

**Preliminary Economic Assessment  
NI 43-101 Technical Report on the Mercur Gold Project  
Tooele & Utah Counties, Utah, USA**

**Prepared for:**



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Toronto, ON, M5H 1J8  
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**Prepared by:**



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Technical Report Effective Date: March 25, 2025  
Mineral Resource Effective Date: March 13, 2025

**Authors:**

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## **TECHNICAL REPORT CONTENTS**

QUALIFIED PERSON'S CERTIFICATES .....	2
QUALIFIED PERSON'S SIGNATURE PAGE .....	5
1 SUMMARY .....	1-1
2 INTRODUCTION .....	2-1
3 RELIANCE ON OTHER EXPERTS .....	3-1
4 PROPERTY DESCRIPTION AND LOCATION .....	4-1
5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY .....	5-1
6 HISTORY .....	6-1
7 GEOLOGIC SETTING AND MINERALIZATION .....	7-1
8 DEPOSIT TYPE .....	8-1
9 EXPLORATION .....	9-1
10 DRILLING .....	10-1
11 SAMPLE PREPARATION, ANALYSIS, AND SECURITY .....	11-1
12 DATA VERIFICATION .....	12-1
13 MINERAL PROCESSING AND METALLURGICAL TESTING .....	13-1
14 MINERAL RESOURCE ESTIMATES .....	14-1
15 MINERAL RESERVE ESTIMATES .....	15-1
16 MINING METHODS .....	16-1
17 RECOVERY METHODS .....	17-1
18 PROJECT INFRASTRUCTURE .....	18-1
19 MARKET STUDIES AND CONTRACTS .....	19-1
20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACTS .....	20-1
21 CAPITAL AND OPERATING COSTS .....	21-1
22 ECONOMIC ANALYSIS .....	22-1
23 ADJACENT PROPERTIES .....	23-1
24 OTHER RELEVANT DATA AND INFORMATION .....	24-1
25 INTERPRETATION AND CONCLUSIONS .....	25-1
26 RECOMMENDATIONS .....	26-1
27 REFERENCES .....	27-1
Appendix A – Property Interests .....	A-1
Appendix B – End-of-Year Mine General Arrangement Drawings for Main & South Mercur ....	B-1

**CERTIFICATE OF QUALIFIED PERSON**

I, **Caleb D. Cook, P.E.**, of Reno, Nevada, USA, Project Engineer/Manager at Kappes, Cassiday & Associates, as an author of this report entitled “Preliminary Economic Assessment *NI 43-101 Technical Report for the Mercur Gold Project, Tooele & Utah Counties, Utah, USA*”, prepared for Revival Gold Inc. (the “**Issuer**”) do hereby certify that:

1. I am employed as a Project Engineer/Manager at Kappes, Cassiday & Associates, an independent metallurgical and engineering consulting firm, whose address is 7950 Security Circle, Reno, Nevada 89506.
2. This certificate applies to the technical report “Preliminary Economic Assessment *NI 43-101 Technical Report for the Mercur Gold Project, Tooele & Utah Counties, Utah, USA*”, effective date March 25, 2025 (the “**Technical Report**”).
3. I am a Professional Engineer in the state of Nevada (No. 025803) and my qualifications include experience applicable to the subject matter of the Technical Report. In particular, I am a graduate of the University of Nevada with a B.S. in Chemical Engineering (2010) and have practiced my profession continuously since graduating. Most of my professional practice has focused on the development of gold-silver leaching projects.
4. I am familiar with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“**NI 43-101**”) and by reason of education, experience and professional registration I fulfill the requirements of a “qualified person” as defined in NI 43-101.
5. I visited the Mercur Gold Project on August 15, 2024.
1. I am responsible for Sections 1.1, 1.2, 1.6, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 2, 3, 4, 5, 12.5, 13, 17, 18 except for 18.3 and 18.9, 19, 20, 21 except for 21.2.1, 21.3.1 and 21.3.2, 22, 23, 24, 25.1, 25.1.1, 25.1.4, 25.1.5, 25.2.3, 25.3.3, 25.3.4, 26, 26.1 and 27 and co-responsible for of Sections 1.15, 1.16 1.17, 1.18, 1.19, and 1.20 as they pertain to metallurgy, processing and infrastructure of the Technical Report.
2. I am independent of the Issuer as described in section 1.5 of NI 43-101.
3. I have had no prior involvement with the property that is the subject of the Technical Report.
4. I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101.
5. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 2nd day of May 2025

**“Signed and Sealed”**

Caleb D. Cook, PE

**CERTIFICATE OF QUALIFIED PERSON**

I, **Michael S. Lindholm**, C.P.G., do hereby certify that I am currently employed as Principal Geologist by RESPEC Company LLC, 210 South Rock Blvd., Reno, Nevada 89502 and:

1. I graduated with a Bachelor of Science degree in Geology from Stephen F. Austin State University in 1984 and a Master of Science degree in Geology from Northern Arizona University in 1989. I have worked as a geologist for more than 30 years. I am a Certified Professional Geologist in good standing with the American Institute of Professional Geologists (#11477). I am also registered as a Professional Geologist in the state of California (#8152).
2. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”). I have previously conducted exploration, definition, modeling and estimation of similar Carlin-type, sediment-hosted epithermal gold-silver deposits in the western US. I certify that by reason of my education, affiliation with certified professional associations, and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
3. I visited the Mercur Project site on May 17 and 18, 2021. Prior to those dates, I have not been involved with the property that is the subject of this technical report.
4. I am responsible for Sections 1.3, 1.4, 1.5, 1.7, 6 through 12 except 12.5, 14, 25.1.2, 25.2.1, 25.3.1, and 26.2.1 and co-responsible for Sections 1.15, 1.16 and 1.17 as they pertain to exploration and mineral resource estimation of this technical report titled, “*Preliminary Economic Assessment NI 43-101 Technical Report for the Mercur Gold Project, Tooele & Utah Counties, Utah, USA*”, with an effective date of March 25, 2025, prepared for Revival Gold Inc. (the “Technical Report”).
5. I am independent of Revival Gold Inc., and all its subsidiaries, and the Mercur Property, as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101.
6. As of the effective date of this Technical Report, to the best of my knowledge, information, and belief, this Technical Report contains all the scientific and technical information that is required to be disclosed to make those parts of this Technical Report for which I am responsible for not misleading.
7. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 2nd day of May 2025

***“Signed and Sealed”***

---

Michael S. Lindholm, CPG

**CERTIFICATE OF QUALIFIED PERSON**

I, **Jordan M. Anderson**, RM SME, do hereby certify that I am currently employed as a Senior Engineer by RESPEC Company LLC, 210 South Rock Blvd., Reno, Nevada 89502 and:

1. I graduated with a B.S. degree in Mine Engineering in 2009 from the South Dakota School of Mines and Technology and a Master of Business Administration from the University of South Dakota in 2019. I am a Registered Member of SME (#4148636) in good standing.
2. I have worked as a Mining Engineer for a total of 14 years since my graduation. My relevant experience includes 11 years of engineering in multiple operating open pit mines. This operations experience included increasing responsibilities obtaining the position of Engineering Superintendent. Since that time, I have worked as a Consulting Mining Engineer for numerous open pit projects including Preliminary Economic Assessments, Pre-feasibility, and Feasibility studies.
3. I have read the definition of “qualified person” set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by reason of my education, affiliation with certified professional associations and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43 101.
4. I visited the Mercur Project site on August 15, 2024. Prior to those dates, I have not been involved with the property that is the subject of this technical report.
5. I am responsible for Section 1.8, 15, 16, 18.3, 18.9, 21.2.1, 21.3.1, 21.3.2, 25.1.3, 25.2.2, 25.3.2, 26.2.2 and co-responsible for 1.15, 1.16 and 1.17 as they relate to mining of this technical report titled, “*Preliminary Economic Assessment NI 43-101 Technical Report for the Mercur Gold Project, Tooele & Utah Counties, Utah, USA*”, with an effective date of March 25, 2025, prepared for Revival Gold Inc. (the “Technical Report”).
6. I am independent of Revival Gold Inc., and all its subsidiaries, and the Mercur Property, as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101.
7. As of the effective date of this Technical Report, to the best of my knowledge, information, and belief, this Technical Report contains all the scientific and technical information that is required to be disclosed to make those parts of this Technical Report for which I am responsible not misleading.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 2nd day of May 2025

***“Signed and Sealed”***

---

Jordan M. Anderson, RM SME

**Preliminary Economic Assessment**  
**NI 43-101 Technical Report for the Mercur Gold Project**  
**Tooele & Utah Counties, Utah, USA**

**Prepared for:**



**Revival Gold Inc.**  
145 King St. W, Suite 2870  
Toronto, Ontario  
M5H 1J8 Canada

**DATE AND SIGNATURES**

Signed in Reno, NV, May 2, 2025

***“Signed and Sealed”***

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Caleb D. Cook, PE  
Kappes, Cassiday & Associates

Signed in Reno, NV, May 2, 2025

***“Signed and Sealed”***

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Michael S. Lindholm, CPG  
RESPEC Company LLC

Signed in Reno, NV, May 2, 2025

***“Signed and Sealed”***

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Jordan M. Anderson, RM SME  
RESPEC Company LLC

## SECTION 1 CONTENTS

1	SUMMARY .....	1-2
1.1	Introduction .....	1-2
1.2	Property Description and Ownership .....	1-2
1.3	Exploration and Mining History .....	1-4
1.4	Geology and Mineralization .....	1-5
1.5	Drilling, Database and Data Verification .....	1-6
1.6	Mineral Processing and Metallurgical Testing .....	1-6
1.7	Mineral Resource Estimates .....	1-7
1.8	Mining Methods .....	1-9
1.9	Recovery Methods.....	1-11
1.10	Infrastructure.....	1-12
1.11	Environmental Studies, Permitting and Social Impact .....	1-13
1.12	Capital & Operating Costs .....	1-13
1.13	Economic Analysis.....	1-14
1.14	Conclusions .....	1-18
1.15	Opportunities .....	1-18
1.16	Risks .....	1-19
1.17	Recommendations.....	1-20

## SECTION 1 TABLES

Table 1-1:	Mineral Resource Pit Optimization Parameters .....	1-8
Table 1-2:	Main Mercur and South Mercur Mineral Resource Estimates.....	1-8
Table 1-3:	In-Pit Mineralized Material and Associated Waste Rock.....	1-10
Table 1-4:	Mine Production Schedule (US Units).....	1-11
Table 1-5:	Mine Production Schedule (Metric Units).....	1-11
Table 1-6:	PEA Capital Cost Summary .....	1-14
Table 1-7:	Operating Cost Summary .....	1-14
Table 1-8:	PEA Economic Analysis Summary .....	1-15

## SECTION 1 FIGURES

Figure 1-1:	Annual Gold Production and Cumulative After-Tax Cash Flow .....	1-16
Figure 1-2:	After-Tax Sensitivity Analysis – IRR (KCA, 2025).....	1-17
Figure 1-3:	After-Tax Sensitivity Analysis – NPV @5% (KCA, 2025).....	1-17

# **1 SUMMARY**

## **1.1 Introduction**

This technical report on the Mercur Gold Project (“Mercur” or “Project”) has been prepared at the request of Revival Gold Inc. (“Revival” or “Issuer”), a public company registered in Canada. This report has been prepared in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101 – Standards of Disclosure for Mineral Projects, Companion Policy 43-101CP, and Form 43-101F1 (collectively, “NI 43-101”). The purpose of this technical report is to provide an update on the Mineral Resources and a Preliminary Economic Assessment (“PEA”) of Mercur, to support continued exploration and development activities.

The authors of this report are:

- Caleb D. Cook, PE, a project manager at Kappes, Cassiday & Associates, Reno, Nevada;
- Michael S. Lindholm, CPG, a principal geologist at RESPEC Company LLC, Reno Nevada; and
- Jordan M. Anderson, RM SME, an engineering manager at RESPEC Company LLC, Reno Nevada.

Each author is an Independent Qualified Person (“QP”) as defined by NI 43-101 and has no affiliation with Revival Gold.

The effective date of the Mineral Resource estimate included in this technical report is March 13, 2025. The effective date of this technical report is March 25, 2025.

Unless otherwise indicated, all references to dollars (\$) in this report refer to United States dollars.

## **1.2 Property Description and Ownership**

The Project is located 35 mi (57 km) southwest of Salt Lake City, Utah in the Camp Floyd and Ophir mining districts in the southern Oquirrh Mountains, centered at approximately 40.32°N, 112.22°W, and includes four informally named areas known as Main Mercur, South Mercur, West Mercur and North Mercur.

The Mercur property includes the real property interests as listed in Appendix A (the “Mercur Property”). The Mercur Property includes interests in 450 unpatented lode claims, three unpatented millsite claims, 475 patented mining claims, 426 fee land tax parcels comprised of surveyed lots, and six Utah state metalliferous minerals leases that cover approximately

16,378 acres (6,628 hectares) of mineral rights. The holding costs for the Mercur Property are estimated to be \$271,418 for 2025.

On April 10, 2024, Revival, Ensign, and Revival Gold Amalgamation Corp. entered into a definitive business combination agreement dated April 9, 2024, whereby Revival will acquire all the issued and outstanding shares of Ensign, a private company and owner of Mercur, in exchange for an aggregate of 61,376,098 shares of the Company based on a share exchange ratio of 1.1667 Revival shares for each common share of Ensign. The consideration implies a purchase price of C\$0.4164 per Ensign Share, or gross consideration of approximately C\$21.9 million. On May 30, 2024, Revival completed the acquisition of Ensign, and therefore, the Mercur project.

The title to the Mercur Property is held by Ensign's wholly owned subsidiary, Ensign Gold (US) Corp. ("EGUS"), by way of five key agreements with mining companies, four leases with private parties, and the staking of 200 additional mining claims. The five key agreements include:

1. A mineral lease option agreement with Barrick Gold Exploration Inc. ("BGEI") and Barrick Resources (USA) Inc. ("Barrick"), the entity that owns the Mercur mine properties, on May 13, 2021, under which Ensign paid C\$1,000,000 and issued 3,000,000 warrants for shares of Ensign, exercisable at C\$0.25/share, for an option to explore Barrick's reclaimed Mercur mine property. The mineral lease option agreement was amended on June 13, 2022, May 15, 2023, and April 9, 2024, to extend the option exercise period and to restructure the option price. The amended agreement calls for Ensign to pay BGEI \$5,000,000 by January 2, 2026, and three additional \$5,000,000 payments to be made on the first, second and third anniversary of commercial production. At BGEI's election, the payments may be made in cash or in Ensign common shares at market price. Ensign has already completed a work commitment to spend C\$6,000,000 on the Barrick property during the option period.
2. An option and assignment agreement with Geyser Marion Gold Mining Company ("Geyser Marion") on October 25, 2021, as amended on October 13, 2023, under which Geyser Marion granted Ensign a five-year option to explore its mineral interests in exchange for 1,050,000 shares of Ensign stock, and an option to purchase its properties for \$127,188. The properties include mineral interests at Main Mercur, as well as mineral interests at West Mercur that were already under lease to Ensign. The October 13, 2023 amendment also expanded the definition of an 'initial public offering' in the option and assignment agreement to include Ensign's completion of a business combination transaction with a corporation listed on the TSXV.
3. An option and assignment agreement with Sacramento Gold Mining Company ("Sacramento") on October 25, 2021, as amended on October 13, 2023, under which Sacramento granted Ensign a five-year option to explore its mineral interests at Main

Mercur in exchange for 150,000 shares of Ensign stock, and an option to purchase its properties for \$37,500. The October 13, 2023 amendment also expanded the definition of an ‘initial public offering’ in the option and assignment agreement to include Ensign’s completion of a business combination transaction with a corporation listed on the TSXV.

4. A merger agreement on August 17, 2020, under which Priority Minerals Limited (“Priority”) merged into EGUS in exchange for 4,200,000 shares of Ensign, delivered to Energold Minerals Inc., the parent of Priority. With this merger, Ensign acquired mineral interests in the South Mercur area.
5. An assignment agreement dated August 3, 2020, under which Rush Valley Exploration Inc. agreed to assign its properties to EGUS in exchange for 4,000,000 shares of Ensign. These properties of mineral interests are primarily located in the West Mercur area.

### 1.3 Exploration and Mining History

Mercur was the first Carlin-type gold deposit identified and mined in the Great Basin of the western US. Some Carlin-type districts in Nevada, such as Gold Acres, Getchell, Carlin and Cortez, have produced more than 10 million ounces of gold.

The Mercur Project area experienced four cycles of mining activity beginning with the underground mining of small bonanza-grade silver deposits in 1870-1881, which yielded more than 438,000 ounces of silver. Sedimentary rock-hosted, disseminated gold deposits (Carlin-type) were discovered at Mercur in 1883. In 1890, the first commercial use of cyanide for gold extraction was developed and later proved successful at Mercur. The Golden Gate mill was constructed at Mercur and was the largest gold mill in the US in 1900, with a capacity of 1,000 short tons (907 metric tonnes) per day. By 1917, Mercur had produced over 920,000 ounces of gold – decades before similar Carlin-type deposits in Nevada were discovered.

Mercur experienced renewed activity on a small scale between 1931 and 1945. Recorded production for this period totals 194,194 ounces of gold and 173,955 ounces of silver.

In the 1970s and early 1980s, Getty Oil Company (“Getty”) consolidated a large land position at Mercur and Homestake Mining Company consolidated a large land position around the historical underground mines at South Mercur. Getty’s work ultimately led to the development of the Mercur open pit mine and CIL mill complex in 1983. Homestake’s South Mercur project was vended to Priority and that area remains undeveloped.

In 1985, Getty sold the Mercur mine to a subsidiary of American Barrick Resources Corporation (later renamed Barrick Gold Corporation). Barrick added a run-of-mine heap leach circuit for low-grade material and a pressure oxidation circuit to pretreat refractory material for the CIL mill. Total gold production by Getty and Barrick from 1983 to 1998 was 1.49 million ounces of gold.

Historical calculations of the cumulative mining in the Mercur district between 1890 and 1988 indicate a total of 41.4 million tons (37.6 million tonnes) of mineralized material were mined at an average gold grade of 0.084 oz/t (2.88 g/T) containing 3.49 million ounces of gold, from which 2.61 million ounces of gold were recovered. Silver production is recorded at 1.18 million ounces, about half mined from primary silver deposits and the other half produced as a by-product of the gold deposits.

In 2011 a founder of Rush Valley Exploration Inc. ("RVX") noted a remote sensing anomaly in the pediment 3 mi (5 km) west of Mercur in what is now known as the West Mercur area. A field check of the anomalous area revealed previously unmapped limestone outcrops in the alluvium, along with local outcrops of gold-bearing jasperoid. These findings generated interest in the potential for gold deposits concealed by thin alluvial cover along the range front near Mercur. RVX consolidated a large land position at West Mercur, compiled historical data, and collected rock and soil samples to generate exploration targets.

Ensign acquired the RVX properties in 2020 and commenced acquisition of additional prospective lands throughout the Mercur district. Ensign evaluated the extensive historical data, collected 836 soil samples, conducted geologic mapping and rock sampling in select areas, and drilled 114 holes totaling 59,850 feet (18,242 meters).

## **1.4 Geology and Mineralization**

The Mercur Project encompasses a large portion of the Ophir anticline, a north-northwest trending, doubly plunging fold which exposes a very thick sequence of Mississippian carbonate platform stratigraphy. The important host unit for gold mineralization is the approximately 1,000 m-thick Mississippian Great Blue Limestone. This unit is subdivided into the Lower Great Blue Member, the Mercur Member, the Long Trail Shale Member, and the Upper Great Blue Member. The known mineralization along the east flank of the Ophir anticline (North, South and Main Mercur) occurs in the Mercur Member. Along the west flank of the Ophir anticline (West Mercur), the known mineralization occurs in the Upper Great Blue Member, near the contact with the overlying Pennsylvanian Manning Canyon Shale.

The gold deposits at Mercur are classified as Carlin-type gold deposits, in which micron-size gold particles tend to be disseminated in silty, calcareous, and carbonaceous marine sedimentary rocks. At Mercur, the mineralization was deposited in favorable beds of the Mercur Member, where faulting and fracturing structurally prepared the rocks and provided pathways for hydrothermal transport of mineralizing fluids. There is an apparent spatial and temporal association of gold mineralization with early Oligocene dikes and sills of Eagle Hill Rhyolite.

## **1.5 Drilling, Database and Data Verification**

As of the effective date of this report, Revival's digital project database includes location and other data from 3,149 holes, for a total of more than 966,000 feet (294,400 meters), that were drilled by Newmont, Getty, Homestake, Touchstone Resources, Barrick, Priority, Kennecott, and Ensign. This database includes 114 holes totaling 59,850 feet (18,242 meters) drilled and sampled by Ensign in the South, West and Main Mercur areas between 2020 and 2022.

The original datum, projections and precise base point for the local Mercur Mine and South Mercur grids are not known. Transformations were developed by Barrick to convert between the global and local coordinate systems. Ensign verified collar locations using various historical maps, LiDAR surveys and aerial imagery; Ensign modified coordinates as warranted.

Collar, survey and assay data from drilling was evaluated and verified with respect to the most original documentation available. In the case of assay data, a manual audit was performed against scans of original assay certificates on 6.7% of the total of 94,748 records in the pre-Ensign drill-hole database, as received from Revival. The manual audit yielded an acceptable 0.03% error rate. All of Ensign's data were compared to original assay certificates downloaded directly from the laboratories. Any significant errors found in both sets of assay data were corrected by Revival in the database.

The available information regarding sample preparation, analysis, security and QA/QC data is limited for pre-Ensign exploration sampling and drilling programs. As a result, the quality of historical drilling and assay results cannot be fully evaluated. However, most assays are documented with original or scans of assay certificates, and the assay results supported a successful mining operation.

## **1.6 Mineral Processing and Metallurgical Testing**

The Mercur mine most recently produced 1.49 million ounces of gold between 1983 and 1998 utilizing three process flowsheets including a carbon-in-leach ("CIL") process for high-grade oxide material, a run-of-mine ("ROM") dump leach for low-grade oxide material and pressure oxidation ("POX") followed by CIL to treat refractory sulfide materials. Life of mine ("LOM") gold recoveries for the historical operation averaged 77% for the CIL, 49% for the ROM dump leach and 75% for the POX and CIL circuit with an overall recovery of approximately 69%.

Variability bottle roll leach tests were commissioned by Ensign in 2022 and 2023 and column and bottle roll leach test programs were commissioned by Revival in 2024 to evaluate a potential heap leaching operation. The results of these recent test programs along with an expansive database

of CIL and direct cyanide leach (DCN) tests collectively form the basis for the following metallurgical recommendations and conclusions:

- Crush size of 100% passing ½ inches (1.27 cm)
- Overall average gold recovery of 75% (based on variable recovery applied to the minable resource on a block-by-block basis).
- Design leach cycle of 80 days.
- Lime consumption of 1.80 lbs/t (0.90 kg/T).
- Cyanide consumption of 0.36 lbs/t (0.18 kg/T).

The key design parameters are based on limited test work performed on geochemically representative samples which will need to be validated as part of future test work programs. In general, the available test results show good correlation between the column and bottle-roll leach tests with similar metallurgical recoveries for all materials tested. Gold recovery has been estimated by applying a 5% discount factor to the DCN or CIL recovery estimates from the mine resource model on a block-by-block basis, with the DCN value used in cases where both results were available. Carbonaceous zones with pre-robbing behavior are present in the Mercur deposits, which presents a moderate risk to overall gold recovery.

## **1.7 Mineral Resource Estimates**

Two gold domains were modeled at grade boundaries based on cumulative probability plots of gold data. Revival's geologic model was used to guide domain modeling, which generally followed specific, favorable stratigraphic horizons. Gold domains were coded into separate block models for Main and South Mercur. The block size (25 ft x 25 ft x 25 ft) of the block models was chosen in consideration of potential exploitation by open pit mining and heap leach extraction, and resources were reported within pits optimized using current economic parameters. All modeling processes and inputs that were used to estimate the gold resources, including the mineral domain modeling, grade capping, grade estimation, and density assignment, were completed independent of potential mining methods. Reported mineral resources were interpolated using inverse-distance with a power of three inside modeled gold domains.

The Main and South Mercur mineral resources were classified considering confidence in the underlying database, sample integrity, analytical precision/reliability, QA/QC results, drilling methods, variography, the status of metallurgical test work, the available density data, and confidence in the top-of-bedrock surface and geological interpretations. Pit optimization parameters for resource reporting are provided in Table 1-1, and estimates of the Indicated and Inferred mineral resources for both Main and South Mercur are shown in Table 1-2.

**Table 1-1: Mineral Resource Pit Optimization Parameters**

General		
Mineral Resource Gold Price	\$2,000 /oz Au	
Mining & Heap Leaching Rate	20,000 tons/day	18,144 tonnes/day
Average Gold Leach Recovery (Main Mercur)	74 %	
Average Gold Leach Recovery (South Mercur)	79 %	
Operating Expenditures		
Mining – Rock	\$2.50 /ton mined	\$2.76 /tonne mined
Mining – Fill	\$2.14 /ton mined	\$2.36 /tonne mined
Haul to Crusher (Main Mercur)	\$0.32 /ton processed	\$0.35 /tonne processed
Haul to Crusher (South Mercur)	\$0.82 /ton processed	\$0.90 /tonne processed
Heap Leaching	\$4.05 /ton processed	\$4.46 /tonne processed
General & Administrative Costs	\$0.82 /ton processed	\$0.90 /tonne processed
Other Costs		
Refining & Freight	\$5.00 /oz Au recovered	
Royalties <sup>1</sup>	2.1 % Net Smelter Return	
<u>Note:</u>		
1. Royalties for the property are variable and were calculated on a block-by-block basis. This value represents the block-weighted average net smelter return royalty for the Main and South Mercur PEA pits.		

**Table 1-2: Main Mercur and South Mercur Mineral Resource Estimates**

Project Area	Indicated Mineral Resources					Inferred Mineral Resources				
	Tonnage		Gold Grade		Contained Gold	Tonnage		Gold Grade		Contained Gold
	(ktons)	(ktonnes)	(oz/ton)	(g/tonne)	(koz)	(ktons)	(ktonnes)	(oz/ton)	(g/tonne)	(koz)
Main Mercur	31,558	28,629	0.018	0.63	581.0	36,574	33,179	0.016	0.53	567.0
South Mercur	7,352	6,670	0.023	0.77	165.0	3,380	3,066	0.018	0.60	59.0
<b>Total Mercur</b>	<b>38,910</b>	<b>35,299</b>	<b>0.019</b>	<b>0.66</b>	<b>746.0</b>	<b>39,954</b>	<b>36,246</b>	<b>0.016</b>	<b>0.54</b>	<b>626.0</b>
<b>Notes:</b>										
1. The estimate of mineral resources was done by Michael S. Lindholm, CPG of RESPEC in Imperial units.										
2. In-situ mineral resources were classified in accordance with CIM Standards.										
3. Mineral Resources comprised all model blocks at a 0.005 oz/ton (0.17 g/T) Au cutoff for all material within optimized pits.										
4. The average grades of the mineral resources are comprised of the weighted average of block-diluted grades within the optimized pits. Alluvium, dump and backfill materials are not included in the mineral resources.										
5. Mineral resources that are not mineral reserves do not have demonstrated economic viability.										
6. Mineral resources potentially amenable to open pit mining methods are reported using a gold price of US\$2,000/oz, a throughput rate of 20,000 tons/day (18,144 tonnes/day), assumed average metallurgical gold recoveries of 74% for Main Mercur and 79% for South Mercur, mining costs of US\$2.50/ton (US\$2.76/tonne) mined, heap leach processing costs of US\$4.05/ton (US\$4.46/tonne) processed, general and administrative costs of \$0.82/ton (US\$0.90/tonne) processed. The gold commodity price was selected based on an analysis of the three-year running average at the end of April 2025.										
7. The effective date of the mineral resource estimate is March 13, 2025.										
8. Rounding may result in apparent discrepancies between tons, grade, and contained metal content.										

## **1.8 Mining Methods**

The PEA mine plan was developed assuming the use of the conventional open-pit, truck-and-shovel mining method and with extraction of gold by the cyanide heap-leach method. Waste rock would be extracted using 150-ton haul trucks and transported to designated waste rock storage facilities ("WRSF"s). Leach material would be mined from the open pits, processed through a crusher and stacked on a heap leach pad for leaching gold. Ultimate pit limits were developed using pit optimization techniques based on the block models of estimated mineral resources. Production schedules have been developed using the preliminary pit designs and the estimated mineral resources with those pit designs for a total expected mine life of 10 years after a one-year pre-production period.

Indicated and Inferred mineral resources have been used to determine potentially mineable resources for the PEA. Note that:

***A preliminary economic assessment is preliminary in nature, and it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied that would enable them to be classified as mineral reserves, and there is no certainty that the preliminary assessment will be realized.***

Mineral resource pit optimization parameters that are summarized in Table 1-2 were developed for the anticipated 20,000 tpd (18,144 Tpd) mineralized material mining and processing rate. Based on the resulting pit optimizations, pit designs were developed and phased for both Main Mercur and South Mercur. The resulting mineral resources and associated waste rock for the designed pits are summarized in Table 1-3.

**Table 1-3: In-Pit Mineralized Material and Associated Waste Rock**

Project Area	Parameter	Units	Mineralized Material		Waste Rock	Total Mined	Strip Ratio
			Indicated	Inferred			
Main Mercur	Tonnage	(ktons)	29,649	32,915	160,914	223,477	2.57
		(ktonnes)	26,897	29,860	145,979	202,735	
	Gold Grade	(oz/ton)	0.019	0.016			
		(g/tonne)	0.64	0.54			
	Contained Gold	(koz)	551	514			
South Mercur	Tonnage	(ktons)	6,868	2,915	38,421	48,204	3.93
		(ktonnes)	6,230	2,645	34,855	43,730	
	Gold Grade	(oz/ton)	0.023	0.018			
		(g/tonne)	0.79	0.62			
	Contained Gold	(koz)	158	53			
Total Project	Tonnage	(ktons)	36,516	35,830	199,335	271,681	2.76
		(ktonnes)	33,127	32,504	180,834	246,465	
	Gold Grade	(oz/ton)	0.019	0.016			
		(g/tonne)	0.67	0.54			
	Contained Gold	(koz)	708	567			
<u>Note:</u> Mineralized material is based on indicated and inferred mineral resources and is meant only to allow a calculation of the cash-flow value and does not imply that any economics will be realized from the mining of the leachable material.							

Mine production scheduling was done using MineSched software (version 2024). Scheduling targeted production of 7.3 million tons (6.6 million tonnes) of leachable material per year.

The production schedule for the LOM was created using monthly periods so that appropriate lag times for gold recovery could be used for the process production schedule. The schedule was then summarized in yearly periods. The Mercur mining schedule, shown in Table 1-4 (in US units) and Table 1-5 (in metric units), assumes mining will utilize an equipment fleet with a maximum of 16 150-ton trucks, one 29-cu yd shovel and one 30-cu yd loader as the primary mining equipment.

**Table 1-4: Mine Production Schedule (US Units)**

	Parameter	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Totals
Mineralized Rock	Pit to Stockpile	k tons	938	2,716	3,021	2,898	3,205	4,119	3,131	2,862	3,888	2,483	1,789	31,051
	Pit to Crusher	k tons	-	4,727	4,393	4,274	4,678	5,992	3,059	5,316	4,174	3,365	1,316	41,295
	Total Mined	k tons	938	7,444	7,414	7,172	7,883	10,112	6,191	8,179	8,062	5,848	3,104	72,346
	Crusher to Heap	k tons	-	6,964	7,300	7,320	7,300	7,300	7,300	7,320	7,300	7,300	6,942	72,346
	Gold Grade	oz/ton	-	0.017	0.015	0.017	0.017	0.013	0.017	0.019	0.019	0.025	0.021	0.018
	Contained Gold	k oz	-	128	124	110	121	125	91	122	136	141	177	1275
	Recovery	%	-	84%	79%	76%	77%	76%	74%	80%	78%	71%	58%	75%
	Recoverable Gold	k oz	-	107	98	84	94	95	68	98	106	100	102	951
Waste Rock	Rock to Dumps	k tons	942	20,626	18,958	18,695	15,778	18,971	21,581	18,304	17,477	16,761	4,218	172,311
	Fill to Dumps	k tons	633	3,459	-	20	92	412	436	1,836	11,649	8,228	260	27,024
	Total to Dumps	k tons	1,575	24,085	18,958	18,716	15,870	19,382	22,017	20,139	29,126	24,989	4,478	199,335
All Rock	Total Mined	k tons	2,513	31,528	26,373	25,887	23,753	29,494	28,208	28,318	37,188	30,837	7,582	271,681
	Strip Ratio	wr:mr	1.7	3.2	2.6	2.6	2.0	1.9	3.6	2.5	3.6	4.3	1.4	2.8

**Table 1-5: Mine Production Schedule (Metric Units)**

	Parameter	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Totals
Mineralized Rock	Pit to Stockpile	k tonnes	851	2,464	2,741	2,629	2,908	3,737	2,841	2,597	3,527	2,253	1,623	28,169
	Pit to Crusher	k tonnes	-	4,288	3,985	3,877	4,243	5,436	2,776	4,823	3,787	3,053	1,194	37,462
	Total Mined	k tonnes	851	6,753	6,726	6,506	7,151	9,173	5,616	7,419	7,314	5,305	2,816	65,631
	Crusher to Heap	k tonnes	-	6,317	6,622	6,641	6,622	6,622	6,641	6,622	6,622	6,622	6,298	65,631
	Gold Grade	g/tonne	-	0.58	0.52	0.57	0.59	0.43	0.57	0.64	0.66	0.87	0.72	0.60
	Contained Gold	k oz	-	128	124	110	121	125	91	122	136	141	177	1275
	Recovery	%	-	84%	79%	76%	77%	76%	74%	80%	78%	71%	58%	75%
	Recoverable Gold	k oz	-	107	98	84	94	95	68	98	106	100	102	951
Waste Rock	Rock to Dumps	k tonnes	855	18,712	17,199	16,960	14,314	17,210	19,578	16,605	15,854	15,205	3,827	156,318
	Fill to Dumps	k tonnes	574	3,138	-	18	84	373	395	1,665	10,568	7,464	236	24,516
	Total to Dumps	k tonnes	1,429	21,849	17,199	16,978	14,397	17,583	19,973	18,270	26,422	22,670	4,062	180,834
All Rock	Total Mined	k tonnes	2,280	28,602	23,925	23,484	21,549	26,757	25,590	25,690	33,736	27,975	6,879	246,465
	Strip Ratio	wr:mr	1.7	3.2	2.6	2.6	2.0	1.9	3.6	2.5	3.6	4.3	1.4	2.8

## 1.9 Recovery Methods

Test work results completed to date indicate that the minable Mineral Resource for the Mercur project, including for the Main Mercur and South Mercur pits, are amenable to cyanide leaching for the recovery of gold. Based on the Mineral Reserve of 72.3 million tons (65.6 million tonnes) and established the processing rate of 20,000 tons (18,144 tonnes) per day, the Project has an estimated life of 10 years and will produce approximately 950,000 ounces of gold.

Mineralized material from the Main Mercur and South Mercur pits will be hauled to the central West Mercur processing site and crushed to 100% passing ½" at an average rate of 20,000 tons (18,144 tonnes) per day using a three-stage closed crushing circuit. Pebble lime will be added to the material for pH control before being stacked onto the heap using a conveyor stacking system.

The heap will be leached with a dilute cyanide solution with the resulting pregnant leach solution flowing by gravity to a pregnant solution pond before being pumped to a carbon adsorption circuit. Gold values loaded onto carbon from the adsorption circuit will be stripped using a modified pressure Zadra process and recovered by electrowinning. The resulting precious metal sludge will be treated in a retort to recover mercury before being smelted to produce the final doré product. Doré will be sold to a third-party refiner.

Carbon will be acid-washed before every strip to remove scale and other inorganic contaminants. All activated carbon will be thermally regenerated after each strip using a rotary kiln.

### **1.10      Infrastructure**

Plant infrastructure and most buildings from the previous Mercur mining operation were removed as part of the site reclamation; however, wherever possible, the remaining site infrastructure will be refurbished and reused, including the site access road and gate, the electrical power supply and distribution lines and equipment, the site roads, and the administration building.

New buildings to be constructed for the Project include the mine truck shop/warehouse, administration and process office trailers, a recovery plant, and a laboratory facility. A haul road will be constructed for transportation of the mineralized material from the Main Mercur and South Mercur pits to the processing facility at West Mercur and will be designed to accommodate two-way traffic with 150-ton (136-tonne) haul trucks. The project considers one leach pad that will be constructed at the West Mercur site and will be used to leach material from both Main and South Mercur. Solution storage will require construction of a pregnant solution pond, an event/overflow pond, and a barren solution tank. The fuel storage system will consist of several above ground tanks including a diesel tank and a gasoline tank.

Power will be delivered to the project by an existing 43.8 kV transmission line and distributed using a 4.16 kV, 3 Ph, 60 Hz distribution power line and will be stepped down to 480V or 110/220V as needed. Emergency power for the recovery plant and process solution pumps will be provided by a diesel generator.

Raw water for process requirements and makeup water will be taken from the existing historical production wells located approximately 3 miles (5 kilometers) from the West Mercur site and will be pumped to a head tank for distribution to other areas. A portion of the head tank will be used to provide fire water storage. Potable water is planned to be delivered to the site and distributed using a potable water storage and transfer pumping system.

### **1.11 Environmental Studies, Permitting and Social Impact**

The lead agency for all mine permitting in Utah is the Utah Division of Oil, Gas, & Mining (“UDOGM”). UDOGM has an organized and efficient approach to mine permitting as they have pre-established agreements with applicable state and federal regulatory agencies. The primary regulatory agencies that would be involved in permitting at Mercur, and coordinated through UDOGM, include: Utah Department of Environmental Quality (“UDEQ”); Utah State Historic Preservation Office (“SHPO”); Utah Division of Water Rights (“UDWR”); School and Institutional Trust Lands Administration (“SITLA”); and the U.S. Bureau of Land Management (“BLM”).

The Mercur PEA was developed with the objective that all mining and processing facilities would be located on State of Utah-managed land, with the majority designated as private. The only two Project facilities located on federally managed land would be the water supply pipeline, and the haul roads connecting the Main Mercur and South Mercur mines to the processing facility.

The primary permits/agreements that are expected to drive the overall Mercur permitting schedule include:

- Large Mining Operation Permit (UDOGM)
- Reclamation Permit (UDOGM)
- SITLA Mining Lease (SITLA)
- Air Quality Permit (UDOGM)
- Groundwater Discharge Permit (UDEQ)
- Dam Safety Permit (UDWR)
- Rights-of Way (BLM)

Permitting of the Project is estimated to take approximately 2 years once the necessary supplemental baseline studies have been completed.

### **1.12 Capital & Operating Costs**

Capital and operating costs for the process and general and administration (“G&A”) components of the Project were estimated by KCA. Mining costs were estimated by RESPEC based on owner mining and a leased mining fleet. Reclamation and closure costs have been estimated as an allowance based on total tons of material processed. The costs are presented in first quarter 2025 US dollars and are considered to have an accuracy of +/-35%. A summary of the project capital cost requirements and operating costs are presented in Table 1-6 and Table 1-7, respectively.

**Table 1-6: PEA Capital Cost Summary**

Description	Costs (\$,000)
<b>Pre-Production Capital</b>	
Process & Infrastructure (including spare parts)	\$115,036
Mining Capital & Mining Pre-Production	\$32,586
Indirect & Owner's Costs	\$4,258
Engineering, Procurement & Construction Management (EPCM)	\$13,804
Contingency	\$28,753
<b>Total Pre-Production Capital</b>	<b>\$194,439</b>
<b>Working Capital &amp; Initial Fills</b>	
Mining Working Capital	\$9,343
Process Working Capital	\$3,782
G&A Working Capital	\$567
Initial Fills	\$201
<b>Total Working Capital</b>	<b>\$13,893</b>
<b>Total Pre-Production &amp; Working Capital</b>	<b>\$208,332</b>
<b>Sustaining Capital</b>	
Process & Infrastructure	\$13,496
Indirect & EPCM	\$2,024
Mining	\$87,132
Contingency	\$7,461
<b>Total Sustaining Capital</b>	<b>\$110,113</b>
Reclamation & Closure Allowance (Gross)	\$39,790
<b>LoM Total Capital Costs (Excluding Working Capital)</b>	<b>\$344,342</b>

**Table 1-7: Operating Cost Summary**

Operating Cost Area	Unit Operating Costs	
	(\$/ton processed)	(\$/tonne processed)
Mining	\$10.38	\$11.44
Processing & Support	\$4.20	\$4.63
G&A	\$0.63	\$0.69
<b>Total</b>	<b>\$15.21</b>	<b>\$16.77</b>

### 1.13 Economic Analysis

Based on the estimated production schedule, capital costs and operating costs, KCA prepared a Microsoft Excel spreadsheet-based Discounted Cash Flow (“DCF”) model, which estimates the Net Present Value (“NPV”) of future cash flow streams. The PEA economic model was developed based on the following assumptions:

- The mine production schedule from RESPEC.
- Period of analysis of 15 years including one year of investment and pre-production, 10 years of production and 4 years for reclamation and closure.
- Gold price of \$2,175/oz.
- Processing rate of 20,000 t/d (18,144 T/d).
- Overall average recovery of 75% for gold.
- Capital and operating costs as developed in Section 21 of this report.

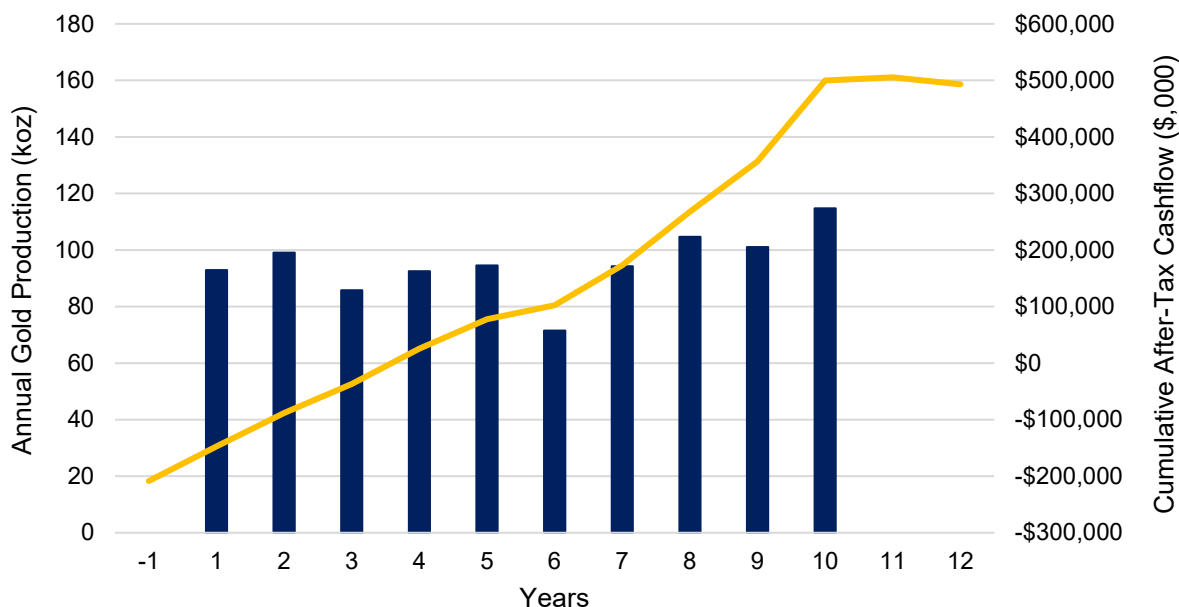
The Project economics based on these criteria from the DCF are summarized in Table 1-8.

**Table 1-8: PEA Economic Analysis Summary**

Financial Parameters	Results	
Internal Rate of Return (Pre-Tax)	30.8 %	
Internal Rate of Return (After-Tax)	26.5 %	
Average Annual Cashflow (Pre-Tax)	\$83 million	
NPV @ 5% (Pre-Tax)	\$373 million	
Average Annual Cashflow (After-Tax)	\$71 million	
NPV @ 5% (After-Tax)	\$295 million	
Gold Price Assumption	\$2,175 /ounce Au	
Pay-Back Period (based on After-Tax)	3.6 years	
Capital Costs (Sales Tax Included)		
Initial Capital	\$194 million	
Working Capital & Initial Fills	\$14 million	
LOM Sustaining Capital	\$110 million	
Reclamation & Closure (Gross)	\$40 million	
Operating Costs (Average LOM)		
Mining	\$10.38 /ton processed	\$11.44 /tonne processed
Processing & Support	\$4.20 /ton processed	\$4.63 /tonne processed
G&A	\$0.63 /ton processed	\$0.69 /tonne processed
All-in Sustaining Cost	\$1,363 /ounce Au	
Cash Cost	\$1,205 /ounce Au	
Production Data		
Life of Mine	9.95 years	
Average Daily Process Throughput	20,000 tons/day	18,144 tonnes/day
LOM Average Metallurgical Gold Recovery	75 %	
Average Annual Gold Production	95,600 ounces Au	
Total Gold Produced	951,000 ounces Au	
LOM Strip Ratio (Waste Rock : Mineralized Rock)	2.8	

Figure 1-1 presents the estimated annual gold production and cumulative after-tax cash flow from pre-production through mine closure at \$2,175 per ounce of gold.

**Figure 1-1: Annual Gold Production and Cumulative After-Tax Cash Flow**



A sensitivity analysis was performed on the Project economics. Figure 1-2 and Figure 1-3 are charts showing the relative sensitivity of the after-tax IRR and NPV to the gold price, capital cost, and operating cost.

Figure 1-2: After-Tax Sensitivity Analysis – IRR (KCA, 2025)

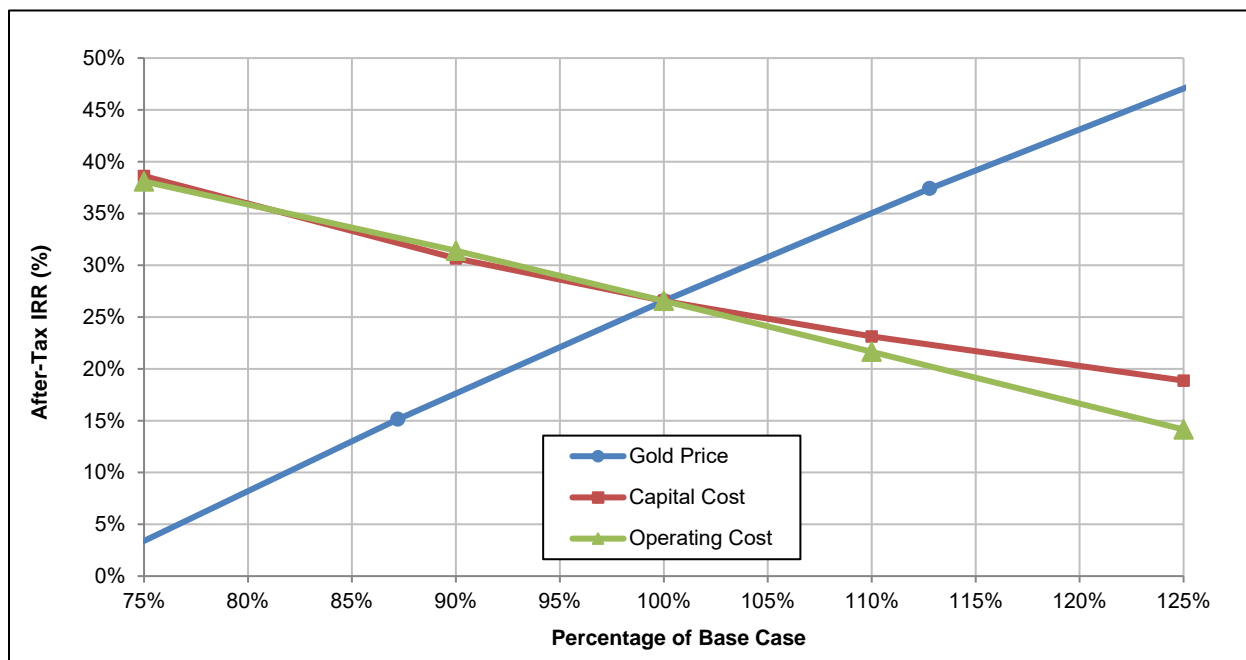
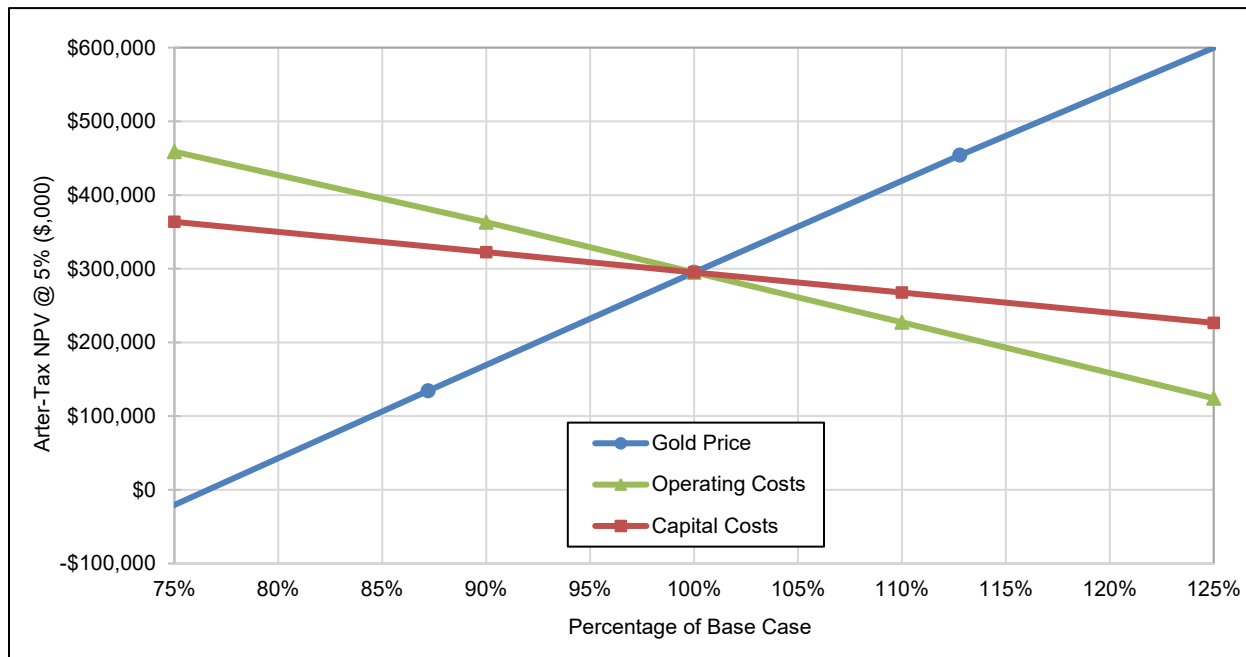


Figure 1-3: After-Tax Sensitivity Analysis – NPV @5% (KCA, 2025)



## 1.14 Conclusions

The work completed to date has demonstrated that resumption of operations at the Mercur site as a heap-leach-only operation is technically and economically viable. The Project is accessible year-round via Interstate 80 and State Routes 36 and 73, which are well-maintained roads from Salt Lake City, Utah. The Project also benefits from existing infrastructure from the previous operation including the site access road, the electrical power transmission and distribution lines, the site roads, and the administration building at the Main Mercur Site.

The Project considers open pit mining from multiple pits with heap leaching for recovery of gold from predominantly oxide material. The material will be crushed to 100% passing ½ inches, stockpiled, reclaimed and conveyor stacked onto a leach pad centrally located at the West Mercur site at an average rate of 20,000 t/d (18,144 T/d). Stacked ore will be leached using low-concentration sodium cyanide solution and the resulting pregnant leach solution will be processed in an ADR plant where gold will be adsorbed onto activated carbon, stripped, and recovered by electrowinning followed by treatment in a mercury retort and smelting to produce the final doré product.

Metallurgical test work completed indicates that the material is amenable to cyanide leaching for the recovery of gold with low to moderate reagent requirements. The overall gold recovery for the project is estimated at 75% and will produce an estimated 951,000 ounces of gold.

## 1.15 Opportunities

Key opportunities identified by the Study Authors include:

- Low-risk infill drilling will increase drill-hole density in areas of wide-spaced drilling, which will potentially upgrade the classification of mineral resources. Infill drilling would also test the current gold domain model, and confirmation would allow for the upgrade of Inferred material to Indicated or potentially Measured.
- The best potential to expand resources at Main and South Mercur with step-out drilling is in local areas down-dip to the east, although pit expansion is more difficult due to increasing overburden in that direction.
- Outside the existing modeled deposits, there are opportunities to discover new mineralization that could eventually add to current mineral resources. These include:
  - Mineralized feeder structures and deeper stratigraphic host units at Main Mercur.
  - The northeast extension of the favorable Mercur Series host units at Main Mercur.
  - New en echelon pods of mineralization at South Mercur.
  - Greenfields exploration in the West Mercur pediment.

- Early-stage exploration at North Mercur.
- Potential to identify mineralized material within the historical Main Mercur waste rock and ROM heap leach facilities, and historical South Mercur underground mine tailings piles to increase mineral resources and reduce the overall Project strip ratio.
- Potential to increase the production rate with the discovery of additional mineral resources amenable to heap leach recovery.
- Review and extraction of additional historical data to potentially improve the geological, geotechnical, metallurgical, and hydrogeological understanding of the site.

## 1.16 Risks

Risks identified by the Study Authors that could negatively impact the Project economics include:

- The original datum, projections and precise base point for the local Mercur Mine and South Mercur grids are not known. Although transformations were developed by Barrick and Ensign verified collar locations using various indirect sources, there is uncertainty and risk associated with collar coordinates.
- The precise location of the top-of-bedrock surface at Main Mercur is not known in backfilled areas within the pits.
- At South Mercur there was a small amount of historical production from the Overland and Sunshine underground mines, and there is a risk that some material predicted by the resource model no longer exists.
- Rock density measurements were not available for the Mercur project. A global tonnage factor was applied to all bedrock material based on historical mining, however, actual tonnages of material mined will be variable.
- Samples used for the column leach tests were derived from a limited number of core holes that do not represent the full range of metallurgical behavior of the Mercur mineral resources. Additional drilling, sampling and testing will be required to increase confidence in the heap leach recovery estimates to support a Preliminary Feasibility Study (“PFS”) and continued Project development.
- The Mercur mine pits have known carbonaceous material that could impact overall heap performance if this material is not well understood and managed in any future operation. Steps have been taken to identify this material, and the PEA mine schedule was developed such that the material would be stockpiled and leached at the end of mine life.
- Geotechnical studies are required to verify the pit slope assumptions for both Main and South Mercur.

- The Mercur land position includes claim interests optioned from Barrick Resources (USA) Inc. and others and requires future lease fees and earn-in payments.

## 1.17 Recommendations

The Study Authors have recommended additional work to increase the level of detail, potentially improve the PEA economics, and de-risk certain aspects of the Project. These recommendations have been separated into core items that support moving the Project forward by completing a PFS, and discretionary items such as some exploration and Project permitting activities. A summary of the recommendations include:

- Complete additional infill and step-out drilling in the Main and South Mercur Mineral Resource areas to test the gold domain model, potentially upgrade the classification of modeled material, expand the existing deposits, and collect samples for metallurgical and geotechnical testing.
- Conduct exploration drilling, rock sampling, soil sampling, and geophysical surveys to explore for potential new discoveries from targets in Main, North, West and South Mercur that could extend the LOM.
- Obtain spatially representative density data from drill core, pit wall samples, or other representative sources, and sufficiently distinguish the various lithologic, alteration and oxidation types.
- Search existing historical collar coordinate information for transformations between local and State Plane systems.
- Undertake additional heap leach metallurgical testing including column leach and compacted permeability tests to determine the optimum crush size, increase confidence in the recovery model for a range of rock types including potentially carbonaceous and sulfidic materials, and validate the reagent requirements.
- Complete foundation geotechnical studies in the key infrastructure areas at West Mercur.
- Initiate wildlife and cultural baseline studies to supplement existing data and compress the permitting schedule.
- A PFS should be completed on the Project once supporting lab and field studies referenced above have been sufficiently advanced and the Mineral Resource estimate has been updated.

The total cost for completing the core work is estimated at \$8.96 million with an additional \$2.92 million for discretionary items.

## **SECTION 2 CONTENTS**

2	INTRODUCTION .....	2-2
2.1	Project Scope and Terms of Reference.....	2-2
2.2	Frequently Used Units of Measure, Acronyms, and Abbreviations.....	2-4
2.3	References .....	2-6

## **SECTION 2 TABLES**

Table 2-1:	List of Authors and Report Sections they Authored or Co-Authored.....	2-3
Table 2-2:	Frequently Used Units of Measure.....	2-4
Table 2-3:	Frequently Used Acronyms and Abbreviations .....	2-5

## **2 INTRODUCTION**

This technical report on the Mercur Gold Project (“Project”) was prepared at the request of Revival Gold Inc. (“Revival”), a public company registered in Canada. Revival is listed on the TSX Venture Exchange (TSX.V: RVG, OTCQX: RVLGF) and owns or controls a 100% working interest in the Project, located in Tooele County, Utah. This report has been prepared by Kappes, Cassiday & Associates (“KCA”) and RESPEC Company LLC (“RESPEC”) with input from other consulting groups in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (“NI 43-101”). The Mercur Project is controlled by Ensign Gold (US) Corp. (“EGUS”), a Nevada corporation and wholly owned subsidiary of Ensign Minerals Ltd., which is in turn a wholly owned subsidiary of Revival.

### **2.1 Project Scope and Terms of Reference**

The purpose of this technical report is to provide an update on the Mineral Resources at the Mercur Project, to develop a preliminary economic analysis (“PEA”) of the Project, and to support efforts to raise capital to continue exploration and development activities. This technical report builds upon previous technical reports on the Mercur Gold Project on behalf of Ensign (Lomas et al., 2023; Lindholm et al., 2022) and a technical report on the West Mercur Project on behalf of Rush Valley Exploration Inc. (Lunbeck, 2019). The scope of the work completed by the authors included a review of pertinent reports and data provided to the authors by Revival/Ensign relative to the general setting, geology, project history, exploration and mining activities and results, drilling programs, methodologies, quality assurance, metallurgy, and interpretations. References are cited in the text and listed at the end of each section. This report supports information disclosed in a news release dated March 31, 2025.

The Project considers open pit mining of approximately 72.3 million tons of mineralized material (62.6 million tons from the Main Mercur area and 9.8 million tons from South Mercur) with an overall average gold grade of 0.018 oz/ton. Mineralized material from the Main Mercur and South Mercur areas will be hauled to the centrally located West Mercur area and processed in a conventional three-stage crushing circuit followed by conveyor stacking and heap leaching with a low-concentration cyanide solution. The resulting pregnant leach solution will be collected in a pregnant process solution pond and treated in an adsorption, desorption-recovery (“ADR”) plant for the recovery of gold resulting in the production of a final doré product.

This report has been prepared under the supervision of Caleb Cook, Professional Engineer (“PE”) and a project manager at KCA, Reno, Nevada; Michael S. Lindholm, Certified Professional Geologist (“CPG”) of the American Institute of Professional Geologists and Principal Geologist for

RESPEC, Reno, Nevada; and Jordan Anderson, PE, an engineering manager at RESPEC, Reno Nevada and supersedes a National Instrument 43-101 Technical Report prepared by Lionsgate Geological Consulting dated May 24, 2024 titled, “NI 43-101 Technical Report for the Mercur Project, Camp Floyd and Ophir Mining Districts, Tooele & Utah Counties, Utah, USA”. Mr. Cook, Mr. Lindholm and Mr. Anderson are Qualified Persons under NI 43-101 and have no affiliation with Revival or Ensign except that of an independent consultant/client relationship and each author is independent as described in Section 1.5 of NI 43-101. A summary of each author’s report section responsibility is presented in Table 2-1.

**Table 2-1: List of Authors and Report Sections they Authored or Co-Authored**

<b>QP Name and Professional Designation</b>	<b>Report Section Authored</b>
Caleb D. Cook, PE	Sections 2, 3, 4, 5, 12.5, 13, 17, 19, 20, 22, 23, 24, 27 and parts of Sections 1, 18, 21 25 and 26
Michael S. Lindholm, CPG	Sections 1.3, 1.4, 1.5, 1.7, 6 through 12 except 12.5, 14, 25.1.2, 25.2.1, 25.3.1, 26.2.1 and parts of Section 1
Jordan M. Anderson, RM SME	Sections 15, 16 and parts of Sections 1, 18, 21, 25 and 26

Mr. Cook visited the Mercur Gold Project on August 15, 2024. During the visit, Mr. Cook reviewed the site conditions for proposed process infrastructure, including the heap leach pad, looked at drill core, and met with project and site personnel.

Mr. Lindholm visited the Mercur Project on May 17 and 18, 2021. He was accompanied by Mr. David Mako, Mr. Calvin Mako, Mr. William Wulfange, Mr. Norm Pitcher, Mr. James Lunbeck and Mr. Michael Ressel, all employees or contractors of Ensign. Also in attendance was Mr. Kevin Hamatake, representing Barrick. Altered and mineralized rocks associated with Barrick’s open pit mining and gold production at Main Mercur were examined on the first day. Also observed were the tailings impoundment facility, the remaining infrastructure, and the current state of reclamation at the historical Mercur mine site. The next day, the geology and remnants of historical mining were examined at South Mercur and West Mercur. The North Mercur area of the property was not visited due to difficult access (snow cover).

Mr. Anderson visited the Mercur Gold Project on August 15, 2024. During the visit, Mr. Anderson reviewed the historical mining facilities in the Main Mercur area including the remaining infrastructure, previously mined pits and dumps, historical leach pad and tailings impoundment facility as well as drill core with site personnel. Mr. Anderson also reviewed the South and West Mercur areas.

The most recent drill hole at the Mercur Project was completed on October 15, 2022. Revival/Ensign has stated that no material work has been done at the site since then, as

subsequent efforts were focused on upgrading the drill hole database, mineral resource estimating, and financing efforts.

The information in this report is not a substitute for independent professional advice before making any investment decisions. The authors have reviewed the available data and have made judgments as to the general reliability of this information. Where deemed either inadequate or unreliable, the data were either eliminated from use or procedures were modified to account for lack of confidence in that specific information. Mr. Cook, Mr. Lindholm and Mr. Anderson have made such independent investigations as deemed necessary in their professional judgment to be able to reasonably present the conclusions discussed herein.

This Technical Report was prepared specifically for the purpose of complying with NI 43-101 and may be distributed to third parties and published without prior consent of the Authors if the Technical Report is presented in its entirety without omissions or modifications, subject to the regulations of NI 43-101. The effective date of this technical report is March 25, 2025.

## **2.2 Frequently Used Units of Measure, Acronyms, and Abbreviations**

In this report, measurements are reported in United States Customary units unless noted otherwise. Conversions have been made using the parameters provided in Table 2-2. Frequently used acronyms and abbreviations are provided in Table 2-3.

