to be sampled and insert standard reference materials, blanks, and duplicate samples into the sample stream. After logging and control sample insertion, the core is photographed.

Core is logged in a Microsoft (MS) Excel logging template and the relevant data on sample intervals, assays, recovery, and alteration recorded. Assay data is entered directly from spreadsheets provided by the JCG onsite assay laboratory, reducing the potential for data entry errors, and uploaded directly in to an acQuire database.

In 2008, all historic drill logs, assay certificates, geology maps, and other diagrams were moved to the administration building at Jerritt Canyon. The logs are currently stored at the Jerritt Canyon Drill Hole Library while maps and other diagrams are stored in several flat files in the database administrator's office.

11.2 Sampling Method and Approach

Sample types used on a routine basis to support both the mine operation and for geological exploration include:

- Underground RC (Cubex) drill sampling
- Underground sludge sampling
- Muck (windrow sampling)
- Underground core drilling sampling
- Surface RC drill sampling

11.2.1 Cubex and Sludge Samples

Underground Cubex samples are collected in five-foot intervals from the collar. The samples are collected in barcoded sample bags which are placed in a five-gallon plastic bucket installed under the cyclone on the drill. Each bag has the hole ID and sample interval written on it with permanent marker. On



completion of the hole, the driller completes a submittal form which includes hole ID, barcode number, and from-to sample interval for each sample. The samples and the submittal form are dispatched from the underground drill site to the JCG assay laboratory by the site geologists. At the assay laboratory, the samples are unloaded onto trays and JCG technicians check the sample bag hole ID and intervals against the submittal sheet. The collection, recording, and handling of sludge samples are the same as that for the Cubex samples; however, the sludge samples are of higher priority for analysis to support the on-going mining operation. Cubex samples are included in the Mineral Resource database, while sludge samples support daily mine operations and ore control.

11.2.2 Muck Sampling

Production muck is transported from underground and laid out in windrows in a specified area adjacent to the respective portal. Each round comprises one windrow and consists of several piles hauled by 20 ton haul trucks. JCG has a written procedure for the handling and sampling of windrows. Muck samples are used to support daily mine operations and ore control destinations of windrow piles.

- The location of each windrow pile is marked on the map in the field to help track the origin of the
- Each windrow pile is marked in the field with paint with a unique location identification (ID) number.
- A lath with the unique windrow ID number is placed in front of each windrow pile with the zone, heading, cut, date mucked, and the number of samples in the windrow indicated.
- Muck characterization data is documented in a specially designed "Underground Muck Windrow Ore Control Table", described, which is periodically updated by the JCG Geology Department.
- One sample from two piles (representing approximately 40 tons) is taken according to the Windrow Grade Control Sampling Protocol, described.
- Samples are dispatched to the JCG assay laboratory by a designated person from either JCG or Small Mine Development, LLC. (SMD).
- Once the assays are finalized and received, the ore-waste characterization for each windrow pile
 is determined and colored flagging is tied to the labelled lath using the following flag coloring
 designations: red flagging for high grade ore, yellow flagging for low grade ore, and blue flagging
 for waste.
- Once each windrow has been marked in the field with colored flagging as ore or waste, the JCG surface operations group is notified that hauling to the run of mine (ROM) area may begin. Under certain situations, the JCG Geology Department may allow certain windrow piles to be hauled to the ROM area without having received final assays, which is referred to as "Released Assays Pending" (or RAP). Communication between SMD, the JCG Geology Department, and surface operations must be clear when a RAP situation is approved so appropriate tracking and hauling of the materials is correctly performed. Only a JCG geologist can approve RAP situations. When RAP situations are approved by a JCG geologist, the windrow pile must be marked and identified as such on the Underground Muck Windrow Ore Control Table.

The Underground Muck Windrow Ore Control Table contains the following statistics relating to each windrow pile:

• The date mapped, which is the actual date the windrow is placed on the surface laydown area and the date samples are collected.



- Windrow location number.
- Zone, heading, and cut from which the mined muck material originates.
- Ore or waste designation (high, low, or waste as defined previously).
- Estimated tons mucked determined by the number of piles in the surface laydown area multiplied by the truck ton factor of 18.2 ft³/st.
- The final gold assay grades from the JCG assay laboratory.
- The approximate hauled ounces determined by multiplying the average gold grade by the estimated tons mucked.
- The average moisture content determined by the JCG assay laboratory from the final assay analysis.
- Pile count which is defined by the total number of piles associated with each windrow.
- The number of samples taken which is the actual number of samples collected from each windrow pile.
- The dates mucked, flagged, and hauled.

The Windrow Grade Control Sampling Protocol includes one sample for every two windrow piles (representing approximately 40 wet tons) as follows:

- The sample is collected midway up each pile at equally spaced points around each pile.
- The desired representative sample weight for each bag submitted to the JCG assay laboratory is twelve pounds with approximately one and one-half pounds collected from each sampling point.
- The sampled material from each pile must be placed in a properly labelled sample bag that
 includes the muck date, the zone and heading from which the sample is taken, and a unique
 barcode ID number.
- The sampled muck material collected in each sample contains equal amounts of coarse material and fine materials to achieve the targeted final sample weight of 12 lb. Individual rock clasts placed in each muck sample must be less than 4 in. in diameter to minimize sample size bias.
- All the sample bags are placed at the end of the windrow after they have been collected.
- After all the samples from the windrow have been collected, all the sample numbers are marked on the lath.

On completion, the samples are delivered to the JCG assay laboratory. The Windrow Ore Control Table is submitted to the JCG database administrator.

11.2.3 Underground Core Sampling

At the end of each 12-hour shift, the drill contractor transports core from the underground rig to the JCG core logging facility. Prior to any logging, core is aligned, and recovery and rock quality designation (RQD) are recorded. Geology is logged in an MS Excel template. Information logged includes rock type, lithology, alteration, and bedding orientations. Sample intervals are based on geology and mineralogy, are typically three feet long, and respect geological contacts. The geologist indicates the sample limits using a grease pencil and by writing the sample number on the core at the start of the sample interval. Where core is geologically and mineralogically uniform over extended lengths, samples are designated by the run length blocks in which case the samples are five feet long. The logging geologist provides the core technician with a sample sheet listing sample numbers and sample intervals. Core is subsequently photographed before being cut in half using a core saw equipped with a diamond blade. Half of the core is placed in a



sample bag, while the remaining half is returned to the core box. As per the underground Cubex drilling procedure, the sample bags have a barcode, in addition to the hole ID and sample interval having been written on them. Daily, usually at the end of day shift, the core samples are delivered to the JCG assay laboratory. The submittal sheet is emailed to the JCG assay laboratory and database administrator. Underground core samples are used to support Mineral Resource estimation.

11.2.4 Surface RC Drilling

Five-foot samples are collected using a cyclone/splitter apparatus. Samples are placed in barcoded bags with the hole ID and sample interval written on them. Sample bags are labelled and provided to the drill contractor by the supervising geologist. On completion of the hole, the drill contractor delivers the samples to the JCG assay laboratory. The cut sheet containing hole ID, barcode numbers, and sample intervals is provided to the JCG database administrator by the supervising geologist. Surface RC samples are used to support Mineral Resource estimation.

11.3 Sample Preparation and Analysis

Historically, drill hole samples have been prepared and analyzed at the JCG assay laboratory as well as independent commercial laboratories such as ALS Limited (ALS), Bureau Veritas Mineral Laboratories (BVL), and American Assay Laboratory (AAL). Since acquisition of the Jerritt Canyon property in 2015, JCG has primarily used the JCG assay laboratory, with BVL and AAL used for the analysis of samples from 2016 surface drilling and part of the 2015 to 2016 underground drilling.

All underground Cubex and sludge samples, as well as windrow samples, are analyzed at the JCG assay laboratory. Samples from the 2016 surface RC drill program were dominantly analyzed at BVL with the last two holes analyzed at AAL. Samples from the underground drilling program from October 2015 to December 2016 were analyzed at BVL, AAL, and the JCG assay laboratory. Since the resumption of underground drilling in May 2017, all samples have been analyzed at the JCG assay laboratory.

11.3.1 JCG Laboratory

The JCG assay laboratory is owned and operated by JCG. It is located adjacent to the mill, engineering office, and administration building at Jerritt Canyon. Geologists from the mine sites are responsible for the transportation of samples to the laboratory. Upon arrival at the laboratory, samples are unloaded by the ore control technician who places them in the appropriate order on loading carts. The sample preparation technician reviews the samples against the sample submittal sheets to ensure that the records match the samples. Once checked, the samples are logged in the Laboratory Information Management System (LIMS). If any additional tests are required, such as moisture determination or LECO analysis, they are added at this stage. Labels and fire assay batch requisition sheets are printed upon entry of the samples into the system.

Once the samples are scanned or logged in the system, they are placed in the Grieve drying oven in the exact order they were logged. Drying time is dependent on water content and can be up to eight hours. Once the samples are dried, they are unloaded onto the sample carts. If a dry weight is needed for moisture determination, it is taken at this stage.

The entire sample is crushed to 50% passing 10 mesh through a Terminator TM Crusher. The entire sample is then split through a Jones Riffle splitter to obtain a 200 g split. The 200 g split is put into the manila envelope with the appropriate sample ID on the tag and then placed in a box within a respective



fire assay batch. The remaining 95% of the sample is returned to its original bag and stored until an acceptable assay is released.

The 200-g split is pulverized to 95% passing 150 mesh using a TM ring and puck pulverizer. Samples are then grouped into 40 samples per batch. Once an entire batch is pulverized, the sample is split using a rotary splitter to obtain a sub-sample of approximately 15 g, which is submitted for assay by aqua regia digestion, and analyzed using atomic absorption spectrometry (AAS).

11.3.2 Bureau Veritas Mineral Laboratories

BVL, previously Inspectorate America Corporation, is located in Sparks, Nevada. BVL is a commercial laboratory that is independent of JCG, and its preparation and analytical facilities in Sparks are accredited to ISO 9001:2008 for their quality management system and to ISO/IEC 17025:2005 for their competence of laboratory testing of gold samples by fire assay.

Representatives of BVL transport samples from the JCG core shed facility to the BVL laboratory in Sparks, Nevada. The received samples are laid out in order, weighed, dried, and entered into the LIMS. Sample preparation is by the BVL procedure code PRP70-25 which includes crushing to 70% passing less than 2 mm and pulverizing a 250-g split to 85% passing 200 mesh. A 30-g split of the pulverized sample is taken for fire assay and analyzed using an AAS finish (BVL procedure code FA430). Samples that return a gold value greater than 10 g/t Au in procedure FA430 are re-analyzed with a gravimetric finish (procedure code FA530). Samples are barcoded at the crusher stage and tracked through all steps of the analysis. Results are reported to JCG via a CSV data file and hard copy certificate.

11.3.3 American Assay Laboratories Inc.

The AAL laboratory used by JCG is located in Sparks, Nevada. AAL is a commercial laboratory that is independent of JCG and its preparation and analytical facilities in Sparks are accredited to ISO 9001:2008 for their quality management system, and ISO/IEC 17025:2005 for their competence of laboratory testing of gold samples by fire assay. AAL participates in various testing programs including CANMET, Geostats, SMA, and IOAG.

Representatives of AAL transport samples from the JCG core shed facility to the AAL laboratory in Sparks, Nevada. Samples received by AAL are laid out in order and checked against a cut sheet or laboratory submittal form. Samples are dried and entered into the LIMS. Sample preparation is by AAL procedure code BRPP2KG which uses a two-stage crushing method, the primary crush is by a jaw crusher reducing the sample to less than 6 mesh and the secondary is by roll crusher which reduces the sample to 80% passing 10 mesh. A 300-g split is taken using a riffle splitter and pulverized to 85% passing 150 mesh. Analysis is by AAL procedure code FA-PB30-ICP, which is a 30-g fire assay with ICP determination and by GRAVAu30, which is a 30-g fire assay followed by a gravimetric finish for samples over 10 g/t Au.

Pulps are stored on skids at the JCG assay laboratory within the secure Jerritt Canyon compound. Processed pulps are then stored in locked cargo sea containers on the Jerritt Canyon property. Rejects are stored at Jerritt Canyon in a secure location until the assay results are confirmed and then they are discarded periodically. Core is stored in a secure location at Jerritt Canyon.

In SLR's opinion, the sample collection, preparation, analysis, transport, and security procedures at Jerritt Canyon are adequate for use in the estimation of Mineral Resources.



11.4 Quality Assurance/Quality Control

Quality assurance (QA) consists of evidence to demonstrate that the assay data has precision and accuracy within generally accepted limits for the sampling and analytical method(s) used to have confidence in a resource estimate. Quality control (QC) consists of procedures used to ensure that an adequate level of quality is maintained in the process of collecting, preparing, and assaying the exploration drilling samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical), precision (repeatability), and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling-assaying variability of the sampling method itself.

11.4.1 QA/QC Protocols

QA/QC procedures were implemented in 2008 by the previous owners and have been continuously followed by JCG. SLR has relied on raw data provided by JCG for analysis, and a summary of annual QA/QC submittals is presented in Table 11-1. This subsection covers QA/QC protocols for underground core, underground Cubex, and surface RC samples only, as these are the only samples supporting the database used in Mineral Resource estimation.

Drilling samples are grouped into batches of 40. Three standards and three blanks are included in each sample batch. Two to three pulp duplicates are submitted from each batch of samples. Additional QA/QC samples, including laboratory split duplicates and coarse rejects have not been regularly submitted since 2012. Total QA/QC samples comprise over 16% of the sample database.

A QA/QC report is prepared quarterly and annually by the onsite database manager and reviewed by the Project Geologist. Batches of samples identified by QA/QC as anomalous are repeated at the request of the database manager.

Table 11-1: Summary of QA/QC Submittals: 2008 to 2020 **Jerritt Canyon**

Year	Counts/Rates	Samples	Blanks	CRMs	Field Duplicates	Lab Split Duplicate	Coarse Rejects	Pulp Duplicates
2000	Count	46,516	163	636				20
2008	Insertion Rate		0%	1%	0%	0%	0%	0%
2010	Count	16,070	1,083	2,141		16		627
2010	Insertion Rate		7%	13%	0%	0%	0%	4%
2011	Count	49,871	1,004	1,120	1	44	49	1,405
2011	Insertion Rate		2%	2%	0%	0%	0%	3%
2012	Count	24,836	860	1,355		383		1,231
2012	Insertion Rate		3%	5%	0%	2%	0%	5%
2012	Count	51,711	2,837	3,281		10	125	2,817
2013	Insertion Rate		5%	6%	0%	0%	0%	5%
2014	Count	37,995	2,486	2,508			261	2,063
2014	Insertion Rate		7%	7%	0%	0%	1%	5%



Year	Counts/Rates	Samples	Blanks	CRMs	Field Duplicates	Lab Split Duplicate	Coarse Rejects	Pulp Duplicates
2015	Count	57,762	3,667	3,673				3,065
2015	Insertion Rate		6%	6%	0%	0%	0%	5%
2016	Count	93,063	5,654	6,361		60		4,897
2016	Insertion Rate		6%	7%	0%	0%	0%	5%
2047	Count	107,749	6,840	6,895				6,129
2017	Insertion Rate		6%	6%	0%	0%	0%	6%
2040	Count	94,024	6,460	6,434				4,799
2018	Insertion Rate		7%	7%	0%	0%	0%	5%
2040	Count	102,406	7,168	6,977				5,652
2019	Insertion Rate		7%	7%	0%	0%	0%	6%
20201	Count	31,262	2,139	2,122				1,698
2020 ¹	Insertion Rate		7%	7%	0%	0%	0%	5%

11.4.2 Certified Reference Material

Results of the regular submission of Certified Reference Material (CRMs) (standards) are used to identify any issues with specific sample batches, and biases associated with the primary assay laboratory. JCG sources CRMs from Rocklabs, located in New Zealand. Results of the CRMs are plotted in control charts, and failure rates, defined as gold values reporting more than three standard deviations (SD) from the expected value, and warning rates, defined as gold values reporting more than two SD, but less than three SD from the expected values, were tabulated quarterly and annually for review by onsite personnel.

A total of 19 different CRMs and 20 in-house standards were inserted in the Jerritt Canyon sample stream from 2008 to 2020, totaling 43,209 individual samples for an overall insertion rate of 6%. SLR reviewed the Certificates of Analysis of the CRMs, which were in use at Jerritt Canyon from 2010 to 2020 and vary in grade from 0.039 oz/st Au to 0.268 oz/st Au. These grades are representative of the low, medium, and high grades for the Jerritt Canyon deposits. Table 11-2 describes only the 19 commercial standards with the corresponding active years and basic statistics regarding the CRMs. SLR notes that there does seem to be an overall low bias in the CRMs used.

SLR reviewed JCG's quarterly and annual review documents and control charts and found them to be acceptable with no material issues. SLR selected four CRMs, two from the surface samples and two from the underground samples, which represent higher usage rates and longest span of years for additional review.

Figure 11-1 charts 2,237 samples of CRM SK52 used for underground analysis from 2010 through 2019. The mean value for the sample set is 0.119 oz/st Au and had 12 failures (0.5%).

Figure 11-2 charts 1,972 samples of CRM SK78 used for underground analysis from 2014 through 2020. The mean value for the sample set is 0.120 oz/st Au and had 41 failures (2%).

Figure 11-3 charts 183 samples of in-house standard JCQ-05 used for surface analysis from 2008 through 2009. The mean value for the sample set is 0.149 oz/st Au and had four failures (2%).



Figure 11-4 charts 188 samples of in-house standard SK78 used for surface analysis from 2016 through 2019. The mean value for the sample set is 0.128 oz/st Au and had 13 failures (7%). Eight samples in 2016 returned high values, however, there appears to have been a labeling mix up and these standards are likely to be SN60 or SN75. These samples were identified by the onsite database manager and rerun in accordance with the failure protocols and returned assay values within the expected ranges for the CRM.

Table 11-2: 2010 to 2020 Certified Reference Material and Statistics

Jerritt Canyon

CRM	Year	Element	Certified Expected Value (oz/st Au)	Std Dev (oz/st Au)	Assay Count	Mean (oz/st Au)	Bias
GS-2Q	2014-2018	Au	0.069	0.0038	1,948	0.070	1.33%
GS-6D	2014-2018	Au	0.175	0.0093	2,000	0.171	-2.26%
SH65	2017, 2019	Au	0.039	0.0013	826	0.039	0.17%
SH82	2017, 2018	Au	0.039	0.0020	2,026	0.039	0.96%
SI54	2010-2016	Au	0.052	0.0083	2,023	0.051	-0.97%
SI81	2018-2020	Au	0.052	0.0015	3,685	0.052	-0.29%
SJ63	2013-2016	Au	0.077	0.0075	861	0.075	-2.80%
SJ80	2017-2018	Au	0.077	0.0023	2,840	0.077	0.15%
SK109	2019-2020	Au	0.12	0.0050	1,719	0.118	-1.95%
SK52	2010-2019	Au	0.12	0.0090	2,239	0.118	-1.40%
SK62	2013-2016	Au	0.119	0.0080	865	0.117	-1.65%
SK78	2014-2020	Au	0.121	0.0060	2,162	0.120	-1.10%
SK94	2018-2019	Au	0.114	0.0043	2,439	0.111	-2.38%
SL46	2013-2016	Au	0.171	0.0128	829	0.170	-0.77%
SL76	2017-2020	Au	0.174	0.0085	3,038	0.171	-1.75%
SN103	2019-2020	Au	0.249	0.0120	1,953	0.239	-4.13%
SN60	2013-2016	Au	0.251	0.0165	853	0.247	-1.76%
SN75	2014-2018	Au	0.253	0.0085	2,287	0.247	-2.32%
SN91	2018-2019	Au	0.253	0.0100	2,221	0.240	-5.09%

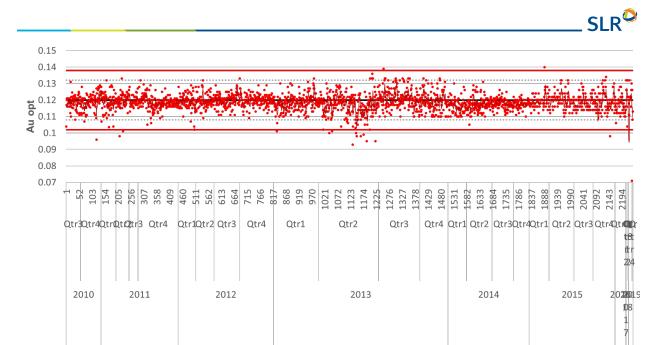


Figure 11-1: Jerritt Canyon Control Chart of CRM SK52 - Underground Samples

·····±2SD

Assay Value

Date Ordered Count

-±3SD

— 5 per. Mov. Avg. (Assay Value)



Figure 11-2: Jerritt Canyon Control Chart of CRM SK78- Underground Samples

CRM Expected Value



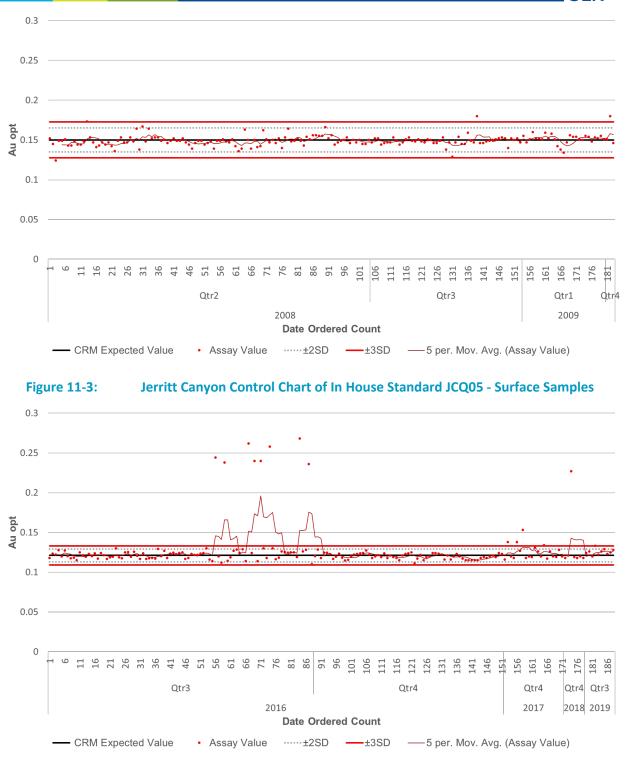


Figure 11-4: Jerritt Canyon Control Chart of CRM SK78 Surface Samples

Z-Score charts (Figure 11-5 and Figure 11-6) plot the performance of 26,022 samples with respect to the standard deviation for underground and surface CRMs, respectively.



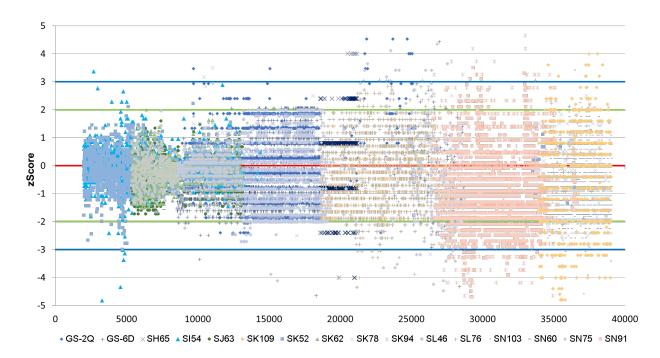


Figure 11-5: Jerritt Canyon Z-Score Chart of Underground CRM Samples

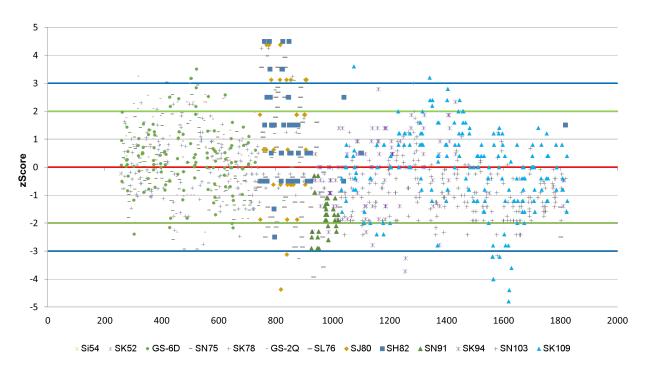


Figure 11-6: Jerritt Canyon Z-Score Chart of Surface CRM samples

Z-Score charts help view the performance of many standards simultaneously. CRMs can look to have poor results due to high or low results in reference to the expected value. The Z-Score charts presented indicate that overall, the CRMs are performing as expected and have a passing rate of 96%.



CRMs can return high or low biases regarding the certified value. The biases calculated for CRMs used are acceptable, except for SN91. SLR recommends investigating SN91 as it is still in circulation for mislabeled samples or if determined necessary, replacing this standard.

JCG properly identified failed standards and according to protocols, had the laboratory rerun the corresponding samples. No major bias trends were identified in the quarterly and annual reports.

While the Z-Score charts indicate some variation in the precision of the CRMs, overall analyses indicate that the standards are performing as expected. The variations observed in the precisions of the CRMs do not adversely affect the overall confidence in the assays.

The QP is of the opinion that the CRMs employed at JCG are appropriate for the type of mineralization and have overall been performing as expected. The QP is of the opinion that the insertion rates for CRMs meet industry standards.

SLR recommends ongoing monitoring of the QA/QC results. The QP is of the opinion that the results of the CRM samples support the use of the assays in the Mineral Resource estimation.

11.4.3 Blank Material

The regular submission of blank material is used to assess contamination during sample preparation and to identify sample numbering errors. The blank material utilized at Jerritt Canyon is a commercial grade sand. SLR analyzed and prepared charts depicting the performances of the underground and surface blank sample submissions, respectively. The QA/QC protocol accepts results returning up to 10 times the detection limit as a pass. Detection limits for the gold blanks are set at 0.002 oz/st Au.

A total of 40,361 blank samples were sent for analysis. Figure 11-7 and Figure 11-8 show the performances of the blank material. Results indicate a negligible amount of sample contamination and sample numbering errors associated with samples from Jerritt Canyon.

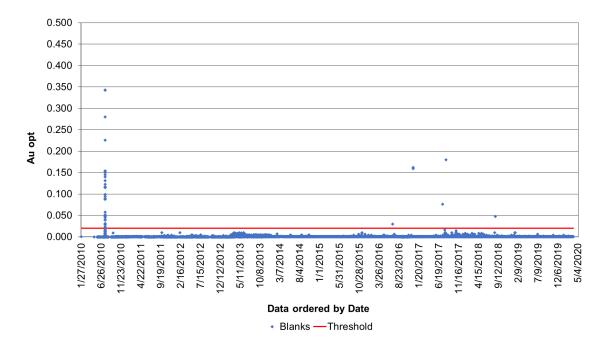


Figure 11-7: Jerritt Canyon Blank Results for Underground Samples



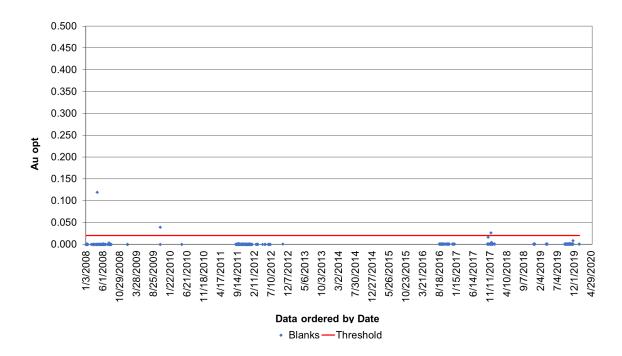


Figure 11-8: Jerritt Canyon Blank Results for Surface Samples

The plotted blank material indicates there are good protocols at the JCG assay laboratory to mitigate any contamination and produce reliable assays. SLR notes that the use of only sand material as a blank can be problematic in ensuring the crusher equipment is also properly cleaned between samples. SLR recommends replacing the blank sand material with a crushed barren rock type of blank material.

In the QP's opinion, the performances of the blank materials support the use of associated assays for Mineral Resource estimation.

11.4.4 Field, Coarse Reject, and Pulp Duplicates

Duplicate samples help to monitor preparation and assay precision and grade variability as a function of sample homogeneity and laboratory error. The field duplicates include the natural variability of the original core and RC samples, as well as all levels of error including core and RC splitting, sample size reduction in the preparation laboratory, sub-sampling of the pulverized sample, and the analytical error. Coarse reject and pulp duplicates provide a measure of the sample homogeneity at different stages of the preparation process (crushing and pulverizing).

SLR re-analyzed the duplicate data compiled by JCG using basic statistics, scatter, quantile-quantile, and percent relative difference plots. Results are divided by the assaying facility. A total of 35,352 sample pairs were analyzed between field, coarse and pulp duplicates. Figure 11-9 through Figure 11-12 are selected duplicate results.



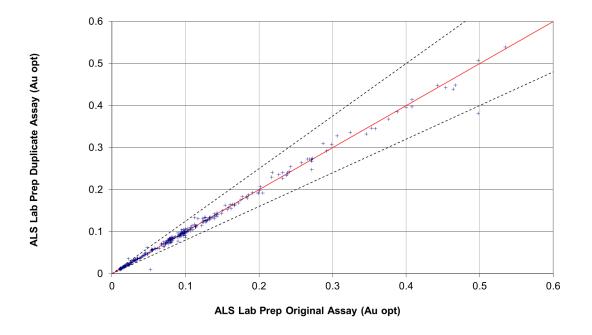


Figure 11-9: ALS Underground Coarse Reject Duplicates

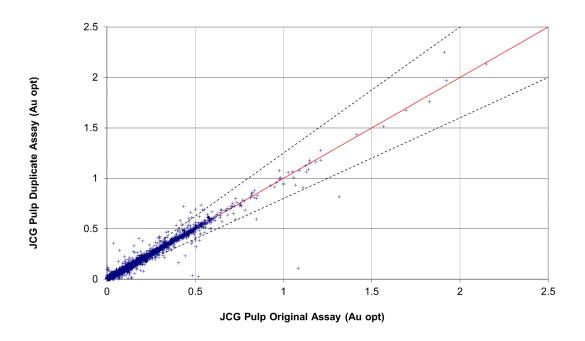


Figure 11-10: JCG Assay Laboratory Underground Pulp Duplicates



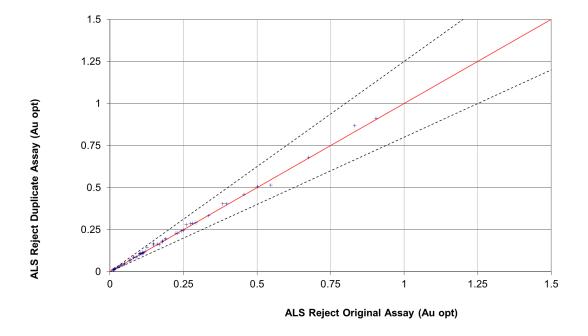


Figure 11-11: ALS Surface Coarse Reject Duplicates

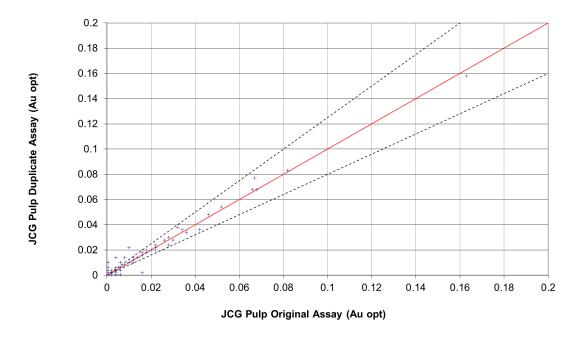


Figure 11-12: JCG Assay Laboratory Surface Pulp Duplicates

Overall, the results of the duplicate samples exhibit good correlation between field, coarse reject, and pulp duplicates for both underground and surface samples. Figure 11-9 graphs pulp duplicates and shows a large number of duplicates outside the 20% range of acceptability. This is due to the density of data



that is charted and does not indicate any systemic issues with the duplicate samples. The overall coefficient of correlation is 0.995.

The QP notes that the pulp duplicate submission rates meet industry standards. No field or coarse reject duplicates have been submitted since 2016.

The lack of field and coarse reject duplicates since 2016 does not adversely affect the accuracy and precision of the assays as Jerritt Canyon is an operating mine and the gold mineralization is generally very fine grained. Additionally, the pulp duplicate and coarse duplicate results show relatively good precision.

11.4.5 External Checks

As part of the QA/QC program, sample pulps were submitted to a secondary laboratory up until 2016. Check assays consist of submitting pulps that were assayed at the primary laboratory to a secondary laboratory and re-analyzing them using the same analytical procedures. This is done primarily to improve the assessment of bias in addition to the submission of CRMs submitted to the original laboratory.

Figure 11-13 plots 934 pulp sample pairs from the original JCG assay laboratory against the external ALS laboratory. The results show moderate variation in assay values and an overall 3% high bias towards the check assay laboratory.

Figure 11-14 is a Q-Q plot of the same samples pairs and confirms the bias towards the secondary assay laboratory.

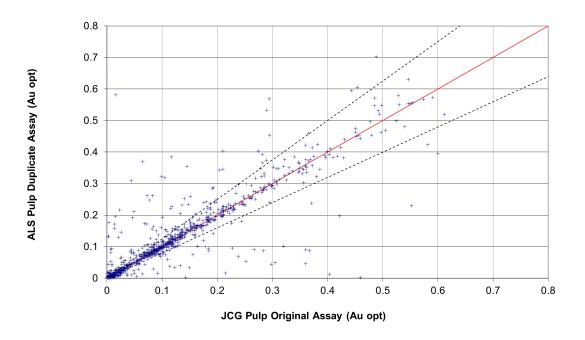


Figure 11-13: Scatter Plot of JCG versus ALS Pulp Duplicate Pairs



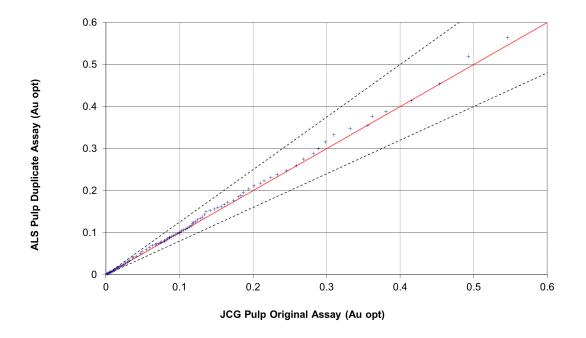


Figure 11-14: Q-Q plot of JCG versus ALS Pulp Duplicate Pairs

Overall, the check assays have moderate correlation with a correlation coefficient 0.86. A Q-Q plot of the pulp duplicates indicates that there is a minor bias towards the secondary lab.

External checks have not occurred at JCG since 2016. SLR recommends reimplementing the external checks for JCG and resuming the monitoring of results.

The QP is of the opinion that the results of the check assays at the external labs supports the use of the assays in the Mineral Resource estimation.