**Table 2-2: Frequently Used Units of Measure**

<b>Measure</b>	<b>Units and Unit Conversions</b>
Linear	1 centimeter = 0.3937 inch 1 meter = 3.2808 feet = 1.0936 yard 1 kilometer = 0.6214 mile
Area	1 hectare = 2.471 acres = 0.0039 square mile
Capacity (liquid)	1 liter = 0.2642 US gallons
Weight	1 tonne = 1.1023 short tons = 2,205 pounds 1 kilogram = 2.205 pounds 1 troy ounce = 31.1035 grams
Currency	Unless otherwise indicated, all references to dollars (\$) in this report refer to currency of the United States.

**Table 2-3: Frequently Used Acronyms and Abbreviations**

Acronym or Abbreviation	Definition
AA	atomic absorption spectrometry
AES	atomic emission spectroscopy
Ag	silver
amsl	above mean sea level
Au	gold
°C	degrees centigrade
C\$	Canadian dollars
CIL	carbon- in-leach
cm	centimeters
CN	cyanide
core	diamond core-drilling method
CX	categorical exclusion
DCN	direct cyanide leach analyses
DNA	determination of NEPA adequacy
EA	environmental assessment
EIS	environmental impact statement
ESA	endangered species act
°F	degrees Fahrenheit
ft	foot or feet
g/T	grams per tonne
g/T Au*m	grade-thickness interval in grams of gold per tonne x meter
ha	hectares
Hg	mercury
ICP	inductively coupled plasma analytical method
in.	inch or inches
kg	kilograms
km	kilometers
l or L	liter
lbs	pounds
m	meters
M	million
Ma	million years
mi	mile or miles
mm	millimeters
NOI	notice of intention
µm	micron or one-millionth of a meter

Acronym or Abbreviation	Definition
MS	mass spectroscopy
NSR	net smelter return
OES	optical emission spectroscopy
oz	troy ounce
oz/ton or oz/t or opt	troy ounces per short ton
POD	plan of development
POX	pressure oxidation
ppb	parts per billion
ppm	parts per million
QA/QC	quality assurance and quality control
RC	reverse-circulation drilling method
ROW	right-of-way
SHPO	state historic preservation office
SITLA	school and institutional trust lands administration
t	short ton
T	metric tonne or tonne
T/d	metric tonnes per day
tpd	short tons per day
UDEQ	Utah department of environmental quality
UDOGM	Utah division of oil, gas & mining

## 2.3 References

Lomas, S., Davis, B., Lindholm, M.S. and Defilippi, C., 2024, NI 43-101 Technical Report for the Mercur Project, Camp Floyd and Ophir Mining Districts, Tooele and Utah Counties, Utah, USA; Report prepared on behalf of Revival Gold Inc. and Ensign Minerals Inc. Effective date December 5, 2023. 272 p.

### 3 RELIANCE ON OTHER EXPERTS

The QPs are not experts in legal or environmental matters, such as the assessment of the validity of mining claims, mineral rights, property agreements or permitting requirements in the United States or elsewhere. Furthermore, the authors did not conduct any investigations of the environmental, social, or political issues associated with the Mercur Project, and are not experts with respect to these matters. The authors have therefore relied fully upon information and historical title opinions provided by Ensign to Mr. David T. Terry, professional landman of Thames River LLC, to Mr. Matthew S. Brahana, attorney with Fabian VanCott, and to Ms. Opal Adams, environmental permitting consultant, with regards to the following:

- Section 4.2, which pertains to land tenure, was the subject of limited due diligence reviews of the Mercur Property prepared by Mr. Terry of Thames River LLC (dated June 29, July 23, and November 11, 2021, and September 21, 2023), and by Mr. Brahana of Fabian Vancott (dated May 1, 2024). Section 4.2 was also the subject of a land status review, compilation and inventory of properties owned or controlled by Ensign Minerals Inc.: prepared for Ensign Gold (US) Corp. by Catherine Suda of Veradale, Washington.
- Section 4.3, which pertains to legal agreements and encumbrances, was the subject of limited due diligence reviews of the Mercur Property prepared by Mr. Terry of Thames River LLC (dated June 29, July 23, and November 11, 2021, and September 21, 2023), and by Mr. Brahana of Fabian Vancott (dated May 1, 2024). Section 4.3 was also the subject of a land status review, compilation and inventory of properties owned or controlled by Ensign Minerals Inc.: prepared for Ensign Gold (US) Corp. by Catherine Suda of Veradale, Washington.
- Section 4.4, which pertains to environmental permits and liabilities, was the subject of a summary of environmental liabilities at Mercur in a report dated August 22, 2023, prepared by David Mako former VP Land of Ensign.
- Section 20, which pertains to the environmental and permitting status and requirements for the project, was the subject of limited due diligence reviews of the Mercur property and was prepared wholly by Ms. Opal Adams.

With such details being contained in the following reports from Mr. Terry, Mr. Brahana, Ms. Suda, and Mr. Mako:

- Terry, D.T., 2021, Letter dated June 29, 2021, summarizing review of Ensign Gold's Mercur mining claims and fee lands title status: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.

- Terry, D.T., 2021b, Letter dated July 23, 2021, summarizing review claims and fee lands title status of Sacramento Gold Mining Company and Geyser Marion Gold Mining Company properties: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.
- Terry, D.T., 2021c, Letter dated November 11, 2021, summarizing review of Sections 4.2 and 4.3 of the Technical Report: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.
- Terry, D.T., 2023, Due diligence title work, Mercur: Letter dated September 21, 2023: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 3 p. and 4 Appendices, including: A) Map and List of Properties; B) County Status of Private Lands; C) BLM Status of Unpatented Claims; and D) SITLA Status of State Leases.
- Brahana, M.S., 2024, Limited title status report: Letter dated May 1, 2024, prepared for Ensign Minerals Inc. and Ensign Gold (US) Corp. by Fabian VanCott, Attorneys at Law of Salt Lake City, 35 p.
- Suda, C., 2025, Memorandum dated April 30, 2025, summarizing the land status review, compilation and inventory of properties owned or controlled by Ensign Minerals Inc.: prepared for Ensign Gold (US) Corp. by Catherine Suda of Veradale, Washington.
- Mako, D.A., 2023, Summary of environmental liabilities pertaining to historical mining at Mercur: Ensign Minerals Inc. memo, 12 p.

## SECTION 4 CONTENTS

4	PROPERTY DESCRIPTION AND LOCATION.....	4-2
4.1	Location .....	4-2
4.2	Land Area .....	4-3
4.3	Agreements and Encumbrances.....	4-7
4.4	Environmental Liabilities .....	4-12
4.5	Permitting.....	4-13
4.6	References .....	4-14

## SECTION 4 TABLES

Table 4-1:	Estimated 2025 – 2026 Land Holding Costs for the Mercur Property .....	4-6
Table 4-2:	Summary of Agreements and Encumbrances .....	4-9
Table 4-3:	Table of EGUS' Permits to Commence Exploration.....	4-13

## SECTION 4 FIGURES

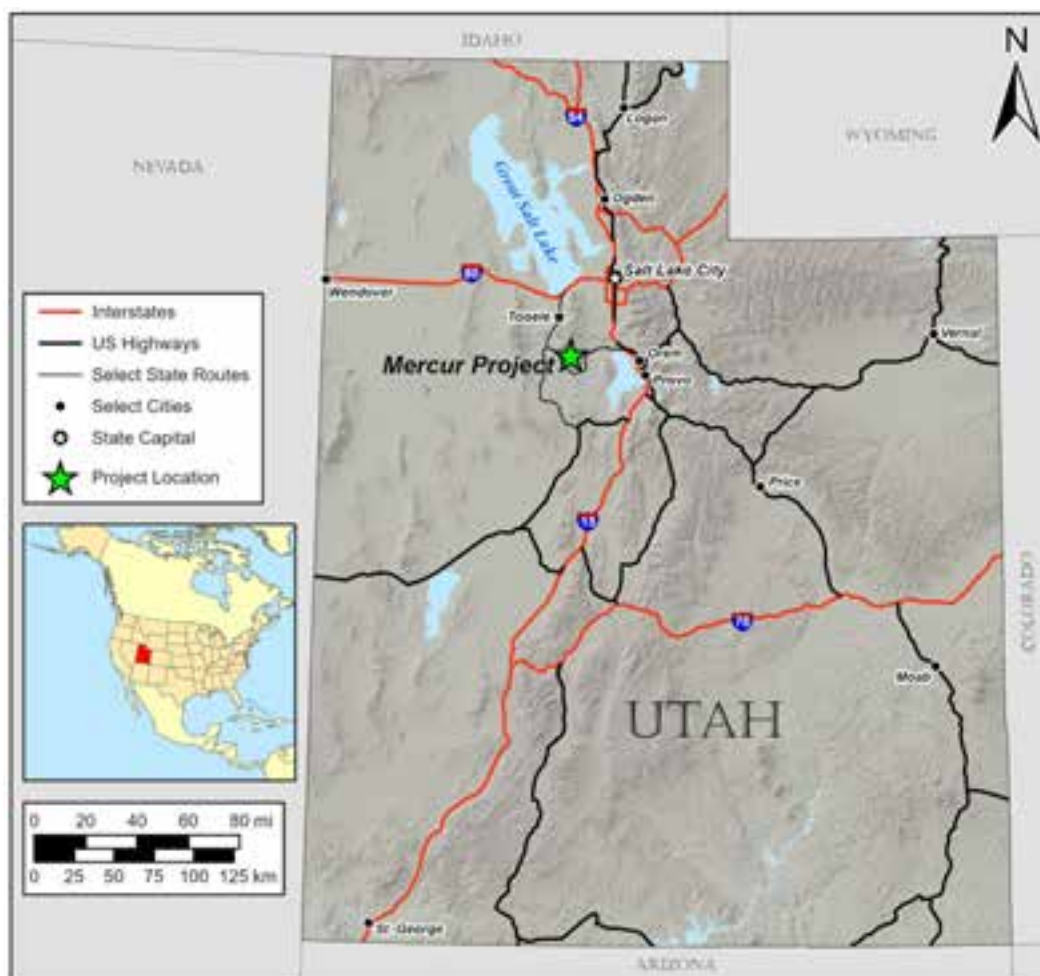
Figure 4-1:	Location Map for the Mercur Project.....	4-2
Figure 4-2:	Generalized Map of the Mercur Property, Oquirrh Mountains, Utah.....	4-4
Figure 4-3:	Map of the Mercur Property .....	4-5
Figure 4-4:	Map of Royalty Encumbrances for the Mercur Project .....	4-11

## 4 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Location

The Mercur Gold Project is located in Tooele and Utah counties, Utah, 57 km southwest of Salt Lake City (Figure 4-1 and Figure 4-2). The property is centered at approximately 40.32°N, 112.22°W, and is within the historical Camp Floyd mining district and the southern part of the Ophir mining district. The Mercur Property includes the formerly producing Mercur gold mine, which was last operated by Barrick Resources (USA) Inc. (“Barrick”), a subsidiary of Barrick Gold Corporation.

**Figure 4-1: Location Map for the Mercur Project**



## 4.2 Land Area

Revival owns or controls an exclusive 100% working interest in the Mercur Property, which consists of those real property interests listed in Appendix A. These properties include interests in 450 unpatented lode claims, three unpatented millsite claims, 475 patented mining claims, 426 fee land tax parcels comprised of surveyed lots, and six Utah School and Institutional Trust Lands Administration (“SITLA”) metalliferous minerals leases located in the Oquirrh Mountains of Tooele and Utah counties, Utah. All the properties, lease agreements and option agreements in Appendix A are held by Ensign Gold (US) Corp. (“EGUS”), a Nevada corporation and a wholly owned subsidiary of Ensign.

The Mercur Property covers approximately 6,628 hectares (16,378 acres) of mineral rights as shown on Figure 4-2 and Figure 4-3, and occupies portions of:

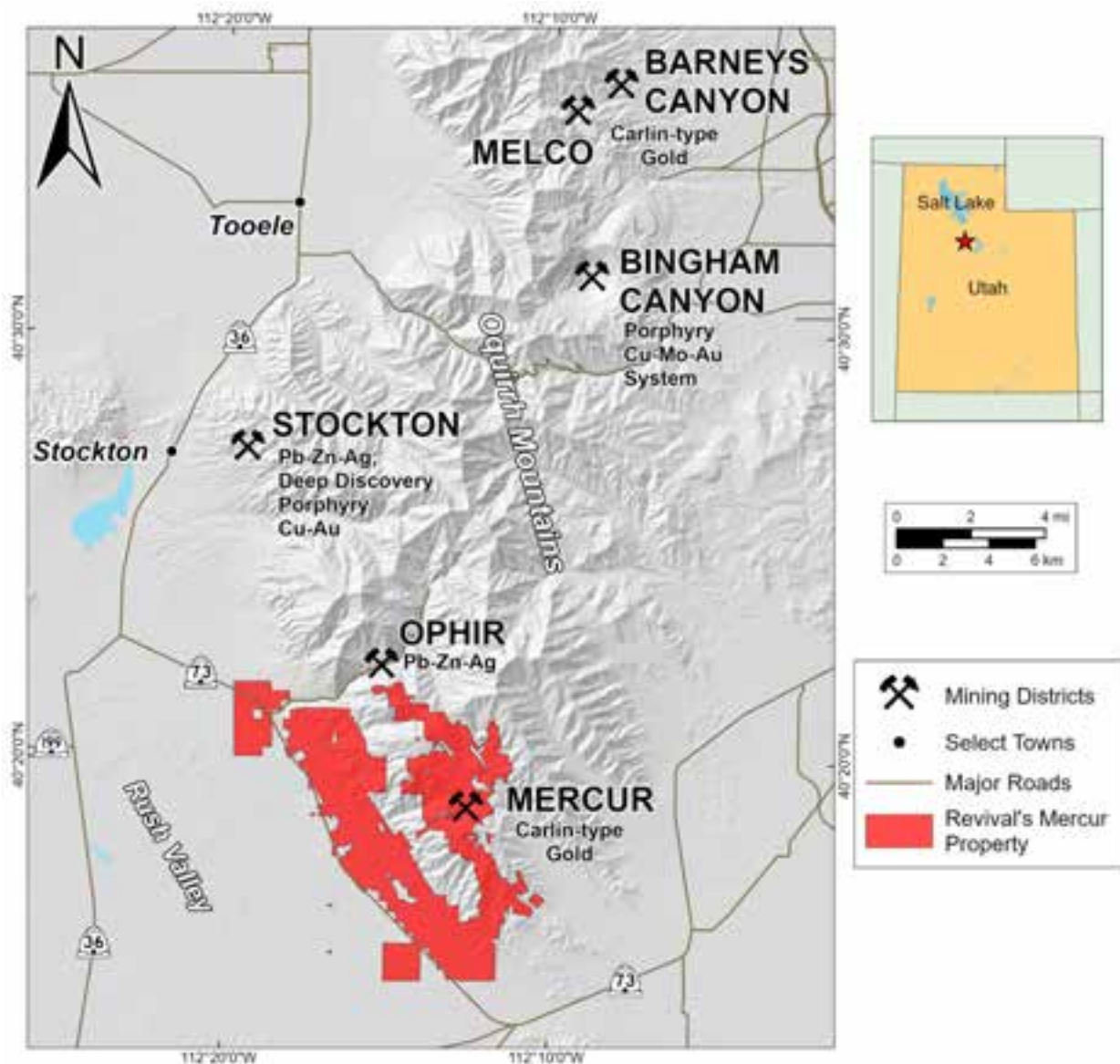
- Sections 29 through 33 of Township 5 South, Range 3 West;
- Sections 25 through 29 and 32 through 35 of Township 5 South, Range 4 West;
- Sections 4 through 9, 17 through 22, and 27 through 32 of Township 6 South Range 3 West; and
- Sections 1 through 4, 10 through 15, 23 through 25, and 36 of Township 6 South, Range 4 West, Salt Lake Base and Meridian.

A listing of the patented and unpatented claims and leasehold interests that comprise the property is provided in Appendix A, Parts 1 through 6. Note that for most of the parcels in Appendix A that are less than 100% interest, the remaining interest is also held by Ensign due to overlapping leases, options or acquisitions. The few cases where a total of less than 100% interest is controlled by Ensign are shown on Figure 4-3. These partially controlled properties do not impact the ability to complete the work program proposed herein. Less than 1% of the inferred resource described in Section 14 is affected by partially controlled properties, and the inferred resource has been discounted to account for that partial control. Ensign represents that the list of claims and leasehold interests in Appendix A is complete to the best of its knowledge as of the effective date of this report.

Ownership of the unpatented mining claims is in the name of the holder (locator), subject to the paramount title of the United States of America, under the administration of the U.S. Bureau of Land Management (“BLM”). Under the Mining Law of 1872, which governs the location of unpatented mining claims on federal lands, the locator has the right to explore, develop, and mine minerals on unpatented mining claims without payments of production royalties to the U.S. government, subject to the surface management regulation of the BLM. Currently, annual claim-maintenance fees are the only federal payments related to unpatented mining claims, and these

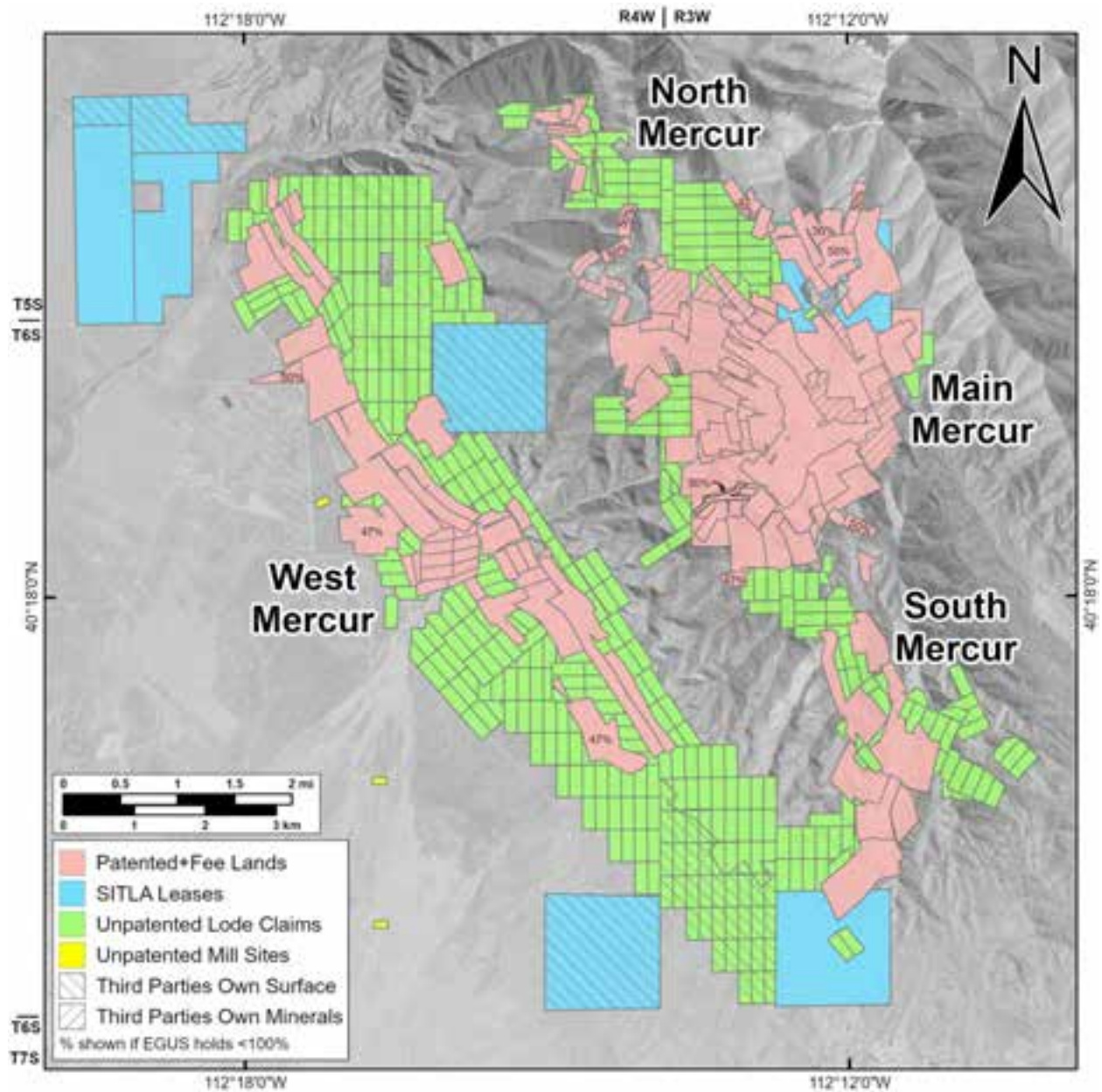
fees have been paid in full until September 1, 2025. The annual holding costs for the Mercur Project unpatented mining claims, patented claims, leased fee lands and lease payments due to third-party claim owners for 2025 and 2026 are listed in Table 4-1.

**Figure 4-2: Generalized Map of the Mercur Property, Oquirrh Mountains, Utah**



The Mercur Project includes four informally named sub-areas. These are known as the Main Mercur area, South Mercur area, West Mercur area, and North Mercur area on Figure 4-3.

Figure 4-3: Map of the Mercur Property



**Table 4-1: Estimated 2025 – 2026 Land Holding Costs for the Mercur Property**

<b>Annual Fee Type</b>	<b>2025</b>	<b>2026</b>
Unpatented Claims BLM Maintenance Fees	\$90,600	\$90,600
Unpatented Claims County Filing Fees	\$850	\$850
<b>Unpatented Mining Claims Holding Costs</b>	<b>\$91,450</b>	<b>\$91,450</b>
Tooele and Utah County Patented Claims & Fee Land Taxes	\$19,000	\$19,000
Private Party Mining Lease Agreement Fees (advanced minimum royalties)	\$148,000	\$150,000
Exercise Private Party Purchase Option	-	\$100,000
Utah SITLA Leases (annual rental & minimum royalty payments)	\$12,968	\$12,968
<b>Lease Payments, Holding Taxes and Fees, &amp; Purchase Option</b>	<b>\$179,968</b>	<b>\$281,968</b>
<b>Unpatented Claims, Lease Payments, Taxes, Fees &amp; Purchase Option</b>	<b>\$271,418</b>	<b>\$373,418</b>

The reviews by Ensign and due diligence reviews by Mr. Terry of Thames River LLC (2021a, 2021b, 2021c and 2023) and Mr. Brahana of Fabian VanCott (2024) have not identified any known fatal defects in the title of the claims, and the authors are not aware of any significant land use or conflicting rights, or such other factors and risks that might substantially affect title or the right to explore and mine the property, based on the information provided by Ensign, Thames River LLC and Fabian VanCott.

EGUS holds the surface rights to the patented claims it owns and has leased, subject to various easements and other reservations and encumbrances. EGUS has rights to use the surface of the unpatented mining claims for exploration and mining purposes until September 1, 2025; however, the surface rights can be maintained beyond that by timely annual payment of claim maintenance fees and other filing requirements. The unpatented claims are subject to the paramount title of the U.S. federal government. EGUS holds surface rights to the areas it has under lease in accordance with the terms of each lease.

Some of the unpatented mining claims and the Utah SITLA leases held by EGUS are split-estate lands in which EGUS controls the mineral rights and private third parties own the surface rights (Figure 4-3). EGUS has the right to conduct casual exploration on these lands (mapping, geochemical sampling, geophysical surveys), but prior agreement with the surface owner is required before undertaking surface disturbing activity such as road construction, drilling or mining. Ensign has no immediate plans for surface disturbing work on these lands, and no surface use agreements have yet been obtained on the split-estate lands.

### 4.3 Agreements and Encumbrances

On April 10, 2024, Revival, Ensign, and Revival Gold Amalgamation Corp. entered into a definitive business combination agreement dated April 9, 2024, whereby Revival will acquire all the issued and outstanding shares of Ensign a private company and owner of Mercur, in exchange for an aggregate of 61,376,098 shares of the Company based on a share exchange ratio of 1.1667 Revival shares for each common share of Ensign. The consideration implies a purchase price of C\$0.4164 per Ensign Share, or gross consideration of approximately C\$21.9 million. On May 30, 2024, Revival completed the acquisition of Ensign, and therefore, the Mercur project.

Ensign consolidated its land position at the Mercur Project by way of transactions with five mining companies, along with the staking of additional claims and the execution of two mining leases with private parties. The mining company transactions included:

- 1) An Assignment Agreement between Rush Valley Exploration Inc. (“RVX”) and Ensign and its wholly owned subsidiary, EGUS, dated August 3, 2020, under which RVX agreed to assign 236 unpatented lode mining claims, five Utah SITLA metalliferous minerals leases and eight leases with private parties holding interests in 129 patented claims of mineral rights to EGUS in exchange for 4,000,000 shares of Ensign stock.
- 2) An Agreement and Plan of Merger between Ensign and EGUS, and Energold Minerals Inc. (“Energold”) and its wholly owned subsidiary, Priority Minerals Limited (“Priority”), dated August 17, 2020, effected the merger of Priority into EGUS in exchange for Energold’s receipt of 4,200,000 shares of Ensign stock. By this merger, EGUS acquired ownership interests in 53 patented claims in the South Mercur area;
- 3) A Mineral Lease and Option to Purchase was executed between Barrick Resources (USA) Inc. (“Barrick”) and Barrick Gold Exploration Inc. (“BGEI”), Ensign and EGUS on May 13, 2021. The agreement was amended on June 13, 2022, May 15, 2023, and April 9, 2024, to extend the option exercise period to January 2, 2026, and to restructure the option price. The key terms included a payment of C\$1,000,000 by Ensign to BGEI upon signing, the issue of 3,000,000 warrants for shares of Ensign to BGEI, exercisable at C\$0.25/share, and a two-year lease period during which Ensign must spend C\$6,000,000 on exploration and evaluation of the Barrick Mercur mine property, all of which have been satisfied. Under the agreement, as amended, Ensign holds an option to complete the purchase of Barrick Resources (USA) Inc. and its Mercur mine property any time prior to January 2, 2026, by paying to BGEI \$5,000,000 by January 2, 2026, and three additional \$5,000,000 payments to be made on the first, second and third anniversaries of commercial production. At BGEI’s election the payments may be made in cash or in Ensign common shares at market price. The Barrick Mercur mine property include interests in 189 patented claims, 174 fee

lots, six unpatented lode claims, three unpatented mill site claims, and one Utah SITLA metalliferous minerals lease;

- 4) Geyser Marion Gold Mining Company (“Geyser Marion”) entered into an Option and Assignment Agreement with Ensign on October 25, 2021. As amended on October 13, 2023, the key terms grant Ensign a five-year option to purchase the properties in exchange for 1,050,000 shares of Ensign stock. The option may be exercised by payment of \$127,188 to Geyser Marion. This agreement pertains to interests in 157 patented mining claims and 257 fee lots in the Main Mercur and West Mercur areas. Sixty-one of these patented mining claims at West Mercur are already under lease to Ensign. Exercise of the purchase option will result in the termination of the lease. The October 13, 2023 amendment also expanded the definition of an ‘initial public offering’ in the option and assignment agreement to include Ensign’s completion of a business combination transaction with a corporation listed on the TSXV.; and
- 5) Sacramento Gold Mining Company (“Sacramento”) entered into an Option and Assignment Agreement with Ensign on October 25, 2021. As amended on October 13, 2023, the key terms grant Ensign a five-year option to purchase the properties in exchange for 150,000 shares of Ensign stock. The option may be exercised by payment of \$37,500 to Sacramento. This agreement pertains to interests in 19 patented mining claims in the Main Mercur area. The October 13, 2023 amendment also expanded the definition of an ‘initial public offering’ in the option and assignment agreement to include Ensign’s completion of a business combination transaction with a corporation listed on the TSXV.

In addition to the major acquisitions above, EGUS has:

- staked 200 unpatented lode claims;
- executed two Mining Lease Agreements with private parties with interests in two patented claims and eight unpatented lode claims;
- executed an Exploration License and Option Agreement with a private party on 1 patented claim;
- purchased a 4.17% interest in 15 patented claims in which Ensign holds the remaining interest; and
- executed a Mining Lease Agreement with a private party with a 25% interest in 43 patented claims.

Fees other than production royalties associated with these agreements are included in the land-holding costs in Table 4-1. Table 4-2 summarizes the agreements and encumbrances applicable to the property.

**Table 4-2: Summary of Agreements and Encumbrances**

Area	Owner	Number of Claims or Lease	Royalty
West Mercur	Utah SITLA	5 separate metalliferous minerals leases	4.0% gross proceeds
West Mercur	Parties A-G	118 patented claims in 7 leases with similar terms	2.0% net smelter return
West Mercur	Party A	23 unpatented lode claims	2.0% net smelter return
West Mercur	"Royalty Pool" Parties A-G	All third-party properties in the West Mercur Area of Interest	1.0% net smelter return, capped at \$10,000,000
North Mercur	Party H	12 patented claims	2.0% net smelter return, can purchase for \$1,000,000
North Mercur	Party I	1 unpatented lode claim	2.0% net smelter return, can purchase for \$162,162
South Mercur	Ensign-Party RR1	1/3 interest in 6 of the Ensign patented claims	Retained royalty of 1.5% net smelter return by previous owner
South Mercur	Ensign-Party RR2	2/3 interest in the same 6 of the Ensign patented claims	Retained royalty of 3.0% net smelter return by previous owner; can purchase for \$775,000
South Mercur	Party J	7 unpatented lode claims, 41% interest in 2 patented claims	1.0% net smelter return
South Mercur	Homestake	All third-party properties in the South Mercur Area of Interest	1.5% net smelter return
Main Mercur	Barrick	189 patented claims, 174 fee Lots, 1 Utah SITLA mining lease, 6 unpatented lode claims, 3 unpatented mill site claims	2.0% net smelter return on the Barrick-owned mineral interests
South & Main Mercur	Party L	25% interest in 43 patented claims	2.0% net smelter return, can purchase for \$1,530,765
Main & West Mercur	Barrick-Party RR4 <sup>1</sup>	62 of the Barrick patented claims	Retained royalty of 0.48% net smelter return shared by 4 previous owners
Main Mercur	Barrick-Party RR5	25% interest in 7 of the Barrick patented claims	Retained royalty of 2.0% net value by previous owner
Main Mercur	Barrick-Party RR6	7 of the Barrick patented claims	Retained royalty of 5.0% net value by previous owner
Main Mercur	Barrick-Party RR7	20 of the Barrick patented claims	Retained royalty of 5.0% gross proceeds by previous owner
Main Mercur	Barrick-Party RR8	16.67% interest in 1 of the Barrick patented claims	Retained royalty of 5-20% net return by previous owner
Main Mercur	Barrick-Party RR9	2 fee lots	Retained royalty of 5.0% gross proceeds by previous owner.

*Note 1: RR3 is not applicable*

In terms of royalties at West Mercur, Ensign holds five Utah SITLA metalliferous minerals leases with royalties of 4.0% gross proceeds. There are seven mining lease agreements with nearly identical terms that include a 2.0% net smelter return production royalty (“NSR”) obligation (referred to as Parties A-G on Figure 4-4, and in Table 4-2) that apply to 118 of the patented claims. Parties A-G also hold interests in the “Royalty Pool” at West Mercur, which holds a 1.0% NSR, capped at \$10,000,000, on any production by Ensign within the West Mercur Area of Interest.

At North Mercur, Ensign holds a mining lease with Party H on 12 patented claims with a 2% NSR (\$1,000,000 buyout option) and another mining lease with Party I on one unpatented lode claim with a 2% NSR (\$162,162 buyout option).

At South Mercur, six patented claims have a 1.5% NSR retained royalty by a previous owner of a 1/3 interest in the claims (Party RR1). The other 2/3 interest is subject to a 3% NSR retained royalty by a previous owner, that may be purchased for \$775,000 (Party RR2). Ensign also holds a mining lease with Party J on two patented claims and seven unpatented lode claims with a 1.0% NSR. The South Mercur Area of Interest (Figure 4-4) is purported to be subject to a 1.5% NSR payable to Homestake Mining Company of California on any mining in the area conducted by Priority Minerals Limited.

Ensign executed a mining lease with Party L pertaining to a 25% interest in 43 patented claims at South Mercur and Main Mercur. There is a 2% NSR royalty on the 25% interest in these claims (\$1,530,765 buyout option).

At the Main Mercur area, through its lease and option agreement with Barrick, and its option and assignment agreements with Geyser Marion and Sacramento, Ensign holds interests in 279 patented claims, 426 fee lots, one Utah SITLA metalliferous minerals lease, six unpatented lode claims, and three unpatented mill site claims. Once the Barrick option is exercised, a 2% NSR is payable to Barrick on mineral interests owned by Barrick, and a 1% NSR is payable on non-Barrick interests that Ensign may acquire within 1 km of Barrick’s mineral properties (the “Barrick Area of Interest”, Figure 4-4).

Some parts of the Main Mercur area have additional royalties. Six parties retained royalty interests when they sold their properties to Barrick or its predecessors (Parties RR4 through RR9), which range from 0.48% to 20% (Table 4-2 and Figure 4-4). The Utah SITLA lease is subject to a 4.0% gross proceeds royalty.

To put the wide range of royalty burdens (0%-7% NSR) on the Mercur Project in perspective, Ensign made rough calculations of the weighted average royalty in the areas of known gold mineralization. Polygons were drawn for the various royalties over the mineralized areas indicated

by the Main Mercur and South Mercur block models. The weighted average royalty of the block model areas multiplied by the royalty of these polygons, was calculated to be about 2.1% NSR.

**Figure 4-4: Map of Royalty Encumbrances for the Mercur Project**

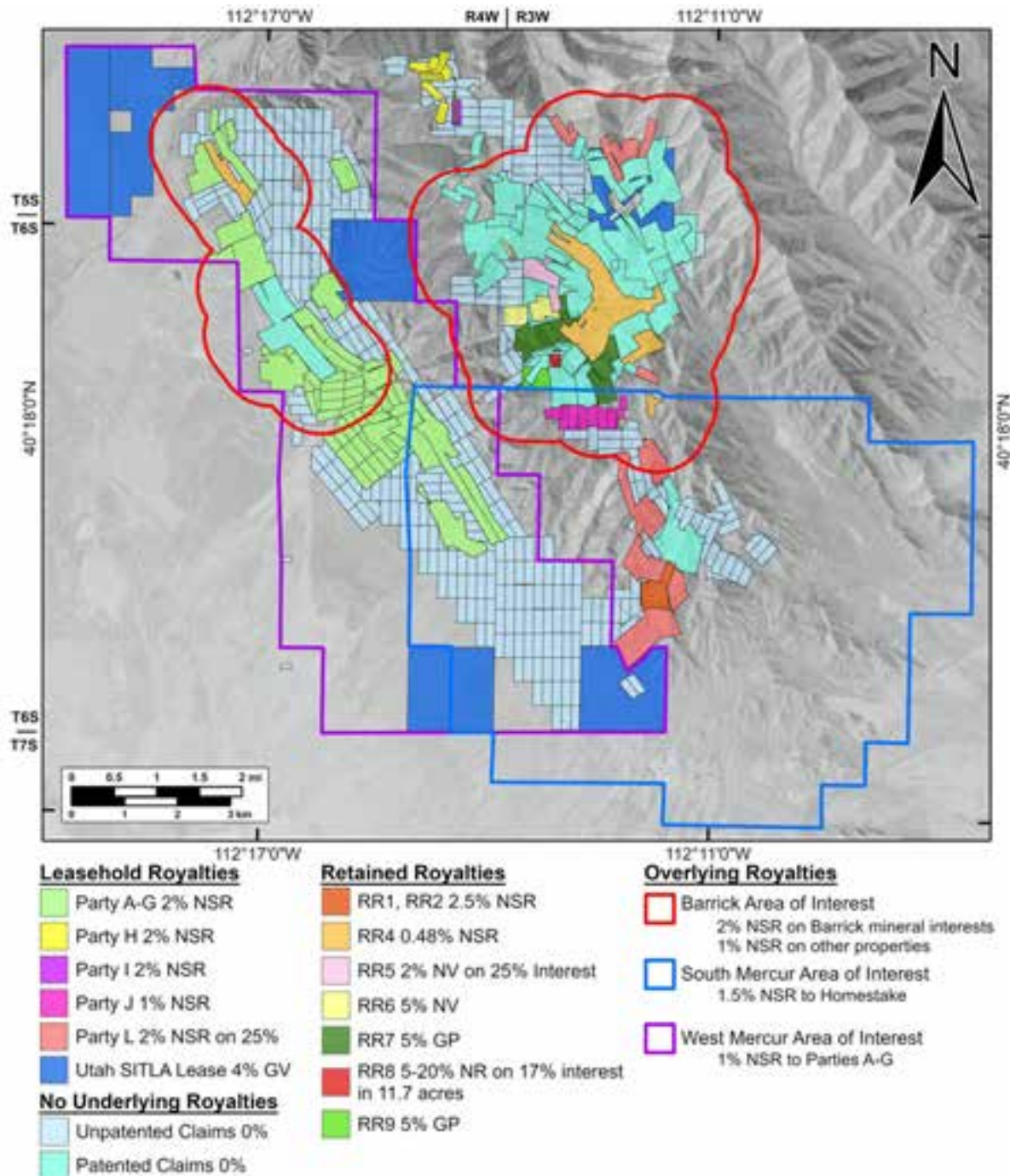


Figure 4-4 shows the areas subject to the lease agreements and royalties summarized in Table 4-2. Royalty types include net smelter return (“NSR”), gross value (“GV”), net value (“NV”), gross proceeds (“GP”) and net return (“NR”) royalties, each of which is defined in the individual agreements.

Portions of the property are subject to a road access agreement, pipeline easements, an electrical utility right-of-way, and a BLM right-of-way agreement that include lands and certain rights within portions Sections 28 and 33 of Township 5 South, Range 4 West, Sections 3, 4 10, 11, and 12 of Township 6 South, Range 4 West, and Sections 5, 6, 7, 8 and 18, Township 6 South, Range 3 East, Salt Lake Base and Meridian. These agreements are primarily for the purpose of providing access and utilities to the historical Mercur mine site.

#### **4.4 Environmental Liabilities**

No known liability exists at the Mercur Project for historical underground mine openings. In the late 1990s the Abandoned Mine Reclamation Program of Utah’s Division of Oil, Gas and Mining (“AMR”) mitigated more than 225 abandoned mine openings on what is now the Mercur Property, by backfilling or constructing barricades to prevent human access. Rush Valley Exploration Inc. discovered additional underground openings in 2013. Once these openings were reported to AMR, the state agreed to incorporate the unmitigated mine openings into their closure schedule (Morse, 2013) and the work was completed by 2018.

No known environmental liability exists at the Mercur Project for the historical mine dumps and tailings. At Main Mercur, nearly all the historical mine openings, dumps and tailings were consumed by the Getty and Barrick open pit operations and the disturbance was reclaimed to modern standards. At South Mercur, the Division of Environmental Response and Remediation of Utah’s Department of Environmental Quality (“DEQ”) conducted a study of the historical mine dumps and tailings in Sunshine Canyon (Barnitz, 2009), which was followed by DEQ’s recommendation to the U.S. Environmental Protection Agency (“EPA”) to designate the site as No Further Remedial Action Planned (“NFRAP”). DEQ noted that despite elevated arsenic in the tailings, there is no permanent human population in the area to warrant further investigation, and that no surface or groundwater was affected (Urban, 2011). The EPA approved the NFRAP designation (Dunham, 2012).

At West Mercur, DEQ conducted an internal investigation of the historical mine dumps and tailings at West Dip. The results of the studies are not known, but a summary memo by DEQ reports that further investigation of the site is not warranted due to the lack of human health or environmental targets (Taylor, 2011). No similar studies are known to have been conducted for the historical

mines at North Mercur. However, the disturbed areas at North Mercur are less extensive than those at both South Mercur and West Mercur and are more remote from human habitation.

## 4.5 Permitting

EGUS holds five Permits to Commence Exploration from Utah's Division of Oil, Gas and Mining ("DOGM") (Table 4-3). DOGM is the lead permitting agency for mineral exploration and mining projects in Utah, and the sole permitting agency for projects on private land. On lands administered by the BLM, approval of the Notice of Intent to Conduct Exploration ("NOI") is also required by the BLM. On state lands, a copy of the NOI is to be provided to the SITLA.

**Table 4-3: Table of EGUS' Permits to Commence Exploration**

DOGM Permit #	Project Name	Land Type	BLM NOI #	Actual Disturbed Acres	Current Reclamation Bonds	Permit Term (renewable annually)
E/045/0178	Silverado	BLM	UTU-94852	1 acre	\$9,500	Through 12/31/2025
E/045/0179	Nose	Utah SITLA		0 acres	\$1,000	Through 12/31/2025
E/045/0180	West Mercur Patents	Private		2 acres	\$15,600	Through 12/31/2025
E/045/0181	South Mercur Patents	Private		2 acres	\$15,600	Through 12/31/2025
E/045/0183	Mercur Mine Exploration	Private		14 acres	\$53,100	Through 12/31/2025
				19 acres	\$94,800	

All these permits were subject to surveys for cultural resources and approval by Utah's State Historic Preservation Office ("SHPO"). All the completed work has been fully bonded. These permits will need to be amended for any new surface disturbing work at Mercur and the reclamation bonds will need to be increased accordingly. The only areas of cultural significance that have been identified at the Mercur Project to date relate to local areas with evidence of historical mining activity that are being avoided. No other significant environmental concern or liability for Ensign was identified during the process of obtaining these five permits. Further, Barrick has largely rehabilitated the property.

All the holes drilled by Ensign were properly capped with a 1.52 m cement plug. Drill holes that encountered groundwater were filled with bentonite prior to capping with cement. All drill site sumps were backfilled. Drill sites and associated roads that are not required for future exploration drilling were regraded, scarified and reseeded in the fall of 2024.

The Barrick Mercur mine was in operation between 1981 and 1997 under DOGM's Mining and Reclamation Plan M/045/0017. Barrick holds a Groundwater Discharge Permit, No. UGW450002, from Utah's Division of Water Quality. Barrick also holds a Conditional Use Permit, No. 700-81, with Tooele County and a Road Property Agreement under Ordinance No. 81-15 with the Tooele County Engineer. The mine has been in closure status since 1997. Closure activities have involved partial backfill of the open pits, recontouring and revegetating the waste dumps, dewatering, capping and revegetation of the tailings and heap leach facilities. Water monitoring of the tailings water retention pond and of the heap leach facilities continues. In its latest amendment of the reclamation plan, Barrick (2016) reported that final reclamation release still remained for 404 acres out of the total 1,209 life-of-mine disturbed acres. By the time of its 2018 annual report to DOGM, Barrick (2019) reported 90 acres of remaining disturbance to be reclaimed. Barrick's reclamation surety for the Mercur mine is \$4,766,352. Most of this surety is related to Barrick's continuing maintenance of its water management system.

Ensign's permit for the historical Barrick Mercur mine area pertains only to the new surface disturbance and drilling to be conducted by EGUS. Ensign is currently not liable for Barrick's activities under M/045/0017. However, if Ensign exercises the option to purchase the Barrick properties, Ensign will assume whatever reclamation liability remains associated with the Mercur mine.

#### **4.6 References**

- Brahana, M.S., 2024, Limited title status report: Letter dated May 1, 2024, prepared for Ensign Minerals Inc. and Ensign Gold (US) Corp. by Fabian VanCott, Attorneys at Law of Salt Lake City.
- Suda, C., 2025, Memorandum dated April 30, 2025, summarizing the land status review, compilation and inventory of properties owned or controlled by Ensign Minerals Inc.: prepared for Ensign Gold (US) Corp. by Catherine Suda of Veradale, Washington.
- Terry, D.T., 2021, Letter dated June 29, 2021, summarizing review of Ensign Gold's Mercur mining claims and fee lands title status: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.
- Terry, D.T., 2021b, Letter dated July 23, 2021, summarizing review claims and fee lands title status of Sacramento Gold Mining Company and Geyser Marion Gold Mining Company properties: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.

Terry, D.T., 2021c, Letter dated November 11, 2021, summarizing review of Sections 4.2 and 4.3 of the Technical Report: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 2 p.

Terry, D.T., 2023, Due diligence title work, Mercur: Letter dated September 21, 2023: prepared for Ensign Gold (US) Corp. by Thames River LLC of Salt Lake City, Utah, 3 p. and 4 Appendices, including: A) Map and List of Properties; B) County Status of Private Lands; C) BLM Status of Unpatented Claims; and D) SITLA Status of State Leases.

## **SECTION 5 CONTENTS**

5	ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY .....	5-2
5.1	Access to Property.....	5-2
5.2	Climate.....	5-3
5.3	Physiography .....	5-3
5.4	Local Resources and Infrastructure.....	5-3
5.5	References .....	5-4

## **SECTION 5 FIGURES**

Figure 5-1: Access Map for the Mercur Gold Project .....	5-2
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## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The information presented in this section of the report was taken in its entirety from Lomas et al., 2024, which was derived from publicly available sources. Mr. Lindholm has reviewed this information and believes this summary is materially accurate.

### 5.1 Access to Property

The Mercur Gold Project is located on the southwest part of the Oquirrh Mountains and is centered 35 mi south-southwest of Salt Lake City, Utah. It is accessed from Salt Lake City around the west side of the mountains via Interstate 80 ("I-80") and State Routes 36 and 73 (Figure 5-1). Alternatively, one can travel south on Interstate 15 ("I-15") to the Lehi area where State Route 194 can be followed west to a junction with State Route 73. All roads to the Mercur Mine turnoff are paved and are kept plowed during the winter by the Utah State Highway Department. Driving distance to the Project is some 58 mi from downtown Salt Lake City using I-80, or 62 mi using I-15 through Lehi (Figure 5-1).

**Figure 5-1: Access Map for the Mercur Gold Project**



There is a marked and paved county access road from Route 73 to the historical Barrick Mercur Mine, which is at the center of the Mercur Gold Project. Currently there is a locked gate that limits public access to the Barrick Mercur Mine. Other parts of the Mercur Gold Project are easily accessed from Route 73 by means of other dirt roads.

## **5.2 Climate**

The Mercur Gold Project and surrounding area have a dry continental climate characterized by cold dry winters and hot dry summers with overall low precipitation. Average wintertime daily high temperatures are about 34°F and low temperatures average about 18°F. It is not unusual for temperatures to fall as low as -5°F. During the summer, the average high is about 85°F, and the average daily low is about 55°F. Spring is the wettest season of the year, with an average of about 2 in of precipitation per month. Summers are usually quite dry, averaging one inch or less of rain per month. Overall precipitation is 15 to 20 in per year. This includes an average of about 7 ft of snowfall during the winter months.

The climate here is such that weather does not usually hamper operations during any season, but large precipitation events can lead to minor operational difficulties. Exploration and mining can take place all year, although exploration at higher elevation areas may be significantly impacted by winter weather.

## **5.3 Physiography**

The Mercur Gold Project is located along the western range front of the southern part of the Oquirrh Mountains. Elevations within the project area vary from 5,700 ft to 8,700 ft above sea level. The terrain can be described as moderately steep with most slopes ranging from 15° to 30°, although the westernmost parts of the project area west of the range front are quite flat. Much of the project area can be accessed with a high-clearance four-wheel drive vehicle and some areas are accessible with two-wheel drive vehicles.

Vegetation over the greater part of the property consists of juniper and piñon pine, which do not generally exceed six meters in height, and sagebrush. At higher elevations there are some areas of dense scrub oak, mountain mahogany and local stands of aspen. On the lower, flatter slopes of the alluvial areas there are grasses and sagebrush growing between rare juniper and pinon pine trees.

## **5.4 Local Resources and Infrastructure**

The Mercur Gold Project is located about an hour's drive from Salt Lake City and the Wasatch Front, a population center of a few million people with a large, skilled work force. All services that

might be expected in a major metropolitan area are available, including drill contractors, heavy equipment dealers, engineering, financial and communications services, freight railroads, and an international airport with destinations throughout North America.

Closer to the property is the town of Tooele (Figure 5-1) with a population of approximately 40,000. Supplies, services, lodging, groceries, and restaurants are available in Tooele. Provo, a large city along the Wasatch Front, is some 35 mi east of the project area, and is also a good source of supplies and labor for any mining operation.

Medium-voltage power lines bring power to the project area from the town of Tooele. There is sufficient gently sloped land on the property and along the range front nearby to locate waste dumps, leach pads, and mill sites within reasonable distances.

There is no flowing water anywhere within the project, and average depth to groundwater is reported to be on the order of 1,000 ft. Water for drilling and potential mining operations can be obtained from developed water wells in the alluvial deposits of Rush Valley, west of the Oquirrh Mountains. Water rights sufficient for a potential mining operation have not yet been obtained.

The surface rights, as described in Section 4, are sufficient for the mining and exploration activities proposed in this report.

## **5.5      References**

Lomas, S., Davis, B., Lindholm, M.S. and Defilippi, C., 2024, NI 43-101 Technical Report for the Mercur Project, Camp Floyd and Ophir Mining Districts, Tooele and Utah Counties, Utah, USA; Report prepared on behalf of Revival Gold Inc. and Ensign Minerals Inc. Effective date December 5, 2023. 272 p.

## SECTION 6 CONTENTS

6	HISTORY .....	6-2
6.1	Camp Floyd Mining District Discovery and Mining History (1870 – 1945) .....	6-2
6.2	Historical Exploration and Mining (1973 – 1999) .....	6-4
6.2.1	Main Mercur Area .....	6-4
6.2.2	South Mercur Area .....	6-9
6.2.3	West Mercur Area.....	6-10
6.2.4	North Mercur Area .....	6-13
6.3	Recent Exploration (2020 – Present).....	6-13
6.4	Historical Mineral Resource Estimates .....	6-13
6.4.1	Main Mercur.....	6-13
6.4.2	South Mercur .....	6-13
6.5	References .....	6-15

## SECTION 6 TABLES

Table 6-1:	Recorded Metal Production, Camp Floyd (Mercur) Mining District .....	6-4
Table 6-2:	Mercur Mine Production Summary (1983 – 1998) .....	6-6
Table 6-3:	Mercur Mill and Dump Leach Gold Recovery (1983 – 1995) .....	6-7
Table 6-4:	Annual Production from the Mercur Gold Mine (1983 – 1998).....	6-7

## SECTION 6 FIGURES

Figure 6-1:	Photo of Mercur and the Golden Gate Mill, ca 1902, Looking East .....	6-3
Figure 6-2:	Barrick Mercur Mine, ca. 1993, Looking Southeast .....	6-5
Figure 6-3:	Aerial Image of the Reclaimed Mercur Mine Site.....	6-8
Figure 6-4:	West Mercur Soil Samples Locations .....	6-12
Figure 6-5:	Three-Dimensional View of Historical South Mercur Gold Model by Caracle .....	6-15

## **6 HISTORY**

The information presented in this section was taken in its entirety and modified from Lomas et al., 2024, which was extracted and modified from public sources. Mr. Lindholm has reviewed this information and believes this summary is materially accurate.

Exploration in the Mercur region commenced during the early 1860s when placer gold was discovered in Bingham Canyon, on the east side of the Oquirrh Mountains. Subsequent nearby discoveries sparked interest in prospecting throughout the range.

### **6.1 Camp Floyd Mining District Discovery and Mining History (1870 – 1945)**

The Camp Floyd Mining District was organized around what is now known as Mercur in 1870 after discoveries of rich silver mineralized material were made. The district experienced four main cycles of mining activity and recovered from two major fires, which earned Mercur the nickname “the town that can’t stay dead” (Brigham Young University, ca. 1990; Smith, 1997).

In 1870 the mining camp of Lewiston was established at the current Mercur mine site to support mining of bonanza grade silver deposits in the North Mercur area between Marion Hill, Lion Hill and Silveropolis Hill. The siliceous silver-lead mineralization carried grades as high as 1,000 oz Ag/ton (Gilluly, 1932). Total production is uncertain, but Gemmel (1897) reported that production by just three parties held a combined silver value of \$530,000, or about 438,000 oz silver. The silver deposits were exhausted and the town of about 1,500 residents was abandoned by 1881.

Around 1883, gold was identified near some mercury prospects at the Lewiston camp. The gold was detectible by assay but was not visible to the naked eye and could not be recovered by crushing and panning. This marks the first discovery of what is now known as a Carlin-type deposit – micron size gold disseminated in sedimentary host rocks (Reid et al., 2020). Recovery of gold from these occurrences proved to be problematic, but in 1890, failure of the Manning Canyon amalgamation mill resulted in the reconfiguration of the mill to use cyanide for gold recovery, marking the start of gold production at Mercur and the first commercial use of the cyanide gold recovery process in the United States (Butler et al., 1920).

The town of Mercur grew from 1,500 inhabitants in 1897 to a peak of 5,500 in 1900. During this period, the Golden Gate mill, the largest in North America at the time (1,000 tons per day) was built under the direction of Daniel C. Jackling (Figure 6-1). In 1902 most of the town burned to the ground, but the Golden Gate mill was spared. Operations continued to 1913 with at least two roasting plants and four cyanide gold recovery plants yielding 920,843 oz Au (Butler et al., 1920). During this period, a small portion of the district production came from the Sunshine and Overland underground mines at South Mercur, and the La Cigale and Daisy underground mines at West Mercur (Gilluly, 1932).

**Figure 6-1: Photo of Mercur and the Golden Gate Mill, ca 1902, Looking East**



Photo from <https://westernmininghistory.com>.

Another resurgence of mining activity occurred at Mercur between 1931 and 1944. Several companies conducted small operations that reprocessed some of the old tailings and mined new areas. Total precious metal production during this period was tallied to be 194,194 oz Au and 173,955 oz Ag (Gloyn, 1999).

Total recorded precious metal production in the Camp Floyd district between 1870 and 1945 was 1,223,037 oz Au and 614,715 oz Ag (Table 6-1).

**Table 6-1: Recorded Metal Production, Camp Floyd (Mercur) Mining District**

Period	Ore Mined (tons)	Contained Gold <sup>2</sup> (oz)	Reprocessed Tailings (tons)	Recovered Gold (oz)	Recovered Silver (oz)	Recovered Mercury (flasks)	Sources
1871 - 1881	?	?	-	?	438,000	-	Gemmell, 1897
1890 - 1917	5,583,983	1,200,000	-	920,843	2,760	3,338	Butler et al, 1920
1931 - 1942	1,425,399	200,000	502,205	189,135	8,933	-	Gloyn, 1999
1942 - 1945	94,858	6,000	-	5,059	165,022	-	Gloyn, 1999
1983 - 1998	34,298,383	2,077,375	1,723,000	1,490,000	569,009	131	Mako, 1999
Totals	41,402,623	3,483,375	2,225,205	2,605,037	745,724	3,469	
<b>Notes:</b> 1. Table developed by Mako, 1999. 2. Estimated based on published gold recovery rates. These figures do not include the tonnage and gold content of reprocessed tailings to avoid duplication.							

## 6.2 Historical Exploration and Mining (1973 – 1999)

### 6.2.1 Main Mercur Area

Newmont Exploration Ltd. (“Newmont”) was the first modern explorer known to have evaluated the Mercur area. In 1969 they conducted sampling, trenching, and drilling before dropping the project that same year (Lenzi, 1973; Klatt, 1980). During this time, Newmont drilled approximately 30 rotary holes and two core holes.

In 1973, Gold Standard, Inc. began consolidating the fractured land position at Mercur and secured an exploration agreement with Getty Oil Company (“Getty”). Getty continued land consolidation and conducted an extensive drilling campaign, resulting in the delineation of reported reserves of 1.35 million ounces of gold from 15 million tons at 0.09 oz/ton Au (Faddies and Kornze, 1985). Faddies and Kornze (1985) do not discuss the procedures used to arrive at this historical estimate, so the key assumptions, parameters, and methods used to prepare this historical estimate, as well as whether the category of reserves applied to the estimate is consistent with current CIM standards, are unknown to Mr. Lindholm. However, this historical estimate is both supported and superseded by subsequent mining by Getty and Barrick, who processed a total of over 34 million tons of mineralized material at an average grade of 0.06 oz/ton Au from 1983 to 1997 (Mako, 1999) from the Main Mercur area. Some or all the reserves reported by Faddies and Kornze (1985) were likely consumed by mining, so Mr. Lindholm is unable to do sufficient work to upgrade, verify or classify the historical estimate as current mineral resources or mineral reserves. Therefore, the issuers are not treating this historical estimate as current mineral resources or mineral reserves. Mr. Lindholm believes this estimate is relevant for historical context only and should not be relied upon.

Construction of an open pit mine and 3,000 tpd carbon-in-leach (CIL) mill complex began in 1981. Commercial gold production began in April 1983 with a targeted production rate of 80,000 oz Au/year.

In June 1985, a subsidiary of American Barrick Resources, predecessor to Barrick Gold Corporation (“Barrick”), acquired the Mercur mine from Getty. Barrick immediately increased the mill throughput to 4,000 tpd and added a dump leach facility to increase production. The mill capacity was further increased to 4,500 tpd in 1986, which raised annual production levels above 110,000 oz Au/year. In 1988, Barrick added a 750 tpd pressure oxidation circuit to the mill circuit to treat refractory material, and in 1991 the mill and autoclave capacities were increased to 5,000 tpd and 875 tpd, respectively. An overview of the mine area in 1993 is shown on Figure 6-2.

**Figure 6-2: Barrick Mercur Mine, ca. 1993, Looking Southeast**



Photo from Barrick Gold Corporation – History, <http://www.barrick.com/Company/History/default.aspx>, accessed 05/12/14, annotated by Ensign, 2021.

Barrick (1996) reported that the CIL mill began operating in April 1983 and consumed cyanide at an average rate of 1.19 lbs/ton between 1983 and 1995. The first of three dump leach facilities was initiated in 1985, and the average cyanide consumption was 1.02 lbs/ton between 1985 and 1995. The alkaline pressure oxidation autoclave circuit to pre-treat the refractory gold mineralization associated with sulfide minerals and organic carbon was added in February 1988. The autoclave operated at a temperature of 419°F (215°C) and a pressure of 461 psi (2,900 kPa),

consuming oxygen at an average rate of 25.64 lbs/ton of ore between 1988 and 1995. Barrick (1996) noted, “Oxidation of the Mercur deposit developed from the bottom upwards. Accordingly, sulphide materials are mined as open-pit overburden.” Note that even though waste rock dumps contain sulphide material that was removed as overburden, the likelihood of acid mine drainage is very low due to the buffering capacity of the limestone host rock.

The autoclave circuit was discontinued in February 1996 due to the exhaustion of refractory ores at that time (Barrick, 1996). Mining was halted in March 1997, but the oxide circuits continued to recover gold until April 1998. Based on the production records shown in Table 6-2, refractory ore tons accounted for approximately 12% of the total ore mined. The refractory feed included the lower-grade historical tailings of the Golden Gate mill (1,723,000 tons at 0.053 oz/ton Au), which were mined to expose the underlying gold mineralization in the Golden Gate pit and for environmental remediation.

**Table 6-2: Mercur Mine Production Summary (1983 – 1998)**

Pit Name	Milled Oxide Ore			Milled Refractory Ore			Run-of-Mine Dump Leach Ore			Total Ore			Total Recovered Gold (oz)
	Tonnage (tons)	Grade (oz/ton)	Contained Gold (oz)	Tonnage (tons)	Grade (oz/ton)	Contained Gold (oz)	Tonnage (tons)	Grade (oz/ton)	Contained Gold (oz)	Tonnage (tons)	Grade (oz/ton)	Contained Gold (oz)	
Mercur Hill	6,785,796	0.087	590,364	1,275,685	0.081	103,330	2,920,420	0.035	102,215	10,981,901	0.072	795,909	562,706
Marion Hill	7,193,976	0.067	481,996	585,124	0.075	43,884	6,584,322	0.032	210,698	14,363,422	0.051	736,579	497,976
Sacramento	4,223,534	0.073	308,318	632,022	0.087	54,986	842,604	0.035	29,491	5,698,160	0.069	392,795	282,726
Golden Gate	1,628,206	0.062	100,949	147,017	0.088	12,937	1,242,605	0.025	31,065	3,017,828	0.048	144,951	100,094
Rover	74,760	0.045	3,364	1,168	0.060	70	161,144	0.023	3,706	237,072	0.030	7,141	4,435
Historical Tails				1,723,000	0.053	91,319				1,723,000		91,319	42,062
Totals	19,906,272	0.075	1,484,992	4,364,016	0.070	306,527	11,751,095	0.032	377,176	36,021,383	0.060	2,168,694	1,490,000

Note: Table developed by Mako (1999).

Based on a report of annual mill production records, from April 1983 to December 1995 (Barrick, 1996), consulting metallurgist Dr. Jinxing Ji calculated that the CIL mill circuit for oxide ore reported approximately 77% recovery and 75% recovery from the refractory mineralization that was processed by the autoclave/CIL mill circuit (Ji, 2021). As of the end of 1995, 49% of the contained gold placed on the dump leach pads had been recovered (Table 6-3) (Barrick, 1996). The table does not include subsequent production from 1996 – 1998, which yielded another 130,446 ounces of gold.

**Table 6-3: Mercur Mill and Dump Leach Gold Recovery (1983 – 1995)**

Processing Method	Years of Operation	Ore Processed (tons)	Average Gold Head Grade (oz/ton)	Gold Produced (oz)	Gold Recovery (%)
Oxide CIL Mill	Apr 1983 - Dec 1995	18,276,744	0.076	1,067,057	76.9%
Autoclave/CIL Mill	Feb 1988 - Dec 1995	2,352,859	0.075	131,153	74.8%
ROM Oxide Dump Leach	Jul 1985 - Dec 1995	9,451,977	0.035	161,444	48.8%
Totals	Apr 1983 - Dec 1995	30,081,580	0.063	1,359,654	71.8%

Note: Table developed from Barrick (1996).

Total precious metal production in the Camp Floyd mining district between 1983 and 1998 by Getty and Barrick was 1,490,000 oz Au and 569,009 oz Ag (Table 6-1). In addition, 131.3 flasks of mercury were produced. Annual production is reported in Table 6-4.