11.4.6 QA/QC Conclusions

The following conclusions are made from the review and analysis of QA/QC data collected for Jerritt Canyon from 2008 to 2020:

- The QA/QC program as designed and implemented is adequate and the assay results within the database are suitable to support Mineral Resource estimation.
- The results of the CRM performances at Jerritt Canyon indicate good precision of samples assayed and a minor low bias of the results. The external check assay results confirm that the JCG assay laboratory may understate gold values by up to a few percent.
- The results of the blank samples confirm that there is a low likelihood of grade smearing and contamination at the preparation laboratory.
- Moderate to high precision is observed in the results of the coarse reject and pulp duplicate programs.



11.4.7 QA/QC Recommendations

The following recommendations are made to improve the QA/QC program at Jerritt Canyon:

- Decrease the insertion rate of CRM to approximately 1 in 50.
- Reimplement a check assay program to submit pulp samples to a secondary umpire laboratory at a rate of approximately 1 in 100. Insert blank and CRM samples at a rate of 1 in 20 with the check assay samples.



12.0 DATA VERIFICATION

12.1 Historical Database Verifications

As of the data cut-off date, the underground drill hole databases contain 48,330 drill hole entries and the surface databases contain 6,431 entries. The databases represent approximately 39 years of exploration and almost continuous mining. Over the years, a number of evaluations, resource/reserve estimates, and audits have been carried out at Jerritt Canyon. In more recent years, Jerritt Canyon has been the subject of three NI 43-101 Technical Reports (Odell et al., 2012, Johnson et al., 2013 and RPA, 2018). Table 12-1 describes the previous years and companies which carried out the data verification.

None of the assay data produced after the data cut-off date has been used in the Mineral Resource estimate stated in Section 14 of this Technical Report. Notwithstanding, JCG has a history of following industry standard protocols for database management. The QP is of the opinion that these procedures and results will continue to be of good quality.

Table 12-1: Previous Database Audits Jerritt Canyon

Year	Company
1993	Behre Dolbear & Company Inc.
2000	Mineral Resources Development Inc.
2003	Pincock Allen & Holt
2004	Pincock Allen & Holt
2005	Pincock Allen & Holt
2006	SRK Consulting
2007	SRK Consulting
2010	SRK Consulting
2012	SRK Consulting
2013	Veris Gold Corp.
2018	RPA Inc.

12.2 Recent Data Verification

12.2.1 Software Validation

The QP carried out a program of validating the assay tables in the drill hole databases by means of spot checking a selection of drill holes that are used for the current Mineral Resource estimate.

The collar, survey, and assay tables were imported from acQuire into Leapfrog. Collars above the topography, suspect surveys, overlapping intervals and non-numerical assays were checked during importing. In addition, the QP conducted a search of the databases looking for duplicate sample numbers.



The assay table was evaluated for overlap and gaps in the from-to intervals, and seven gaps were identified. The logs for these holes were queried and, in all cases, it was determined that the gaps were consistent with the logs where the gap interval was recorded as "no sample". There were no overlaps detected.

The from-to sample intervals were evaluated for gaps and overlap, and none were found. A total of 485 sample and assay entries in the database were compared with the original assay certificates and no errors were found.

The QP queried the years in the database for individual drilling campaigns and found that several drill holes did not have years associated with them or had years that are mislabeled. SLR recommends fixing these in the database to allow easy access to drill holes by years.

The QP notes that no other errors were identified.

12.2.2 Database Verification

The QP compared over 267,000 assays, representing approximately 15% of the database, to the laboratory certificates used for the Mineral Resource estimates. Assay tables of the digital database were checked against the assays presented in the original laboratory certificates. Approximately 80% of the assays checked represent drilling from 2018 to 2020, with the remaining 20% from previous drilling campaigns. Six discrepancies were identified. JCG has addressed the discrepancies appropriately.

12.2.3 Database Conclusions and Recommendations

The QP recommends updating and correcting the year associated with each drill hole.

The QP is of the opinion that data collection and entry, and database verification procedures for Jerritt Canyon comply with industry standards and the data is adequate for the purposes of Mineral Resource estimation.



13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Mining and processing by the Freeport-FMC JV commenced at Jerritt Canyon in 1981. The initial processing facility processed mildly refractory, carbonaceous, preg-robbing mineralized material. Alkaline chlorination was used to passivate the carbonaceous constituents of the mineralized material to reduce preg-robbing and cyanidation to extract the gold. The chlorination facility continued operation until 1997 (Marsden, 2006).

In 1989, operation of a whole ore roaster commenced to treat double refractory mineralized material that contained higher concentrations of sulfide sulfur in addition to organic carbon. Over the life of the Jerritt Canyon operation, numerous metallurgical studies have been completed, however, the current operating practice relies on historical operating data to support recovery estimates and anticipate future operating performance. The current life of mine (LOM) plan estimates an average gold average gold recovery of 86% independent of the changes in the gold feed grade. Table 13-1 presents the historical production, feed grade, ounces produced, and gold recovery for Jerritt Canyon.

Table 13-1: Annual Mill Production Data 1981 to 2020

Jerritt Canyon

	Tons Processed	Head Grade	Contained Metal	A., Doggvens	Production
Year	(tons)	(oz/st Au)	(oz Au)	Au Recovery (%)	(oz Au)
1981	333,768	0.080	26,701	87.0	23,000
1982	1,241,940	0.180	223,549	87.0	196,100
1983	1,093,200	0.277	302,816	86.5	261,900
1984	1,206,600	0.220	265,452	91.2	243,100
1985	1,284,500	0.220	282,590	89.2	255,400
1986	1,339,200	0.227	303,998	87.4	269,600
1987	1,512,400	0.215	325,166	91.8	315,900
1988	1,574,500	0.212	333,794	91.5	310,100
1989	1,825,800	0.178	324,992	89.8	236,700
1990	2,513,500	0.148	371,998	88.0	329,800
1991	2,882,200	0.147	423,683	88.7	374,400
1992	2,952,120	0.132	389,680	89.3	353,300
1993	3,024,390	0.126	381,073	89.6	340,200
1994	3,006,870	0.122	366,838	85.6	323,400
1995	2,945,915	0.129	380,023	86.1	327,900
1996	2,667,593	0.130	346,787	88.0	310,000
1997	1,539,561	0.220	338,703	91.0	320,000
1998	1,484,445	0.250	371,111	91.0	350,000
1999	1,609,374	0.250	402,344	91.0	363,333



Year	Tons Processed (tons)	Head Grade (oz/st Au)	Contained Metal (oz Au)	Au Recovery (%)	Production (oz Au)
2000	1,499,143	0.240	359,794	90.0	316,667
2001	1,469,000	0.310	455,390	89.2	403,000
2002	1,467,000	0.260	381,420	87.9	339,000
2003	1,496,441	0.225	336,699	88.3	302,096
2004	1,305,833	0.210	274,225	86.7	243,333
2005	1,106,937	0.220	243,526	86.6	204,091
2006	973,593	0.210	204,455	86.2	169,851
2007	968,130	0.206	199,435	88.2	175,646
2008	338,350	0.160	54,136	87.3	44,732
2009	NP	NP	-	-	-
2010	599,555	0.123	73,745	88.2	65,104
2011	628,418	0.142	89,235	85.8	67,748
2012	978,262	0.130	127,174	82.7	105,626
2013	1,084,131	0.154	166,956	85.5	139,556
2014	1,106,524	0.166	183,683	87.8	160,451
2015	1,158,585	0.173	200,049	85.5	172,591
2016	1,191,674	0.144	171,333	85.4	140,989
2017	1,143,530	0.135	154,187	83.9	129,335
2018	1,214,349	0.136	165,670	85.7	141,963
2019	883,582	0.154	135,736	85.5	116,060
2020	826,234	0.160	131,831	85.5	112,750
Total	57,477,147	0.179	10,269,798	88.2	9,040,661

Figure 13-1 presents the historical gold grade-recovery relationship for three different time periods, 1) 1981 to 2020, 2)1989 to 2020 and 3) 1997 to 2020. The first period is inception to date, the second period begins when the roaster was commissioned, and the third period begins when chlorination was discontinued. SLR notes that the 1981 to 2020 and 1989 to 2020 lines are essentially the same. The 1997 to 2020 line indicates a slightly higher sensitivity of gold recovery to feed grade. SLR notes that the data are scattered and the correlations of the three lines are low suggesting that variables other than head grade, including sulfide sulfur, total organic carbon (TOC), and roaster performance contribute to changes in gold recovery.



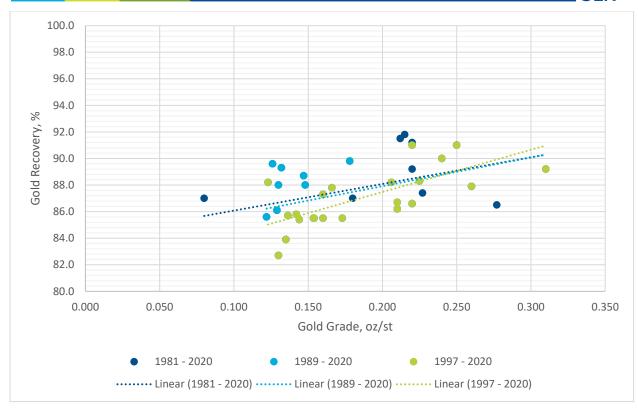


Figure 13-1: Historical Gold Feed Grade versus Recovery 1981 to 2020

Figure 13-2 is a statistical plot of the historical gold grade and recovery from 1981 to 2020. The chart indicates narrow ranges of gold feed grade and recovery. The gold feed grade ranges from a 25th percentile 0.142 oz/st Au to a 75th percentile 0.220 oz/st Au with an average gold grade of 0.183 oz/st Au. Gold recovery ranges from a 25th percentile 85.8% to a 75th percentile 89.3% with a weighted average recovery of 88.2%. SLR notes that the process operating data indicates very consistent plant feed and operational performance and, with the low correlation between grade and recovery, the use of near term historical averages would provide a reasonable gold recovery value for planning purposes. The operation is currently using a constant average gold recovery of 86% for the LOM plan and budget. The consistency in recovery could be affected by changes in mineralogical characteristics as new ore types are encountered in the future. SLR recommends that metallurgical testing be performed on the main ore types to provide more information for predicting plant performance.



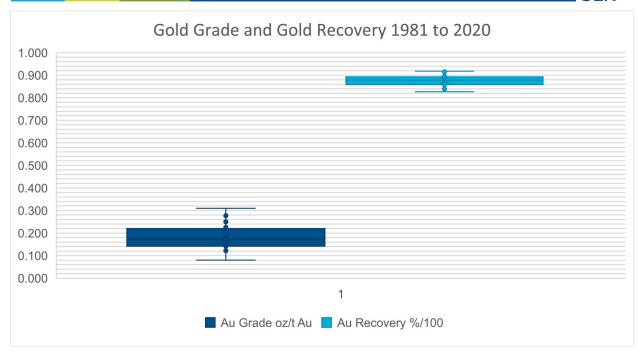


Figure 13-2: Plot of Historical Gold Grade and Recovery from 1981 to 2020

Table 13-2 provides the monthly mill production, gold feed grade and recovery for 2018, 2019, and 2020. Production during the three years varied from 48,849 st/month to 119,903 st/month in early 2018 with an average of 81,227 st/month over the three year period. Gold grade ranged from 0.120 oz/st Au to 0.189 oz/st Au with an average grade of 0.151 oz/st Au and recovery ranged from 82.2% to 87.6% with an average of 85.5% over the three year period.

Table 13-2: Monthly Mill Production Data 2018 to 2020

Jerritt Canyon

Year	Month	Production (tons)	Feed Grade (oz/st Au)	Au Recovery (%)
2018	Jan	119,903	0.120	83.5
	Feb	105,337	0.131	84.3
	Mar	95,980	0.141	85.7
	Apr	93,088	0.144	86.1
	May	113,239	0.141	85.8
	Jun	114,049	0.144	87.0
	July	112,968	0.147	87.6
	Aug	108,864	0.142	86.4
	Sept	99,890	0.133	85.8
	Oct	101,485	0.132	84.5
	Nov	64,629	0.139	85.4



Year	Month	Production (tons)	Feed Grade (oz/st Au)	Au Recovery (%)
	Dec	84,917	0.123	85.2
	Total	1,214,349	0.136	85.7
2019	Jan	94,219	0.127	84.2
	Feb	69,465	0.131	84.6
	Mar	82,194	0.136	83.2
	Apr	82,473	0.129	85.2
	May	92,388	0.144	86.5
	Jun	74,916	0.163	86.8
	July	73,404	0.169	86.8
	Aug	69,556	0.176	85.6
	Sept	48,849	0.177	84.9
	Oct	67,248	0.177	85.0
	Nov	64,966	0.173	86.9
	Dec	63,904	0.169	85.6
	Total	883,582	0.154	85.5
2020	Jan	50,020	0.173	83.9
	Feb	68,827	0.178	85.4
	Mar	73,090	0.174	86.6
	Apr	69,135	0.189	85.4
	May	74,674	0.160	84.6
	Jun	81,695	0.157	86.0
	July	71,386	0.175	87.0
	Aug	73,141	0.151	86.2
	Sept	53,580	0.155	86.6
	Oct	68,921	0.147	86.0
	Nov	69,091	0.131	82.2
	Dec	72,674	0.129	85.4
	Total	826,234	0.160	85.5

Figure 13-3 graphically presents the monthly mill throughput, gold feed grade and recovery for 2019 and 2020 illustrating the variance in these key performance indicators over the two year period.



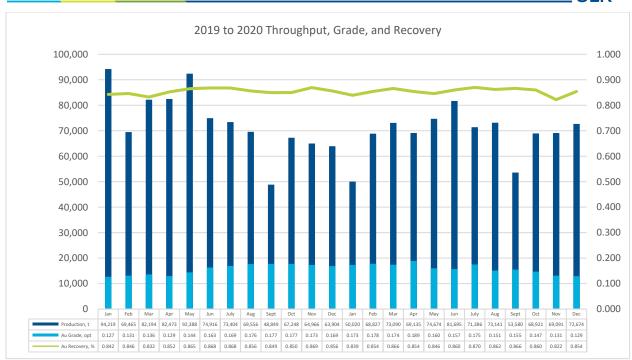


Figure 13-3: Monthly Mill Throughput, Feed Grade, and Recovery for 2019 to 2020

Figure 13-4 is a graph of the mill feed grade versus gold recovery for 2019 and 2020. As exhibited in Figure 13-1, while there is a variance in recovery with the feed grade, the correlation is low.

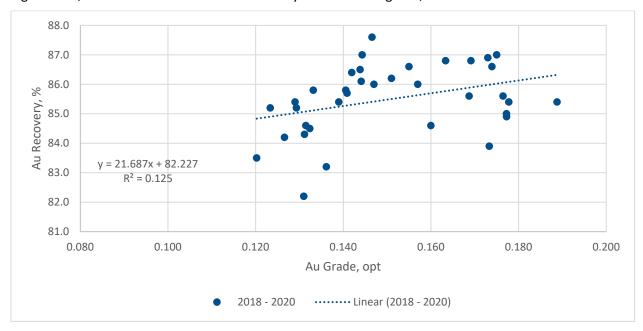


Figure 13-4: Mill Feed Grade versus Recovery for the Period 2019 to 2020

SLR recommends that JCG complete metallurgical testing of samples from the various mining sources that represent the current and future feed to the processing plant in order to develop more accurate estimates



for future gold recovery and to provide information to support the blending of plant feed with respect to sulfide sulfur, TOC concentrations and other variables that contribute to plant performance.



14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

Since the completion of the 2018 Mineral Resource estimate (RPA, 2018), JCG has conducted in-fill drilling programs from the surface and underground. These drilling programs have resulted in a total of 13,345 additional drill holes for a total length of approximately 2,930,162 ft. This new drill hole information has resulted in the creation of additional mineralized wireframe models for the Jerritt Canyon underground mines.

Wireframe and block modelling for the Jerritt Canyon deposits were completed by JCG Geologists and provided to SLR for review. A total of five deposits are the focus of this Mineral Resource estimate: Saval 4, Smith, SSX, USB, and WGen. Two deposits, Smith and SSX, consist of multiple domains. A total of 17 mineralized wireframe models were built for SSX Zone 1, SSX Zone 2-3, SSX Zone 4, SSX Zone 5, SSX Zone 6, SSX Zone 7, SSX Zone 9, Smith Zone 1, Smith Zone 2-3, Smith Zone 4, Smith Zone 5, Smith Zone 7, Smith Zone 8, Smith Zone 9, Saval 4, USB, and WGen. All wireframes are based on approximately a 0.10 oz/st Au threshold.

Visual examination of the assay tables related to the drill hole data revealed the presence of a large number of unsampled intervals within and abutting the boundaries of the interpreted mineralization wireframes. A value of 0.001 oz/st Au was entered for all such intervals with null values prior to the creation of composited assays. The resulting sample information for the drill holes was composited into nominal equal lengths of five feet within the mineralized boundaries using the run-length compositing algorithm in the Leapfrog Edge modelling software package.

JCG capped a number of high grade assays contained within the mineralized wireframe models. The composites for diamond drill holes and RC drill holes were capped to 1.8 oz/st Au during compositing. In total, 656 samples were capped at 1.8 oz/st Au, all of which are contained within the Smith and SSX deposits.

A total of 225,511 composited samples were used for grade interpolation between the five different Jerritt Canyon deposits. Composites with lengths below three feet were ignored, which constituted approximately 10% of total composites.

A total of 11 different block models were created from the 17 wireframe models. Parent block sizes for all models are 10 ft x 10 ft x 10 ft with sub-block sizes at 2.5 ft x 2.5 ft. One interpolation pass was carried out to estimate the grades into the separate block models. Gold grades were estimated into the blocks using Ordinary Kriging (OK) interpolation algorithm with Leapfrog Edge. Nearest Neighbor (NN) and Inverse Distance Cubed (ID³) estimations were used for model validation.

A 100 ft dilution zone was created around the mineralized wireframe models for all the block models. A single pass estimation strategy using ID³ was applied when estimating the grades for the dilution domain in the individual block models.

Block model validation exercises included a comparison of the average grade of the composite samples to the block average grades, visual comparisons of the estimated block grades to the composited gold grades, swath plots, and reconciliation to production statistics.

Cut-off grades were developed for reporting of underground Mineral Resources using a gold price of US\$1,700/oz Au. The resource cut-off grade was determined to be 0.11 oz/st Au. The current operating cut-off grade is approximately 0.12 oz/st Au.



Summaries of the JCG Mineral Resources in Imperial and Metric units are provided in Table 14-1 and Table 14-2, respectively.

JCG provided underground excavation wireframes as of December 31, 2020. The cut-off date of the data informing the Mineral Resource estimate is April 29, 2020 for all the deposits.

Table 14-1: Summary of Mineral Resources (effective date December 31, 2020, Imperial Units) **Jerritt Canyon**

Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)
Measured	4,811	0.159	767
Indicated	406	0.160	65
Measured and Indicated	5,217	0.160	832
Inferred	1,950	0.171	334

Notes:

- 1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition and Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were followed for Mineral Resources.
- Mineral Resources are exclusive of Mineral Reserves. 2.
- Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- 4. Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 0.11 oz/st Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.
- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.

Table 14-2: **Summary of Mineral Resources (effective date December 31, 2020, Metric Units) Jerritt Canyon**

Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Measured	4,365	5.47	767
Indicated	368	5.49	65
Measured and Indicated	4,733	5.47	832
Inferred	1,769	5.87	334

Notes:

- 1. CIM (2014) definitions were followed for Mineral Resources.
- 2. Mineral Resources are exclusive of Mineral Reserves.
- Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 3.77 g/t Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.



- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.

The classification of Measured, Indicated, and Inferred Resources conforms to the 2014 "CIM Definition Standards for Mineral Resources and Mineral Reserves" using industry best practices as outlined in the 2019 "CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines".

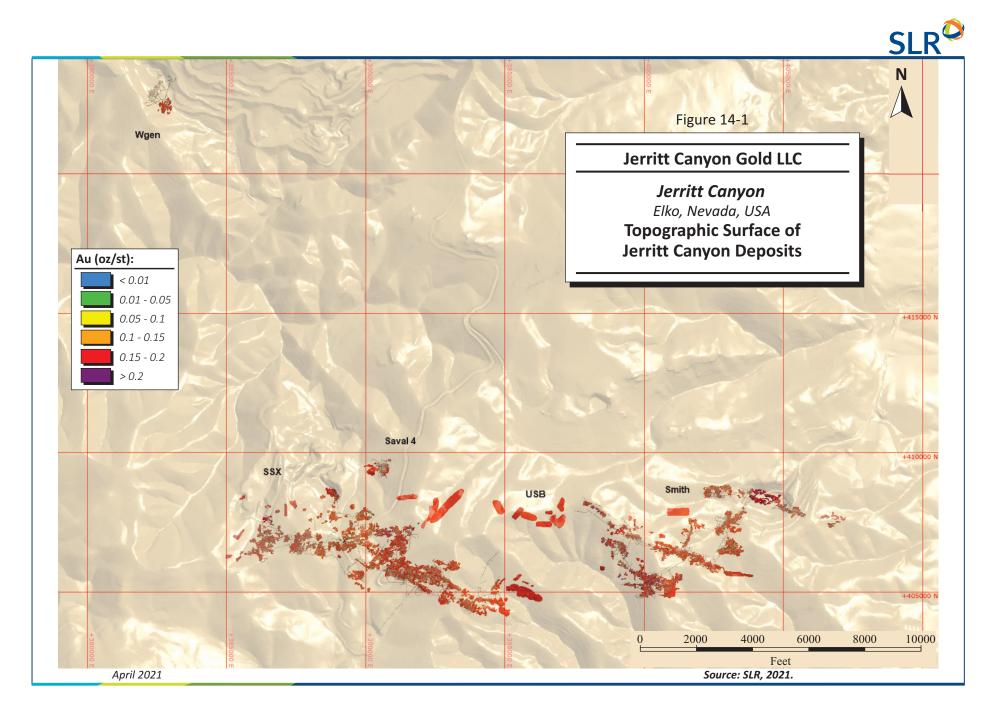
The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate aside from those identified in Section 20 of this Technical Report which are being mitigated by further work by JCG.

Risk factors that could materially impact the Mineral Resource estimate include:

- Metal price and exchange rate assumptions.
- Changes in the interpretations of mineralization geometry and continuity of mineralized zones.
- Changes to geotechnical, mining, and metallurgical recovery assumptions.
- Changes to the assumptions related to the continued ability to access the site, retain mineral and surface right titles, maintain environment and other regulatory permits, and maintain the license to operate.

14.2 Topography

Aerial topography mapping of the Jerritt Canyon property was conducted in July 2004 on five foot contour intervals and has been utilized as the base for the current models. Aerial Light Detection and Ranging (LiDAR) mapping of Jerritt Canyon on five foot contour line spacing was conducted by Aero-graphics Geospatial Services from August 29, 2011 to September 2, 2011 on square tiles 1,800 ft by 1,800 ft in size. Finer 0.5 ft LiDAR contour interval definition in the mill and tailings areas was also completed. Figure 14-1 shows the topography of the different Jerritt Canyon deposits.





14.3 Description of the Databases

The drill hole database is stored in acQuire at Jerritt Canyon and consists of two parts: surface drilling, and underground and production drilling. The data cut-off date for the current resource block model was April 29, 2020 for all of the deposits. In total the database contained 54,761 drill holes with a total length of approximately 9,967,671 ft. The locations of the drill holes for the Jerritt Canyon deposits are shown in Figure 14-2. Table 14-3 describes the amount of drilling at each deposit.

Table 14-3: Drill Holes by Deposit

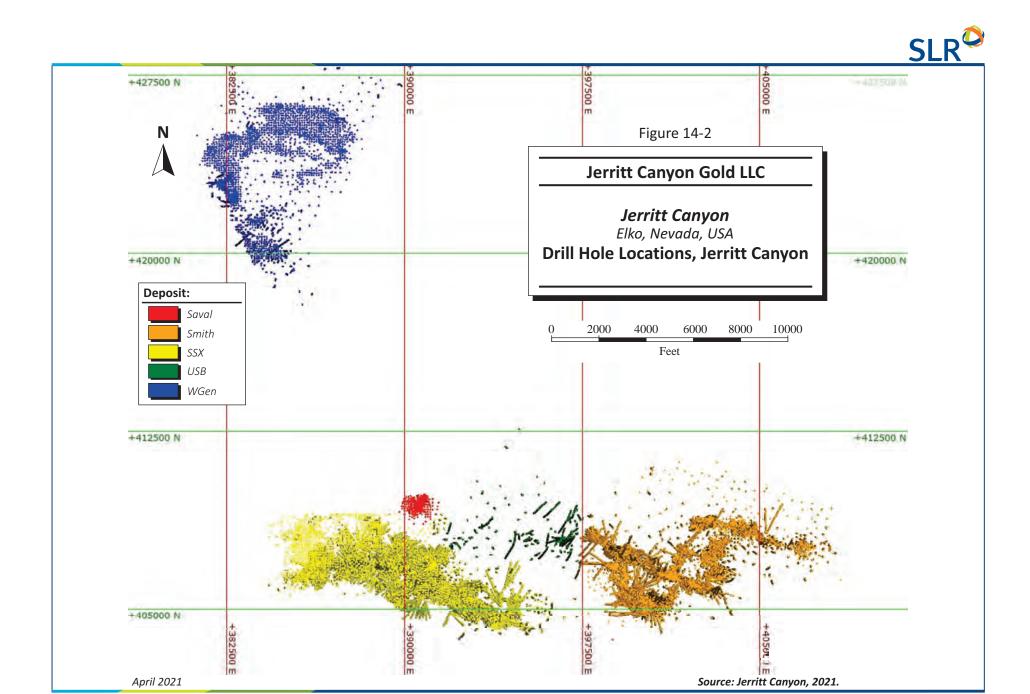
Jerritt Canyon

Deposit	Holes	Footage (ft)
Saval 4	537	159,186
Smith	20,273	3,756,920
SSX	31,488	4,935,615
USB	141	161,910
WGen	2,322	954,040

A summary of the database statistics is described in Table 14-4.

Table 14-4: Assay Statistics of Jerritt Canyon Deposits
Jerritt Canyon

Deposit	Count	Min (oz/st Au)	Max (oz/st Au)	Mean (oz/st Au)	Variance	StDev (oz/st Au)
SSX	167,437	0.001	50.259	0.270	0.087	0.286
Smith	127,720	0.001	135.891	0.226	0.247	0.410
Saval	2,627	0.001	1.636	0.209	0.036	0.190
USB	80	0.001	0.910	0.142	0.018	0.135
WGen	582	0.001	0.910	0.197	0.020	0.142
Total	298,446	0.001	31.401	0.251	0.155	0.338





14.4 Mineralization Wireframes

Grade domains are commonly used in resource modelling to constrain similar grades and prevent grade smearing. JCG used Leapfrog to construct 0.10 oz/st Au mineralized domains for all five deposits. Wireframes were created using three methods: interpolants, veins, and numeric models.

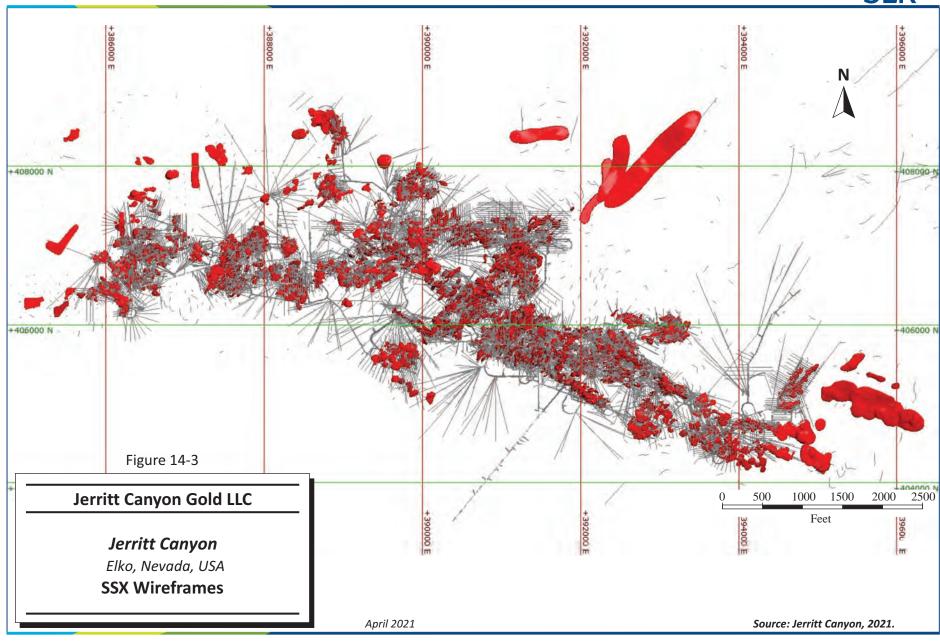
In the interpolant approach, drill hole intersections above a 0.10 oz/st Au cut-off grade were selected to define the mineralized wireframes. This strategy was used to model Saval 4. In the vein method, Leapfrog interpolates hanging wall and footwall surfaces from the zones which have intersections above the 0.10 oz/st Au cut off. USB mineralization and some mineralization at Smith and SSX were developed following the Leapfrog vein construction method due to the wider drill spacing. The remaining mineralization at SSX and Smith, as well as all of WGen were modelled using a numeric indicator interpolant method in Leapfrog Geo creating wireframes with the probability to average higher than the 0.10 oz/st Au cut-off grade following stratigraphy and structural geology features as structural trends. SLR notes that the numeric model wireframes required some post processing adjustments.

Wireframes were grouped into 17 individual mineralized domains. Table 14-5 describes the statistics for the assays within each of the 17 domains used in resource estimation. Figure 14-3 through Figure 14-7 show the wireframes and their locations within the five deposits.

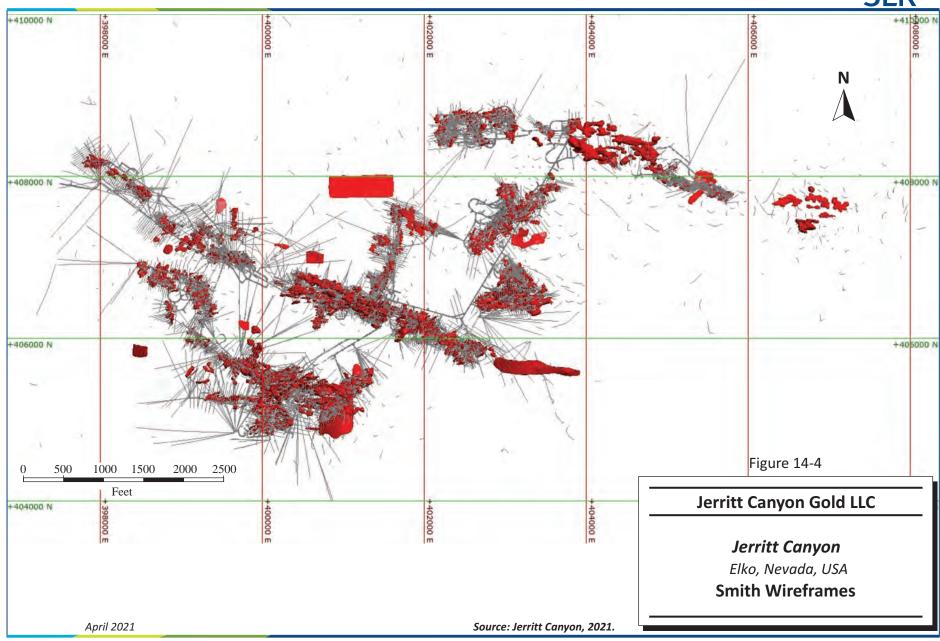
Table 14-5: **Assay Statistics for Mineralized Wireframe Domains Jerritt Canyon**

Domain	Count	Min (oz/st Au)	Max (oz/st Au)	Mean (oz/st Au)	Variance	StDev (oz/st)
1100-SSX-Zone1	14,341	0.001	5.60	0.252	0.06	0.25
1200-SSX-Zone2-3	89,577	0.001	50.26	0.307	0.12	0.35
1400-SSX-Zone4	7,621	0.001	1.99	0.192	0.02	0.15
1500-SSX-Zone5	28,005	0.000	2.25	0.221	0.03	0.19
1600-SSX-Zone6	2,120	0.001	2.34	0.250	0.07	0.26
1700-SSX-Zone7	25,595	0.001	7.42	0.232	0.05	0.23
1900-SSX-Zone9	178	0.001	1.07	0.208	0.02	0.15
2100-Smith-Zone1	14,249	0.000	1.63	0.197	0.03	0.16
2200-Smith-Zone2-3	39,899	0.000	7.19	0.245	0.09	0.31
2400-Smith-Zone4	29,682	0.001	135.89	0.195	0.83	0.91
2500-Smith-Zone5	9,775	0.001	3.12	0.176	0.02	0.13
2700-Smith-Zone7	13,838	0.000	3.34	0.257	0.07	0.26
2800-Smith-Zone8	13,999	0.001	4.39	0.242	0.09	0.29
2900-Smith-Zone9	6,278	0.001	4.64	0.287	0.08	0.28
3000-Saval 4	2,627	0.001	1.64	0.209	0.04	0.19
4000-USB	80	0.001	0.91	0.142	0.02	0.14
5000-WGen	582	0.001	0.91	0.197	0.02	0.14

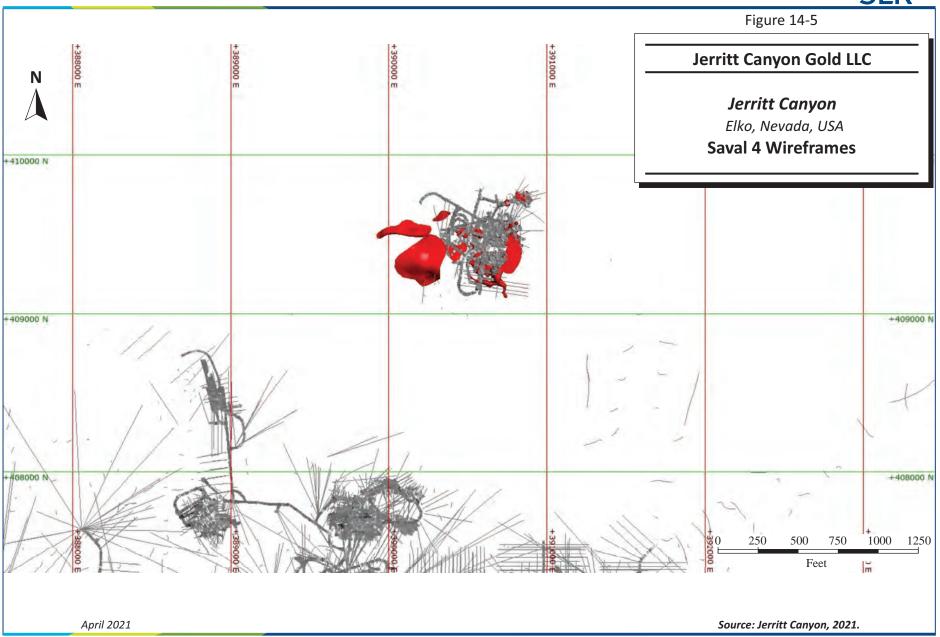




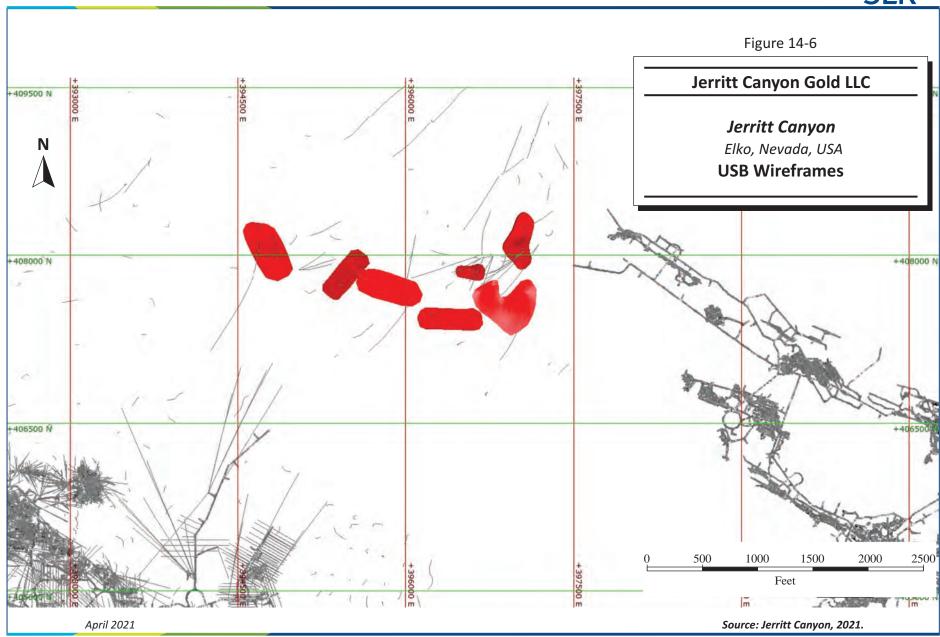




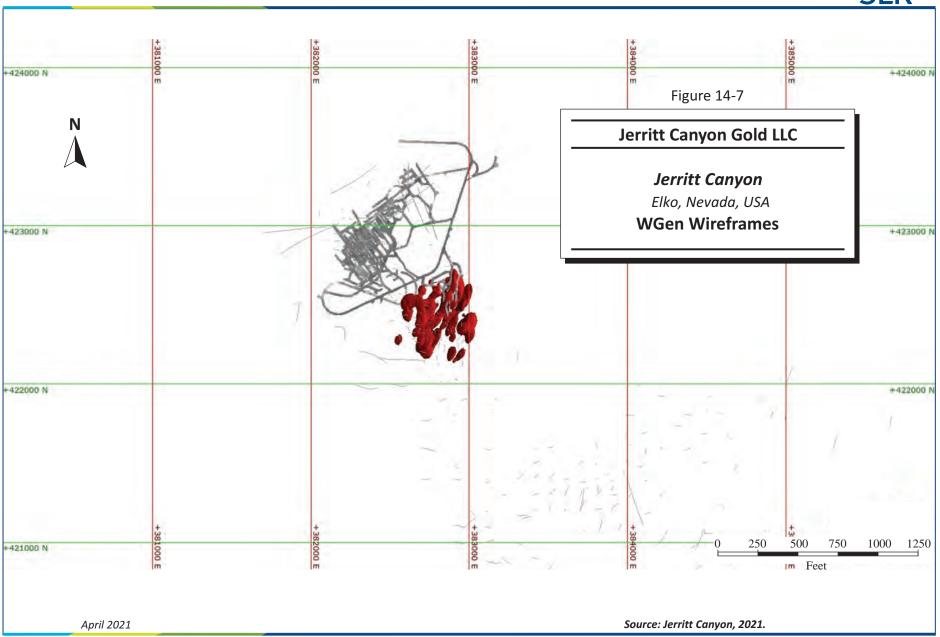














14.5 Compositing Methods and Grade Capping

Assay values were composited within each mineralized wireframe. Assays were composited into nominal equal lengths of five feet using the compositing algorithm of the Leapfrog Geo modelling software package. Composites less than three feet were discarded. Visual examination of the assay tables related to the diamond drill hole data revealed the presence of unsampled intervals within and adjacent to the interpreted mineralization wireframes. All unsampled intervals with null values were assigned 0.001 oz/st Au values prior to compositing.