**Table 6-4: Annual Production from the Mercur Gold Mine (1983 – 1998)**

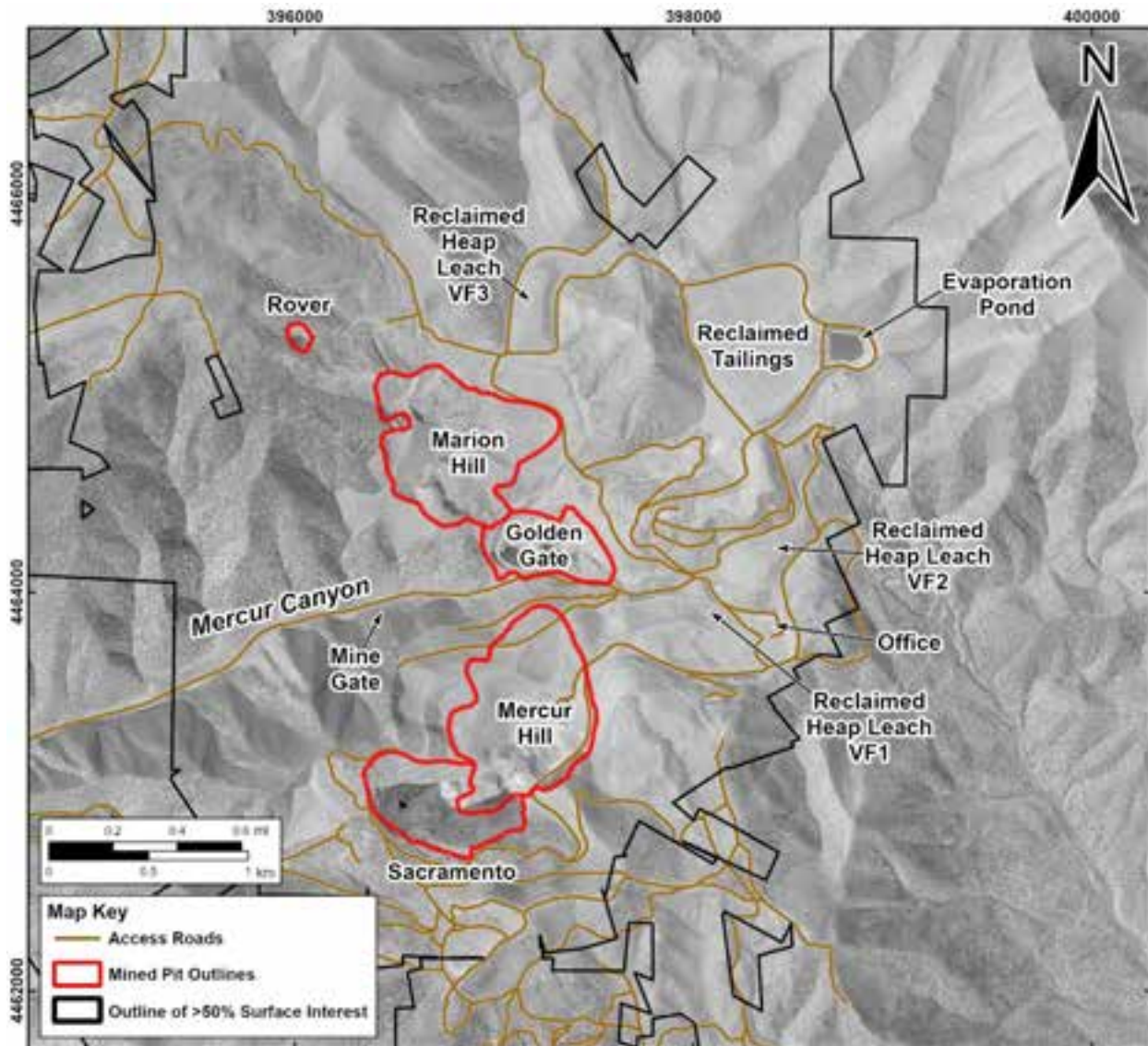
Operator	Year	Gold (oz)	Silver (oz)	Mercury (flasks)	Comments
Getty	1983	37,643	-	-	April start-up.
	1984	80,394	-	-	Mill at 3,000 tpd capacity.
	1985a	41,546	9,985	-	
Barrick	1985b	52,290	6,813	-	Barrick purchase 6/28. Increased mill to 4,000 tpd. Add dump leach in Nov.
	1986	111,007	23,250	3.1	Milling increased to 4,500 tpd.
	1987	108,278	43,000	7.1	
	1988	115,390	33,009	29.1	750 tpd autoclave commissioned in February.
	1989	117,536	86,721	24.0	
	1990	122,043	54,500	6.9	
	1991	127,280	94,280	14.1	Milling increased to 5,000 tpd, autoclave to 875 tpd.
	1992	121,239	53,168	16.2	
	1993	114,761	35,000	9.3	
	1994	108,107	50,510	12.3	
	1995	101,682	39,773	9.2	
	1996	82,593	25,000	-	Autoclave retired in February due to exhaustion of refractory material.
	1997	40,269	14,000	-	Open pit mining ceased in March.
	1998	7,942	-	-	Gold recovery ceased in April.
	Totals	1,490,000	569,009	131.3	

Note: Table developed by Mako (1999).

Ultimately, the combined operations by Getty and Barrick resulted in the mining and processing of 36,021,383 tons of ore at an average grade of 0.060 oz/ton Au from five open pits to produce 1,490,000 ounces of gold (Table 6-4), a significant increase from the pre-mining reserves reported

by Faddies and Kornze (1985). Figure 6-3 shows the locations of the five open pits and the reclamation status of the site. When combined with historical records of mining activity since 1871 in the Camp Floyd mining district, it can be estimated that a total of 41,402,623 tons of material were mined with an average grade of 0.086 oz/ton Au to produce 2,605,037 ounces of gold (Table 6-1; Mako, 1999), the vast majority of which was mined from the Main Mercur area. The Mercur mine has been in closure and reclamation status since production ceased in 1997. In 2021, Ensign acquired a lease and option agreement on the Barrick properties.

**Figure 6-3: Aerial Image of the Reclaimed Mercur Mine Site**



### 6.2.2 South Mercur Area

In 1980 Homestake Mining Company (“Homestake”) consolidated a large land position in the South Mercur area, centered on the historical Sunshine and Overland underground mines. Homestake collected at least 500 rock samples, which, when plotted, show coincident gold, arsenic, antimony, mercury, and thallium anomalies at the surface where the rocks below the Long Trail Shale outcrop. Tailings samples were also collected to investigate the possibility of reprocessing the remaining tailings piles. Homestake drilled over 50 RC holes between 1981 and 1984.

In 1984, Touchstone Resources (“Touchstone”) optioned the South Mercur project from Homestake and drilled approximately 35 vertical RC drill holes. By 1986, Homestake assigned their South Mercur project to Priority Minerals Limited (“Priority”) and WCC, Inc. (“WCC”). Between 1986 and 1990, Priority and WCC drilled approximately 10 core holes and 300 RC holes.

In 1988, Priority and WCC produced a “Feasibility Study” (Priority-WCC, 1988), based on approximately 350 RC holes and approximately 10 core holes. McClelland Laboratories, Inc. of Sparks, Nevada was commissioned to conduct limited metallurgical tests for their South Mercur historical feasibility study on three types of mineralization encountered in drill samples, and on samples of the historical tailings at the Overland and Sunshine mines (Shoemaker, 1987). The summary of that report reads as follows:

*“Column percolation leach tests were conducted on three ore types from [South] Mercur (Overland hard, Overland soft, and Sunshine soft) stage crushed to an 80 percent minus 1¼ inch feed size to determine gold recovery, recovery rate, and reagent requirements. The ore charges were agglomerated before leaching.*

*“Each [South] Mercur ore type was amenable to heap leaching treatment at the 1¼ inch feed size. The soft ores were readily amenable to heap leaching. Gold recoveries ranged from 70.4 to 92.9 percent.*

Priority and WCC continued exploration in 1989 and 1990, drilling approximately 35 RC holes. In 1990, the project was assigned to Rochester Minerals (U.S.A.) Inc. (“Rochester”), following which, Rochester entered into an agreement with Kennecott. In 1991, Kennecott drilled approximately 10 holes in Sunshine Canyon.

Barrick leased the South Mercur properties in 1996 and drilled approximately 20 vertical RC holes. In 1997, Kennecott leased the South Mercur properties again and drilled at approximately nine RC holes. Despite these efforts, the deposits at South Mercur have not yet been developed.

Priority acquired WCC's interest in South Mercur in 1997. Priority drilled 11 core holes in 2013. A non-compliant resource calculation was conducted, and drafting of a technical report was initiated, but not completed. The South Mercur area of the property has been idle since 2014.

Priority merged into EGUS in 2020, and Revival currently owns mineral interests in the properties that encompass most of the known mineralization at South Mercur.

### **6.2.3 West Mercur Area**

The northern part of West Mercur, north of the mouth of Mercur Canyon, which is known historically as West Dip, produced about 36,900 ounces of gold from several underground mines active between 1895-1913 and 1933-1941 (Mako, 2016). Two of the larger historical operations, the Daisy and the La Cigale mines, accounted for most of the historical production. Both mines are located about three miles west of the Main Mercur area on the west flank of the Ophir Anticline. Gemmell (1897) described the gold grade at La Cigale as worth about \$12/ton over a 12 ft width (~0.6 oz/ton Au based on a gold price of \$20/oz).

Modern exploration at West Mercur included geologic mapping, limited soil sampling, some limited geophysical surveys (gravity, EM, VLF, IP/Res) and drilling. Between 1975 and 1982 Getty drilled approximately 40 RC holes in the vicinity of the historical underground mines along a three-mile trend known as West Dip. Mineralization was found to be too erratic to develop (Barron, 1982; Bayer, 1982). An important geologic observation of this effort was that the West Dip mineralization occurs in a favorable stratigraphic horizon in the Upper Great Blue Limestone about 1,500 ft above the Mercur Member beds, which are the primary host units at the Mercur mine.

In 1986 Barrick drilled around six holes to test stratigraphic targets near the mouth of Mercur Canyon. Hole WDS-1 intersected 30 ft averaging 0.006 oz/ton Au, including a quartz vein with realgar. Two follow-up holes were drilled that also intersected low grade gold, the best intercept was in WDS-2, being 60 ft averaging 0.022 oz/ton Au starting at a depth of 95 ft. At the time, this discovery was recognized as a new area of hydrothermal gold mineralization that was clearly separate in style and geography from the mineralization at West Dip (Shrier, 1987). However, no further work was done in this area by Barrick in subsequent drilling campaigns.

Barrick drilled 10 holes in 1988 with no significant results. In 1996 Barrick conducted a wide-spaced gravity survey and three reflection seismic survey lines to evaluate the thickness of alluvial cover at West Mercur. The results seemed to indicate less than 330 ft of alluvial cover for a large portion of the pediment. Barrick's drilling focused on stratigraphic tests for the Mercur beds, close to the range front. Approximately 27 RC holes were drilled in 1996 with no significant results.

In 1999 Barrick conducted soil sampling and mapping north of Mercur Canyon to evaluate potential in the stratigraphy between the Mercur Member beds and the gold-bearing beds at West Dip. A new geochemically anomalous area was identified between the two traditional host units near dikes of rhyolite. Three holes were drilled without significant results.

Also in the 1990s, Kennecott Utah Copper Corporation (“Kennecott”) drilled more than 20 holes during two campaigns in the West Mercur area. Approximately 14 holes were drilled into the Nose target at the mouth of Sunshine Canyon and at least 10 holes were drilled in the Hidden Treasure target in the Silverado Canyon and North Folds target areas. No drill results from these programs have been released. In 1996 BHP Minerals (“BHP”) drilled seven holes in the northern part of the West Mercur area. Four holes were drilled well west of the West Dip Fault and were unsuccessful. Three holes were drilled along the West Dip Fault and two reportedly returned gold mineralization of 85 ft averaging 0.021 oz/ton Au and 60 ft averaging 0.010 oz/ton Au in holes WD-2 and WD-6 respectively (Zimmerman, 1996).

In 2011, Mr. David Mako reviewed a remote sensing study of the Mercur area that was published after Barrick’s Mercur mine had closed (McDougal et al., 1999). The authors of that paper identified an unexplained AVIRIS “Anomaly B” in the pediment (Mako, 1999). Subsequent field visits identified previously unmapped limestone bedrock and gold-bearing jasperoid outcrops within the area of Anomaly B.

Mr. Mako commenced claim staking for Ash-ley Woods LLC (“Ash-ley Woods”) in 2011 and opened discussions with adjacent patented claim owners who had shared the data from Barrick’s drilling on their claims. This included the three holes that Barrick drilled in 1986 that encountered low-grade gold, all situated within Anomaly B (Ash-ley Woods, 2012).

In 2017 Rush Valley Exploration Inc. (“RVX”) acquired the Ash-ley Woods properties and leased the patented claims of five other parties. RVX compiled rock geochemistry data from Getty, several companies visiting West Mercur, and sampling by RVX predominantly in the southern part of West Mercur. Gold values as high as 0.50 oz/ton Au were found in mine dumps along the West Dip trend. Jasperoid with anomalous gold values was discovered within Anomaly B. Overall, the gold values in rocks in the south part of West Mercur are low, but anomalous arsenic persists along a 8.75-mile strike length of the range front.

RVX entered into an agreement with Torq Resources Inc. (“Torq”) in May 2018 under which Torq could acquire RVX by meeting certain funding requirements. Field work included geologic mapping and the collection of 1,037 wide-spaced soil samples (500 ft x 500 ft grid) and 28 rock samples (Figure 6-4). The soil sampling program was designed to detect mineralization beneath post-mineralization cover so most of the samples were collected in pediment. Many of the

anomalous samples north of Mercur Canyon were also collected in areas disturbed by mining such as the West Dip area. Torq abandoned the project in October 2018.

Ensign acquired the RVX West Mercur property in 2020.

**Figure 6-4: West Mercur Soil Samples Locations**

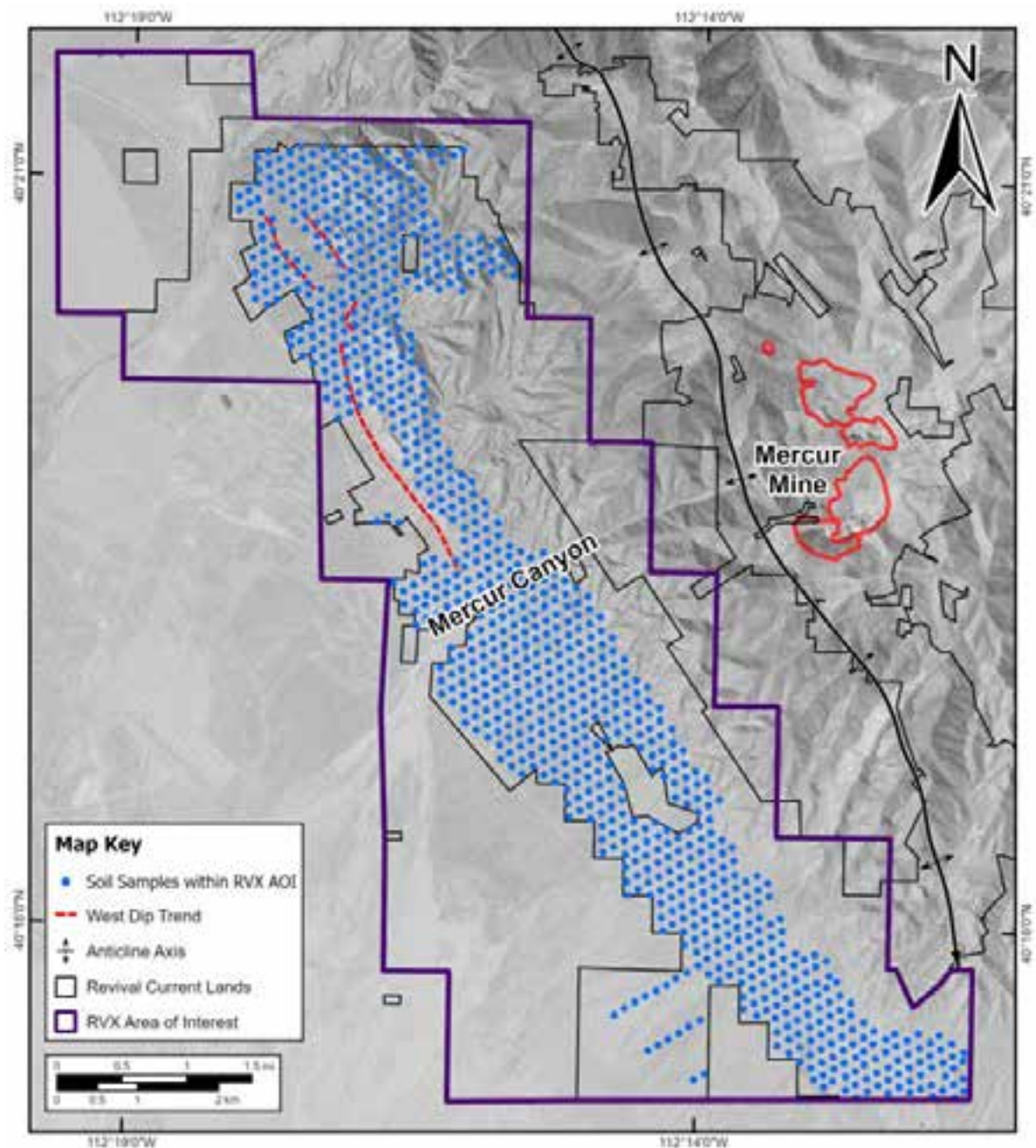


Figure from RVX, 2019.

#### **6.2.4 North Mercur Area**

Despite being the site of the earliest mining in the Camp Floyd mining district, relatively little modern exploration has been carried out at North Mercur. Based on permitting documents and field observations, Centurion Mines Corporation (“Centurion”) drilled 14 holes in 1991, and Kennecott drilled two holes in 1994 at North Mercur. The results of these drilling programs are not known.

### **6.3 Recent Exploration (2020 – Present)**

In 2020, Ensign completed acquisitions of key areas in the district held by RVX and Priority, and agreements on the Main Mercur ground held by Barrick and Geyser Marion-Sacramento were signed in 2021. Exploration work conducted by Ensign is summarized in Section 9.

### **6.4 Historical Mineral Resource Estimates**

#### **6.4.1 Main Mercur**

Revival has not located documentation in Barrick’s files of historical mineral resource estimates after mining was halted in 1997.

#### **6.4.2 South Mercur**

In 1988, Priority and WCC produced a “feasibility study” that identified “current mineable reserves” of 1,411,300 tons at 0.059 oz/ton Au (Priority and WCC, 1988). “Additional geological reserves” of 1,100,000 tons at 0.046 oz/ton Au were also identified (Priority and WCC, 1988). These historical estimates predate the CIM Definition Standards and NI 43-101, and therefore the terms “feasibility study”, “current mineable reserves” and “additional geological reserves” could not reference the level of study or resource and reserve categories as they are currently applied. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Revival is not treating these historical estimates as current resources or reserves.

With respect to key assumptions, parameters, and methods used to prepare the historical estimates reported by Priority and WCC (1988), the authors are aware only that “current mineable reserves” were calculated from polygonal shapes manually drawn on ten-foot bench plans around pierce points of RC drill holes spaced about 50 to 100 feet apart. The tons, grades and ounces derived using these polygonal methods are considered suitable for disclosure only as broad measures of the possible extents and tenor of mineralized material that may exist at South Mercur and are relevant as a guide for possible discovery and delineation of resources. A qualified person has not done sufficient work to classify these estimates as current mineral resources or reserves

as defined in Sections 1.2 and 1.3 of NI 43-101, and accordingly, should not be relied upon. To upgrade or verify the historical estimates, drill-hole locations and assays must be confirmed with proper documentation and supported by any existing QA/QC data. Revival has been able to locate much of the supporting documentation to fulfil these requirements, however, for the historical data that cannot be confirmed, Mr. Lindholm believes additional drilling will be necessary to properly delineate the deposit(s). Metallurgical testwork and geotechnical studies also need to be applied, some of which has been done for the mineral resources reported in Section 14.

In 2013, Priority initiated an effort to produce an updated resource calculation at South Mercur, incorporating results of an additional 88 RC drill holes and 11 core holes drilled between 1989 and 2013. Caracle Creek International Consulting Inc. ("Caracle"), with offices in Toronto, was contracted by Priority in 2013 to calculate a near surface mineral resource through pit optimization using Whittle software. The consulting firm was to provide a block model and resource estimate with deliverables in the form of a spreadsheet and a CAD database for GEMCOM and advise Priority on the steps that would be needed to create a resource estimate in accordance with NI 43-101. A draft technical report was initiated by Caracle but apparently not completed.

In 2014, Priority compiled a draft technical report which contains summaries of the 3D modelling work initiated by Caracle (Batson, 2014). The models developed by Caracle used 3D GEMS software to generate a wireframe-constrained block model, and gold grades were calculated using the inverse distance squared interpolation. Mr. Lindholm believes this historical estimate is not reliable, does not satisfy the requirements of the CIM Definition Standards and NI 43-101, and therefore is not suitable for disclosure herein. Revival is not treating this historical estimate as current mineral resources. Mr. Lindholm does consider the shapes generated during the modeling efforts as shown on Figure 6-5 to be relevant in a global sense and suitable to guide future exploration and delineation drilling. As with the 1988 estimates, however, the 2014 work would require sufficient documentation of underlying data, QA/QC support, a representative geologic and metal domain model, classification by a qualified person, metallurgical and geotechnical studies, and probable new drilling in order to produce reliable resource estimates. To upgrade or verify the historical estimates, drill-hole locations and assays would need to be confirmed with proper documentation and supported by any existing QA/QC data. Additional drilling will be necessary to confirm historical drilling results, as well as to properly delineate the deposit(s). Metallurgical and geotechnical investigations would also be needed.

Figure 6-5: Three-Dimensional View of Historical South Mercur Gold Model by Caracle

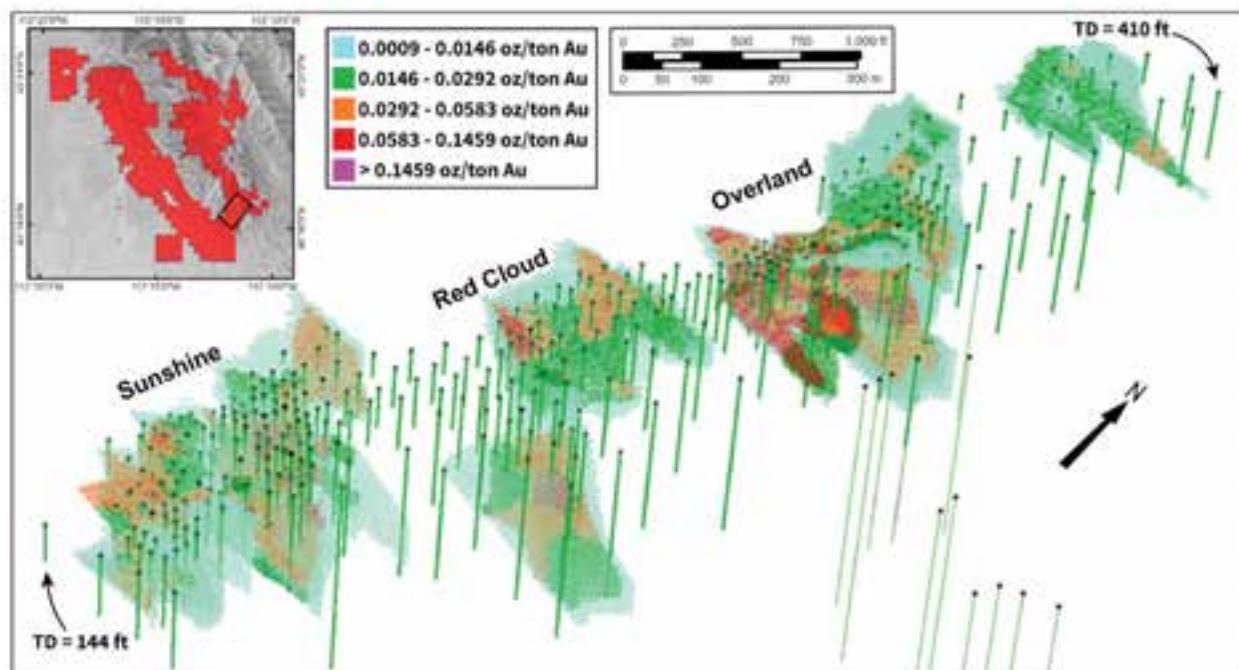


Figure from Batson, 2014, modified by Ensign, 2021 and Revival, 2025.

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## **SECTION 7 CONTENTS**

<b>7</b>	<b>GEOLOGIC SETTING AND MINERALIZATION .....</b>	<b>7-2</b>
7.1	Northern Great Basin Regional Geology .....	7-2
7.2	Geology of the Southern Oquirrh Mountains .....	7-4
7.3	Mercur Property Geology.....	7-7
7.4	Gold and Silver Mineralization .....	7-11
7.4.1	Main Mercur Mineralization .....	7-13
7.4.2	North Mercur (Lion Hill-Silveropolis).....	7-20
7.4.3	West Mercur (West Dip) .....	7-20
7.4.4	South Mercur.....	7-22
7.5	References .....	7-23

## **SECTION 7 FIGURES**

Figure 7-1:	Regional Setting of the Mercur Gold Project.....	7-4
Figure 7-2:	Generalized Stratigraphic Column for the Main Mercur Area .....	7-5
Figure 7-3:	Schematic Section Across the Southern Oquirrh Mountains .....	7-6
Figure 7-4:	Simplified Geology Map of the Southern Oquirrh Mountains.....	7-7
Figure 7-5:	Geology of the Mercur Mine Area .....	7-8
Figure 7-6:	Geologic Section of the Sacramento Deposit Area, Main Mercur Area .....	7-15
Figure 7-7:	Geologic Section of Mercur Hill, Main Mercur Area .....	7-16
Figure 7-8:	Geologic Section of the Golden Gate Area.....	7-17
Figure 7-9:	Breccia Thickness and Gold Grade Thickness, Golden Gate Area .....	7-18
Figure 7-10:	Geologic Section of Marion Hill, Main Mercur Area .....	7-19
Figure 7-11:	Geologic Section of the Daisy Mine Area, West Mercur .....	7-21

## 7 GEOLOGIC SETTING AND MINERALIZATION

The information presented in this section of the report was taken largely from Lindholm et al. (2022) and Lomas et al., 2024. It was derived from multiple sources, as cited, and was originally written by Michael W. Ressel. Mr. Lindholm has reviewed this information and believes this summary accurately represents the Mercur Project geology and mineralization as it is presently understood.

### 7.1 Northern Great Basin Regional Geology

The Mercur Gold Project is located in north-central Utah near the northeastern boundary of the Great Basin, an area of high elevation and internal drainage occupying much of Nevada and western Utah. The Great Basin overlaps the northern part of the larger Basin and Range, a physiographic province of normal faulting and crustal extension characterized by numerous alternating north-trending high mountain ranges and deep, broad valleys that developed since the Miocene. The distance between successive mountain ranges averages about 12 to 18 miles. The Oquirrh Mountains are the first range west of the Wasatch Mountains, which bound the Basin and Range from the Colorado Plateau and Uinta Basin provinces to the east.

Carlin-type gold deposits like those at Mercur and other parts of the northeastern Great Basin occur in a complex geologic setting generally regarded as the late Proterozoic rifted edge of the North American craton (Stewart, 1980; Hintze and Kowallis, 2009). After rifting, a thick wedge of Paleozoic siliciclastic and carbonate sedimentary rocks accumulated upon a passive margin until a series of generally east-vergent orogenic events broadly affected the area and greatly disrupted marine sedimentation. The first deformation event, the early Mississippian Antler orogeny in Nevada, produced highlands that sourced a large amount of sediment in Carboniferous foreland basins in Utah, including in the Oquirrh Mountains. Episodic contractional deformation continued through the late Mesozoic, although north-central Utah including the Oquirrh Mountains was most affected by folding and thrusting associated with the late Cretaceous Sevier orogeny.

Contraction in the northern Great Basin was accompanied by pulses of widespread arc magmatism in the late Jurassic (165 to 157 Ma) and Cretaceous (~120 to 85 Ma), mainly in Nevada, but the Jurassic pulse extended into northwestern Utah. Widespread arc magmatism resumed in the middle Cenozoic at about 42 Ma following a lull of more than 40 m.y. (Barton, 1990). Mechanisms for mid-Cenozoic magmatism are unclear, but a reasonable model is that this magmatism resulted from steepening of the subducted slab, which had previously been subducted at a shallow angle that precluded melt generation. Mid-Cenozoic magmatism swept southwest between the late Eocene and Oligocene in northern and central Nevada and Utah and changed character from early intermediate intrusion- and lava-dominated igneous centers, on the north, to subsequent large silicic caldera complexes dominated by ash-flow tuff to the south, the

latter constituting the Oligocene ignimbrite flare-up that affected a broad area of the southern North American Cordillera (Henry and John, 2013).

The timing and magnitude of extension in the northern Great Basin is debated, but likely low-magnitude extension initiated prior to onset of Cenozoic magmatism, as evidenced by the development of elongate lacustrine basins and angular unconformities between mid-Cenozoic units. Major extension appears to postdate Eocene-Oligocene magmatism (Best et al., 1991; Henry et al., 2011), initiating in the mid-Miocene (~17 Ma) and coinciding with renewed magmatism of a distinctive bimodal (basalt-rhyolite) character that reflects its extensional origin.

The metallogeny of the northern Great Basin is strongly associated with Mesozoic to Cenozoic magmatism. Economic porphyry mineralization, although not abundant in the province, is associated with Jurassic through mid-Cenozoic intrusions (e.g., Yerington, Contact, Robinson, Hall, Mount Hope, and Bingham Canyon). Jurassic intrusions are associated with porphyry copper and iron oxide-copper-gold ("IOCG") deposits (Barton et al., 2011), whereas Cretaceous porphyries in Nevada range from copper-gold-molybdenum (e.g., the ~90 Ma system at Robinson), through low-fluorine molybdenum types (e.g., Hall and Buckingham).

Eocene magmatism produced the giant Bingham porphyry copper-gold-molybdenum system in the northern Oquirrh Mountains and major silver-base metal deposits of the Park City and Tintic districts of central Utah, and large gold-rich skarns at Fortitude and Cove-McCoy in Nevada. However, Eocene low-temperature Carlin-type or sedimentary rock-hosted gold deposits are, by far, the most important precious-metal deposits in the Great Basin (Figure 7-1), accounting for about 60% of the Great Basin's total gold production, or ~170Moz (5,300 tonnes) of 280 Moz (8,700 tonnes) total production (Muntean and Davis, 2017; Utah Geological Survey, 2019).

Carlin-type deposits are spatially and temporally related to Eocene magmatism and several studies link the magmatism with Carlin-type ore deposition (Sillitoe and Bonham, 1990; Johnston and Ressel, 2004; Muntean et al., 2011). Combined, Eocene ore deposits account for approximately 77% of the province's gold production, a remarkable statistic considering the Great Basin is also well-known for precious-metal production from major Miocene to Oligocene volcanic-hosted epithermal deposits like Round Mountain, Comstock, Goldfield, and Tonopah (Figure 7-1). In northern Utah, examples of Carlin-type deposits broadly associated with Eocene magmatism include Barney's Canyon and Melco near Bingham Canyon (Figure 7-1), and those at Mercur and the Drum Mountains (Krahulec, 2010). Carlin-type deposits in Utah districts have produced about 4.8 Moz of gold (Krahulec, 2011), Mercur being Utah's largest primary gold mine having recovered 2.6 Moz of gold.

Abundant mid-Miocene low-sulfidation, volcanic-related epithermal gold-silver deposits, some of which include bonanza veins (e.g., Jarbidge, Midas, National, Sleeper, Fire Creek), are

widespread in the northern Great Basin. Mid-Miocene epithermal deposits are associated with a switch from arc-type to bimodal volcanism in northern Nevada and parts of adjacent Idaho, Utah, and Oregon 17-15 Ma). The switch to bimodal volcanism coincided with the start of widespread extensional faulting throughout the Great Basin.

Figure 7-1: Regional Setting of the Mercur Gold Project

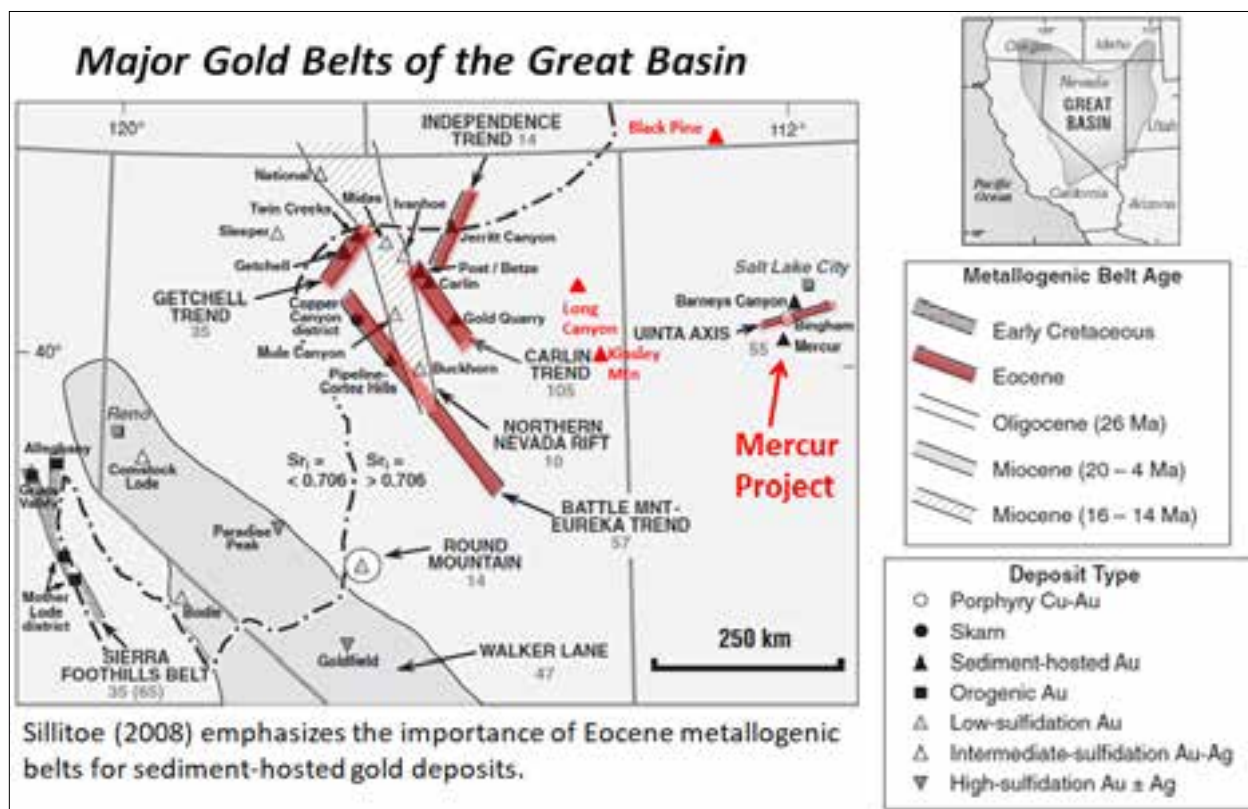


Figure developed from Sillitoe, 2008; annotated by Ensign, 2021.

Somewhat younger epithermal deposits ( $\leq 5$  Ma) are abundant in the northern Great Basin and commonly spatially associated with modern geothermal systems. In several cases, these young low-sulfidation gold-silver deposits lack a strong spatial or temporal tie to magmatism, prompting interpretations that they are amagmatic and extension-related in origin (Coolbaugh et al., 2011).

## 7.2 Geology of the Southern Oquirrh Mountains

Exposures in the southern Oquirrh Mountains mostly comprise Mississippian through Early Permian carbonate and siliciclastic strata having an aggregate thickness over 17,000 ft. Five broadly conformable units are recognized, which from oldest to youngest are: Middle Mississippian Deseret Limestone, Late Mississippian Humbug Formation, Late Mississippian Great Blue Limestone, Early Pennsylvanian Manning Canyon Shale, and Pennsylvanian to Early Permian.

Permian Oquirrh Group (Figure 7-2; Tooker and Roberts, 1998). In Ophir Canyon just north of the Mercur Property, older strata of Devonian-Mississippian and Cambrian age are exposed beneath the Deseret Limestone. The older rocks represent the deeper levels of the Bingham thrust nappe in the southern Oquirrh Mountains.

**Figure 7-2: Generalized Stratigraphic Column for the Main Mercur Area**

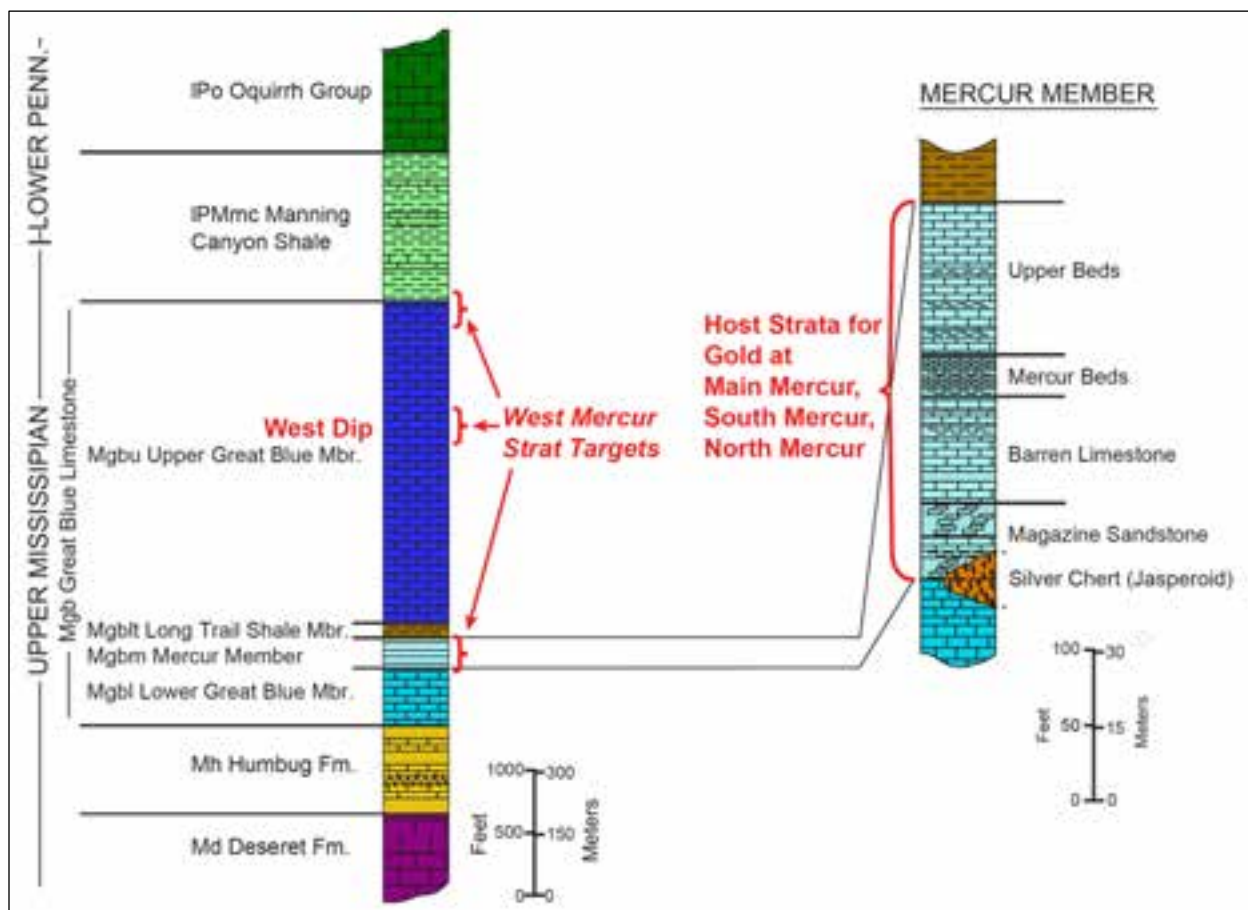


Figure from Mako, 1999 and Kerr, 1997, modified by Ensign, 2021.

The Deseret Limestone mainly consists of medium-bedded, commonly karstic, fossiliferous, and cherty limestone and lesser sandstone. Thick-bedded brown sandstone and lesser medium-bedded gray limestone characterize the Humbug Formation. Micritic and silty limestone intercalated with lesser amounts of sandstone, siltstone, and shale characterize the heterogeneous Great Blue Limestone. The Manning Canyon Shale consists mostly of black, commonly calcareous shale with limy sandstone at its base and thin-bedded limestone at its top. The Oquirrh Group represents cyclic deposition of more than 12,000 ft of shale, sandstone, and limestone subdivided into five formations (see Tooker and Roberts, 1998). In general, the tremendous volume of sedimentary rocks deposited during the Carboniferous in north-central

Utah reflects the transition between stable platform deposition of clean carbonate and sand through the Early Mississippian to growing basin instability and changing subsidence rates and lithologies in the Middle Mississippian to Early Pennsylvanian. This was in response to the westerly influx of siliciclastic sediment associated with erosion of the Antler orogenic highland in Nevada (Bissell and Barker, 1977; Morris et al., 1977).

The structure of the Oquirrh Mountains is dominated by successive thrusts sheets stacked eastward against the bulwark of the Uinta Mountains crystalline uplift during the compressive Cretaceous Sevier orogeny (Hintze and Kowallis, 2009). In the Oquirrh Mountains, five nappes are mapped, each possessing distinct internal structural patterns and Paleozoic depositional facies (Tooker and Roberts, 1998). The southern Oquirrh Mountains, including the Mercur region, are located in the Bingham nappe (Figure 7-3), which is comprised of approximately 23,000 ft (over four miles) of allochthonous Paleozoic strata-sole by the Midas thrust. The Bingham nappe contains four broad, high-amplitude, asymmetric folds (Figure 7-3) with axes trending north-northwest across the southern Oquirrh Mountains (Tooker, 1999). Both the Mercur area and neighboring Ophir mining district to the north are located in the Ophir anticline, the westernmost of the major folds.

**Figure 7-3: Schematic Section Across the Southern Oquirrh Mountains**

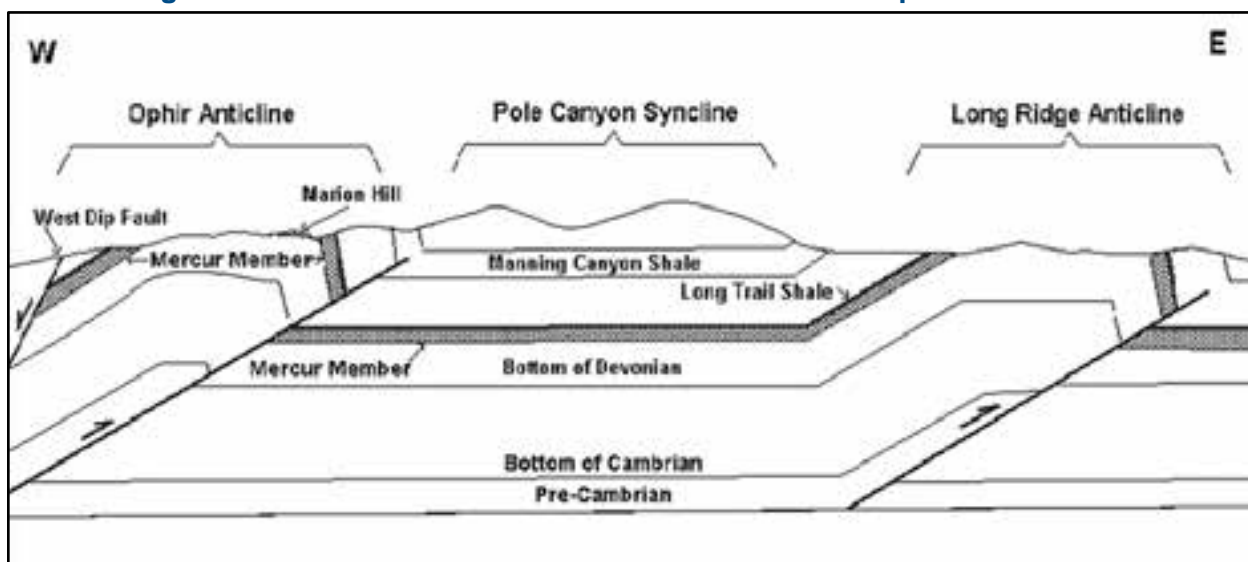


Figure from Kroko, 1992.

The asymmetry of the Ophir anticline and other regional folds is interpreted to be fault related. The Ophir anticline is observed to be a “box fold” with a gently dipping western limb, broad hinge zone and steep eastern limb (Kerr, 1997). Tooker (1987) favored a fault-bend fold interpretation of this geometry while a structural analysis by Kroko (1992) supported a fault-propagation fold. The thrust fault in question is not clearly exposed and was regarded as blind by Kroko (1992), so

a definitive classification is challenging. Clark et al (2023) interpret the Manning Canyon Fault to be an east dipping attenuation fault as opposed to an east vergent thrust. In either case, the underlying thrust fault likely provided an important fluid pathway, linking the Mercur district to yet deeper structures (Kroko and Bruhn, 1992).

### 7.3 Mercur Property Geology

The Mercur Property is underlain by Mississippian rocks that are broadly folded into the northwest-trending Ophir anticline (Figure 7-4 and Figure 7-5). Because of folding and topography, the Great Blue Limestone is the most extensively exposed stratigraphic unit on the property, with smaller exposures of the underlying Humbug Formation and Deseret Limestone in the core of the Ophir anticline in Mercur Canyon, as well as exposures of the younger Manning Canyon Shale along the western and eastern flanks of the fold.

**Figure 7-4: Simplified Geology Map of the Southern Oquirrh Mountains**

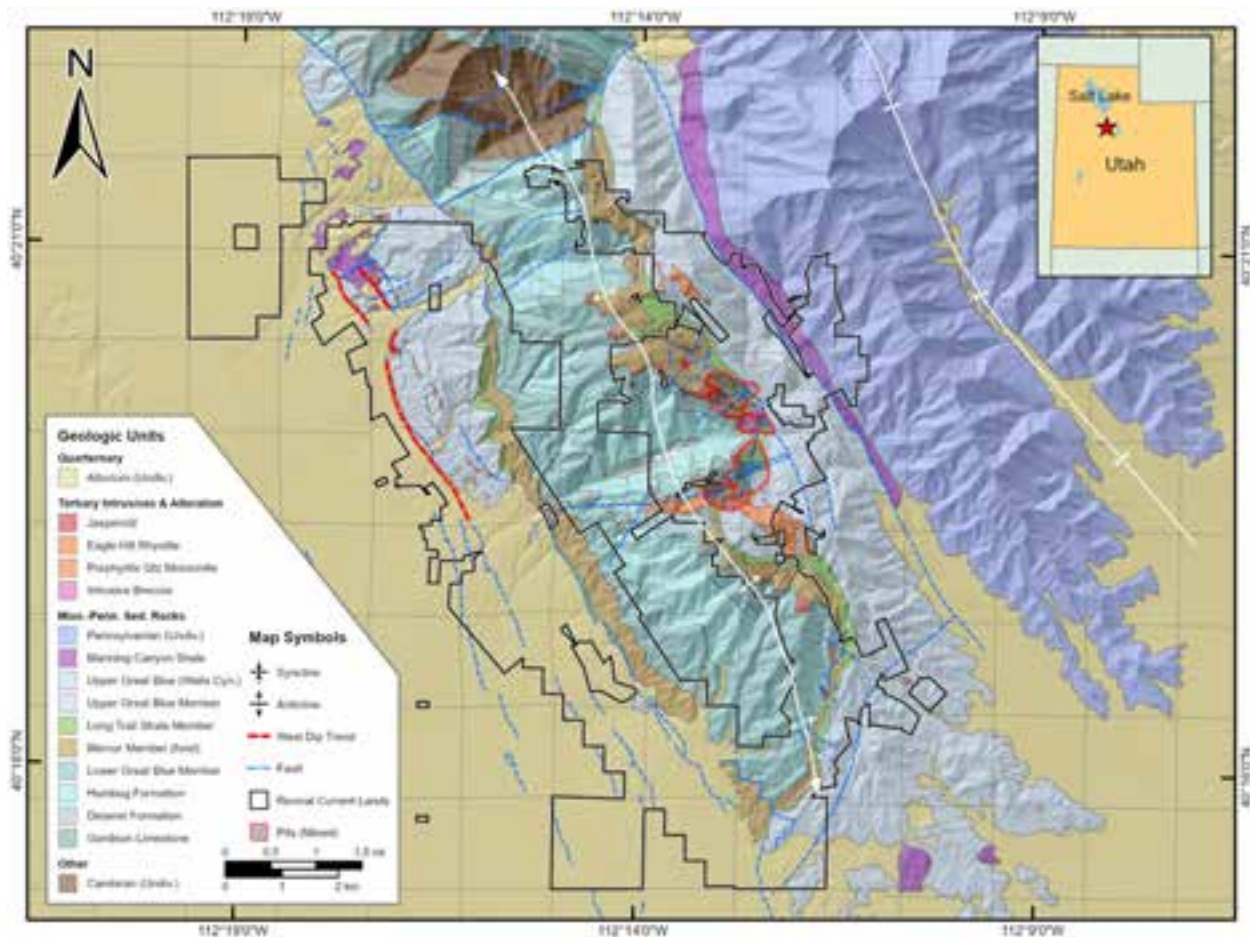


Figure from Ensign, 2024 and Revival, 2025.

Figure 7-5: Geology of the Mercur Mine Area

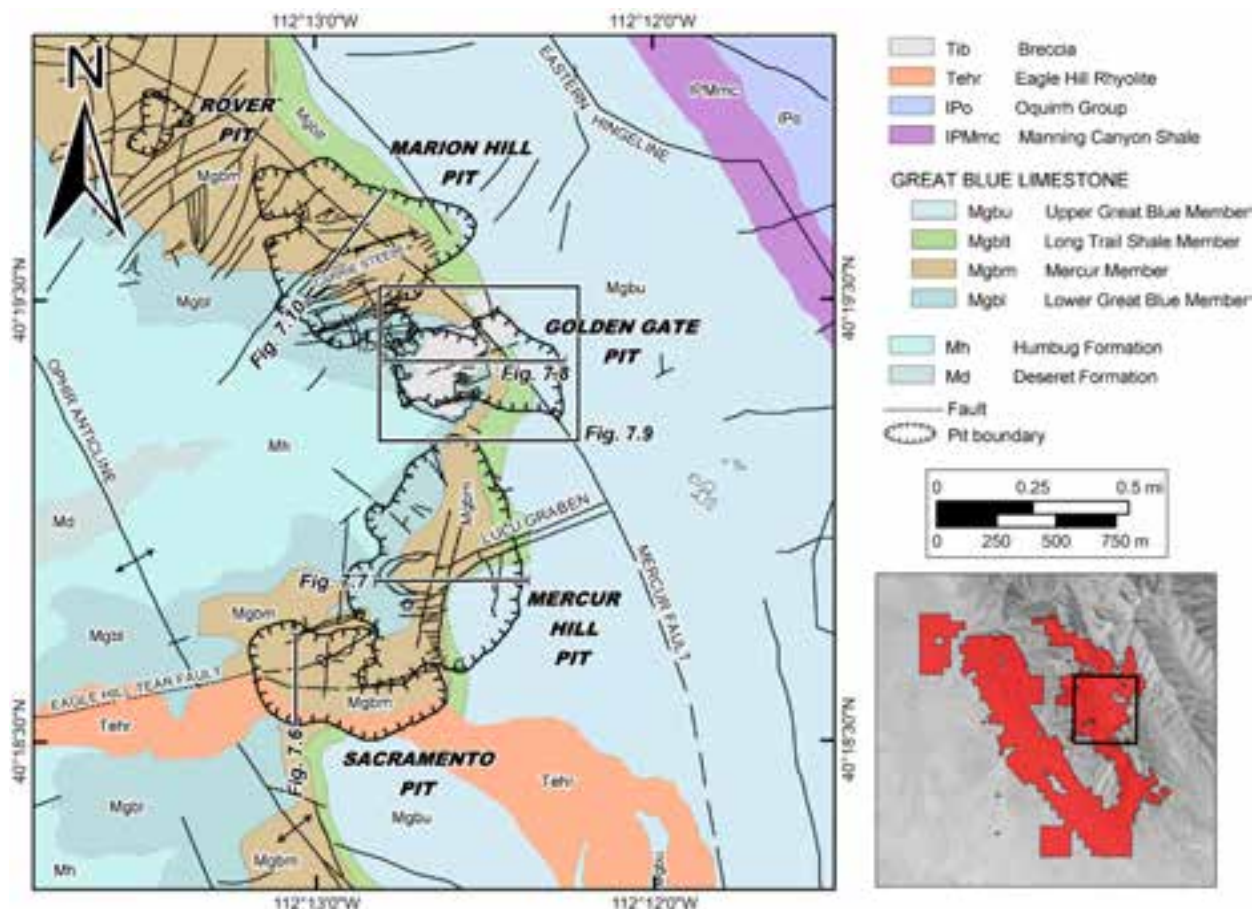


Figure from Mako, 1999, modified by Revival, 2025. Inset shows location of map area relative to the property outlines.

The Great Blue Limestone has a total stratigraphic thickness ranging from 2,500 ft (Gordon et al., 2000) to about 3,300 ft (Chamberlain, 1981) in the Mercur mine area. Three mappable subunits are recognized by geologists of the US Geological Survey (Tooker, 1987) and the Utah Geological Survey (Clark et al., 2023). These subunits include the Lower Limestone Member, the Long Trail Shale Member, and the Upper Limestone Member. Tafuri (1987) further divided the Lower Limestone Member to recognize the Mercur Member, a distinct set of beds that host most of the gold in the Mercur district (Figure 7-2).

The oldest unit, the Lower Limestone Member, is correlated with the Topliiff Member of the Great Blue Limestone (Figure 7-2) in the northern part of the East Tintic Mountains by many workers (Tafuri, 1987). Depending on where the section is measured, the thickness of the Lower Limestone Member is reported to range from 535 ft to 850 ft thick (Klatt, 2016; Chamberlain, 1981; Kerr, 1997, Gordon et al., 2000). The lower portion of the unit consists primarily of dark gray, medium- to thick-bedded micritic limestone. The upper portion of the unit is composed of thin

bedded, bioclastic limestone, micritic limestone, calcareous shale and sandstone units (Klatt, 2016). Ensign and other workers in the Mercur district further divide the Lower Limestone Member into the Lower Great Blue Member (the lower portion) and the Mercur Member (the upper portion).

The Mercur Member (Figure 7-2) was defined by Tafuri (1987) as the upper portion of the Lower Limestone Member, just below the Long Trail Shale. Measured thickness of the Mercur Member ranges from 300 ft at Main Mercur, to 330 ft at West Mercur (Klatt, 2016). The Mercur Member consists of alternating bioclastic limestone, silty limestone, calcareous siltstone and sandstone beds, which hosted the bulk of material mined in the district. Units within the Mercur Member may be carbonaceous.

The Long Trail Shale Member of the Great Blue Limestone (Figure 7-2) consists of 80 to 150 ft of fissile, black, carbonaceous, and fossiliferous shale with interlayers of limestone and mudstone.

The Upper Limestone Member (or Upper Great Blue Member) of the Great Blue Limestone is 1,500 to over 3,000 ft thick and consists mostly of cherty, medium- to thick-bedded, medium gray, micritic limestone, with some beds of calcareous siltstone, shale and bioclastic limestone. The Upper Great Blue Member was the host unit for the material historically mined underground in the West Mercur area.

The Mercur Member, which is the most favorable host unit for gold mineralization in the Mercur mine area, crops out in both the western and eastern limbs of the Ophir anticline (Figure 7-4). The Mercur Member is further subdivided (Figure 7-2) into four lithologically distinct “beds” (e.g., Mako, 1999; Kerr, 1997; Kornze, 1987; Tafuri, 1987) that influenced the distribution of mineralization: the lower, “Magazine Sandstone Beds” (~40 ft thick), the “Barren Beds” of thicker-bedded limestone (~75 ft thick), the “Mercur Beds” of highly fossiliferous silty limestone (~30 ft thick), and the so called “Upper Beds” of medium-bedded limestone (~125 ft thick). Additionally, an alteration unit, the Silver Chert, is used extensively in the literature of the Mercur mine area to describe a stratigraphically controlled layer of silicified limestone and sandstone at the base of the Mercur Member.

In addition to Mississippian sedimentary rocks, several dikes, sills, and plugs of sparsely quartz-phyric to aphyric rhyolite or aplite (Eagle Hill rhyolite) and porphyritic quartz monzonite (Porphyry Hill quartz monzonite) of Eocene age are present at Mercur (Guenther, 1973; Mako, 1999; Figure 7-4). The Eagle Hill rhyolite comprises several irregular sill- and dike-like bodies that discontinuously cover an area of ~3 mi east-to-west by ~1.3 mi north-to-south centered on Mercur Canyon; the largest rhyolite bodies are ~0.16 mi<sup>2</sup> and 0.24 mi<sup>2</sup>. The Eagle Hill Rhyolite has been dated at 32.38 ± 0.10 Ma (UGS and NIGL, 2012). Prior to mining, the largest of the Eagle Hill rhyolite exposures covered most of the Sacramento pit gold resource, with most mined material associated with east-northeast- and north-striking faults cutting prospective Mercur Member rocks

beneath the intrusion (Kerr, 1997). Patchy strong hydrothermal alteration and low-grade gold mineralization in rhyolite indicate that mineralization postdates the age of intrusion (Kerr, 1997; Mako, 1999).

Additional exposures of Eagle Hill rhyolite have been mapped along the western range front in the West Mercur area (Tooker, 1987; Clark et al., 2023). The dikes are subparallel to the general north-northwest strike of bedding and mapped range-front faults. Some of the dikes are near historical mines in the West Mercur area.

The Porphyry Hill quartz monzonite is exposed as altered sills and plugs of porphyritic quartz monzonite in the area about 1,600 ft northeast of the Rover pit (Figure 7-5) near “Porphyry Hill”. The rock is coarsely and abundantly porphyritic granodiorite with large, euhedral phenocrysts of plagioclase, K-feldspar, and biotite, with smaller amounts of quartz and hornblende set in a fine-grained, granular groundmass. The largest body covers less than 0.1 mi<sup>2</sup>. The Porphyry Hill quartz monzonite has been dated at  $36.7 \pm 0.5$  Ma (Moore and McKee, 1983). The sills and other small intrusions have a northwest trend overall and are mapped as far as the North Mercur (Lion Hill) area in the Ophir district, a distance of ~2 mi (Clark et al., 2023).

*Structural Geology* – The Mercur Property covers two geologic domains that correspond to the eastern and western limbs of the Ophir anticline (Figure 7-4). The west-dipping limb, called “West Dip” for the historical mining area along the range front, exposes strata from the Late Mississippian Humbug Formation through the Early Pennsylvanian Manning Canyon Shale, including all members of the Great Blue Limestone. West of the range front, the property is covered by Quaternary and Cenozoic alluvial gravels of unknown thickness, although in several places, small patches of Paleozoic rocks are exposed through gravels and shallow historical shafts penetrated to bedrock, indicating modest depths to bedrock, at least locally. Several active fault scarps cut young alluvial fans along western range front of the property (Wu and Bruhn, 1994). The historical West Dip underground mines exploited a poorly understood, bedding-parallel structure known as the West Dip fault along the range front at the La Cigale and Daisy mines.

The east limb of the Ophir anticline consists of a west-to-east progression of moderately east-dipping Humbug Formation through Manning Canyon Shale, including all members of the Great Blue Limestone, which is well exposed in the Main Mercur area (Figure 7-5). Most historical production from underground mines and from open pits in the Mercur mine area was derived from mineralized material in the Mercur Member. Although mineralization exhibits a strong lithologic control, individual deposits are typically localized by steeply dipping faults and their intersections with Mercur Member stratigraphy and other faults (e.g., Kerr, 1997). Such high-angle faults are

common in the Mercur mine area, although many faults have modest displacements ( $\leq 30$  ft) and are not traced for more than a few miles (Tooker and Roberts, 1998).

Most high-angle faults are north-northwest- and east-northeast-striking, and faults of both orientations localized mineralization in deposits of the Mercur mine area (Kroko and Bruhn, 1992; Kerr, 1997). The east-northeast-trending faults cut the Ophir anticline at nearly right angles and have been interpreted as tear faults associated with fold propagation (Tooker, 1999; Kerr, 1997; Kroko and Bruhn, 1992). The Eagle Hill “tear” fault has the greatest continuity of the east-northeast faults and partly coincides with the Lulu graben, a 250 ft-wide east-northeast “keystone” fault zone in the Mercur Hill pit that down-dropped a wedge of highly mineralized Mercur Beds against weakly mineralized Lower Great Blue (Topliff) Member (Kerr, 1997). The Carrie Steele fault in the Marion Hill pit is another east-northeast striking structure. Many of the faults controlling mineralization in the Mercur mine area described by Kerr (1997) have minimal offsets of a few tens of feet or less.

The most extensive faults mapped in the Mercur mine area are northwest-striking faults. The Mercur fault was mapped by Barrick geologists (Kornze, 1987; Kerr, 1997) as a major northwest fault that skirts the east edge of the Golden Gate and Marion Hill pits and extends for more than 6 mi between Ophir Canyon and Sunshine Canyon. However, the 1:62,500-scale map by Clark et al. (2023) did not include the Mercur fault. Kerr (1997) speculates a fold-fault link between the Ophir anticline and Mercur fault based on their similar orientation and scale.

## **7.4 Gold and Silver Mineralization**

Four areas of significant precious-metal mineralization are identified on the Mercur Property: the Main Mercur area where most historical production was derived, and the North, South, and West Mercur areas. Historically, all areas were mined from underground workings, with more recent production from open-pit mining in the Main Mercur area. Most precious-metal mineralization from all areas is disseminated in preferred stratigraphic intervals of the Great Blue Limestone, although some mineralization also occurs in a few steeply plunging and irregular breccia bodies that cut other stratigraphic units. Vein or intrusion-hosted mineralization is rarely, if ever, described.

Most deposits, except for those at West Mercur, occur on the east limb of the Ophir anticline, near its crest, in thin-bedded, carbonaceous, and relatively iron-rich Mississippian carbonate strata of the Mercur Member of the Great Blue Limestone (Tafari, 1987). Gold at West Mercur occurs in similar carbonate strata of the Upper Great Blue Member in the west limb of the Ophir anticline. Gold mineralization at Mercur is broadly replacement style, wherein gold-bearing iron sulfides were disseminated in more favorable carbonate-bearing units during hydrothermal alteration of impure carbonate host rocks. Near the surface or along faults, fracture zones, and dikes, post-

mineralization oxidation of the gold deposits converted iron sulfides to oxides. Like other major base and precious metal deposits in the Oquirrh, and neighboring Wasatch and East Tintic Mountains, mineralization at Mercur is considered to be of Eocene age based on close relationships with coeval intrusions.

Sedimentary rock-hosted gold mineralization on the Mercur Property is generally consistent with characteristics of large Carlin-type gold deposits in Nevada (e.g., Cline et al., 2005). Mineralization at Mercur exhibits the typical Carlin-type geochemical assemblage of gold associated with anomalous arsenic, antimony, mercury and thallium. Gold values generally exceed silver values, and base metals have low average concentrations. Gold in unoxidized, carbonaceous strata generally occurs in two forms: 1) as minute grains of irregularly shaped iron sulfides ("filigree" pyrite) disseminated and in extremely fine veinlets distributed throughout the rock, or, 2) as a component of micron-scale rims on subhedral pyrite in pyrite-marcasite-sulfosalt micro veinlets (Wilson and Wilson, 1992). The gold-bearing rims on earlier pyrite, and the micron-sized filigree pyrite, also contain high concentrations of arsenic, antimony, mercury, and thallium (e.g., Wilson and Wilson, 1992; Mako, 1999).

Other minerals in unoxidized zones include local abundances of realgar, orpiment, stibnite, cinnabar, and an assortment of minor thallium-bearing sulfosalts, and barite. Orpiment and realgar occur in irregular clot-like masses, and fracture coatings mostly in carbonaceous rocks broadly associated with gold mineralization. Cinnabar and stibnite are sporadically distributed at Main Mercur, cinnabar most notably at the Sacramento pit and stibnite in the Silver Chert jasperoid. Barite is a common primary sulfate mineral at Mercur and occurs widely in deposits, partly as a component of early silicification in the Silver Chert horizon and in late-stage calcite-halloysite veins (Tafari, 1987; Mako, 1999). Thallium sulfosalts were described by Wilson and Wilson (1990) and fluorite was described by Faddies and Kornze (1985) in late-stage calcite-barite veins.

Three main types of primary hydrothermal alteration associated with precious metal mineralization at Mercur are carbonate removal ("decalcification"), silicification of carbonates to form jasperoid, and argillization of the feldspathic component in impure carbonates and igneous rocks. In addition, concentrations of organic carbon are locally evident adjacent to intrusions and in areas associated with intense decalcification. The deposits at Mercur are variably oxidized, although the redox boundary is highly irregular and, in some cases, oxidation occurs below sulfide- and carbon-bearing zones (Kornze, 1987).

The earliest (and pre-gold) stage of alteration recognized at Main Mercur is silicification associated with the Silver Chert, which is a jasperoid body variably developed along a 7 mi-long stretch at the contact between the Lower Great Blue and Mercur members of the Great Blue

Limestone. The Silver Chert jasperoid contains fine-grained quartz along with varying amounts of barite, pyrite, secondary silver minerals, and native silver. Tourmaline in the jasperoid suggests a higher formation temperature prior to supergene silver enrichment. Other zones of bedding-replacement silicification occur widely at Mercur but are relatively minor (Mako, 1999). Moderate silicification is also observed with relatively late mineralization associated with several breccia bodies (Guenther, 1973).

Carbonate dissolution, which Jewell and Parry (1987) equated with argillic alteration, is the principal style of alteration associated with gold mineralization on the Mercur Property. The process of carbonate dissolution resulted in more porous and less dense host rocks, produced clays (e.g., illite, kaolinite) from feldspars comprising impure carbonate rocks, and increased the concentration of organic carbon as a residue in unoxidized rocks.

In addition to the replacement-type mineralization, gold has been found to occur in multiple discrete breccia bodies. Breccia bodies occur on the Mercur Property in the Golden Gate, Mercur Hill, and Sacramento deposits at Main Mercur, and a cluster of three small pipes near the Sunshine mine in South Mercur. The breccia bodies have irregular, funnel-shaped forms that tend to narrow with depth. Some breccia bodies contain igneous clasts (Guenther, 1973; Mako, 1999), although most clasts comprise altered limestone consistent with lithologies in the lower members of the Great Blue Limestone that host the breccia bodies. The breccia bodies at the Golden Gate and Sacramento deposits were the only ones to carry significant gold mineralization, and gold was erratically distributed throughout the breccia.

Beginning in the 1980s, Getty questioned the origin of the breccias, but collapse was considered to be an important mechanism in their formation, whether collapse was caused by collapse of domed sediments above a magma column, withdrawal of magma at depth, or explosive release of gases (Faddies and Kornze, 1985, Stanger 1977). Breccia bodies have also been described as intrusive breccia pipes (Tooker, 1987, Mako, 1999); however, the petrography performed to date describes a combination of cataclastic and collapse related brecciation events (DePangher 1997, DePangher 1999). Since solution collapse breccias are common features in sediment-hosted deposits, this seems to be the most likely origin, but other mechanisms of formation should be considered.

#### **7.4.1 Main Mercur Mineralization**

The Mercur Gold Project is comprised of five open pits that were mined between 1983 and 1997. The pits, which were largely expansions of the historical underground workings, are from south to north: Sacramento, Mercur Hill, Golden Gate, Marion Hill, and Rover (Figure 7-5). The Sacramento pit consumed the smaller Jessie Lakin and Mattie pits, the Mercur Hill pit consumed the Walker pit, and the Marion Hill pit consumed the smaller Lady May, Brickyard and Carrie

Steele pits. All five areas contain gold-mineralized material that was not previously mined but was identified through drilling and other historical exploration activities. Representative cross sections of the Sacramento, Mercur Hill, Golden Gate, and Marion Hill pits are provided on Figure 7-6, Figure 7-7, Figure 7-8, Figure 7-9 and Figure 7-10. These areas are summarized individually in the following subsections based on Faddies and Kornze, (1985), Kerr (1997), and Mako (1999).

#### 7.4.1.1 *Sacramento Pit*

Gold mineralization in the Sacramento pit area occurs in the pipe-like Sacramento breccia body and in replacements of favorable sedimentary beds. The Sacramento breccia body is bound within a graben-like structure defined by two oppositely dipping, east-northeast-striking normal faults. In contrast, bedding replacements occur in the footwall of one of the normal faults. Although production from Sacramento pit was mostly gold, early underground mining was initially for mercury in cinnabar, and Getty-Barrick recovered about 131 flasks of mercury from the autoclave process during open pit mining (Mako, 1999).

The Sacramento breccia is an upward-flaring body as much as 500 ft wide near its upper contact with the flat-lying Eagle Hill rhyolite sill and extends vertically for at least 400 ft (Figure 7-6). The plan view footprint of the mineralized breccia is about 725 ft by 330 ft, but narrow mineralization extends for more than 1,300 ft along the normal faults (Kerr, 1997). The breccia cuts the favorable Mercur Member as well as underlying Lower Great Blue Member of the Great Blue Limestone, and clasts of both make up the bulk of breccia clasts. A small percentage of kaolinite-altered clasts were interpreted as rhyolite (Guenther, 1973; Tafuri, 1987).

The breccia is described as generally oxidized, matrix-supported, and consisting of angular to subrounded, decalcified, and clay-altered limestone clasts in a matrix of fine-grained quartz and hematite (Guenther, 1973; Kerr, 1997). Abundant organic carbon with disseminated fine-grained iron sulfides and realgar persists at high levels of the breccia body immediately beneath the rhyolite sill in the Mercur Member in the south highwall. The varying degrees of oxidation are generally attributed to near-surface weathering, although Kornze (1987) suggests that some oxide mineralization underlying intervals of mineralized sulfidic and carbonaceous rocks such as in the Sacramento pit may be primary. The percentage of gold associated with the siliceous matrix versus that contained in oxidized pyrite in the altered clasts of the breccia is uncertain. Gold grades in the mined breccia were locally greater than 0.088 oz/ton Au in its upper part but apparently decreased to less than 0.009 oz/ton Au at depths greater than 400 ft (Figure 7-6). Despite extensive mineralization in the breccia, not all of it was mineralized (Kerr, 1997; Mako, 1999).

Figure 7-6: Geologic Section of the Sacramento Deposit Area, Main Mercur Area

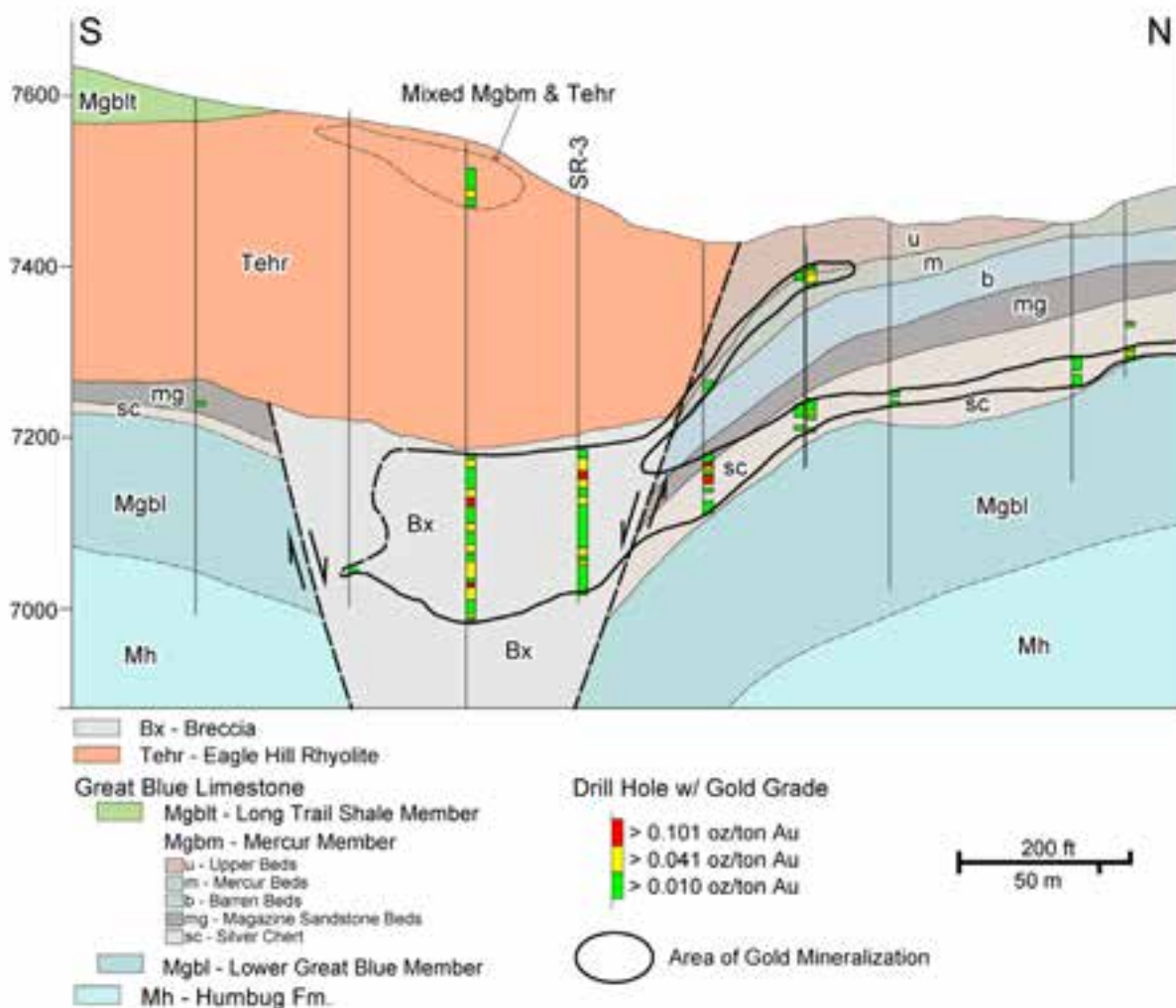


Figure from Mako, 1999, modified by Revival, 2025. See Figure 7-5 for section location.

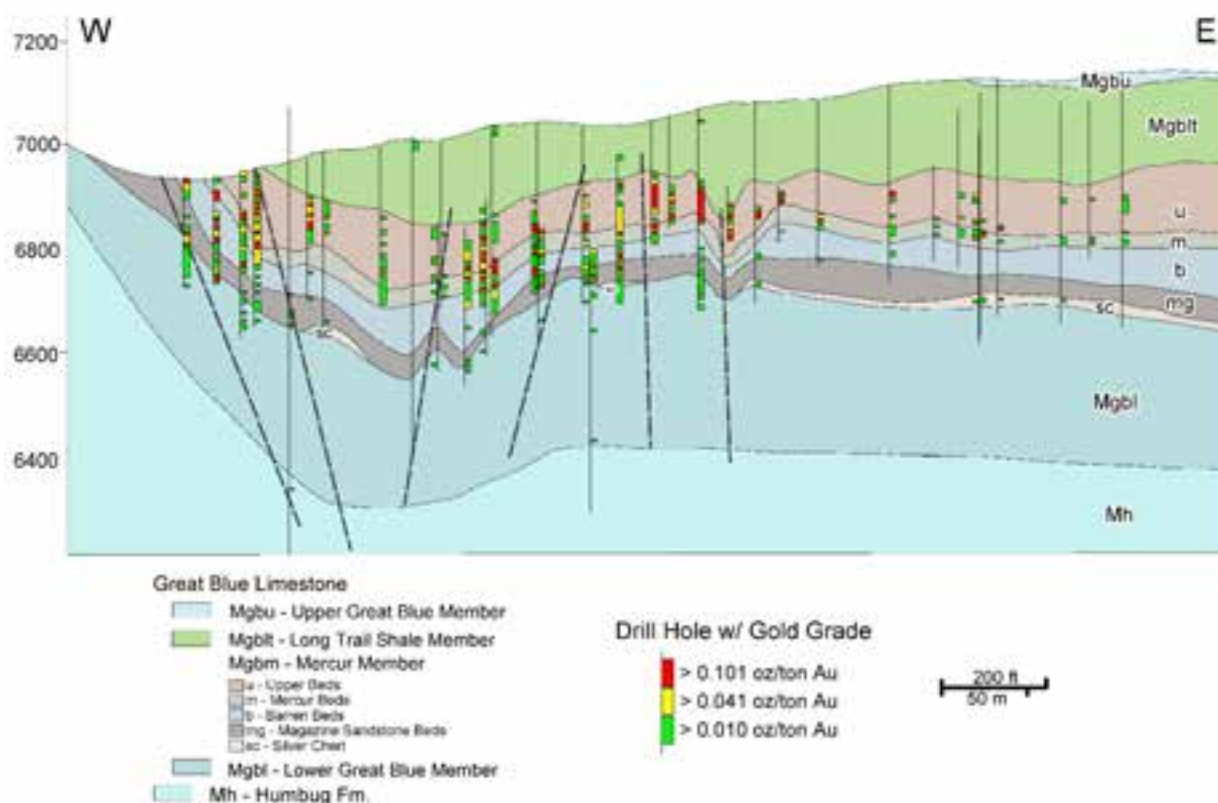
The bedding-replacement mineralization is localized in the footwall of the Eagle Hill fault (Figure 7-6), the northernmost of the two east-northeast normal faults and mainly occurs as jasperoid in both the Mercur Member as well as the uppermost part of the Lower Great Blue Member (Kerr, 1997). Distal bedding-replacement alteration affecting the Mercur Member includes decalcification and argillization of silty carbonate interbeds.

#### 7.4.1.2 Mercur Hill Pit

Mercur Hill had the largest production of the Getty-Barrick open pits (Mako, 1999) and partly overlaps with the eastern edge of the Sacramento pit. The deposit contained the highest and most persistent gold grades of any of the open pits and a large volume of mined material averaged

more than 0.088 oz/ton Au (Kerr, 1997). Mercur Hill exploited two fault-connected zones: a southern oblong footprint measuring about 1,800 ft east-west by about 800 ft north-south, and a northern cross-shaped footprint measuring approximately 1,200 ft north-south by 1,000 ft east-west, with each cross segment averaging about 330 ft in width. In both zones, gold was stratabound in the Mercur Member (Figure 7-7) and extended outward from syn-mineral faults no more than about 330 ft (Kerr, 1997).

**Figure 7-7: Geologic Section of Mercur Hill, Main Mercur Area**



From Mako, 1999, modified by Revival, 2025. See Figure 7-5 for section location.

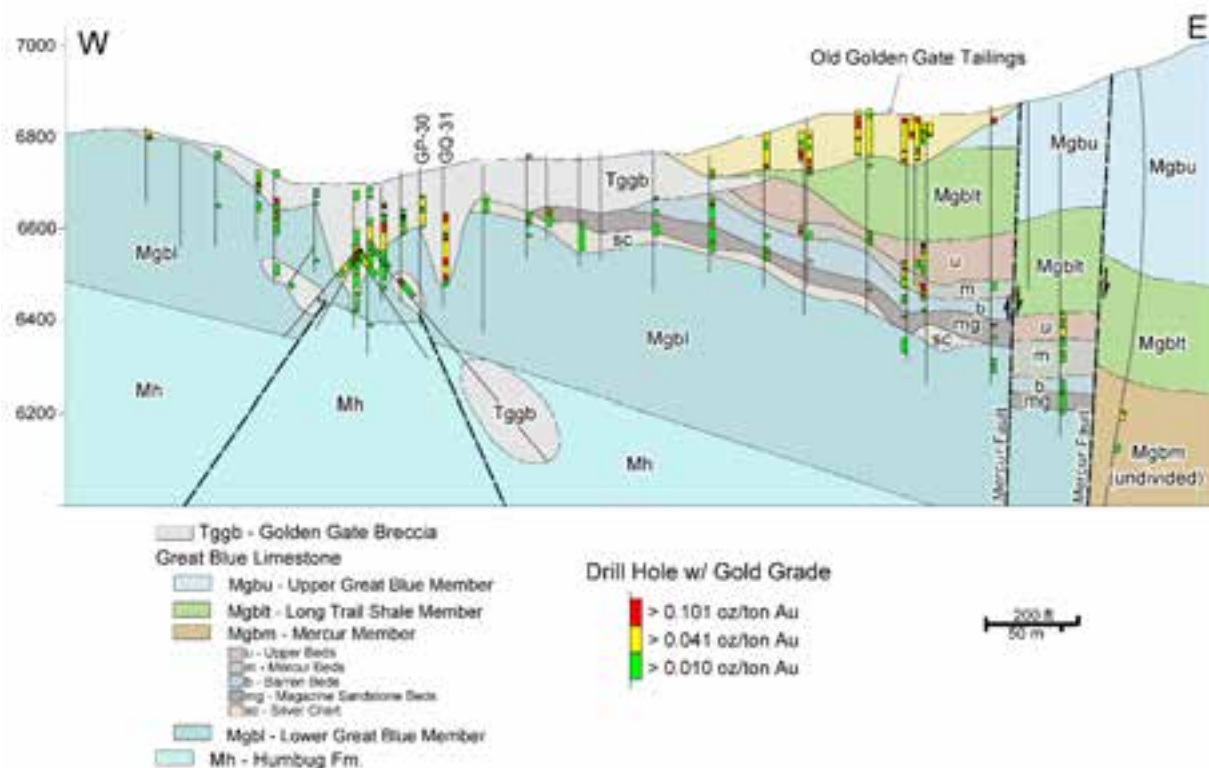
Gold in the southern zone is localized in the Mercur Member at the intersection of the narrow (130 ft to 575 ft wide), east-northeast-trending Lulu graben and a series of north-northeast trending faults about 230 ft wide known as the Twist fault zone (Kerr, 1997). A collapse breccia body ("Kirk breccia") occurs in the southwest corner of the fault intersection, an area in which the mineralization was broadest. The lower part of the Kirk breccia contained mineralized clasts of Mercur Member and possibly even clasts of the Upper Great Blue Member of the Great Blue Limestone and was bounded by coherent limestone of the Lower Great Blue Member. Abundant fractures in the entirety of this structural intersection resulted in pervasive oxidation.

The northern zone of mineralization is linked to the southern zone by the Twist fault zone, which changes to a northwest strike north of the Lulu graben (Kerr, 1997). The intersection of the Twist fault zone with another east-northeast fault focused the highest grades.

#### 7.4.1.3 Golden Gate Pit

The Golden Gate pit was developed in Mercur Canyon at an area covered by tailings from the historical Golden Gate Mill and part of the historical townsite of Mercur. Gold mineralization is elongate in an east-west direction over approximately 1,100 ft. The bulk of the gold mineralization at Golden Gate was contained in an irregular, but generally upward-flaring, mushroom-shaped breccia body (“Golden Gate breccia” of Mako, 1999) centered above a structural high of the Humbug Formation (Figure 7-8) in the western half of the deposit.

**Figure 7-8: Geologic Section of the Golden Gate Area**

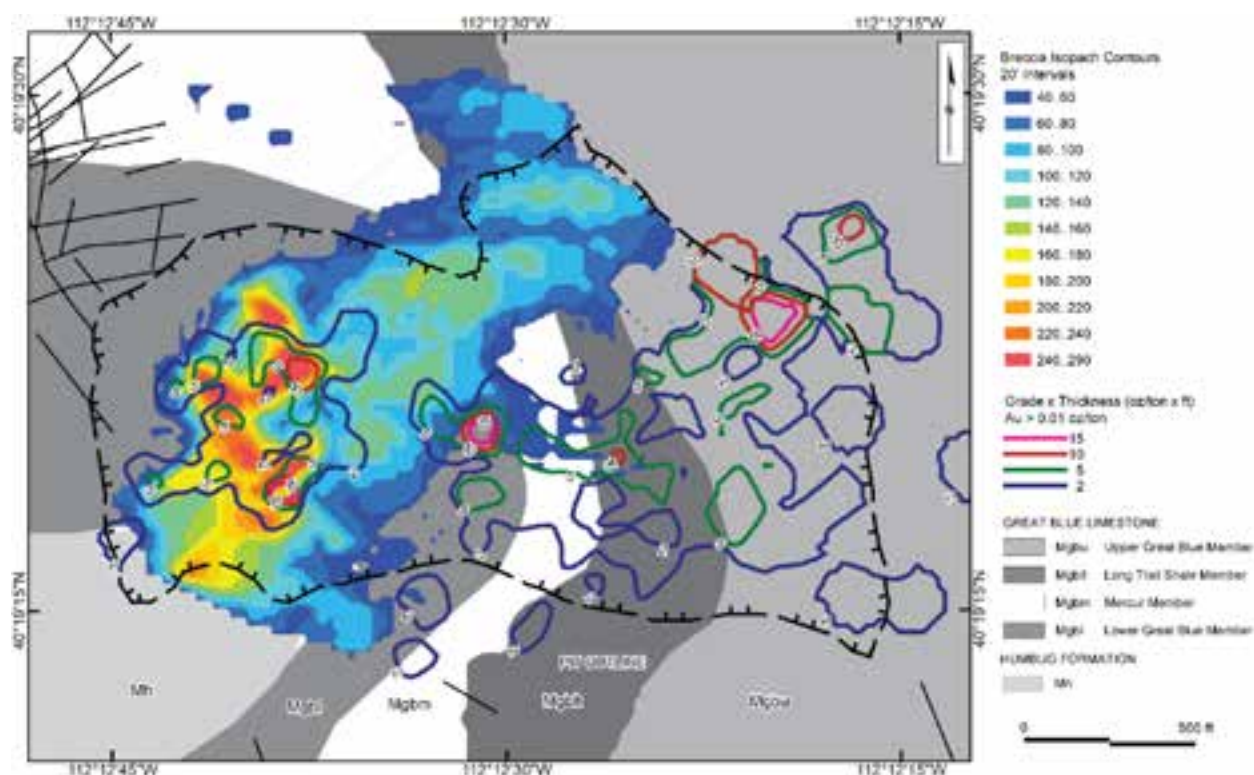


From Mako, 1999. Modified by Revival, 2025. See Figure 7-5 for section location.

Prior to mining, the Golden Gate breccia, most of which was oxidized, covered an area roughly 1,800 ft northeast-southwest by 700 ft northwest-southeast (Figure 7-9). Kerr (1997) indicates that the northeast elongation of the Golden Gate breccia and deposit was a result of a northeast-striking fault. The flared upper part of the Golden Gate breccia narrowed considerably below about

200 ft into a series of more discrete pipe-like bodies (Figure 7-8). The Golden Gate breccia cuts the upper Humbug Formation, and the Lower Great Blue and Mercur members of the Great Blue Limestone. Variably sized clasts of these sedimentary units along with igneous lithologies similar to the Eagle Hill rhyolite and Porphyry Hill granodiorite occur mixed within the core of the breccia (Mako, 1999). The matrix of the Golden Gate breccia consists of fine rock fragments, calcite, and iron oxides commonly with euhedral crystals of biotite. No information could be found that describes the deportment of gold between breccia clasts and matrix. Gold grade was distributed erratically in the breccia and not all the breccia contained economic grades of gold (Figure 7-9).

**Figure 7-9: Breccia Thickness and Gold Grade Thickness, Golden Gate Area**



From Mako, 1999. Modified by Ensign, 2021. See Figure 7-5 for map location.

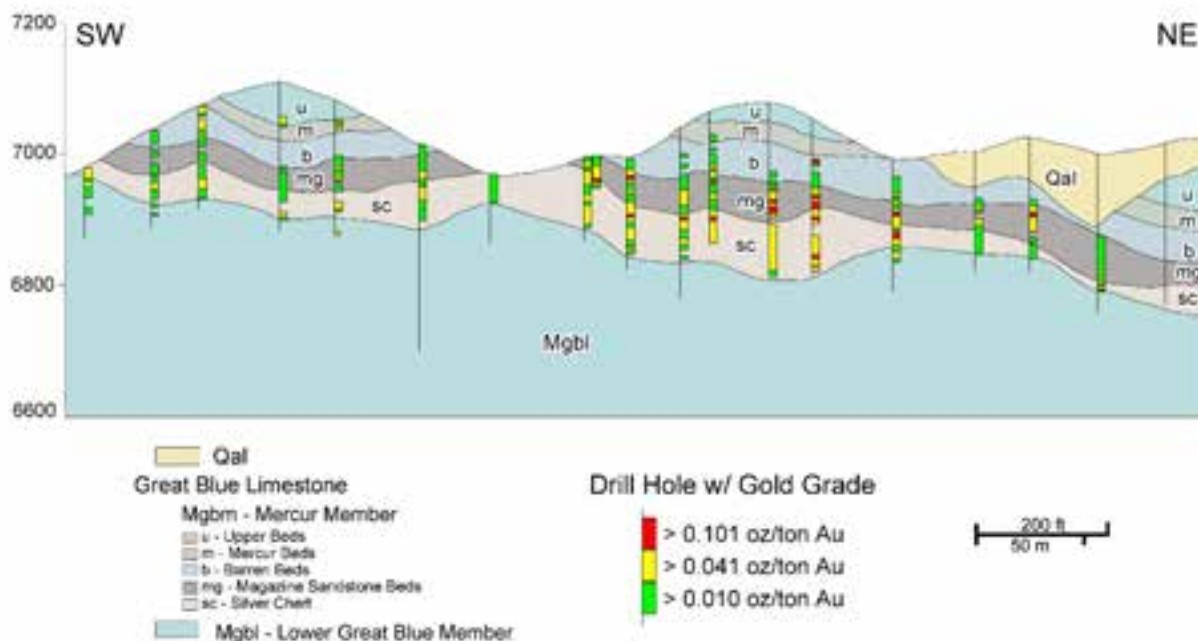
Gold mineralization in the eastern part of the Golden Gate pit is stratabound in the Mercur Member (mostly the Mercur Beds subunit) rather than the Golden Gate breccia body. Much of the material mined from the eastern part of Golden Gate was sulfide-bearing and carbonaceous, and calcite and realgar veins were common (Kerr, 1997).

#### 7.4.1.4 Marion Hill Pit

The Marion Hill pit is located immediately north of the Golden Gate pit on the north side of Mercur Canyon. Historically, Marion Hill was the best and highest-grade producer of silver at Main

Mercur, with much silver derived from the Silver Chert horizon. Gemmell (1897) reported that silver grades from Marion Hill locally exceeded \$4,000/short ton (~2,800 oz/ton Ag) in the early 1870s. The gold at Marion Hill is distributed more widely than silver. Most gold occurs in the Silver Chert and Magazine Sandstone Beds, but all beds of the Mercur Member may carry economic grades of gold (Figure 7-10). Three pit phases at Marion Hill (Carrie Steele, Brickyard and Lady May pits) produced about 498,000 ounces of gold (Mako, 1999).

**Figure 7-10: Geologic Section of Marion Hill, Main Mercur Area**



From Mako, 1999. Modified by Revival, 2025. See Figure 7-5 for section location.

The Marion Hill mineralization is localized by several small displacement, east-northeast-striking normal faults, the largest of which is the Carrie Steele fault (Figure 7-5). The east-northeast-trending faults dip north, thus progressively down-dropping fault blocks to the north. Mineralized zones are secondarily controlled along north-south faults or intersection between north-south and east-northeast faults. A small zone of gold mineralization occurs on the east side of the Mercur fault at its intersection with the Carrie Steele fault.

The largest and highest-grade gold zone at Marion Hill occurs in the footwall of the Carrie Steele fault. This zone extends approximately 1,150 ft along the fault and has a footprint width in plan view of about 300 ft. Similar, but narrower and shorter, zones of mineralization occur south of the Carrie Steele fault along other east-northeast faults. The replacement-style mineralization that occurs along east-northeast-trending faults at Marion Hill is largely contained in the Silver Chert and Magazine Sandstone beds of the Mercur Member (Kerr, 1997).

#### **7.4.1.5    Rover Pit**

The Rover pit is by far the smallest of the modern-era open pits and is centered on an apparently separate deposit, or mineralized zone, at the northwest part of the Main Mercur mine area (Figure 7-5). Gold mineralization occurs in the Magazine Sandstone Beds, Mercur Beds and Upper Beds of the Mercur Member in association with east-northeast and northwest-striking faults (Kerr, 1997) and is largely oxidized. Several northwest-trending dikes of the Porphyry Hill granodiorite occur in and near the Rover area.

#### **7.4.2       North Mercur (Lion Hill-Silveropolis)**

The north part of the Mercur Property includes the many historical workings at Lion Hill and Silveropolis Hill about 1.2 km south of the town of Ophir (Figure 7-3). This area is referred to as the North Mercur area. North Mercur is notable for production of bonanza-grade silver in the 1870s when the Camp Floyd district was established. The silver grades at North Mercur were generally higher than those encountered elsewhere in the district, except perhaps in the Marion Hill area.

Mineralization at North Mercur was first found in the Silver Chert, which is a largely conformable jasperoid ledge occurring at the base of the Mercur Member of the Great Blue Limestone. Silver chlorides and native silver indicative of near surface enrichment occurred in oxidized and brecciated Silver Chert. Most of the production from the 1870s was from Lion Hill and was poorly documented. The size, grade, and geometry of the silver deposits are poorly known. Similarly, the potential for gold mineralization at North Mercur is uncertain and little exploration has been undertaken in this area since the early 1900s.

#### **7.4.3       West Mercur (West Dip)**

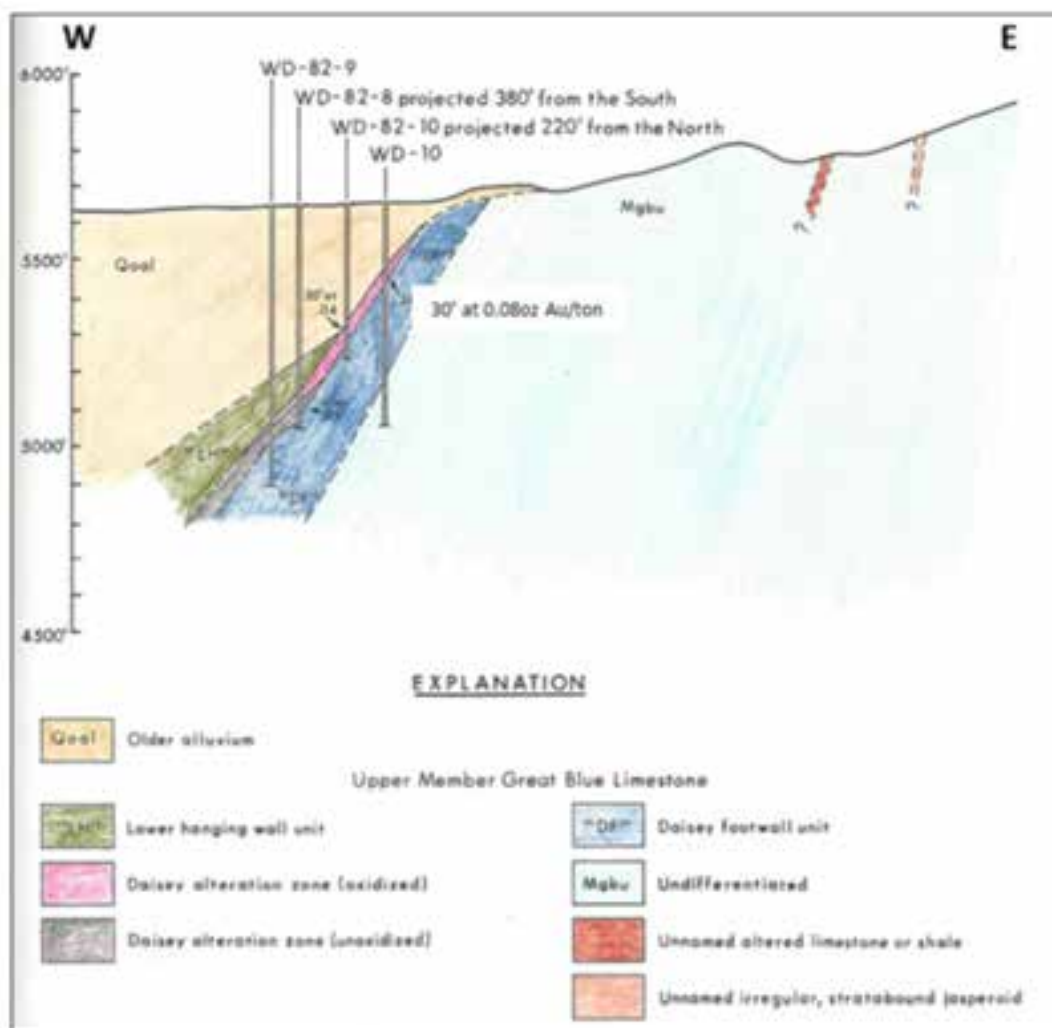
West Mercur refers to the extensive area located west of the Main Mercur area along the western flank of the Oquirrh Mountains and extending west beneath the pediment. In contrast to Main Mercur, known gold mineralization at West Mercur occurs in the Upper Limestone Member of the Great Blue Limestone near its contact with the Manning Canyon Shale in the west-dipping limb of the Ophir anticline (Gilbert, 1935; Bayer, 1982). The axis of the Ophir anticline lies about 2 mi east of West Mercur. In this position, mineralized units of the Great Blue at West Mercur lie stratigraphically about 1,500 ft higher than the productive horizons of the Mercur Member in the Main Mercur area.

Mineralization at West Mercur was described by Gilbert (1935) as occurring discontinuously over a 2.25 mi strike length and at the Daisy mine, to depths of at least 700 ft along the West Dip fault, which dips 45° to 60° to the west. The mineralization was noted to be of a pinch-and-swell character. As an indication of potential gold grades and thicknesses of gold mineralization at West

Mercur, two better drill intercepts to date are from hole WD-13-1, which intersected 20 ft grading 0.144 oz/ton Au, and WD-11, which intersected 15 ft grading 0.172 oz/ton Au (Bayer, 1982; Barron, 1982).

The gold mineralization at West Mercur occurs in highly carbonaceous strata spatially linked to a range front fault (West Dip fault) that is partly obscured by alluvial cover. A prominent fault scarp is present in several areas along the range front that separates footwall rocks of the Upper Great Blue Member of the Great Blue Limestone from Quaternary alluvial gravels. Despite the evidence for planar fault control for mineralization, some old mine maps show that narrow but persistent, steep shoots extended east-northeast, nearly orthogonal to the northwest-striking, west-dipping fault and bedding.

**Figure 7-11: Geologic Section of the Daisy Mine Area, West Mercur**



From Bayer, 1982. Modified by Ensign, 2022.

The West Dip fault separates alluvial gravels in the hanging wall from the gold-mineralized Daisy alteration zone in the footwall. The Daisy alteration zone is a strongly decalcified and carbonaceous zone in the Upper Great Blue Member of the Great Blue Limestone (Figure 7-11). The Daisy alteration zone commonly is brecciated along its footwall margin (Bayer, 1982), and overall, the zone of strong decalcification averages about 40 ft width, nearly all of which consists of soft, strongly sulfidic, and highly carbonaceous material. The sulfide-bearing rocks of the Daisy alteration zone contain finely disseminated pyrite and thus are like occurrences of unoxidized mineralized material at Main Mercur. There is a distinctive subunit of dense, fossiliferous limestone just a short distance into the footwall known as the Daisy footwall unit of the Upper Great Blue Member (Bayer, 1982; Barron, 1982).

#### **7.4.4 South Mercur**

The Sunshine and Overland mines were the principal historical underground mines of the South Mercur area, each of which produced about 10,000 ounces of gold during the periods 1895-1913 and 1936-1941 (Mako, 1999).

Gold mineralization occurs in the east limb of the Ophir anticline near its axial trace along a narrow, north-northwest-trending, 1.5 mi-long corridor that follows the Mercur Member in and near the bottom of Sunshine Canyon. This mineralization is considered to be a southern continuation of the deposits in the Main Mercur area, with similar styles of mineralization and host strata.

Three principal gold deposits have been described at South Mercur: Overland, Sunshine Flats (sometimes referred to as Red Cloud), and Sunshine (Priority Minerals and WCC, 1988). The deposits are *en echelon* along 3,200 ft of strike length of north-northeast trending Mercur Member beds. The deposits appear to occur where northwest-trending structural zones intersect the Mercur Member, resulting in the discontinuous deposits shown on Figure 6.5. Historical drilling shows the southeast-dipping deposits can be traced down dip from the surface to depths of more than 650 ft. The thickness of the mineralized zones is quite variable, ranging from a few feet to more than 180 ft. Overall, gold grades are similar to those at Main Mercur.

Mineralized material in the upper 150 ft at South Mercur is oxidized. Below 150 ft, rocks are partially to completely unoxidized and were considered by Priority Minerals (1988) to possess refractory characteristics. However, one of Ensign's deeper drill holes at South Mercur (SM-20-011) encountered refractory mineralization at the top of the 250-foot mineralized zone, followed by oxidized mineralization to depths of 450 ft (see Section 10.6). The oxidized rocks consist mostly of clay, quartz in jasperoid, and/or relatively minor iron oxides. Unoxidized material is variably altered to jasperoid or clay; clay-rich material is strongly sulfidic and carbonaceous with varying amounts of fine-grained pyrite and/or marcasite, orpiment, and realgar.

Mineralization at South Mercur is stratabound, mainly within the favorable units of the Mercur Member of the Great Blue Limestone. The more prospective units of the Mercur Member include the basal contact of the Mercur Member (i.e., Silver Chert) which is commonly altered to jasperoid, the Magazine Sandstone and the Mercur Beds. Despite the strong stratigraphic control, mineralization is confined to narrow zones bordering northwest-striking, high-angle faults. Gold mineralization locally extends into the overlying Long Trail Shale Member and the underlying Lower Great Blue Member where these units are cut by northwest-striking faults (Priority Minerals and WCC, 1988). The combined structural and stratigraphic controls on gold mineralization yield moderately plunging mineralized shoots that trend southeast, similar to but oblique to the dip of the sedimentary strata (Priority Minerals, 1988).

## **7.5      References**

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## **SECTION 8 CONTENTS**

8	DEPOSIT TYPE .....	8-2
8.1	Summary .....	8-2
8.2	References .....	8-4

## **SECTION 8 FIGURES**

Figure 8-1: Genetic and Alteration Models for Carlin-type Gold Deposits .....	8-2
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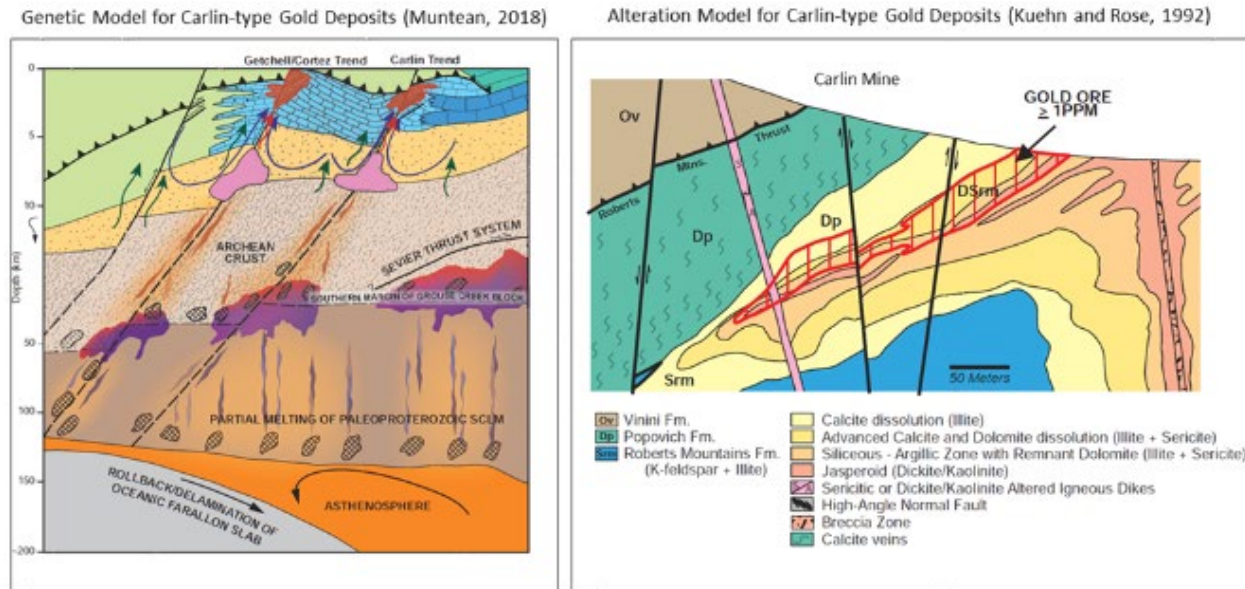
## 8 DEPOSIT TYPE

### 8.1 Summary

The information presented in this section has been modified from Lindholm et al. (2022) and Lomas et al. (2024). It was derived from multiple sources, as cited, and was originally written by Michael W. Ressel. Mr. Lindholm has reviewed this information and believes it is appropriate in the context of the Mercur Gold Project as the geology and mineralization are presently understood.

Based on an abundance of gold production between about 1890 and 1996, the Mercur mineralization is best described in the context of Carlin-type gold deposits (see Figure 8-1). Carlin-type deposits are disseminated, replacement-type gold deposits commonly contained in fine-grained silty limestone and calcareous siltstone. Where unoxidized by surface weathering, the mineralized carbonate rocks are commonly carbonaceous. The deposits are characterized by high gold, minor silver, and negligible base-metal contents; ratios of Au:Ag are typically three or greater. Other elements associated with Carlin-type gold mineralization include arsenic, antimony, mercury, and thallium.

**Figure 8-1: Genetic and Alteration Models for Carlin-type Gold Deposits**



Gold in Carlin-type deposits occurs in micron-size particles. In some cases, gold grains are encapsulated in jasperoid quartz or in cases of unoxidized strata, in arsenic-rich rims of pyrite or marcasite grains. Minerals associated with Carlin-type mineralization are stibnite, orpiment, realgar, and barite.

Carlin-type gold deposits are derived from hydrothermal fluids that were relatively low temperature ( $\leq 250^{\circ}\text{C}$ ) and are considered more distally derived from contemporaneous heat sources like larger intrusions, although older plutons are commonly present in major Carlin-type districts. Many Carlin-type deposits are, however, spatially and temporally associated with small, shallowly emplaced felsic dikes and other small intrusions, which are commonly porphyritic in texture. The dikes are commonly coeval with mineralization, and popular models favor origins of Carlin-type deposits from deep-seated, subduction-related magmatism.

The alteration associated with Carlin-type deposits is commonly subtle due to a general paucity of feldspathic rocks to cause extensive clay alteration. Nonetheless, argillic alteration of silty carbonates and felsic intrusions is common as are decalcification, silicification, and bleaching of host carbonate rocks (Figure 8-1). Decalcification, or removal of carbonate from calcareous rocks, is the most important alteration process and results in mass or volume loss. Rocks significantly affected by decalcification are generally soft, porous, of lower-density and weather recessively. Commonly, alteration accompanying Carlin-type gold mineralization renders the host beds soft, and the associated recessive weathering makes exploration difficult. If there are cleaner, less silty limestone beds intercalated with ore-bearing units, they will often remain visually unaltered and unmineralized, but it is often only these unmineralized rocks which will crop out. In addition, the slope wash or colluvium from these more resistant units will often completely cover the weathering ore beds. Other common signs of Carlin-type mineralization are late hydrothermal barite and calcite veins, and visually apparent zones of enrichment in organic carbon, all of which may be found proximal or distal to significant mineralized material.

Carlin-type deposits are typically associated with jasperoid, most often a very resistant, sucrosic-to chalcedonic-textured, dark-colored, very hard, siliceous replacement of carbonate rocks. The gold content of these jasperoids can be quite low or even below detection limits, although in other cases their grade is such that they constitute ore. Indeed, the highest-grade roots of some major Carlin-type deposits (e.g., Meikle, Deep Post), contain a large amount of jasperoid quartz. This association of jasperoid with Carlin-type mineralization is observed in most deposits, but no systematic spatial or temporal relation of jasperoid to ore grades is recognized. Because jasperoid bodies often develop in an envelope of argillic alteration, they are sometimes not all that prominent even though the jasperoid itself is very resistant to erosion. Still, jasperoid is known as one of the best visual indications of potential mineralization, even though there are many occurrences of jasperoid in the Great Basin that lack nearby gold mineralization.

Carlin-type gold deposits are named for the Carlin mine in Nevada, which was put into production by Newmont Mining Corporation in 1965. Carlin was considered unusual at the time due to its lack of quartz veins and the extremely small particle size of its gold. Despite the notoriety of the

Carlin mine for micron-sized gold, the first Carlin-type gold ores to be mined, starting around 1890, were actually from the Mercur area of the Camp Floyd district.

The occurrence of high concentrations of silver in the Silver Chert at Lion Hill and Marion Hill, although in part of supergene origin, coupled with modest base metals, is atypical of most Carlin-type deposits in the Great Basin. The high silver and modest base metal contents of some Mercur deposits suggest relatively higher fluid temperatures like those associated with proximal intrusion-centered sources. Yet, mineral occurrences in these areas of the Mercur Property are also described as containing very fine-grained quartz (i.e., jasperoid) and gold mineralization consistent with relatively lower-temperature Carlin-type deposits. One possibility is that the higher silver and base metal expression of the Silver Chert mineralization reflects a higher-temperature, early phase of Carlin-type mineralization. Similar examples from Nevada include deposits such as Lone Tree and Cove sedimentary rock-hosted deposits that have been classified as distal-disseminated Au-Ag deposits (Cox, 1990) because of these characteristics and their closer spatial relationship to Eocene intrusions (e.g., Sillitoe and Bonham, 1990; Johnston and Ressel, 2004). A more recent study by Sillitoe (2020) emphasizes the expected variation of Carlin-type replacement deposits from those that are relatively more proximal versus those that are more distal to intrusion sources.

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## **SECTION 9 CONTENTS**

9	EXPLORATION .....	9-2
9.1	Geological Database Development .....	9-2
9.2	Ensign Soil Geochemical Sampling .....	9-3
9.3	Ensign Rock Sampling .....	9-5
9.4	Ensign Geologic Mapping .....	9-7
9.5	References .....	9-7

## **SECTION 9 FIGURES**

Figure 9-1:	Gold in Soil Samples, North Mercur Area .....	9-4
Figure 9-2:	Soil Sample Locations, Violet Ray Prospect, South Mercur Area .....	9-5
Figure 9-3:	Rock Sample Locations, Mercur Gold Project .....	9-6

## **9 EXPLORATION**

The information presented in this section was modified from Lindholm et al. (2022) and Lomas et al. (2024) and is a summary of exploration work carried out by Revival and Ensign, which is now a wholly owned subsidiary of Revival. Mr. Lindholm has reviewed this information and believes it accurately represents relevant work completed by Revival and Ensign at the Mercur Project. Drilling conducted by Ensign is described in Section 10.6.

Ensign began acquiring properties in the Mercur area in August 2020. Since then, Ensign and Revival have been compiling historical data for the property. In 2020, Ensign completed a soil geochemical survey at North Mercur, conducted RC drilling at South and West Mercur, and initiated geologic mapping in all areas. In 2021, Ensign conducted prospecting, geologic mapping, rock sampling and RC drilling, collected 456 soil samples at South Mercur, and continued to compile historical data. In 2022, Ensign conducted RC and core drilling.

### **9.1 Geological Database Development**

Revival's geological database contains data for 3,077 of the approximately 3,150 drill holes in the Mercur Project area. Much of this data was originally provided to Ensign by Barrick and Priority in the form of Excel spreadsheets. Of the total number of holes in the database, paper files containing geological logs and/or assay data for approximately 2,100 holes have been located (these files were scanned by Revival in 2024). Data for the remaining holes were in the original spreadsheets obtained from Barrick and Priority. All drill-hole data has been organized and is managed in the MX Deposit drill-hole database software.

Most of the historical drill-hole data (approximately 2,400 holes) pertains to the Main Mercur area. Of this total, approximately 1,600 holes fall within the footprint of the final Barrick open pits. An additional 580 holes were drilled in the South Mercur area by previous operators.

During the fall and winter of 2022 to 2023, Ensign began compiling the extensive gold-recovery data, including carbon-in-leach ("CIL"), atomic absorption ("AA"), and direct cyanide amenability ("DCN") data, from paper files obtained by Ensign from Barrick. Much of this data, especially the CIL and AA results, were entered manually by Ensign staff into spreadsheets that were subsequently checked for accuracy. The DCN data were largely found in historical Mercur Mine metallurgy reports (Hazen, 1981, 1982a, 1982b and 1982c). Most of the DCN results were in computer printouts and could be scanned and digitized by optical scanning software. All the data were incorporated into the digital database.

Ensign selected a small number of assay records (one above-detection result per drill hole) from Chemical & Mineralogical Services of Salt Lake City, Utah for checking. Assays on paper

certificates were compared to values in the database. The discrepancy rate between the two was less than 1%. Errors were not corrected.

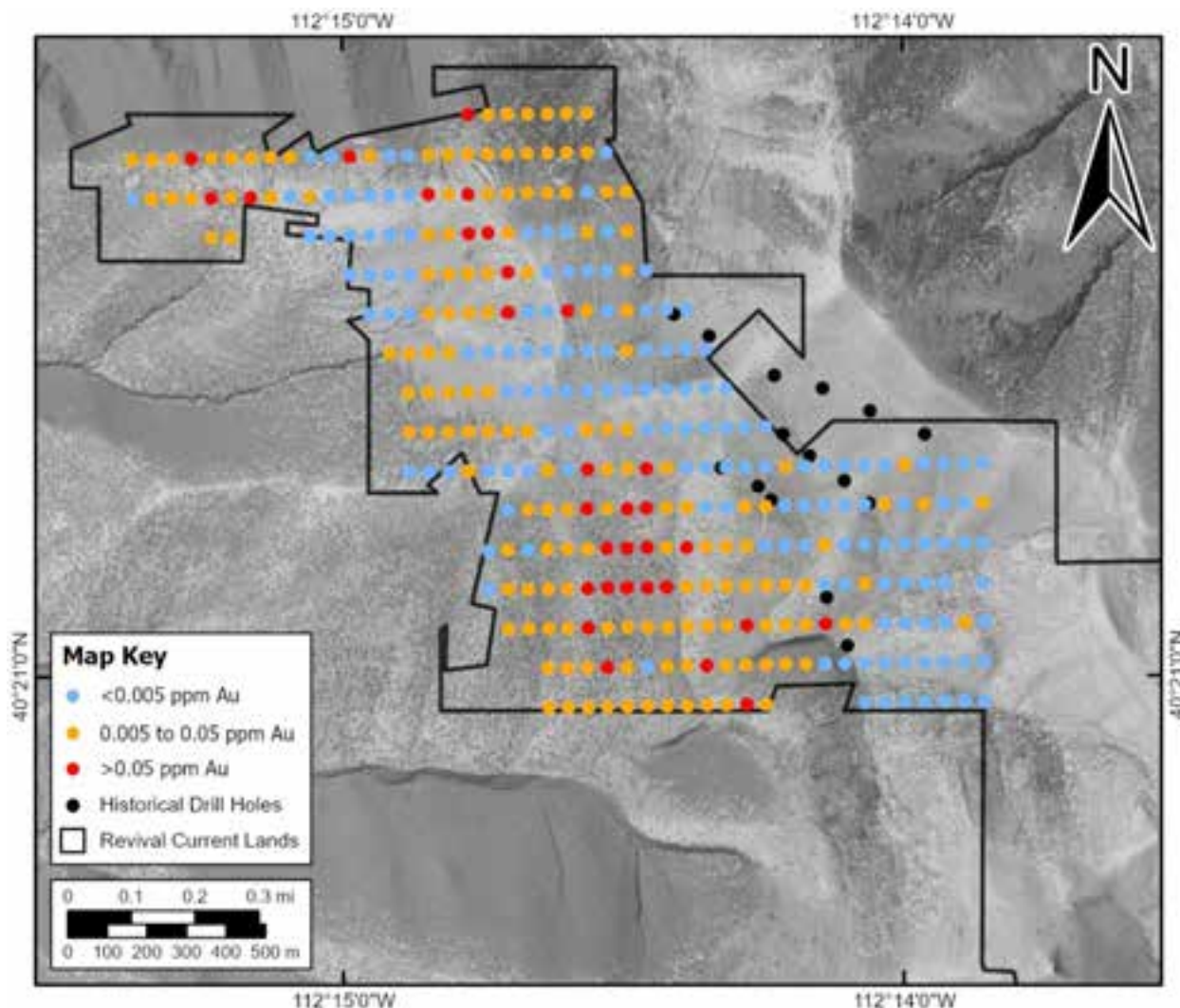
In 2024, Revival scanned and organized drill-hole files available from the Barrick paper files. This included information for approximately 2,100 drill holes along with numerous reports, maps and cross-sections covering all disciplines. This work led to the recovery of additional DCN data from South Mercur and the review of approximately 980 logs to recover data on logged carbon to aid in the development of a metallurgical model. This data is now in Revival's Mercur database.

## **9.2 Ensign Soil Geochemical Sampling**

In October of 2020, Ensign commissioned North American Exploration Services, Inc. ("North American") of Layton, Utah to carry out a soil sampling program in the North Mercur portion of the property (DeMars, 2020). Soil samples were collected from 380 sites. The samples were spaced at 165 ft intervals along east-west lines spaced 330 ft apart. Samples were collected in cloth bags of 5.5 in by 8 in in size. Target depth of the sampling was 10 in, although this depth was not always reached in rockier terrain. No screening was done in the field, but larger pebbles were removed from the samples by hand. Most samples weighed between 1.5 and 2 lbs.

A plot of the results for gold is shown on Figure 9-1 indicates a number of anomalous gold zones in soils at North Mercur. Revival has not conducted follow-up reconnaissance or geologic mapping to ascertain the nature of these anomalous areas. It is apparent that historical drilling did not test the area of anomalous gold in soils.

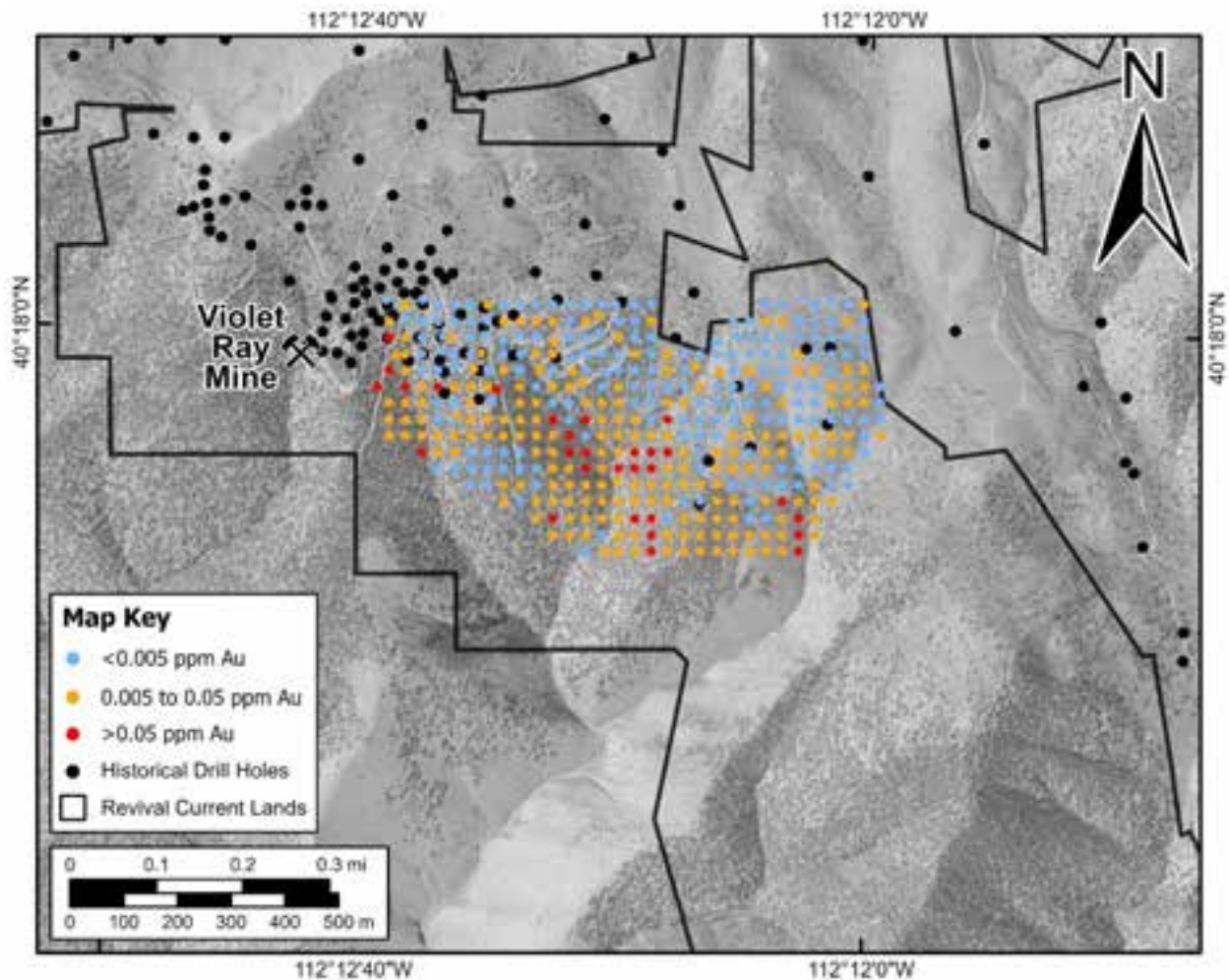
Figure 9-1: Gold in Soil Samples, North Mercur Area



From Ensign, 2022. Note that the highest gold value is 0.514 ppm.

In October 2021, McKay Mineral Exploration, LLC of South Ogden, Utah collected 456 soil samples on behalf of Ensign at the Violet Ray prospect in the north part of South Mercur (Figure 9-2). The samples were spaced at 100 ft intervals along east-west lines spaced 100 ft apart. Samples were collected in cloth bags of 5.5 in by 8 in in size. The average depth of the sampling was 10 in. The batch of samples included four field duplicates, three blanks and three CRMs that were inserted at 50-sample intervals in the sample stream. The results show anomalous gold values that trend to the south-southeast from the area of the Violet Ray mine (Figure 9-2).

Figure 9-2: Soil Sample Locations, Violet Ray Prospect, South Mercur Area

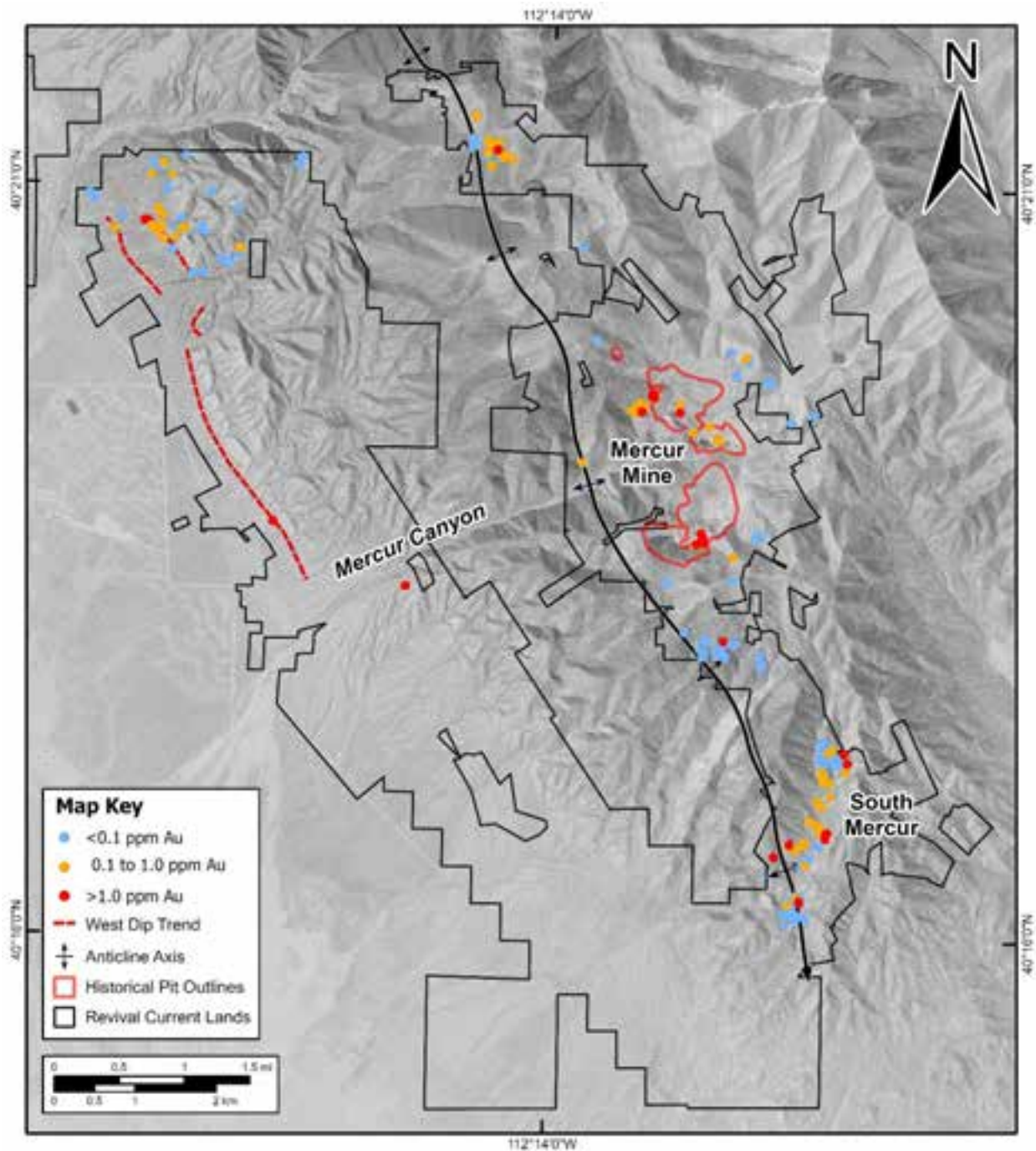


From Ensign, 2025.

### 9.3 Ensign Rock Sampling

Ensign's staff and consulting geologists collected 400 rock samples for geochemical analyses during the course of prospecting and mapping various parts of the Mercur Property. The locations of the rock samples are shown on Figure 9-3. The sample sites are color-coded for gold grade.

Figure 9-3: Rock Sample Locations, Mercur Gold Project



From Ensign, 2024.