Assay data was examined by means of frequency plots to determine an appropriate capping value. Figure 14-8 is an example of the log probability plot for Jerritt Canyon. The upper tail of the frequency plot indicates that high grade samples are not affecting the Jerritt Canyon deposits in a significant manner. Following inspection of log probability plots, JCG capped all high grade assays to 1.8 oz/st Au during compositing. The resulting composite statistics for each of the domains are given in Table 14-6.

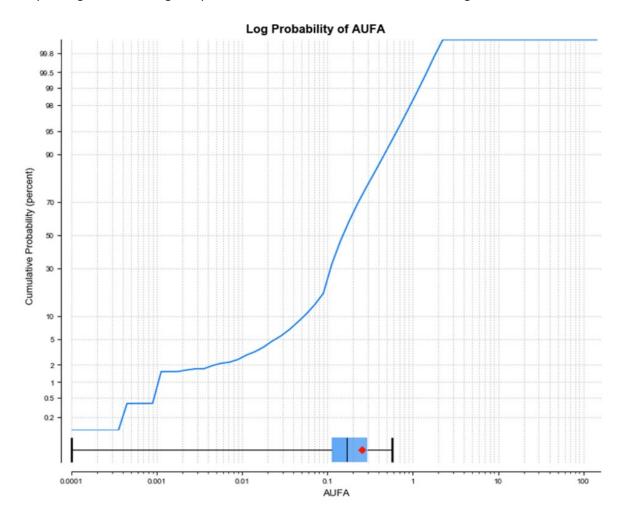


Figure 14-8: Jerritt Canyon Assay Log Probability



Table 14-6: Composite Statistics for Mineralized Wireframe Domains

Jerritt Canyon

Domain	Count	Min (oz/st Au)	Max (oz/st Au)	Mean (oz/st Au)	Variance	StDev (oz/st Au)
1100-SSX-Zone1	10,127	0.001	1.800	0.263	0.023	0.232
1200-SSX-Zone2-3	70,328	0.001	1.800	0.315	0.065	0.338
1400-SSX-Zone4	4,998	0.001	1.573	0.199	0.031	0.135
1500-SSX-Zone5	19,225	0.001	1.800	0.230	0.013	0.172
1600-SSX-Zone6	1,298	0.001	1.800	0.264	0.055	0.239
1700-SSX-Zone7	17,597	0.001	1.800	0.241	0.061	0.216
1900-SSX-Zone9	125	0.043	0.763	0.216	0.060	0.139
2100-Smith-Zone1	10,702	0.001	1.543	0.202	0.052	0.153
2200-Smith-Zone2-3	32,871	0.001	1.800	0.246	0.074	0.294
2400-Smith-Zone4	22,561	0.001	1.800	0.191	0.018	0.937
2500-Smith-Zone5	7,643	0.001	1.800	0.180	0.029	0.120
2700-Smith-Zone7	10,250	0.001	1.800	0.264	0.054	0.241
2800-Smith-Zone8	10,081	0.001	1.800	0.246	0.043	0.282
2900-Smith-Zone9	4,803	0.001	1.800	0.293	0.019	0.255
3000-Saval 4	2,428	0.001	1.636	0.210	0.034	0.184
4000-USB	80	0.001	0.910	0.142	0.018	0.135
5000-WGen	394	0.006	0.748	0.205	0.016	0.127

14.6 Bulk Density

The tonnage factor used for the Jerritt Canyon deposits is 12.6 ft³/st, which is equivalent to the density of 0.0794 st/ft³. SLR notes that density has not been determined for different lithologies.

Tests, carried out in 2000 at the University of Nevada, Reno and ALS Chemex on 67 samples, defined the tonnage factor as 12.616 $\rm ft^3/st$. Zonge Engineering and Research of Tucson, Arizona tested 50 samples from Mahala and five samples from Steer. The testing resulted in average densities of 12.45 $\rm ft^3/st$ for Mahala and 13.0 $\rm ft^3/st$ for Steer.

In 2005, tests on 22 ore and 24 waste samples from Starvation Canyon resulted in an average tonnage factor of $11.8 \, \text{ft}^3/\text{st}$ for ore and $12.2 \, \text{ft}^3/\text{st}$ for waste samples.

14.7 Variography

For the purpose of variography, all samples in the Leapfrog interpolant wireframes were used, which include mined-out areas contained within the mineralized wireframes. Variograms were created for each of the individual domains using only the composites contained within the wireframes.



The variograms indicated relative nugget effects of between approximately 10% and 20% with most major ranges between approximately 50 ft and 80 ft. The variography analysis produced reliable variograms. Based on the results, JCG used OK methods to estimate gold grades into the block model. Table 14-7 presents the results of the experimental variography for each zone. Figure 14-9 shows an example of the major, semi-major, and minor direction variograms for SSX Zone 5.



Table 14-7: Variography Parameters
Jerritt Canyon

Daniel /		Rotation				:	Structure 1				9	Structure 2		
Deposit / Zones	Dip	Dip Azimuth	Pitch	NE	Model	Sill1	Major (ft)	Semi (ft)	Minor (ft)	Model	Sill2	Major (ft)	Semi (ft)	Minor (ft)
2100-Smith- Zone1	0	50	110	0.18	Spherical	0.54	20	13	10	Spherical	0.28	50	25	20
2200-Smith- Zone2-3	10	110	90	0.15	Spherical	0.60	20	18	15	Spherical	0.25	70	40	20
2400-Smith- Zone4	15	110	90	0.16	Spherical	0.64	20	18	15	Spherical	0.20	60	30	20
2500-Smith- Zone5	20	140	90	0.20	Spherical	0.75	15	12	7	Spherical	0.05	35	20	10
2700-Smith- Zone7	25	330	150	0.20	Spherical	0.30	20	5	3	Spherical	0.50	60	35	20
2800-Smith- Zone8	0	50	70	0.18	Spherical	0.52	18	12	5	Spherical	0.30	50	30	15
2900-Smith- Zone9	20	110	90	0.16	Spherical	0.46	13	10	5	Spherical	0.38	60	40	20
1100-SSX- Zone1	27	145	50	0.20	Spherical	0.70	13	10	8	Spherical	0.10	20	15	10
1200-SSX- Zone2-3	0	290	90	0.20	Spherical	0.60	15	10	5	Spherical	0.20	60	30	15
1400-SSX- Zone4	10	110	70	0.20	Spherical	0.65	30	25	8	Spherical	0.15	70	50	20
1500-SSX- Zone5	20	50	120	0.20	Spherical	0.65	17	15	12	Spherical	0.15	60	40	20



Danasit /	Rotation				Structure 1					Structure 2				
Deposit / Zones	Dip	Dip Azimuth	Pitch	NE	Model	Sill1	Major (ft)	Semi (ft)	Minor (ft)	Model	Sill2	Major (ft)	Semi (ft)	Minor (ft)
1600-SSX- Zone6	25	170	0	0.20	Spherical	0.45	20	15	10	Spherical	0.35	60	30	20
1700-SSX- Zone7	10	110	110	0.20	Spherical	0.65	17	15	10	Spherical	0.15	60	25	15
1900-SSX- Zone9	20	190	10	0.20	Spherical	0.60	15	10	5	Spherical	0.20	60	30	15
Saval	50	10	120	0.18	Spherical	0.66	6	4	3	Spherical	0.16	30	20	10
USB	0	110	90	0.20	Spherical	0.80	50	30	10	-	-	-	-	-
WGen	60	290	10	0.10	Spherical	0.70	30	15	5	Spherical	0.20	80	20	10



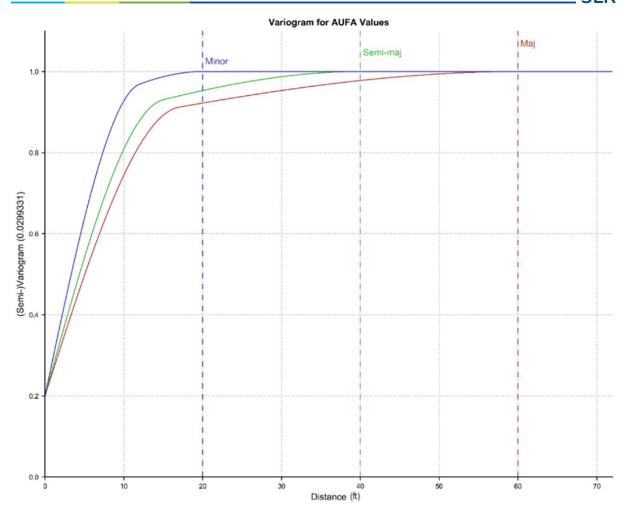


Figure 14-9: Variograms in Major, Semi-Major, and Minor Directions for SSX Zone 5

14.8 Block Model Construction

The 17 individual wireframe domains were used to create a total of 11 different block models. The models created are named as follows: Saval 4, Smith8, Smith9, Smith57, Smith1234, SSX4, SSX19, SSX57, SSX236, USB, and WGen. All models have parent block sizes of 10 ft x 10 ft x 10 ft and sub-block sizes at 2.5 ft x 2.5 ft x 2.5 ft.

The block models were constructed using the Leapfrog Edge software package and oriented parallel to the local grid coordinate system (i.e. no rotation or tilt). The block model's origins and dimensions are provided in Table 14-8.



Table 14-8: Summary of the Block Model Origins and Block Sizes

Jerritt Canyon

Туре	X (Easting)	Y (Northing)	Z (Elevation)
	SS	K 19	
Origin	392,300	404,000	7,500
Boundary Size (ft)	4,160	2,310	1,300
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	SSX	236	
Origin	389,220	404,820	7,600
Boundary Size (ft)	4,310	2,380	1,140
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	SS	X 4	
Origin	390,200	406,700	7,500
Boundary Size (ft)	3,400	2,100	900
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	SS	X57	
Origin	384,900	406,000	7,700
Boundary Size (ft)	5,670	2,800	950
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	Smith	n 1234	
Origin	398,300	404,650	7,200
Boundary Size (ft)	5,700	2,550	1,200
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10



Туре	X (Easting)	Y (Northing)	Z (Elevation)
		ith 57	· ,
Origin	400,700	406,500	7,200
Boundary Size (ft)	3,100	2,400	800
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	Sm	nith 8	
Origin	397,700	406,070	7,100
Boundary Size (ft)	2,720	2,310	700
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	Sm	nith 9	
Origin	403,630	407,230	7,150
Boundary Size (ft)	3,690	1,570	1,090
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	Sa	val 4	
Origin	389,800	409,030	7,360
Boundary Size (ft)	1,200	800	600
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10
	l	JSB	
Origin	394,400	407,200	7,250
Boundary Size (ft)	2,900	1,300	750
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10



Туре	X (Easting)	Y (Northing)	Z (Elevation)
	W	Gen	
Origin	382,400	422,000	6,660
Boundary Size	750	800	410
Min. Block Size (ft)	2.5	2.5	2.5
Maximum Block Size (ft)	10	10	10

14.9 Interpolation Strategy

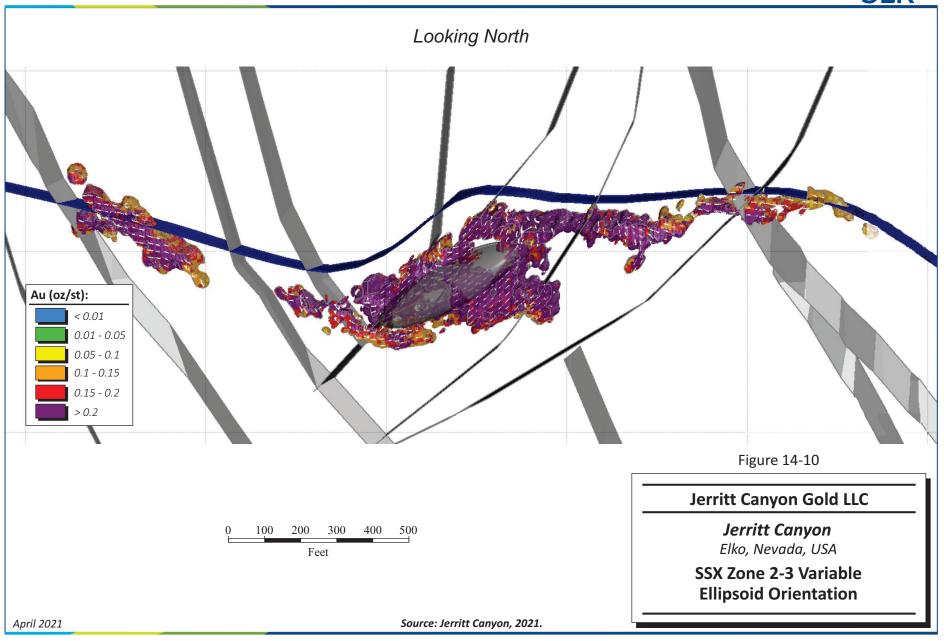
Gold grades were estimated into the block models using the Leapfrog Edge OK interpolation algorithm. One interpolation pass was carried out to estimate the grades for each domain. The search ellipsoid radii are based on the variogram anisotropies and the distances were long enough to ensure gold grades were estimated in most of the blocks located in mineralization wireframes. Domains with sparse drilling required longer search radii, which are shown under the adjusted domain column of Table 14-9. The estimations were organized by domain and each wireframe was estimated with the corresponding composites located within the wireframe. JCG employed Leapfrog Variable Orientation for the ellipsoid orientation. This allows the search ellipse to follow trends seen within the deposits. Figure 14-10 is an example of the Smith Zone 9 variable ellipsoid orientation with respect to the wireframe. The white dashes indicate the orientation for that particular area.

Table 14-9: Search Ellipsoid Radii

Jerritt Canyon

		Search Ellipse			Adjusted Domains	s
Domain	Major (ft)	Semi-Major (ft)	Minor (ft)	Major (ft)	Semi-Major (ft)	Minor (ft)
2100-Smith-Zone1	150	75	60	-	-	-
2200-Smith-Zone2-3	210	120	60	-	-	-
2400-Smith-Zone4	240	120	80	-	-	-
2500-Smith-Zone5	140	80	40	350	200	100
2700-Smith-Zone7	180	105	60	600	350	200
2800-Smith-Zone8	200	120	60	-	-	-
2900-Smith-Zone9	240	160	80	-	-	-
1100-SSX-Zone1	200	150	100			
1200-SSX-Zone2-3	240	120	60	-	-	-
1400-SSX-Zone4	280	200	80	700	500	200
1500-SSX-Zone5	240	160	80	-	-	-
1600-SSX-Zone6	240	120	80	-	-	-
1700-SSX-Zone7	240	100	60	-	-	-
1900-SSX-Zone9	360	180	90	-	-	-
Saval	120	80	40	-	-	-
USB	500	300	100	-	-	-
WGen	320	80	40	-	-	-







14.10 Block Model Validation

SLR validated the block model results using the following methods:

- Swath plots of composite grades versus block grades in the X, Y, and Z directions. Figure 14-11 to Figure 14-13 are examples of the swath plots for block model SSX 19.
- Volumetric comparison of blocks versus wireframes (Table 14-10).
- Visual inspection of block versus composite grades on plan, vertical, and longitudinal section. Figure 14-14 to Figure 14-16 provide cross sections of the SSX, Smith, and Saval 4 deposits.
- Parallel secondary estimations using ID³ and NN.
- Statistical comparison of block grades with composite grades (Table 14-11).

The Swath plots support that the block grades were reasonably consistent with local drill hole composite grades.

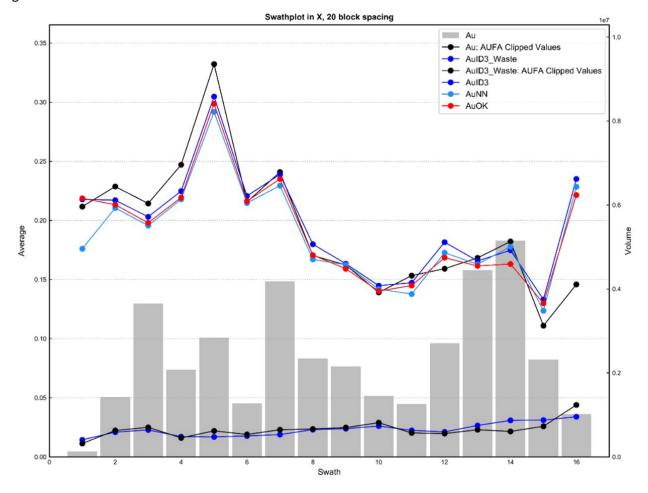


Figure 14-11: East West (x) Swath Plot SSX 19



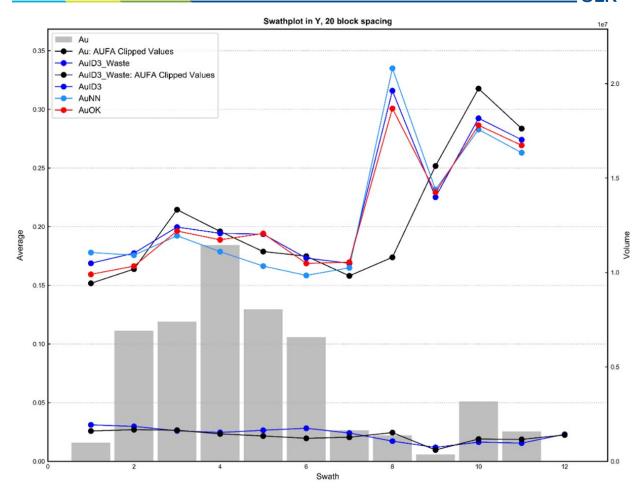


Figure 14-12: North South (Y) Swath Plot SSX 19



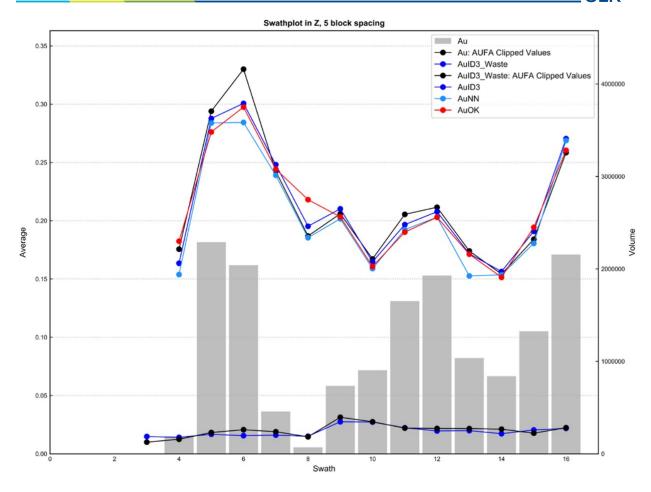


Figure 14-13: Vertical (Z) Swath Plot SSX 19

14.10.1 Volume Comparison

Wireframe volumes were compared to block volumes for each zone at Jerritt Canyon. This comparison is summarized in Table 14-10 and the results indicate that there is good agreement between the wireframe volumes and block model volumes with the difference being less than 0.1%.

Table 14-10: Block Model Versus Wireframe Volume Comparisons

Jerritt Canyon

Domain	Wireframe Volume (ft³)	Block Model Volume (ft³)	Difference (%)
1100-SSX-Zone1	35,546,625	35,550,450	-0.01%
1200-SSX-Zone2-3	107,300,797	107,311,857	-0.01%
1400-SSX-Zone4	27,509,797	27,510,561	0.00%
1500-SSX-Zone5	46,910,469	46,919,541	-0.02%
1600-SSX-Zone6	4,554,672	4,554,460	0.00%

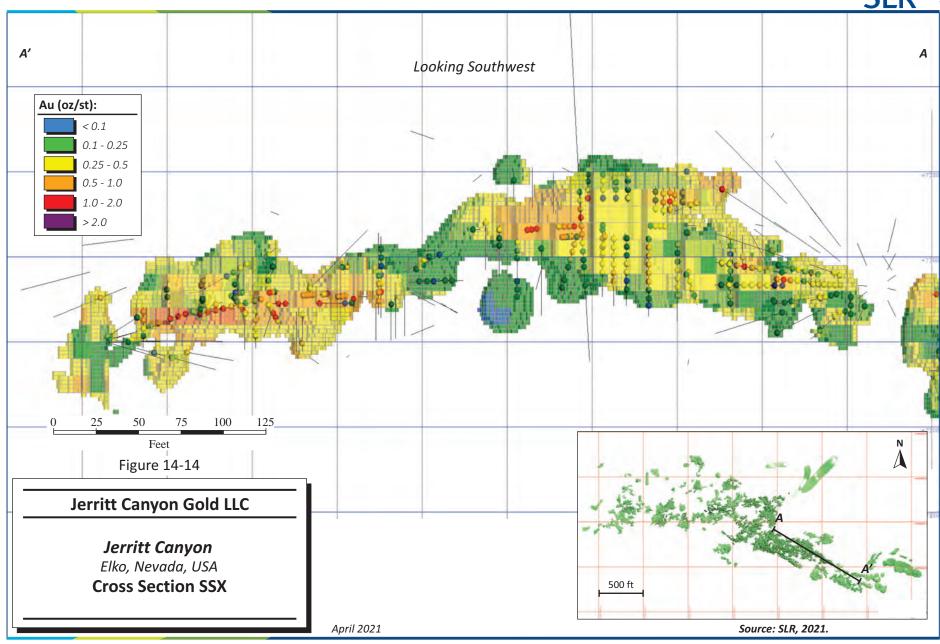


Domain	Wireframe Volume (ft³)	Block Model Volume (ft³)	Difference (%)
1700-SSX-Zone7	36,200,453	36,202,681	-0.01%
1900-SSX-Zone9	13,965,766	13,971,578	-0.04%
2100-Smith-Zone1	14,400,531	14,404,070	-0.02%
2200-Smith-Zone2-3	45,217,656	45,221,947	-0.01%
2400-Smith-Zone4	52,272,734	52,313,333	-0.08%
2500-Smith-Zone5	12,115,563	12,113,705	0.02%
2700-Smith-Zone7	16,879,703	16,878,600	0.01%
2800-Smith-Zone8	19,356,281	19,356,216	0.00%
2900-Smith-Zone9	24,557,391	24,557,766	0.00%
3000-Saval 4	5,117,313	5,119,140	-0.04%
4000-USB	10,748,422	10,746,353	0.02%
5000-WGen	6,591,938	6,592,722	-0.01%
Total	479,246,109	479,324,980	-0.02%

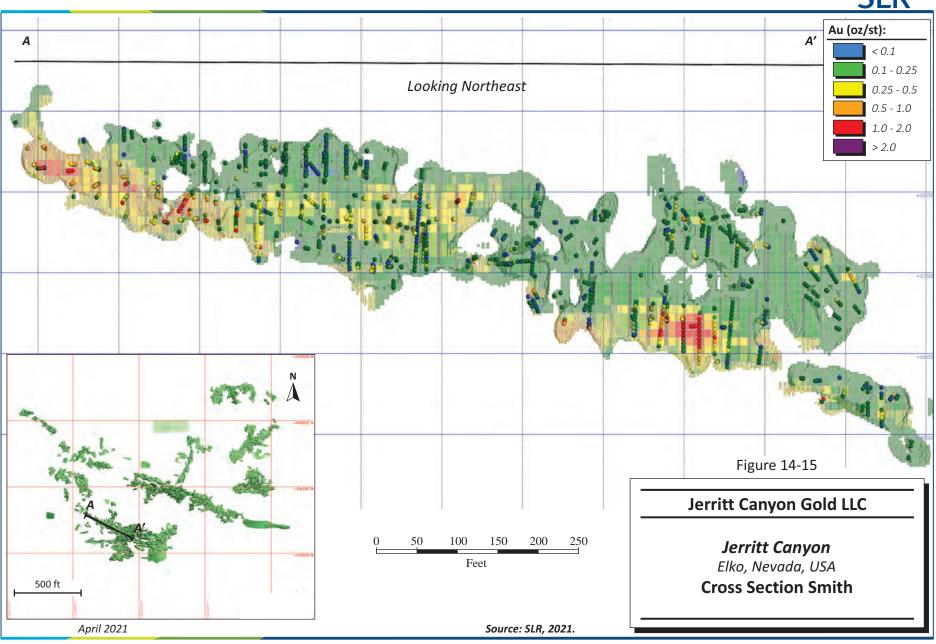
14.10.2 Visual Comparisons

Block grades were visually compared with drill hole composites on cross-sections, longitudinal sections, and level plan views. SLR notes that the block grades and composite grades correlate very well visually within the individual deposits. Figure 14-14 through Figure 14-16 are cross sections of the SSX, Smith, and Saval 4 deposits, respectively.

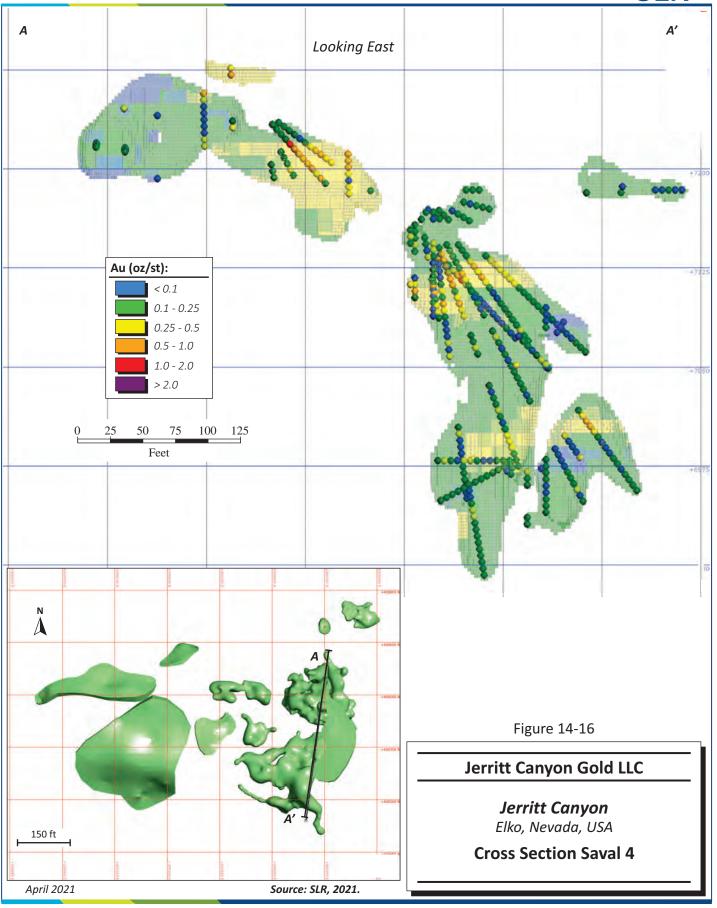














14.10.3 Statistical Comparison of Composites versus Block Model

Statistics of the block grades were compared with statistics of composite grades in Table 14-11 for all blocks and composites within the Jerritt Canyon domains.



Table 14-11: Statistics of Composite Grades Versus Block Grades
Jerritt Canyon

Domain		Comp (oz/s		Block Model (oz/st Au)								
	Count	Mean	Minimum	Maximum	Variance	StDev	#Blocks	Mean	Minimum	Maximum	Variance	StDev
SSX-Zone1	10,127	0.265	0.001	3.995	0.054	0.232	1,439,611	0.192	0.025	1.185	0.009	0.093
SSX-Zone2-3	70,328	0.319	0.001	50.259	0.114	0.338	4,171,545	0.259	0.022	1.505	0.019	0.139
SSX-Zone4	4,998	0.200	0.001	1.573	0.018	0.135	1,134,285	0.129	0.012	0.865	0.005	0.069
SSX-Zone5	19,225	0.232	0.001	2.246	0.030	0.172	2,083,492	0.215	0.013	1.220	0.008	0.089
SSX-Zone6	1,298	0.266	0.001	2.335	0.057	0.239	224,530	0.226	0.057	1.218	0.016	0.128
SSX-Zone7	17,597	0.243	0.001	5.953	0.047	0.216	1,717,013	0.219	0.001	1.435	0.011	0.106
SSX-Zone9	125	0.216	0.043	0.763	0.019	0.139	467,678	0.205	0.007	0.612	0.008	0.088
Smith-Zone1	10,702	0.203	0.001	1.543	0.024	0.153	622,136	0.185	0.046	0.911	0.005	0.072
Smith-Zone2-3	32,871	0.252	0.000	7.190	0.086	0.294	1,792,568	0.215	0.002	1.625	0.020	0.143
Smith-Zone4	22,561	0.201	0.001	135.891	0.879	0.937	2,053,145	0.180	0.001	1.740	0.011	0.105
Smith-Zone5	7,643	0.181	0.000	3.116	0.014	0.120	497,191	0.171	0.047	1.027	0.003	0.055
Smith-Zone7	10,250	0.267	0.000	3.260	0.058	0.241	792,707	0.239	0.067	1.203	0.017	0.130
Smith-Zone8	10,081	0.252	0.001	4.393	0.079	0.282	851,480	0.228	0.035	1.475	0.014	0.116
Smith-Zone9	4,803	0.296	0.001	3.993	0.065	0.255	809,816	0.288	0.005	1.260	0.019	0.139
Saval 4	2,428	0.211	0.001	1.636	0.034	0.184	205,163	0.199	0.009	0.823	0.007	0.086
USB	80	0.142	0.001	0.910	0.018	0.135	559,633	0.122	0.050	0.513	0.003	0.056
WGen	394	0.205	0.006	0.748	0.016	0.127	247,248	0.188	0.060	0.647	0.005	0.072

Note:

1. Block counts are represented by subblocks.



14.10.4 Secondary Estimation Comparison

As a secondary parallel estimation validation, JCG completed NN and ID³ estimates. The secondary estimations are within 2% of the OK estimation. Table 14-12 compares the composite grades with the block grades of the OK, ID³, and NN estimates.

Table 14-12: Statistics of Secondary Estimation Check Jerritt Canyon

	Con	nposites	Block Model						
Domain	# Composites	Composite Grade (oz/st Au)	# Blocks	OK (oz/st Au)	ID³ (oz/st Au)	NN (oz/st Au)			
SSX-Zone1	10,127	0.263	222,912	0.192	0.199	0.193			
SSX-Zone2-3	70,328	0.315	761,726	0.259	0.264	0.259			
SSX-Zone4	4,998	0.199	127,255	0.129	0.130	0.131			
SSX-Zone5	19,225	0.230	329,037	0.215	0.221	0.217			
SSX-Zone6	1,298	0.264	31,920	0.226	0.232	0.216			
SSX-Zone7	17,597	0.241	274,345	0.219	0.225	0.222			
SSX-Zone9	125	0.216	46,306	0.205	0.206	0.181			
Smith-Zone1	10,702	0.202	101,948	0.185	0.188	0.185			
Smith-Zone2-3	32,871	0.246	301,505	0.215	0.220	0.221			
Smith-Zone4	22,561	0.191	318,447	0.180	0.183	0.178			
Smith-Zone5	7,643	0.180	86,152	0.171	0.173	0.170			
Smith-Zone7	10,250	0.264	118,644	0.239	0.242	0.235			
Smith-Zone8	10,081	0.246	146,454	0.228	0.233	0.227			
Smith-Zone9	4,803	0.293	112,204	0.288	0.298	0.279			
Saval 4	2,428	0.210	32,662	0.199	0.199	0.197			
USB	80	0.142	52,544	0.122	0.125	0.117			
WGen	394	0.205	36,767	0.188	0.195	0.182			
Total	225,511	0.257	3,100,828	0.217	0.222	0.217			

14.10.5 Block Model Attributes

Once the block models were validated and finalized, they were transferred to Maptek Vulcan software to use the stope optimizer and reporting tools. Table 14-13 presents the imported block model attributes in the Vulcan block models.



Table 14-13: Summary of the Vulcan Block Model Attributes

Jerritt Canyon

Variable	Туре	Default Value	Description
ZONE	Name (Translation Table)	default	Zone Domain - Geological Zone
SHELL	Name (Translation Table)	default	Mineralization Wireframe Identifiers (381)
WT	Name (Translation Table)	default	Water Table level, coded as above and below elevation 6,600ft
CLASS	Name (Translation Table)	default	Resources Categorization (1 Measured, 2 Indicated, 3 Inferred, and Unclassified)
DENS	Float (Real * 4)	-99	Density value coded as 0.0794 ton/ft ³ to mineralization and waste
AUOK	Float (Real * 4)	-99	Gold Grade Estimated by OK Methodology
AUID3	Float (Real * 4)	-99	Gold Grade Estimated by ID ³ Methodology
AUNN	Float (Real * 4)	-99	Gold Grade Estimated by NN Methodology
NSMP	Float (Real * 4)	-99	Number of composites used to estimate the block gold grade
AVD	Float (Real * 4)	-99	Average Distance of the composites used to estimate the block gold grade
CLOD	Float (Real * 4)	-99	Distance to the closest composite used to estimate the block gold grade

14.10.6 Reconciliation to Production Statistics

14.10.6.1 Production Statistics

Reconciliation activities conducted compared the quarterly production grades with JCG's resource block model reported in the month-end excavation shapes. Differences in the masses and grade between plant feed and 3D excavation reflects the ore control activity where not all mined material goes to the plant. SLR notes this has an affect on showing higher tons and less grade.

The reconciliation results by quarter of the JCG production from the mines compared to the mill feed and output is presented in Table 14-14. SLR notes that a few months have higher grade variances that may be due to finding and mining mineralized material that is not in the resource model. JCG will occasionally drill out and mine mineralized material before it can be added to the resource model updates and can have an affect on the overall reconciliation.

Another factor potentially affecting the reconciliation is the presence of mineralized rib material left behind during previous mining operations. This material is not included in resource or reserve classifications due to the uncertainty of extraction but will add to the milled ounces output.

JCG assumes a fixed 5% dilution for all mining activities. Overall, the QP is of the opinion that the reconciliation results are acceptable.



Table 14-14: Summary of Reconciliation, January 2016 to March 2020 Jerritt Canyon

Quarter	Block Grade (oz/st Au)	Block Tons	Mill Grade (oz/st Au)	Mill Tons	Block Ounces (000 oz Au)	Mill Output (000 oz Au)
2016-Q1	0.132	316,800	0.164	268,420	41,671	44,186
2016-Q2	0.117	347,004	0.140	320,189	40,586	44,943
2016-Q3	0.119	377,578	0.134	321,147	44,970	43,020
2016-Q4	0.109	384,253	0.139	281,918	41,785	39,185
2017-Q1	0.107	385,929	0.136	277,736	41,353	37,728
2017-Q2	0.100	402,013	0.127	263,363	40,301	33,419
2017-Q3	0.115	351,832	0.133	306,737	40,296	40,639
2017-Q4	0.110	373,343	0.143	295,694	41,043	42,248
2018-Q1	0.111	360,863	0.130	321,220	40,042	41,665
2018-Q2	0.130	384,941	0.143	320,376	50,186	45,792
2018-Q3	0.109	366,883	0.141	321,722	39,850	45,314
2018-Q4	0.121	275,180	0.131	251,031	33,178	32,899
2019-Q1	0.113	282,838	0.131	245,878	32,013	32,251
2019-Q2	0.132	262,935	0.145	249,777	34,589	36,194
2019-Q3	0.119	293,709	0.174	191,809	34,950	33,348
2019-Q4	0.112	289,534	0.173	196,118	32,427	33,941
2020-Q1	0.113	332,598	0.175	191,937	37,544	33,618
Total	0.115	5,788,232	0.143	4,625,072	666,784	660,390

14.10.7 Review of Drilling After April 29, 2020

The drilling campaigns which occurred after the data cut-off date have been reviewed in 3D space with the current gold wireframes. The drilling has identified new lenses as well as expanded and contracted the sizes of current lenses modeled. Overall, the new drilling does appear to be expanding the current mineralization.

14.11 Mineral Resource Classification Criteria

The definitions for resource categories used in this Technical Report are consistent with the 2014 "CIM Definition Standards for Mineral Resources & Mineral Reserves". In the CIM definition, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction". Mineral Resources are classified into Measured, Indicated, and Inferred categories.



The definition of categories in the Mineral Resource estimate is based primarily on a distance function, however, visual and geological interpretation has also been used. The classification methodology is based on the following:

- Measured: Based on drill hole spacing up to approximately 30 ft.
- Indicated: Based on drill hole spacing up to approximately 75 ft.
- Inferred: Based on drill hole spacing up to approximately 100 ft.

Figure 14-17 shows the classification for the SSX mine with the mine development in gray.



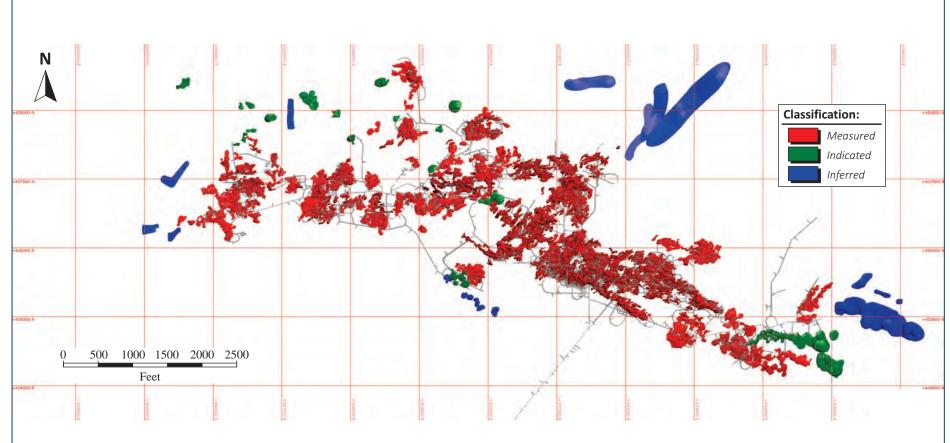


Figure 14-17

Jerritt Canyon Gold LLC

Jerritt Canyon
Elko, Nevada, USA
Mineral Classification SSX Mine

April 2021 Source: SLR, 2021.



14.12 Cut-off Grade

SLR applied a breakeven cut-off grade of 0.11 oz/st Au to estimate the Mineral Resource. The economic parameters used to calculate the cut-off grade are provided below:

Gold price: US\$1,700/oz Au
Mining cost: US\$102/st
Milling cost: US\$45/st
Metal recovery: 86%

General and administrative costs: US\$18/st

14.13 Reasonable Prospects for Eventual Economic Extraction

Once the block models were validated and finalized, they were transferred to Maptek Vulcan software to use the stope optimizer and reporting tools to evaluate the mineral resource estimates for reasonable prospects for eventual economic extraction. JCG used the stope optimizer module available through Maptek Vulcan software to produce Mineral Resource stopes from material that is exclusive of the Mineral Reserve stopes used for SSX and Smith. USB, WGen, and Saval 4 do not have material classified as Mineral Reserves and therefore do not have any Mineral Reserve stopes removed from their corresponding Mineral Resources.

The criteria used to produce these stopes was a minimum mining size (15 ft x 15 ft), continuity criteria, and a cut-off value of 0.08 oz/st Au. The dimensions of the minimum mining size were based on the equipment employed by JCG. Once results were available, the final cut-off grade of 0.11 oz/st Au was applied and stopes that were below the cut-off were removed from the resource numbers.

14.14 Mineral Resource Estimate

The Mineral Resource estimate has an effective date of December 31, 2020. A cut-off grade of 0.11 oz/st Au was applied to the underground Mineral Resources. The Mineral Resources have been depleted for production to December 31, 2020 and are exclusive of Mineral Reserves.

In the QP's opinion, the assumptions, parameters, and methodology used for the Jerritt Canyon Mineral Resource estimates are appropriate for the style of mineralization and mining methods. Mineral Resources located above and below the water table (6,600 FASL) are tabulated in Table 14-15 and Table 14-16 in Imperial and Metric units, respectively.



Table 14-15: Mineral Resource Estimate (effective date December 31, 2020, Imperial Units)

Jerritt Canyon

Measured					Indicated			Measured and Indicated				Inferred		
Mine/ Deposit	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)		
						Above 6,600 FAS	iL .							
Smith	1,702	0.146	248	74	0.139	10	1,776	0.145	258	15	0.115	2		
SSX	2,338	0.164	383	48	0.146	7	2,386	0.163	390	407	0.154	63		
Saval 4	87	0.170	15	104	0.172	18	191	0.171	33	-	-	-		
USB	-	-	-	-	-	-	-	-	-	294	0.143	42		
Subtotal	4,127	0.156	646	226	0.156	35	4,353	0.156	681	716	0.149	107		
						Below 6,600 FAS	SL .							
Smith	310	0.162	50	37	0.134	5	347	0.159	55	254	0.157	40		
SSX	2	0.113	0	8	0.112	1	9	0.113	1	980	0.191	187		
WGen	373	0.192	72	135	0.177	24	508	0.188	96	-	-	-		
Subtotal	685	0.178	122	180	0.166	30	864	0.176	152	1,234	0.184	227		
Total	4,811	0.159	767	406	0.160	65	5,217	0.160	832	1,950	0.171	334		

Notes:

- 1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition and Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were followed for Mineral Resources.
- 2. Mineral Resources are exclusive of Mineral Reserves.
- 3. Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- 4. Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 0.11 oz/st Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.
- 6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.



Table 14-16: Mineral Resource Estimate (effective date December 31, 2020, Metric Units)

Jerritt Canyon

Measured					Indicated			sured and Ind		Inferred		
Mine/ Deposit	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
					Į.	Above 2,012 MAS	SL .					
Smith	1,544	4.99	248	67	4.77	10	1,612	4.98	258	14	3.96	2
SSX	2,121	5.61	383	44	5.01	7	2,165	5.60	390	369	5.29	63
Saval 4	78	5.84	15	94	5.89	18	173	5.87	33	-	-	-
USB	-	-	-	-	-	-	-	-	-	267	4.90	42
Subtotal	3,743	5.36	646	205	5.34	35	3,950	5.36	681	650	5.10	107
					E	Below 2,012 MAS	SL					
Smith	281	5.57	50	33	4.59	5	315	5.46	55	230	5.39	40
SSX	1	3.87	0	7	3.85	1	8	3.86	1	889	6.56	187
WGen	338	6.58	72	123	6.08	24	461	6.45	96	-	-	-
Subtotal	620	6.11	122	163	5.68	30	784	6.02	152	1,119	6.32	227
Total	4,365	5.47	767	368	5.49	65	4,733	5.47	832	1,769	5.87	334

Notes:

- 1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition and Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were followed for Mineral Resources.
- 2. Mineral Resources are exclusive of Mineral Reserves.
- 3. Mineral Resources are estimated using an average gold price of \$1,700/oz Au.
- 4. Mineral Resources are constrained using minimum thickness mining shapes reflecting the geometries of cut and fill mining methods.
- 5. Mineral Resources are reported at a cut-off grade of 0.11 oz/st Au, accounting for mining costs of \$102/st, milling costs of \$45/st, general and administrative costs of \$18/st, and a metal recovery of 86%.
- 5. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 7. Numbers may not add due to rounding.



14.15 Factors that May Affect the Mineral Resource Estimate

Risk factors that could materially impact the Mineral Resource estimate include:

- Metal price and exchange rate assumptions.
- Changes in the interpretations of mineralization geometry and continuity of mineralized zones.
- Changes to geotechnical, mining, and metallurgical recovery assumptions.
- Changes to the assumptions related to the continued ability to access the site, retain mineral and surface right titles, maintain environment and other regulatory permits, and maintain the license to operate.



15.0 MINERAL RESERVE ESTIMATE

15.1 Summary

Jerritt Canyon Mineral Reserves are based on Proven and Probable material as defined in CIM (2014). A Mineral Reserve is defined as the "economically mineable part of a Measured and/or Indicated Mineral Resource" demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories.

SLR generated the Jerritt Canyon underground Mineral Reserves by filtering Deswik stope optimizer (DSO) shapes, as provided by JCG, and applying mine designs to the March 31, 2020 as-built survey solids. The design methodology uses both cut-off grade estimation and economic analysis to design and validate the Mineral Reserves.

Stopes and development tasks were classified in the Mineral Resource classification based on the majority of material in the task. For the majority of the orebody the material for each task was one classification type. In areas of mixed classification the Measured or Indicated material accounted for 70% or more of the stope material.

SLR selected stopes to be used in Mineral Reserves first by filtering or identifying stopes based primarily on their proximity to existing historical mine workings, open pits, and infrastructure, and secondly, by identifying large and continuous regions of stopes, until approximately five years of Mineral Reserves were accumulated for each mine. Stopes within 15 ft of historical mine workings were identified and flagged due to a lack of knowledge or confidence in the quality or type of backfill used in those workings. At SSX, a risk factor was applied to these stopes. Measured stopes with a risk factor were classified as Probable, and measured stopes with no risk classified as Proven. At Smith, any material within 15 ft of existing workings was excluded from the Mineral Reserves and material classes were based on block model output.

The natural water table at both SSX and Smith is situated at 6,600 feet above sea level (FASL) or 2,012 m above sea level (masl). Mineral Reserves below the natural water table will require dewatering to rehabilitate old workings or to drive new headings. Scheduling has taken dewatering into account, and no additional costs have been applied to cut-off grades below the natural water table. Further details can be found in Section 16 of this Technical Report.

Table 15-1 presents a summary of the Jerritt Canyon Mineral Reserves above and below the natural water table at 6,600 FASL.

Table 15-1: Summary of Mineral Reserves (effective date December 31, 2020, Imperial Units)

Jerritt Canyon

Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)				
Above 6,600 FASL							
Proven	1,059	0.18	187				
Smith	193	0.17	33				
SSX	866	0.18	154				



Category	Tonnage (000 tons)	Grade (oz/st Au)	Contained Metal (000 oz Au)	
Probable	689	0.19	129	
Smith	54	0.18	10	
SSX	635	0.19	119	
Subtotal Proven + Probable	1,748	0.18	316	
	Below 6,60	0 FASL		
Proven	915	0.22	200	
Smith	808	0.22	180	
SSX	107	0.19	20	
Probable	897	0.21	186	
Smith	380	0.26	101	
SSX	516	0.17	86	
Subtotal Proven + Probable	1,811	0.21	387	
T I D	4.074	0.20	200	
Total Proven	1,974	0.20	388	
Total Probable	1,585	0.20	316	
Total Proven +Probable	3,559	0.20	703	

Notes:

- 1. CIM (2014) definitions were followed for Mineral Reserves.
- 2. Mineral Reserves are estimated at a cut-off grade of 0.128 oz/st Au which assumes \$102/st mining cost, \$45/st processing cost, \$18/st G&A cost and 86% metallurgical recovery.
- 3. Mineral Reserves are estimated using an average long term gold price of US\$1,500/oz Au.
- 4. A minimum mining width of 15 ft was used assuming a cut and fill mining method.
- 5. Bulk density is 0.0794 t/ft³.
- 6. Numbers may not add due to rounding.

Table 15-2 presents a summary of the Jerritt Canyon Mineral Reserves above and below the natural water table at 2,012 MASL.

Table 15-2: Summary of Mineral Reserves (effective date December 31, 2020, Metric Units)

Jerritt Canyon

Category	Tonnage (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)				
	Above 2,012 MASL						
Proven	961	6.1	187				
Smith	175	5.9	33				
SSX	786	6.1	154				



Category	Category Tonnage (000 t)		Contained Metal (000 oz Au)
Probable	625	6.4	129
Smith	49	6.2	10
SSX	576	6.4	119
Subtotal Proven + Probable	1,585	6.2	316
	Below 2,012	2 MASL	
Proven	830	7.5	200
Smith	733	7.7	180
SSX	97	6.4	20
Probable	813	7.1	186
Smith	345	9.	101
SSX	468	5.7	86
Subtotal Proven + Probable	1,643	7.3	387
Total Proven	1,791	6.7	388
Total Probable	1,438	6.8	316
Total Proven +Probable	3,229	6.8	703

Notes:

- 1. CIM (2014) definitions were followed for Mineral Reserves.
- 2. Mineral Reserves are estimated at a cut-off grade of 4.39 g/t Au which assumes \$112/st mining cost, \$50/st processing cost, \$20/st G&A cost and 86% metallurgical recovery.
- 3. Mineral Reserves are estimated using an average long term gold price of US\$1,500/oz Au.
- 4. A minimum mining width of 4.6 m was used assuming a cut and fill mining method.
- 5. Bulk density is 2.544 t/m³.
- 6. Numbers may not add due to rounding.

The QP is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate, aside from those identified in Section 20 of this Technical Report which are being mitigated by further work by JCG.

15.2 Dilution

SLR selected an overall dilution factor of 2% which was applied to all stopes. This is to account for various types of dilution and to simplify the process. SLR notes that this factor is consistent with the mining method and recent production results. Dilution factors include overbreak, and dilution from backfill.

15.3 Extraction

SLR selected an extraction factor of 95% which was applied to all stopes. This is to account for losses due to mining and is consistent with the mining method and recent production results.



15.4 Cut-Off Grade

Metal prices used for Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources. The cut-off grade used for the Mineral Reserves is 0.128 oz/st Au, and the inputs are provided in Table 15-3. Incremental stopes were included at a grade of 0.12 oz/st Au.

Table 15-3: Summary of Cut-Off Grade Factors – March 31, 2020 Jerritt Canyon

Item	Units	Value
Gold	\$/oz Au	1,500
Mill Recovery	%	86
Mining Cost	\$/st	102.00
Milling Cost	\$/st	45.00
General and Administrative (G&A)	\$/st	18.00



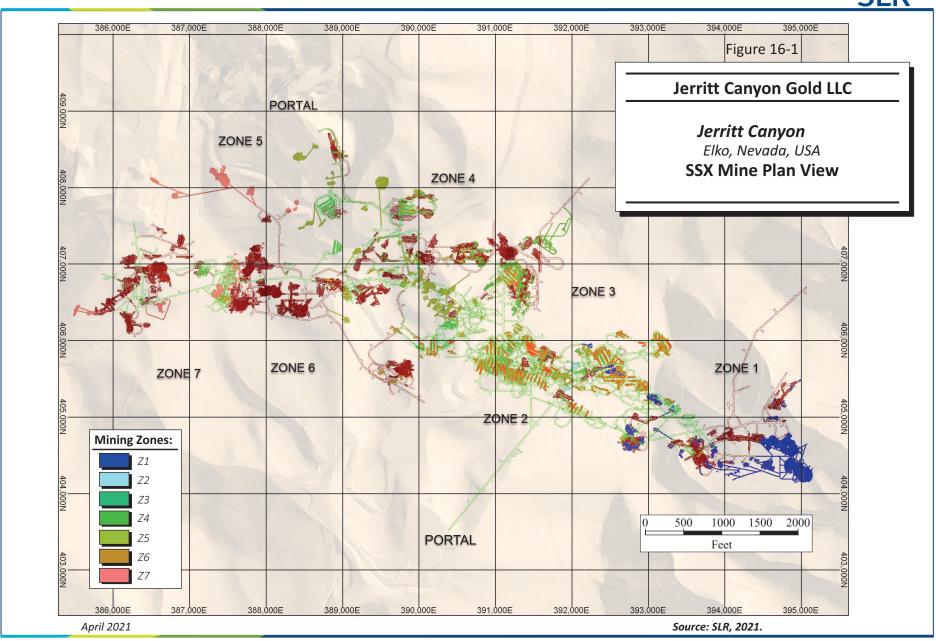
16.0 MINING METHODS

Jerritt Canyon has been in operation since 1981, with open pit operations occurring from 1981 to 1999, and underground operations commencing in 1993 at SSX and Smith. SSX and Smith are currently contractor operated.

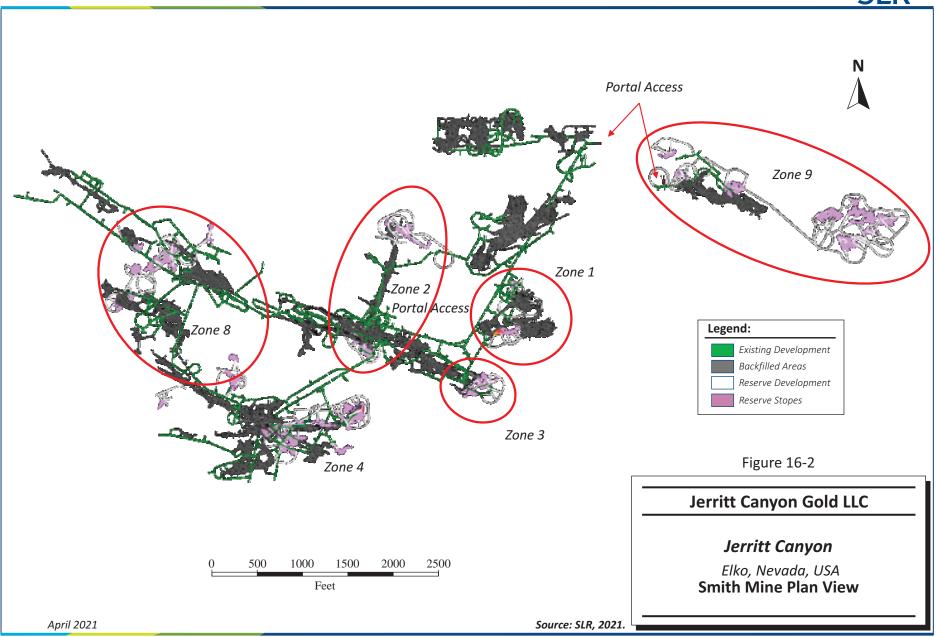
SSX is accessed via ramp located in the southeast portion of the underground mine at the bottom of a historical open pit, and underground workings strike northwest to southeast, spanning approximately 10,000 ft. SSX is comprised of seven mining zones, with Zone 1 in the east and Zone 7 in the west. The zones overlap in areas due to overlapping orebodies in the vertical plane. SSX is ventilated via a series of raises and through the main ramps. Mineralized material is hauled from muck bays and stockpiled near the portal, where it is then delivered to the mill via larger haul trucks. All mining voids are filled with cemented rock fill (CRF). Figure 16-1 presents an overall plan view of SSX and the active mining zones.

Smith is accessed via a ramp located at the bottom of the inactive Dash open pit. Underground workings are extensive and access eight distinct mining zones, though only six zones have been considered by SLR in the estimation of Mineral Reserves. Smith is ventilated via a series of raises and through the main ramp. Similarly to operations at SSX, mineralized material is hauled from muck bays and stockpiled near the portal, where it is then delivered to the mill via larger haul trucks. All mining voids are filled with CRF. Figure 16-2 presents an overall plan view of Smith and the active mining zones.











16.1 Stoping Methods

Production at SSX and Smith utilizes the cut and fill stoping method. Minimum mining openings are 15 ft by 15 ft, with widths of up to 25 ft where justified by the mineralized structure width. Stopes are mined using a combination of overhand and underhand methods, with a stope typically consisting of three lifts. The middle lift is mined first, followed by the top lift to allow for curing of the first lift before mining of the bottom lift occurs.

Ore is hauled to surface stockpiles using mine haul trucks for grade control and surface haul trucks to the mill feed stockpile.

These methods have been employed successfully at Jerritt Canyon since underground operations began. Based on SLR's site visit, SLR considers the mining methods to be adequately applied.

16.2 Mine Development

SSX and Smith are accessed by way of surface portals and 15 ft by 15 ft declines typically grading 12% to 15%. Underground lateral development including level and stope access is generally designed to be 15 ft by 15 ft. Cut and fill stopes are typically mined in three lifts with access drift gradients varying from +15% to -15%. All aspects of the mining cycle are fully mechanized with excavations created using conventional drill, blast, muck, and support techniques.

16.3 Geomechanics, Ground Support

Gold mineralization at Jerritt Canyon is hosted by Hanson Creek Formation units I to III and the lower part of the Roberts Mountains Formation. The Hanson Creek host rock at Jerritt Canyon has a fair to poor classification with Rock Mass Rating (RMR) values typically in the 30 to 40 range.

Golder Associates, Inc. (Golder) completed a preliminary geotechnical assessment of the Starvation Canyon underground area in 2012 (Golder, 2012). Gold mineralization at Starvation Canyon occurs at the Hanson Creek II to III contact. Geotechnical data was collected from 12 boreholes which included logging for geotechnical parameters and borehole televiewer surveys to collect structural orientations. The Golder (2012) assessment concluded that a rock mass quality distribution in both mineralization and host rock consisted of 75% Good to Very Good (RMR $_{76}$ >61), 15% Fair (RMR $_{76}$ of 41 to 61), and the remaining 10% Poor to Very Poor (RMR $_{76}$ <41).

Mine openings at all mines are primarily supported with 6 ft split sets on a 3 ft by 3 ft pattern with 6-gauge wire mesh and supplemented with shotcrete in areas of poor rock mass quality.

16.4 Backfill

Backfilling of production voids is completed using CRF, which is produced by crushing and screening mine waste material and placed using a load-haul-dump unit (LHD) with a rammer push plate attachment. Cement content varies from 5% to 6% for adjacent and undercut mining, with the majority of fill placed with 6% cement content. CRF is mixed at batch plants located near the portal of each mine and hauled underground by mine haul trucks. In cut and fill mines, CRF is loaded into cut and fill stopes using loaders and pushed tight to the back using a dozer or loader.



16.5 Groundwater Control

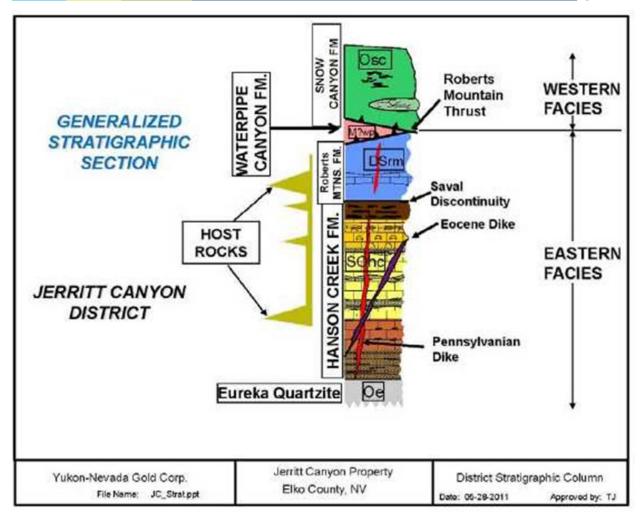
Initial studies of the groundwater at the Jerritt Canyon District (the District) indicated that groundwater occurs throughout the Mine area ranging from surface in the areas of springs to several hundred feet below the surface in upland areas (USDA, 1993). In general, the aquifer systems at Jerritt Canyon consist of both perched and regionally controlled aquifers occurring under confined and unconfined conditions. The regional groundwater system consists of consolidated sedimentary and igneous rocks being recharged in the Independence Mountains. The potentiometric surface generally follows the topography with fractures and limestone solution cavities being the primary conduits for groundwater flow. Local groundwater barriers formed by faults or low permeable rocks have created a complex pattern of perched and semi-perched aquifers (Eakin and Lamke, 1966).

Surface mining in the District has been concentrated in three exhausted surface areas, the Marble Canyon Extension Mine, Steer/Saval pits, and Dash Pit, however, the Dash Pit is currently used as a portal for Smith. In addition, underground mining has been concentrated at Murray, SSX, and Smith. Currently only SSX and Smith are active, with plans to develop these mines below the local water table, necessitating dewatering to access mineralized material. Groundwater studies are currently focused on Smith. The following subsections present a brief description of the hydrogeology of the District, and Smith groundwater management in regard to dewatering and pollution control of seepage from TSF 1.

16.5.1 Hydrogeology

The geology of the District (detailed in Section 7 of this Technical Report) has a profound influence on the groundwater flow and dewatering at Smith. The sedimentary rocks of the Roberts Mountain and Hanson Creek Formations which host the main ore body are the principal aquifers in the District and are part of the regional groundwater aquifer sytem. As illustrated in Figure 16-3, the Saval Discontinuity occurs between these two formations. Table 16-1 provides a brief description of the hydrogeology of these geologic formations.





Source: Yukon Nevada Corp, 2011

Figure 16-3: Jerritt Mine Lithology

Table 16-1: Hydrogeologic Units in the Jerritt Canyon District Jerritt Canyon

Name	Age	Material	Unit Thickness	Hydrology
Alluvium/ Colluvium	Quaternary and Tertiary	SAND and GRAVEL	10-100 ft on mountain flanks, up to 1,500 ft in basin fill	Moderate permeability, high porosity
Snow Canyon Fm	Ordovician	QUARTZITE, CHERT, ARGILLITE, METABASALT	Typically, ~1,000 ft, maximum 2,000 ft, often eroded	Low permeability, low porosity
Waterpipe Canyon Fm	Mississippian	Carbonaceous SHALE, CHERT, GREYWACKE	Maximum thickness 1,000 ft, may not be present	Very low permeability, moderate porosity



Name	Age	Material	Unit Thickness	Hydrology
Roberts Mountains Fm	Devonian and Silurian	SILTSTONE, calcareous to dolomitic	Typically, 600 feet, maximum 1,000 feet. Target unit.	Low to medium permeability, low porosity
Hanson Creek Fm	Silurian and Ordovician	LIMESTONE, grey, occasionally carbonaceous, dolomitic.	Maximum thick- ness 750 feet, in five members. Target unit.	High permeability, moderate porosity
Eureka Quartzite	Ordovician	QUARTZITE, massive	Approximately 600- 800 feet thick	Very low permeability, very low porosity

SLR notes that according to JCG (2021), some of these units are not always encountered in this order, or at all, due to erosion, faulting, thrusting, intercalation, overturning, or other geologic processes that have occurred at the site.

Groundwater flows are controlled primarily by the openness and continuity of fractures and joints with the primary water bearing strata being the ore zones. Faulting and tectonic displacement of the materials in the District is extensive. The main faults trend west northwest - east southeast, and in general are permeable water conduits. Complementary faults and displacement sets at right angles, south southwest - north northeast, are generally highly mylonized, and tend to form a barrier to groundwater flow and compartmentalize groundwater.

The hydraulic characteristics of the main hydrogeologic units based on JCG (2021) are as follows:

16.5.1.1 Alluvium (Aquifer)

Deep alluvial aquifers occur in the basin fill on the eastern and western edges of the District. The following hydraulic characteristics of these aquifers are based on deep water supply wells on the eastern side of the Independence Mountains:

• Material: Boulders, cobbles, gravel, sand, and some silt.

Thickness: 50 ft to 1,500 ft

Hydraulic conductivity: 10⁻³ cm/sec to 10⁻⁴ cm/sec

Specific Storage: approximately10⁻⁶/ft

Porosity: approximately 30%

Drainable porosity: 10%

Flow: Porous media

Confinement: Unconfined

Artesian: NoPerched: No

None of the borings proposed at Smith will be drilled into or through this aquifer.

16.5.1.2 Snow Canyon Complex (Ordovician) (Aguitard).

The Snow Canyon complex covers much of the District, and where present, forms an aquitard that confines underlying more permeable materials. The following hydrologic information on this aquitard has



been developed by JCG as a result of testing and modelling in the vicinity of Smith and from the injection well system used for the re-introduction of dewatering water to the bedrock flow system.

- Material: Consists of an upper unit of primarily poorly bedded turbiditic quartzite, a middle unit
 of chert, argillite, siltstone, shale, and local bedded barite, and a lower basalt sequence of
 limestone, chert, and greenstone (metabasalt).
- Thickness: typically, approximately 1,000 ft, maximum 2,000 ft, often the uppermost unit in the Jerritt Canyon area, and thinner due to erosion.
- Hydraulic conductivity: 10⁻⁵ cm/sec to 10⁻⁶ cm/sec
- Specific Storage: approximately 10⁻⁶ /ft
- Porosity: approximately 5%
- Drainable porosity: approximately 1%
- Flow: Fracture and porous media flow, depending on material
- Confinement: Generally, forms a confining layer, but underlying carbonates may be unsaturated.
- Artesian: No
- Perched: Frequently, due to limited vertical permeability preventing significant flow of infiltrating
 precipitation to lower stratigraphic units and aquifers. Perched water may exit this unit to ground
 surface in the form of localized springs.

Most of the borings proposed at Smith will be drilled through this aquitard.

16.5.1.3 Roberts Mountains Formation (Devonian and Silurian) (Aquitard/Aquifer)

The Roberts Mountains Formation is the upper gold containing unit in the District and is the uppermost target for the drilling of exploration boreholes in the Jerritt Canyon area. It is generally of low permeability but contains higher permeability lamina that are capable of producing water. Accordingly, this formation acts as a low transmissivity horizontal aquifer, and a low permeability vertical aquitard. The following hydrologic information on this aquitard/aquifer has been developed by JCG as a result of testing and modelling in the vicinity of Smith and from the injection well system that is used for the re-introduction of dewatering water to the bedrock flow system.