## 9.4 Ensign Geologic Mapping

In 2021, Mr. Peter Chapman, a consulting geologist, conducted geologic mapping on behalf of Ensign with a focus on alteration and structural zones in the northern part of West Mercur, north of Silverado Canyon (Chapman, 2021a) and in the area of the open-pit mines of Main Mercur (Chapman, 2021b). Detailed stratigraphic, alteration and structural geologic mapping was conducted at South Mercur on behalf of Ensign by Mr. Calvin Mako (Mako, 2022). In 2022, Mr. Chris Clinkscales completed geologic mapping in the Silverado Canyon area of West Mercur and the Golden Gate and Sacramento pit areas of Main Mercur (Clinkscales, 2022). This mapping is being used to guide further exploration.

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## SECTION 10 CONTENTS

10	DRILLING .....	10-3
10.1	Summary .....	10-3
10.2	Historical Drilling –Main Mercur Area, 1969 to 1998.....	10-6
10.2.1	Newmont 1968 – 1969 .....	10-6
10.2.2	Getty 1973 – 1985.....	10-6
10.2.3	Homestake – 1981 .....	10-6
10.2.4	Barrick 1985 – 1997 .....	10-7
10.2.5	Summary of Assay Intervals in Historical Main Mercur Drilling.....	10-7
10.3	Historical Drilling – South Mercur Area, 1968 to 2013 .....	10-8
10.3.1	Newmont 1968 – 1969 (Violet Ray Prospect).....	10-8
10.3.2	Getty 1973 – 1985 (Violet Ray Prospect) .....	10-8
10.3.3	Homestake 1980 – 1984 .....	10-8
10.3.4	Touchstone 1984.....	10-8
10.3.5	Priority – WCC 1986 – 1990.....	10-8
10.3.6	Rochester – Kennecott 1991 .....	10-10
10.3.7	Barrick 1992 – 1996 (Violet Ray Prospect).....	10-10
10.3.8	Barrick 1996 .....	10-10
10.3.9	Kennecott 1997 .....	10-10
10.3.10	Priority 1997 – 2013 .....	10-10
10.4	Historical Drilling – West Mercur Area, 1975 to 1999 .....	10-11
10.4.1	Getty 1975 – 1982.....	10-11
10.4.2	Barrick 1986 .....	10-11
10.4.3	Barrick 1988 .....	10-11
10.4.4	Kennecott 1990 – 1992 (Hidden Treasure Project) .....	10-12
10.4.5	Rochester – Kennecott 1991 .....	10-12
10.4.6	Kennecott 1995 (Southwest Pediment Project) .....	10-12
10.4.7	Barrick 1996 .....	10-12
10.4.8	BHP 1996 .....	10-12
10.4.9	Barrick 1999 .....	10-13
10.5	Historical Drilling – North Mercur, 1991 and 1994 .....	10-13
10.5.1	Centurion 1991 .....	10-13
10.5.2	Kennecott 1994 .....	10-13
10.6	Ensign Drilling 2020 to 2022.....	10-13
10.6.1	South Mercur Ensign Drilling 2020 to 2021 .....	10-19
10.6.2	West Mercur Ensign Drilling 2020 to 2021 .....	10-21

10.6.3	Main Mercur Ensign Drilling 2021 to 2022.....	10-22
10.7	Drill-Hole Collar Surveys.....	10-25
10.8	Down-Hole Surveys.....	10-27
10.8.1	Historical Drilling.....	10-27
10.8.2	Ensign Drilling .....	10-27
10.9	Sample Quality and Down-Hole Contamination.....	10-28
10.10	Summary Statement .....	10-28
10.11	References .....	10-29

## SECTION 10 TABLES

Table 10-1:	Mercur Gold Project Drilling Summary.....	10-3
Table 10-2:	Ensign 2020 to 2022 Drilling Summary.....	10-13
Table 10-3:	Ensign 2020 to 2022 RC Drill-Hole Assay Interval Summaries.....	10-14
Table 10-4:	Ensign 2022 Drill-Core Assay Interval Summaries .....	10-18
Table 10-5:	Ensign Main Mercur Gold Intercepts in Non-Traditional Host Rocks .....	10-24

## SECTION 10 FIGURES

Figure 10-1:	Map of Mercur Area Historical and Ensign Drill Holes through 2022 .....	10-5
Figure 10-2:	Select Historical Drill-Hole Assay Intervals from the Mercur Mine Area .....	10-7
Figure 10-3:	Priority-WCC South Mercur Drill Cross Section 1 .....	10-9
Figure 10-4:	Priority-WCC South Mercur Drill Cross Section 2 .....	10-9
Figure 10-5:	Ensign 2020 South Mercur Drill Holes Relative to Historical Drilling .....	10-20
Figure 10-6:	West Mercur Area 2020 to 2021 Drill Hole Locations .....	10-22
Figure 10-7:	Main Mercur Area 2021 to 2022 Drill Hole Locations .....	10-23
Figure 10-8:	Mercur Hill Interpretive Cross Section Looking North .....	10-25

## 10 DRILLING

The information presented in this section of the report was modified from Lindholm et al. (2022) and Lomas et al. (2024). This information is derived from multiple sources as cited. Mr. Lindholm has reviewed this information and believes this summary accurately represents drilling done at the Mercur Project.

### 10.1 Summary

Drilling within the Mercur property is summarized in Table 10-1 and collar locations are shown on Figure 10-1. It is a summary of the drilling carried out by historical operators prior to 2020 and Ensign during 2020 through 2022. Revival has done no drilling at the Mercur Project as of the effective date of this report.

**Table 10-1: Mercur Gold Project Drilling Summary**

Year	Company	# Holes	Feet
<b>Main Mercur</b>			
1969	Newmont	33	11,545
1981	Homestake	4	1,840
1973 – 1985	Getty	888	223,562
1985	Getty – Barrick <sup>1</sup>	770	210,843
1985 – 1997	Barrick	626	239,546
2021 – 2022	Ensign	97	52,579
<b>Main Mercur Totals</b>		<b>2,418</b>	<b>739,915</b>
<b>South Mercur</b>			
1969	Newmont ( <i>Violet Ray area</i> )	19	5,730
1973 – 1985	Getty ( <i>Violet Ray area</i> )	14	3,530
1980 – 1984	Homestake	55	19,590
1984	Touchstone	35	13,850
1986 – 1990	Priority - WCC	307	58,334
1986 – 1992	Barrick ( <i>Violet Ray area</i> )	84	28,800
1991	Rochester – Kennecott	9	6,035
1996	Barrick	22	12,940
1997	Kennecott	9	8,890
2013	Priority	11	3,081
2020 – 2021	Ensign	13	5,646
<b>South Mercur Totals</b>		<b>578</b>	<b>166,426</b>

Year	Company	# Holes	Feet
<b>West Mercur</b>			
1975 – 1982	Getty	41	13,433
1982	BHP	7	1,902
1986	Barrick	6	5,162
1988	Barrick	10	5,250
1990 – 1992	Kennecott ( <i>HT project</i> )	10	5,000
1991	Rochester – Kennecott	14	5,460
1995	Kennecott ( <i>SWP project</i> )	16	?
1996	Barrick	27	18,395
1999	Barrick	3	3,900
2020 – 2021	Ensign	4	1,626
<b>West Mercur Totals</b>		<b>138</b>	<b>60,128</b>
<b>North Mercur</b>			
1991	Centurion	13	?
1994	Kennecott	2	?
<b>North Mercur Totals</b>		<b>15</b>	<b>-</b>
<b>Total Project Area Drilling</b>		<b>3,149</b>	<b>966,469</b>
<sup>1</sup> No company and/or date specified in drill-hole files.			

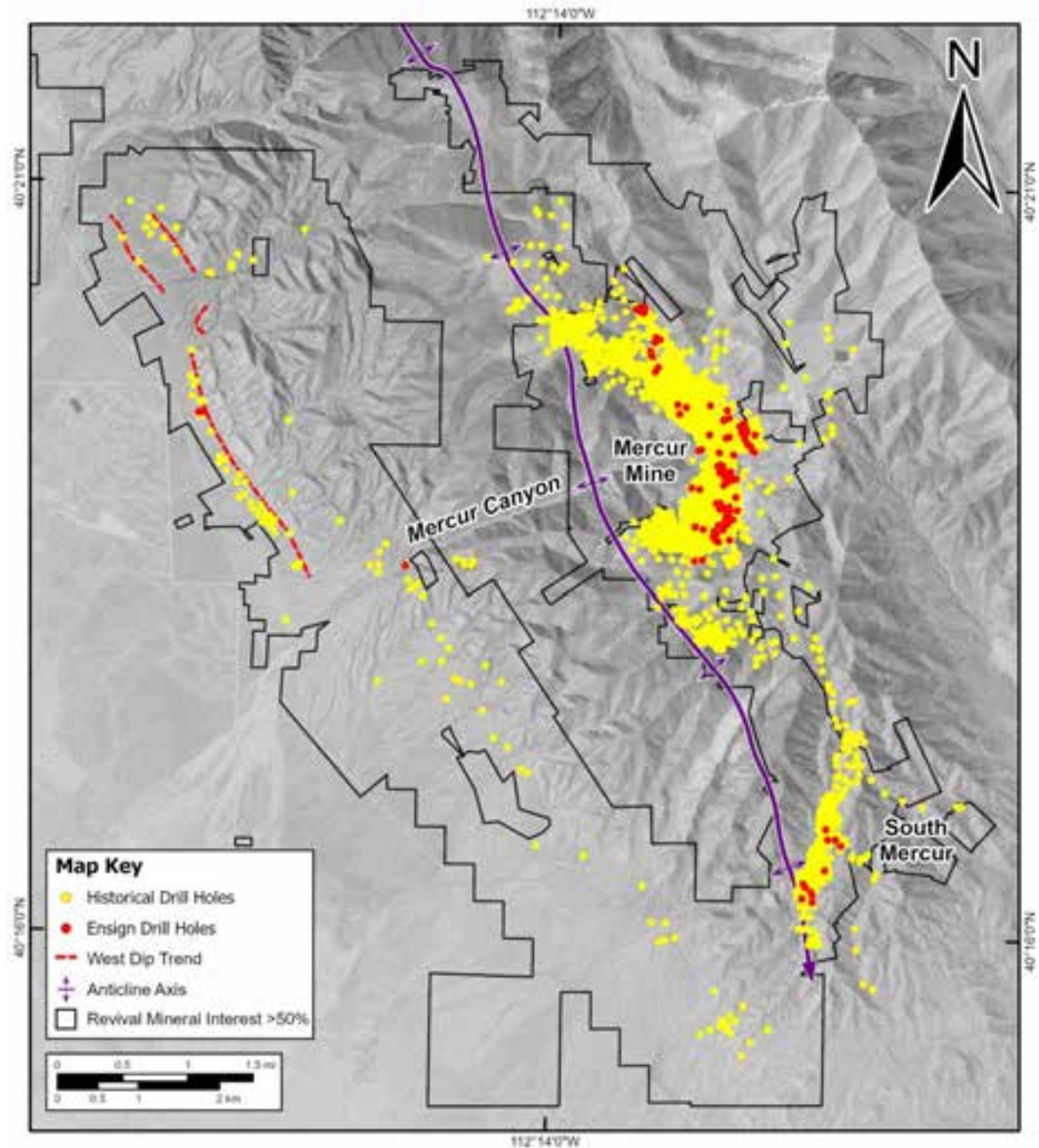
Records of historical drilling are incomplete, but a substantial amount of data from Barrick's files were scanned by Revival in 2024 and incorporated into the database. Table 10-1 reflects the information captured in 2024 by Revival from the Barrick files.

Revival has not yet, and may not, be able to fully parse and use all the data in the paper and scanned files. Revival has prioritized the compilation of CIL and DCN assays, which are useful for evaluating gold recoveries from the historical drill samples and extracting information concerning the presence of organic carbon as logged by geologists. The known limitations of the data sets are described in Section 10.2. Revival has not yet conducted an exhaustive evaluation of all the available data. Much of the drilling information pertains to portions of gold deposits that have already been mined. The available data not yet incorporated into the project drilling and exploration database is noted here to illustrate the amount of information available to guide future exploration.

Mineralization at Main and South Mercur generally dips 10° to 20° to the east and southeast, with local areas that are steeper or shallower by a few tens of degrees. Since most drilling in the Mercur project is vertical, the true dips of the mineralized intercepts discussed in the following sections are about 5% to 10% shorter than the drill-interval lengths. At West Mercur, mineralization associated with bedding dipping shallowly to the west would have the same relationship between true and apparent dips. However, for mineralization associated with more

steeply dipping ( $45^{\circ}$  to  $60^{\circ}$ ) structures, such as in the Daisy Mine area, the true dips are about 40% to 50% shorter than the drill-interval lengths.

**Figure 10-1: Map of Mercur Area Historical and Ensign Drill Holes through 2022**



## **10.2 Historical Drilling –Main Mercur Area, 1969 to 1998**

### **10.2.1 Newmont 1968 – 1969**

In late 1968, Newmont Exploration Ltd. (“Newmont”) acquired a lease of lands in the Main Mercur area which covered the Marion Hill, Sacramento, and other areas. They held this land until late 1969. The Newmont exploration program included trenching and both rotary and core drilling (Table 10-1). Drilling east and south of the Sacramento area revealed a 600 ft by 3,000 ft zone which had anomalous gold. Klatt (1980) reported the highest-grade zones contained 0.06 to 0.17 oz/ton Au over thicknesses ranging from 5 to 55 ft at depths of 80 to 350 ft. The drill hole locations, depths and assays are included in the Barrick drill hole database, but, to date, logs and assay data have been encountered for only about two-thirds of the Newmont holes in the Main Mercur area. No information has been found on the drilling contractors, rigs, methods and procedures used by Newmont, except that samples from the 1969 Newmont rotary holes were collected at 5-ft intervals.

### **10.2.2 Getty 1973 – 1985**

Getty began exploring the Main Mercur area in 1973, began mining in March 1983 and sold the mine to Barrick in June 1985. More than 800 drill holes attributed to Getty appear in the Revival database. The total number of holes drilled by Getty is difficult to determine because more than 700 holes lack sufficient information to allow for the identification of the year drilling took place or the company responsible for drilling the holes.

Getty used conventional rotary drilling with a down-hole hammer for the first 26 holes in 1973, and RC methods for later drilling (Klatt, 1980d). Revival has prioritized the recovery of data from the paper files which will likely prove useful for continued exploration in the Main Mercur area, especially cyanide leach data. After reviewing scanned drillhole files, Revival determined that O’Keefe Drilling was the drilling contractor for Getty in 1980 and 1981. Beyond that Revival has not been able to clarify the details of the Getty drilling.

### **10.2.3 Homestake – 1981**

In 1981, Homestake Mining Company (“Homestake”) drilled four RC holes in the Main Mercur area. Three of the holes were drilled in the Reservation Canyon area (the location of the current tailings storage facility) and one hole was drilled in the Mercur Hill area (Dexter claim). Logs and assay results are available for these holes. O’Keefe Drilling was the drilling contractor but additional information on rigs, methods and procedures has not been found.

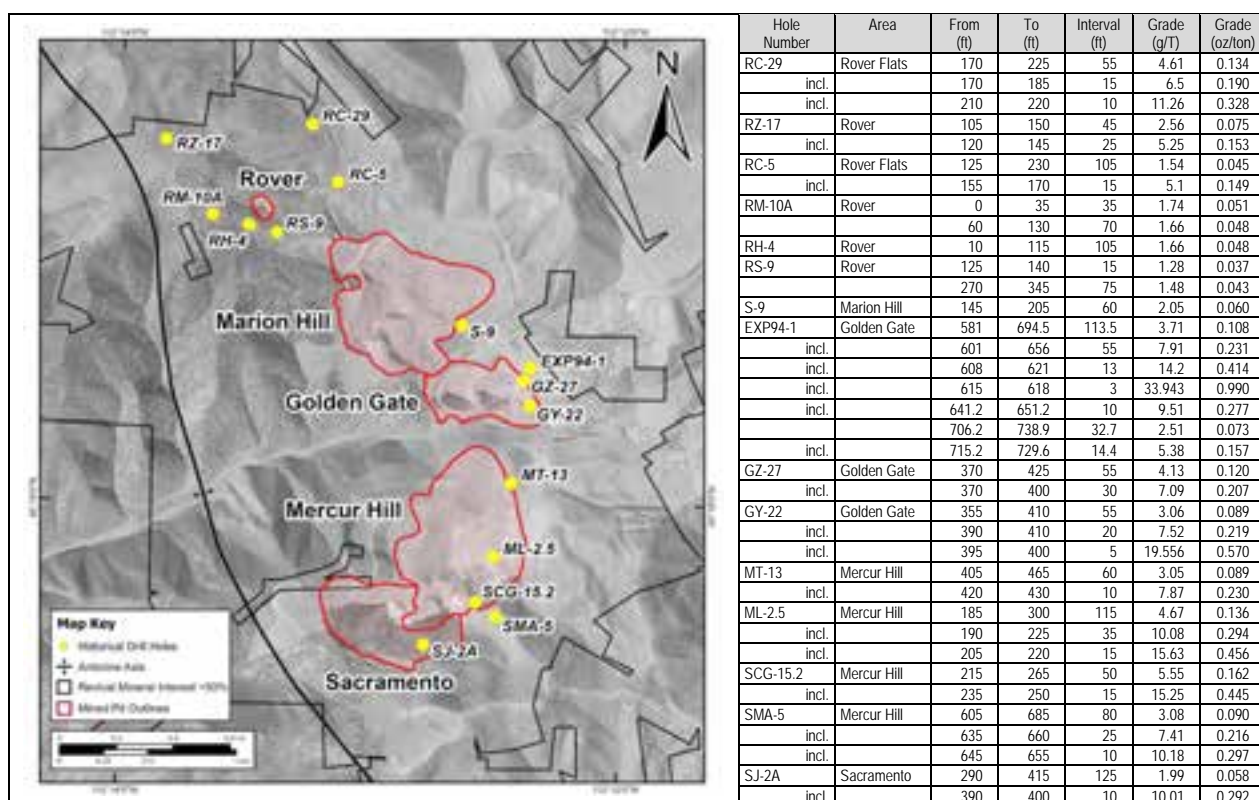
#### 10.2.4 Barrick 1985 – 1997

Based on the data provided from scanned drill-hole files, Barrick drilled more than 600 holes in the Main Mercur area. As with the Getty holes, the precise number of holes drilled by Barrick is difficult to determine because more than 700 holes lack sufficient information to allow for the identification of the year drilling took place or company responsible for drilling the holes. Most of Barrick's programs involved vertical RC drilling, but some core drilling was completed, along with some angled holes. Revival has encountered paper files for over 500 Barrick holes, of which more than 350 include drill logs and assay results. Some drill-hole files also contain driller's shift reports. It is known that RC drilling in 1995 and 1996 was conducted by Lang Exploratory Drilling but no other information concerning other drilling contractors, rigs, methods and procedures has been found.

#### 10.2.5 Summary of Assay Intervals in Historical Main Mercur Drilling

Based on the historical data compiled by Ensign and Revival as of the effective date of this report, a summary of historical drill results and selected intervals from unmined areas as of 1997 are presented on Figure 10-2.

**Figure 10-2: Select Historical Drill-Hole Assay Intervals from the Mercur Mine Area**



Revival, 2025.

### **10.3 Historical Drilling – South Mercur Area, 1968 to 2013**

#### **10.3.1 Newmont 1968 – 1969 (Violet Ray Prospect)**

Concurrently with its exploration in the Main Mercur area, Newmont also conducted drilling south of the current Sacramento pit area at what is known as the Violet Ray prospect in the northern part the South Mercur area. The number of holes and footage drilled are provided in Table 10-1. The collar locations, depths and assays were included in the original Barrick drill-hole database. Drill-hole files include assays and a few geological logs, but Revival has not yet encountered information on the drilling contractors, rigs, methods and procedures used.

#### **10.3.2 Getty 1973 – 1985 (Violet Ray Prospect)**

Along with its exploration at Main Mercur, Getty drilled several vertical RC holes at the Violet Ray prospect (Figure 10-1). Paper files for most of the Getty drilling have been located and scanned, but no information is available on the drilling contractors, rigs, methods and procedures used.

#### **10.3.3 Homestake 1980 – 1984**

Homestake initiated modern exploration at South Mercur in 1980 and drilled over 50 vertical rotary holes by 1984 (Table 10-1). Revival has copies of the drill logs with assays written or typed on the logs, but assay certificates, and other information related to the drilling details are not available. From notes on the logs, it appears that Hunter Labs was usually used for gold assays for these holes. No information is available on the drilling contractors, rigs, methods and procedures used.

#### **10.3.4 Touchstone 1984**

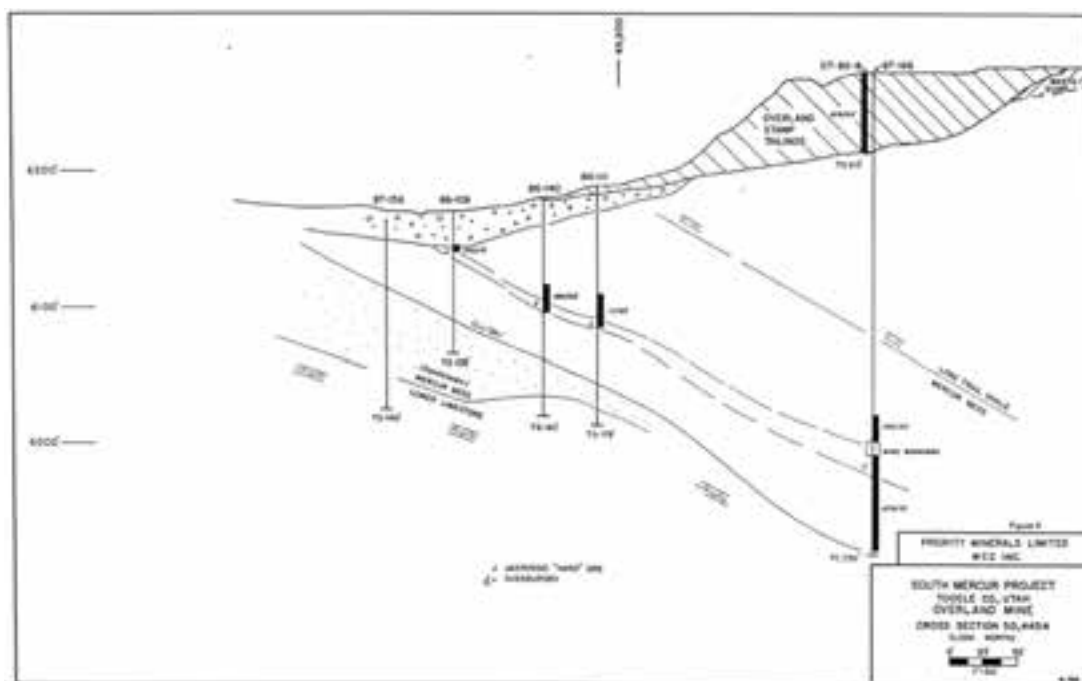
In 1984, Touchstone optioned the South Mercur project from Homestake and drilled 35 vertical RC drill holes (Table 10-1). Revival has copies of the handwritten drill logs and assays. The logs contain the logo for Cornucopia Resources Ltd., a company that was related to Touchstone, but no other details pertaining to drilling or assaying are available.

#### **10.3.5 Priority – WCC 1986 – 1990**

Priority and WCC, Inc. optioned the South Mercur project from Homestake in 1986. The venture drilled nearly 300 vertical RC holes and approximately 10 core holes (Table 10-1). Revival has copies of the handwritten drill logs and assay certificates, but no other details pertaining to drilling or assaying are available. Some of the results of the 1986 and 1987 drilling by Priority-WCC are shown in the cross sections on Figure 10-3 and Figure 10-4.

[illegible]

**Figure 10-4: Priority-WCC South Mercur Drill Cross Section 2**



Page 10-9

#### **10.3.6 Rochester – Kennecott 1991**

In 1990 Priority and WCC acquired the South Mercur project from Homestake and shortly thereafter assigned the project to Rochester Minerals (U.S.A.) Inc. (“Rochester”). Rochester then entered into an agreement with Kennecott, who drilled approximately 14 vertical RC holes in Sunshine Canyon. Poor-quality photocopies of logs are available for the Kennecott holes and a brief report summarizes Kennecott’s efforts (Garbrecht, 1991). The drill-hole spreadsheets obtained from Priority and Barrick have summaries of the geology and assays of these holes, but no additional information regarding the drilling or assay details is available.

#### **10.3.7 Barrick 1992 – 1996 (Violet Ray Prospect)**

Barrick explored the Violet Ray prospect in the northern part of the South Mercur area with more than 80 vertical RC holes. Revival has not yet encountered the original data or the details of the drilling or assaying for these holes. No information is available on the drilling contractors, rigs, methods and procedures used.

#### **10.3.8 Barrick 1996**

In 1996, Barrick leased the Priority-WCC property at South Mercur, and those of other adjacent patented claim owners, and drilled approximately 20 vertical RC holes. Data for these holes was scanned from Barrick’s paper files, and data was also included in the drill-hole spreadsheet received from Barrick. The drilling contractor was Lang Drilling but there is no information concerning rigs, methods and procedures used.

#### **10.3.9 Kennecott 1997**

Kennecott leased the Priority-WCC property at South Mercur and is known to have drilled approximately ten holes in Sunshine Canyon. Poor-quality photocopies of logs are available for these holes. Drilling data are included in spreadsheets provided by Priority, but no assays or other details about the drilling are available.

#### **10.3.10 Priority 1997 – 2013**

In 1997 Priority acquired WCC’s interest in the South Mercur project, but no further drilling was done until 2013, when Priority drilled 11 HQ-diameter core holes. Drilling was done by National Exploration, Wells and Pumps of Elko, Nevada, using an Atlas Copco CS14C crawler mounted core rig. Samples were shipped to the Elko ALS prep facility by Old Dominion Freight Line. The logs and assay certificates for these holes are included in the Priority database. Some of the core was retained in a Utah storage facility and transported to Revival’s core storage facility at the Mercur mine. About half of the core was relogged by Ensign geologists and this core remains at

the Mercur site. No further information is presently available as of the effective date of this report on the methods and procedures used for this drilling.

## **10.4 Historical Drilling – West Mercur Area, 1975 to 1999**

### **10.4.1 Getty 1975 – 1982**

Getty drilled four RC holes in the pediment west of the mouth of Mercur Canyon area in 1975 and 1976. Bedrock was encountered between 250 ft and 310 ft in two of the four holes and both of those holes had detectable gold in bedrock. Paper drill-hole files containing geological logs, assay certificates and driller's reports for all four holes have been found. Drilling was done by Drilling Services Inc. Driller's reports indicate that drilling was done with a 5 ¼-inch hammer bit and mud was used in at least two of the holes. There is no mention of water in any of the holes.

Getty drilled in the West Dip (West Mercur) area in 1981 and 1982 (Barron, 1982; Bayer, 1982). Approximately 36 vertical RC holes, seven of which had core tails (core holes drilled from the bottom of an RC hole) were drilled at that time. RVX later purchased the West Dip project files from a private owner of the Getty files, which include a nearly complete set of handwritten drill logs and most of the original assay certificates. In 1981 the RC drilling was done by O'Keefe Drilling of Butte, Montana. All holes were dry to the total depth. The 5-ft samples were taken starting in bedrock. The core tails were done by an unnamed core drilling contractor. No information is available as to RC drill technique (hammer or tri-cone), bit diameter, or sampling procedures on the rig. Details are also lacking from the 1982 RC and all core campaigns.

### **10.4.2 Barrick 1986**

Barrick drilled six vertical RC holes testing stratigraphic targets near the mouth of Mercur Canyon in 1986. One hole was deepened with core drilling. Copies of Barrick's handwritten drill logs and assays were provided by a lessor of the property. Revival has not yet encountered the original data or the details of the drilling or assaying. No information is available on the drilling contractors, rigs, methods and procedures used.

### **10.4.3 Barrick 1988**

Barrick drilled 10 vertical RC holes in 1988 at West Mercur. Copies of Barrick's handwritten drill logs and assays for some of the holes were provided by a lessor of the property. Revival has not yet encountered the original data or the details of the drilling or assaying, and no information is available on the drilling contractors, rigs, methods and procedures used.

#### **10.4.4 Kennecott 1990 – 1992 (Hidden Treasure Project)**

Kennecott drilled approximately 14 holes at its Hidden Treasure project in the north part of the West Mercur area. Copies of Kennecott's handwritten drill logs and assays for four vertical RC holes were provided by a lessor of the property. While the locations of the remaining holes are known from permitting documents, no other details are known about the drilling or assaying.

#### **10.4.5 Rochester – Kennecott 1991**

In 1990 Priority and WCC acquired the South Mercur project from Homestake and shortly thereafter assigned the project to Rochester Minerals (U.S.A.) Inc. ("Rochester"). Rochester entered into an agreement with Kennecott, who drilled approximately 14 vertical RC holes in 1991 in the in the pediment in the southern part of the West Mercur area (the Nose target). Poor-quality photocopies of logs are available for the Kennecott holes, and a brief report summarizes Kennecott's efforts (Garbrecht, 1991). The drill-hole spreadsheets obtained from Priority and Barrick both have summaries of the geology and assays of these holes, but no additional information regarding the drilling or assay details is available.

#### **10.4.6 Kennecott 1995 (Southwest Pediment Project)**

Kennecott is believed to have drilled 10 holes at its Southwest Pediment project in the southern half of the West Mercur area. Some of the locations of these drill sites are known, but no additional information regarding the geology, drilling or assay details is available.

#### **10.4.7 Barrick 1996**

Barrick drilled approximately 27 vertical RC holes in the West Mercur area in 1996. Revival scanned paper files for these holes, which include geological logs, assay certificates from RMGC and driller's shift reports from Lang Drilling. The spreadsheets obtained by Ensign from Barrick include summaries of the geology and assays for these holes. No information is available on the drilling rigs, methods and procedures used.

#### **10.4.8 BHP 1996**

BHP drilled six vertical RC holes, one of which had a core tail, and one core hole in the West Mercur area in 1996. This information is based on drill logs and conflicts slightly from Zimmerman (1996), who does not mention core drilling. The Zimmerman report mentions that bedrock is deeper than anticipated and noted two interesting intercepts of gold mineralization, 175 ft averaging 0.021 oz/ton Au and 195 ft averaging 0.10 oz/ton Au. It is not known how much, if any, of this mineralization occurs in overburden. Drill logs do not contain the locations of the holes or additional information regarding the drilling or assay details.

#### **10.4.9 Barrick 1999**

In 1999, Barrick conducted its last exploration drilling program with three RC holes at the Tonya prospect, which is located just south of the mouth of Silverado Canyon at West Mercur. This drill program was documented by Tapper (2000) but did not address the drilling details. No paper or scanned drill-hole files, or other information is available on the drilling contractors, rigs, methods and procedures used.

### **10.5 Historical Drilling – North Mercur, 1991 and 1994**

#### **10.5.1 Centurion 1991**

Centurion permitted and reclaimed 13 drill sites in the North Mercur area based on public permit documents. The locations of the drill sites are known, but there are no other details regarding drilling methods or assay details.

#### **10.5.2 Kennecott 1994**

Kennecott permitted and reclaimed two drill sites in the North Mercur area based on public permit documents. The locations of the drill sites are known, but there are no other details regarding drilling methods or assay results.

### **10.6 Ensign Drilling 2020 to 2022**

Ensign drilled 114 holes in the South, West and Main Mercur areas in 2020 to 2022 as summarized in Table 10-2.

**Table 10-2: Ensign 2020 to 2022 Drilling Summary**

Area	Year	RC Drilling		Core Drilling		Total Drilling	
		(holes)	(ft)	(holes)	(ft)	(holes)	(ft)
South Mercur	2020-2021	13	5,646	-	-	13	5,646
West Mercur	2020-2021	4	1,626	-	-	4	1,626
Main Mercur	2021-2022	87	46,735	10	5,844	97	52,579
All Ensign Drilling	2020-2022	104	54,007	10	5,844	114	59,850

The first drill program was carried out in December of 2020 and included 11 RC holes at South Mercur and one RC hole at West Mercur. The next drilling campaign commenced in late July 2021 and continued through October 2021. Fifty RC holes were drilled at Main Mercur, three at West Mercur, and two at South Mercur. The third drilling program was conducted from July to October 2022 at Main Mercur and consisted of 37 RC holes and 10 core holes.

For both the 2020 and 2021 campaigns, the drilling was performed by Major Drilling America, Inc. (“Major Drilling”) of Salt Lake City, utilizing a track-mounted Schramm 455 RC drill rig which ran two 12-hour shifts per day. Holes were drilled with a 4.75-in diameter hammer bit, with both crossover and center-return set-ups being used. Most drill holes were dry, but water was injected into the compressed air stream for dust mitigation as is generally required in the United States.

In 2022, Major Drilling was the core drilling contractor and provided HQ-size core. For the RC part of the campaign, Boart-Longyear utilized a Foremost 1500 track-mounted rig which used 10-ft rods.

Table 10-3 is a summary of the significant drill-hole assay results (grade x interval > 0.088 oz/ton Au x ft) from the RC drill holes. Table 10-4 is a summary of the significant assay results from the core drill holes.

**Table 10-3: Ensign 2020 to 2022 RC Drill-Hole Assay Interval Summaries**

Hole Number <sup>1</sup>	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
	Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
	Total (ft)	From (ft)	To (ft)				
South Mercur							
SM-20-002	676.0	510	535	25	0.021	Upper Beds	6.4
	and	535	635	100	0.053	Mercur Beds, Barren Beds	
	and	650	660	10	0.058	Barren Beds	
SM-20-003	265.0	30	150	120	0.045	Mercur, Barren & Mag SS Beds	6.1
	and	165	225	60	0.013	Mag SS Beds, Lower Great Blue	
SM-20-004	200.0	45	190	145	0.044	Mercur, Barren & SS Beds, Lower Great Blue	6.3
SM-20-005	250.0	35	105	70	0.054	Barren Beds, Mag SS Beds	3.8
SM-20-006	245.0	70	75	5	0.099	Barren Beds	5.5
	and	145	235	90	0.056	Mag SS Beds	
SM-20-007	400.0	130	345	215	0.069	Mercur, Barren & SS Beds, Lower Great Blue	14.9
	incl.	145	155	10	0.441	Mercur Beds	
SM-20-008	405.0	200	225	25	0.045	Barren Beds	1.1
SM-20-009	400.0	280	305	25	0.015	Mag SS Beds, Lower Great Blue	0.4
SM-20-010 45°; -50°	350.0	280	335	55	0.047	Mag SS Beds	2.6
SM-20-011	485.0	240	295	55	0.112	Long Trail Shale, Upper Beds	16.8
	and	300	485	185	0.058	Mercur, Barren, Mag SS Beds, L. Great Blue	
SM012 45°; -50°	805.0	265	290	25	0.084	Barren Beds	3.6
	and	380	460	80	0.018	Mag SS Beds, Brx	
SM013	665.0	425	465	40	0.055	Upper Beds, Mercur Beds, Barren Beds	3.7
	and	490	590	100	0.015	Barren Beds, Mag SS Beds	
West Mercur							
WM002	250.0	90	115	25	0.034	Alluvium?/Collapsed stope?	0.8
WM003	345.0	195	220	25	0.132	Alluvium?/Daisy Alteration Zone	3.8
	incl.	205	215	10	0.238	Alluvium?/Daisy Alteration Zone	

Hole Number <sup>1</sup>	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
	Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
	Total (ft)	From (ft)	To (ft)				
	and	220	240	20	0.023	Alluvium?/Daisy Alteration Zone, Upper Great Blue	
Main Mercur							
EN002	525.0	360	420	60	0.102	Upper Beds, Mercur Beds	7.0
	incl.	375	395	20	0.209	Upper Beds	
	and	425	445	20	0.043	Workings	
EN003 270°; -55°	485.0	390	415	25	0.034	Mercur Beds	1.1
	and	470	485	15	0.017	Barren Beds	
EN004 240°; -60°	625.0	395	445	50	0.060	Mercur Beds, Barren Beds	4.8
	incl.	430	445	15	0.206	Barren Beds	
	and	450	480	30	0.060	Barren Beds	
EN006	1,045.0	535	575	40	0.025	Barren Beds	1.5
	and	585	615	30	0.017	Barren Beds, Mag SS Beds	
EN007	1,305.0	895	970	75	0.044	Upper Beds	4.6
	and	1,040	1,110	70	0.009	Mercur Beds, Barren Beds	
	and	1,245	1,300	55	0.013	Lower Great Blue	
EN008	525.0	430	495	65	0.027	Lower Great Blue	1.7
EN009	275.0	185	270	85	0.048	Mag SS Beds, Rhyolite, Lower Great Blue	4.1
EN010	500.0	131	170	39	0.190	Upper Beds	9.4
	incl.	145	165	20	0.295	Upper Beds	
	and	210	225	15	0.038	Mercur Beds	
	and	345	420	75	0.019	Mag SS Beds, Lower Great Blue	
EN011 295°; -60°	605.0	165	240	75	0.102	Upper Beds	21.0
	incl.	175	185	10	0.240	Upper Beds	
	and	250	425	175	0.072	Mercur, Barren & SS Beds, Lower Great Blue	
	incl.	255	270	15	0.262	Mercur Beds	
	and	515	560	45	0.015	Lower Great Blue	
EN012	525.0	160	210	50	0.069	Upper Beds	3.8
	and	245	265	20	0.019	Mercur Beds	
EN013	525.0	325	385	60	0.020	Mag SS Beds, Lower Great Blue	3.6
	and	405	445	40	0.061	Lower Great Blue	
	incl.	415	420	5	0.246	Lower Great Blue	
EN014	345.0	80	130	50	0.024	Mercur Beds, Barren Beds	1.6
	and	165	190	25	0.018	Barren Beds	
EN015	365.0	65	95	30	0.024	Mag SS Beds	0.7
EN018	345.0	45	100	55	0.063	Upper Beds	11.4
	incl.	45	55	10	0.245	Upper Beds	
	and	215	330	115	0.069	Silver Chert, Lower Great Blue	
	incl.	295	305	10	0.370	Lower Great Blue	
EN019	460.0	110	140	30	0.022	Upper Beds	2.2
	and	265	345	80	0.019	Mercur Beds, Barren Beds	
EN020	745.0	650	685	35	0.016	Silver Chert, Lower Great Blue	0.6
EN021	465.0	225	240	15	0.021	Mercur Beds	0.6
	and	265	275	10	0.031	Mercur Beds	
EN022	365.0	225	350	125	0.060	Mag SS Beds, Lower Great Blue	7.5

Hole Number <sup>1</sup>	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
	Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
	Total (ft)	From (ft)	To (ft)				
	incl.	290	300	10	0.447	Lower Great Blue	
EN023	465.0	130	145	15	0.027	Upper Beds	2.3
	and	195	215	20	0.017	Mercur Beds	
	and	285	355	70	0.022	Mag SS Beds	
EN024	405.0	150	195	45	0.061	Barren Beds	3.3
	incl.	170	180	10	0.182	Barren Beds	
	and	280	305	25	0.022	Silver Chert, Lower Great Blue	
EN025	505.0	225	255	30	0.105	Mercur Beds, Barren Beds	13.4
	incl.	230	240	10	0.264	Barren Beds	
	and	270	325	55	0.143	Barren Beds	
	incl.	270	300	30	0.236	Barren Beds	
	and	415	470	55	0.031	Silver Chert, Lower Great Blue	
	and	490	505	15	0.044	Lower Great Blue	
EN026	345.0	135	145	10	0.030	Barren Beds	0.6
	and	235	315	80	0.047	Barren Beds, Mag SS Beds, Silver Chert	
EN027	505.0	195	220	25	0.043	Barren Beds, workings	22.3
	and	295	400	105	0.054	Mag SS Beds, Silver Chert	
	and	420	490	70	0.223	Lower Great Blue	
	incl.	450	470	20	0.697	Lower Great Blue	
EN028	365.0	180	195	15	0.049	Mercur Beds	0.7
EN029	365.0	125	135	10	0.160	Upper Beds	4.3
	and	160	205	45	0.060	Upper Beds, Mercur Beds	
EN030	325.0	135	165	30	0.090	Mercur Beds	2.7
	incl.	140	145	5	0.328	Mercur Beds	
EN031	525.0	170	225	55	0.121	Upper Beds	12.6
	incl.	185	195	10	0.503	Upper Beds	
	and	235	275	40	0.149	Upper Beds, Mercur Beds	
	incl.	240	255	15	0.320	Upper Beds	
EN032	445.0	135	145	10	0.031	Mercur Beds	5.3
	and	235	290	55	0.085	Mag SS Beds, Silver Chert	
	incl.	250	260	10	0.283	Mag SS Beds	
EN033	505.0	425	465	40	0.008	Mag SS Beds	0.3
EN034	325.0	165	195	30	0.012	Silver Chert	0.4
EN035	345.0	170	225	55	0.021	Mag SS Beds, Silver Chert	1.2
EN036	305.0	90	145	55	0.013	Barren Beds, Mag SS Beds	6.7
	and	145	230	85	0.032	Mag SS Beds, Silver Chert, L. Great Blue	
	and	140	275	135	0.024	Lower Great Blue	
EN037	345.0	190	275	85	0.020	Barren Beds, Mag SS Beds	1.7
EN038	285.0	160	205	45	0.057	Mag SS Beds, Silver Chert	2.6
EN041 315°; -65°	565.0	345	390	45	0.010	Silver Chert, Lower Great Blue	0.4
EN042	825.0	575	585	10	0.032	Barren Beds	0.3
EN043	285.0	95	125	30	0.028	Mag SS Beds	3.5
	and	125	155	30	0.040	Mag SS Beds, Silver Chert	

Hole Number <sup>1</sup>	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
	Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
	Total (ft)	From (ft)	To (ft)				
	and	155	225	70	0.017	Silver Chert, Lower Great Blue	
	and	250	280	30	0.010	Lower Great Blue	
	EN044	585.0	0	50	50	0.039	
	and	495	545	50	0.014	Upper Beds, Mercur Beds	
EN047	605.0	455	485	30	0.015	Long Trail, Upper Beds	2.9
	and	485	495	10	0.243	Upper Beds	
	incl.	490	495	5	0.446	Upper Beds	
EN048 230°; -53°	725.0	440	455	15	0.011	Upper Beds	1.4
	and	455	475	20	0.064	Mercur Beds	
EN049	725.0	425	475	50	0.029	Upper Beds, Mercur Beds	1.5
EN050 225°; -60°	665.0	415	435	20	0.017	Upper Beds	0.3
EN054	460.0	260	275	15	0.019	Barren Beds	2.3
	and	325	385	60	0.034	Mag SS Beds, Silver Chert, Lower Great Blue	
EN055	400.0	150	195	45	0.058	Barren Beds	2.6
EN056	400.0	130	240	110	0.023	Barren/Mag SS Beds, Silver Chert, L. Great Blue	2.6
EN057	425.0	175	210	35	0.017	Mag SS Beds, Silver Chert	0.6
EN059 140°; -80°	1,445.0	640	670	30	0.078	Upper Beds	3.2
	incl.	650	655	5	0.292	Upper Beds	
	and	710	745	35	0.013	Upper Beds, Mercur Beds	
	and	910	945	35	0.011	Silver Chert, Lower Great Blue	
EN061 90°; -65°	950.0	20	55	35	0.048	Mercur Beds, U/G Workings	2.7
	and	180	235	55	0.019	Mag SS Beds, Silver Chert, Lower Great Blue	
EN062 300°; -55°	700.0	0	20	20	0.014	Dump (BX?)	0.5
	and	20	35	15	0.012	Dump (BX?)	
EN063 330°; -55°	800.0	0	30	30	0.013	Dump (BX?)	0.4
EN064 300°; -50°	805.0	90	155	65	0.019	Dump, Humbug Formation? (prob BX)	1.2
EN066	450.0	235	250	15	0.080	Mag SS Beds	1.2
EN067	700.0	275	345	70	0.064	Mag SS Beds, Silver Chert	4.5
	incl.	290	300	10	0.191	Mag SS Beds	
EN068	450.0	200	310	110	0.053	Mag SS Beds, Silver Chert, Lower Great Blue	7.7
	incl.	275	280	5	0.300	Silver Chert	
EN069	450.0	255	275	20	0.024	Mag SS Beds, Silver Chert	1.5
EN070	600.0	260	305	45	0.050	Mag SS Beds, Silver Chert	3.1
	and	355	380	25	0.034	Lower Great Blue	
EN071	600.0	30	120	90	0.048	Upper/Mercur/Barren Beds	4.4
EN072	600.0	260	340	80	0.036	Upper/Mercur/Barren Beds	12.8
	and	445	600	155	0.064	Silver Chert, Lower Great Blue	
	incl.	465	470	5	0.237	Silver Chert	
EN073	750.0	280	385	105	0.028	Upper Beds, Mercur Beds	4.6
	and	600	630	30	0.057	Lower Great Blue	
EN074	600.0	305	370	65	0.039	Upper/Mercur/Barren Beds	5.1

Hole Number <sup>1</sup>	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
	Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
	Total (ft)	From (ft)	To (ft)				
	and	465	530	65	0.040	Silver Chert, Lower Great Blue	
EN075	600.0	245	275	30	0.034	Upper Beds	1.6
	and	440	495	55	0.010	Silver Chert	
EN076	500.0	315	385	70	0.017	Silver Chert, Lower Great Blue	1.2
EN077	600.0	165	185	20	0.049	Upper Beds	3.3
	and	345	380	35	0.067	Silver Chert, Lower Great Blue	
	incl.	350	355	5	0.306	Silver Chert	
EN080	400.0	130	150	20	0.029	Mercur Beds	0.6
EN082	600.0	335	380	45	0.036	Mag SS Beds, Silver Chert	1.6
EN085	300.0	35	60	25	0.018	Mag, Silver Chert	0.5
EN086	400.0	45	130	85	0.026	Mag, Silver Chert, Lower Great Blue	2.2
EN087	300.0	60	85	25	0.028	Mag, Silver Chert	0.9
	and	110	120	10	0.017	Lower Great Blue	

<sup>1</sup>All holes drilled vertical unless otherwise noted beneath the hole number

**Table 10-4: Ensign 2022 Drill-Core Assay Interval Summaries**

Hole Number	Azimuth, Inclination	Mineralized Intervals					Host Stratigraphic Units	Cumulative Average Au x Length (oz/ton x ft)
		Drilling Depth			Drilled Width (ft)	Avg Au (oz/ton)		
		Total (ft)	From (ft)	To (ft)				
Main Mercur								
ENC001	270°, -70°	630.5	342.0	345.1	3.1	0.176	Barren Beds	1.3
		and	393.5	453.0	59.5	0.013	Mag SS Beds, Silver Chert	
ENC003	0°, -70°	618.0	312.8	365.5	52.7	0.011	Upper Beds, Mercur Beds	0.6
ENC004	180°, -70°	689.0	264.7	312.0	47.3	0.044	Mag. SS Beds, Lower Great Blue	2.1
ENC006	90°, -60°	700.0	266.0	280.0	14.0	0.023	Barren Beds	4.7
		and	280.0	294.0	14.0	0.024	Barren Beds, Mag. SS Beds	
		and	294.0	307.0	13.0	0.014	Magazine Sandstone Beds	
		and	307.0	370.0	63.0	0.021	Mag. SS Beds, Silver Chert, Lower Great Blue	
		and	464.5	536.0	71.5	0.035	Mag. SS Beds, Silver Chert, Lower Great Blue	
		incl.	504.8	507.0	2.2	0.365	Lower Great Blue	
ENC007	90°, -60°	685.0	326.8	370.5	43.7	0.017	Magazine Sandstone Beds, Silver Chert	0.7

Mr. Lindholm verified the accuracy of the average grade and grade-thickness calculations reported in Table 10-3 and Table 10-4 with respect to the gold values in Revival's database. Averages have been calculated by ignoring missing assay intervals which are usually due to no sample return from broken ground or voids in underground workings, but the grade-thickness calculations include the thickness of these missing intervals. Those mineralized zones with missing intervals are marked with an asterisk in the "Interval" column.

Ninety-two of 108 holes drilled and assayed by Ensign encountered significant gold intercepts greater than 0.088 oz/ton Au x ft. Also, 59 of the holes encountered intercepts greater than

0.58 oz/ton Au x ft. Nineteen intervals of higher-grade material were encountered that exceeded 10 ft at 0.175 oz/ton Au. The best of these higher-grade intervals was in EN027 (Table 10-3), which encountered 20 ft at 0.697 oz/ton Au within an interval of 70 ft at 0.223 oz/ton Au, all within the Lower Great Blue Member, which had been considered by previous operators to be an unfavorable host rock.

#### **10.6.1 South Mercur Ensign Drilling 2020 to 2021**

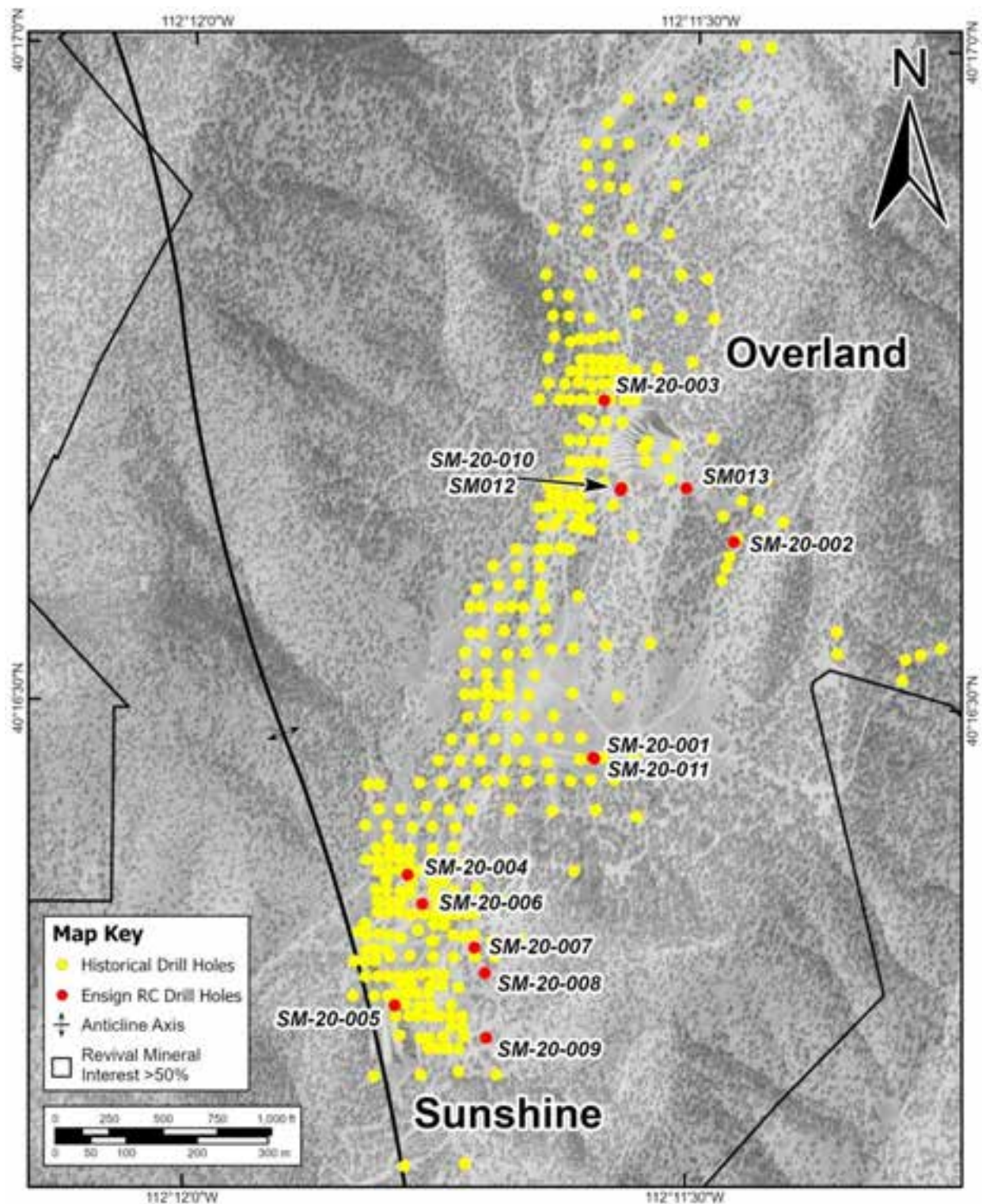
Ensign drilled 13 holes at South Mercur in 2020 and two holes in 2021. Of the 13 holes, seven were validation (“twin”) holes of previous operators’ drilling, five were offsets of mineralized holes drilled by previous operators, and one was a redrill of an earlier hole in the program (SM-20-011 was a redrill of SM-20-001).

The gold grade and mineralized interval lengths encountered in twin holes were similar to the twinned historical holes drilled by Priority and Homestake. The results generally confirm the mineralization in the historical holes, although with occasionally moderate to significant variation. Heterogeneity in the distribution of gold in Carlin-type systems can be high, so the variability in the twin-hole pairs is not uncommon. General confirmation of mineralization in older holes may be the best result that can be expected.

The step out drill holes were successful in intercepting gold values in the target stratigraphy. Ensign’s drill results at South Mercur are summarized in Table 10-3.

Figure 10-5 provides the locations of the Ensign drill holes at South Mercur.

Figure 10-5: Ensign 2020 South Mercur Drill Holes Relative to Historical Drilling



Revival, 2025.

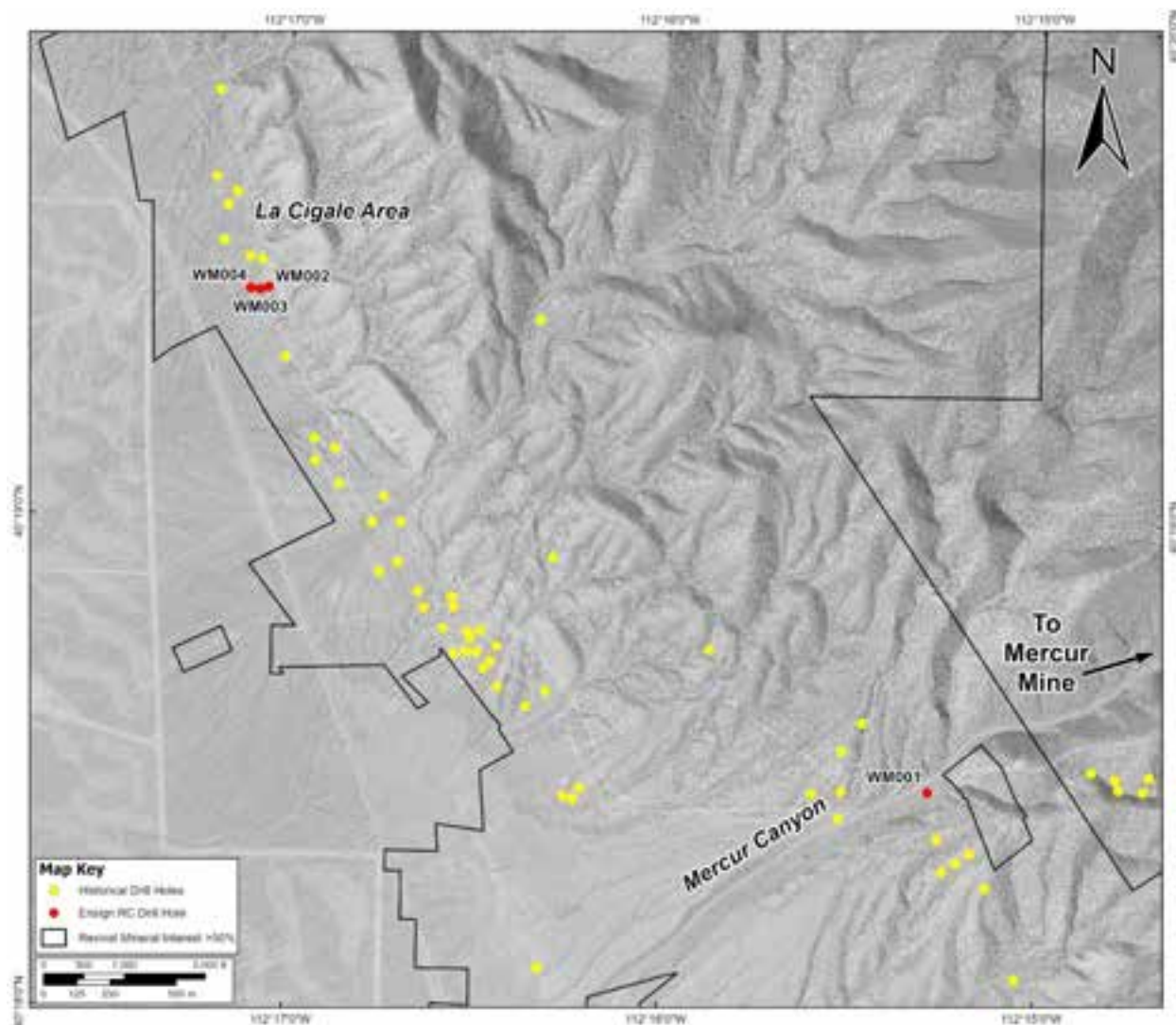
### **10.6.2 West Mercur Ensign Drilling 2020 to 2021**

One RC hole was drilled in 2020 in the West Mercur area to test a previously undrilled area at the mouth of Mercur Canyon. That hole, WM001, intercepted target stratigraphy of the Mercur Beds but encountered no gold.

Three additional RC holes were drilled at West Mercur in 2021 in the vicinity of the La Cigale mine attempting to intersect the down-dip projection of historical stopes of the underground workings. The locations of the West Mercur drill holes are shown on Figure 10-6.

All three of the holes encountered detectable gold. WM002 and WM003 encountered significant gold (grade x interval >0.086 oz/ton Au x ft) and WM003 had a high-grade interval of 10 ft of 0.238 oz/ton Au (Table 10-3). Most of the gold mineralization occurs in logged alluvium.

**Figure 10-6: West Mercur Area 2020 to 2021 Drill Hole Locations**

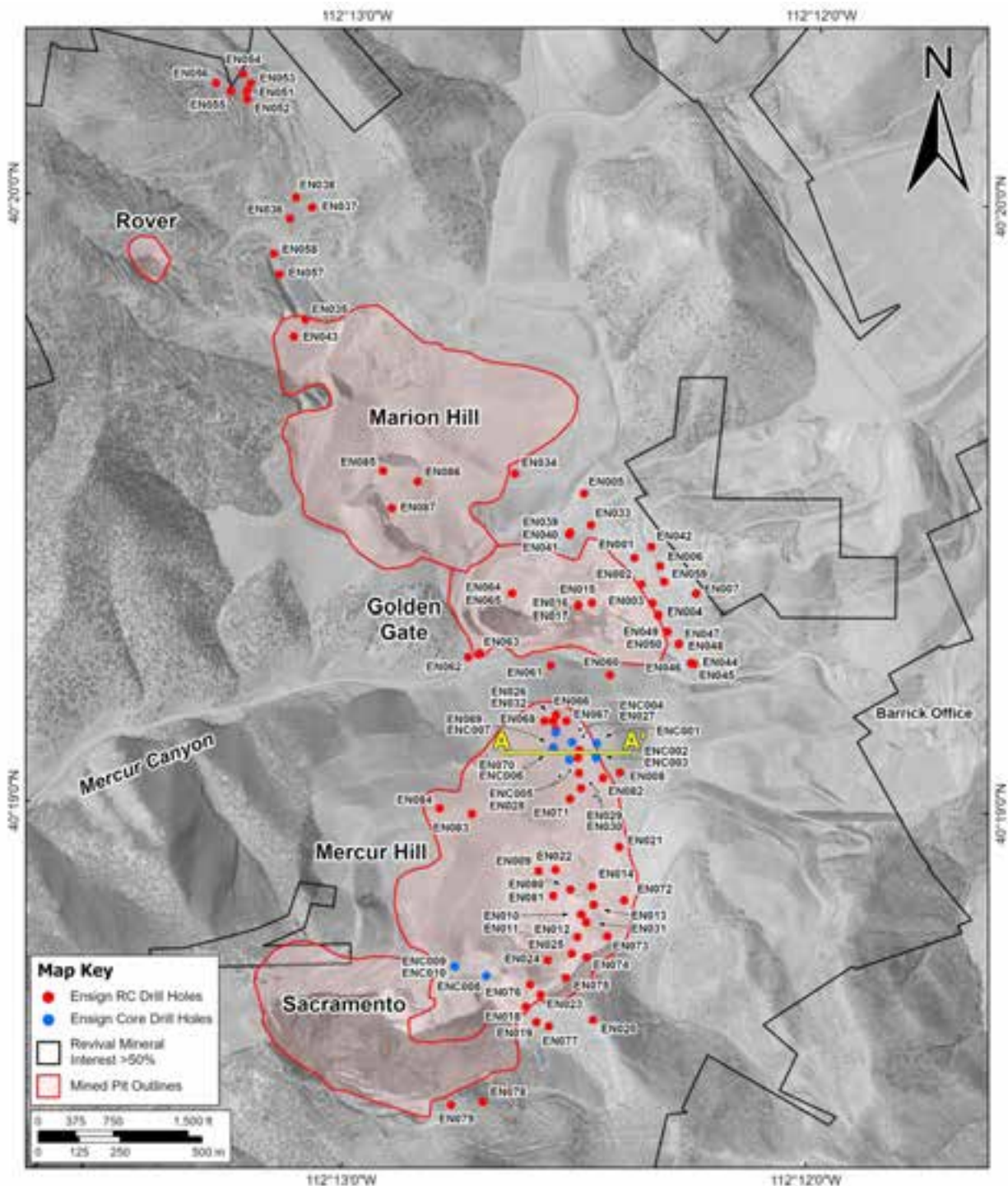


Revival, 2025.

### 10.6.3 Main Mercur Ensign Drilling 2021 to 2022

Fifty RC holes were drilled at Main Mercur in 2021 as an initial confirmation of mineralization encountered by historical drill holes, to determine the backfill/bedrock contact in the historical open pit mines, and to test new target areas. In 2022, an additional 37 RC holes and 10 core holes were drilled at Main Mercur. The locations of the drill holes are shown on Figure 10-7 and mineralized intervals are summarized in Table 10-3.

Figure 10-7: Main Mercur Area 2021 to 2022 Drill Hole Locations



Revival, 2025.