- Material: Laminated carbonaceous, calcareous to dolomitic, siltstone.
- Thickness: Typically, approximately 600 ft thick, maximum 1,000 feet, thinner due to erosion when uppermost unit in the Jerritt Canyon area.
- Hydraulic conductivity: 10⁻⁴ cm/sec to 10⁻⁶ cm/sec, depending on the mineralogy of the lamina
- Specific Storage: approximately 10⁻⁶ /ft
- Porosity: approximately 20%
- Drainable porosity: <5%
- Flow: Principally fracture flow, with porous media flow dominating in less fractured zones remote from faulting.
- Confinement: Generally confined, and when it is the uppermost unit can form a confining layer
- Artesian: Generally, not
- Perched: Frequently, where the underlying Hanson Creek formation is partially saturated.

Most of the borings proposed at Smith will be drilled into or through this aquitard.



16.5.1.4 Hanson Creek Formation (Silurian and Ordovician) (Aguifer)

The Hanson Creek Formation is the major bedrock aquifer in the District, underlaying almost the entire Mine area. It is a thick layer of high permeability limestone and contains significant gold values so is frequently the target of exploration drilling. The formation has also been dewatered in the past (and presently) to allow access to mineralized material that is currently below the piezometric surface in the formation. Much of the information on the hydrology of this unit is derived from dewatering wells and injection wells associated with this dewatering by JCG and its predecessors.

- Material: Limestone; carbonaceous, argillaceous, calcareous, and dolomitized.
 - SOhc1 (10 ft to 100 ft) black chert and carbonaceous limestone.
 - SOhc2 (0 ft to 100 ft) gray limestone, fossiliferous and dolomitized.
 - SOhc3 (0 ft to 300 ft) carbonaceous argillaceous limestone, hosts a significant amount of gold.
 - SOhc4 (approximately 250 ft) carbonaceous limestone.
 - SOhc5 (15 ft to 100 ft) chert, limestone, and laminated calcareous siltstones.
- Thickness: Typically, 500 ft to a maximum of 750 ft.
- Hydraulic conductivity: 10⁻² cm/sec to 10⁻³ cm/sec, higher values in proximity to major northwestsoutheast faults
- Specific Storage: approximately 10⁻⁶ /ft
- Porosity: approximately 10%
- Drainable porosity: approximately 5%
- Flow: Principally fracture flow, with porous media flow dominating in highly fractured zones associated with regional faulting.
- · Confinement: Frequently unconfined but confined on eastern and western edges of the Independence mountains.
- Artesian: Rarely, at the periphery of the mountain range, where the piezometric pressure in this unit is naturally close to or above the ground surface.

Specifically in the Smith area the hydrogeology is very complex. According to Brown (2021), the original geohydrology concept involved a continuous sheet of permeable carbonates comprising the Roberts Mountain and Hanson Creek formations, sandwiched between the low permeability Snow Canyon Complex above and the low permeability Eureka Quartzite below. The change is the addition of tectonic displacement of this system by approximately north-south trending mountain bounding faults, creating a horst and graben structure, with the grabens being infilled with alluvial and colluvial materials. The significance of this change is that the tectonism segmented the hydrologic system by displacing permeable bedrock materials against impermeable bedrock materials, and interposing mylonized materials (both bedrock and alluvial) between the blocks created. This results in a compartmentalization of the groundwater system, in which water infiltrates vertically into each compartment, and lateral flow of this water is essentially unrestricted within compartments, and significantly restricted between compartments. This model has been clearly evident in the current dewatering test work, where:

- The water level has been pulled down 30 ft in the Smith Zone 2/4 compartments.
- The water level has remained unchanged in the immediately adjacent Zone 8 compartment to the west.



• Injection of the dewatering water into the adjacent Upper (south) Injection Field has raised the water level approximately 200 ft without any observable effect on any surrounding compartment, including the Smith compartments.

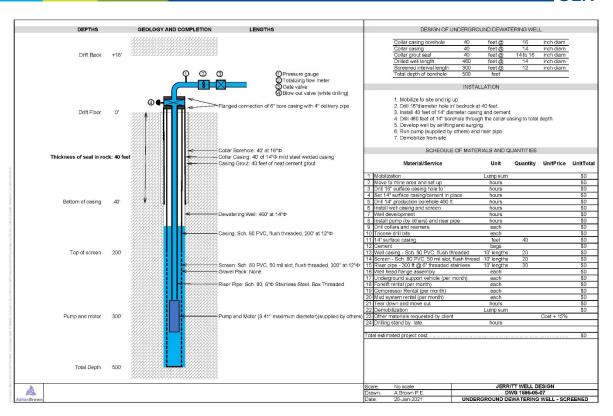
16.5.2 Mine Water Management

As previously mentioned, Smith consists of eight ore zones connected by a southwesterly trending decline originating from the portal on the west side of the former Dash Pit. Dewatering of ore zones 1, 2, and 4 began in December 2002. Over a three-year period, eleven dewatering wells were installed and discharge from these wells was directed to seven sumps and pumped to the surface. Peak discharge of approximately 1,600 gpm from these wells occurred in 2005. Dewatering continued to 2008, at which time the pumps were shut down. The water table has been drawn down to approximately 6,535 FASL. As of the end of 2011, the water table within Smith had recovered to near its original elevation of 6,600 FASL.

According to the Smith Dewatering Plan (Queenstake Resources USA, Ltd, 2012), geologic exploration conducted in 2011 to 2012 identified new, deep gold deposits below the water table within Zone 4 of Smith. Development of the mineral deposit in this area would require dewatering to reduce the groundwater level. To resume mining in Zone 2 and 4 workings, the Zone 4 groundwater level must be lowered by approximately 200 ft, from a level of 6,600 FASL to 6,400 FASL.

Dewatering goals of the current operation are to reduce the water level to the pre 2008 level of approximately 6,535 FASL. Currently, pumping is underway to dewater the existing workings. This consists of the operation of two dewatering wells and a barge to dewater Zones 2 and 4. The wells are each pumping at approximately 700 gpm while the barge pumps at approximately 400 gpm. Two additional, 500 ft deep underground dewatering wells have been designed. Details for a typical well are presented in Figure 16-4.





Source: (Adrian Brown, 2021)

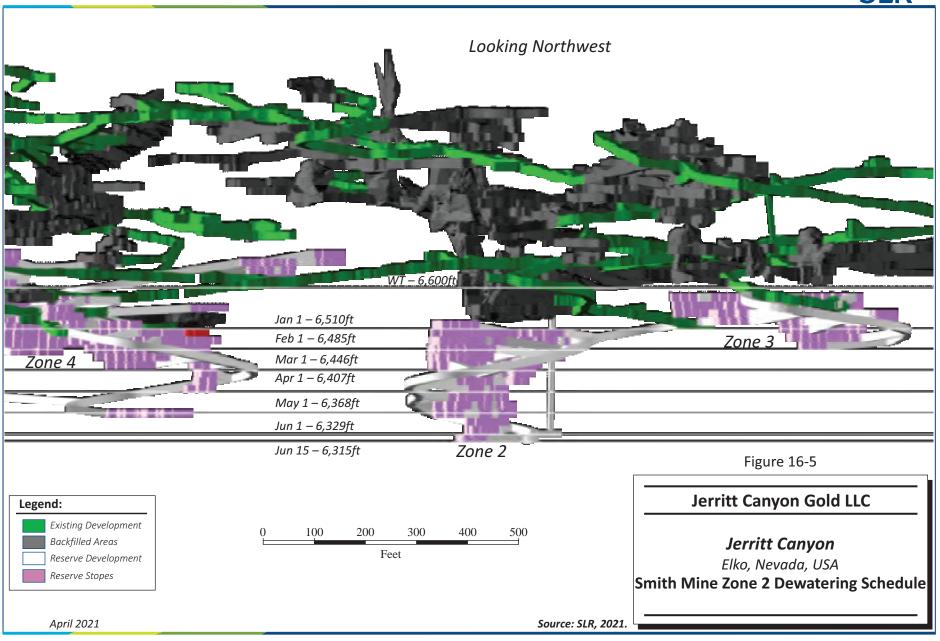
Figure 16-4: Typical Dewatering Well

The dewatering schedule for Zones 2 and 4 are presented in Figure 16-5 and Figure 16-6. Dewatering at Smith is occurring at a rate of approximately 39 ft/month in Zones 2 and 4 concurrently. Zones 2 and 4 are expected to be fully dewatered to the bottom of the Mineral Reserves by June 2021. In the LOM schedule, material is not accessed until the water table has drawn down below the reserve elevation. Table 16-2 presents the scheduled Smith dewatering levels. SLR notes that this table represents predicted values as actual values beyond December 2020 were not reviewed by SLR.

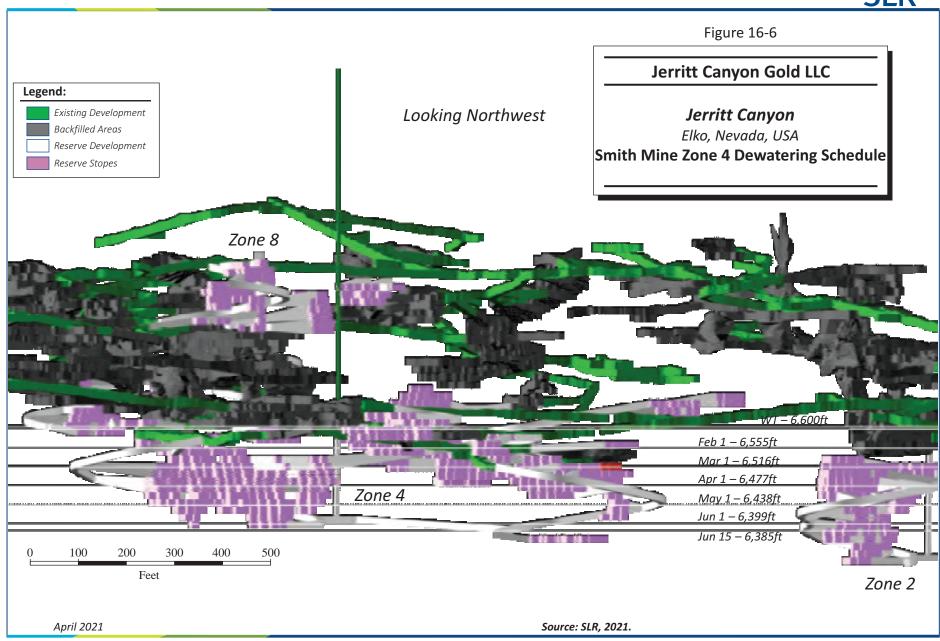
Table 16-2: Smith Mine Dewatering Schedule Jerritt Canyon

		1-Jan-21	11-Jan-21	1-Feb-21	1-Mar-21	1-Apr-21	1-May-21	1-Jun-21	11-Jun-21
Smith Zone 2	Water table elevation	6,524	6,510	6,485	6,446	6,407	6,368	6,329	6,315
Smith Zone 4	Water table elevation	6,594	6,580	6,555	6,516	6,477	6,438	6,399	6,385









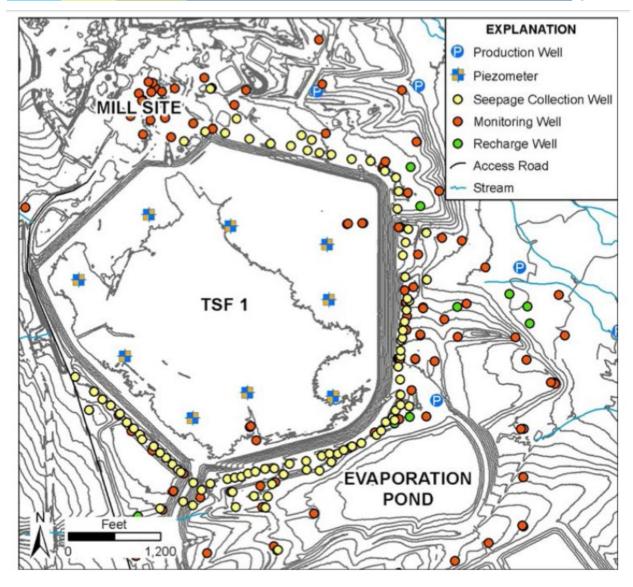


A connecting drift between Smith and SSX is being developed. Once the drift is established and piping infrastructure between the two mines installed, SSX will begin to draw down water. This drift is expected to be completed and water drawn down by the end of the first quarter 2022.

It is anticipated that over time Smith will be dewatered at a rate of 2,100 gpm. All pumped groundwater will continue to be conveyed to the water treatment plant (WTP) which has a capacity of 1,400 gpm. Any flows over 1,400 gpm will be routed to Zone 9 prior to treatment. Following treatment, the water is pumped to an underground injection well field consisting of three 1,200 ft deep injection wells located on USFS land. The injection wells and water disposal are covered under the existing Underground Injection Control (UIC) Permit UNEV93214. Due to the water treatment process minerals are added to the injected water to reduce dissolution of the aquifer. Two additional 500 ft deep dewatering wells are planned for 2022 in Zone 1.

Another aspect of Jerritt Canyon groundwater management is pollution control from TSF 1. Initially, TSF 1 was lined with compacted native soils. In addition, as shown in Figure 16-7, there are 90 seepage control wells, 14 freshwater recharge wells receiving water from the tailings WTP, and greater than 80 down gradient monitoring wells (Wanner et al, 2017). Currently, it is planned to replace these wells with five larger capacity wells. As of the writing of this Technical Report, one test well has been drilled and a step-drawdown test completed. The results of this test indicated that the well could be pumped at approximately 40 gpm. A longer term aquifer test with observation wells is planned. Water from these wells will also be pumped to the WTP. SLR notes that the recharge wells are also covered under UIC Permit UNEV93214.





Source: (Wanner et al, 2017)

Figure 16-7: TSF 1 Seepage Control Wells

SLR notes that the current dewatering system does not have a backup power supply for surface water pumps. Any type of long term power loss can cause the operation to flood and damage infrastructure. A backup power system is recommended for site to keep critical infrastructure running and prevent damage.

16.6 Mining Equipment

Mining is completed with trackless equipment, including drill jumbos, bolters, production drills, loaders, and haul trucks. The contractor fleet is summarized in Table 16-3.



Table 16-3: Contractor Primary Mining Fleet Jerritt Canyon

Equipment Type/Size	Quantity
Jumbo Drill	6
Bolter	8
LHD Loader 2.5 yd ³	2
LHD Loader 6 yd³	12
Haul Truck 30 T	17
Longhole Drill	4
ANFO Loader	3
Cement Truck	2
Shotcreter	2
Scissor Truck	2
Jammers	7

16.7 Production Rate

The production rate from 2021 onward is planned at 1,200 stpd at SSX and 800 stpd at Smith. Table 16-4 presents the production from SSX and Smith from 2018 to 2020. SLR notes that the target production rates are achievable based on past production and given dewatering plans. SLR believes that there could be an opportunity to increase the production rate at Smith once the water is drawn down enough and more headings are available.

Table 16-4: Historical Mine Production 2018 to 2020 Jerritt Canyon

Mine	Production Period	Tons Mined	Mining Rate (stpd)	Grade (oz/st Au)	Contained Metal (oz Au)
Smith	2018	367,188	1,006	0.143	52,486
	2019	279,575	766	0.156	43,743
	2020	266,330	730	0.200	53,159
SSX	2018	524,170	1,436	0.155	81,172
	2019	436,010	1,195	0.171	74,437
	2020	390,389	1,070	0.174	67,978



16.8 Production Schedule

The Jerritt Canyon production schedule is found in Table 16-5.

Table 16-5: Reserve Production Schedule Jerritt Canyon

	Units	Total	2021 Year 1	2022 Year 2	2023 Year 3	2024 Year 4	2025 Year 5
Operating Days	days	1,770	365	365	365	365	310
Tons milled per day	tons / day	2,011	1,997	2,051	2,001	2,001	2,001
Smith Production	tons	1,434,644	291,086	292,022	291,963	291,891	267,681
Au	oz/st	0.23	0.19	0.24	0.21	0.22	0.28
Au Contained	OZ	324,017	54,477	69,230	62,738	63,222	74,350
Waste	tons	928,101	392,416	238,916	181,456	68,656	46,657
Development horizontal footage	ft	54,296	22,920	14,233	10,482	3,966	2,695
SSX Production	tons	2,124,349	437,999	456,743	438,347	438,412	352,848
Au	oz/st	0.18	0.18	0.19	0.18	0.18	0.17
Au Contained	OZ	379,146	77,037	84,664	80,812	77,537	59,097
Waste	tons	330,794	72,906	141,591	66,892	36,296	13,109
Development horizontal footage	ft	19,108	4,211	8,180	3,864	2,096	757
Total Production	tons	3,558,993	729,085	748,765	730,310	730,303	620,529
Au	oz/st	0.20	0.18	0.21	0.20	0.19	0.22
Au Contained	OZ	703,164	131,514	153,894	143,550	140,759	133,447
Waste	tons	1,258,894	465,322	380,507	248,348	104,952	59,766
Development horizontal footage	ft	73,405	27,131	22,413	14,345	6,062	3,452
Total Moved	tons	4,817,887	1,194,407	1,129,271	978,658	835,255	680,295



17.0 RECOVERY METHODS

Mining and processing by the Freeport-FMC JV commenced at Jerritt Canyon in 1981. The initial processing facility processed mildly refractory, carbonaceous, preg-robbing mineralized material. Alkaline chlorination was used to passivate the carbonaceous constituents of the mineralized material to reduce preg-robbing during cyanidation to extract the gold. As a result of increases in chlorine consumption due to increased sulfide sulfur, the cost of operating the alkaline chlorination circuit increased. Thus, roasting, an alternative oxidation process that could treat both carbonaceous and sulfide refractory mineralized materials was selected to replace the chlorination circuit. The whole ore roaster was commissioned in 1989 and from 1989 to 1997, the two plants operated in parallel, with the chlorination circuit processing the less refractory mineralized materials at 3,500 stpd to 4,200 stpd until 1997, and the more refractory carbonaceous shale mineralized materials processed in the whole ore roaster at a design rate of 4,000 stpd. The design recovery of the whole ore roaster using oxygen instead of air was 87% to 90%. Pilot plant testing of the oxygen roasted calcine by Dorr Oliver (1987) achieved an average gold recovery of 88%. SLR notes that the process continues to operate consistently in the design range, depending primarily on roaster performance, as some of the mineralized materials are reported to have zero gold recovery without oxidation. The main deleterious elements are arsenic and mercury. The processing plant is designed with the appropriate gas cleaning systems including mercury scrubbing from the gas streams and mercury collection from the refinery retort condenser.

17.1 Processing Plant

The processing facilities at Jerritt Canyon are designed to operate at a rate of 4,500 stpd with an operating availability of 90% and are permitted to operate at 6,000 stpd. The plant operated at an average rate of 2,265 stpd during 2020. The facilities include:

- · Primary crushing
- Ore drying
- Secondary crushing
- Tertiary crushing
- Dry grinding
- Roasting
- Thickening
- Carbon in leach (CIL)
- Carbon stripping
- Carbon reactivation
- Electrowinning
- Electrowinning sludge refining
- Oxygen plant
- Cooling pond
- Water evaporation pond
- Tailings Impoundment

Ore is delivered to the ROM area from the mines. The process flow sheet is presented in Figure 17-1.



17.1.1 Primary Crushing

ROM mineralized material is crushed to minus six inches with a 36 in. by 42 in., 200 hp jaw crusher.

17.1.2 Dryer

Crushed mineralized material from the primary crushing circuit is fed to the propane fired dryer via a 100 st surge bin and 48 in. by 20 in. apron feeder. The Heyl and Patterson dryer is 14 ft by 60 ft, driven by a 350 hp variable speed motor. Rotation speed is two to four revolutions per minute. The dryer shell contains 300 lifters (i.e., flights). The feed end of the dryer is equipped with a Hauck special open fired Starjet Sj750 Ratiomatic burner. Feed rate to the dryer is controlled to maintain mineralized material discharge moisture less than one percent. Discharge air from the dryer goes through two pulse-jet type bag houses, each containing 810 bags. Gas discharge from the bag houses is fed to a 56 ft, dual bed wet scrubber to remove remaining particles and mercury. Each bed contains 15 ft of Tri-Mer packing.

Material from the baghouse is moved with an FLSmidth Fuller-Kinyon pump directly to the roaster feed bin.

17.1.3 Fine Crushing

Dried mineralized material from the dryer is conveyed to the secondary crushing vibrating screen, a 5 ft by 12 ft double deck screen with ¾ in. top deck screen panels and ¼ in. bottom deck screen panels. Screen oversize is fed to the 4.25 ft standard Omnicone crusher. Minus ¼ in. screen undersize by-passes the secondary crusher and is transported by screw conveyor and a standard conveyor belt to the high angle conveyor that joins the material on the fines conveyor from the crushing circuit. Fine material is transported to the 2,000 st capacity fine ore bin (FOB). Approximately 30% of the material discharging from the dryer discharge is minus ¼ in.

Ore from the secondary crusher is conveyed to the 100 st tertiary crusher feed bin, which has two discharge points that each feed a 6 ft x 16 ft double-deck vibrating screen. The top deck of the screens has ¾ in. openings and the bottom decks have ¼ in openings. Oversize from each screen is fed to a 4.25 ft short head Omnicone crusher. Minus ¼ in material by-passes the tertiary crushers and reports to fines conveyor that transports the material to a high angle conveyor that discharges to the FOB. Material stored in the FOB feeds the grinding circuit.

The fine crushing circuit is served by a north and a south baghouse. Fine material collected in the north baghouse is pneumatically conveyed to the roaster feed bin (RFB) by a puker system. The south baghouse has a FL Smidth Fuller-Kinyon pump to move fine material collected in the baghouse to the RFB.

17.1.4 Grinding

Ore from the FOB is conveyed to the 14.5 ft x 18.5ft ball mill. The grinding circuit was designed to reduce the mineralized material from 100% passing (P_{100}) 1/4 in mineralized material to P_{100} 35 mesh (i.e., 500 μm). The ball mill is driven by a 2,750 hp synchronous motor. The mixed ball charge is approximately 40% by volume. The makeup ball sizes are 2.5 in., 2.0 in., and 1.5 in. Mineralized material passes through the discharge grates to an air slide and then to a bucket product elevator that transfers the ground material to an Osepa air classifier. Classifier oversize reports back to the ball mill for further size reduction. The circulating load is approximately 300%.

Fines from the classifier oversize report to separator cyclones, where approximately 88% of the fines are removed from the air stream. The collected fines are deposited into the product bucket elevator feed air



slide. The air stream, with the remaining 12% entrained fines, reports to the 700 hp, 131,000 actual cubic feet per minute (acfm) separator fan. 66% to 75% of this stream is fed back into the air classifier through the separator fan, while 25% to 33% of the stream is bled into the classifier baghouse.

The classifier baghouse uses the 125 hp classifier baghouse fan to pull 44,800 acfm of air through the bag filters. The captured dust is transported via an air slide and the 60 hp product bucket elevator to the RFB.

17.1.5 Roaster

The roaster feed bucket elevator lifts the mixture of mineralized material and pulverized coal approximately 135 ft and discharges into the roaster feed air slide. A disengaging bin receives the air slide discharge and funnels this material into the fluidized feed distributor. The roaster system is comprised of two identical, side by side roaster trains, each train is permitted for 125 dry tons per hour (stph), however, normal operating conditions process 90 dry stph to 100 dry stph. The roasters are two-stage, countercurrent, fluid bed type, and utilize relatively pure oxygen to both fluidize the bed and oxidize refractory mineralized material. The mineralized material itself does not contain sufficient fuel value to sustain combustion so pulverized coal is added to control and maintain proper roasting temperatures in the stages. The temperature in the first stage is 1,030°F to 1,050°F. Retention time in each stage is one minute for every 4 in. water column (WC) (for example, 24 minutes at 95 in. WC in the first stage and 16 minutes in the second stage at 65 in. WC). The second stage discharge temperature is approximately 900°F.

Calcine from the roasters discharges into quench tanks for cooling.

17.1.6 Gas Handling

The gas handling circuit pulls the off-gas from the roaster first stage secondary cyclone and processes it to remove particulate material, sulfur dioxide gas, and mercury vapour prior to the discharge of clean gas to the atmosphere through the roaster stack. A vacuum, or negative differential pressure with respect to atmosphere, is maintained inside the roaster to prevent dust and toxic gases from escaping the vessel. This differential pressure is controlled by the operation of the gas handling circuit.

17.1.7 Carbon in Leach

Cooled slurry from the roaster quench system is pumped to a 100 ft diameter thickener. Thickener overflow is subsequently pumped to the cooling pond where it is recycled back to the roasters after cooling. Slurry from thickener underflow is pumped across a vibrating trash screen to remove oversize mineralized material particles, which are recycled back to the primary crusher. Trash screen undersize, which is approximately P₈₀ 200 mesh, discharges directly to the first of six CIL tanks. Milk of lime is added to the slurry and liquid sodium cyanide is added to the top of the slurry in the first CIL tank. Cyanide can also be added in subsequent stages as needed. Each CIL tank holds 20 g/L of coconut shell 6 mesh by 12 mesh activated carbon. Carbon is held in the tanks by screens with 18 mesh openings. The slurry in the CIL circuit flows by gravity from tank 1 to tank 2 to tank 3, and so on until the slurry discharges from the circuit. As carbon is loading with gold, it is advanced countercurrent to the slurry flow using carbon advance pumps. That is, the carbon is advanced from CIL tank 6 to tank 5 to tank 4 and so on until it is removed from CIL tank 1 and advanced to the carbon strip circuit. Slurry discharging from CIL tank 6 reports to the 30 mesh safety screen to collect any carbon that may have passed through the tank screens. The tailings are sampled by an inline Heath & Sherwood sample cutter before flowing to the TSF.



17.1.8 Carbon Strip Circuit

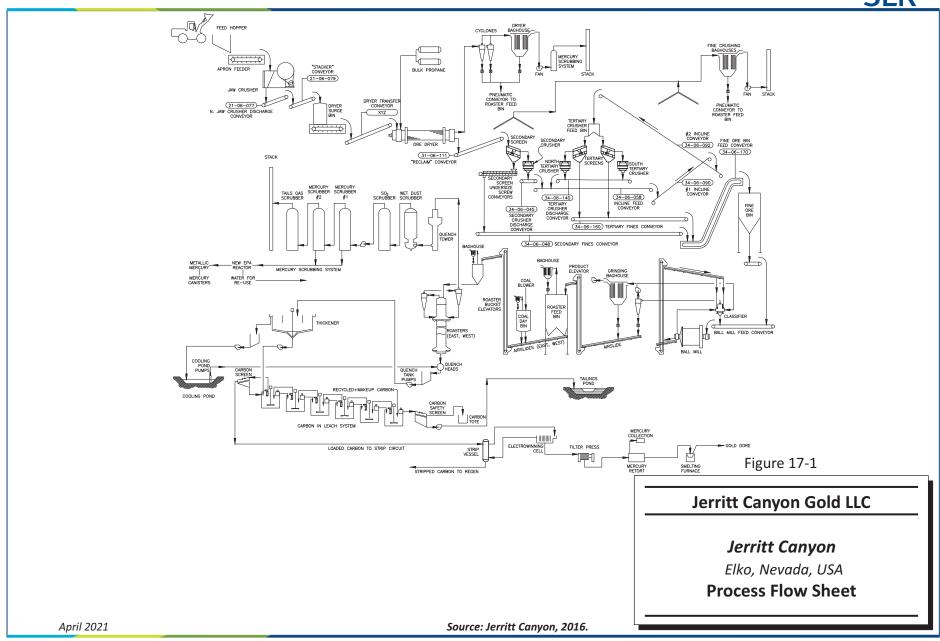
Activated carbon is stripped in six ton batches, using heat and pressure. The solution temperature is 280°F at a pressure of 50 psi to 60 psi. The flow rate is approximately 40 gpm and the average strip time is 12 hours to 14 hours.

Pregnant solution from the carbon strip solution reports to electrowinning (EW) cells where gold is recovered from the solution. Two EW cells, 150 ft³ and 50 ft³, respectively, operate in series.

17.1.9 Refinery

The EW cells are cleaned on a batch basis, with the resulting sludge pumped through a filter press to remove moisture, and then dried in a mercury retort for 48 hours. The temperature reaches 1,150°F to remove mercury from the sludge prior to smelting. Dried sludge from the retort furnace is mixed with flux (e.g., borax, niter, soda ash, and silica), which helps to create a stable slag to allow the oxidized impurities to separate from the precious metal doré as it is being smelted in the induction furnace. Doré bars weighing approximately 1,000 oz and containing approximately 90% to 95% gold are poured and shipped off site for additional refining. Mercury is collected from the retort condenser in one ton, flasks. Approximately five to six tons of mercury are produced annually at Jerritt Canyon. The mercury containers are shipped off-site to a third-party storage company.







18.0 PROJECT INFRASTRUCTURE

Jerritt Canyon has been in production for many years and has well established infrastructure including:

- Office buildings
- Warehouse facilities
- Maintenance shops
- Laboratory facilities
- Communication networks
- Onsite security
- TSFs
- Water management systems

18.1 Road Access

The main access road is approximately seven miles long and is a 22 ft wide paved road between Nevada Highway 225 and the mill site. A 100 ft wide haul road provides access between the major ore-producing mines and the mill site. This road network is approximately 17 miles long.

18.2 Water Sources

Water for the mill site comes from two sources: deep underground water wells and a connected series of seepage recovery wells and pumps. All pumping wells are permitted through the Nevada Division of Water Resources water rights. Three potable water systems exist on the property and are permitted as public water supplies.

18.3 Power

Power to the mine site is supplied by NV Energy through a 125 kV, three-phase transmission line. Monthly power consumption is approximately 8.0 MWh.

18.4 Sewage and Waste Disposal

Domestic wastewater (sewage) at the mill site is treated in a packaged wastewater treatment plant. Treatment includes primary settling, air-enhanced digestion, and chlorine disinfection. Treated effluent is disposed of in the TSF. Each of the underground mines has an individual sewage disposal system consisting of a collection system, septic tank, and leach field.

18.5 Ore Stockpiles

There are a number of mineralized material stockpiles present at the mine site. The remote stockpiles are located distal to the mill facilities and are spread throughout the property mostly in the areas of the Smith, SSX, Saval 4, and West Mahala mines. There are also several mineralized material stockpiles located in the ROM area adjacent to the mill.



18.6 Tailings Storage Facility

Jerritt Canyon currently has two TSFs, TSF 1 and TSF 2, and two main process water storage facilities which include the water storage reservoir (WSR) and evaporation pond (Figure 18-1).

Currently, Jerritt Canyon operates a process WTP intended to produce water that meets NDEP Profile I discharge standards from the process water contained in the WSR and evaporation pond.

Additionally, Jerritt Canyon intends to convert the WSR into a TSF in the future, and has submitted to, and received approval from both the NDEP-Bureau of Mining Regulation and Reclamation (BMRR) and the NDWR for this planned construction. All these facilities are shown in plan view in Figure 18-1 and briefly described below:

- TSF 1 is currently inactive and in the process of being closed and reclaimed.
- TSF 2 is currently active and used to dispose of tailings solids delivered to the impoundment in a slurry consisting of a ratio of 40 tons solids to 60 tons water.
- The WSR is designed to store approximately 402 million gallons (Mgal) of process solution and is currently being maintained at is maximum operating capacity.
- The evaporation pond is designed to store approximately 450 Mgal of process solution and is currently being maintained at its maximum operating capacity. The evaporation pond is also being used for disposal of brine concentrate from the process WTP.

This section provides an overview and summary of the current and future planned operations of TSF 1 and TSF 2 together with a description of the mass and water balances for TSF 2 with regards to current and planned future production, and how the WSR, evaporation pond, and process WTP operation are integral to the overall water balance for TSF 2. SLR relies on the conclusions and recommendations in the various SRK Consulting reports listed in Section 27 of this Technical Report regarding the TSF and provides no conclusions or opinions regarding the stability of the listed dams and impoundments.



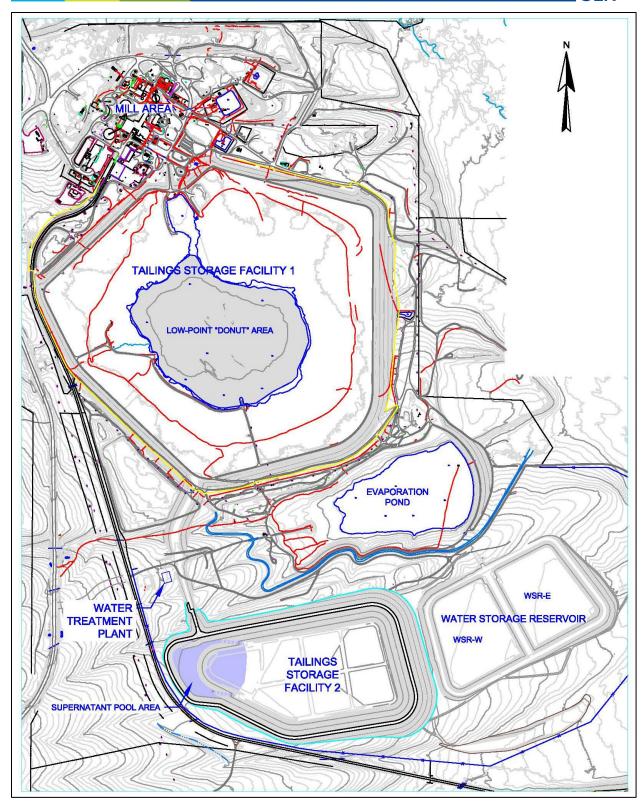


Figure 18-1: General Layout of Jerritt Canyon Tailings and Water Management Facilities



18.6.1 TSF 1

TSF 1 was designed and constructed by Beckwith and Hauskins as an unlined facility in the mid-1980s, prior to the adoption of the Nevada Water Pollution Control regulations in 1991. As a result, seepage from TSF 1 was detected in the alluvium as early as 1981, when a recharge mound and migration of tailings decant solution were first observed. As TSF 1 was unlined, it seeped from its base and resulted in contamination of the underlying vadose zone and groundwater. The contamination was due mainly to chloride, which was used in the chlorination plant to oxidize mineralized material during process operations in the 1980s and 1990s.

This seepage from TSF 1 was found to be moving in the underlying vadose zone alluvium predominately to the south-southwest at a rate of approximately 450 gpm. Groundwater within a few hundred feet of TSF 1 was impacted with high concentrations of chloride and total dissolved solids. As a result of the seepage, TSF 1 was found to be noncompliant with the 1991 regulations which require tailings impoundments to be lined with a one foot thick soil layer of compacted earth with a hydraulic conductivity equivalent of 1x10⁻⁶ cm/s.

This resulted in the installation of groundwater recovery wells beginning in 1985 to intercept and pump contaminated groundwater back to the mill circuit, and downgradient groundwater monitoring wells to measure the chemistry. This procedure of interception well installation followed by groundwater monitoring well installation was repeated over the following +25 years of operation whenever an existing monitoring well indicated chloride concentrations above the NDEP "reference value" for groundwater (400 mg/l). In this instance, the monitoring well would become an interception well and a new monitoring well would be installed further downgradient. At the end of TSF 1's continuous deposition operations between 1980 and 2014, there were 92 interception wells and 82 monitoring wells installed.

In 2010, SRK developed a Final Plan for Permanent Closure (FPPC) for TSF 1 which was subsequently approved by the State of Nevada regulatory agencies. For the 300 acre TSF 1 impoundment surface, the FPPC consists of regrading to promote runoff and preclude surface water impoundment, placing a working cover on which a high-density polyethylene (HDPE) liner will be installed, installing a three foot thick alluvial growth media cover, and revegetating the final surface with an approved seed mix. Reclamation and closure activities that have been completed on TSF 1 include:

- Outer embankment slopes have been graded, covered, and revegetated.
- Removal of approximately 700 Mgal of supernatant water from the center low-point (i.e. "donut") area of the impoundment surface (Figure 18-1) over a period of approximately four years.
- Filling of the emptied low-point area with tailings slurry to achieve a tailings surface similar to that outside of the low-point area. In addition, the original closure plan called for authorization to deposit more tailings as necessary into the low-point area to account for settlement of the tailings surface in the low-point area. Additional tailings deposition into the low-point area occurred intermittently until the end of 2018.
- Construction of a working cover for the remainder of the impoundment area that consists of waste rock, alluvium, or spent or rinsed heap leach ore, which forms the general closure topography that will ultimately drain water towards the closure spillway. Approximately 70% of this cover was placed between 2015 and 2020 outside the low-point area and is a minimum of two feet thick, but thicker in places depending on final surface slope requirements.
- Installation of a synthetic liner over approximately 70% of the impoundment surface (i.e., excluding the low-point area).



- Growth media has been installed over approximately 30% of the 300 acre impoundment surface.
- Installation of a spillway capable of passing the Probable Maximum Flood (PMF).

Activities that are in progress or have yet to be started include:

- Installation of above-liner drainage in areas of water accumulation requiring drainage.
- Placement of three feet of alluvium above the liner to allow establishment of approved vegetation species.
- Final covering of the low-point area with a synthetic liner and adequate above-liner drainage.
- Final abandonment of TSF 1 internal monitoring wells and piezometers.
- Final abandonment of TSF 1 seepage interception and monitoring wells.

As a result of the removal of the supernatant water in the TSF 1 low-point area, monitoring data showed significant decreases in impoundment phreatic surfaces, as well as water levels in interception wells and external monitoring wells.

18.6.2 TSF 2

For active tailings management, Jerritt Canyon is currently depositing tailings with a 40:60, solids/water, ratio into TSF 2 Phase 2. TSF 2 was designed by SRK in 2010 with a two layer HDPE liner which incorporates a LCRS to limit the risk of groundwater contamination (as in the case of its predecessor TSF 1). This design meets or exceeds the most current environmental and engineering standards.

TSF 2 (Phase 1) was constructed in 2011 and 2012 and commissioned in 2013 to store approximately 3.7 Mst of tailings. Shortly after commissioning, the NDEP-BMRR designated TSF 2 as a single lined tailings impoundment, because recoveries from its LCRS were significantly higher than flow limitations required by the State of Nevada. Regardless of this determination, the NDEP-BMRR still requires Jerritt Canyon to measure pumped flows from the LCRS as well as head development above the TSF 2 secondary HDPE liner.

As part of the TSF 2 monitoring program, JCG measures pumped flows from the LCRS, hydraulic head development above the TSF 2 secondary HDPE liner, and surrounding groundwater depths, and the presence (or absence) of process solution in the vadose zone underlying TSF 2.

Monitoring data for Phase 2 deposition indicate the following:

- Pumping from the LCRS is being performed at 20 gpm.
- Head above the primary liner above the LCRS sump is approximately 15 ft.
- Pumping from the overliner drain is being performed at 20 gpm.
- Head above the overliner drain sump is approximately 50 ft.
- Three vibrating wire piezometers installed in the TSF 2 embankment indicate no phreatic surface within the compacted earth embankment at its deepest section.

The maximum operating elevations and related capacities for Phases 1 to 4 are summarized in Table 18-1. For Phases 2, 3, and 4, four feet of dry freeboard below the crest elevation is required to contain the PMF and wave run-up.



Table 18-1: Maximum Operating Elevations and Storage for TSF 2 Phases 1 to 4

Jerritt Canyon

TSF 2 Phase	Max. Operating Tailings Elevation (FASL)	Total Tailings Capacity at Max. Operating Elevation (acre-feet)	Total Tailings Capacity ¹ at Max. Operating Elevation (tons)	Embankment Crest Elevation (FASL)	Theoretical Total Storage at Crest Elevation (acre-feet)
Phase 1	6,366	2,297	3,740,000	6,372	2,729
Phase 2	6,378	3,202	5,231,600	6,382	3,531
Phase 3	6,386	3,868	6,319,000	6,390	4,213
Phase 4	6,398	4,942	8,072,300	6,402	5,319

Note:

1. For an assumed average dry density of 75 pounds per cubic foot (pcf).

Phase 2 construction was performed and completed in 2018 as a 10 ft raise using the downstream method and extending the double-lined system to the crest elevation (TSF 2 Phase 2).

Phase 3 is currently being constructed as an eight foot raise using the centerline/downstream method (TSF 2 Phase 3). This centerline/downstream construction method is required to accelerate embankment construction due to tailings deposition above authorized Phase 2 elevations in the eastern portion of TSF 2. The Phase 3 HDPE containment will be installed as a single-lined system tied into the Phase 2 primary liner, as approved by the NDEP-BMRR. Construction and commissioning of TSF 2 Phase 3 is expected to be completed in May 2021.

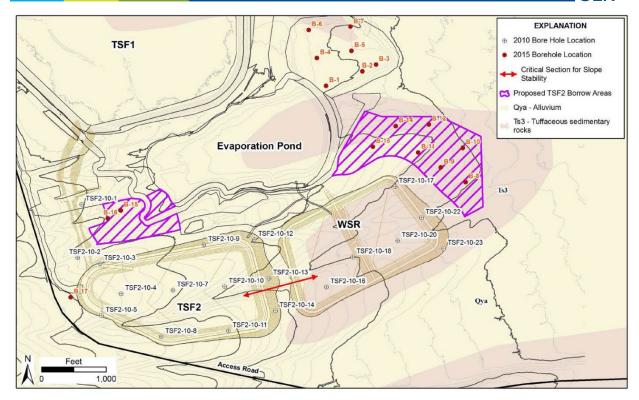
A final Phase 4 raise is planned to add 12 ft to the Phase 3 embankment elevation and will allow storage of an additional 1.7 Mst of tailings as shown in Table 18-1. Phase 4 has been designed and approval is being awaited from the State of Nevada regulatory agencies (NDEP-BMRR and NDWR). Construction is planned for 2021 using the downstream method (TSF 2 Phase 4). The Phase 4 HDPE containment will also be installed as a single-lined system tied into the Phase 3 liner. Phase 4 construction will require approximately 1.5 million cubic yards of compacted fill excavated from an approved borrow source over one mile east of TSF 2.

18.6.2.1 Geological and Hydrogeological Conditions

The area underlying the footprint of TSF 2 is mapped as Qya (i.e. Quaternary alluvium), Figure 18-2. This unit is described as "relatively thin, coarse poorly sorted unconsolidated gravel and sand along present streams." This material covers Older Quaternary alluvium (alluvial fans and older stream deposits) and Tertiary sedimentary units at the site. Both the Quaternary and Tertiary materials behave as soils from a geotechnical perspective. Hard bedrock was not encountered in any of the boreholes advanced for the TSF 2 geotechnical subsurface investigation performed in 2010 (SRK, 2011) and in 2015 (SRK, 2015).

Groundwater was not encountered in any of the boreholes advanced in the TSF 2 area during 2010 nor in any of the boreholes advanced into the potential borrow sources during 2015 (refer to Figure 18-2 for borehole locations).





Source: SRK, 2011

Figure 18-2: TSF 2 Borehole Location and Geology (SRK, 2015)

The groundwater elevation data points nearest to TSF 2 are found in piezometers TSF2-PZ-2 and TSF2-PZ-4 and monitoring wells GW-50 and GW-83 (Figure 18-3). Groundwater depths for all but one of the TSF 2 groundwater monitoring points measured between 2018 and 2020 have been consistently greater than 100 ft. TSF 2 piezometer PZ-4 indicated the highest groundwater elevation at approximately 80 ft below ground surface. TSF 2 piezometers (PZ-1, PZ-3, PZ-5, PZ-6, PZ-7, & PZ-8) have remained dry since their installation in 2014, and TSF 2 monitoring well GW-82 has remained dry since 2018.



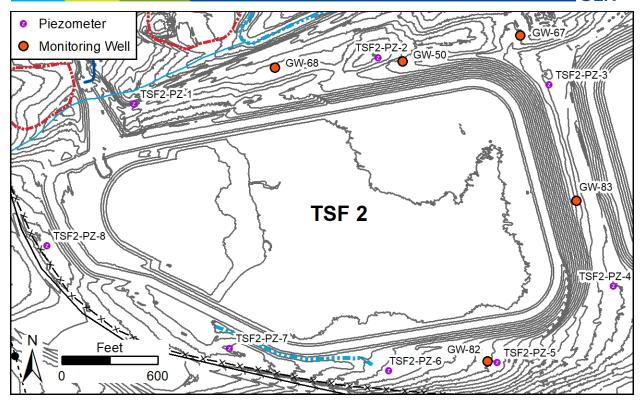


Figure 18-3: Locations of TSF 2 Piezometers and Monitoring Wells

18.6.2.2 Geotechnical Stability

Geotechnical properties for the native materials at the Jerritt Canyon and those used for construction of the TSF 2 embankment Phases 1 to 3 were evaluated through previous geotechnical investigations completed in 2010, 2015, and 2020. Borehole samples from TSF 2 borrow sources indicated the soils are comprised of mainly lean sandy clay or clayey sand with occasional inter-bedding of silty sand or clayey gravel (SRK, 2015).

The geomechanical properties for the fill material used in the Phase 4 stability analyses are based on a reinterpretation of the triaxial tests performed in 2010, and 2020 borrow sampling and analysis. Although some test results indicated a drain cohesion as high as 786 pounds per square foot (psf), SRK performed sensitivity analyses with lower values of cohesion. This demonstrated that the proposed grading plan with a downstream slope inclination of 2.5:1 (horizontal to vertical) meets the stability requirements. As a result of discussion held between SRK and the NDWR Office of Dam Safety, it was concluded that a cohesion of 0 psf and a drained (peak) friction angle of 32° would be assigned to the borrow material used to build the TSF 2 embankment.

Limit equilibrium slope stability analyses were performed for the Phase 4 expansion using circular slip surfaces through the whole embankment for the following conditions:

- Static conditions:
 - Embankment under its own weight (i.e., empty)
- Seismic conditions:



- Pseudo-static analysis conducted using a horizontal seismic coefficient equal to half the peak ground acceleration (PGA) with a return period of 10,000 years (i.e., half of 0.417 g, or 0.208 g).
- Yield acceleration defined as the seismic coefficient yielding a pseudo static factor of safety
- Post-earthquake, using residual shear strength.

A phreatic surface within the tailings and through the lower part of the embankment was included in the model. The location of the phreatic surface was based on the LCRS sump elevation at the upstream toe of the embankment. If the LCRS and tailings underdrain system (overliner drain) is not pumped at a sufficient rate to keep phreatic levels at a minimum within the LCRS and underdrain sumps, it is possible for the phreatic table to be higher within the embankment, which could affect the stability. To minimize this risk, the phreatic levels within the LCRS and underdrain sumps should continue to be monitored with existing transducers. The phreatic level within the embankment will be accurately assessed through the instrumentation program (i.e. embankment vibrating wire piezometers) installed in the TSF 2 embankment.

The minimum factors of safety obtained for the Phase 4 expansion under the various conditions modelled are summarized in the Tailings Storage Facility 2 - Phase 4 Expansion Engineering Design Report (SRK, 2021). Results of geotechnical stability analyses performed by SRK for TSF 2 Phase 4 exhibit static factors of safety greater than 1.6 and pseudo-static factors of safety of 1.0. The results indicate that the stability requirements are met except for the pseudo-static condition. As the pseudo-static factor of safety is 1.0, which is less than 1.1, in accordance with Nevada Administrative Code (NAC) 535.210(9)(d), a deformation analysis was performed using the value of yield accelerations of 0.21 g and 0.22 g and the PGA of 0.417 g. The results for TSF 2 Phase 4 indicate the calculated seismic displacement is between five and six inches, which is less than the accepted state of practice criterion of 12 in.

18.6.2.3 TSF 2 Phase 3 and 4 Depositional Mass Balance

Separate mass balances were developed for the designs of TSF 2 Phase 3 and TSF 2 Phase 4 and are provided in Table 18-2 and Table 18-3, respectively. All calculations assume a daily deposition rate of 2,350 stpd.

For Table 18-2 (Phase 3), an average dry density of 75 pcf was used to determine the volumes of dry tailings deposited with height. This dry density was measured using precise topography while accounting for the tons of dry solids placed in the impoundment during Phase 3 expansion. SRK notes, that dry density is defined as mass of dry solids/total volume (solids and liquids). SRK is of the opinion that this relatively low value of 75 pcf is because the volume of water retained in the impoundment supernatant pond has saturated the tailings for almost the full height of the tailings profile.

Table 18-2 provides a tailings solids mass balance for the remaining capacity in the western portion of TSF 2 Phase 2 (i.e., between 6,356 FASL (the lowest topographic elevation measured in the July 14, 2020 bathymetric survey completed by NewFields), and 6,378 FASL (the maximum tailings storage elevation to ensure four feet of freeboard for PMF storm and wave run-up containment)).

Due to the tailings surface being nominally higher than 6,378 FASL in the eastern portion of TSF 2, tailings deposition is currently limited to the western portion of the impoundment, and the rates of rise, which are inversely proportional to area of deposition, are much higher than the rates of rise for the full area of the impoundment. This may potentially result in a lower than 75 pcf dry density and a shorter timeframe



than that calculated in Table 18-2. For Phase 3, Table 18-2 indicates that at an elevation of 6,378 FASL, a total mass of approximately 370,000 tons of dry tailings could be deposited on the western portion of TSF 2 over 161 days or 5.3 months beyond the July 14, 2020 bathymetric survey.

During the past year, high rates of rise contributed to a high degree of suspended solids in the TSF 2 supernatant pond which has to be removed as quickly as possible to maintain the supernatant pool in compliance with the maximum operating elevation of 6,378 FASL. This water is pumped directly into the WSR which is currently almost full, and then via the WTP to the mill circuit.

Based on March 2021 drone surveys and visual inspections of the TSF 2 Phase 2 supernatant pool and encroaching tailings beach, TSF 2 Phase 2 is rapidly approaching a condition where deposition will have to be reduced or temporarily suspended due to exceedance of the currently permitted Phase 2 operating level of 6,378 FASL in both the western and eastern portions of TSF 2. TSF 2 can resume full functionality once Phase 3 earthworks and HDPE liner deployment are completed, thus increasing the authorized storage elevation to 6,386 FASL.

SRK calculated a storage capacity of approximately 800,000 tons of dry solids between elevations 6,378 FASL and 6,386 FASL, which translates to an additional seven months of deposition at 2,350 stpd of tailings once the Phase 3 raise is commissioned.

Table 18-3 (Phase 4) provides the mass balance between elevations 6,378 FASL and 6,386 FASL and indicates much lower rates of rise from elevation 6,381 FASL (9 ft/annum) to elevation 6,398 FASL (6 ft/annum). As presented in Table 18-3, there is no tailings storage capacity between elevation 6,398 FASL and 6,402 FASL as this capacity is reserved for storage of the PMF (approximately two feet) and the calculated results of wave action (approximately two feet). As exhibited in Table 18-3, the areas are different for Phase 4 as a result of the implementation of downstream construction for the full raise height of 20 ft for the Phase 3 and 4 raises, thus the areas starting at elevation 6,378 FASL, and hence the volumes and dry tons at 75 pcf dry density, are also different. Phase 4 will require construction during the 2021 construction season (i.e., between May and November 2021) to ensure continued operation beyond November 2021. Phase 4 will be filled with tailings solids to 6,398 FASL within approximately 33 months (i.e., by December 2023). The total fill needed for the Phase 4 embankment is approximately 1.5 million cubic yards (compacted in-place).

Assuming a planned production rate of 2,350 stpd, TSF 2 Phase 4 will be filled to capacity by December 2023. The Jerritt Canyon Water Pollution Control Permit authorizes up to 3.0 Mst of dry tailings to be produced per annum (approximately 8,200 stpd). If the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 2 Phase 4 to capacity will be shortened proportionally.



Table 18-2: TSF 2 Phase 3 – Stage, Area, Storage, Time, Rate-of-Rise Characteristics Jerritt Canyon

Elevation (ft amsl)	Elevation Change (ft)	Area (sq ft)	End-Area Storage Capacity (cu ft)	Cumulative Storage Capacity (cu ft)	Cumulative Tons @ Dry Density of 75 pcf	Time to Fill with Tailings Solids (days)	Equivalent Annual Rate of Rise (ft/year)	Phase
6,356	0	25,651	0	0	0	0	892	2
6,357	1	78,745	52,198	52,198	1,957	1	290	2
6,358	1	111,959	95,352	147,550	5,533	2	204	2
6,359	1	143,293	127,626	275,176	10,319	4	160	2
6,360	1	174,263	158,778	433,954	16,273	7	131	2
6,361	1	204,712	189,488	623,442	23,379	10	112	2
6,362	1	237,388	221,050	844,492	31,668	13	96	2
6,363	1	271,070	254,229	1,098,721	41,202	18	84	2
6,364	1	306,278	288,674	1,387,395	52,027	22	75	2
6,365	1	343,514	324,896	1,712,291	64,211	27	67	2
6,366	1	379,741	361,628	2,073,918	77,772	33	60	2
6,367	1	414,746	397,244	2,471,162	92,669	39	55	2
6,368	1	445,180	429,963	2,901,125	108,792	46	51	2
6,369	1	474,053	459,617	3,360,742	126,028	54	48	2
6,370	1	505,501	489,777	3,850,518	144,394	61	45	2
6,371	1	535,266	520,383	4,370,902	163,909	70	43	2
6,372	1	572,080	553,673	4,924,575	184,672	79	40	2
6,373	1	681,423	626,751	5,551,326	208,175	89	34	2
6,374	1	793,546	737,484	6,288,811	235,830	100	29	2
6,375	1	877,378	835,462	7,124,273	267,160	114	26	2
6,376	1	947,204	912,291	8,036,564	301,371	128	24	2
6,377	1	1,009,396	978,300	9,014,864	338,057	144	23	2
6,378	1	1,098,145	1,053,771	10,068,635	377,574	161	21	2
6,379	1	1,172,203	1,135,174	11,203,809	420,143	179	20	3
6,380	1	1,384,789	1,278,496	12,482,305	468,086	199	17	3
6,381	1	2,523,242	1,954,016	14,436,321	541,362	230	9	3
6,382	1	3,179,234	2,851,238	17,287,559	648,283	276	7	3
6,383	1	3,509,482	3,344,358	20,631,917	773,697	329	7	3
6,384	1	3,621,192	3,565,337	24,197,254	907,397	386	6	3
6,385	1	3,640,821	3,631,007	27,828,260	1,043,560	444	6	3
6,386	1	3,660,489	3,650,655	31,478,915	1,180,459	502	6	3
6,387	1	3,680,196	3,670,343	35,149,258	1,318,097	561	6	3
6,388	1	3,699,942	3,690,069	38,839,327	1,456,475	620	6	3
6,389	1	3,719,728	3,709,835	42,549,162	1,595,594	679	6	3
6,390	1	3,739,553	3,729,641	46,278,802	1,735,455	738	6	3



⁼ Phase 2 crest elevation - provides 4 feet of dry freeboard for PMF storm and wave run-up containment

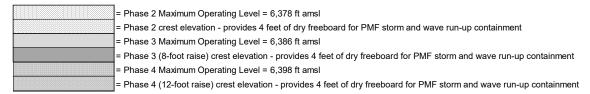
⁼ Phase 3 Maximum Operating Level = 6,386 ft amsl

⁼ Phase 3 (8-foot raise) crest elevation - provides 4 feet of dry freeboard for PMF storm and wave run-up containment



Table 18-3: TSF 2 Phases 2, 3, & 4 – Stage, Area, Storage, Time, Rate-of-Rise Characteristics Jerritt Canyon

Elevation (ft amsl)	Elevation Change (ft)	Area (sq ft)	End-Area Storage Capacity (cu	Cumulative Storage Capacity (cu ft)	Cumulative Tons @ Dry Density of 75 pcf	Time to Fill with Tailings Solids (days)	Equivalent Annual Rate of Rise (ft/year)	Phase
6,378	1	0	454,929	0	0	0	0	2
6,379	1	1,255,531	627,766	627,766	23,541	10	18	3
6,380	1	1,384,789	1,320,160	1,947,926	73,047	31	17	3
6,381	1	2,523,242	1,954,016	3,901,941	146,323	62	9	3
6,382	1	3,179,234	2,851,238	6,753,179	253,244	108	7	3
6,383	1	3,509,482	3,344,358	10,097,537	378,658	161	7	3
6,384	1	3,621,192	3,565,337	13,662,874	512,358	218	6	3
6,385	1	3,640,821	3,631,007	17,293,881	648,521	276	6	3
6,386	1	3,736,366	3,688,594	20,982,474	786,843	335	6	3
6,387	1	3,758,584	3,747,475	24,729,949	927,373	395	6	3
6,388	1	3,780,849	3,769,717	28,499,666	1,068,737	455	6	3
6,389	1	3,803,159	3,792,004	32,291,670	1,210,938	515	6	3
6,390	1	3,825,515	3,814,337	36,106,006	1,353,975	576	6	3
6,391	1	3,892,801	3,859,158	39,965,164	1,498,694	638	6	4
6,392	1	3,917,018	3,904,910	43,870,074	1,645,128	700	6	4
6,393	1	3,941,291	3,929,155	47,799,228	1,792,471	763	6	4
6,394	1	3,965,621	3,953,456	51,752,684	1,940,726	826	6	4
6,395	1	3,990,008	3,977,815	55,730,499	2,089,894	889	6	4
6,396	1	4,014,451	4,002,230	59,732,728	2,239,977	953	6	4
6,397	1	4,038,951	4,026,701	63,759,429	2,390,979	1017	6	4
6,398	1	4,063,507	4,051,229	67,810,658	2,542,900	1082	6	4
6,399	1	4,088,120	4,075,814	71,886,472	2,695,743	1147	6	4
6,400	1	4,112,790	4,100,455	75,986,927	2,849,510	1213	6	4
6,401	1	4,137,516	4,125,153	80,112,080	3,004,203	1278	6	4
6,402	1	4,162,299	4,149,908	84,261,987	3,159,825	1345	5	4



11.2 months to fill up to 6,386 ft a 12/1/21 36.1 months to fill up to 6,398 ft a 12/19/23

18.6.3 WSR Conversion to TSF 3

The WSR was constructed between 2011 and 2012 and is capable of storing approximately 402 Mgal of process water. The WSR is comprised of two adjoining basins (west and east) bisected by an internal midberm dividing the WSR into West and East basins, of which 186 Mgal and 216 Mgal can be stored in the WSR West Basin (WSR-W) and WSR East Basin (WSR-E), respectively. The WSR-W and WSR-E basins are double geomembrane lined impoundments consisting of a 60 mil HDPE secondary liner, and an 80 mil HDPE primary liner, each with its own leak collection and recovery system (LCRS) constructed at the lowest



interior elevation of each basin. The crest of the mid-berm dividing the WSR-W and WSR-E is constructed at 6,263 FASL, while the final as-built elevation of the outer embankment crest was constructed to 6.268 FASL.

In 2020, Jerritt Canyon received approval from the NDEP-BMRR and the NDWR to convert the WSR to TSF 3. The WSR's conversion to TSF 3 will allow Jerritt Canyon to dispose of and contain a maximum of 2.4 Mst of tailings solids. At an average mill production rate of 2,350 stpd, TSF 3 would provide approximately 2.6 years or 32 months of tailings storage.

Originally, Jerritt Canyon planned to convert the WSR into TSF 3 during the 2020 construction season after removing stored process solution via the process WTP. However, because the process WTP could not treat surplus process water at its design treatment rates, the WSR could not be emptied during 2020, and its conversion to TSF 3 could not be accomplished. As of March 21, 2021, the WSR is currently storing 193 Mgal in the WSR-E basin and 179 Mgal in the WSR-W basin for a total of 372 Mgal. Jerritt Canyon will need to convert the WSR into TSF 3 before December 2023 when TSF 2 Phase 4 is projected to reach its design capacity. Since TSF 3 would be commissioned before January 2024, additional tailings storage (beyond TSF 3) would need to be permitted and constructed before the end of 2025 to ensure a new facility is ready for tailings disposal by the middle of 2026. Likewise, if the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 3 and needing additional tailings storage beyond TSF 3 will be shortened proportionally.

The feasibility of converting the WSR into TSF 3 in a timely manner relies on the removal of 372 Mgal of process solution which is currently stored within the WSR by end 2022. Within the next two years, this volume will require removal via active and passive evaporation and/or treatment via the process WTP. If this volume cannot be removed by the end of 2022, other locations or methods of tailings disposal will need to be permitted, approved, and constructed.

18.6.4 Evaporation Pond

The evaporation pond was constructed in 2006 to store approximately 450 Mgal of process solution. The evaporation pond is double geomembrane lined with a 60 mil low linear density polyethylene (LLDPE) secondary liner, and an 8 mil HDPE primary liner with an LCRS constructed at the lowest interior elevation of its impoundment. The purpose of the evaporation pond was to facilitate the transfer of over 400 Mgal of TSF 1 supernatant solution to a double lined facility (i.e. evaporation pond). Removing this surplus process solution from TSF 1 has allowed for additional tailings deposition into TSF 1 and reduced the large hydraulic head on the TSF 1 impoundment causing process contamination of the vadose zone and groundwater underlying TSF 1.

Currently, the evaporation pond is being used to dispose of approximately 500 gpm of concentrate brine solution from the process WTP. As of March 2021, the evaporation pond is being maintained at its maximum operating elevation of 6,287 FASL and maximum capacity of 450 Mgal.

18.6.5 Process Water Treatment Plant

The process WTP (Figure 18-1) was designed by Linkan Engineering of Elko, Nevada to treat excess process water stored in the WSR to facilitate the construction of TSF 3. Treated effluent water (permeate) is temporarily stored in a 60,000 gallon tank before it is pumped to an injection field, where it is disposed of in injection wells WW#2, WW#3, and WW#4. Concentrate (brine) gravity drains via a dual containment pipeline to the evaporation pond for disposal, where it is recirculated back into the process solution



inventory. Fluids from the WTP clarifier underflow are pumped via a dual containment pipeline to the tailings slurry pipeline for disposal into TSF 2.

As of March 2021, the process WTP treats approximately 700 gpm of surplus process solution from the WSR-E basin. Of this amount, approximately 200 gpm is permeate and approximately 500 gpm is concentrate brine being disposed of in the evaporation pond. Therefore, the process WTP is only removing 200 gpm from the overall water balance inventory. Under these conditions, SRK recommends a significant increase in the WTP capacity is needed to eliminate positive water balances during the winter and spring.

18.6.6 Tailings and Process Solution Water Balance

SRK completed tailings and process solution water balance calculations to estimate pumping capacities required to maintain the supernatant pool elevation at least four feet below the TSF 2 embankment crest elevation, both during Phase 4 construction and operation. These calculations were used to determine future TSF scheduling and operational timing. The water balance includes inflows, outflows, and change in storage calculations, to assess the pumped flowrate that would have to be maintained during placement of tailings slurry in Phases 3 and 4. The resulting rate of supernatant removal varies from approximately 400 gpm to 600 gpm, which are currently being achieved by operations.

18.7 Water Treatment Plants

18.7.1 Tailings Water Treatment

An Engineering Design Change (EDC) for the installation of a WTP consisting of chemical pre-treatment, pH adjustment, coagulation, oxidation, an inclined plate settler, ultrafiltration (UF) system, sea water reverse osmosis (SWRO), and ion exchange (IX) vessels to treat antimony, arsenic, cadmium, chloride, manganese, mercury, nitrogen, selenium, sulfate, thallium, and total dissolved solids (TDS) was approved by the NDEP-BMRR in December 2016. Following approval, the WTP was subsequently commissioned in November 2019. Water contained in the WSR-E, WSR-W, TSF 2, and the evaporation pond requires treatment so the ponds can be drained to remove excess water from the site and facilitate future tailings storage.

The WTP is designed to process 800 gpm with a maximum flow of 1,000 gpm. Raw water from the Dash pit dewatering wells and the WSRs is pumped through separate double contained pipelines to a polyethylene reaction tank. Upstream from the reaction tank, sodium dimethyldithiocarbamate (NaDTC), sodium hydroxide (NaOH), ferric chloride (FeCl₃), and sodium hypochlorite (NaOCI) are added to the raw water through an inline mixer for chemical pre-treatment, pH adjustment, coagulation, and oxidation, respectively. Process water is then pumped to an inclined plate settler (IPS) for solids separation. The solids laden underflow from the IPS is pumped back to TSF 2. The clarified effluent from the IPS is gravity fed to the UF feed tank.

Clarified process water is then pumped by variable frequency drive controlled feed pumps through 200 µm pre-strainers to protect the ultrafilters, and then through a UF system for suspended solids removal. Antiscalant (Vitec 3000) and FeCl₃ is dosed into the UF feed tank for scale control and coagulation of fugitive suspended solids. Sulfuric acid is also added for pH adjustment. Hydrochloric acid may be substituted as the acid depending on cleaning characteristics observed during operation. After filtration, the UF filtrate flows to another polyethylene tank for SWRO feed. The process water is then pumped through three parallel SWRO units for removal of TDS. Bisulfide and antiscalant (Vitec 3000) is



added to the SWRO feed for chlorine removal and scaling control. These chemicals are added through an inline mixer into the SWRO feed pipe.

UF and SWRO cleaning waste and SWRO concentrate is sent to one of two sump chambers inside of the WTP that gravity-drains to the evaporation pond. Water from periodic UF flushes contains particulate solids and is sent to the other sump chamber which is recirculated to the reaction tank. SWRO permeate is sent to IX vessels for final polishing. Backwash water from the IX vessels is pumped to the same sump chamber as the SWRO and UF cleaning waste. Treated water from the IX is pumped to a 60,000 gallon existing tank located next to the Smith WTP. This water comingles with the treated effluent from the Smith WTP and is pumped through HDPE pipelines to injection wells.

18.7.2 Smith Mine Water Treatment Plant

The Smith WTP is designed to reduce arsenic and antimony concentrations in the Smith water to Nevada Profile 1 standards using chemical pre-treatment, coagulation, filtration and granular ferric oxide, GFO, adsorption at a design rate of 1,400 gpm. The Smith WTP was designed as an addition to the existing Dash WTP which receives approximately 1,400 gpm of dewatering well water from the Dash pit. Raw water from the Smith dewatering wells is pumped to a 282,000 gallon tank that serves as dewatering equalization, fire water pressure and reserve volume, and Smith WTP feed. Raw water flows by gravity from the 282,000 gallon tank to the WTP via a 12 in. HDPE pipeline. Upon entering the WTP, a pressure reducing valve reduces the pipeline pressure to a level appropriate for the process equipment.

Treatment begins with the addition of $FeCl_3$ for coagulation and iron adsorption, sulfuric acid (H_2SO_4) to lower pH, and NaOCl for oxidation. Chemically pre-treated water flows through a reaction vessel, then to coagulation/filtration vessels, and finally through adsorption vessels into an existing 60,000 gallon finished water tank. A bypass/blend line allows controlled blending of filtrate from the coagulation/filtration vessels with water that has undergone the entire treatment process. NaOH will be added post treatment to raise the pH to permissible levels. All plant vessels will be connected by polyvinylchloride (PVC) piping and automatic valves for process control.

The coagulation/filtration and adsorption vessels are backwashed regularly into cone bottom backwash (BW) tanks. Process water is transported inside the building via single wall PVC pipes, and inside pipe in pipe configurations between the building and tank farm area. Supernatant from the BW tanks is transported via pipe in pipes from the tanks and pumped to the WTP intake, upstream from chemical addition. Solids laden process water is pumped from the BW tanks to the TSF for disposal.

The effluent from the WTP is pumped to the existing 60,000 gallon tank where it is comingled with treated effluent from the tailings WTP. Treated water is pumped using a dedicated pipeline to injection wells. The disposal pipeline is a combination of double containment methods using buried pipe in pipes, single wall pipes in lined trenches, and above grade pipe in pipes. The various methods are required to ensure the process pipe can be drained if service is necessary.



19.0 MARKET STUDIES AND CONTRACTS

19.1 Markets

The principal commodities at Jerritt Canyon are freely traded at prices that are widely known so that prospects for sale of any production are virtually assured. SLR used a gold price of US\$1,700/oz Au for Mineral Resources and US\$1,500/oz Au for Mineral Reserves.

The QP has reviewed the metal price assumptions and considers them reasonable to be used in the economic analysis that supports the Mineral Reserve estimates in this Report.

19.2 Supply and Services Contracts

Contracts and agreements are currently in place for the supply of goods and services necessary for the mining operations. These include, but are not limited to, contracts for drilling services, mine development and mine production, waste and ore haulage, maintenance service for the mining equipment, specialized maintenance service for processing plant equipment, supply of diesel for equipment operation, supply of electrical power, supply of explosives, supply of process reagents, and transportation and logistics services including infrastructure maintenance, catering and personnel transportation.

In the opinion of the QP, the terms, rates and charges set in the relevant service contracts and supply agreements for the mining and processing operation are within industry practice in North America.



20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Jerritt Canyon has been in operation since 1981 and is primarily located on private land controlled by JCG and public land predominantly administered by the USFS, with small portions administered by the BLM. The Jerritt Canyon area consists of surface and underground mines, rock disposal areas (RDAs), haul roads, maintenance facilities, ancillary and support facilities, processing facilities, and TSFs.

20.1 Environmental Studies

Prior to and during operation, numerous environmental studies and evaluations have been conducted to support permit applications and operations. An Environmental Impact Statement (EIS) was completed and the Record of Decision (ROD) was issued in 1980.

Jerritt Canyon has a history of environmental concerns and permit exceedances that have been mitigated; however, a number of environmental regulatory concerns and permit exceedances currently exist. Since taking ownership in 2015, JCG has worked and continues to work diligently to mitigate the historic and current environmental concerns.

20.2 Project Permitting & Current Status

Operating permits are in place and current or in the process of being renewed, as presented in Table 20-1. At the time JCG assumed ownership from Veris on June 24, 2015, Veris was operating under the 2013 Second Modified Consent Decree. This decree has since been replaced by the Agreement for Adequate Reclamation Bond and Rock Disposal Area Seepage Treatment (NDEP, 2015) between JCG and the NDEP.