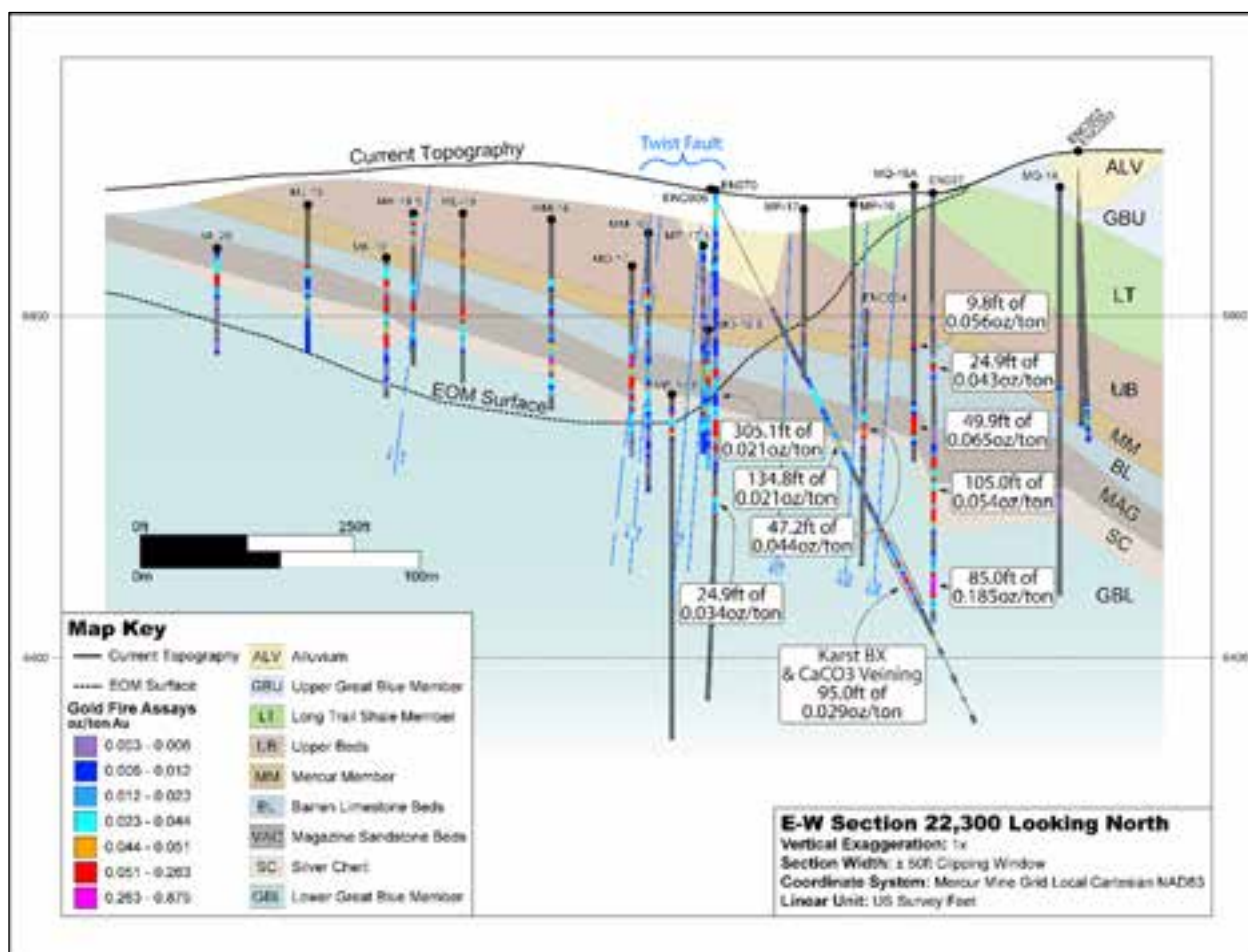
Substantial intervals and grades were intersected by Ensign's drilling at Main Mercur, as shown in Table 10-3. In addition to the traditional host units in the Mercur Member, sixteen holes encountered unexpected gold-bearing zones in deeper stratigraphic horizons in the Lower Great Blue Member. Table 10-5 summarizes the gold mineralization intercepted by the 2021 to 2022 drilling from Table 10-3 in these non-traditional host rocks. Figure 10-8 provides a cross-section through EN027, which encountered 70 ft at 0.0223 oz/ton Au in the Lower Great Blue Member (Figure 10-7 shows the location of the cross-section). The orientation and true thickness of this mineralized zone is unknown.

**Table 10-5: Ensign Main Mercur Gold Intercepts in Non-Traditional Host Rocks**

Hole ID <sup>1</sup>	Total Depth (ft)	Mineralized Intervals				Stratigraphic Units	Average Au x Interval (oz/ton x ft)
		From (ft)	To (ft)	Width (ft)	Avg Au (oz/ton)		
Main Mercur							
EN007	1,305	1,245	1,300	55	0.013	Lower Great Blue	0.7
EN008	525	430	495	65	0.027	Lower Great Blue	1.7
EN010	500	345	420	75	0.019	Mag SS Beds, Lower Great Blue	1.5
EN011 295°; - 60°	605	515	560	45	0.015	Lower Great Blue	0.7
EN013	525	405	445	40	0.061	Lower Great Blue	2.5
	incl.	415	420	5	0.246	Lower Great Blue	1.2
EN018	345	215	330	115	0.069	Silver Chert, Lower Great Blue	8.0
	incl.	295	305	10	0.370	Lower Great Blue	3.7
EN022	365	225	350	125	0.060	Mag SS Beds, Lower Great Blue	7.5
	incl.	290	300	10	0.447	Lower Great Blue	4.5
EN025	505	415	470	55	0.031	Silver Chert, Lower Great Blue	1.7
	and	490	505	15	0.044	Lower Great Blue	0.7
EN027	505	420	490	70	0.223	Lower Great Blue	15.6
	incl	450	470	20	0.697	Lower Great Blue	13.9
EN043	285	250	280	30	0.010	Lower Great Blue	0.3
EN056	400	130	240	110	0.023	Barren/Mag SS Beds, Silver Chert, L. Great Blue	2.6
EN072	600	445	600	155	0.064	Silver Chert, Lower Great Blue	9.9
EN073	750	600	630	30	0.057	Lower Great Blue	1.7
EN074	600	465	530	65	0.040	Silver Chert, Lower Great Blue	2.6
EN076	500	315	385	70	0.017	Silver Chert, Lower Great Blue	1.2
ENC006	700	465	536	72	0.035	Lower Great Blue	2.5
	incl.	505	507	2	0.365	Lower Great Blue	0.8
<sup>1</sup> All holes vertical unless otherwise noted.							

<sup>1</sup> All holes vertical unless otherwise noted.

Figure 10-8: Mercur Hill Interpretive Cross Section Looking North



Revival, 2025.

## 10.7 Drill-Hole Collar Surveys

Historical drill-hole collar locations at the Mercur Project were typically surveyed in feet on what was called the “Mercur Mine” grid or on the separate “South Mercur” grid, also in feet. Revival has no information on the exact methods and instruments used to measure these historical locations, or any information regarding the accuracy of this historical surveying. The definition of the Mercur Mine grid, such as the original datum, projection or precise base point, is not currently known to Revival. An ArcGIS transformation was developed as a result of surveying by Rick Lyman, a former Getty employee, for Barrick in 2002 (E. Nozdrya, pers. comm. with Ensign, 2021). This transformation is currently in use to convert between the global and local coordinate systems. The parameters for the projections are as follows:

False\_Easting: 22304.478

False\_Northing: 17968.243

Scale\_Factor: 1.000500483

Azimuth: 0.129704528

Longitude\_Of\_Center: -112.205187775

Latitude\_Of\_Center: 40.306347862

Linear Unit: Foot\_US (0.3048006096012192)

Geographic Coordinate System: GCS North American 1983 (NAD 83)

The Root Mean Squared Error of this projection is reported as < 2 ft (E. Nozdrya, pers. comm. with Ensign, 2021).

Historical drill holes at the South Mercur area were surveyed in feet on the local “South Mercur” grid. The northeast corner of Section 29, T6S, R3W is the 50,000 ft East, 50,000 ft North point on the local grid. It is not known if this grid was derived from the Utah State Plane system or if it uses the same north direction.

Ensign located known drill holes in the NAD 83 coordinate system at South and West Mercur primarily by georeferencing maps with drill-hole locations to section corners, and visible features in LiDAR and aerial imagery. This included maps likely drafted by Homestake and subsequent property owners which were inherited by Ensign from Priority Minerals. If holes deviated from obvious drilling-related ground disturbance in LiDAR and aerial imagery, the initial georeferenced locations of drill holes were adjusted. For reference, the website for the Maxar imagery (used by Google Earth and ArcGIS) that these adjustments were based on states, “*The average positional accuracy of our imagery is less than 5 m (16.4 ft) CE90*” (Maxar Technologies, 2021). In addition, some holes that appeared to be mis-located due to presumed typographical errors were corrected. Based on Ensign’s work, many drill-hole collars or evidence of historical drilling can be found in the field at the expected locations in unreclaimed areas.

Mr. Lindholm recommends an effort to recover the original transformations of both the Mercur Mine and South Mercur local grids, and to have a professional surveyor survey the known drill holes and old control points in the field with modern equipment in the UTM system, NAD83 datum.

The collar location coordinates of Ensign’s 2020 drill holes were surveyed immediately following drilling by Ensign geologists using a Garmin ETREX20 GPS in December 2020. In May 2021, surveyors with Mineral Exploration Services of Reno, Nevada surveyed the coordinates of each drill hole in UTM coordinates, NAD83 datum, using a Trimble ProXRT2. Coordinates were surveyed with decimeter precision. In one case the exact location of the drill collar could not be

identified, but indirect evidence of drilling allowed a location within ~20 ft of the probable collar location to be surveyed.

Ensign's 2021 drill-hole collars at Main Mercur were surveyed in October 2021 by McKay Mineral Exploration, LLC in UTM coordinates, NAD83 datum, using a Trimble R1 GNSS receiver with a Juno3B controller. The instruments used were reported to have sub-meter precision.

The drill collars of Ensign's 2022 program were surveyed by an Ensign employee using a Trimble Geo 7X GPS receiver with an accuracy of about three ft in the horizontal plane. Mr. Lindholm recommends that these holes be surveyed by a professional surveyor.

## **10.8 Down-Hole Surveys**

### **10.8.1 Historical Drilling**

Revival has down-hole survey information compiled for 27 holes from the historical drilling in the Mercur Project area. Most of these holes were deep tests (>1,000 ft) in the Main Mercur area drilled by Barrick from 1994 to 1996. Ten of the 27 holes were angle holes, and the remainder were vertical. In general, the average deviation of the surveys at 300 ft down hole is about 5° and the average at 650 ft is 10° or more. At 1,000 ft down hole, deviations are near 14°. Deviation may be in the vertical or horizontal direction, or both. Of the seven angle holes that were surveyed, two drooped by 15° and 22° at the final depth, although the others drilled straighter.

Mr. Lindholm concludes that although down-hole deviation is likely to have occurred in the historical drilling at the Mercur Project, it was likely minor because nearly all holes were drilled vertically and to shallow depths. Although it would be preferable to have down-hole surveys, particularly for deep and angle holes, the lack of this information does not preclude the use of the associated data from exploration targeting or resource estimation in the future. Mr. Lindholm recommends that all future drill-holes be surveyed for down-hole deviation.

### **10.8.2 Ensign Drilling**

Major Drilling operated a Reflex EZ-GYRO down-hole survey tool to measure down-hole deviation in all of Ensign's 2020 drill holes. On the first hole, deviation was measured every 50 ft but on subsequent holes measurements were taken every 20 ft. The results of these surveys indicate that deviations on all the vertical holes were minor, generally at 3° or less. The deviation may be in the vertical or horizontal direction, or both.

Major Drilling used the same type of Reflex EZ-GYRO down-hole survey tool to measure the 2021 drill holes. Deviation was measured every 50 ft to the bottom of the hole. The results from the 44

vertical RC drill holes indicate that deviations were in most cases moderate, averaging less than 2° at 500 ft.

During the 2021 campaign, nine RC angle holes were drilled by the end of October. Almost all of these drooped significantly but stayed relatively straight in terms of azimuth with deviations at less than 10°. All angle holes, except for hole EN004, had steepened by about 10° by 500 ft depth.

During the 2022 drill campaign, a total of 33 RC holes and nine diamond holes were completed. A tenth diamond drill hole was collared but abandoned due to difficult drilling conditions. A total of 26 of the RC holes were vertical and seven of the RC holes and all of the core holes were drilled at various angles. The vertical RC holes had an average deviation of about 3 ½° at 500 ft depth during the initial phases of the drilling but tended to be much straighter with an average of 1 ½° of deviation at 500 ft during the later stages of the drilling. These vertical RC holes had no dominant azimuth direction of drift. The RC angle holes generally drooped by about 3° to 5° at 500 ft depth which increases at greater depths. However, the azimuth deviations were minimal. The nine angled core holes were generally straight with very little change in azimuth and dip. Two holes (ENC007, ENC010) steepened about 3° at 500 ft depth.

## 10.9 Sample Quality and Down-Hole Contamination

The depth of the water table is generally 1,000 ft or more below the surface. The total depths of nearly all of the Mercur Project drill holes have been above the water table, although small, perched water zones have been intersected locally. In general, there is an inherent risk of down-hole contamination in RC drilling. However, the known water table at the Mercur project is generally below the modeled resources, and there was no evidence of contamination in drill-hole assays or noted on the drilling logs reviewed by Revival. Therefore, down-hole contamination associated with the RC drilling is not considered to be a significant issue at the Mercur project.

## 10.10 Summary Statement

Mineralization at Main and South Mercur generally dips 10° to 20° to the east and southeast, with local areas that are steeper or shallower by a few tens of degrees. Since most drilling in the Mercur project is vertical, the true dips of the mineralized intercepts discussed in the following sections are about 5% to 10% shorter than the drill-interval lengths. At West Mercur, mineralization associated with bedding dipping shallowly to the west would have the same relationship between true and apparent dips. However, for mineralization associated with more steeply dipping (45° to 60°) structures, such as in the Daisy Mine area, the true dips are about 40% to 50% shorter than the drill-interval lengths.

Historical drill-hole collar locations at the Mercur Project were typically surveyed in feet in the Mercur Mine and South Mercur local grids. Revival has no information regarding the definition of the local grids, and the original datum, projections or precise base points are not currently known to Revival. Transformations were developed for Barrick in 2002, which are currently in use to convert between the global and local coordinate systems. Mr. Lindholm recommends an effort to recover the original transformations of both the Mercur Mine and South Mercur local grids, and to have a professional surveyor survey the known drill holes and old control points in the field with modern equipment in the UTM system, NAD83 datum.

There are a limited number of down-hole deviation surveys (27) performed for historical holes in the Mercur database. The lack of down-hole deviation surveys for most of the historical drilling adds some uncertainty to the precise locations of drill samples at depth. However, although down-hole deviation is likely to have occurred in the historical drilling, it was likely minor because nearly all holes were drilled vertically and to shallow depths. Therefore, Mr. Lindholm concludes that the lack of orientation information does not preclude the use of the associated data from exploration targeting or resource estimation in the future. It is also recommended that all future drill-holes be surveyed for down-hole deviation.

In general, there is an inherent risk of down-hole contamination in RC drilling, particularly below the water table. However, the known water table at the Mercur project is generally below the modeled resources, and there was no evidence of contamination suspected in drill-hole assays or noted on the drilling logs reviewed by Revival. Any risk associated with the RC drilling is considered to be low.

## **10.11     References**

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## SECTION 11 CONTENTS

11	SAMPLE PREPARATION, ANALYSIS, AND SECURITY .....	11-3
11.1	Pre-Ensign Historical Sample Preparation, Analysis and Security .....	11-3
11.1.1	Historical Surface and Underground Sampling.....	11-3
11.1.2	Pre-Ensign Historical Drill Sampling.....	11-5
11.1.3	Sample Security Procedures for Pre-Ensign Historical Drilling.....	11-8
11.2	Ensign Sample Preparation, Analysis and Security.....	11-8
11.2.1	Ensign Soil Samples 2020 – 2021.....	11-8
11.2.2	Ensign Rock Samples 2021 – 2022 .....	11-9
11.2.3	Ensign Drill Samples 2020 .....	11-10
11.2.4	Ensign Drill Samples 2021 .....	11-11
11.2.5	Ensign Drill Samples 2022 .....	11-11
11.3	Quality Assurance / Quality Control Programs .....	11-12
11.3.1	Pre-Ensign Historical QA/QC Procedures .....	11-12
11.3.2	Ensign QA/QC Program 2020 .....	11-14
11.3.3	Ensign QA/QC Program 2021 .....	11-14
11.3.4	Ensign QA/QC Program 2022 .....	11-15
11.4	Quality Assurance/Quality Control Results .....	11-15
11.4.1	Pre-Ensign Historical QA/QC Results.....	11-15
11.4.2	Ensign QA/QC Results .....	11-15
11.5	Discussion of Sample Preparation, Analysis, Security and QA/QC Results .....	11-24
11.6	References .....	11-26

## SECTION 11 TABLES

Table 11-1:	Summary of 2020 to 2022 Drill and QA/QC Samples .....	11-16
Table 11-2:	Certified Reference Materials .....	11-16
Table 11-3:	List of Failures for the CRMs .....	11-17
Table 11-4:	2020 Drilling Program Coarse Blank Assay Failures .....	11-20

## SECTION 11 FIGURES

Figure 11-1:	Control Chart for MEG-Au.19.05, AAL.....	11-18
Figure 11-2:	Control Chart for OREAS 264, ALS.....	11-18
Figure 11-3:	2020 Drilling, Coarse Blank and Preceding Sample Gold Assays, AAL .....	11-20

Figure 11-4: 2021 to 2022 Drilling, Pulp Blank and Preceding Sample Gold Assays, ALS.....	11-21
Figure 11-5: 2021 to 2022 Drilling, Pulp Blank and Preceding Sample Gold Assays, BV.....	11-22
Figure 11-6: Relative Percent Difference of 2020 Drilling Field Duplicates, AAL .....	11-23
Figure 11-7: Relative Percent Difference of 2021 Drilling Field Duplicates, ALS.....	11-23
Figure 11-8: Relative Difference of 2022 Drilling Field Duplicates, BV .....	11-24

## **11 SAMPLE PREPARATION, ANALYSIS, AND SECURITY**

Revival has done no material systematic sampling at the Mercur Project. The information in this section has been compiled from records as cited and from observation of the 2020 to 2023 work done by Ensign. Assays for all Ensign QA/QC samples were originally measured and reported in metric units (g/T Au). Therefore, all charts, tables and discussion related to the Ensign's work remain in metric units in this section. Historical work is discussed in the original U.S. Customary units, more consistent with the rest of this technical report.

### **11.1 Pre-Ensign Historical Sample Preparation, Analysis and Security**

#### **11.1.1 Historical Surface and Underground Sampling**

Data from historical sampling carried out before 1973 is minimal and usually available only as assays plotted on surface and underground maps. Gold and silver data from before 1973 are presumed to have been obtained by fire-assay fusion methods ("FA") with a gravimetric finish to determine gold content. There are no known laboratory records for assays prior to 1973. Some of the surface sampling results from the 1970s through the late 1990s, from what is now the Mercur property, survive but there are no details available as to the QA/QC procedures that might have been used during these years.

##### *11.1.1.1 Main Mercur*

A surface sampling program made up of approximately 1,150 soil and 1,150 rock samples was completed by Getty in 1981. Sampling was conducted on variable 100- and 200-foot center grids extending from Marion Hill north through the Rover area. Samples were analyzed for Au, Ag, Sb, and Tl using atomic absorption ("AA") by Rocky Mountain Geochemical Corp. ("RGMC"), an assay laboratory located in Salt Lake City that was independent of Getty. Gold was re-analyzed by fire assay ("FA") at Getty's request. Original assay certificates and results of standards and duplicates are not available. Contoured maps with sample locations have been recovered from historical files (Martz, 1983), but a database of sample results has not been found, and no information is available on sample security procedures in use by Getty.

Revival has located no additional information as of the effective date of this report on any aspect of the surface sampling by operators prior to Ensign in the Main Mercur area.

##### *11.1.1.2 South Mercur*

The only surface sample data available from South Mercur are widespread rock and tailings sampling results from Homestake, mostly from 1983 but with some dating back to 1983. These samples were assayed by Cone Geochemical ("Cone") of Lakewood, Colorado, using an aqua

regia digestion and atomic absorption (“AA”) for gold. Other elements were analyzed by AA but may have had a different digestion. It appears that Cone used Coalex Energy Corporation to run some samples by fire assay as a check for their AA results. Both Cone and Coalex Energy were independent of Homestake. It is not known what certifications they might have held as of 1981, but Cone was a well-known and respected lab that was in business for many years. No further information is available as to the procedures used to collect, ship, prepare, and assay these Homestake samples. Likewise, no information is available on sample security procedures in use by Homestake when these samples were collected.

#### **11.1.1.3 West Mercur**

Aside from a few underground maps from the 1930s, the earliest known records from the West Mercur area are those of Getty’s sampling at their West Dip project. It appears Getty collected numerous rock samples and ran several soil sample lines. Rocky Mountain Geochemical Corp. (“RMGC”) of Salt Lake City, Utah was used as the primary lab for this work. Most results, including those for gold, were determined by AA, but arsenic values were determined colorimetrically. Later, during 1987 and 1988, Barrick sampled the waste dumps in the West Mercur area as possible sources of mill feed. The assays were done in the Barrick Mercur mine lab. Gold was determined variously by AA, FA, and cyanide leach with an AA finish.

During Barrick’s programs at West Mercur, it appears that surface rock samples were sent to Chemex Labs (“Chemex”) of Sparks, Nevada. Gold assays were determined by FA with an AA finish. For trace elements specified by Barrick, the pulps were digested with aqua regia or other acids and analyzed by AA, and the multi-element package was analyzed by an inductively coupled plasma atomic-emission spectrometry (“ICP-AES”) process. Chemex was a well-known independent commercial lab for many years prior to its merger with ALS Minerals (“ALS”), but it is not known what certifications it may have held during the relevant time periods.

There is no information available from other operators at West Mercur before 2011.

Rush Valley Exploration Inc. (“RVX”) and predecessor company Ash-ley Woods LLC were responsible for several small surface sampling programs from 2011 to 2019. None of these small sampling programs used quality control samples. Other companies that took samples to evaluate the West Mercur area also sent copies of their results to RVX. These samples were mostly sent to ALS or American Assay Laboratories (“AAL”), both in Reno, Nevada. Gold determinations were made with a 30-g FA with an ICP-AES finish and trace elements were usually determined with an ICP-AES procedure.

In 2018, RVX entered into an agreement with Torq Resources Inc. (“Torq”) on the West Mercur property as it existed at that time. Torq’s soil samples were screened to minus 80 mesh and

assayed by ALS. At ALS, 25 g subsamples were digested with aqua regia and analyzed for gold and 25 other elements by an inductively coupled plasma – mass spectrometry (“ICP-MS”) process. Adequate sample security procedures were in place during this sampling, including formal chain of custody protocols, and the use of locked facilities for temporary storage. ALS is an accredited lab independent of Torq, RVX, and Revival. QA/QC procedures included Torq’s insertion of blanks, standards and duplicates at rates of 2%, 3% and 4%, respectively.

#### **11.1.1.4 North Mercur**

Revival has electronic copies of rock sample geochemistry maps of the North Mercur area for gold, silver, and arsenic that were provided by a lessor. These maps were prepared in 1991 by Centurion. No information is available as to the samplers, analytical methods, or laboratories used to determine these mapped values.

### **11.1.2 Pre-Ensign Historical Drill Sampling**

#### **11.1.2.1 Main Mercur**

Samples from the 1969 Newmont rotary holes were collected at 5-ft intervals. Newmont’s analytical work was performed by at least three different laboratories: Union Assay Office, Inc. (“Union”), RMGC and C.G., likely Cone Geochemical, Inc, based in Denver, CO. A fourth lab, Parker, is listed as having run limited assay checks but nothing is known about this laboratory. There is no definitive information on analytical technique, but it is assumed that assays were performed by AA. No information is known about the equipment or sampling techniques used for this drill program.

Getty used conventional rotary drilling with a down-hole hammer for the first 26 holes in 1973, and RC methods for later drilling (Klatt, 1980d). Analytical work for Getty was performed by Union and Chemical & Mineralogical Services (“CMS”), both located in Salt Lake City. Limited analytical work for Getty was done at RMGC. From 1983 to 1985, Getty performed assays in-house at the Mercur mine site. It is presumed that assays from 1969 through 1974 were performed by AA but at least some of the early assaying performed by the commercial laboratories mentioned above, were performed by FA. Assay certificates do not always specify.

After a substantial program of testing the accuracy of AA in comparison to FA (Klatt, 1980a, 1980b and 1980c) Getty began roasting drill hole chip samples as a pretreatment step for AA analysis, beginning on August 21, 1974, as indicated by Klatt (1980b). This involved a one-hour roast at 500°C prior to aqua regia digestion of the pulp that was then analyzed by AA (Klatt 1980b and 1980d). In 1982, a similar method was used by RMGC, but the roasting temperature was increased to either 650° or 750°C. It is not clear why some samples were roasted at a higher

temperature, but later investigation showed that higher roast temperatures had had the effect of volatilizing some of the gold, leading to lower assay results. Later reruns by FA and with a lower roast temperature returned gold values significantly higher than had been first reported by RMGC. What is not known is whether samples were roasted before or after pulverization, or before or after weighing the aliquot. This may be important because, if the sample was roasted after weighing the aliquot, gold may have been concentrated through loss of volatile components of the sample during roasting.

In 1981 and 1982, Hazen Research undertook an extensive metallurgical test program that included both CIL and DCN analyses. The sample preparation used by Hazen was the same for both analyses and was described in detail in Hazen (1981; 1982). Three-hundred grams of sample was ground to 80% passing -100 mesh for samples containing greater than 0.035 oz/ton Au (1.09 g/T Au) was submitted for CIL and DCN analyses.

For both CIL and DCN testing, samples were run under standardized conditions: 24 hours of bottle agitation at 50% solids and a pH of 11 with 10 g/l NaCN. For CIL testing, 11 g of carbon were added before the reagents and again after two hours. Detailed procedures are outlined in Hazen (1981; 1982). Barrick acquired Mercur in 1985 and, from that point until 1996, analytical work was performed in-house. In 1996, the assaying was done at RMGC.

Both Getty and Barrick routinely performed CIL analyses in house. CIL analyses were accompanied by a FA of the original sample pulp. Nothing is known about the sample preparation or analyses for this work for Getty, but Barrick appears to have followed the Hazen protocol described above.

#### **11.1.2.2 South Mercur**

For South Mercur, assay certificates from several drilling campaigns are available, but little information about sampling protocols and QA/QC procedures has been found.

Information available on drilling methods used by Getty during their work at the Violet Ray prospect at South Mercur between 1975 and 1985 is presented in Section 10 of this report. For the 1975 and 1978 drilling programs, analytical work was performed by CMS and the samples were roasted prior to FA. Assays for the 1985 drilling program were performed in-house by roasted AA with FA and CIL as described above. No information on the sampling procedure has yet been found.

From the drill logs, it is apparent that Homestake submitted a small number of duplicate samples and a few standards along with the general run of drill samples. On sample summary sheets from this drilling, the lab is noted as "Hunter". There is no information available on drilling methods, bit

sizes or sampling procedures used by Homestake during their work in the South Mercur area between 1981 and 1984 but assays appear to have been “one-assay ton” FA.

There is no information available on drilling methods, drill contractors, bit sizes, or sampling procedures used by Touchstone during their work in the South Mercur area during 1984. Both FA and DCN analyses were done by RMGC.

Bondar-Clegg, Inc. conducted FA and DCN analyses for Priority in 1986 and 1987. Bondar-Clegg was a well-known laboratory at the time and was independent of Priority and WCC. In a brief memorandum (Eliopoulos, 1987), the Bondar-Clegg sample preparation and analytical process for DCN analyses is described as follows: a 20 g split of pulp (80% passing -150 mesh) was mixed with cyanide solution to 50% solids. The solution was agitated for one hour at 80°C, vacuum filtered, and the liquor analyzed by AA. There is no mention of the procedure used by Bondar-Clegg for FA or by RMGC for DCN analysis.

In 1988, Priority and WC used Bondar-Clegg and RMGC for FA analysis. In 1990, Priority and WCC used RMGC for FA, but there is no evidence that DCN work was done in 1990. Drill logs show no evidence that any QA/QC samples were submitted. Samples were assayed only for gold. There is no information available as to drill contractors, drilling methods, bit sizes or sampling procedures used during the Priority and WCC drill programs from 1986 to 1990.

No information is available on drill contractors, drilling methods, bit sizes, sampling procedures, laboratories, or analytical methods used by Kennecott during their work in the South Mercur area in 1991 or 1997.

No information is available on drill contractors, drilling methods, bit sizes, sampling procedures, laboratories, or analytical methods used by Barrick during their work in the South Mercur area in 1992. In 1996, RC drilling for Barrick was performed by Lang Drilling and FA with a gravimetric finish were used for assays completed at RMGC. No additional information is known concerning bit sizes or sampling procedures.

From available information in Batson (2014), the core drilling at South Mercur was done by National Exploration of Elko, Nevada using an Atlas Copco CS14C crawler mounted core rig. Samples were shipped by Old Dominion Freight Line. Preparation of samples was done at Elko, Nevada by ALS. Assaying was done by ALS either at Reno, Nevada or North Vancouver, B.C., Canada using FA with an ICP-AES finish for gold, an ICP-MS procedure to determine silver, and 35 other elements were analyzed using an aqua regia digestion with an ICP-AES finish.

### **11.1.2.3 West Mercur**

Getty used CMS and RMGC for drilling at West Mercur. CMS was the primary lab used in 1981 and RMGC was the primary lab used in 1982. During 1981 an AA method was used which had been developed at the Getty Mercur mine. This involved a one-hour roast at 550°C prior to aqua regia digestion of the pulp that was then analyzed by AA. In 1982, a similar method was used by Rocky Mountain, but the roasting temperature was increased to either 650° or 750°C, as described previously. Later investigation showed that the higher roast temperatures had had the effect of volatilizing some of the gold, leading to lower-than-true assay results. Later reruns by FA and with a lower roast temperature returned gold values significantly higher than had been first reported by RMGC.

During 1981 Getty used O’Keefe Drilling of Polson, Montana as the RC drill contractor. The 5-ft samples were collected starting in bedrock. Some RC holes were deepened by an unnamed core drilling contractor. No information is available as to RC drill technique (hammer or tri-cone), bit diameter, or sampling procedures on the rig. Details are lacking from the 1982 campaign as to drill contractors, drilling equipment used, bit sizes, and sampling techniques.

During the later Barrick drilling from 1986 to 1988, assay certificates are generally missing, as is drilling and sampling information.

There is no information as to drilling, sampling or assaying during the Kennecott and the Rochester-Kennecott drilling in the West Mercur area from 1990 to 1992, or for the Kennecott 1995 drilling, for Barrick during their 1996 campaign or for the BHP 1996 drill campaign.

Most details are lacking for the three holes drilled by Barrick during 1999.

### **11.1.3 Sample Security Procedures for Pre-Ensign Historical Drilling**

There is no information about sample security procedures in use during any of the pre-Ensign drilling programs in the Mercur Project area by any of the previous operators from the 1960s to the 1990s.

## **11.2 Ensign Sample Preparation, Analysis and Security**

### **11.2.1 Ensign Soil Samples 2020 – 2021**

The 2020 North Mercur soil samples obtained for Ensign by North American were collected and labelled by contractor personnel and stored at a nearby base camp. At the conclusion of the field work, the samples were grouped into lots of about 25 and placed into large woven nylon-filament “rice sacks” for shipment to the laboratory. The samples were transported from North American’s

base camp to Elko, transferred to a principal of Ensign, and delivered to ALS in Reno, Nevada. ALS is a commercial laboratory that was independent of Ensign and is certified under ISO/IEC 17025:2017 and ISO 9001:2015. All ALS geochemical hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures.

At ALS the samples were dried and screened to a minus 180 µm size, equivalent to an 80-mesh sieve. Then a 25 g split of the fine fraction was dissolved with aqua regia (a 3:1 mixture of concentrated hydrochloric and nitric acids). The content of gold and 50 other elements was determined by ICP-MS and ICP-AES. Samples with silver contents over the limit of 100 g/T Ag were re-analyzed using aqua regia digestion and ICP-AES or AA methods.

The 2021 South Mercur samples from the Violet Ray prospect were collected and labeled by contract personnel of McKay Mineral Exploration, LLC. The samples were stored at their nearby base camp and either picked up by Ensign geologists at the camp or delivered to the Mercur project office at the Barrick Mercur mine site. The samples were stored in a locked facility until shipment for geochemical analyses.

#### **11.2.2 Ensign Rock Samples 2021 – 2022**

During 2021, Ensign and contract geologists collected 292 rock samples which were analyzed by AAL in Sparks, Nevada. The samples were crushed to pass a 10-mesh screen (equivalent to 2 mm or smaller particle size). A 250 g split of the crushed sample was pulverized to 85% passing a 250-mesh screen (less than 75 µm in size). From this pulp a 30 g subsample was analyzed by FA fusion with an inductively coupled plasma – optical emission spectrometry (“ICP-OES”) finish. In the event of an overlimit result (more than 10 g/T Au, or 100 g/T Ag), another 30 g subsample was assayed by FA with a gravimetric finish. In addition, silver, arsenic, calcium, copper, iron, mercury, molybdenum, lead, sulfur, antimony, uranium, and zinc were determined by ICP-OES using a 0.5 g sample of the prepared pulp dissolved in a 2-acid (hydrochloric and nitric acids) digestion (AAL package 2AO-12). An additional six rock samples were analyzed by ALS of Reno, Nevada in late 2021. Each sample was dried, weighed, crushed to 70% passing a 2 mm mesh and was then split to obtain 250 g which was pulverized to 85% less than 75 µm. Gold analyses were determined at both the Reno and North Vancouver facilities by FA of a 30 g portion of the pulp with an AA finish.

During 2022, 108 rock samples were collected by Ensign employees and were analyzed by Bureau Veritas (“BV”) using a 30 g sample of the pulp that was assayed by FA with an AA finish. BV is an independent, international analysis company which maintains ISO 17025 accreditation.

Results from these rock samples are being used to plan further exploration.

### **11.2.3 Ensign Drill Samples 2020**

For the 2020 program, RC drilling was used, and samples were collected over 5-ft intervals. Because the samples were generally wet from the water injection during drilling to suppress dust, a rotary cyclone splitter was used to collect the assay samples. The 6-digit numbers on commercially available, prelabeled sample bags, were noted on drill logs and recorded by the assay laboratory. All bags were labeled with hole number and footage with a permanent marker by Ensign personnel at the drill rig. Personnel from Major Drilling were responsible for collecting all samples but a geologist from Ensign was present at all times during sample collection to ensure proper sampling procedures.

After each sample was taken from the rotary splitter, the Olefin bag was closed and placed on a large plastic sheet so that excess water could drain from the sample bags. Given the volume of sample and water produced from each 5-ft drilling interval, it was impossible to prevent loss of some of the finer fraction of the sample. Because drilling was carried out during early December, the samples usually froze on the plastic sheets.

After completion of each drill hole, all samples were loaded onto a pickup truck and transported a few miles to Ensign's camp. At this camp the samples were thawed and dried in an inclined, enclosed trailer to allow more water to drain from the samples prior to shipping. A propane heater within the trailer maintained a temperature of between 20° and 40°C. The dried samples were transported to a rented, locked and heated storage locker in Lehi, Utah. At the conclusion of the drill program, the samples were shipped in three lots by USF Reddaway Trucking to AAL in Sparks, Nevada.

AAL is an accredited lab, independent of Ensign. It has the ISO 17025 and the Nevada Department of Environmental Protection accreditations starting in 2013. It is accredited with an ISO 17025:2017 Certificate with an Effective Date of December 2, 2020.

At AAL, the drill samples were dried and crushed to pass a 10-mesh screen (equivalent to 2 mm or smaller particle size). A 1-kg split of the crushed sample was pulverized to 85% passing a 250-mesh screen (less than 75 µm in size). From this pulp a 30 g subsample was analyzed by FA fusion with an ICP-OES finish. In the event of a result of more than 10 g/T Au, another 30 g subsample was assayed by FA with a gravimetric finish. In addition, silver, arsenic, calcium, copper, iron, mercury, molybdenum, lead, sulfur, antimony, uranium, and zinc (package 2AO-12) were determined by ICP-OES using a 0.5 g sample of the prepared pulp dissolved in a 2-acid (hydrochloric and nitric acids) digestion.

Some of the samples were analyzed for gold by cyanide-leach extraction. Ensign commissioned AAL in Sparks, Nevada to perform 2-hour cyanide-leach shaker tests on 30-g aliquots of pulps

from Ensign's 2020 South Mercur RC drilling. The pulps had a nominal particle size of 85% passing 75 µm. The 30 g sample was weighed into a centrifuge tube and 60 ml of 0.30% NaCN/NaOH solution was dispensed into the tube, which was tumbled for two hours. The tubes were then centrifuged and decanted for analysis of the solution, which was analyzed by ICP-OES.

#### **11.2.4 Ensign Drill Samples 2021**

In the summer of 2021, all geochemical services for drill samples were provided by ALS. Sample collection procedures were similar to the 2020 campaign described above, except that warmer temperatures allowed the samples to drain on the drill site before shipment. Personnel from ALS took custody of the samples at the Mercur Project site at regular intervals during the course of the 2021 drill program. The samples were transported either to ALS's laboratory facilities in Elko, Nevada or Guadalajara, Jalisco, Mexico for sample preparation. Each sample was dried, weighed, and crushed to 70% passing a 2 mm mesh. This was then split to obtain a 250 g sample and pulverized to 85% passing a 75 µm screen. The resulting pulps were then shipped to the ALS facilities in Reno, Nevada or North Vancouver, British Columbia, Canada for analysis by FA from a 30-g split with an AA finish (ALS procedure Au-AA23). The North Vancouver facility also analyzed for 35 elements by aqua regia digestion and ICP-AES analysis (ALS procedure ME-ICP41). Overlimit results of the multi-element determination were rerun by the same process with a diluted solution. Samples that assayed >10 g/T Au were reanalyzed by 30-g FA with a gravimetric finish (ALS procedure Au-GRA21).

#### **11.2.5 Ensign Drill Samples 2022**

All RC drill samples were bagged at the drill site and left to dry overnight. Samples were transported by Ensign geologists to the Mercur mine office and stored in palletized bins or supersacks provided by BV.

The core drilling contractor applied orientation marks to the core samples at the drill site. The core samples were transported to the core facility, a framed tent next to the Mercur mine office. Geologists marked, logged, split core using a rock saw, bagged and placed the samples into BV-supplied shipping containers.

BV personnel periodically took custody of and transported the accumulated drill samples from the Mercur storage facilities to the BV preparation facility in Elko, Nevada. Each sample was dried, weighed, crushed to 70% passing a 10-mesh screen, split to 250 g and pulverized to 85% passing a 200-mesh screen (BV procedure PRP70-250) to form the pulp material which was used for all geochemical procedures.

Pulps for gold assay were shipped to the BV laboratory in Reno Nevada, where a 30-g sample of the pulp was assayed by FA with an AA finish (BV procedure FA430) to determine the gold content. The detection limit reported by BV was 0.005 ppm Au (5 ppb). Samples which returned more than 10 ppm Au were rerun with a gravimetric finish (BV procedure FA530).

At the beginning of the drill campaign, a split of the pulp of each sample was sent by BV from Reno to Vancouver, B.C., where a 0.25 g split was dissolved with a four-acid digestion and 45 elements were analyzed by an ICP-MS process (BV procedure MA200). For the latter half of the campaign, the multi-element analysis was discontinued, and only FA results were reported.

During the early months of 2022, a number of drill sample pulps from the 2021 campaign were subjected to a cyanide leach test (BV procedure CN403) in which a 30-g sample was shaken for one hour in a 60 mL cyanide solution, which was then analyzed by AA. The lower and upper detection limits for this test were 0.03 ppm Au and 50 ppm Au, respectively.

In early 2023 selected gold-bearing pulps from the 2022 campaign were sent to American Assay Labs in Elko, Nevada for cyanide leach testing for gold. A 30-g sample of each pulp was leached for two hours, and the resultant liquor was analyzed by ICP-OES (procedure IO-CNAu230). The lower and upper detection limits were 0.01 ppm Au and 100 ppm Au, respectively.

### **11.3 Quality Assurance / Quality Control Programs**

QA/QC programs undertaken as part of the various exploration and development drilling programs of historical operators, including Ensign, are described in this subsection. Very little information survives on what QA/QC procedures were used by early historical operators in the Mercur Project area. Available information is summarized below.

#### **11.3.1 Pre-Ensign Historical QA/QC Procedures**

##### *11.3.1.1 Main Mercur*

There is little information available on QA/QC procedures used during Newmont, Getty, and Barrick drilling from the 1960s through the 1990s. There are brief memoranda describing the programs (e.g. Klatt, 1980a) but no comprehensive review of either Getty or Barrick QA/QC programs has been found. There is no information available on Newmont's drilling. During the Getty drilling from 1973 to 1978, a Certified Reference Material ("CRM", also known as a standard) was inserted into the sample stream for every ten drill samples (Klatt, 1980). These CRMs were fabricated by Getty personnel using some of the large "metallurgical" samples regularly collected during this early drilling. No information is available for later Getty and Barrick drilling conducted during the 1980s and 1990s. Control samples for QA/QC were inserted into the sample stream at a rate of one standard per 10 samples for internal analytical work by both Getty and Barrick.

#### **11.3.1.2 South Mercur**

It is apparent from copies of Homestake drill logs that there were a few insertions of CRMs assayed along with drill samples. The CRMs were inserted at a rate of 5%. A few check assays (less than 5%) were performed, but it is unclear whether these checks were assayed by the same laboratory or sent to a referee laboratory.

The 1984 Touchstone drill logs show no evidence of any QA/QC procedures on the samples taken. There is no evidence from the logs that Touchstone submitted any QA/QC samples along with their drill samples.

The limited number of copies of original Bondar-Clegg assay certificates from Priority's in 1986 and 1988 drilling provide no indication that a QA/QC program was implemented. Similarly, there is no evidence on geologist's logs of any QA/QC procedures.

There is no information regarding any QA/QC procedures from the Getty drilling at South Mercur during 1973-1985, or for the 1991 Rochester – Kennecott drilling. Also, there is no information available on QA/QC procedures in use by Barrick during their campaigns in the South Mercur area from 1992 to 1996.

During the 2013 Priority drill campaign, chain-of-custody procedures were followed while shipping samples to the ALS prep lab in Elko, Nevada. Batson (2014) states that no QA/QC samples were inserted by Priority into the assay sample stream during the 2013 campaign.

#### **11.3.1.3 West Mercur**

There is very little information available on QA/QC procedures that were used by Getty during the drilling programs carried out in the West Mercur area. During the 1981 Getty drilling, it is apparent that a CRM was submitted with every ten samples taken at the drill. There is no information on QA/QC procedures from the 1982 Getty drilling.

There is no information available regarding QA/QC procedures for the Barrick drilling that occurred in 1986, 1988, 1996 and 1999. There is also no information available on QA/QC procedures for any of the Kennecott and BHP drill campaigns in the West Mercur area.

#### **11.3.1.4 North Mercur**

There is no information available with respect to QA/QC procedures that may have been used during the Centurion and Kennecott drilling in 1991 and 1994, respectively.

### **11.3.2 Ensign QA/QC Program 2020**

A system of inserting blanks, duplicates and CRMs was instituted by Ensign for drilling at South Mercur. In general, for every 10 samples taken on the rig, a quality control sample, either a duplicate, blank, or CRM was inserted into the numbered sample stream. Half of the duplicates were field duplicates taken at the rig by means of a y-splitter attached to the outflow port of the cyclone splitter to give two roughly equal samples. The other duplicates were pulp duplicates, where an empty bag was inserted into the sample stream with instructions to the lab to prepare an additional standard size pulp, with its own number, from the previous sample number. An equal number of coarse blanks and CRMs were submitted with drill samples. The certified CRMs were prepared by Minerals Exploration and Environmental Geochemistry of Reno, Nevada ("MEG").

In addition to Ensign's 10% insertion rate of QA/QC samples, all of the internal CRMs, blanks and duplicates run by AAL were included in the analysis of the QA/QC results. These included 110 preparation duplicates (pulp prepared from 1 kg splits from the minus 10-mesh coarse crushed sample), 33 coarse blanks, and 48 standards for a total of 191 laboratory QA/QC samples. A total of 931 drill samples were analyzed, yielding a 20.5% insertion rate of QA/QC samples.

Ensign's protocol for interpreting the analytical results for the CRMs, blanks and duplicates was established by Wulftange (2021). Any CRM analysis that exceeded  $\pm 3$  standard deviations from the certified value was considered a failure and triggered re-assay of the batch. Any two consecutive CRM assays that exceeded the warning zone limit of  $\pm 2$  standard deviations from the certified value were also deemed a failure and triggered re-assay of the batch. Coarse blanks were made from Sakrete™ sand and gravel material obtained from a home improvement store. All blank assays that exceeded the warning limit of 6.0 times the detection limit for a given analytical method were investigated. If the potential for mis-labeled QA/QC samples was ruled-out, Ensign would have the associated batch re-assayed if the blank assay was 2% of the analysis of the previous sample plus 2.0 times the detection limit.

In October of 2020, Ensign carried out a soil sampling program in the North Mercur portion of the property (DeMars, 2020). Most samples weighed between 600 and 900 g. A total of seven duplicates were taken in the field and four blanks and four CRMs were inserted into the sample stream by Ensign.

### **11.3.3 Ensign QA/QC Program 2021**

The QA/QC program used by Ensign for the 2021 drill program at Main and West Mercur was similar to the program implemented for the 2020 campaign. The insertion rate of CRMs, blanks, field duplicates and preparation duplicates was the same. During the 2021 program, certified pulp blank material was obtained from Ore Research and Exploration P/L of Australia ("OREAS").

OREAS in Melbourne, Australia, and replaced the sand and gravel material that was used for the 2020 campaign. The same two CRMs from MEG were used, as well as two additional CRMs purchased from OREAS. The blanks and CRMs were submitted to the laboratory in sealed plastic bags along with the drill samples.

#### **11.3.4 Ensign QA/QC Program 2022**

The QA/QC for the 2022 drill program at Main Mercur was identical in most respects to the programs followed by Ensign in prior drilling campaigns during the previous two years. On average, one QA/QC sample for every 10 drill samples was analyzed. The same two OREAS CRMs used during the 2021 campaign were used in 2022. The CRM pulps were placed into the sample stream at a rate of about one every 40 samples, as in previous years. The same blank material, OREAS 22h was also used and submitted in a similar manner at a similar rate as the CRMs. Field and preparation duplicates were inserted by Ensign or prepared by the laboratory, each at a rate of one every 40 samples. Insertion rates for BV's internal QA/QC program consisted of approximately 3% pulp duplicates, 3% preparation duplicates, 12% pulp CRMs, and 4% pulp blanks. Three pulp blanks per certificate were generally inserted with each batch. The results of BV's internal checks were reported at the end of each assay certificate.

### **11.4 Quality Assurance/Quality Control Results**

#### **11.4.1 Pre-Ensign Historical QA/QC Results**

There is no information available regarding the results of any QA/QC programs instituted for drilling completed within the Mercur Project area by any of the operators prior to Ensign.

#### **11.4.2 Ensign QA/QC Results**

Drill samples from South Mercur and West Mercur were obtained in 2020 and analyzed by AAL in Sparks, Nevada. The Main Mercur drill samples were analyzed by ALS in Reno, Nevada in 2021 and by BV in Reno, Nevada and Vancouver, British Columbia in 2022. Table 11-1 summarizes the drilling and accompanying QA/QC samples analyzed by the various laboratories. An acceptable insertion rate of 11.0% QA/QC samples was maintained for all Ensign drilling.

**Table 11-1: Summary of 2020 to 2022 Drill and QA/QC Samples**

Sample Type	Count
Drill Samples Submitted for Analyses	11,353
Ensign Field Duplicates	381
Ensign Inserted QA/QC CRMs	500
Ensign Inserted QA/QC Blanks	368
Total Ensign QA/QC (Blanks, CRMs and Duplicates)	1,249
Ensign QA/QC Insertion Rate	11.0%
Laboratory Preparation Duplicates	223

Assays for all Ensign samples were originally measured and reported in metric units (g/T Au). Because CRM certified gold grades and standard deviations are also reported in ppm Au, all charts and tables related to the CRM evaluation were not converted from metric to imperial units. To be consistent with the CRM evaluation, charts, tables and discussion of blank and duplicate QA/QC data is also presented in metric units.

#### 11.4.2.1 Certified Reference Materials

The CRMs used for Ensign's 2020 to 2022 drill programs at Mercur were obtained from MEG and OREAS. At least two CRMs were submitted in any given assay batch, one with a relatively low certified gold grade and the other five to ten times that grade. The OREAS CRMs have certified values for cyanide leach digestions, whereas the MEG CRMs do not. Table 11-2 provides the overall statistics by laboratory associated with the CRMs in use during the 2020 to 2022 drill programs, and Table 11-3 lists the failures associated with the CRMs.

**Table 11-2: Certified Reference Materials**

CRM	Laboratory	Certified Gold Values		Insertions	Number of Failures	Failure Rate	Average of Data vs Target Value
		Target (g/T)	Std Dev				
MEG-Au.11.17	AAL	2.693	0.118	17	4	24%	-3.6%
MEG-Au.11.17	ALS	2.693	0.118	23	0	0%	4.8%
MEG-Au.19.05	AAL	0.663	0.046	15	4	27%	-13.0%
MEG-Au.19.05	ALS	0.663	0.046	22	0	0%	-3.0%
OREAS 264	ALS	0.307	0.011	72	1	1.4%	2.9%
OREAS 264	BV	0.307	0.011	152	6	3.9%	10.9%
OREAS 277	ALS	3.39	0.12	67	0	0%	1.0%
OREAS 277	BV	3.39	0.12	132	1	0.8%	3.5%
All	All			500	16	3.2%	0.2%

**Table 11-3: List of Failures for the CRMs**

CRM	Drilling Year	Lab	Sample ID	Target (g/T)	High /Low	Fail Limit	Failed Value	Certificate
MEG-Au.11.17	2020	AAL	696223	2.693	Low	2.339	2.27	SP0134535
MEG-Au.11.17	2020	AAL	696289	2.693	Low	2.339	2.31	SP0134535
MEG-Au.11.17	2020	AAL	696378	2.693	Low	2.339	2.14	SP0134665
MEG-Au.11.17	2020	AAL	696488	2.693	Low	2.339	2.06	SP0134665
MEG-Au.19.05	2020	AAL	696179	0.663	Low	0.525	0.514	SP0134535
MEG-Au.19.05	2020	AAL	696422	0.663	Low	0.525	0.461	SP0134665
MEG-Au.19.05	2020	AAL	696532	0.663	Low	0.525	0.451	SP0134665
MEG-Au.19.05	2020	AAL	696642	0.663	Low	0.525	0.449	SP0134665
OREAS 264	2022	ALS	PN0000725277	0.307	High	0.34	0.373	EL21336699
OREAS 264	2022	BV	4563720	0.307	High	0.34	0.35	EKO22000179B
OREAS 264	2022	BV	4560193	0.307	Low	0.274	0.268	REN22000603
OREAS 264	2022	BV	4564143	0.307	Low	0.274	0.272	EKO22000187B
OREAS 264	2022	BV	4564011	0.307	High	0.34	0.348	EKO22000187A
OREAS 264	2022	BV	4566991	0.307	High	0.34	0.345	EKO22000250
OREAS 264	2022	BV	4560625	0.307	High	0.34	3.345	EKO22000187
OREAS 277	2022	BV	4565407	3.39	Low	3.21	2.968	EKO22000215B

Charts were made for each set of CRM assay data for each laboratory. Examples of these charts are shown on Figure 11-1 and Figure 11-2. The target value or the certified average value (green line), and the Upper and Lower Specification Limits (“USL”, light blue line and LSL”, yellow line), are shown on the chart. The USL and LSL are the target value plus or minus three times the certified standard deviation, respectively, and CRM assays that exceed these limits are considered failures. Also shown on the chart are the sample population average (dashed red line), and the Upper and Lower Control Limits (“UCL”, gray line and “LCL”, pink line), which are the population average plus or minus three times the population standard deviation, respectively. These lines provide information regarding CRM assay variability and bias but are not used to define CRM failures.

Figure 11-1: Control Chart for MEG-Au.19.05, AAL

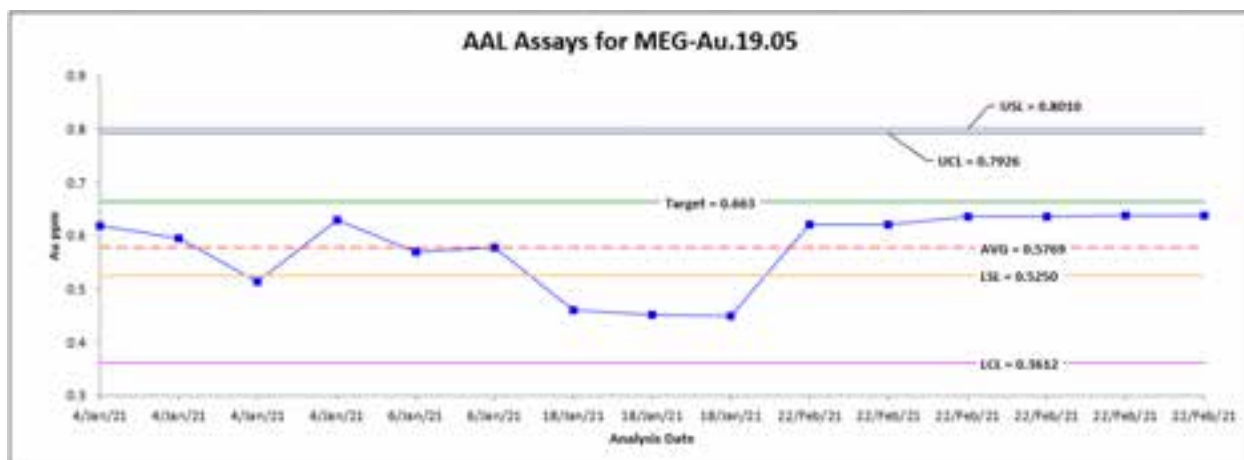
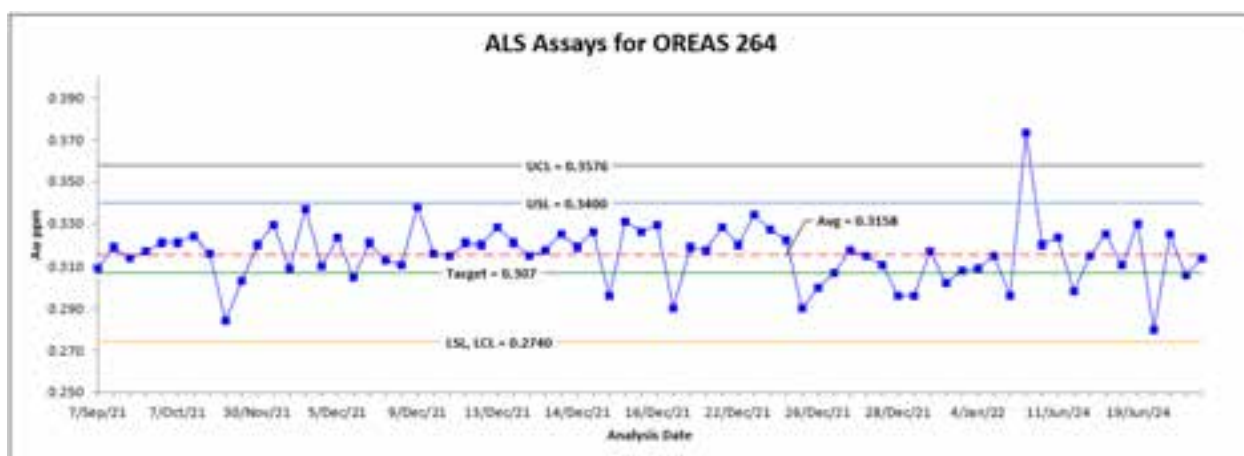


Figure 11-2: Control Chart for OREAS 264, ALS



There were four low failures each for the MEG-Au.11.17 and MEG-Au.19.05 CRMs assayed at AAL, which are associated with the 2020 South Mercur and West Mercur drill programs (Table 11-2 and Table 11-3). The gold assay results of these CRMs were consistently low, with 23 of 32 CRMs below the certified value. All the AAL MEG-Au.19.05 CRMs assayed below the target value (Figure 11-1). The first eight MEG-Au.11.17 assays were consistently below the target value, however, CRM assays after January 18, 2021 were consistently above the target value. Ensign believed at the time, and Mr. Lindholm acknowledges the possibility that the clustered CRM assays below the Specification Limits could be due to water damage of the CRMs during shipment of the samples to the lab (Mako, C., 2021a). Ensign directed AAL to re-assay the pulps from 71 mineralized samples (drill holes SM-20-005, SM-20-011) associated with the eight failed CRM assays. Seven MEG CRMs were inserted into the re-assay sample stream. The re-assays were reasonably consistent with the original assay results, and there were no CRM failures (Mako, C.,

2021b). The original assays associated with the failed CRMs were replaced by the re-assay values.

There are no ALS CRM assay failures associated with the 2020 drilling program. However, the sample population averages of MEG-Au.11.17 and MEG-Au.19.05 relative to the target values, as shown in Table 11-2, indicate slight positive and negative biases of 4.8% and 3.0%, respectively, in the CRM assays.

There were eight CRM assay failures recorded for the 2021 to 2022 drilling programs. One occurred at ALS for OREAS 264 and is shown in Figure 11-2. The remaining seven were associated with BV assays, six on OREAS 264 and one on OREAS 277. One BV assay of OREAS 264 was unusually high and is within the Specification Limits of OREAS 277. Although it cannot be confirmed, this high CRM assay could have resulted from a mis-labeled CRM. Some of the other CRM failures do not significantly exceed the Specification Limits. Positive bias of averaged CRM assays is apparent for ALS data at 1.0% to 2.9%. The positive bias is higher for BV data at 3.5% to 10.9%, although the latter value is skewed by the possible mis-labeled CRM assay. Mr. Lindholm recommends that all assays exceeding their respective Specification Limits and average CRM assays showing bias relative to the target values be investigated and resolved, if possible.

There were 19 CRM assays with analysis dates of June 2024 in Revival's CRM database that were included in the CRM analysis for this report. These were assayed at ALS, and there were no associated failures with this data set. The QA/QC samples were submitted by Revival in 2024 with drilling samples that had not been assayed by Ensign previously.

#### **11.4.2.2 Blanks**

Coarse blank material ("Company Blank"), which consisted of Sakrete™ gravel obtained from a home improvement store, was submitted with drill samples to AAL for the 2020 South Mercur and West Mercur drilling. Two pulp blank reference materials, OREAS 22f and OREAS 22h, were submitted to ALS with 2021 drill samples. These same OREAS certified pulp blanks were used in the 2022 drill program for samples submitted to BV. The warning limit Mr. Lindholm uses to identify a failure of a blank assay is five times the lower detection limit. For the AAL, ALS and BV gold analyses, this limit is 0.015 g/T Au, 0.025 g/T Au and 0.025 g/T Au, respectively. The warning limit for Ensign's QA/QC programs was six times the detections limit, but the slightly higher threshold did not result in fewer blank failures.

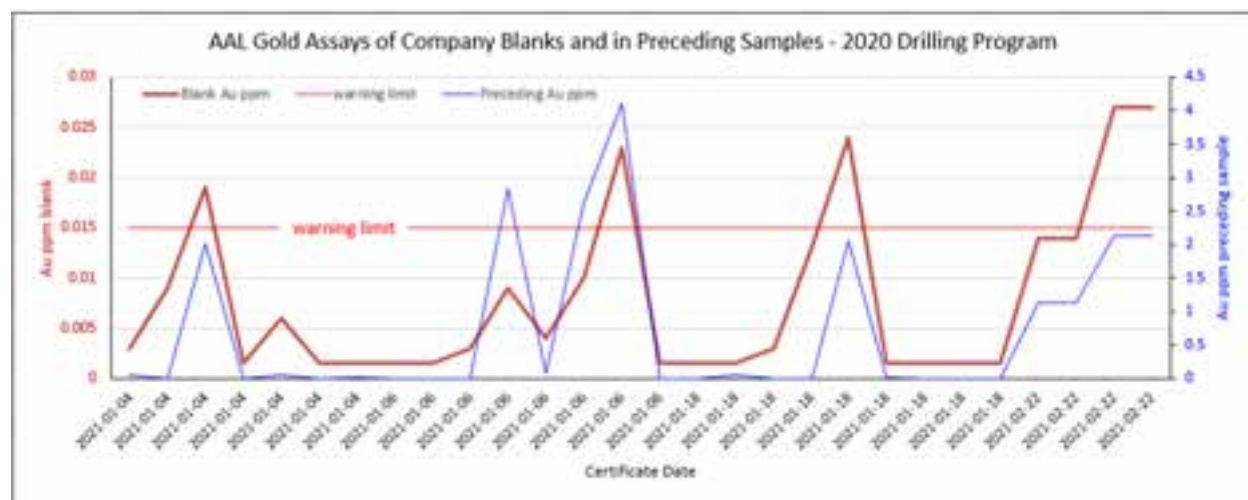
Pulp blanks test for possible contamination during the analytical phase of assaying, but do not test the sample preparation phase. Most sample contamination overwhelmingly occurs during sample preparation, which is tested by the use of coarse blank material.

There were five coarse blank assays that exceeded the warning limit for AAL, which are listed in Table 11-4 and plotted on Figure 11-3. The chart shows both the preceding sample and the gold value of the blank, ordered by date. Three of these are the same sample number on two different certificates, suggesting the original assay was flagged as a failure and rerun. Although the re-assays were consistent with the original results, likely indicating the pulp assays are reasonably accurate, it does not preclude the possibility of contamination during sample preparation. In all, three of 30 of the coarse blank assays would be considered failures, which is a rate of 10%. All of the blank assays followed samples with grades in excess of 2 g/T Au, which does suggest that contamination during sample preparation was occurring at the lab. However, the grades of the blank assays are low, which indicates that the magnitude of the possible contamination is correspondingly low. Also, the coarse blanks were not certified, and it is possible that the gravels contained higher than background levels of gold. Ensign discontinued use of the Company Blank material following the 2020 drill program.

**Table 11-4: 2020 Drilling Program Coarse Blank Assay Failures**

Blank Sample Number	Certificate	Report	Method	Previous Sample Number	Preceding Assay	
					(g/T Au)	(g/T Au)
695571	SP0134536	44202	Fire/ICP	695570	4.11	0.023
696113	SP0134535	44200	Fire/ICP	696112	2.01	0.019
696554	SP0134665	44214	Fire/ICP	696553	2.05	0.024
696554	SP0134993	44249	Fire/GrH	696553	2.14	0.027
696554	SP0134993	44249	Fire/ICP	696553	2.14	0.027

**Figure 11-3: 2020 Drilling, Coarse Blank and Preceding Sample Gold Assays, AAL**



For the 2021 to 2022 drilling campaigns, none of the 40 OREAS 22f or the 45 OREAS 22h pulp blanks assayed at ALS and BV, respectively, exceeded the warning limit. There was a single failure in each of the 115 ALS blank assays of OREAS 22f (Figure 11-4) and 63 BV blank assays of OREAS 22h (Figure 11-5), yielding overall failure rates of 0.9% and 1.6%, respectively. The preceding assay grade for both cases was not anomalous. The extreme high grade of the ALS blank assay suggests that a CRM was mistakenly submitted rather than a blank, although this cannot be confirmed, and the returned assay was not within the Specification Limits of any of the CRMs in use at the time. Regardless, the low failure rates do not indicate a systematic contamination issue in the analytical phase of the assaying process during the 2021 to 2022 drilling programs.