Table 20-1: Operating Permits
Jerritt Canyon

Name of Governmental Authority	License or Permit #	Name and Date of License, Permit, Approval or Consent	Description and Expiry	Comments
NDW^1	S-464035	Industrial Artificial Pond Permit	Mining Operation – Mill Facility period August 12, 2019 to August 11, 2022	-
NDW	S-464039	Industrial Artificial Pond Permit	TSF 2, period August 8, 2019 to August 7, 2022	-
NDW	S-464038	Industrial Artificial Pond Permit	Water Storage Reservoir, period August 12, 2019 to August 11, 2022	-
NBRLPG ²	5-5333-02	Class 5 License	Lower Truck Shop Propane Tank, Expires July 31, 2021	-
NBRLPG	5-5333-03	Class 5 License	Roaster Propane Tank Expires July 31, 2021	-
NBRLPG	5-5333-01	Class 5 License	Lee Smith Mine Propane Tank, Expires July 31, 2021	-
NBRLPG	5-5333-04	Class 5 License	SSX Mine Propane Tank Expires July 31, 2021	-
NBRLPG	5-5333-06	Class 5 License	Steer Portal Propane Tank Expires July 31, 2021	-
USFWS ³	MB78444B-0	Application for Migratory Bird Special Purpose Utility Permit, dated November 2014	Effective June 2, 2016; Expired March 2, 2019	Renewal has been submitted. Have not received updated permit yet due to delays related to COVID-19.
NDEP-BAC ⁴	AP1041-2217	Mercury Operating Permit to Construct: Phase II for Facility ID No. A0004	Signed August 25, 2015 This permit does not expire	-



Name of Governmental Authority	License or Permit #	Name and Date of License, Permit, Approval or Consent	Description and Expiry	Comments
NDEP-BWPC ⁵	NS2009504	Groundwater Discharge Permit – Septic System Permit	Effective November 4, 2014; Expired November 3, 2019	Permit renewal application submitted on April 24, 2019. New permit has not been issued yet.
NSFMD ⁶	88128	Fire Marshal Hazardous Materials Permit for the [Mine]-FDID 05001	Expired February 28, 2021	-
NDEP- BAC	1041-3422	Class I Air Quality Operating Permit for Facility ID No. A0004	Expired March 31, 2019	Renewal currently in progress.
NDEP-BWPC	NEV000020	Water Pollution Control Permit	Expired September 17, 2019	Renewal currently in progress.
NDEP-BWPC	UNEV93214	Underground Injection Control Permit	Effective April 26, 2017; Expires April 26, 2022	-
NDEP-BWM ⁷	SW381	Jerritt Canyon Mine Mill Area Class III Landfill Waiver	Effective September 29, 2015; Expires September 29, 2020	Terminated on July 16, 2020.
NDEP-BWM	SW384	Jerritt Canyon Burns Basin Area Class III Landfill Waiver	Effective September 29, 2020; Expires September 29, 2025	-
NDEP-BWM	SW385	Jerritt Canyon Alchem Area Class III Landfill Waiver	Effective September 29, 2020; Expires September 29, 2025	-
NDEP-BWM	SW1775	Jerritt Canyon Mine New Mill Area Class III Landfill Waiver	Effective October 20, 2015; Expired October 20, 2020	Renewal application submitted on June 30, 2020
NDEP-BWPC	GNV980001-50004	Oil Water Separator permits for the [Mine]	The original permit for the site was issued in 1998 and has been maintained.	Renewed annually.
NDEP-BMRR	77	Reclamation Permit	Effective June 30, 2016	-
NDPBHRCP ⁸	05-11-0133-01	Radioactive Materials License	N/A	-
USFS	Multiple	All authorizations or approvals in any form related to activities of the mine on federal lands (including	Effective June 26, 1984.	Updated annually with Annual Work Plans (AWPs).



Name of Governmental Authority	License or Permit #	Name and Date of License, Permit, Approval or Consent	Description and Expiry	Comments
		approximately 350 Plans of Operation)		
BLM	Various	All authorizations or approvals in any form related to activities of the mine on federal lands	Updated annually as disturbance requests are submitted.	-
NDEP-BWPC	NVR300000	General stormwater discharge permit and associated authorization	Effective March 1, 2013 Expired February 28, 2018	This permit is currently in administrative continuance. Notices will be sent out by NDEP when renewal is required.
NDWR	N/A	Permit to appropriate waters	N/A	-
	J-171, South Drainage Retention Dam			
	J-172, North Drainage Retention Dam			
	J-249, Overflow Catchment	Permits, authorizations or approvals		Americal Foodbase and accombase
NDWR	J-313, Cooling Pond	to construct impoundments/dam	N/A	Annual Fee due each year by December 31.
	J-490, TSF 1	safety		
	J-578, Evaporation Pond			
	J-667, TSF 2			
	J-668, WSRs			
NDEP-BSDW ⁹	EL-3013-12NTNC	Mill site Permit to Operate a Public Water System	Effective June 30, 2020; Expires June 30, 2021	Permit fees paid. Awaiting formal new permits.
NDEP-BSDW	EL-0313-TP03	Permit to Operate a Treatment Plant – SSX Mine Arsenic Treatment plant	Effective June 30, 2020; Expires June 30, 2021	Permit fees paid. Awaiting formal new permits.



Name of Governmental Authority	License or Permit #	Name and Date of License, Permit, Approval or Consent	Description and Expiry	Comments
NDEP-BSDW	EL-0313-12NTNC	Permit to Operate a Public Water System – SSX Mine	Effective June 30, 2020; Expires June 30, 2021	Permit fees paid. Awaiting formal new permits.

Notes:

- 1. Nevada Department of Wildlife (NDW)
- 2. Nevada Board for the Regulation of Liquefied Petroleum Gas (NBRLPG)
- 3. United States Fish and Wildlife Service (USFWS)
- 4. Nevada Division of Environmental Protection Bureau of Air Pollution Control (NDEP-BAC)
- 5. Nevada Division of Environmental Protection Bureau of Water Pollution Control (NDEP-BWPC)
- 6. Nevada State Fire Marshal's Division (NSFMD)
- 7. Nevada Division of Environmental Protection Bureau of Waste Management (NDEP-BWM)
- 8. Nevada Division of Public and Behavioral Health, Radiation Control Program (NDPBHRCP)
- 9. Nevada Division of Environmental Protection Bureau of Safe Drinking Water (NDEP-BSDW)



Currently, SLR has identified seven environmental issues that have the potential to impact JCG's ability to extract Mineral Reserves or the cost of doing so. Based on the data provided and communications with JCG, in addition to SLR's experience working in the state of Nevada with the NDEP and United States Environmental Protection Agency, these environmental issues are being addressed by JCG in an acceptable manner and pace for the regulators. Therefore, the potential negative impact on JCG's ability to extract the Mineral Reserves is minimal and it is likely that some further spending on mitigation will be required. The issues identified are listed below and discussed in further detail in the following subsections:

- 1. Numerous requests for modifications to permits are pending, and Jerritt Canyon has a track record of failure to follow through on timelines for commitments made to the regulators. This is a legacy issue that JCG has inherited.
- 2. Multiple violations of the Class I Air Quality Operating Permit and the Mercury Operating Permit to Construction in the past two years. Mitigation efforts are in progress but have not yet demonstrated the ability to achieve permit levels.
- 3. Multiple exceedances of the Reference Value water quality standards at injection wells and monitoring wells related to the UIC permit including aluminum, antimony, arsenic, iron, magnesium, manganese, nitrite, nickel, TDS, thallium, and sulfate.
- 4. Surface water: High concentrations and increasing concentrations of multiple constituents of concern including TDS and sulfate in surface water associated with mining activities and in particular seepage from the RDAs. These will be addressed though either active or passive remediation systems.
- 5. Groundwater: High concentrations and increasing concentrations of multiple constituents of concern including TDS, sulfate, arsenic, calcium, chloride, and selenium at multiple groundwater monitoring locations associated with mining activities, and in particular seepage from TSF 1.
- 6. Water management constraints including water treatment facilities.
- 7. Violation of Secondary Drinking Water Standards for iron at a water supply well.

20.2.1 Permitting Practices and Plans

SLR's review of the environmental permitting documents provided by JCG indicate that multiple permits are currently in the process of being renewed or updated, including the Class I Air Quality Operating Permit which currently has violations. In the last five years multiple requests for permit modifications and operating changes have been made by JCG and the conditions of the approvals have not been met within the time frame granted by NDEP. Three examples of this are:

- Additional tailings storage was to be constructed during the 2017 construction period (SRK, 2016)
- Deposition of tailings was to revert back to TSF 2 by the end of October 2017 (SRK, 2017)
- JCG has failed to meet many of the deadlines outlined in the Agreement for Adequate Reclamation Bond and Rock Disposal Area Seepage Treatment (NDEP, 2015)

Jerritt Canyon has remained operational throughout these requests and operational changes, which demonstrates a positive working relationship between the JCG and the NDEP, as well as state and local support for the continued operation of Jerritt Canyon. Continued issues modifying and most importantly, meeting the conditions of permit approvals may, however, present a risk to the future operations of Jerritt Canyon.



20.2.2 Class I Air Quality Operating Permit and Mercury Operating Permit Violations

Jerritt Canyon has had exceedances for the Class I Air Quality Permit and Mercury Operating Permit within the past two years and is currently responding to the violations. Although progress is being made, continued exceedances of regulatory standards may result in fines, significant modification of permits, and/or the revocation of permits, however, SLR considers revocation of permits to be unlikely considering the mitigation efforts being taken by JCG.

The Class I Air Quality Permit has historically and is currently a challenge for Jerritt Canyon. Air monitoring and modelling indicates that, even after completing a number of changes to the processing facilities, passing the applicable standards pertaining to particulate matter 2.5 (PM 2.5) remain. Mitigation activities are ongoing by JCG.

20.2.3 High/Increasing Concentrations in Groundwater and Surface Water

Multiple constituents of concern including TDS, sulfate, arsenic, calcium, chloride, and selenium are elevated in seepage from the RDAs. Surface water concentrations can be directly associated with the RDAs which have been in various stages of water treatment/reclamation since 1999 as described in Section 20.2.4 and are currently being addressed in the proposed RDA closure plan. High/increasing concentrations of constituents of concern in groundwater associated with the operation of the TSF 1 as described in Section 20.2.5 and are currently being mitigated through closure and groundwater extraction wells. Additional impacts to groundwater quality are also be associated with the underground injection wells.

20.2.4 Seepage from Rock Disposal Areas

The original plan of operation of which the EIS ROD is based on, selected a valley fill option as the preferred RDA design (USFS and BLM, 1980). Design criteria rely on structuring the RDAs by draining storm water run-off and snowmelt towards the interior of the RDAs. This design resulted in seepage from the toes of four RDAs, which have elevated levels of TDS and sulfates. The four RDAs are:

- Marlboro Canyon
- Gracie
- Snow Canyon East
- Dash East

Jerritt Canyon staff have been working with NDEP-BMRR to develop mitigation actions and monitoring plans for the seepages since the late 1990s.

In 1999, a biological treatment method that used a surface sedimentation pond was studied and proved ineffective in addressing the elevated sulfates in the seepage from the RDAs. Therefore, in 2003, a treatment method that utilized a biological sulfate reducing trench (SRT) was analyzed for the Marlboro Canyon RDA. Monitoring of the water from this SRT continues presently; however, since 2004 target constituents are still elevated.

In 2012, Veris, commissioned a third party consultant to evaluate the Marlboro Canyon SRT and make any recommendations for improved operation. Their findings determined that while the passive treatment method was treating the seepage, the capacity was insufficient to treat the amount of seepage from the RDA as well as applicable water quality standards. As a result of their findings, Veris began assessing remedial actions to diminish the capture and infiltration of precipitation in the RDAs exhibiting seepage



and correspondingly reduce seepage from the RDA. These measures were completed at Gracie and partially completed at Snow Canyon East and Marlboro Canyon RDAs. Completion of this project is scheduled for the 2021 construction season.

In 2011 and 2012, a pilot treatment plant was constructed at the Dash East RDA to assess the effectiveness of an active chemical treatment method. During 2013 to 2014, the active treatment system at Dash East proved successful at removing sulfates and TDS. Sludge from the process, however, did not meet the Toxicity Characteristic Leaching Procedure (TCLP) standards for barium and thus JCG determined this treatment method undesirable.

Upon acquisition of Jerritt Canyon in 2015 by Sprott, JCG constructed SRTs at each of the RDAs, except the DASH RDA. The SRTs are passive bioreactor cells composed of mixed media, including lime, wood chips, straw, rock, and organic material with sulfate reducing bacteria. The cells were designed based on bench scale testing, which reduced both sulfate and TDS levels to within permissible discharge standards. While initial results of the system have not met expectations, JCG is working with a third party passive system expert to improve performance of the SRTs. This work will commence in 2021.

Closure plans currently being investigated require re-sloping the RDAs to a stable landform and the placement of an impermeable liner to prevent infiltration into the RDAs resulting in seepage reduction if not elimination. These closure plans are designed to mitigate the impacts to surface water as a result of seepage from the RDAs. Permitting for this closure option is currently underway.

20.2.5 Seepage from TSF 1

The first phase of TSF 1 was designed in 1979 to 1980 and with the first phase of construction completed in October 1981. While the design incorporated an earthen embankment and compacted soil liner it did not include a synthetic liner. Seepage from TSF 1 was first observed in March 1982 and efforts to control and manage the seepage have continued since that time. Initial discharge to TSF 1 was terminated in November 2013, however, the NDEP issued approval for an EDC in 2016 that allowed for a temporary change to the operating status of TSF 1. The EDC was requested in order to fill a depression in TSF 1 that allowed accumulation of storm water after precipitation events and to provide additional storage capacity for tailings that were generated prior to the 2017 construction season. The EDC (SRK, 2017) stated that the "emergency storage of tailings within TSF 1 to allow continued operation of the Jerritt Canyon mill through the 2016 to 2017 winter (or through the 2017 construction season after additional tailings storage is available via TSF 2 Phase 2 or the WSR)".

As closure activities (including liner installation and growth media placement) continue on the surface of TSF 1, the mitigation of the seepage plume is an on-going project. In September 2020, JCG drilled a well through the tailings and into the contaminated aquifer and conducted pumping tests. Additional pumping tests are scheduled to occur in the coming months. The pumping wells will be used to determine if the plume migration can be reversed and help to close the impoundment entirely.

20.2.6 Water Management Constraints

The water management system at Jerritt Canyon relies on pumping water from TSF 1 and TSF 2 to the evaporation pond, WSR-E, and WSR-W. Analyses of water samples taken from the various ponds indicate that the blended water quality from all ponds exceeds Nevada Profile I standards for antimony, arsenic, cadmium, chloride, manganese, mercury, nitrogen, selenium, sulfate, thallium, and TDS (Linkan, 2017). Bench and pilot testing was conducted to develop a process that will remove the contaminants in order



to meet the standards required for discharge. The WTP is located adjacent to the existing Dash East RDA WTP, now known as the Mine WTP.

The Dash East RDA WTP has been converted to treat water from dewatering of Smith. Water from the Dash East RDA has been re-routed and combined with the tailings supernatant for treatment. The two plants share chemical storage tanks and a concrete containment area. Effluent from both plants is combined in a 60,000 gallon temporary storage tank and subsequently pumped to two separate injection fields. The primary injection point for the tailings WTP is located north of the evaporation pond. The injection point for the Smith WTP is located on USFS land. The injection wells and water disposal are covered under the existing UIC Permit UNEV93214.

Brine generated from the Mine WTP is stored within the evaporation pond which currently receives other inflows associated with the operation of the TSFs. As a result, the evaporation pond is net gaining – the free capacity is diminishing over time. Additionally, the WSR-E and WSR-W are planned to be utilized as the footprint of TSF 3 and both ponds are currently storing solution.

20.2.7 Violation of Secondary Drinking Water Standards

Jerritt Canyon has exceeded the secondary drinking water quality standard for iron at one of the water supply wells (WW7) in 2020 resulting in a violation of the water supply permit limit. As a result of continued exceedances, corrective actions may be established including, but not limited to acquiring a replacement supply well, water treatment, or identifying another means of supply water to the mine. The implementation of these corrective actions will not have a significant impact on the operation of Jerritt Canyon.

20.3 Social or Community Requirements

Jerritt Canyon is located in Elko County, Nevada which is a mining friendly jurisdiction. The employees of JCG are residents of Elko, Nevada and the local area and numerous other mining operations are located nearby. JCG supports the adopt a highway program and conducts roadside cleanup on a voluntary basis as well as supports the local ranchers with fencing. Therefore, no particular social or community involvement required.

20.3.1 Safety

During SLR's site visit, it was reported that the operation was shut down by the Mine Safety and Health Administration (MSHA) for approximately four weeks in 2017 due to dust issues in the plant. No additional shutdowns have been incurred in 2018. JCG permitted and completed a reconfiguration of the baghouse that has helped alleviate the concerns, however, personnel working inside the roaster building are required to wear respirators, which is considered the last line of defense from a safety perspective.

20.4 Mine Closure Requirements

Approved closure and reclamation plans are in place for Jerritt Canyon. Concurrent reclamation is completed where possible.



20.4.1 Concurrent Reclamation Projects

One of the most significant closure activities in progress at the time of writing was the closure of TSF 1, consisting of the installation of 12.5 million square feet of liner and placement of growth media covering approximately 4.0 million square feet. This cover not only will close the facility but will reduce infiltration and thus the volume of contaminated water to manage. The placement of cover on TSF 1 is scheduled for completion in 2021.

In 2020, JCG also completed the construction and installation of the TSF 1 spillway. The installation utilized a product called HydroTurfTM, which is an armored cover over an impermeable membrane, essentially creating a double-lined system. The turf with cementitious infill adds structural integrity to the system while covering the underlying geomembrane from UV degradation. The turf blades have a specified halflife of over 100 years and reinforce the cementitious infill, creating a long lasting structure.

JCG has also decommissioned the fuel dispensing area that has been in place since the construction of the mill and truckshop and replaced them with new double walled storage tanks with leak detection. Additionally, contaminated soil has been removed and the area is now being utilized as a light vehicle parking area.

The second area is located near the haul roads for utilization by heavy equipment. It consists of two double walled, 20,000 gallons tanks that store and dispense red diesel.

JCG has also fully demolished and removed the original chlorination circuit and building. The chlorination processing area is believed to be the source of a contaminant plume located throughout the mill. The plume is currently treated using a pump and treat system which was installed following JCG's acquisition of Jerritt Canyon in 2015.

In addition to mill structures being removed, JCG has also removed an old office area utilized for operations near Murray, West Generator, and MCE. In addition to the removal of the facilities, the Alchem landfill located in the same area was re-contoured and seeded.

20.4.2 Mine Closure Planning

JCG submits AWPs every three years and submits annual updates to the USFS which include updates to the reclamation cost estimates. Nevada uses the "Standardized Cost Estimator" for estimating reclamation costs. Two separate estimates are completed for Jerritt Canyon. One is for the work to be done on private lands and the other is for work to be done on public lands (i.e., USFS and BLM). The total reclamation costs, as updated in 2019, are approximately \$86.6 million, as summarized in Table 20-2.

Table 20-2: 2019 AWP Reclamation Costs **Jerritt Canyon**

Items	Private Lands	Public Lands
Earthwork/Recontouring	\$15,414,924	\$5,977,457
Revegetation/Stabilization	\$604,420	\$1,284,131
Detoxification/Water Treatment/Disposal of Wastes	\$30,243,110	\$24,870
Structure, Equipment and Facility Removal, and Misc.	\$7,652,823	\$1,129,085
Monitoring	\$1,754,975	\$370,434



Items	Private Lands	Public Lands
Construction Management and Support	\$1,645,869	\$535,390
Subtotal	\$57,316,121	\$9,321,367
Indirect Costs	\$16,629,687	\$3,284,568
Indirect Costs - Percentage of Direct Costs	29%	35%
Total	\$73,945,808	\$12,605,935

The Agreement for Adequate Reclamation Bond and Rock Disposal Area Seepage Treatment (NDEP, 2015) required payment of \$10 million in bonds that had not been paid by Veris. On May 4, 2018, NDEP approved a good faith bonding payment schedule to resolve the bonding deficiency associated with the 2015 RDA Agreement. The schedule consisted of quarterly payments totaling \$1,000,000 by February 15, 2019. This was completed and the final payment has been submitted.

As of December 08, 2020, NDEP provided a letter summarizing the financial instruments that form the bond, as shown in Table 20-3 (NDEP, 2020.).

Table 20-3: Bonds Held as of December 8, 2020

Jerritt Canyon

Financial Instruments held by NDEP	Amount (US\$)	Financial Instruments held by USFS	Amount (US\$)
National Union Fire Insurance Co. of Pittsburg, PA Surety #919-063	\$41,277,523	National Union Fire Insurance Co. of Pittsburg, PA Surety #919-065	\$10,949,287
Cash bond, interest earning	\$19,432,640	Insurance Co. of State of Pennsylvania Surety #919-064	\$273,389
Interest earned as of 12/04/2020	\$104,390	Cash bond paid on 8/14/2019	\$1,361,169
Cash bond	\$18,235,645		
NDEP Total Amount ¹	\$78,945,808	USFS Total Amount (excludes interest)	\$12,583,845

Source: NDEP, 2020

Note:

1. The interest earned with NDEP is not included in the total obligated amount.



21.0 CAPITAL AND OPERATING COSTS

For the purpose of this Technical Report, SLR reviewed capital and operating costs required for mining and processing Jerritt Canyon Mineral Reserves. Capital and operating cost estimates were supplied to SLR by JCG largely in the form of US\$/st (processed) values, based on recent operating performance and the current operating budget for 2021. SLR considers these cost estimates to be reasonable, though recommends that a cost estimation using first principals be developed for future cash flow models. All costs in this section are expressed in US dollars (US\$).

21.1 Capital Costs

Sustaining capital costs were estimated by JCG, with the majority of the costs consisting of mine development and heavy mobile equipment needed to replace the aging fleet. Sustaining capital costs for Jerritt Canyon are summarized in Table 21-1.

Table 21-1: Sustaining Capital Cost Estimate
Jerritt Canyon

Sustaining Costs (US\$ millions)	Sustaining Cost Basis (US\$/st milled)
21.4	6.00
9.0	\$9M in 2021
3.6	1.00
5.3	1.50
3.6	1.00
42.8	-
	(US\$ millions) 21.4 9.0 3.6 5.3 3.6

SLR notes that reclamation costs have not been estimated for the end of mine life, though a progressive annual reclamation cost has been applied based on a rate of \$1.50/st processed.

21.2 Operating Costs

Operating costs estimated by JCG, averaging US\$121.5 million/yr or \$164.68/st ore were estimated by JCG for mining, processing, and G&A. Operating cost inputs such as labour rates, consumables, and supplies were based on JCG operating data. A summary of Jerritt Canyon operating costs is provided in Table 21-2.

Table 21-2: Operating Cost Estimate

Jerritt Canyon

Parameter	Total LOM (US\$ millions)	Average Year (US\$ millions/yr)	LOM Unit Cost (US\$/st milled)
Mining	315.6	65.6	88.69
Labor	133.5	27.5	37.50
Variable Costs	93.4	19.3	26.25

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Parameter	Total LOM (US\$ millions)	Average Year (US\$ millions/yr)	LOM Unit Cost (US\$/st milled)
Maintenance Cost	14.9	3.1	4.20
Fixed Costs	57.1	11.8	16.05
Dewatering Phase 1	1.4	1.4 in 2021	0.38
Dewatering Phase 2	8.4	8.4 in 2021	2.36
Dewatering Phase 3	1.6	1.6 in 2022	0.45
Other costs	5.3	1.1	1.50
Development	46.2	9.5	12.99
Labor	20.6	4.3	5.80
Primary Development, Horizontal	14.4	3.0	4.06
Maintenance Cost	2.3	0.5	0.65
Fixed Costs	8.8	1.8	2.48
Processing	160.2	33.1	45.00
Labor	56.9	11.8	16.00
Variable Costs	35.6	7.3	10.00
Maintenance Cost	32.0	6.6	9.00
Fixed Costs	35.6	7.3	10.00
G&A	64.1	13.2	18.00
Total	586.1	121.5	164.68



22.0 ECONOMIC ANALYSIS

This section has been optionally included in this Technical Report although JCG is a producing company, SSX and Smith are currently in production, and there is no planned material expansion.

The economic analysis contained in this Technical Report is based on the Mineral Reserves, economic assumptions provided by JCG for SSX and Smith, and the capital and operating costs as presented in Section 21 of this Technical Report.

22.1 Economic Criteria

22.1.1 Physicals

• Mine life: 5 years (between 2021 and 2025):

Underground ore tonnes mined: 3.559 Mst

 Gold grade: 0.20 oz/st Au

Processed:

Total Ore Feed: 3.559 Mst Gold grade: 0.20 oz/st Au

Contained Metal:

o Gold: 703,164 oz Au

Average LOM Recovery:

 Gold recovery 86%

Recovered Metal:

o Gold: 604,721 oz Au

Payable Metal:

o Gold: 604,721 oz Au

22.1.2 Revenue

Revenue is estimated based on the following LOM weighted average metal prices:

 Gold price: US\$1,500/oz Au

22.1.3 Capital Costs

- LOM sustaining capital costs of US\$42.8 million.
- Closure costs of US\$5.3 million were estimated annually based on US\$1.50/st milled.

22.1.4 Operating Costs

• LOM unit operating cost average of:

Mine Development: US\$12.99/st mined



Underground Mining: US\$88.66/st mined

US\$45.00/st milled o Processing:

US\$18.00/st milled G&A:

Total unit operating costs: US\$164.68/st milled. LOM operating costs: US\$586.1 million n.

22.1.5 Taxation and Royalties

The Corporate Federal income tax rate in Nevada is 21% and State income tax rate is 5% for an average realized effective income tax rate of 24.95%.

- Nevada Select (ELY Gold) royalty rate: 0.5% NSR
- NouHgt Technologies royalty rate: 0.225% NSR (based on mill throughput and realized gold price)
- Leaseholder land royalties: average \$1.05 million/yr

22.2 Cash Flow

SLR reviewed the JCG LOM after-tax cash flow model to confirm the economics of the LOM plan. The model is based on JCG's JCG Model Ver2.0 file, which includes Measured and Indicated material, as well as material from other areas on the Mine site, and credit for tolling. The JCG model does not take into account the following components:

- Financing costs
- Existing working capital
- Insurance
- Overhead cost for a corporate office

SLR has used JCG's model as a reference for capital and operating cost rates but has created a standalone cash flow model to represent only the Mineral Reserve material. SLR's cash flow cash flow summary is presented in Table 22-1. All costs are in Q4 2020 US dollars with no allowance for inflation.



Table 22-1: After-Tax Cash Flow Summary
Jerritt Canyon

MINING Underground Departing Days Tonnes milled per day Tonnes mil		INPUTS	UNITS	TOTAL		2021 Year 1	2022 Year 2	2023 Year 3	2024 Year 4	2025 Year F	2026 Year 6
Total Production	MINING	INPUIS	UNITS	IOIAL		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Container Days 385 days 1.770 385 385 385 385 380 3											
Tomes milled per day		365	davs	1.770		365	365	365	365	310	
Au Waste tons 1,25,26,2745											
Au Waste tons 1,25,26,2745	·										
Waste Total Moved Total	Smith Production		tons	1,434,644		291,086	292,022	291,963	291,891	267,681	-
Total Moved	Au		oz/t	0.23		0.19	0.24	0.21	0.22	0.28	-
SSX Production	Waste		tons	928,101		392,416	238,916	181,456	68,656	46,657	-
Au Waste tons 33,074 72,065 141,951 6,682 8,266 13,109 - 1	Total Moved		tons	2,362,745		683,502	530,938	473,419	360,548	314,338	-
Au Waste tons 33,074 72,065 141,951 6,682 8,266 13,109 - 1											
Waste											-
Total Moved tons											-
Total Production Au tons Ox/1 Au Waste Total Moved T											-
Au Waste Total Moved	Total Moved		tons	2,455,143		510,905	598,334	505,240	474,708	365,957	-
Au Waste Total Moved	Total Dundrichler			2 550 002		720.005	740 765	720 240	720 202	620 520	
Waste Total Moved Total Gross Revenue Total Gros											-
Total Moved											
### Note Processing Total Augrage Recovery											
Mill Feed Au tons 0,558,993 (72,085) 748,765 (730,310 (730,303 620,529	Total Moved		tons	4,017,007		1,194,407	1,129,271	978,038	835,233	080,295	-
Mill Feed Au tons 0,558,993 (72,085) 748,765 (730,310 (730,303 620,529	PROCESSING										
Au			tons	3.558.993		729.085	748.765	730.310	730.303	620.529	-
Contained Au											-
Mill Recovery Au Net Recovery Au Total Average Recovery Total Recovery Au Total Average Recovery Total Recovered Au US\$1500 / oz											-
Au Net Recovery Au Total Average Recovery Total Average Recovery Total Average Recovery Total Recovered Au US\$1500 / oz Au US\$,							
Net Recovery Au Au Total Average Recovery Total Recovered Au EVENUE Metal Prices Au US\$1500 /oz Au US\$1000 \$ 907,081 \$ 169,653 \$ 189,523 \$ 185,180 \$ 181,580 \$ 172,146 \$ - Treatment S Treatment S Treatment S Treatment S Treatment S S S S S S S S S S S S S	Mill Recovery										
Au Total Average Recovery Total Average Recovery Total Revenue Metal Prices Au US\$1500 /oz Au US\$1500 \(\)	Au	86%	%	86%		86%	86%	86%	86%	86%	86%
Total Average Recovery Total Recovered Au	Net Recovery										
Total Recovered Au REVENUE Metal Prices Au US\$1500 /oz Au US\$1500 S 1,500 S 1,50	Au		%	86%		86%	86%	86%	86%	86%	86%
Au Metal Prices Au US\$1500 /oz Au US			%	86%		86%	86%	86%	86%	86%	-
Nevada Select Royalty Inc Nevada Select Royalty Inc Nevada Select Royalty Inc Nevada Select Royalty Inc Novigit Section Novigi											
Metal Prices Au US\$1500 /oz Au Input Units US\$/oz Au \$ 1,500.00 \$ 1,500.0 </td <td>Au</td> <td></td> <td>OZ</td> <td>604,721</td> <td></td> <td>113,102</td> <td>132,349</td> <td>123,453</td> <td>121,053</td> <td>114,764</td> <td>-</td>	Au		OZ	604,721		113,102	132,349	123,453	121,053	114,764	-
Metal Prices Au US\$1500 /oz Au Input Units US\$/oz Au \$ 1,500.00 \$ 1,500.0 </td <td>DEVENITE</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	DEVENITE	-									
Au Payable Percentage 100% U\$\$/02 Au U\$\$/02 Au U\$\$/02 Au \$ 1,500.00 \$ 1,600.00 \$ 1,			Innut Units								
Au Payable Percentage 100% US\$ '000 100% 100% 100% 100% 100% 100% 100%		US\$1500 /oz Au		\$ 1500.00	Ś	1500 \$	1 500 \$	1 500 \$	1 500 \$	1 500 \$	1,500
Au Gross Revenue Total Gross Revenue US\$ '000 \$ 907,081 \$ 169,653 \$ 198,523 \$ 185,180 \$ 181,580 \$ 172,146 \$ - Treatment \$ 0.40 US\$/oz \$ 242 \$ 45 \$ 53 \$ 49 \$ 48 \$ 46 \$ - Transport \$ 1,500.00 US\$/shipment (12/yr) \$ 379 \$ 78 \$ 78 \$ 78 \$ 78 \$ 78 \$ 66 \$ - Total charges Gross NSR Royalties Nevada Select Royalty Inc Nouldgt Technologies, LLC Leaseholder Roylties Leaseholder Roylties Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ - Total Royalties	7.0	0392300702710	000,02710	7 2,500.00	Ť	2,500 \$	2,500 ψ	2,500 \$	2,500 ψ	2,500 \$	2,500
Au Gross Revenue Total Gross Revenue US\$ '000 \$ 907,081 \$ 169,653 \$ 198,523 \$ 185,180 \$ 181,580 \$ 172,146 \$ - Treatment \$ 0.40 US\$/oz \$ 242 \$ 45 \$ 53 \$ 49 \$ 48 \$ 46 \$ - Transport \$ 1,500.00 US\$/shipment (12/yr) \$ 379 \$ 78 \$ 78 \$ 78 \$ 78 \$ 78 \$ 66 \$ - Total charges Gross NSR Royalties Nevada Select Royalty Inc Nouldgt Technologies, LLC Leaseholder Roylties Leaseholder Roylties Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ - Total Royalties	Au Payable Percentage	100%	US\$ '000	100%		100%	100%	100%	100%	100%	100%
Total Gross Revenue Comparison	,		·								
Treatment \$ 0.40 US\$/oz US\$/shipment (12/yr) \$ 242 \$ 45 \$ 53 \$ 49 \$ 48 \$ 46 \$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Au Gross Revenue		US\$ '000	\$ 907,081	\$	169,653 \$	198,523 \$	185,180 \$	181,580 \$	172,146 \$	-
Transport Early Settlement fees Total charges \$ 1,500.00 US\$/shipment (12/yr) \$ 379 \$ 78 \$ 78 \$ 78 \$ 78 \$ 78 \$ 66 \$ - Early Settlement fees Total charges \$ 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 \$ 925 \$ 907 \$ 860 \$ - Early Settlement fees Nought Technologies, LLC Leaseholder Roylties Total Royalties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Early Settlement fees \$ 0.225 US\$ '000 \$ 5,092 \$ 1,050	Total Gross Revenue		US\$ '000	\$ 907,081	\$	169,653 \$	198,523 \$	185,180 \$	181,580 \$	172,146 \$	-
Transport Early Settlement fees Total charges \$ 1,500.00 US\$/shipment (12/yr) \$ 379 \$ 78 \$ 78 \$ 78 \$ 78 \$ 78 \$ 66 \$ - Early Settlement fees Total charges \$ 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 \$ 925 \$ 907 \$ 860 \$ - Early Settlement fees Nought Technologies, LLC Leaseholder Roylties Total Royalties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Early Settlement fees \$ 0.225 US\$ '000 \$ 5,092 \$ 1,050											
Early Settlement fees Total charges \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$											-
Total charges \$ 621 \$ 123 \$ 131 \$ 128 \$ 127 \$ 112 \$ - Gross NSR \$ 906,460 \$ 169,529 \$ 198,392 \$ 185,052 \$ 181,453 \$ 172,034 \$ - Royalties Nevada Select Royalty Inc \$ 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 \$ 925 \$ 907 \$ 860 \$ - NouHgt Technologies, LLC \$ 0.225 US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -		\$ 1,500.00	US\$/shipment (12/yr)								-
Section Sect											
Royalties Nevada Select Royalty Inc 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 925 907 \$ 860 \$ - NouHgt Technologies, LLC 0.225 US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -	Total charges			\$ 621	\$	123 \$	131 \$	128 \$	127 \$	112 \$	-
Royalties Nevada Select Royalty Inc 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 925 907 \$ 860 \$ - NouHgt Technologies, LLC 0.225 US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -	Corres NICD				_	460 530 6	400 202 6	405.053 6	404 453 . 6	472.024 6	
Nevada Select Royalty Inc 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 \$ 925 \$ 907 \$ 860 \$ - NouHgt Technologies, LLC 0.225 US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -	Gross NSK			ο 906,460	,	169,529 \$	198,392 \$	185,052 \$	181,453 \$	1/2,034 \$	-
Nevada Select Royalty Inc 0.5% US\$ '000 \$ 4,532 \$ 848 \$ 992 \$ 925 \$ 907 \$ 860 \$ - NouHgt Technologies, LLC 0.225 US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -	Royalties										
NouHgt Technologies, LLC US\$ '000 \$ 801 \$ 164 \$ 168 \$ 164 \$ 164 \$ 140 \$ - Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -		0.5%	uss 'nnn	\$ 4522	¢	848 ¢	992 ¢	q25 ¢	907 ¢	860 ¢	_
Leaseholder Roylties US\$ '000 \$ 5,092 \$ 1,050 \$ 1,050 \$ 1,050 \$ 892 \$ - Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -											
Total Royalties US\$ '000 \$ 10,425 \$ 2,062 \$ 2,210 \$ 2,140 \$ 2,122 \$ 1,892 \$ -		0.225									
Net Smelter Return US\$ '000 \$ 896,035 \$ 167,468 \$ 196,181 \$ 182,913 \$ 179,331 \$ 170,142 \$ -	, otal riojanico		23, 000	10,423		_,002 3	2,210 9	2,140 9	2,122 7	1,052 9	_
	Net Smelter Return		US\$ '000	\$ 896,035	\$	167,468 \$	196,181 \$	182,913 \$	179,331 \$	170,142 \$	-
				,		· , · · · · ·	, •		-, -	-, - +	



						2021	2022		2023	20	24	2025	2026	;
	INPUTS	UNITS		TOTAL		Year 1	Year 2		Year 3	Yea		Year 5	Year 6	
OPERATING COST														
Mining (Underground)	\$ 101.68	US\$/t milled	\$	101.68	\$	101.68	\$ 101	.68 \$	101.68	\$	101.68	\$ 101.68	\$ 1	101.68
Processing	\$ 45.00	US\$/t milled	\$	45.00	\$	45.00	\$ 45	.00 \$	45.00	\$	45.00	\$ 45.00	\$	45.00
G&A	\$ 18.00	US\$/t milled	\$	18.00	\$	18.00	\$ 18	.00 \$	18.00	\$	18.00	\$ 18.00	\$	18.00
Total Unit Operating Cost		US\$/t milled	\$	164.68	\$	164.68	\$ 164	68 \$	164.68	\$	164.68	\$ 164.68	\$ 1	L64.68
Mining (Underground)		US\$ '000	Ś	361,867	\$	74,131	\$ 76.1	.32 \$	74,256	Ś	74,255	\$ 63,094	Ś	_
Processing		US\$ '000	\$	160,155	\$	32,809		94 \$	32,864		32,864			-
G&A		US\$ '000	\$	64,062	\$	13,124		78 \$	13,146		13,145			_
Total Operating Cost	\$969.18/oz Au	US\$ '000	\$	586,084	\$	120,063		04 \$	120,265		120,264			-
Operating Cashflow		US\$ '000	\$	309,950	\$	47,404	\$ 72,8	77 \$	62,647	\$	59,067	\$ 67,955	\$	-
CAPITAL COST														
Direct Cost														
Safety, Health & Environmental		US\$ '000	\$	-	\$	- :	\$	\$	-	\$	-	\$ -	\$	-
Heavy Mobile Equipment		US\$ '000	\$	-	\$	- :	\$	\$	-	\$	-	\$ -	\$	-
Expansion		US\$ '000	\$	-	s .	-	\$	\$		\$		\$ -	\$	-
Modernization		US\$ '000	\$	_	\$	-	\$	\$		\$		\$ -	\$	-
Other		US\$ '000	Ś	_	Ś		Ś .			\$		\$ -	\$	_
Total Direct Cost		US\$ '000	\$	-	\$		\$	· \$		\$		\$ -	\$	-
Sustaining Cost														
Mine Capital		US\$ '000	Ś	21,354	\$	4,375	¢ 1/	93 \$	4,382	ċ	4,382	\$ 3,723	¢	
·				21,334	\$,	\$,		\$	_
Exploration Capital		US\$ '000	\$					Y				~		-
Tailings Facility		US\$ '000	\$	9,000	\$	-,	Ÿ	\$		\$		\$ -	\$	-
Processing Plant		US\$ '000	\$	3,559	\$			49 \$		\$			\$	-
Reclamation and closure	\$ 1.50	US\$ '000	\$	5,338	\$,	. ,	23 \$		\$			\$	-
Sustaining Exploration Diamond Drilling	\$ 1.00	US\$ '000	\$	3,559	\$			49 \$		\$	730		\$	-
Total Sustaining Cost		US\$ '000	\$	42,810	\$	15,926	\$ 7,1	13 \$	6,938	\$	6,938	\$ 5,895	\$	-
Working Capital		US\$ '000	\$	(1,284)	\$	(17,519)	\$ (3,6	68) \$	1,339	\$	236	\$ 403	\$ 1	17,925
All in Sustaining Cost	\$1037.85/oz Au	US\$ '000	\$	627,610	\$	118,471	\$ 126,7	50 \$	128,542	\$	127,438	\$ 108,485	\$ 1	17,925
CASH FLOW														
Net Pre-Tax Cashflow		US\$ '000	Ś	268,424	\$	48,996	¢ 60/	31 \$	54,371	ċ	51,894	\$ 61,657	¢ (1	17,925)
Cumulative Pre-Tax Cashflow		US\$ '000	,	200,424	\$	48,996		28 \$	172,798		224,692			58,424
Cullidiative Fie-Lax Casillow		033 000			ş	40,550	ş 110,º	<i>چ</i> 20	1/2,/90	ş	224,032	\$ 200,349	Ş 20	00,424
Depreciation		US\$ '000	Ġ	42,810	\$	2,979	\$ 57	01 \$	7,422	\$	10,839	\$ 16,171	¢	
Taxes		US\$ '000	Ś	65,319	Ś	10,811		55 \$	13,505		11,760			
laxes		033 000	ې	05,519	ş	10,611	\$ 10,5	33 Ş	13,303	ş	11,700	\$ 12,000	ş	-
After-Tax Cashflow		US\$ '000	Ś	203,105	Ś	38,185	ć E2 0	76 \$	40,865	ć	40,134	\$ 48,969	ė (1	17,925)
Cumulative After-Tax Cashflow		US\$ '000	ې	203,103	\$	38,185		61 \$	131,926		172,061			03,105
					Ş	30,103	\$ 91,0	101 Ş	131,926	Þ	172,001	\$ 221,029	\$ 20.	J3,1U5
Carradette Arter Tax Castillott		033 000												
All-In Sustaining Cost		US\$/oz	\$	1,041	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
			\$	1,041	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost			\$	1,041	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost	5.0%			1,041 \$234,234	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS	5.0% 7.5%	US\$/oz		<u> </u>	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS Pre-tax NPV at 5% discounting		U\$\$/oz		\$234,234	\$	1,203	\$ 5	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS Pre-tax NPV at 5% discounting Pre-tax NPV at 7.5% discounting	7.5%	U\$\$/oz U\$\$ '000 U\$\$ '000		\$234,234 \$219,617	\$	1,203	\$ 5	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS Pre-tax NPV at 5% discounting Pre-tax NPV at 7.5% discounting Pre-tax NPV at 10% discounting	7.5% 10.0%	US\$/oz US\$ '000 US\$ '000 US\$ '000		\$234,234 \$219,617 \$206,383	\$	1,203	\$ 5	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS Pre-tax NPV at 5% discounting Pre-tax NPV at 7.5% discounting Pre-tax NPV at 10% discounting After-Tax NPV at 5% discounting	7.5% 10.0% 5.0%	US\$/0z US\$ '000 US\$ '000 US\$ '000 US\$ '000		\$234,234 \$219,617 \$206,383 \$177,639	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		
All-In Sustaining Cost PROJECT ECONOMICS Pre-tax NPV at 5% discounting Pre-tax NPV at 7.5% discounting Pre-tax NPV at 10% discounting	7.5% 10.0%	US\$/oz US\$ '000 US\$ '000 US\$ '000		\$234,234 \$219,617 \$206,383	\$	1,203	\$ 9	86 \$	1,031	\$	1,052	\$ 943		



22.2.1 Cash Flow Analysis

Mine economics have been evaluated using the discounted cash flow method, using mid-year discounting convention, and taking into account annual processed tonnages and gold grades. The associated process recovery, metal price, operating costs, royalties, and capital expenditures were also considered.

The economic analysis confirmed that the Jerritt Canyon Mineral Reserves are economically viable. The pre-tax net present value (NPV) at a 5% base discount rate is US\$234 million and the after-tax NPV at a 5% base discount is US\$178 million.

The summary of the results of the cash flow analysis is presented in Table 22-2.

Table 22-2: Cash Flow Analysis Jerritt Canyon

Item	Discount Rate	Units	Value
Pre-tax NPV at 5% discount	5%	US\$ million	234
Pre-tax NPV at 7.5% discount	7.5%	US\$ million	220
Pre-tax NPV at 10% discount	10%	US\$ million	206
After-Tax NPV at 5% discount	5%	US\$ million	178
After-Tax NPV at 7.5% discount	7.5%	US\$ million	167
After-tax NPV at 10% discount	10%	US\$ million	157

The undiscounted pre-tax cash flow is US\$268 million, and the undiscounted after-tax cash flow is US\$203 million. For this cash flow analysis, the internal rate of return (IRR) and payback are not applicable as there is no negative initial cash flow (no initial investment to be recovered).

22.3 Sensitivity Analysis

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities on after-tax NPV at a 5% discount rate. The following items were examined:

- Metal price
- Head grade
- Metallurgical recovery
- Operating costs
- Capital costs

After-tax sensitivity over the base case has been calculated for -20% to +20% (for head grade), -10% to +5% (for recoveries), -20% to +20% (for metal prices), and -5% to +15% (operating costs and capital costs) variations to determine the most sensitive parameter of this project. The after-tax NPV is most sensitive to head grade and metal prices, followed by operating costs, and is least sensitive to capital costs.

The sensitivities are presented in Table 22-3 and Figure 22-1.



Table 22-3: After-Tax Sensitivity Analysis
Jerritt Canyon

	Head Grade (oz/st Au)	NPV at 5% (US\$ million)
80%	0.16	58.8
90%	0.18	118.2
100%	0.20	177.6
110%	0.22	237.1
120%	0.24	296.5
	Recovery (% Au)	NPV at 5% (US\$ million)
90%	0.77	118.5
98%	0.82	148.1
100%	0.86	177.6
103%	0.88	192.4
105%	0.90	207.2
	Metal Price (US\$/oz Au)	NPV at 5% (US\$ million)
80%	1,200	59.3
90%	1,350	118.5
100%	1,500	177.6
110%	1,650	236.8
120%	1,800	295.9
	Operating Costs (US\$ million)	NPV at 5% (US\$ million)
95.0%	528.9	221.0
97.5%	557.1	199.6
100.0%	586.1	177.6
107.5%	677.3	107.9
115.0%	775.1	32.4



	Total Capital Costs (US\$ million)	NPV at 5% (US\$ million)
95.0%	40.7	179.0
97.5%	41.7	178.3
100.0%	42.8	177.6
107.5%	46.0	175.5
115.0%	49.2	173.5

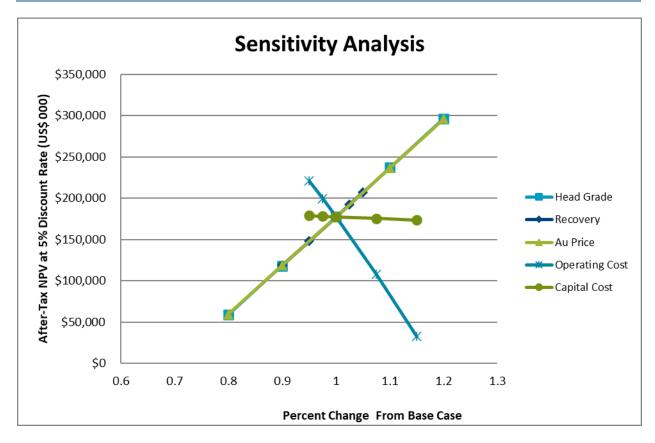


Figure 22-1: After-Tax NPV Sensitivity Graph



23.0 ADJACENT PROPERTIES

There are no adjacent properties to report in this section.



24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.



25.0 INTERPRETATION AND CONCLUSIONS

The QPs offer the following conclusions:

25.1 Geology and Mineral Resources

- JCG geologists have a good understanding of the regional, local, and deposit geology and controls on mineralization.
- Exploration and development sampling and analysis programs involve industry standard practices, providing generally reasonable results. The drill hole database was verified by the QP and is suitable for Mineral Resource estimation work. The resulting data can effectively be used for the estimation of Mineral Resources and Mineral Reserves.
- The methods and procedures utilized to gather geological, assaying, density, and other information are reasonable and meet generally accepted industry standards.
- Sampling and assaying have been carried out using industry standard QA/QC practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, secure sample storage, use of third-party laboratories, and use of standards, blanks, and duplicates.
- Since 2015, Jerritt Canyon has made considerable advances in the compilation and interpretation of historical geophysical and geochemical datasets resulting in the identification of 17 high priority target areas. The property holds significant exploration potential, particularly in the southern portion.
- Since January 1, 2015 through December 31, 2020, JCG has drilled a total of 18,533 holes between RC and core from underground drilling sites, comprising 2,800,695 ft. This has enabled Jerritt Canyon to increase the size and confidence of the existing resources.
- The geological wireframes are reasonable and plausible interpretations of the drill results.
- The resource model has been prepared using appropriate methodology and assumptions, including:
 - Treatment of high grade assays
 - Compositing length
 - Customized search parameters
 - Bulk density
 - Cut-off grade
 - Classification
- As of December 31, 2020 and at a cut-off grade of 0.11 oz/st Au, the Measured and Indicated Mineral Resources at Jerritt Canyon total 5.217 Mst grading 0.160 oz/st Au containing approximately 832,000 oz Au. In addition, Inferred Mineral Resources are estimated at 1.950 Mst grading 0.171 oz/st Au containing approximately 334,000 oz Au.
- Mineral Resource estimates have been prepared utilizing acceptable estimation methodologies in accordance with CIM MRMR Best Practice Guidelines. The classification of Measured, Indicated, and Inferred Mineral Resources conforms to CIM (2014) definitions.



25.2 Mining and Mineral Reserves

- Mining operations at Jerritt Canyon are well established and carried out by an experienced mining contractor at Smith and SSX using the cut and fill mining method.
- A significant portion of the Mineral Reserves are located below the current water table. There is a dewatering plan in place for the mine below the 6,600 FASL water table, which allows for the inclusion of Mineral Reserves below this elevation.
- Groundwater flows in the Roberts Mountain and Hanson Creek formations (the principle aguifers) are controlled primarily by the openness and continuity of fractures and joints with the primary water bearing strata being the ore zones. Faulting and tectonic displacement of the materials in the Jerritt Canyon District is extensive.
- The main faults trend west northwest east southeast, and in general are permeable water conduits. Complementary faults and displacement sets at right angles, south southwest – north northeast, are generally highly myolinitized, and tend to form a barrier to groundwater flow and compartmentalize groundwater.
- Dewatering goals of the current operation are to reduce the water level to the pre 2008 level of approximately 6,535 FASL. Currently, pumping is underway to dewater the existing workings. This consists of the operation of two dewatering wells and a barge to dewater Zones 2 and 4. The wells are each pumping at approximately 700 gpm while the barge pumps at approximately 400 gpm. Two additional, 500 ft deep underground dewatering wells have been designed.
- It is anticipated that over time Smith will be dewatered at a rate of 2,100 gpm. All pumped groundwater will continue to be conveyed to the WTP which has a capacity of 1,400 gpm. Any flows over 1,400 gpm will be routed to Zone 9 prior to treatment. Following treatment, the water is pumped to an underground injection well field consisting of three 1,200 ft deep injection wells located on USFS land.
- Another aspect of Jerritt Canyon mine water/groundwater management is pollution control from TSF 1. Initially, TSF 1 was lined with compacted native soils. In addition, there are 90 seepage control wells, 14 freshwater recharge wells receiving water from the tailings WTP, and greater than 80 down gradient monitoring wells (Wanner et al, 2017).
- Production is limited by mine capacity, and production forecasting is based on mining rates of 800 stpd for Smith and 1,200 stpd for SSX. There is potential for increased production from Smith once dewatering is advanced and more headings are available.

25.3 Mineral Processing and Metallurgical Testing

- Historical gold grade-recovery relationships for three different time periods, 1) 1981 to 2020, 2)1989 to 2020 and 3) 1997 to 2020 were plotted. The first period is inception to date, the second period begins when the roaster was commissioned, and the third period begins when chlorination was discontinued. The inception to date line and the 1989 to 2020 lines are essentially the same. The 1997 to 2020 line indicates a slightly higher sensitivity of gold recovery to feed grade. The QP notes that the data are scattered and the correlations of the three lines are low suggesting that variables other than head grade, including sulfide sulfur oxidation, TOC, and roaster performance contribute to changes in gold recovery.
- SLR notes that the process operating data indicate very consistent plant feed and operational performance and, with the low correlation between grade and recovery, the use of near term historical averages would provide a reasonable gold recovery value for planning purposes. The



- operation is currently using a constant average gold recovery of 86% for the LOM plan and budget. The consistency in recovery could be affected by changes in mineralogical characteristics as new ore-types are encountered in the future.
- The design recovery of the whole ore roaster using oxygen instead of air was 87% to 90%. Pilot plant testing of the oxygen roasted calcine by Dorr Oliver (1987) achieved an average gold recovery of 88%. SLR notes that the process continues to operate consistently in the design range depending primarily on roaster performance, as some of the mineralized materials are reported to have zero gold recovery without oxidation.
- The main deleterious elements are arsenic and mercury. The processing plant is designed with the appropriate gas cleaning systems including mercury scrubbing from the gas streams and mercury collection from the refinery retort condenser.

25.4 Infrastructure

- Jerritt Canyon is a mature operation that has been operating for nearly 40 years, and as a result the requisite infrastructure is in place including:
 - Access Roads
 - Power supply and distribution
 - Office buildings
 - Warehouse facilities
 - Maintenance shops
 - Laboratory facilities
 - Communication networks
 - Onsite security
 - TSFs
 - Water management systems

25.5 Tailings and Water Management Facilities

- TSF 1 is currently inactive and in the process of being closed and reclaimed under a FPPC approved by the State of Nevada regulatory agencies. The TSF 1 FPPC consists of regrading the top impoundment surface to promote runoff and preclude surface water impoundment, placing a working cover impoundment surface on which an HDPE liner will be installed, installing a three foot thick alluvial growth media cover, and revegetating the final surface with an approved seed mix. As of the date of this Technical Report, the following reclamation and closure activities have been completed on TSF 1:
 - Outer embankment slopes have been graded, covered, and revegetated.
 - Working cover and HDPE liner have been installed over 70% of the 300 acre impoundment surface.
 - o Growth media has been installed over approximately 30% of the 300 acre impoundment surface.



- For active tailings management, Jerritt Canyon is currently depositing tailings with a 40:60, solids/water, ratio into TSF 2 Phase 2. TSF 2 is an HDPE lined impoundment with a LCRS, which is designed and constructed to meet or exceed the most current environmental and engineering standards. As part of the TSF 2 monitoring program, Jerritt Canyon measures pumped flows from the LCRS, hydraulic head development above the TSF 2 secondary HDPE liner, and surrounding groundwater depths, and the presence (or absence) of process solution in the vadose zone underlying TSF 2.
- TSF 2 Phase 3 is currently being constructed as an eight foot raise. Construction and commissioning of TSF 2 Phase 3 is expected in May 2021 and will only provide an additional seven months of tailings storage until December 2021, approximately.
- TSF 2 Phase 4 is planned for construction during 2021 and will allow storage of an additional 1.7 Mst of tailings. Due to the short operational life of Phase 3, TSF 2 Phase 4 must be constructed and commissioned before December 2021. This construction will require approximately 1.5 million cubic yards of compacted fill excavated from approved borrow source over one mile east of TSF 2. Assuming a planned production rate of 2,350 stpd, TSF 2 Phase 4 will be filled to capacity by December 2023. The Jerritt Canyon Water Pollution Control Permit authorizes up to 3.0 Mst of dry tailings to be produced per annum (approximately 8,200 stpd). If the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 2 Phase 4 to capacity will be shortened proportionally.
- Jerritt Canyon plans to convert the existing WSR to TSF 3 for tailings disposal after TSF 2 is filled to capacity. TSF 3 will store approximately of 2.4 Mst of tailings and provide 2.6 years of tailings storage at an assumed average production rate of 2,350 stpd. Since TSF 3 would be commissioned before January 2024, additional tailings storage (beyond TSF 3) would need to be permitted and constructed before the end of 2025 to ensure a new facility is ready for tailings disposal by the middle of 2026. Likewise, if the average deposition rate is increased above 2,350 stpd, the timeline for filling TSF 3 and needing additional tailings storage beyond TSF 3 will be shortened proportionally.
- The feasibility of converting the WSR into TSF 3 in a timely manner relies on the removal of 372 Mgal of process solution which is currently stored within the WSR by the end of 2022. Within the next two years, this volume will require removal via active and passive evaporation and/or treatment via the process WTP. If this volume cannot be removed by the end of 2022, other locations or methods of tailings disposal will need to be permitted, approved, and constructed.
- Currently, the process WTP only removes approximately 200 gpm of process solution from the site-wide water balance inventory as permeate. Under these conditions, a significant increase in the WTP capacity is needed to eliminate positive water balances during the winter and spring. At this stage, the exact increase is unknown, but may be three to four times the current treatment rate for costing purposes.

25.6 Environmental Considerations

- All of the necessary permits and approvals to operate are either in place or in the process of being renewed or modified.
- Jerritt Canyon has multiple violations related to their environmental permits including air quality, water supply, surface water, and UIC.
- Although environmental permitting requirements are being exceeded, JCG is actively mitigating these issues. Persisting exceedances would likely result in corrective actions and/or fines and not



result in the revocation of operational permits due to the social and economic considerations of this operation.

25.7 Safety

• The large number of MSHA citations and extended shutdowns imposed during 2017 have been resolved and JCG continues to adhere to MSHA's regulations.



26.0 RECOMMENDATIONS

The QPs offer the following recommendations:

26.1 Geology and Mineral Resources

- 1. Explore the 17 high priority exploration targets. The QP concurs with First Majestic's plans to carry out a multi-year exploration program that will include a significant amount of surface and underground drilling that will cost approximately US\$10 million to US\$15 million annually.
- 2. Continue drilling to expand Mineral Resources.
- Continue to convert Inferred Mineral Resources to Indicated Mineral Resources.
- 4. Update the block models on a regular basis.
- 5. Improve mineralized material tracking and reconciliation procedures.

26.2 Mining and Mineral Reserves

- 1. The dewatering system does not have a backup power supply. Any type of long term power loss can cause the operation to flood and damage infrastructure. A backup power system is recommended for site to keep critical infrastructure running and prevent damage.
- 2. Consider and assess the viability of surface water wells. This could reduce the risk of flooding underground workings in the event of a site power grid interruption.
- 3. Adopt long term planning and Mineral Reserve estimation processes, initiated by a mining method optimization trade-off study, and carry out multiple mining method planning exercises with the intention of reducing operating cut-off grades.
- 4. Adjust mobile mining fleet as necessary to achieve reduced mining heights.
- 5. Review cut-off grades and modifying factors as part of the planning process and optimize them where appropriate.
- 6. Explore and evaluate the old workings of the mines to determine which areas are accessible. Much of the resource of the mine is located in these areas. Determine if new development is required or rehabilitation of old workings is feasible. If areas are not accessible, then the resource/reserves should be adjusted to reflect the update.

26.3 Mineral Processing and Metallurgical Testing

1. Complete metallurgical testing of samples from the various mining sources that represent the current and future feed to the processing plant in order to develop more accurate estimates for future gold recovery and to provide information to support blending of plant feed with respect to sulfide sulfur, TOC concentrations, and other variables that contribute to plant performance. Metallurgical testing of two main ore bodies is currently planned, including characterization and roast-CIL leach testing at various grind sizes. The estimated cost of the program is US\$150,000.

26.4 Infrastructure

1. Construction of the additional TSF capacity and increased WTP capacity are critical to operation of the Mine. These projects should be completed as soon as possible, as planned.



26.5 Tailings and Water Management Facilities

- 1. Accelerate the removal of surplus process water from the system by the process WTP and forcedair (i.e. active) evaporation. The process WTP needs to treat and remove its original design rate of 700 gpm from the water inventory in order to empty the WSR within one year to prepare it for conversion to TSF 3 before the end of 2023 or preferably sooner.
- 2. Explore the feasibility of designing a downstream raise of the TSF 2 embankment (Phase 5 Raise). Depending on results of embankment stability analyses, which will dictate the additional raise height, TSF 2 Phase 5 could provide multiple years of additional tailings storage.
- 3. Investigate and identify 'green field' areas near the existing process facilities and mill site where future TSFs may be permitted, designed, constructed, and operated. Due to the multiple-year lead times for permitting such facilities, investigation and conceptual designs need to be initiated as soon as possible.
- 4. Regardless of which option is eventually selected for future tailings storage, Jerritt Canyon should start the permitting process for additional tailings storage in the near future, before TSF 2 Phase 4 is filled to capacity in 2023 and assuming the WSR cannot be emptied within the next year.

26.6 Environmental Considerations

- 1. JCG should continue to mitigate the environmental regulatory exceedances and challenges related to air and water quality to achieve compliance with all their environmental permits.
- 2. To maintain a strong working relationship with regulators, JCG should actively develop a permitting strategy and plan that involves seeking permit approvals and modifications on a regular basis.

26.7 Safety

1. Efforts to alleviate air quality concerns in the processing facilities and provide working areas that can be accessed without wearing respirators should be a top priority and pursued vigorously.



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28.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 was prepared and signed by the following authors:

(Signed & Sealed) Ryan Rodney

Dated at Lakewood, CO April 30, 2021 Ryan Rodney, C.P.G. Associate Geologist

(Signed & Sealed) Gordon L. Fellows

Dated at Elko, NV April 30, 2021 Gordon L. Fellows, P.E.
Jerritt Canyon, Mining Manager

(Signed & Sealed) Chelsea Hamilton

Dated at Whitehorse, YT April 30, 2021

Chelsea Hamilton, P.Eng. Project Mining Engineer

(Signed & Sealed) Andrew P. Hampton

Dated at Lakewood, CO April 30, 2021 Andrew P. Hampton, M.Sc., P.Eng. Principal Metallurgist

(Signed & Sealed) Jeremy Scott Collyard

Dated at Lakewood, CO April 30, 2021 Jeremy Scott Collyard, MMSA QP Principal Environmental Specialist



29.0 CERTIFICATE OF QUALIFIED PERSON

29.1 Ryan Rodney

I, Ryan Rodney, C.P.G., as an author of this report entitled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 prepared for First Majestic Silver Corp., do hereby certify that:

- 1. I am an Associate Geologist with SLR International Corporation, of 1658 Cole Boulevard, Suite 100, Lakewood, CO USA 80401.
- 2. I am a graduate of the University of Arizona in 2008 with a B.Sc. degree in Geology.
- 3. I am Certified Professional Geologist with the American Institute of Professional Geologists (No. CPG-11954) and a Registered Member of SME (RM #4229254). I have worked as a geologist for a total of 13 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Geologic modelling, resource estimation, and preparation of NI 43-101 Technical Reports
 - Planning and execution of resource exploration and reserve conversion drilling
 - Experienced user of acQuire, Maptek Vulcan, Maptek I-Site and Leapfrog
 - Worked as an Underground Mine Geologist for eight years
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited the Jerritt Canyon site on April 20, 2021.
- 6. I am responsible for Sections 2 to 12, 14, 23, and 24, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had prior involvement with the property that is the subject of the Technical Report, as I have prepared a report on Jerritt Canyon in 2021 for Jerritt Canyon LLC's internal purposes.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 30th day of April, 2021

(Signed & Sealed) Ryan Rodney

Ryan Rodney, C.P.G.



29.2 Gordon L. Fellows

I, Gordon L. Fellows, P.E., as an author of this report entitled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 prepared for First Majestic Silver Corp., do hereby certify that:

- 1. I am the Jerritt Canyon Mining Manager with Jerritt Canyon Gold LLC, which is an indirect wholly owned subsidiary of First Majestic Silver Corp.
- 2. I am a graduate of the Colorado School of Mines in 1987 with a Bachelor of Science in Mining Engineering and the University of Idaho in 2001 with a Master of Science in Mining Engineering.
- 3. I am registered as a Professional Engineer in the State of Washington (#39516), a Qualified Professional Member in good standing of the Mining & Metallurgical Society of America (#001152QP), and a Registered Member of The Society for Mining, Metallurgy & Exploration. I have worked as a mining engineer for a total of 34 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Mine planning, underground mine design and scheduling, ventilation design and implementation in multiple mining methods for numerous projects in USA, South Africa, Tanzania, Bulgaria, Canada, Chile, Mexico and Honduras.
 - Technical Services Manager for a number of Canadian mining companies, including Dundee Precious Metals, Inc. and Barrick Gold Corp.
 - Mineral reserves estimation and preparation of NI 43-101 Technical Reports.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I have worked at Jerritt Canyon from September 3, 2019 to present.
- 6. I am responsible for Sections 15, 16, and 18, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
- 7. I am not independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had prior involvement with the property that is the subject of the Technical Report as I am the Jerritt Canyon Mining Manager and have worked at site since September 3, 2019.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 30th day of April, 2021

(Signed & Sealed) Gordon L. Fellows

Gordon L. Fellows, P.E.

HC 31 Box 78 Elko, Nevada 89801 **TEL** (775) 738-5600 **FAX** (775) 539-3191



29.3 Chelsea Hamilton

I, Chelsea Hamilton, P.Eng., as an author of this report entitled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 prepared for First Majestic Silver Corp., do hereby certify that:

- 1. I am a Project Mining Engineer with SLR Consulting Ltd, of 6131 6th Avenue, Whitehorse, YT Y1A 1N2.
- 2. I am a graduate of the University of Toronto in 2007 with a BASc in Mineral Engineering.
- 3. I am registered as a Professional Engineer in the Province of Ontario (Licence No. 100127897) and the Yukon Territory (License No. 3578). I have worked as a mining engineer for a total of 8 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Mine planning, underground mine design and scheduling, ventilation design and implementation for numerous projects in Canada and USA.
 - Mining engineer for an underground gold mine in Ontario, Canada and an underground gold mine in Nevada, USA for a total of 3.5 years.
 - Precious Metals Equity Research Associate/Analyst in Toronto for a total of 2.5 years.
 - Mineral reserve estimation and preparation of NI 43-101 Technical Reports.
 - Experienced user of Deswik mine planning software.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I did not visit Jerritt Canyon.
- 6. I am responsible for Sections 19, 21, and 22, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have been involved with the property that is the subject of this Technical Report since 2020 and was involved in preparation of a report for Jerritt Canyon LLC's internal purposes in 2021.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 30th day of April, 2021

(Signed & Sealed) Chelsea Hamilton

Chelsea Hamilton, P.Eng.



29.4 Andrew P. Hampton

I, Andrew P. Hampton, M.Sc., P.Eng., as an author of this report entitled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 prepared for First Majestic Silver Corp., do hereby certify that:

- 1. I am a Principal Metallurgist with SLR International Corporation, of Suite 100, 1658 Cole Blvd, Lakewood, CO, USA 80401.
- 2. I am a graduate of Southern Illinois University in 1979 with a B.S. Degree in Geology, and a graduate of the University of Idaho in 1985, with an M.S. Degree in Metallurgical Engineering.
- 3. I am registered as a Professional Engineer in the Province of British Columbia (Licence No. 22046). I have worked as an extractive metallurgical engineer for a total of 36 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Process plant engineering, operating, and maintenance experience at mining and chemical operations, including the Sunshine Mine, Kellogg, Idaho, Beker Industries Corp, phosphate and DAP plants in Florida and Louisiana, respectively, and the Delamar Mine in Jordan Valley Oregon.
 - Engineering and construction company experience on a wide range of related, precious metal
 projects and studies, requiring metallurgical testing, preliminary and detailed design, project
 management, and commissioning and start-up of process facilities and infrastructure. EPCM
 companies included Kilborn Engineering Pacific Ltd., SNC Lavalin Engineers and Constructors,
 Washington Group International Inc. and Outotec USA, Inc.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I did not visit Jerritt Canyon.
- 6. I am responsible for Sections 13 and 17, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have been involved with the property that is the subject of this Technical Report since 2020 and was involved in preparation of a report for Jerritt Canyon LLC's internal purposes in 2021.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 30th day of April, 2021

(Signed & Sealed) Andrew P. Hampton

Andrew P. Hampton, M.Sc., P.Eng.



29.5 Jeremy Scott Collyard

I, Jeremey Scott Collyard, MMSA QP, as an author of this report entitled "Technical Report on the Jerritt Canyon Gold Mine, Elko County, Nevada, USA" with an effective date of December 31, 2020 prepared for First Majestic Silver Corp., do hereby certify that:

- 1. I am a Principal Environmental Specialist and United States Mining and Minerals Sector Lead with SLR International Corporation, of Suite 100, 1658 Cole Blvd, Lakewood, CO, USA, 80401.
- 2. I am a graduate of the University of Montana located in Missoula, Montana in 2002 with a Bachelors of Science in Forestry.
- 3. I am registered as a Qualified Professional with special expertise in Environmental Permitting with the Mining & Metallurgical Society of America (MMSA) (QP No. 1544QP). I have worked as an environmental scientist for a total of 18 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Environmental permitting and compliance, and
 - Mine closure planning and execution.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited Jerritt Canyon on April 20, 2021.
- 6. I am responsible for Section 20 and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have been involved with the property that is the subject of this Technical Report since 2020 and was involved in preparation of a report for Jerritt Canyon LLC's internal purposes in 2021.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 30th day of April, 2021

(Signed & Sealed) Jeremey Scott Collyard

Jeremey Scott Collyard, MMSA QP