**Figure 11-4: 2021 to 2022 Drilling, Pulp Blank and Preceding Sample Gold Assays, ALS**

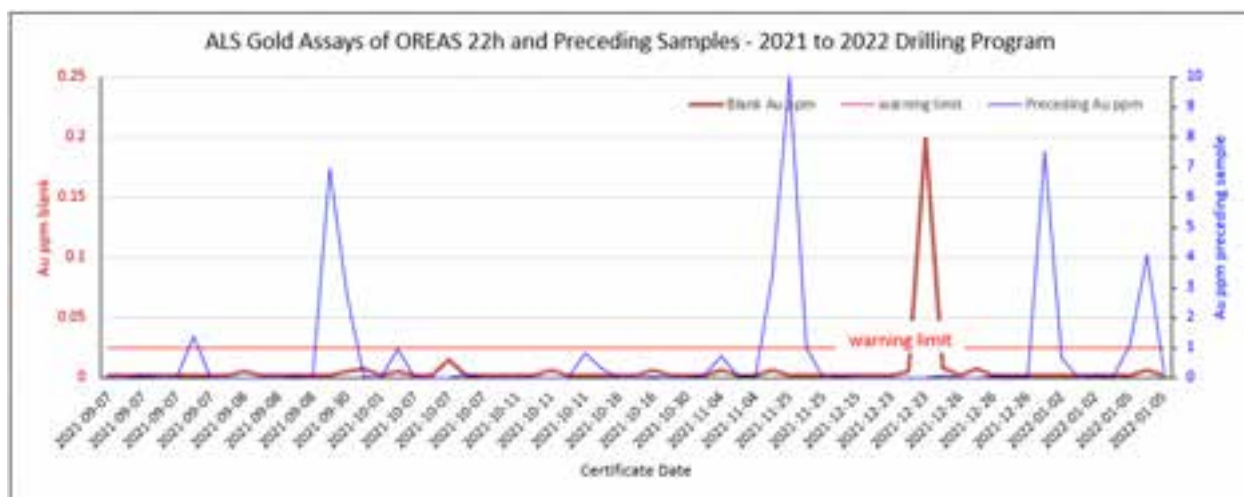
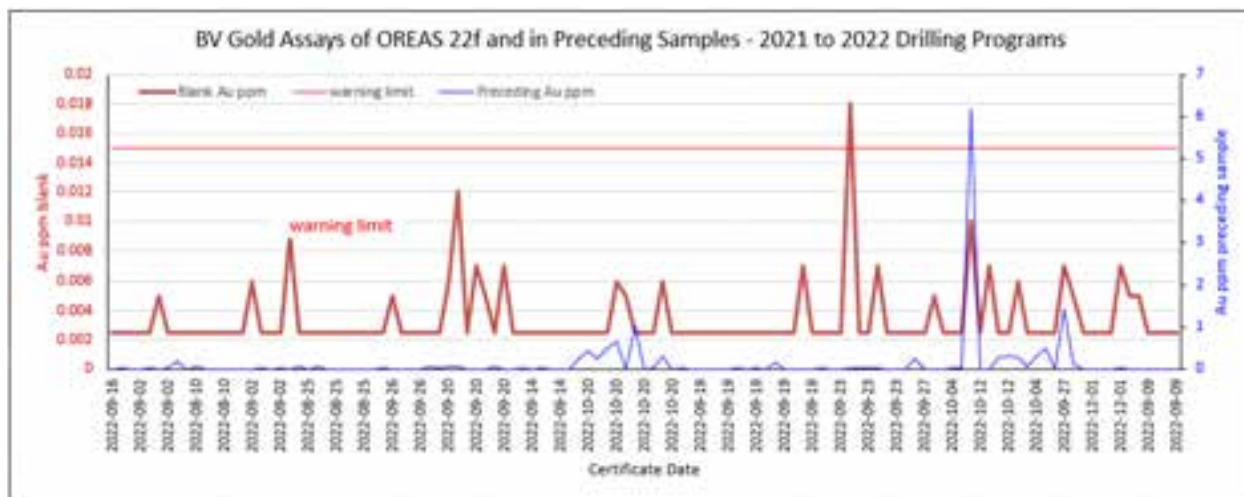


Figure 11-5: 2021 to 2022 Drilling, Pulp Blank and Preceding Sample Gold Assays, BV



#### 11.4.2.3 Duplicates

Field duplicates were collected at the drill rig throughout the 2020 to 2022 drilling programs. Relative difference plots of field duplicate and original AAL, ALS and BV sample assays are shown on Figure 11-6, Figure 11-7 and Figure 11-8. All sample pairs with either original or duplicate assays that are below detection have been excluded from the charts. The relative differences were calculated by dividing the duplicate assay by the lesser value of the pair, which yields the largest relative difference compared to other methods (i.e. divide by the mean of the pair). Calculated differences with the duplicate assay greater than the original assay plot above the '0' relative difference line. One outlier pair with a relative difference greater than 1400% has been excluded from the plot of AAL sample pairs (Figure 11-6).

Figure 11-6: Relative Percent Difference of 2020 Drilling Field Duplicates, AAL

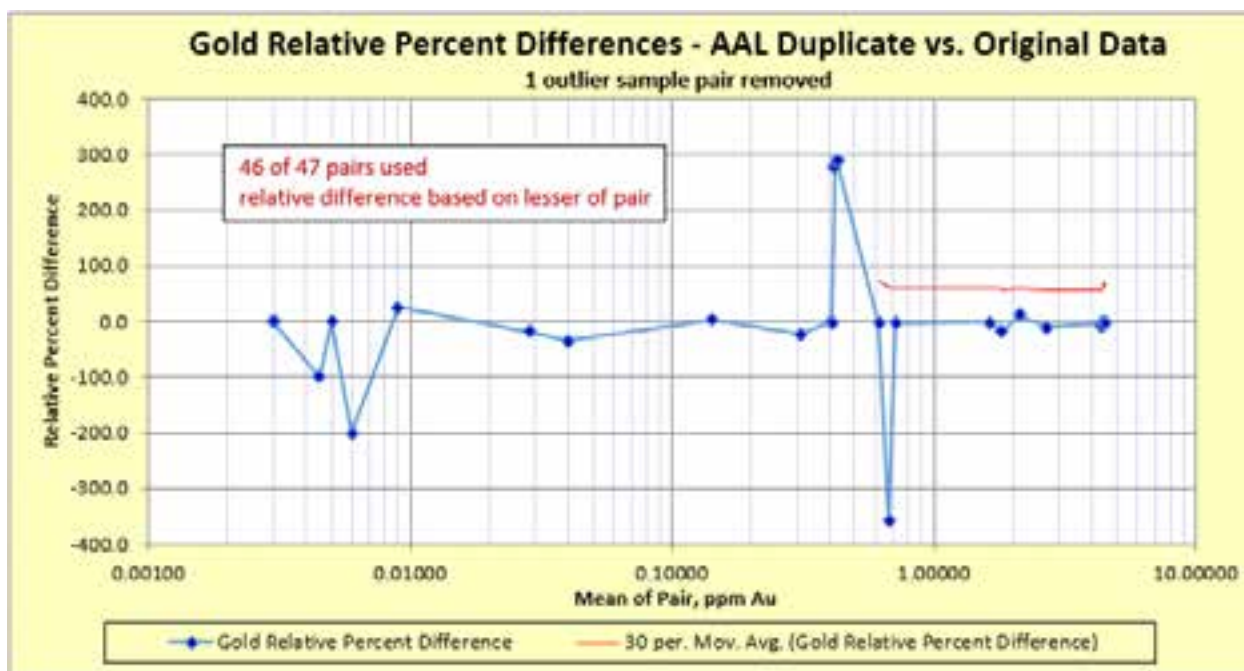


Figure 11-7: Relative Percent Difference of 2021 Drilling Field Duplicates, ALS

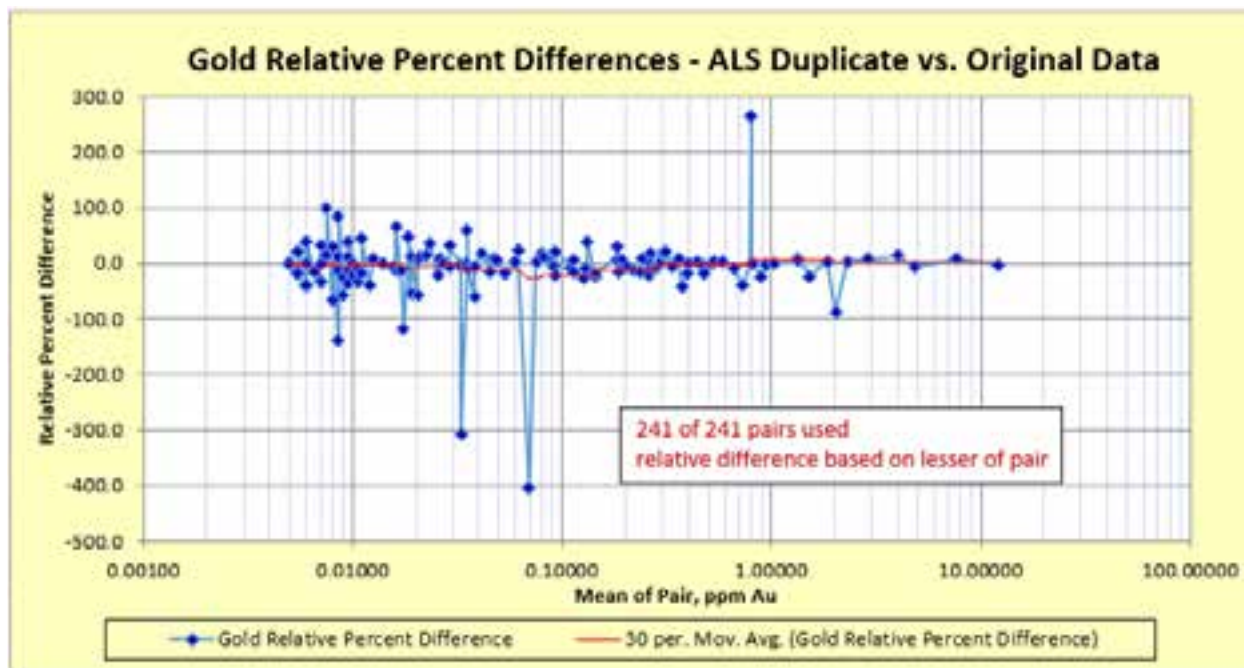
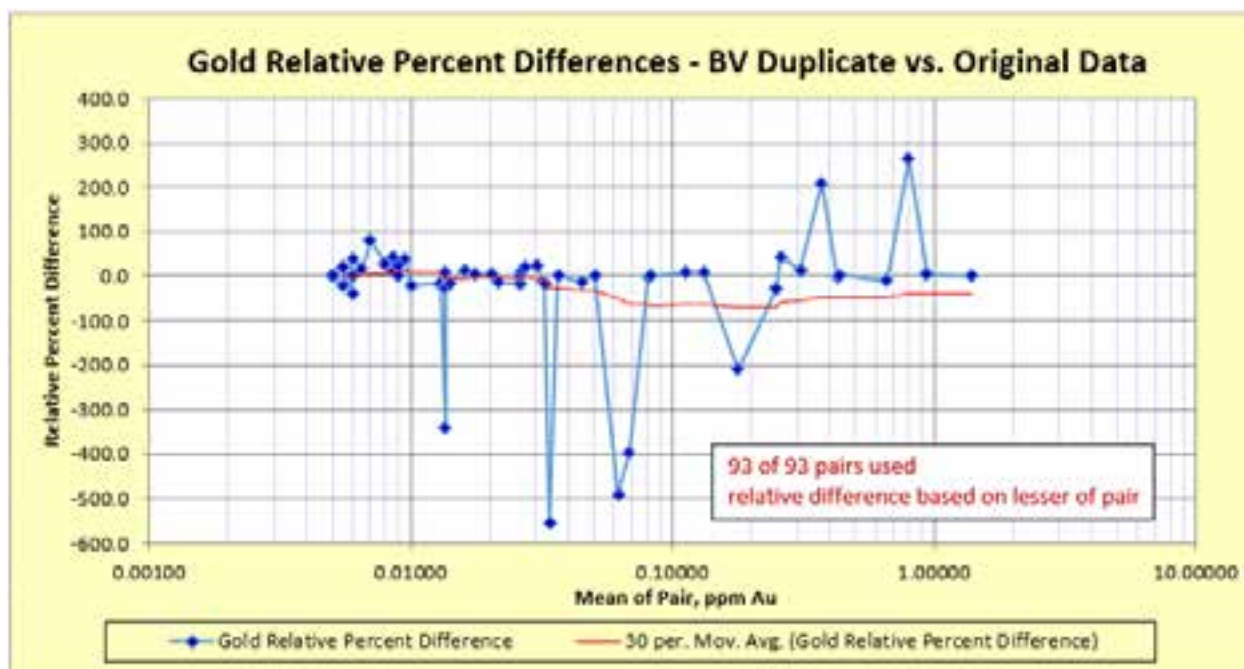


Figure 11-8: Relative Difference of 2022 Drilling Field Duplicates, BV



There are only 47 sample pairs on the chart for the AAL field duplicates, so variability and bias is more difficult to discern (Figure 11-6). However, the variability appears to be low with the exception of a few large relative differences, and there is minimal apparent bias. The variability in the ALS duplicate data is about 75% to ~0.04 g/T Au, and decreases to about 25% to 50% above grades of ~0.04 g/T Au (Figure 11-7). The trend of decreasing variability from lower to higher grades is apparent on the BV chart (Figure 11-8), although there are more relative differences greater than 200% with the original greater than the duplicate assay than the opposite case. There is some low bias indicated on the ALS and BV charts, however, the bias appears to be driven by a few high sample pairs with high relative differences.

In general, the variability in field duplicate data provides a measure of the inherent heterogeneity of gold in the Mercur deposits. Higher variability and a relatively large number of sample pairs with high relative differences indicates more heterogeneity of gold in the deposit. Any bias in the data could indicate a sample splitting issue at the drill rig, which is common when y-splitters that are not level are used.

## 11.5 Discussion of Sample Preparation, Analysis, Security and QA/QC Results

The available information regarding sample preparation, analysis, security and QA/QC data is limited for pre-Ensign exploration sampling and drilling programs. As a result, the quality of

historical drilling and assay results cannot be fully evaluated. However, a majority of the assays are documented with original or scans of assay certificates (see Section 12.1), and the assay results supported a successful mining operation. Mr. Lindholm considers there is somewhat lower confidence in the historical drill data than in Ensign's drilling results due to the lack of available QA/QC and other information. However, because the assay data was verifiable, Mr. Lindholm believes the historical data is adequate to support the estimation of mineral resources. Mr. Lindholm did consider the lower confidence in the historical drill data in classification of the mineral resources.

The overall failure rate of the CRM assays during Ensign's 2020 to 2022 drilling programs was 3.2%. However, nearly half of the failures were from the 2020 program, during which the CRMs may have been compromised, producing possible false failures. As a result of Ensign's investigation and substitution of re-assays of the samples associated with these CRM assays, Mr. Lindholm believes the results which were reported by AAL can be relied upon. Nearly all CRM values for the MEG CRMs were biased low, so the reported grade of drill-sample assays may be understated, although it is possible only the compromised CRMs values were understated. Removal of these eight CRM assays yields an overall failure rate of 1.7%.

There are no ALS CRM assay failures associated with the 2020 drilling program. However, there are slight positive and negative biases in the CRM assays relative to the target values.

There were eight CRM assay failures recorded for the 2021 to 2022 drilling programs, all but one of which were associated with BV assays. One BV CRM assay was unusually high and is within the Specification Limits of a different CRM in use at the time. Although it cannot be confirmed, this high CRM assay could have resulted from a mis-labeled CRM. Some of the other CRM failures do not significantly exceed the Specification Limits. Minimal bias was apparent in ALS CRM assays. The bias is slightly higher, but still low for BV data, although it is skewed by the possible mis-labeled CRM assay. Mr. Lindholm recommends that all assays exceeding their respective Specification Limits and average CRM assays showing bias relative to the target values be investigated and resolved if possible.

There were five coarse blank assays that exceeded the warning limit for AAL, and because grades of the preceding samples exceeded 2 g/T Au, some contamination during sample preparation is indicated. However, the failed coarse blank assays are relatively low at near potential open pit cutoff grades, so the magnitude of the possible contamination is correspondingly low. Also, the uncertified coarse blanks were obtained from a home improvement store, and it is possible that the gravels contained higher than background levels of gold. Ensign discontinued use of the coarse blank material following the 2020 drill program. There was a single failure in the 2021 and 2022 pulp blank assays.

Field duplicate assay pairs showed some expected variability. However, no systematic bias between original and duplicate assays was noted.

The issues identified by the QA/QC evaluation are not sufficient to preclude the use of Ensign's 2020 to 2022 drill program gold assays in exploration, target delineation and resource estimation. Mr. Lindholm suggests that, in the future, Revival's QA/QC program should include the use of coarse blanks to monitor possible contamination during sample preparation and the laboratory's assaying procedures.

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## SECTION 12 CONTENTS

12	DATA VERIFICATION .....	12-2
12.1	Drill-Hole Data Verification.....	12-2
12.1.1	Collar Coordinate Data .....	12-2
12.1.2	Down-Hole Survey Data .....	12-3
12.1.3	Drill Hole Assay Data.....	12-4
12.1.4	Geology .....	12-7
12.2	Independent Personal Site Inspections .....	12-7
12.3	Independent Verification of Mineralization .....	12-7
12.4	GPS Field Collar Checks .....	12-10
12.5	Metallurgical Test Data .....	12-12
12.6	Summary Statement .....	12-13
12.7	References .....	12-13

## SECTION 12 TABLES

Table 12-1:	2017 Verification Sample Results – West Mercur .....	12-8
Table 12-2:	2021 Verification Sample Results – West and South Mercur.....	12-9
Table 12-3:	2021 Verification Sample Results – North Mercur .....	12-9
Table 12-4:	Verification GPS Checks of Drill Collars at the Mercur Project .....	12-10
Table 12-5:	Verification GPS Checks of Ensign Drill Collars at the Mercur Project .....	12-11

## 12 DATA VERIFICATION

Data verification, as defined in NI 43-101, is the process of confirming that data has been generated with proper procedures, has been accurately transcribed from the original source and is suitable to be used. The Mercur Project database has been verified to the extent possible given the availability of supporting documentation.

The historical information available to Mr. Lindholm was electronic records in the form of spreadsheets and electronic images of paper records. Few original paper certificates of assays or other data were available for review. However, there were scans of original assay certificates and drill logs for a significant portion of the drill-hole database. There is no storage facility where cuttings, core, coarse rejects, pulps or other materials are available to be inspected or retested from drilling prior to 2020. Cuttings, core, coarse rejects, and pulps for drilling post-2020 are stored in a gated and locked storage facility at the Mercur Mine site.

In October 2024, Mr. Don Avery of GeoSequel® and a professional associate of RESPEC, conducted verification of Revival's Mercur drilling databases under the supervision of Mr. Lindholm. The databases consisted of Excel spreadsheets with collar, survey, and assay information that were output from Revival's primary cloud-based drill-hole database (MX Deposit). Mr. Avery imported the data directly from the spreadsheets provided by Revival into a SQL database (GeoSequel®) and used the built-in data validation routines to evaluate.

### 12.1 Drill-Hole Data Verification

#### 12.1.1 Collar Coordinate Data

The Getty and Barrick drill-hole collar locations at Main Mercur were surveyed by contracted and in-house professional surveyors using a local grid system. Documentation for the collar coordinates in the drill-hole database is sparse. Prior to the acquisition by Revival, Ensign had located a few old survey sheets, possibly compiled by professional surveyors, giving apparent northings and eastings.

Because the original datum, projection and precise base point for the local Mercur Mine grid was not known, an ArcGIS projection was developed by Barrick and is currently used by Revival to convert between the global and local coordinate systems. At South Mercur, the base point for the grid is known, but the system from which it was derived, and the north direction are not.

Ensign (now a subsidiary of Revival) had applied several methods to verify the locations of pre-Ensign holes at South Mercur and West Mercur, with some success by georeferencing maps with drill-hole locations to section corners, and visible features in LiDAR and aerial imagery. From the initial georeferenced locations, positions of drill holes were adjusted if they deviated from obvious

drilling-related ground disturbance in LiDAR and aerial imagery. In addition, more obvious errors in some locations due to presumed typographical errors were corrected. Based on Ensign's refined and corrected locations, drill-hole collars and evidence of historical drilling can be found in the field at the expected locations, and the data from these drill holes can be used with reasonable confidence.

Most of the drill-hole collars at Main Mercur have been obscured by subsequent mining and reclamation. However, as noted above for South and West Mercur, plots of the Main Mercur drill holes outside reclaimed areas using the ArcGIS projection show reasonable correlation with field evidence of old roads and drill pads.

The confidence and accuracy of historical drill-hole locations for the Mercur Project will be sufficient to estimate classified mineral resources for this PEA-level technical report. For purposes of developing resources for PFS and higher-level reports, Mr. Lindholm recommends an effort to recover the definition of both the Mercur Mine and South Mercur grids, and to have a professional surveyor survey the known drill holes and historical control points with modern equipment in the UTM system, NAD83 datum. Historical mine and exploration records should continue to be searched for any additional documentation that would support collar coordinate, down-hole survey, assay, and other drill-hole data.

Under the author's supervision, Mr. Avery performed logic checks on Revival's collar database, including:

- missing depths,
- missing coordinates, and
- switched or duplicated coordinates.

Errors found during these tests, if any, were iteratively corrected in the database by Revival staff, or by RESPEC staff with input from Revival.

### **12.1.2 Down-Hole Survey Data**

Down-hole surveys were not commonly performed by previous operators in the Mercur Project area. The only down-hole surveys available are from Barrick's drilling in the West Mercur area during 1994, 1995, and 1996. Data from these surveys are available in spreadsheet form, but only two drill holes have the original certificates from the surveying contractor. These two certificates were compared to their respective holes in the database. One, 96-9, contains the correct orientation data in the database, but each record is shifted by 50ft. The other, 96-38, was not in the down-hole survey database. These errors and omissions have been corrected in the down-hole survey database.

Two types of down-hole survey were performed on Ensign's 2022 drill holes, EZ-GYRO in multishot mode and GYRO SPRINT-IQ in continuous measurement mode. At Mr. Lindholm's request, Revival downloaded the unprocessed data for drill holes EN051 to EN087 and ENC001 to ENC010 from the REFLEX website. All records marked as rejected were removed by Mr. Lindholm from the unprocessed data, then the reading depths, azimuths and dips were compared to Revival's survey database. Of the 815 records checked, only one significant error was found, yielding an acceptable error rate of 0.12%. The database dip for one reading in ENC001 differed from the unprocessed REFLEX data by about 4°. Although the error was found after the effective date of the database, it would not materially change the location of any samples in the hole or have a meaningful impact on the model and resource estimates. Other immaterial discrepancies that were noted include:

- negative depths that had been corrected by Revival in the database,
- one record rejected by REFLEX used in Revival's database,
- second of readings at the collar ~2 ft apart not used,
- readings within 2 ft below the collar recorded at '0' depth,
- reading depths rounded down by 0.14 ft or less to nearest 100 ft,
- readings below total depth of hole moved to hole total depth, and
- EZ-GYRO readings used for two intervals with data from multiple methods.

Mr. Avery performed logic checks on Revival's down-hole survey database, including:

- survey depths greater than total depth,
- missing azimuth or dip values,
- azimuth readings above or below 0° to 360°,
- positive or flat dip angles ( $< \sim -45^\circ$ ), and
- dips outside  $-90^\circ$  to  $+90^\circ$  (for surface drilling).

Errors found during these tests, if any, were iteratively corrected in the database by Revival staff, or by RESPEC staff with input from Revival.

### 12.1.3 Drill Hole Assay Data

For the report of Lindholm et al. (2022), Mr. Lunbeck and Ensign personnel performed various checks on portions of the assay database using records available at the time. Although relevant at the time, these prior efforts are superseded by the current validation work done by Mr. Avery under the supervision of Mr. Lindholm as follows:

#### 12.1.3.1 *Logic Checks*

The process of validating the Mercur project assay data began with logic checks performed by Mr. Avery, which include:

- illogical or incorrect 'from' and 'to' intervals,
- excessively large or small assay intervals,
- assay intervals that are greater than hole total depth,
- gaps and overlaps in assay intervals, and
- drill holes without assay intervals and/or intervals without assays.

Errors found during these tests were iteratively corrected in the database by Revival staff, or by RESPEC staff with input from Revival.

#### 12.1.3.2 *Verification of Pre-Ensign Drilling*

Assays in Revival's database were compared to original assay certificates. Scans of hard copies of a significant portion of historical certificates were provided by Revival in pdf format for the pre-Ensign holes. About 10% of the drill holes in the database were randomly selected for a manual audit of the database assays using the scanned certificates. Scanned assay certificates were not available for many of the holes. The manual audit compared 6.7% of the total of 94,748 records from the pre-Ensign drill-hole database, as received from Revival to the scanned assay certificates. However, during the audit, it was discovered that a significant number of original 5-ft intervals with the same assay values had been combined into longer intervals, likely during an export from the software program used to store the data. Revival restored the original 5-ft interval assays to the database from the scanned certificates. As a result, the database contained 180,224 assay records, of which about 5.6% were manually audited.

Twelve minor and 19 significant errors were found during the audit, yielding an acceptable 0.03% error rate. All errors were incorrectly entered assays that were considered significant if the values were above a potential mining cutoff grade, and minor if below. All the identified errors were corrected by Revival in the database.

There were 1,489 discrepancies noted during the audit that were considered immaterial. Some were corrected. However, those that were not will have no impact on the grade domain model, block model and resource estimate. The types of discrepancies found include:

- 959 single intervals of -0.005, <0.001 and <0.002 oz/ton Au on certificate entered as '0',

- 334 merged intervals of -0.005, <0.001, <0.002 oz/ton Au, 'trace', 'none' and 'nil' on certificate entered as '0',
- 51 '0' on certificate entered as 0.0005 or 0.001 oz/ton Au,
- 11 possible no sample intervals entered as '0',
- 97 records with multiple gold assays, FA or AA inconsistently used, not known which is more reliable, and
- 37 miscellaneous discrepancies.

Treatment of detection limit assays in pre-Ensign drilling was somewhat inconsistent in the database. Nearly all the drilling was assayed and reported in oz/ton Au at detection limits of 0.001 oz/ton Au. Only the DDH87-xx series holes had detection limits of 0.002 oz/ton Au. Nearly all below-detection assays had been entered into the database received from Revival Gold as values of 0.0 oz/ton Au, and only the 95-xx, MH-xx and MHH-xx series holes had some entries as half the detection limit. Also, some intervals with no assays had been assigned values of 0 oz/ton Au. Although Mr. Lindholm considers these issues to be insignificant with respect to the grade domain model, block model and resource estimate, it was difficult to distinguish intervals that were not assayed from below detection assays during grade domain modeling. It is also not known why drilled intervals were not assayed, which could have been done for a variety of reasons (e.g. visually determined to be unmineralized, natural void or underground working, poor recovery). Revival Gold was able to correct some of the non-sampled long intervals with 0 oz/ton Au grades noted in the audit, which were assigned '-1' in the database, but the remainder of the intervals with 0 oz/ton Au grades could not be investigated before the database was made effective and were left as '0' values.

Also, observed during the audit was possible use of inconsistent conversion factors between g/T Au and oz/ton Au. Some discrepancies could be due to subsequent rounding, however. Mr. Lindholm recommends determining the grade units for original assays in the database, where possible, and applying a single conversion factor for the calculated grades for consistency.

#### 12.1.3.3 *Verification of 2020 – 2022 Ensign Drill-Hole Data*

A digital audit was performed on 100% of the 11,637 records for gold assays in the database which were compared against certificates received directly from the assaying laboratory in pdf and csv format. A single missing assay was found, which yields an error rate of 0.008%. The assay was added to the database by Revival. Two certificates with different assay values were found for an additional 29 records, which likely represent re-assays of the samples for a possible QA/QC failure. It is not known if the original or re-assays were selected for use in the database, but the issue is not considered to be significant.

For all Ensign drill-hole assays, which were reported in g/T Au by the laboratories, the value of the detection limit had been entered for 4,082 samples in the database received from Revival. During the audit supervised by Mr. Lindholm, all below-detection assays were replaced with values of 0.0015 g/T Au (0.00004 oz/ton Au), which was half the lowest detection limit of 0.003 g/T Au (0.00009 oz/ton Au) in the accepted database.

#### **12.1.4 Geology**

During the May 2021 site visit, Mr. Lindholm was able to verify in a general manner the overall geology in most of the major areas of the Mercur Property. The general stratigraphy, lithology, alteration, oxidation, and structure were observed on a regional, property and local scale. This provides some verification of depictions in Barrick, Ensign, and other published maps and reports. The general alteration and other geological characteristics associated with precious-metal mineralization were observed in pits, on underground mine dumps, and outcrops throughout the property (Lindholm et al., 2022).

#### **12.2 Independent Personal Site Inspections**

Mr. Lindholm visited the Mercur Project on May 17 and 18, 2021, accompanied by geological personnel and consultants of Ensign. Mr. Kevin Hamatake with Barrick also accompanied the group for a portion of the site visit. Altered and mineralized rocks associated with Barrick's open pit mining and gold production at Main Mercur were examined on the first day. Also observed were the tailings impoundment facility, the remaining infrastructure, and the current state of reclamation at the mine site. The next day, the geology and remnants of historical mining were examined at South Mercur and West Mercur. The North Mercur area of the property was not visited due to snow cover.

Mr. Anderson visited the Mercur Project on August 15, 2024. During the site visit, Mr. Anderson reviewed the historical mining facilities in the Main Mercur area including the remaining infrastructure, previously mined pits and dumps, historical leach pad and tailings impoundment facilities and drill core with site personnel. Mr. Anderson also visited the South and West Mercur areas.

Ensign's last drill hole at the Mercur Project was completed on October 15, 2022. Ensign and Revival have stated that no material work has been done at the site since then. Mr. Anderson did not observe any work in progress on site in August 2024 or evidence of post-2022 drilling.

#### **12.3 Independent Verification of Mineralization**

Mr. Lunbeck and Mr. Lindholm collected several confirmation samples from West and South Mercur during the various site visits since 2017. The purpose of the sampling was not to duplicate

values of existing rock-chip or other assays, but rather to confirm that gold exists on Ensign's property outside Barrick's historical production. The samples are not intended to be representative of a particular volume of material but were collected from alteration types, most likely to contain gold at the highest levels in a given area.

On May 16, 2017, Mr. Lunbeck collected 16 samples from outcrops and dumps to confirm the presence of gold mineralization in the West Mercur area (Lunbeck, 2019; Lindholm et al., 2022). These samples were shipped by UPS from Salt Lake City to the ALS preparation laboratory in Elko, Nevada. After preparation, pulps were shipped to North Vancouver, British Columbia, where gold was determined by a 30g fire assay with AA finish. Trace elements (As, Hg, Sb, Tl) were analyzed by ICP following aqua regia digestion. The results of this sampling are listed in Table 12-1. Mr. Lindholm has reviewed Mr. Lunbeck's confirmation sampling procedures and results at West and South Mercur and takes responsibility for the work.

**Table 12-1: 2017 Verification Sample Results – West Mercur**

Sample Number	Type	Lunbeck GPS Sample Site		Au (oz/ton)	Ag (oz/ton)	As (ppm)	Hg (ppm)	Sb (ppm)	Tl (ppm)
		Easting (ft)	Northing (ft)						
301	Grab, 1m	1,282,242	14,648,658	0.001	0.006	154.5	1.12	1.66	7.12
302	Dump	1,282,222	14,648,671	0.004	0.005	524	3.25	6.6	9.35
303	Grab, 1 ft	1,282,268	14,648,731	0.021	0.009	6450	10.45	183	58.4
304	Grab, 1 ft	1,282,556	14,647,874	0.015	0.009	939	2.56	74.4	22.1
305	Grab, float	1,282,563	14,647,812	0.006	0.013	1460	5.75	138	12.2
306	Dump	1,282,199	14,648,186	0.516	0.017	244	20.2	111	1.78
307	Dump	1,282,209	14,648,212	0.014	0.005	299	8.24	9.98	1.08
308	Grab, float	1,282,074	14,649,429	0.039	0.023	3070	22.4	277	4.59
309	Grab, float	1,282,064	14,649,410	0.057	0.024	2390	21.4	288	3.63
310	Grab, float	1,282,123	14,649,147	0.035	0.070	1450	7.03	274	4.04
311	Dump	1,285,381	14,643,478	0.094	0.003	611	10.7	67.5	7.95
312	Dump	1,284,466	14,644,193	0.002	0.005	524	2.64	16.65	11.05
313	Dump	1,284,522	14,644,255	0.085	0.002	1745	22.3	57.3	18.6
314	Dump	1,286,021	14,642,080	0.005	0.016	169	1.06	1.8	1.33
315	Dump	1,286,598	14,640,899	0.001	0.005	231	0.667	1.96	2.8
316	Grab, outcrop	1,290,532	14,640,296	0.033	0.007	15.6	3.47	2.62	0.8
Note: Coordinates measured in UTM NAD 83 meters projection, converted to UTM NAD 83 feet projection.									

Mr. Lindholm collected six confirmation samples during the site visit on May 18 and 19, 2021, including four samples at South Mercur and two at West Mercur. These samples remained in Mr.

Lindholm's control from the time of sampling to submittal to ALS in Reno, Nevada. Gold was determined by a 30g fire assay with AA finish, and silver was analyzed by ICP-AES following aqua regia digestion. Assay results and GPS-determined locations of the samples are given in Table 12-2.

**Table 12-2: 2021 Verification Sample Results – West and South Mercur**

Sample Number*	Type and Location	Lindholm GPS Sample Site			Au (oz/ton)	Ag (oz/ton)
		Easting (ft)	Northing (ft)	Elevation (ft)		
SM-01	Outcrop	1,306,556	14,627,864	6,016	0.007	<0.006
SM-02	Dump, Sunshine Mine	1,306,651	14,627,720	6,026	0.031	0.006
SM-03	Outcrop	1,307,494	14,630,499	6,204	0.019	0.120
SM-04	Dump, Overland Mine	1,307,737	14,630,456	6,259	0.256	0.006
WM-01	Outcrop, Anomaly B	1,290,732	14,640,502	5,885	0.039	0.023
WM-02	Dump, Daisy Mine	1,285,362	14,643,143	5,673	0.080	0.006

Note: Coordinates measured in UTM NAD 83 meters projection, converted to UTM NAD 83 feet projection.

The North Mercur area was visited by Mr. Lunbeck on October 15, 2021, and four rock samples were collected and sent to ALS to independently confirm the existence of gold mineralization (Lindholm et al., 2022). Analytical results are presented in Table 12-3. Mr. Lindholm has reviewed Mr. Lunbeck's confirmation sampling procedures and results at North Mercur and takes responsibility for the work. The samples confirmed the presence of gold at North Mercur; however, the elevated silver, lead and zinc values are not common in the typical geochemical assemblage for Carlin-type deposits.

**Table 12-3: 2021 Verification Sample Results – North Mercur**

Sample Number	Type	Lunbeck GPS Sample Site		Au (oz/ton)	Ag (oz/ton)	As (ppm)	Sb (ppm)	Pb (ppm)	Zn (ppm)
		Easting (ft)	Northing (ft)						
NM401	Float grab	1,294,427	14,658,173	0.004	0.333	155	258	13	17
NM402	Dump grab	1,294,459	14,658,107	0.106	47.833	2,400	4,550	7,590	4,320
NM403	Dump grab	1,294,486	14,658,074	0.025	9.246	908	772	2,520	5,430
NM404	Dump grab	1,294,577	14,658,120	0.011	0.811	592	244	224	2,330

Note: Coordinates measured in UTM NAD 83 meters projection, converted to UTM NAD 83 feet projection.

Gold and silver production from the historical underground mines in all areas of the Mercur Project, and more recent open-pit operations at Main Mercur, is well documented in both private historical records and public documents. The abundance of evidence of significant mining is readily apparent and indicates that precious metals mineralization has existed and could still be

present. This was confirmed by sampling at West and South Mercur. In the opinion of the QPs, independent sampling for the purposes of verifying the Main Mercur mineralization is not needed, as past mining and production is sufficient confirmation that gold was present in the district.

## 12.4 GPS Field Collar Checks

During the May 2021 Mercur site visit, Mr. Lindholm took GPS measurements on 15 drill pads, or suspected drill pads, to spot-check coordinates in Revival's (at the time, Ensign's) collar tables (Table 12-4). Field measurements and collar coordinates in the database were taken in NAD83 meters for comparison in Table 12-4. Direct evidence of drill holes, such as concrete plugs, drill pipe or open holes, were found at eight sites. Five sites had drill hole identifications marked in some way, of which two were Ensign holes. The remainder of the sites were suspected or determined to be pads using less direct evidence, such as the presence of cuttings, or level spots likely constructed for no other reason than drilling. Where no drill-hole identification was found at the site, the closest drill collar in the database was used for comparison. This gives the best case, though unconfirmed, comparisons in Table 12-4. Reclamation, recontouring and reseeding, particularly in the Main Mercur area, has covered or destroyed a significant number of historical drill sites so that physical evidence of holes could not be located.

**Table 12-4: Verification GPS Checks of Drill Collars at the Mercur Project**

Drill Hole	Author's GPS Site			Nearest Collar in Database			Difference - Author's vs Database		
	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)
SCG-14	1,303,137	14,642,385	7,267	1,303,138	14,642,383	7,259	0.7	-2.0	-8.2
EXP92-13	1,303,826	14,641,585	7,450	1,303,830	14,641,586	7,452	3.9	0.7	2.3
96-23	1,302,658	14,642,756	6,987	1,302,633	14,642,759	6,990	-24.9	2.6	3.3
EXP92-4	1,300,371	14,649,889	7,277	1,300,365	14,649,896	7,282	-6.2	7.5	5.2
RC-10	1,300,893	14,650,574	7,304	1,300,901	14,650,576	7,307	7.9	2.0	3.0
EXP92-18	1,301,516	14,649,951	7,237	1,301,525	14,649,938	7,241	8.5	-13.1	4.3
SM-20-004	1,306,713	14,628,343	6,050	1,306,718	14,628,338	6,050	4.3	-5.9	0.0
87-167	1,306,795	14,628,163	6,100	1,306,792	14,628,153	6,082	-3.3	-9.8	-18.4
86-128	1,306,730	14,627,963	6,068	1,306,726	14,627,963	6,059	-3.3	0.0	-8.9
SM-20-003	1,307,619	14,630,515	6,211	1,307,627	14,630,525	6,205	8.5	9.2	-6.2
86-143	1,307,606	14,630,538	6,176	1,307,619	14,630,528	6,205	13.1	-9.8	29.5
WM-001	1,290,601	14,641,208	5,858	1,290,597	14,641,210	5,850	-3.9	2.0	-7.9
WDS-1	1,290,962	14,640,358	5,929	1,290,968	14,640,357	5,932	5.9	-0.7	3.0
WD-7	1,282,114	14,648,658	5,671	1,282,119	14,648,703	5,682	5.2	44.6	10.8
WD-82-14	1,281,792	14,648,786	5,673	1,281,871	14,648,888	5,676	78.7	101.4	3.6

A Garmin eTrex - Legend non-differential GPS was used to measure coordinates at the drill sites and pads. The Garmin website indicates it is accurate to within “3 – 5 m (10 – 16 ft), 95% typical with DGPS corrections, <15 m (49 ft) RMS, 95% typical”. The overall results were good for most holes and suspected pads, drill sites and inferred collar locations, especially considering the exact locations of the collars on the pads were not known for half the sites. Most measured coordinates were within an expected range of the non-differential GPS accuracy as compared to the database coordinates. For the collar check with the largest discrepancy, it is possible that the PVC pipe found and measured for WD-82-14 was not the actual drill collar, and that the actual location was in an adjacent reseeded area.

On April 21, 2022, Mr. Lunbeck visited the Mercur Project and took additional hand-held GPS coordinates on recent Ensign drill-hole collars to verify the general accuracy of the location northings and eastings in the Revival (at the time, Ensign) database (Lindholm et al., 2022). A total of 31 drill holes were located and surveyed with a Garmin eTrex non-differential GPS using the NAD83 datum in the UTM system. Measurements were taken approximately 3.28 ft above ground surface, directly over the hole collar in each case. Claimed accuracy for the GPS is 10 – 16 ft with 95% of measurements accurate to within 49 ft. Steep terrain is known to significantly degrade the accuracy of non-differential GPS receivers, particularly the elevations. The results are presented in Table 12-5. Mr. Lindholm has reviewed Mr. Lunbeck’s GPS collar check data and takes responsibility for the work.

**Table 12-5: Verification GPS Checks of Ensign Drill Collars at the Mercur Project**

Drill Hole	Author's GPS Site			Ensign Database			Difference - Author's vs Database		
	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)
EN001	1,304,148	14,646,844	6,860	1,304,144	14,646,844	6,834	-3.3	0.0	-25.9
EN002	1,304,217	14,646,582	6,836	1,304,210	14,646,582	6,818	-6.6	0.0	-18.0
EN004	1,304,384	14,646,280	6,835	1,304,387	14,646,283	6,822	3.3	3.3	-13.5
EN005	1,303,646	14,647,490	6,817	1,303,646	14,647,504	6,801	0.0	13.1	-15.7
EN006	1,304,407	14,646,762	6,920	1,304,400	14,646,765	6,894	-6.6	3.3	-25.9
EN008	1,304,000	14,644,705	7,001	1,303,990	14,644,708	6,967	-9.8	3.3	-33.8
EN009	1,303,108	14,643,750	6,952	1,303,173	14,643,717	6,921	65.6	-32.8	-31.2
EN011	1,303,613	14,643,288	7,046	1,303,603	14,643,281	7,025	-9.8	-6.6	-21.0
EN012	1,303,577	14,643,061	7,093	1,303,560	14,643,061	7,057	-16.4	0.0	-36.4
EN014	1,303,724	14,643,567	6,991	1,303,711	14,643,570	6,959	-13.1	3.3	-32.5
EN021	1,303,997	14,643,960	7,049	1,304,003	14,643,963	7,012	6.6	3.3	-37.1
EN022	1,303,354	14,643,731	6,953	1,303,350	14,643,731	6,923	-3.3	0.0	-29.9
EN025	1,303,521	14,642,894	7,149	1,303,518	14,642,891	7,122	-3.3	-3.3	-27.2

Drill Hole	Author's GPS Site			Ensign Database			Difference - Author's vs Database		
	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)	Easting (ft)	Northing (ft)	Elevation (ft)
EN026	1,303,341	14,645,227	6,940	1,303,331	14,645,230	6,911	-9.8	3.3	-28.5
EN027	1,303,593	14,644,935	6,945	1,303,593	14,644,941	6,933	0.0	6.6	-12.1
EN028	1,303,580	14,644,856	6,948	1,303,570	14,644,862	6,935	-9.8	6.6	-13.5
EN029	1,303,590	14,644,702	6,956	1,303,590	14,644,702	6,938	0.0	0.0	-17.7
EN030	1,303,613	14,644,551	6,962	1,303,610	14,644,551	6,939	-3.3	0.0	-23.3
EN031	1,303,665	14,643,206	7,071	1,303,652	14,643,202	7,038	-13.1	-3.3	-33.1
EN034	1,302,953	14,647,687	6,849	1,302,950	14,647,694	6,841	-3.3	6.6	-8.5
EN039	1,303,495	14,647,080	6,799	1,303,491	14,647,090	6,760	-3.3	9.8	-38.7
EN040	1,303,495	14,647,077	6,799	1,303,491	14,647,087	6,760	-3.3	9.8	-38.4
EN041	1,303,505	14,647,100	6,802	1,303,508	14,647,107	6,761	3.3	6.6	-40.7
EN042	1,304,315	14,646,956	6,904	1,304,312	14,646,959	6,870	-3.3	3.3	-34.1
EN044	1,304,738	14,645,797	6,834	1,304,735	14,645,804	6,797	-3.3	6.6	-37.1
EN046	1,304,712	14,645,804	6,834	1,304,709	14,645,807	6,810	-3.3	3.3	-24.0
EN047	1,304,594	14,645,998	6,835	1,304,597	14,645,998	6,809	3.3	0.0	-25.6
EN049	1,304,476	14,646,119	6,834	1,304,482	14,646,112	6,805	6.6	-6.6	-29.2
EN050	1,304,509	14,646,112	6,834	1,304,482	14,646,106	6,805	-26.2	-6.6	-29.2
WM002	1,282,419	14,647,474	5,640	1,282,452	14,647,464	5,617	32.8	-9.8	-23.0
WM003	1,282,324	14,647,464	5,631	1,282,340	14,647,444	5,593	16.4	-19.7	-38.4

With one exception, results obtained with the eTrex match the Ensign data within the accuracy limitations of the hand-held GPS receiver. Despite the relatively steep terrain, GPS elevations are within 40.7 ft of the formal surveying. The cause of large discrepancy in eastings and northings for EN009 is not known.

These exercises verify the existence and rough location of the Ensign and pre-Ensign drilling in the database. Results add confidence in collar data. Supporting documentation from original collar surveys, or resurvey of any old holes remains critical to provide a higher level of confidence.

## 12.5 Metallurgical Test Data

KCA reviewed and verified metallurgical test sample locations and test procedures to ensure the data and conclusions derived from the data are in-line with industry standards. It is Mr. Cook's opinion that the metallurgical test data available is sufficient to support the selected processes and conclusions regarding recoveries and costs at this level.

## **12.6 Summary Statement**

Mr. Lindholm experienced no limitations with respect to data verification activities related to the Mercur Project other than the lack of scanned assay certificates for some of the pre-Ensign drill samples. In consideration of the information summarized in this and other sections of this report, the Mr. Lindholm has verified that the Mercur Project data are acceptable as used in this report, specifically for project description, to guide future exploration and to support gold domain modeling and resource estimation.

Collar, survey and assay data from drilling was evaluated and verified with respect to the most original documentation available. In the case of assay data, a manual audit was performed against scans of original assay certificates on 6.7% of the total of 94,748 records in the pre-Ensign drill-hole database, as received from Revival. The manual audit yielded an acceptable 0.03% error rate. All of Ensign's data were compared to original assay certificates downloaded directly from the laboratories. Any significant errors found in both sets of assay data were corrected by Revival in the database.

Existing historical collar coordinate information, particularly transformations between local and State Plane systems, should be searched for in files currently in Revival's possession. The surveyed coordinate system in historical records should continue to be investigated.

## **12.7 References**

Lindholm, M.S., Lunbeck, J.E., and Ressel, M.W., 2022, Technical Report for the Mercur Project, Camp Floyd and Ophir Mining Districts, Tooele and Utah Counties, Utah, USA; Report prepared on behalf of Ensign Minerals Inc. Effective date April 25, 2022. 192 p.

## SECTION 13 CONTENTS

13	MINERAL PROCESSING AND METALLURGICAL TESTING.....	13-3
13.1	Introduction.....	13-3
13.2	Ensign Metallurgical Test Work.....	13-3
13.2.1	Sample Selection and Head Assays.....	13-5
13.2.2	Carbon-in-leach (CIL) Tests Carried out by Bureau Veritas in 2022.....	13-6
13.2.3	Direct Cyanide (DCN) Bottle Roll Leach Tests – ALS Metallurgy in 2022.....	13-8
13.3	Revival Metallurgical Test Work.....	13-10
13.3.1	Kappes, Cassiday & Associates (May, 2024).....	13-12
13.3.2	Kappes, Cassiday & Associates (September, 2024).....	13-18
13.4	Heap Leach Conclusions from Metallurgical Programs.....	13-25
13.4.1	Heap Leach Gold Recovery.....	13-26
13.4.2	Leach Cycle.....	13-29
13.4.3	Reagent Consumptions.....	13-29
13.5	Recommendations for Further Work.....	13-29
13.6	References.....	13-30

## SECTION 13 TABLES

Table 13-1:	Gold Production Data of Mercur Historical Operations from 1983 to 1995.....	13-3
Table 13-2:	Metallurgical Procedures Conducted on Behalf of Ensign.....	13-4
Table 13-3:	Selections of Twelve Composite Samples.....	13-5
Table 13-4:	Head Assays of Twelve Composite Samples.....	13-6
Table 13-5:	Results of Bottle Roll CIL Cyanide Leach Tests Carried out in 2022.....	13-7
Table 13-6:	Results of DCN Cyanide Leach Tests on As-Received RC Chips.....	13-8
Table 13-7:	Comparison of Gold Recovery between CIL and DCN Samples.....	13-9
Table 13-8:	Variability Head Analyses Summary – Gold and Silver.....	13-12
Table 13-9:	Variability As-Received Particle Size Distribution.....	13-13
Table 13-10:	Variability Bottle Roll Leach Test Summary (KCA, 2024).....	13-16
Table 13-11:	Variability Bottle Roll Leach Test Recoveries by Formation (KCA, 2024).....	13-18
Table 13-12:	Head Analyses – Gold and Silver.....	13-19
Table 13-13:	Head Analyses – Carbon and Sulfur.....	13-19
Table 13-14:	Head Analyses – Mercury and Copper.....	13-20
Table 13-15:	Head Analyses – Multi-Element Analysis.....	13-21

Table 13-16: Bond Ball Mill Work Index and Abrasion Index .....	13-22
Table 13-17: Summary of SMC Evaluations .....	13-22
Table 13-18: Cyanide Bottle Roll Tests Results.....	13-24
Table 13-19: Column Leach Test Results .....	13-25
Table 13-20: Column and Bottle Roll Average Recovery by Formation .....	13-27

## **SECTION 13 FIGURES**

Figure 13-1: CIL Gold Recovery as a Function of Total Sulfur Content in the Feed (Ensign, 2023) .....	13-7
Figure 13-2: Comparison of DCN Recovery (RC chips) with CIL Recovery (P80 50 µm) (Ensign, 2023) .....	13-9
Figure 13-3: Revival Column Leach Test Sample Drill Map (Revival, 2025).....	13-11
Figure 13-4: Variability Bottle Roll Recoveries versus Depth (KCA, 2025) .....	13-18
Figure 13-5: Column Leach versus Fine Bottle Roll Gold Recoveries .....	13-26
Figure 13-6: DCN, CIL, Bottle Roll and Column Leach Test Sample Map (Revival, 2025) .....	13-28

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1 Introduction

The Mercur mine district has production records dating back to the late 1800's with the Getty/Barrick Mercur Mine most recently producing 1,490,000 ounces of gold between 1983 and 1998. Getty/Barrick utilized three process flowsheets for recovery of gold and silver values including a carbon-in-leach ("CIL") process for high-grade oxide material, a ROM dump leach for low-grade oxide material and alkaline pressure oxidation ("POX") followed by CIL to treat refractory sulfide materials. A summary of the Getty/Barrick production by pit is presented in Table 13-1. LOM gold recoveries averaged 77% for the CIL, 49% for the ROM dump leach and 75% for the POX and CIL with an overall recovery of approximately 69%.

**Table 13-1: Gold Production Data of Mercur Historical Operations from 1983 to 1995**

Mine Name	Tonnage Processed (tons)	Gold Grade (oz/ton)	Contained Gold (oz)	Recovered Gold (oz)
Rover	237,072	0.030	7,141	4,435
Marion Hill	14,363,422	0.051	736,579	497,976
Golden Gate	3,017,828	0.048	144,951	100,094
Mercur Hill	10,981,901	0.072	795,909	562,706
Sacramento	5,698,160	0.069	392,795	282,726
Golden Gate Tailings	1,723,000	0.053	91,319	42,062
<b>TOTALS</b>	<b>36,021,383</b>	<b>0.060</b>	<b>2,168,694</b>	<b>1,490,000</b>

A significant amount of metallurgical test work, primarily conducted by Hazen Research Inc., was performed in support of the past production including thousands of bottle roll leach tests. Results from this historical test work is considered anecdotal in nature and is only referenced to validate the recommendations and conclusions derived from the recent test programs commissioned by Ensign Minerals Inc. (BV Minerals, 2022; ALS, 2023) and Revival Gold (KCA May 2024 and September 2024). These reports are summarized chronologically below and are referenced in this study. Although condensed, for the sake of completeness, as much relevant data as practical is presented herein, specifically the data and results relevant to the heap leach project.

### 13.2 Ensign Metallurgical Test Work

Test work commissioned by Ensign includes a scoping-level metallurgical test work program carried out jointly by Bureau Veritas Minerals ("BV Minerals") in Richmond, British Columbia, Canada and ALS Metallurgy ("ALS") in Kamloops, British Columbia, Canada with results summarized herein from the BV Minerals report titled "Metallurgical Testing for Gold Recovery,

Ensign Minerals Inc. – Mercur Project” dated 4 November 2022 and ALS report titled “Metallurgical Test Work on Results from the Mercur Gold Project – Utah, USA” dated 18 August 2023.

Twelve composite samples were generated using intervals (RC chips) from eight drill holes in six mineralization zones. The scope of work included cyanide soluble gold assays on all 12 samples. CIL bottle roll testing on milled samples and direct cyanide leach (“DCN”) bottle roll tests using the RC chips without grinding were performed on 10 of the samples. Table 13-2 lists the details of cyanide soluble gold assay procedures, the CIL procedures and the DCN procedures from different laboratories and what materials are covered by each procedure.

**Table 13-2: Metallurgical Procedures Conducted on Behalf of Ensign**

Procedure Type			Cyanide Soluble Gold Assay				CIL (carbon-in-leach)	DCN (direct cyanide leach)
Laboratory			American Assay Labs	Bureau Veritas		ALS	Bureau Veritas	ALS
Test Type			shake	shake	shake	shake	bottle roll	bottle roll
Procedure Name			AuCN30	CN430	AuCN	Au-AA13	customized	customized
Open to Atmosphere			No	No	No	No	continuous oxygen sparging	continuous oxygen sparging
Solid Weight		g	30	30	30	30	1,000	1,000
Method of Particle Size Reduction			dry pulverization	dry pulverization	dry pulverization	dry pulverization	wet ground	no grinding
Particle size (P80)		µm	pulverized	85% passing 75 µm	90% passing 75 µm	85% passing 75 µm	80% passing 50 µm	RC chips
Retention Time		hour	2	1	2	1	48	48
Temperature		°C	room temp	room temp	room temp	room temp	room temp	room temp
Cyanide Solution	Volume	mL	60	60	60	60	1,500	1,000
	g/L NaCN		3.0	3.0	10.0	2.5	2.0	2
	g/L NaOH		alkaline	3.0	2.5	0.5	lime	lime
	pH		/	/	/	/	10.5 ~ 11.0	11.0
Activated Carbon	added before reagents		/	/	/	/	30 g/L	/
	added after 2 hr		/	/	/	/	/	/
Assay Method			ICP-OES	AAS	AAS	AAS	AAS/Fire Assay	AAS/Fire Assay
Solution Assay Range		ppm	0.01 ~ 100	0.03 ~ 50	≥ 0.01	0.03 ~ 50	≥ 0.01	N/A
Covered Materials			Drill Holes SM 20-002 to -011 EN003 to EN050 (partial) EN053 to EN082 ENC001 to ENC007	Drill Holes EN001 to EN050 (partial)	10 met samples MH EN011 175-240 MH EN011 370-410 MH EN027-310-390 MH EN027 440-490 GG EN002 360-410 GG EN043 95-155 GG EN043 155-225 ER EN036 155-220 SE EN018 220-320 GGT EN033 0-50	2 met samples SM 20-011 245-295 SM 20-011 375-440	10 met samples MH EN011 175-240 MH EN011 370-410 MH EN027-310-390 MH EN027 440-490 GG EN002 360-410 GG EN043 95-155 GG EN043 155-225 ER EN036 155-220 SE EN018 220-320 GGT EN033 0-50	10 met samples MH EN011 175-240 MH EN011 370-410 MH EN027-310-390 MH EN027 440-490 GG EN002 360-410 GG EN043 95-155 GG EN043 155-225 ER EN036 155-220 SE EN018 220-320 GGT EN033 0-50
Number of Samples Assayed			1001 samples from exploration	828 samples from exploration	10 met samples	2 met samples	10 met samples	10 met samples
Covered Years			2020 to 2022	2022	2022	2022	2022	2022

### 13.2.1 Sample Selection and Head Assays

The twelve composite samples tested in 2022 were made up using intervals (RC chips) from eight drill holes in six mineralization zones. The samples were selected with a view to test the higher-grade portions of the deposits, which have historically been the more metallurgically challenging components of the resource, albeit a small proportion of it. This selection and program were done to assess the performance of these mineralization zones in a conventional CIL setting to evaluate the merits of a CIL flowsheet vs a Heap Leach approach. It is noted that the locations and mineralogical composition of the samples were not necessarily reflective of the current resource base as it is presented today.

Details of mineralization zones, drill hole numbers and depths are shown in Table 13-3. Based on these selected intervals, the expected head grade and cyanide soluble gold were calculated. These details are also included in Table 13-3.

Detailed assays of the twelve composite samples are presented in Table 13-4. The first ten samples in Table 13-4 were analyzed by BV Minerals and the last two samples were analyzed by ALS. Based on the detailed assays, it is evident that many of the samples contained a high level of organic carbon, which is the main cause of gold preg-robbing. Elevated levels of mercury also appeared in several samples. Sulfur content and arsenic content were variable.

**Table 13-3: Selections of Twelve Composite Samples**

Sample ID	Mineralization Zone	Drill Hole	Depth	Sample Weight	Calculated Head Grade	Calculated CN Soluble Gold	
			foot	kg	g/t	g/t	%
MH EN027 310-390	Mercur Hill	EN027	310 ~ 390	14.59	2.36	2.21	93
MH EN027 440-490			440 ~ 490	9.94	10.58	8.30	78
MH EN011 175-240		EN011	175 ~ 240	13.00	4.05	1.51	37
MH EN011 370-410			370 ~ 410	12.00	3.23	2.90	90
GG EN002 360-410	Golden Gate	EN002	360 ~ 410	9.65	3.89	1.65	42
GG EN043 95-155		EN043	95 ~ 155	12.00	1.16	0.45	39
GG EN043 155-225			155 ~ 225	14.00	0.60	0.32	53
ER EN036 155-220	East Rover	EN036	155 ~ 220	13.00	1.29	1.04	81
SE EN018 220-320	Sacramento East	EN018	220 ~ 320	10.00	2.60	1.74	67
GGT EN033 0-50	Golden Gate Tailing	EN030	0 ~ 50	10.00	1.40	0.31	22
SM-20-011 245-295	South Mercur	SM-20-011	245 ~ 295	17.00	3.83	0.60	16
SM-20-011 375-440			375 ~ 440	22.10	3.48	3.22	93

**Table 13-4: Head Assays of Twelve Composite Samples**

Sample ID	Gold	Cyanide Soluble	Total Carbon	Organic Carbon	Graphite Carbon	Total Sulfur	Sulfide	Mercury	Silver	Arsenic	Copper	Calcium
	Au	Gold	C <sub>TOTAL</sub>	C <sub>ORG</sub>	C <sub>GRA</sub>	S <sub>TOTAL</sub>	S <sup>2-</sup>	Hg	Ag	As	Cu	Ca
	g/t	g/t	%	%	%	%	%	g/t	g/t	g/t	g/t	%
MH EN027 310-390	2.36	1.13	1.9	0.24	0.02	0.17	<0.05	0.58	10.1	411	27	6.1
MH EN027 440-490	7.63	4.97	9.1	0.98	<0.02	0.21	<0.05	1.56	1.7	345	7	28.1
MH EN011 175-240	2.96	0.58	6.2	0.68	<0.02	2.03	0.93	<0.01	<0.5	1,983	7	20.0
MH EN011 370-410	3.58	1.71	1.6	0.29	<0.02	1.11	<0.05	<0.01	6.5	668	10	4.9
GG EN002 360-410	4.03	0.49	4.4	0.56	0.02	3.57	2.86	3.99	<0.5	3,445	11	12.8
GG EN043 95-155	0.98	0.52	0.3	0.06	0.02	0.33	<0.05	7.04	3.7	745	5	0.7
GG EN043 155-225	0.43	0.25	8.4	0.84	0.02	0.20	<0.05	6.69	6.0	424	7	25.7
ER EN036 155-220	1.13	0.53	1.5	0.24	<0.02	0.33	<0.05	<0.01	12.3	411	16	4.4
SE EN018 220-320	2.25	1.11	2.7	0.21	0.02	0.21	<0.05	2.33	12.9	240	9	8.7
GGT EN033 0-50	1.33	0.14	3.3	0.31	<0.02	0.75	<0.05	<0.01	0.6	3,465	13	11.5
SM 20-011 245-295	3.83	0.20	0.2	0.13	0.11	6.91	5.94	60.2	0.1	>10,000	20	0.3
SM 20-011 375-440	2.91	3.72	0.4	0.05	0.02	0.15	0.07	25.5	0.1	3,130	13	1.3

Comparisons of gold grade between direct measurement and calculated from the selected intervals show a good correlation for nine samples. However, for three samples (MH EN027 440-490, MH EN011 175-240 and SM 20-011 375-440), the difference between direct measurement and calculated from the selected intervals is relatively large. The large differences may be an indication of the presence of coarse gold particles.

### 13.2.2 Carbon-in-leach (CIL) Tests Carried out by Bureau Veritas in 2022

Ten CIL bottle roll cyanide amenability tests were completed by BV Minerals in 2022. The grind size was targeted at 80% passing 50 µm. After grinding, 4-hour pre-aeration was followed with addition of 0.50 kg/T lead nitrate, pH 10.5 –11.0 and continuous oxygen sparging to achieve over 15 ppm dissolved oxygen. CIL cyanide leaching was carried out with 30 g/L activated carbon, 2.0 g/L sodium cyanide, pH 10.5 – 11.0 and continuous oxygen sparging for 48 hours. The purpose of these ten CIL cyanide leach tests was to maximize gold recovery.

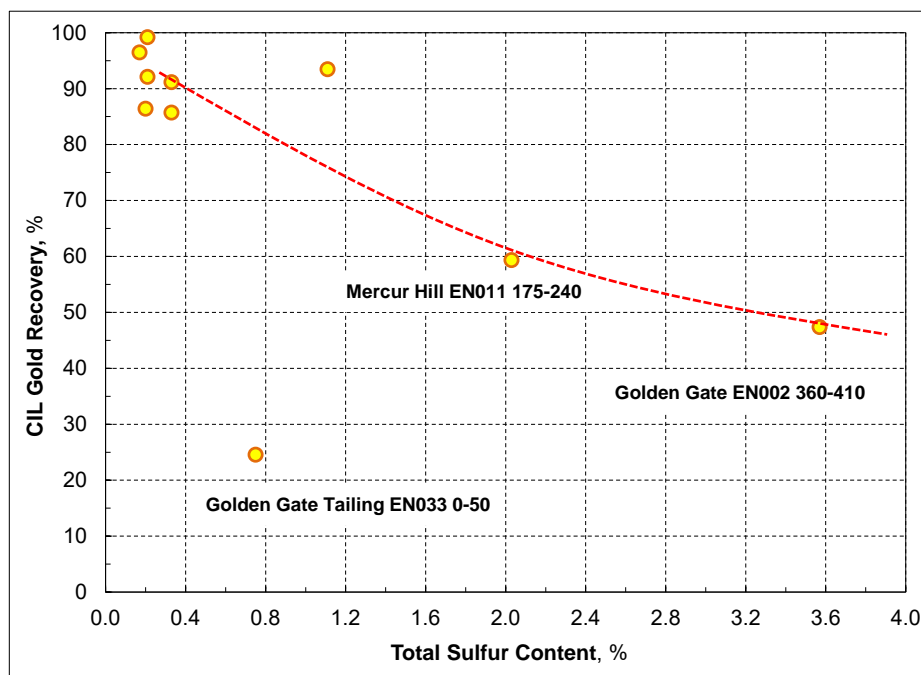
The results of the CIL bottle roll tests are presented in Table 13-5. Half of the samples produced excellent gold recoveries over 90%. Excluding the sample of historical tailing (GGT EN033 0-50), the range of CIL recovery was 47.4% to 99.2% and the average CIL recovery was 83.4%.

**Table 13-5: Results of Bottle Roll CIL Cyanide Leach Tests Carried out in 2022**

Mineralization Zone	Sample ID	Measured Particle Size (80% passing)	Assayed Head Grade	Back Calculated Head Grade	Leach Residue	Gold Recovery	Cyanide Consumption	Lime Consumption
		µm	g/t	g/t	g/t	%	kg/t NaCN	kg/t Ca(OH) <sub>2</sub>
Mercur Hill	MH EN027 310-390	49	2.36	2.53	0.09	96.4	2.82	0.96
	MH EN027 440-490	52	7.63	10.15	0.09	99.2	2.44	0.69
	MH EN011 175-240	50	2.96	3.66	1.49	59.3	3.59	1.78
	MH EN011 370-410	50	3.58	3.81	0.25	93.4	2.68	0.96
Golden Gate	GG EN002 360-410	54	4.03	4.18	2.20	47.4	4.54	2.12
	GG EN043 95-155	47	0.98	1.18	0.11	91.1	2.85	0.92
	GG EN043 155-225	51	0.43	0.55	0.08	86.4	2.68	0.90
East Rover	ER EN036 155-220	47	1.13	1.26	0.18	85.7	2.55	0.91
Sacramento East	SE EN018 220-320	50	2.25	2.72	0.22	92.1	2.91	0.86
Golden Gate Tailing	GGT EN033 0-50	54	1.33	1.39	1.05	24.5	3.78	1.67

Based on the CIL bottle roll test results, there was no consistent correlation between CIL gold recovery and arsenic content, and between CIL gold recovery and organic carbon content. There does appear to be a correlation between gold recovery and sulfur content (Figure 13-1) with lower recoveries resulting from samples with higher total sulfur content.

**Figure 13-1: CIL Gold Recovery as a Function of Total Sulfur Content in the Feed (Ensign, 2023)**



### 13.2.3 Direct Cyanide (DCN) Bottle Roll Leach Tests – ALS Metallurgy in 2022

DCN leach tests in the absence of activated carbon was carried out by ALS using the as-received RC chips without grinding to evaluate the potential viability of heap leaching. Ten DCN bottle roll leach tests were carried out by ALS under the conditions of 1.0 kg solid, pulp density of 50% solid, pH 11.0, 0.50 kg/T lead nitrate, 16-hour pre-aeration, continuous oxygen sparging to achieve over 8 ppm dissolved oxygen, 2.0 g/L sodium cyanide concentration and 48-hour retention time. These conditions were aggressive and meant to maximize gold recovery.

The results of these ten DCN tests are summarized in Table 13-6. Four samples showed the presence of preg-robbing, evidenced by the gold recovery peaking followed by a decline. Despite the coarse particle size, two samples achieved over 90% gold recovery, and three samples achieved between 80% and 90% gold recovery. Sodium cyanide consumption was much lower than what was consumed during CIL tests completed by BV Minerals.

**Table 13-6: Results of DCN Cyanide Leach Tests on As-Received RC Chips**

Mineralization Zone	Sample ID	Head Grade		Gold Recovery				Leach Residue Grade	Cyanide Consumption	Lime Consumption
		Assayed	Back Calcd.	2 h	6 h	24 h	48 h			
		g/t		%						
Mercur Hill	MH EN027 310-390	2.36	2.57	77.9	81.4	88.0	90.8	0.24	0.36	0.67
	MH EN027 440-490	7.63	10.66	90.3	92.4	93.6	96.7	0.35	0.37	0.55
	MH EN011 175-240	2.96	3.69	30.0	31.9	28.8	26.1	2.73	1.13	1.48
	MH EN011 370-410	3.58	3.94	72.7	79.0	84.8	86.9	0.52	0.82	0.68
Golden Gate	GG EN002 360-410	4.03	4.03	13.5	12.9	9.7	8.6	3.68	1.58	1.59
	GG EN043 95-155	0.98	1.16	71.5	81.5	83.8	86.2	0.16	0.29	0.52
	GG EN043 155-225	0.43	0.60	62.9	77.7	76.8	75.7	0.15	0.16	0.50
East Rover	ER EN036 155-220	1.13	1.19	60.1	70.8	68.4	64.2	0.43	0.26	0.56
Sacramento East	SE EN018 220-320	2.25	2.77	79.0	84.6	84.6	86.6	0.37	0.33	0.55
Golden Gate Tailing	GGT EN033 0-50	1.33	1.41	13.0	18.2	18.0	15.8	1.19	0.48	1.22

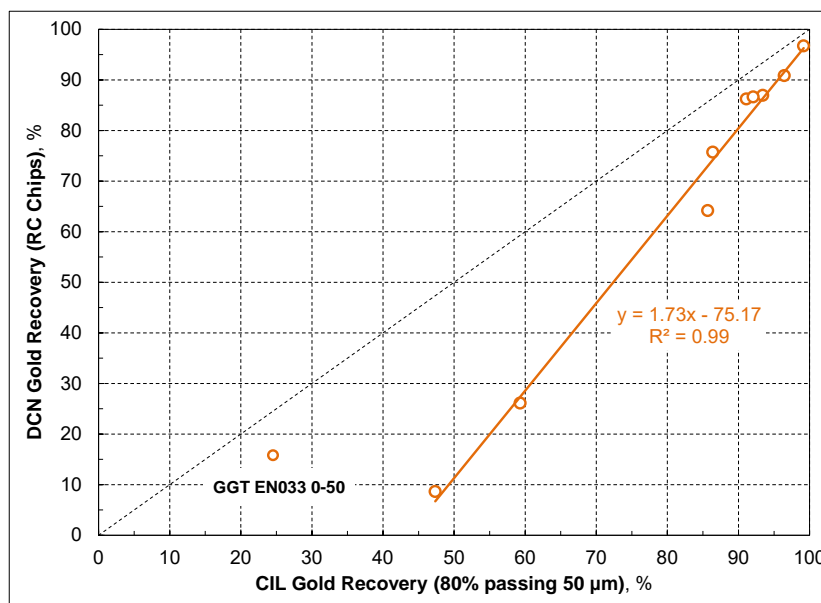
Table 13-7 shows the comparison of each sample between the CIL tests and the DCN tests. For each sample tested, gold recovery was higher in the CIL test than the DCN test. This is a result of the finer grind size used during the CIL tests (P80 of 50 µm) than the RC chip size, but also the presence of activated carbon (30 g/L) in the CIL tests which would mitigate some of the preg rob potential. Across all samples tested, the CIL tests averaged 77.6% gold recovery and the DCN tests averaged 63.8%.

**Table 13-7: Comparison of Gold Recovery between CIL and DCN Samples**

Mineralization Zone	Drill Hole	Depth	Head Grade				Gold Recovery	
			Calcd. from Intervals	Direct Assay	Back Calcd. from CIL	Back Calcd. from DCN	CIL (P80 50 µm)	DCN (RC Chips)
		foot	g/t				%	
Mercur Hill	EN027	310 ~ 390	2.36	2.36	2.53	2.57	96.4	90.8
		440 ~ 490	10.58	7.63	10.15	10.66	99.2	96.7
	EN011	175 ~ 240	4.05	2.96	3.66	3.69	59.3	26.1
		370 ~ 410	3.23	3.58	3.81	3.94	93.4	86.9
Golden Gate	EN002	360 ~ 410	3.89	4.03	4.18	4.03	47.4	8.6
	EN043	95 ~ 155	1.16	0.98	1.18	1.16	91.1	86.2
		155 ~ 225	0.60	0.43	0.55	0.60	86.4	75.7
East Rover	EN036	155 ~ 220	1.29	1.13	1.26	1.19	85.7	64.2
Sacramento East	EN018	220 ~ 320	2.60	2.25	2.72	2.77	92.1	86.6
Golden Gate Tailing	EN030	0 ~ 50	1.40	1.33	1.39	1.41	24.5	15.8

When DCN recovery (RC chips) and CIL recovery (80% passing 50 µm) are compared, after the tailing sample (GGT EN033 0-50) is excluded, there was a consistent relationship (Figure 13-2). This observation implies that CIL recovery can be estimated when DCN recovery is known, or vice versa, DCN recovery can be estimated when CIL recovery is known. Such correlation was also found in the past test work by Hazen Research in 1980s.

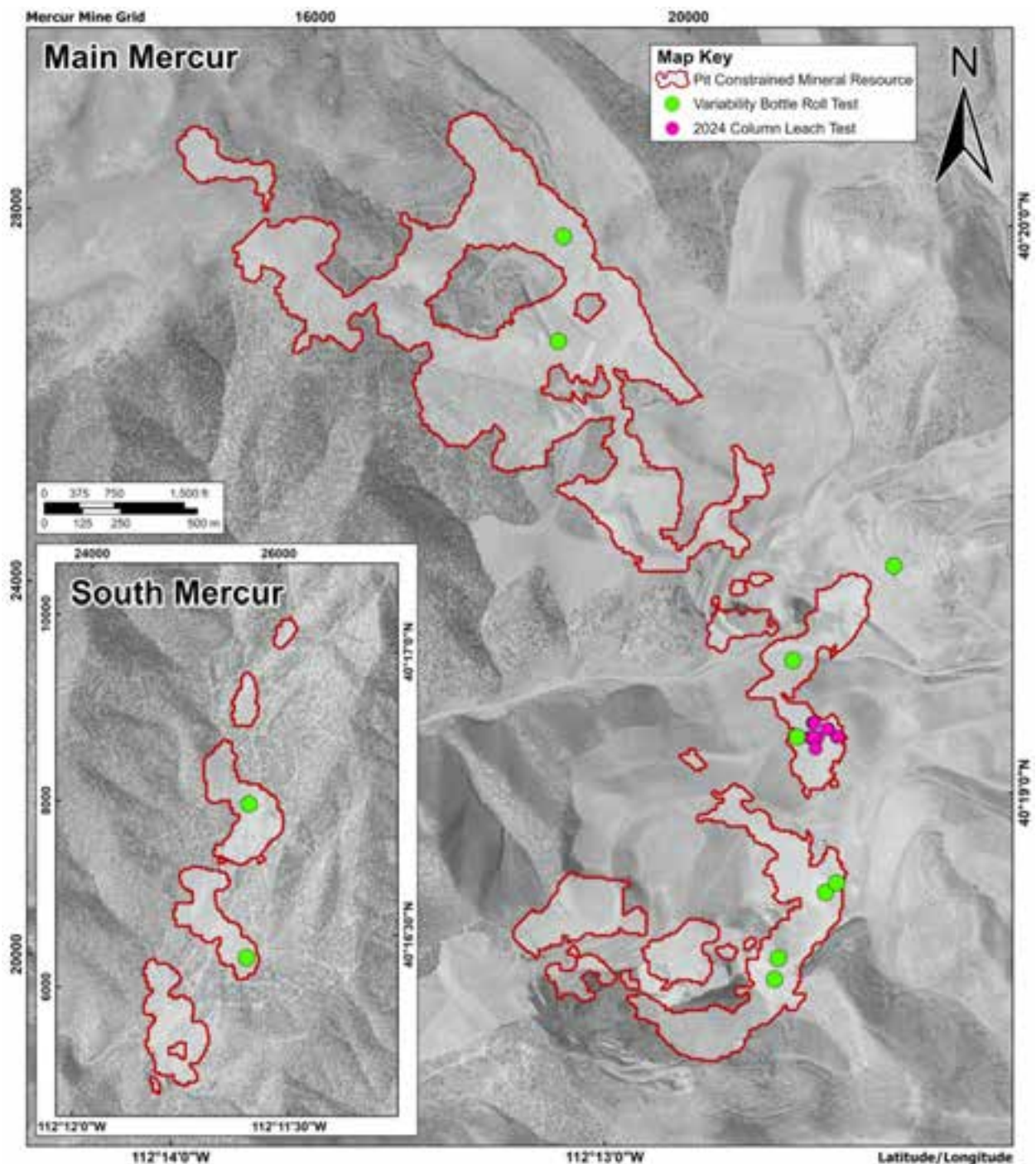
**Figure 13-2: Comparison of DCN Recovery (RC chips) with CIL Recovery (P80 50 µm) (Ensign, 2023)**



### **13.3 Revival Metallurgical Test Work**

Metallurgical test work was performed by KCA on behalf of Revival Gold in 2024 to further evaluate the viability of heap leaching for the recovery of gold for Mercur. The test work included bottle roll and column leach tests on geochemically representative samples taken from the Mercur Hill pit and variability bottle roll leach tests on samples from multiple resource areas. A map of the drill holes used to generate samples used for the column test work program and variability bottle roll program is presented on Figure 13-3. It is noted that the column leach test samples tested are not spatially representative of the overall Mercur deposits and additional test work is planned to cover the entire mineral resource area.

Figure 13-3: Revival Column Leach Test Sample Drill Map (Revival, 2025)



### 13.3.1 Kappes, Cassiday & Associates (May, 2024)

Results for the 2024 Revival variability metallurgical test program summarized herein are extracted from the Kappes, Cassiday & Associates report titled “Mercur Mine Project, Variability Study RC Chip Samples, Report of Metallurgical Test Work” dated May 2024.

The variability program was conducted on RC drill cuttings from 74 small sample bags with 46 of the samples selected for head analyses and bottle roll leach testing. Head analyses for gold and silver for the selected samples are presented in Table 13-8 with as-received particle size distributions presented in Table 13-9.

**Table 13-8: Variability Head Analyses Summary – Gold and Silver**

KCA Sample No.	Bag No.	Description	Average Gold Grade (g/T)	Average Silver Grade (g/T)
98902 A	EN006	537535	1.430	1.05
98906 A	EN010	538488	1.117	1.60
98907 A	EN010	538492	0.576	2.60
98910 A	EN013	538878	0.493	18.55
98911 A	EN013	538879	0.642	21.70
98912 A	EN013	538882	1.297	13.75
98913 A	EN013	538883	0.954	3.85
98915 A	EN018	539079	0.416	1.40
98916 A	EN018	539196	1.114	1.70
98917 A	EN018	539072	0.527	1.70
98919 A	EN018	539197	0.508	1.55
98920 A	EN035	540786	0.448	1.00
98921 A	EN035	540787	1.304	0.99
98922 A	EN035	540788	1.078	1.30
98923 A	EN035	540790	0.698	2.50
98924 A	EN035	540791	2.091	9.45
98925 A	EN035	540792	0.625	15.91
98926 A	EN035	540794	0.880	7.95
98927 A	EN037	540904	0.348	0.41
98928 A	EN037	540934	0.847	4.15
98929 A	EN037	540939	0.692	3.65
98930 A	EN037	540931	0.638	4.00
98931 A	EN037	540937	1.235	4.70
98932 A	EN037	540943	0.662	2.90
98934 A	EN061	4564456	1.085	0.65
98935 A	EN061	4564459	0.938	4.80

KCA Sample No.	Bag No.	Description	Average Gold Grade (g/T)	Average Silver Grade (g/T)
98937 A	EN061	4564470	0.645	65.76
98938 A	EN070	4565862	0.577	2.20
98939 A	EN070	4565864	0.585	1.90
98940 A	EN070	4565854	0.259	2.20
98941 A	EN070	4565839	0.577	1.67
98942 A	EN070	4565846	0.524	26.74
98943 A	EN070	4565840	1.385	1.67
98947 A	EN076	4566677	0.486	4.27
98948 A	EN076	4566679	0.518	5.85
98949 A	EN076	4566682	0.572	6.05
98963 A	SM-20-011	696524	0.645	2.00
98964 A	SM-20-011	696536	1.246	1.80
98965 A	SM-20-011	696537	1.183	0.90
98966 A	SM-20-011	696559	0.799	1.80
98967 A	SM-20-003	695893	1.155	5.00
98968 A	SM-20-003	695906	1.055	1.35
98969 A	SM-20-003	695915	0.309	0.95
98970 A	SM-20-003	695918	0.806	1.20
98971 A	SM-20-003	695925	0.745	1.15
98974 A	SM-20-003	695933	0.455	1.65

**Table 13-9: Variability As-Received Particle Size Distribution**

KCA Sample No.	Description	Cumulative Weight Passing, %			
		1.7 mm	0.6 mm	0.212 mm	Pan
98902 A	537535	100.0%	83.7%	51.2%	41.8%
98906 A	538488	100.0%	92.2%	70.8%	46.0%
98907 A	538492	100.0%	86.7%	58.4%	43.3%
98910 A	538878	100.0%	88.0%	57.9%	44.0%
98911 A	538879	100.0%	87.8%	58.0%	44.0%
98912 A	538882	100.0%	91.3%	66.9%	45.6%
98913 A	538883	100.0%	92.3%	70.3%	46.5%
98915 A	539079	100.0%	82.8%	51.7%	41.5%
98916 A	539196	100.0%	80.0%	48.6%	40.0%
98917 A	539072	100.0%	85.3%	55.0%	42.6%
98919 A	539197	100.0%	84.4%	54.4%	42.2%
98920 A	540786	100.0%	87.2%	54.5%	43.6%
98921 A	540787	100.0%	86.6%	55.8%	43.3%

KCA Sample No.	Description	Cumulative Weight Passing, %			
		1.7 mm	0.6 mm	0.212 mm	Pan
98922 A	540788	100.0%	82.4%	50.4%	41.1%
98923 A	540790	100.0%	88.6%	59.0%	44.4%
98924 A	540791	100.0%	86.6%	55.2%	43.3%
98925 A	540792	100.0%	86.0%	54.1%	43.0%
98926 A	540794	100.0%	83.4%	52.0%	41.7%
98927 A	540904	100.0%	86.7%	57.2%	43.3%
98928 A	540934	100.0%	80.0%	47.5%	40.1%
98929 A	540939	100.0%	85.0%	55.3%	42.6%
98930 A	540931	100.0%	80.9%	48.1%	40.5%
98931 A	540937	100.0%	83.7%	52.3%	42.0%
98932 A	540943	100.0%	82.9%	52.4%	41.7%
98934 A	4564456	100.0%	83.8%	53.7%	41.8%
98935 A <sup>1</sup>	4564459	--	--	--	--
98937 A	4564470	100.0%	75.8%	43.8%	38.1%
98938 A	4565862	100.0%	79.5%	48.2%	39.8%
98939 A	4565864	100.0%	79.4%	46.4%	39.9%
98940 A	4565854	100.0%	86.3%	60.8%	43.3%
98941 A	4565839	100.0%	80.2%	47.7%	40.3%
98942 A	4565846	100.0%	80.5%	48.9%	40.3%
98943 A	4565840	100.0%	80.9%	49.6%	40.6%
98947 A	4566677	100.0%	92.0%	65.3%	46.4%
98948 A	4566679	100.0%	86.8%	57.5%	43.7%
98949 A	4566682	100.0%	83.8%	51.8%	42.1%
98963 A	696524	100.0%	84.9%	52.5%	42.7%
98964 A	696536	100.0%	80.5%	48.0%	40.3%
98965 A	696537	100.0%	83.8%	52.5%	42.2%
98966 A	696559	100.0%	86.3%	52.8%	43.3%
98967 A	695893	100.0%	83.2%	50.7%	41.6%
98968 A	695906	100.0%	84.8%	53.9%	42.5%
98969 A	695915	100.0%	79.4%	46.0%	39.7%
98970 A	695918	100.0%	89.9%	60.1%	45.4%
98971 A	695925	100.0%	85.6%	53.3%	43.0%
98974 A	695933	100.0%	91.9%	65.3%	45.8%
<u>Note:</u> Screen analysis not performed due to insufficient sample.					

#### **13.3.1.1    *Variability Bottle Roll Leach Tests (KCA, 2024)***

Bottle roll tests were conducted on 2.2 lb (1 kg) portions of dried, as-received material for each sample. Tests were completed under the following conditions:

- 40% solids pulp density,
- 10.5 to 11 pH maintained with Lime,
- 1.0 g/L NaCN concentration, and
- 48-hour leach period for coarse material.

The results for gold and silver extraction are presented in Table 13-10 with average recoveries by formation presented in Table 13-11. Gold and silver extractions for the 46 samples ranged from 48% to 98% and 4% to 61%, respectively, with gold recoveries generally declining with depth as shown on Figure 13-4. Cyanide consumptions ranged from 0.02 to 0.34 lbs/t (0.01 to 0.17 kg/T). Lime additions ranged from 1.0 to 3.0 lbs/t (0.5 to 1.5 kg/T).

**Table 13-10: Variability Bottle Roll Leach Test Summary (KCA, 2024)**

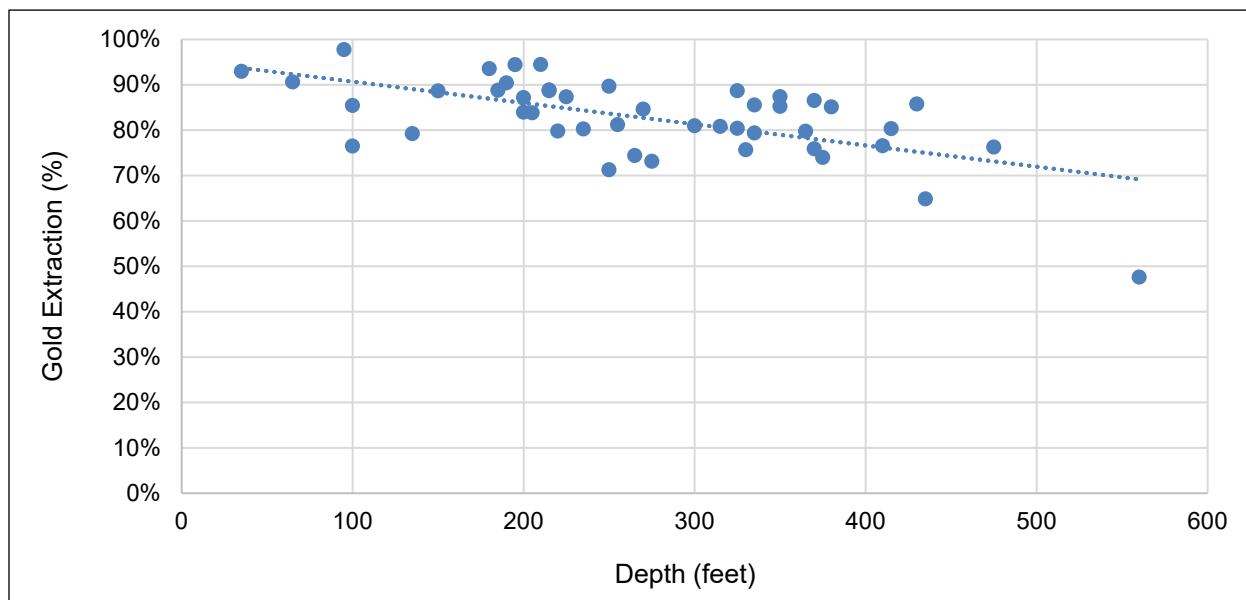
KCA Sample No.	Hole ID	From (ft)	To (ft)	Formation	Sample Selection for KCA	Calculated Head Grade (g/T Au)	Extracted Grade (g/T Au)	Gold Extracted (%)	Calculated Head Grade (g/T Ag)	Extracted Grade (g/T Ag)	Silver Extracted (%)	NaCN Consumption (kg/T)	Ca(OH) <sub>2</sub> Addition (kg/T)
98902 A	EN006	555	560	UB	GG1	1.344	0.640	48%	0.34	0.08	23%	0.11	1.00
98906 A	EN010	345	350	MAG	MS 1	0.929	0.792	85%	1.42	0.16	11%	0.05	0.50
98907 A	EN010	360	365	MAG	MS 2	0.508	0.405	80%	1.41	0.11	8%	0.06	0.50
98910 A	EN013	405	410	GBL	MS 3	0.428	0.327	77%	18.49	3.00	16%	0.05	0.75
98911 A	EN013	410	415	GBL	MS 4	0.562	0.451	80%	20.81	4.53	22%	0.03	0.50
98912 A	EN013	425	430	GBL	MS 5	0.998	0.856	86%	12.95	5.30	41%	0.08	0.50
98913 A	EN013	430	435	GBL	MS 6	0.841	0.545	65%	2.66	1.63	61%	0.05	0.50
98915 A	EN018	95	100	UB	SAC 5	0.347	0.296	85%	0.29	0.03	11%	0.02	0.75
98916 A	EN018	320	325	GBL	SAC 6	0.931	0.749	80%	0.37	0.11	30%	0.03	0.50
98917 A	EN018	60	65	UB	SAC 4	0.448	0.406	91%	0.29	0.03	11%	0.09	0.75
98919 A	EN018	325	330	GBL	SAC 7	0.433	0.328	76%	0.32	0.06	19%	0.05	0.50
98920 A	EN035	185	190	MAG	MR1	0.411	0.371	90%	0.45	0.05	11%	0.12	0.76
98921 A	EN035	190	195	MAG	MR2	1.089	1.029	94%	0.62	0.05	8%	0.05	0.75
98922 A	EN035	195	200	MAG	MR3	0.948	0.826	87%	0.75	0.03	4%	0.02	0.50
98923 A	EN035	200	205	MAG	MR4	0.651	0.546	84%	1.20	0.06	5%	0.03	0.75
98924 A	EN035	205	210	SC	MR5	2.013	1.901	94%	8.76	0.70	8%	0.09	0.75
98925 A	EN035	210	215	SC	MR6	0.545	0.484	89%	15.72	1.32	8%	0.00	0.75
98926 A	EN035	220	225	SC	MR7	0.731	0.638	87%	7.02	0.88	13%	0.08	0.50
98927 A	EN037	95	100	UB	MR8	0.306	0.234	76%	0.30	0.05	15%	0.05	0.75
98928 A	EN037	230	235	MAG	MR10	0.738	0.592	80%	4.02	0.48	12%	0.06	0.50
98929 A	EN037	250	255	MAG	MR12	0.634	0.515	81%	3.97	0.39	10%	0.02	0.50
98930 A	EN037	215	220	MAG	MR9	0.640	0.511	80%	3.57	0.81	23%	0.00	0.75
98931 A	EN037	245	250	MAG	MR11	1.145	1.026	90%	4.45	0.33	7%	0.05	0.50
98932 A	EN037	270	275	MAG	MR13	0.615	0.450	73%	2.17	0.33	15%	0.05	0.50
98934 A	EN061	180	185	MAG	GG2	1.053	0.935	89%	0.61	0.03	5%	0.03	0.75

KCA Sample No.	Hole ID	From (ft)	To (ft)	Formation	Sample Selection for KCA	Calculated Head Grade (g/T Au)	Extracted Grade (g/T Au)	Gold Extracted (%)	Calculated Head Grade (g/T Ag)	Extracted Grade (g/T Ag)	Silver Extracted (%)	NaCN Consumption (kg/T)	Ca(OH) <sub>2</sub> Addition (kg/T)
98935 A	EN061	195	200	SC	GG3	0.977	0.820	84%	4.80	0.80	17%	0.10	0.76
98937 A	EN061	245	250	SC	GG4	0.713	0.508	71%	76.16	15.58	20%	0.17	0.50
98938 A	EN070	365	370	GBL	NM5	0.521	0.451	87%	0.57	0.14	25%	0.06	0.75
98939 A	EN070	375	380	GBL	NM6	0.656	0.559	85%	0.30	0.05	15%	0.03	0.50
98940 A	EN070	330	335	GBL	NM4	0.291	0.231	79%	0.41	0.08	19%	0.00	0.50
98941 A	EN070	260	265	MAG	NM1	0.542	0.403	74%	0.91	0.11	12%	0.05	0.50
98942 A	EN070	295	300	SC	NM3	0.423	0.342	81%	25.42	4.62	18%	0.03	0.50
98943 A	EN070	265	270	MAG	NM2	1.154	0.977	85%	1.94	0.20	10%	0.05	0.50
98947 A	EN076	320	325	SC	SAC1	0.493	0.437	89%	3.72	0.25	7%	0.03	0.75
98948 A	EN076	330	335	SC	SAC2	0.510	0.436	86%	5.12	0.53	10%	0.12	1.00
98949 A	EN076	345	350	SC	SAC3	0.569	0.497	87%	5.67	0.48	8%	0.06	1.00
98963 A	SM-20-011	310	315	MB	SM1	0.541	0.437	81%	0.27	0.02	6%	0.08	1.00
98964 A	SM-20-011	365	370	BL	SM2	1.023	0.777	76%	0.27	0.02	6%	0.12	1.00
98965 A	SM-20-011	370	375	MAG	SM3	0.949	0.702	74%	0.27	0.02	6%	0.11	1.25
98966 A	SM-20-011	470	475	GBL	SM4	0.715	0.545	76%	0.27	0.02	6%	0.17	1.75
98967 A	SM-20-003	30	35	MB	SM5	1.022	0.950	93%	3.63	0.33	9%	0.09	1.00
98968 A	SM-20-003	90	95	BL	SM6	0.977	0.955	98%	0.34	0.08	24%	0.14	0.76
98969 A	SM-20-003	130	135	BL	SM7	0.314	0.249	79%	0.52	0.03	6%	0.05	0.50
98970 A	SM-20-003	145	150	MAG	SM8	0.694	0.616	89%	0.79	0.03	4%	0.07	0.76
98971 A	SM-20-003	175	180	MAG	SM9	0.638	0.597	94%	0.53	0.03	6%	0.11	0.50
98974 A	SM-20-003	210	215	GBL	SM10	0.454	0.403	89%	0.27	0.02	6%	0.15	1.50

**Table 13-11: Variability Bottle Roll Leach Test Recoveries by Formation (KCA, 2024)**

Formation	Extracted Gold (%)	Extracted Silver (%)
Magazine Sandstone (MAG)	84%	9%
Lower Great Blue (GBL)	80%	24%
Silver Chert (SC)	85%	12%
Upper Bed (UB)	75%	15%
Barren Limestone (BL)	84%	12%
Mercur Bed (MB)	79%	6%

**Figure 13-4: Variability Bottle Roll Recoveries versus Depth (KCA, 2025)**



### 13.3.2 Kappes, Cassiday & Associates (September, 2024)

Results for the 2024 Revival Metallurgical test program summarized herein are extracted from the Kappes, Cassiday & Associates reports titled “Mercur Project Report of Metallurgical Test Work” dated 27 September 2024.

The 2024 KCA test program was conducted on 7 separate composites from the Mercur deposit generated from 55 small sample bags of split NQ core. Five of the composite samples were stage crushed to minus ½ inch for leach test work. The remaining two composites were stage crushed to minus 1½ inch and sent to Hazen Research, Inc. for comminution test work.

Head characterization tests were conducted on splits from the five composites received for leach test work with results for the primary elements presented in Table 13-12, Table 13-13, and Table 13-14 for gold and silver, carbon and sulfur and mercury and copper, respectively. A multi-element analysis of the composite samples is presented in Table 13-15.

The head analysis shows some organic carbon with samples ranging from 0.10% and 0.15% and Sulfide Sulfur ranging from 0.05% and 0.19%. Mercury was detected in all samples and will require treatment for recovery operations. Copper concentrations are low and are not expected to present any issues with cyanide leaching.

**Table 13-12: Head Analyses – Gold and Silver**

KCA Sample No.	Description	Assay 1, (g/T Au)	Assay 2, (g/T Au)	Assay 3, (g/T Au)	Average Assay (g/T Au)
98982 A	MAG 1	0.646	0.645	0.681	0.657
98983 A	MAG 2	0.821	0.828	0.902	0.850
98984 A	SC	0.569	0.543	0.519	0.544
98985 A	GBL	1.701	1.433	1.632	1.589
98986 A	Other	0.634	0.598	0.581	0.605

KCA Sample No.	Description	Assay 1, (g/T Ag)	Assay 2, (g/T Ag)	Assay 3, (g/T Ag)	Average Assay (g/T Ag)
98982 A	MAG 1	1.92	1.75	1.68	1.78
98983 A	MAG 2	1.80	1.75	1.85	1.80
98984 A	SC	7.77	8.33	8.25	8.11
98985 A	GBL	2.43	2.64	2.16	2.41
98986 A	Other	7.20	7.75	7.85	7.60

**Table 13-13: Head Analyses – Carbon and Sulfur**

KCA Sample No.	Description	Total Carbon (%)	Organic Carbon (%)	Inorganic Carbon (%)	Total Sulfur (%)	Sulfide Sulfur (%)	Sulfate Sulfur (%)
98982 A	MAG 1	3.40	0.11	3.29	0.21	0.09	0.12
98983 A	MAG 2	0.86	0.10	0.76	0.31	0.19	0.12
98984 A	SC	2.63	0.15	2.48	0.12	0.06	0.06
98985 A	GBL	9.66	0.15	9.51	0.11	0.05	0.06
98986 A	Other	1.60	0.10	1.50	0.17	0.06	0.11

**Table 13-14: Head Analyses – Mercury and Copper**

KCA Sample No.	Description	Total Mercury (mg/kg)	Total <sup>1</sup> Copper (mg/kg)	Cyanide <sup>2</sup> Soluble Copper (mg/kg)	Cyanide Soluble Copper (%)
98982 A	MAG 1	4.18	9	1.12	12%
98983 A	MAG 2	4.38	15	2.38	16%
98984 A	SC	9.34	10	2.74	27%
98985 A	GBL	29.80	1	0.84	84%
98986 A	Other	7.88	10	1.04	10%
<b>Notes:</b> 1. The detection limit for copper by 4 Acid digestion, ICP analysis is 2 mg/kg. For the purpose of calculation a value of ½ the detection limit is utilized for assays less than the detection limit. 2. Assay values from cyanide shake tests.					

**Table 13-15: Head Analyses – Multi-Element Analysis**

Constituent	Unit	MAG 1 KCA Sample No. 98982 A	MAG 2 KCA Sample No. 98983 A	SC KCA Sample No. 98984 A	GBL KCA Sample No. 98985 A	Other KCA Sample No. 98986 A
Al	%	2.95	2.76	1.51	0.50	3.48
As	mg/kg	350	166	191	235	752
Ba	mg/kg	1585	7082	2471	4165	219
Bi	mg/kg	<2	<2	<2	2	<2
C <sub>(total)</sub>	%	3.40	0.86	2.63	9.66	1.60
C <sub>(organic)</sub>	%	0.11	0.10	0.15	0.15	0.10
C <sub>(inorganic)</sub>	%	3.29	0.76	2.48	9.51	1.50
Ca	%	10.44	2.64	8.42	31.72	4.94
Cd	mg/kg	<1	<1	<1	<1	<1
Co	mg/kg	4	<1	5	<1	8
Cr	mg/kg	96	100	98	29	115
Cu <sub>(total)</sub>	mg/kg	9	15	10	<2	10
Cu <sub>(cyanide soluble)</sub>	mg/kg	1.12	2.38	2.74	0.84	1.04
Fe	%	1.63	1.38	0.89	0.66	2.16
Hg	mg/kg	4.18	4.38	9.34	29.80	7.88
K	%	1.58	1.41	0.67	0.37	1.56
Mg	%	0.66	0.24	0.15	0.14	0.25
Mn	mg/kg	288	90	214	777	219
Mo	mg/kg	3	2	3	5	1
Na	%	0.03	0.02	0.02	0.01	0.05
Ni	mg/kg	15	11	28	16	22
Pb	mg/kg	<10	127	36	<10	<10
S <sub>(total)</sub>	%	0.21	0.31	0.12	0.11	0.17
S <sub>(sulfide)</sub>	%	0.09	0.19	0.06	0.05	0.06
S <sub>(sulfate)</sub>	%	0.12	0.12	0.06	0.06	0.11
Sb	mg/kg	30	72	132	109	98
Se	mg/kg	6	6	5	8	6
Sr	mg/kg	321	218	165	503	263
Te	mg/kg	6	5	5	8	8
Ti	%	0.17	0.12	0.05	0.02	0.2
V	mg/kg	44	38	30	25	61
W	mg/kg	<10	<10	<10	<10	<10
Zn	mg/kg	35	24	58	40	35

### 13.3.2.1 Comminution Testing

Material stage crushed to 1½ inch for two of the composite samples was submitted to Hazen Research, Inc. in Golden, Colorado to provide Bond Ball Mill Work Index (“BW<sub>i</sub>”), Bond Abrasion Index (“A<sub>i</sub>”) and Semi-Autogenous Grinding (“SAG”) Mill Comminution (“SMC”) testing with results presented in Table 13-16 and Table 13-17.

**Table 13-16: Bond Ball Mill Work Index and Abrasion Index**

KCA Sample No.	Description	Closing Screen Size (µm)	F <sub>80</sub> (µm)	P <sub>80</sub> (µm)	BW <sub>i</sub> (kWh/t)	A <sub>i</sub> (g)
98987 A	COMM 1	149	2,607	109	9.2	0.0343
98988 A	COMM 2	149	2,721	110	12.0	0.0327

**Table 13-17: Summary of SMC Evaluations**

KCA Sample No.	Description	A	b	A x b	DW <sub>i</sub> (kWh/m <sup>3</sup> )	Dwi (%)	M <sub>ia</sub> (kWh/t)	M <sub>ih</sub> (kWh/t)	M <sub>ic</sub> (kWh/t)	t <sub>a</sub>	SCSE (kWh/t)
98987 A	COMM 1	66.0	1.18	77.9	3.27	12	11.6	7.4	3.8	0.79	7.42
98988 A	COMM 2	62.1	0.89	55.3	4.74	26	15.2	10.5	5.4	0.55	8.48
SMC parameters: sg = specific gravity of the sample A = maximum breakage b = relation between energy and impact breakage A x b = overall AG-SAG hardness Dwi = drop-weight index						M <sub>ia</sub> = coarse particle component M <sub>ih</sub> = high pressure grinding roll component M <sub>ic</sub> = crusher component t <sub>a</sub> = low energy abrasion component of breakage SCSE = SAG circuit specific gravity					

### 13.3.2.2 Cyanide Bottle Roll Leach Tests

Coarse and fine milled bottle roll tests were conducted on 2.2 lb (1-kg) portions of each of the five composite samples. Material for the coarse bottle rolls tests were crushed to a target size of 80% passing 1/16 inch (1.70 mm). Material for the fine bottle roll tests were milled in a laboratory rod mill to a target size of 80% passing 150 mesh (0.106 mm). Tests were completed under the following conditions:

- 40% solids pulp density,
- 10.5 to 11 pH maintained with Lime,
- 1.0 g/L NaCN concentration,
- 96-hour leach period for coarse material, and
- 24-hour leach period for fine material.

Results for the bottle roll leach tests are presented in Table 13-18. Gold extractions for the five coarse samples ranged from 68% to 90% after 96 hours of leaching. Gold extractions for the five

fine samples ranged from 76 to 91% after 24 hours of leaching. Silver extractions for the coarse and fine samples ranged from 4% to 13% and 9% to 21%, respectively. Cyanide consumptions ranged from 0.08 to 0.24 lbs/t (0.04 to 0.12 kg/T) for the coarse material and 0.08 to 0.26 lbs/t (0.04 to 0.13 kg/T) for the fine material. Lime additions ranged from 2.0 to 4.4 lbs/t (1.0 to 2.2 kg/T).

**Table 13-18: Cyanide Bottle Roll Tests Results**

KCA Sample No.	Description	Target p80 Size (mm)	Calculated Gold Head (g/T)	Extracted Gold Grade (g/T)	Gold Extracted (%)	Calculated Silver Head (g/T)	Extracted Silver Grade (g/T)	Silver Extracted (%)	Leach Time (hours)	NaCN Consumption (kg/T)	Ca(OH) <sub>2</sub> Addition (kg/T)
98982 A	MAG 1	1.70	0.702	0.474	68%	1.10	0.08	8%	96	0.12	0.75
98982 A	MAG 1	0.106	0.584	0.446	76%	1.50	0.14	9%	24	0.04	0.50
98983 A	MAG 2	1.70	0.933	0.837	90%	1.39	0.06	4%	96	0.08	0.75
98983 A	MAG 2	0.106	0.744	0.680	91%	1.51	0.14	9%	24	0.04	0.50
98984 A	SC	1.70	0.545	0.440	81%	7.90	0.58	7%	96	0.09	0.50
98984 A	SC	0.106	0.490	0.415	85%	8.05	1.35	17%	24	0.04	0.50
98985 A	GBL	1.70	1.707	1.458	85%	0.76	0.06	8%	96	0.04	0.50
98985 A	GBL	0.106	1.673	1.453	87%	0.93	0.14	16%	24	0.04	0.50
98986 A	Other	1.70	0.611	0.471	77%	6.96	0.93	13%	96	0.10	1.00
98986 A	Other	0.106	0.500	0.408	81%	7.87	1.63	21%	24	0.13	0.75

### 13.3.2.3 Column Leach Tests

Column leach tests were conducted on 40 to 44 lb (18-20 kg) portions of the five composite samples crushed to 100% passing ½ inch (12.5 mm). The columns were leached for 68 days with a sodium cyanide solution. The columns were run continuously for 31 days followed by a 14-day rest cycle and 7 days of additional leaching, which was repeated for the remainder of the leach period. A summary of results for column leach tests are presented in Table 13-19.

**Table 13-19: Column Leach Test Results**

KCA Sample No.	KCA Test No.	Sample	Crush Size (mm)	Calculated Gold Head (g/T)	Extracted Gold Grade (g/T)	Wt. Avg. Tail Screen (g/T Au)	Extracted Gold (%)	Calc. Tail p80 Size (mm)	Days of Leach	NaCN Consumption kg/T	Addition Hydrated Lime (kg/T)
98982 A	100001	MAG 1	12.5	0.638	0.473	0.165	74%	9.1	68	0.66	1.02
98983 A	100004	MAG 2	12.5	0.842	0.778	0.064	92%	9.1	68	0.61	1.01
98984 A	100007	SC	12.5	0.586	0.496	0.090	85%	9.1	68	0.48	1.00
98985 A	100010	GBL	12.5	1.700	1.452	0.248	85%	8.8	68	0.35	1.00
98986 A	100013	Other	12.5	0.470	0.384	0.086	82%	9.4	68	0.76	1.00

KCA Sample No.	KCA Test No.	Sample	Crush Size (mm)	Calculated Silver Head (g/T)	Extracted Silver Grade (g/T)	Wt. Avg. Tail Screen (g/T Ag)	Extracted Silver (%)	Calc. Tail p80 Size (mm)	Days of Leach	NaCN Consumption (kg/T)	Addition Hydrated Lime (kg/T)
98982 A	100001	MAG 1	12.5	0.93	0.04	0.89	5%	9.1	68	0.66	1.02
98983 A	100004	MAG 2	12.5	1.25	0.04	1.21	3%	9.1	68	0.61	1.01
98984 A	100007	SC	12.5	8.04	0.35	7.69	4%	9.1	68	0.48	1.00
98985 A	100010	GBL	12.5	0.63	0.07	0.56	11%	8.8	68	0.35	1.00
98986 A	100013	Other	12.5	7.27	0.73	6.54	10%	9.4	68	0.76	1.00

Gold and silver extractions for the samples ranged from 74% to 92% and 3% to 11%, respectively. Cyanide consumptions ranged from 0.70 to 1.52 lbs/t (0.35 to 0.76 kg/T) and lime addition averaged 2.0 lbs/t (1 kg/T).

The column leach tests indicate that the Mercur materials are amenable to cyanide leaching and that heap leaching may be a viable processing method. Preg robbing did not appear to be an issue with any of the column tests.

## 13.4 Heap Leach Conclusions from Metallurgical Programs

Based on the recent metallurgical tests completed on the project, key design parameters for the Project include:

- Crush size of 100% passing ½ inches
- Overall average gold recovery of 75% (based on variable recovery applied to the minable resource on a block-by-block basis).

- Design leach cycle of 80 days.
- Lime consumption of 1.80 lbs/t (0.90 kg/T).
- Cyanide consumption of 0.36 lbs/t (0.18 kg/T).

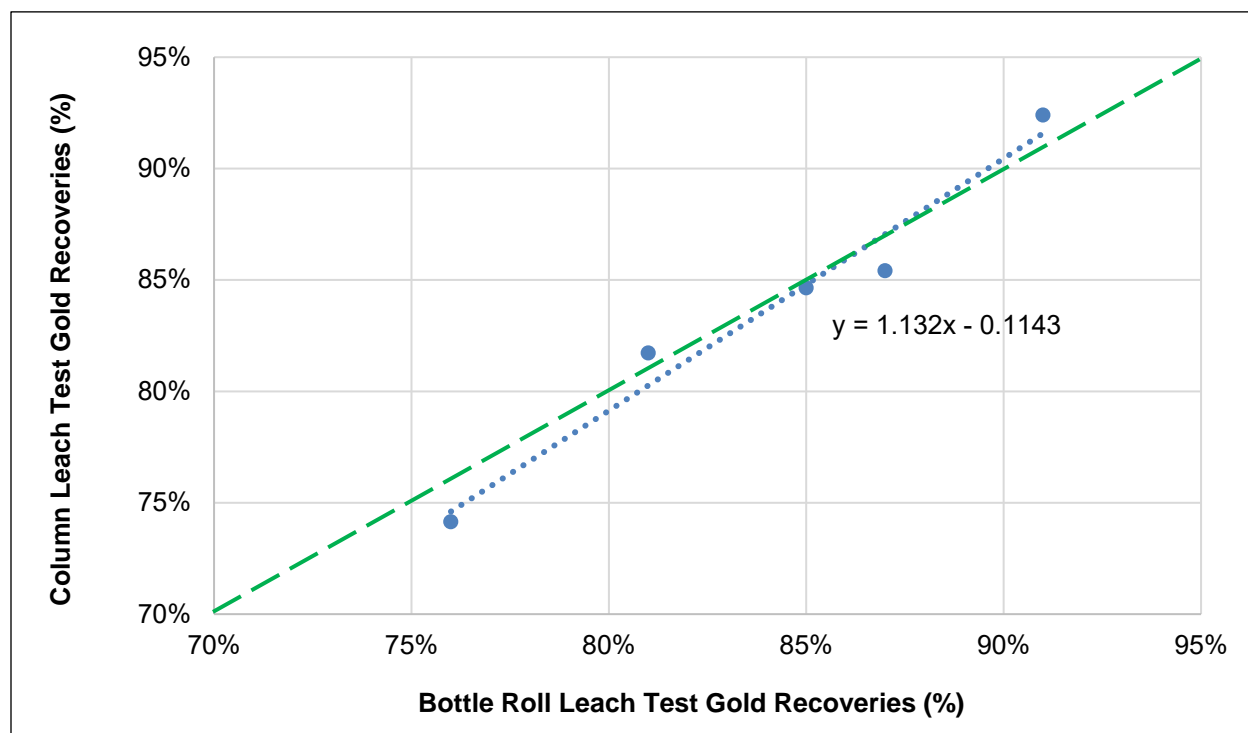
The key design parameters are based on limited test work performed on geochemically representative samples which will need to be validated as part of future test work programs.

The Mercur deposit contains known preg-robbing material which presents a moderate risk to the overall deposit.

### 13.4.1 Heap Leach Gold Recovery

Due to the limited column leach test work available and the substantial historical DCN and CIL test database (7,141 and 10,495 tests, respectively), test results were reviewed to determine if there is a correlation between the column recovery results and corresponding bottle roll leach tests. A plot of the column leach test recoveries vs. corresponding fine bottle roll test recoveries are presented on Figure 13-5. Average column and bottle roll test recoveries were also compared to see if there were any significant recovery differences by material formation with results shown in Table 13-20.

**Figure 13-5: Column Leach versus Fine Bottle Roll Gold Recoveries**



**Table 13-20: Column and Bottle Roll Average Recovery by Formation**

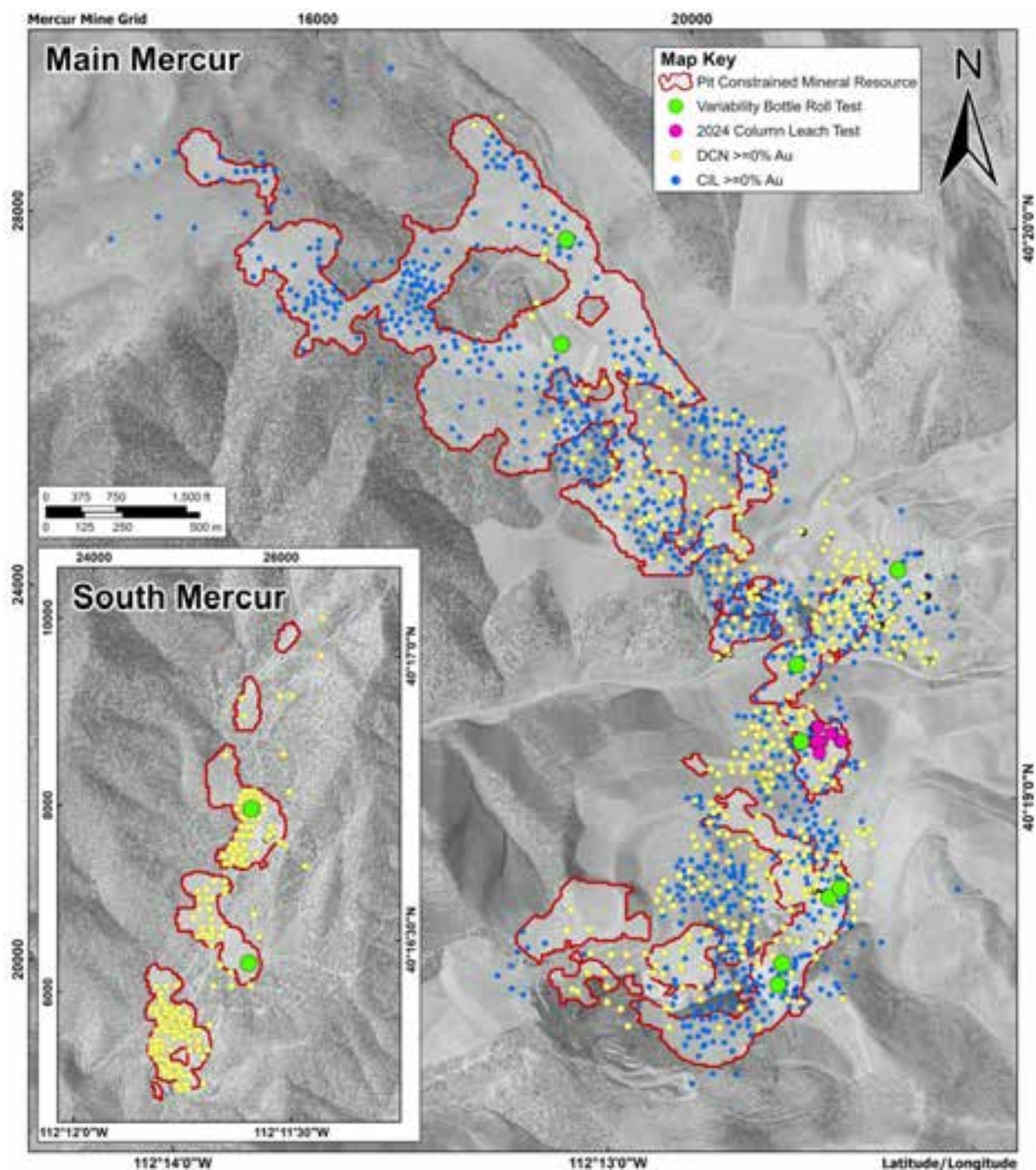
Formation	Bottle Roll Recovery (all KCA)		Column Recovery	
	Gold (%)	Silver (%)	Gold (%)	Silver (%)
<b>MAG</b>	83%	9%	83%	4%
<b>GBL</b>	81%	24%	85%	11%
<b>SC</b>	85%	12%	85%	4%

The results show a good correlation between the column and bottle roll leach tests and no significant recovery differences between the different material formations. Recoveries from the fine bottle roll leach tests averaged 2% higher compared to the column leach tests. For the purposes of this Report, an additional discount of 3% has been added with the gold recovery for the Mercur Project being estimated by applying a 5% discount factor to the DCN (Direct Cyanide) or CIL recovery estimates from the mine resource model on a block-by-block basis. Where both DCN and CIL results were available, the DCN value was used. Based on this method, the overall recovery for gold is estimated at 75% including an average recovery of 74% for the Main Mercur deposits and 79% for South Mercur.

Figure 13-6 illustrates the location of the DCN and CIL samples relative to the bottle roll and column leach tests samples.

Based on this method, the overall recovery for gold is estimated at 75% including an average recovery of 74% for the Main Mercur deposits and 79% for South Mercur.

Figure 13-6: DCN, CIL, Bottle Roll and Column Leach Test Sample Map (Revival, 2025)



### 13.4.2 Leach Cycle

The Mercur leach cycle has been estimated based on the column test work completed by evaluating the leach curves for gold. The leach cycle considers tons of solution per ton of material as well as the total time required to reach the ultimate recovery in the column leach tests. The selected leach cycle for the Mercur material is 80 days.

### 13.4.3 Reagent Consumptions

#### 13.4.3.1 Cyanide

Cyanide consumptions from the column leach tests for Mercur were studied by material type and adjusted to provide a basis for the expected field cyanide consumptions. In KCA's experience, field cyanide consumptions for heap leaches are typically 25% to 50% of observed lab consumptions and have been estimated at 33% of the lab. Lab cyanide consumption for the Mercur material averaged 1.1 lbs/t with an estimated field cyanide consumption of 0.36 lbs/t.

#### 13.4.3.2 Lime

Lime is required for pH control during leaching and is assumed to be consumed at a 1:1 ratio after converting from hydrated lime, which is typically used in laboratory tests, to quick or pebble lime, which is most commonly used in heap leach operation. Lime consumption for the Mercur material is estimated at 1.8 lbs/t.

## 13.5 Recommendations for Further Work

Additional metallurgical test work that more accurately defines the metallurgical characteristics of the resource base as it stands today is needed. Most of the recent testing has focused on geochemically representative samples, which showed similar high recoveries; however, these samples were taken from drill holes in close proximity and did not include transition and refractory material which may behave differently than the oxide material and may require different recovery factors when compared to the DCN and CIL database. The following tests are recommended:

- Column Leach Tests on spatially and grade representative composite samples:
  - Minimum of one column per resource area, targeting oxide, transition and refractory (carbonaceous and sulfide) material,
  - Variability columns with regards to crush size (1/4" up to 1 1/2"), and
  - Preg robbing tests and corresponding bottle roll tests should be considered for each of the columns.

- Compacted Permeability Test to determine if cement agglomeration is required for heap permeability and stability.

## **13.6      References**

Bureau Veritas Minerals, "Metallurgical Testing for Gold Recovery, Ensign Minerals Inc. – Mercur Project", 4 November 2022

ALS Metallurgy, "Metallurgical Test Work on Results from the Mercur Gold Project – Utah, USA", 18 August 2023.

Kappes, Cassiday & Associates, "Mercur Mine Project, Variability Study RC Chip Samples, Report of Metallurgical Test Work", May 2024.

Kappes, Cassiday & Associates, "Mercur Project Report of Metallurgical Test Work", 27 September 2024.

## SECTION 14 CONTENTS

14	Mineral Resource Estimates.....	14-3
14.1	Introduction.....	14-3
14.2	Project Data – Main, South, and West Mercur.....	14-6
14.3	Main Mercur Mineral Resources.....	14-11
14.3.1	Geologic Model – Main Mercur.....	14-11
14.3.2	Gold Domain Modeling – Main Mercur.....	14-12
14.3.3	Assay Coding, Capping, and Compositing – Main Mercur.....	14-18
14.3.4	Tonnage Factors – Main Mercur.....	14-21
14.3.5	Block Model and Coding – Main Mercur.....	14-21
14.3.6	Grade Interpolation – Main Mercur.....	14-21
14.3.7	Mineral Resources – Main Mercur.....	14-23
14.4	South Mercur Mineral Resources.....	14-32
14.4.1	Geologic Model – South Mercur.....	14-32
14.4.2	Gold Domain Modeling – South Mercur.....	14-33
14.4.3	Assay Coding, Capping, and Compositing – South Mercur.....	14-35
14.4.4	Tonnage Factors – South Mercur.....	14-37
14.4.5	Block Model and Coding – South Mercur.....	14-37
14.4.6	Grade Interpolation – South Mercur.....	14-38
14.4.7	Mineral Resources – South Mercur.....	14-39
14.5	Discussion of the Mercur Resources, Risks, and Recommendations.....	14-45

## SECTION 14 TABLES

Table 14-1:	Summary of Drilling in the Main, South and West Mercur Areas.....	14-7
Table 14-2:	Descriptive Statistics of Sample Assays in Main, South and West Mercur Drill-Holes.....	14-10
Table 14-3:	Gold Grade Domain Ranges.....	14-12
Table 14-4:	Capping Levels for Gold by Domain – Main Mercur.....	14-18
Table 14-5:	Coded Gold Assay Statistics by Domain – Main Mercur.....	14-19
Table 14-6:	Coded Gold Composite Statistics by Domain – South Mercur.....	14-20
Table 14-7:	Block Model Dimensions, Local Mine Grid in Feet – Main Mercur.....	14-21
Table 14-8:	Estimation Parameters – Main Mercur.....	14-22
Table 14-9:	Pit Optimization Parameters – Main Mercur.....	14-23
Table 14-10:	Main Mercur Indicated and Inferred Gold Mineral Resources.....	14-24
Table 14-11:	Main Mercur Sensitivity Evaluation by Gold Price Relative to Base Case Mineral Resources.....	14-30

Table 14-12: Main Mercur Classification Criteria .....	14-31
Table 14-13: Gold Grade Domain Ranges.....	14-33
Table 14-14: Capping Levels for Gold by Domain – South Mercur .....	14-35
Table 14-15: Coded Gold Assay Statistics by Domain – South Mercur .....	14-35
Table 14-16: Coded Gold Composite Statistics by Domain – South Mercur.....	14-36
Table 14-17: Block Model Dimensions, Local Mine Grid in Feet – South Mercur .....	14-38
Table 14-18: Estimation Parameters – Main Mercur.....	14-38
Table 14-19: Pit Optimization Parameters – South Mercur.....	14-40
Table 14-20: South Mercur Indicated and Inferred Gold Mineral Resources .....	14-41
Table 14-21: South Mercur Sensitivity Evaluation by Gold Price Relative to Base Case Mineral Resources.....	14-43
Table 14-22: South Mercur Classification Criteria .....	14-44

## SECTION 14 FIGURES

Figure 14-1: Main Mercur Deposit Drill-Hole Map & Mineral Resource Outlines .....	14-8
Figure 14-2: South Mercur Deposit Drill-Hole Map & Mineral Resource Outlines.....	14-9
Figure 14-3: Main Mercur Section N19,100 – Geology & Gold Domains in the Sacramento Pit Area .....	14-13
Figure 14-4: Main Mercur Section N20,725 – Geology & Gold Domains in the Mercur Hill Pit Area .....	14-14
Figure 14-5: Main Mercur Section N25,025 – Geology & Gold Domains in the Marion Hill Pit Area.....	14-15
Figure 14-6: Main Mercur Section N26,500 – Geology & Gold Domains in the Rover Pit Area .....	14-16
Figure 14-7: Main Mercur Section N19,100 – Geology & Gold Block Model in the Sacramento Pit Area.....	14-25
Figure 14-8: Main Mercur Section N20,725 – Geology & Gold Block Model in the Mercur Hill Pit Area .....	14-26
Figure 14-9: Main Mercur Section N25,025 – Geology & Gold Block Model in the Marion Hill Pit Area .....	14-27
Figure 14-10: Main Mercur Section N26,500 – Geology & Gold Block Model in the Rover Pit Area.....	14-28
Figure 14-11: South Mercur Section NE5,600 – Geology & Gold Domains in the Sunshine Mine Area .....	14-34
Figure 14-12: South Mercur Section NE5,600 – Geology & Gold Block Model in the Sunshine Mine Area.....	14-42

## 14 Mineral Resource Estimates

### 14.1 Introduction

The mineral resource estimations for the Main Mercur and South Mercur deposits at the Mercur project were completed in accordance with NI 43-101. The modeling and estimation of mineral resources was completed by Mr. Lindholm, who is a qualified person with respect to mineral resource estimations under NI 43-101, and by Revival staff. Mr. Lindholm is independent of Revival by the definitions and criteria set forth in NI 43-101; there is no affiliation between Mr. Lindholm and Revival except that of independent consultant/client relationships. Mr. Lindholm is not aware of any unusual environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that may materially affect the Main Mercur and South Mercur deposits' mineral resources as of the date of this report.

This report presents gold resources for the Main and South Mercur deposits of the Mercur property that have an effective date of March 13, 2025, the date new pit optimizations were applied to both models that incorporated modified royalty assignments. The resource estimates are based on a drill-hole database with an effective date of November 15, 2024, the date the final database containing changes to assays resulting from RESPEC's audit was received from Revival. No mineral reserves have been estimated for the Mercur project.

The Main Mercur and South Mercur resources are classified in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories in accordance with the "CIM Definition Standards – For Mineral Resources and Mineral Reserves" [2014] and therefore NI 43-101. CIM mineral resource definitions are given below, with CIM's explanatory text shown in italics:

#### **Mineral Resource**

*Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.*

A Mineral Resource is 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.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

*Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and*

*industrial minerals.*

*The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase 'reasonable prospects for eventual economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include estimates of cutoff grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing.*

*Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.*

### **Inferred Mineral Resource**

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

*An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.*

*There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.*

### **Indicated Mineral Resource**

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

*Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions.*

### **Measured Mineral Resource**

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

*Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.*

### **Modifying Factors**

Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

The Main Mercur and South Mercur resources are reported at cutoffs that are reasonable for deposits of this nature given anticipated mining methods and plant processing costs, while also considering economic conditions, because of the regulatory requirements that a resource exists *“in such form and quantity and of such a grade or quality that it has reasonable prospects for eventual economic extraction.”*

## 14.2 Project Data – Main, South, and West Mercur

For the previous technical reports compiled for Ensign from 2021 to 2024 by RESPEC (Lindholm et al., 2022 and preceding reports) and Lionsgate (Lomas et al., 2024), RESPEC was provided with extensive project exploration and delineation data, including various summary reports, geologic maps, drill-hole geology logs, drill-assay data and some assay certificates for the work performed by Ensign, Barrick, Getty and other operators from 1969 to 2022. In 2024, following acquisition of the project, Revival provided a new drill-hole database for use in resource estimation that incorporated originals and copies of paper drilling and assay files into Ensign’s compilation. The resource database contained the combined data from Main, South and West Mercur, but excluded North Mercur. Revival’s drill-hole database was audited by RESPEC using all available assay certificates, and all significant errors that were found were corrected as warranted.

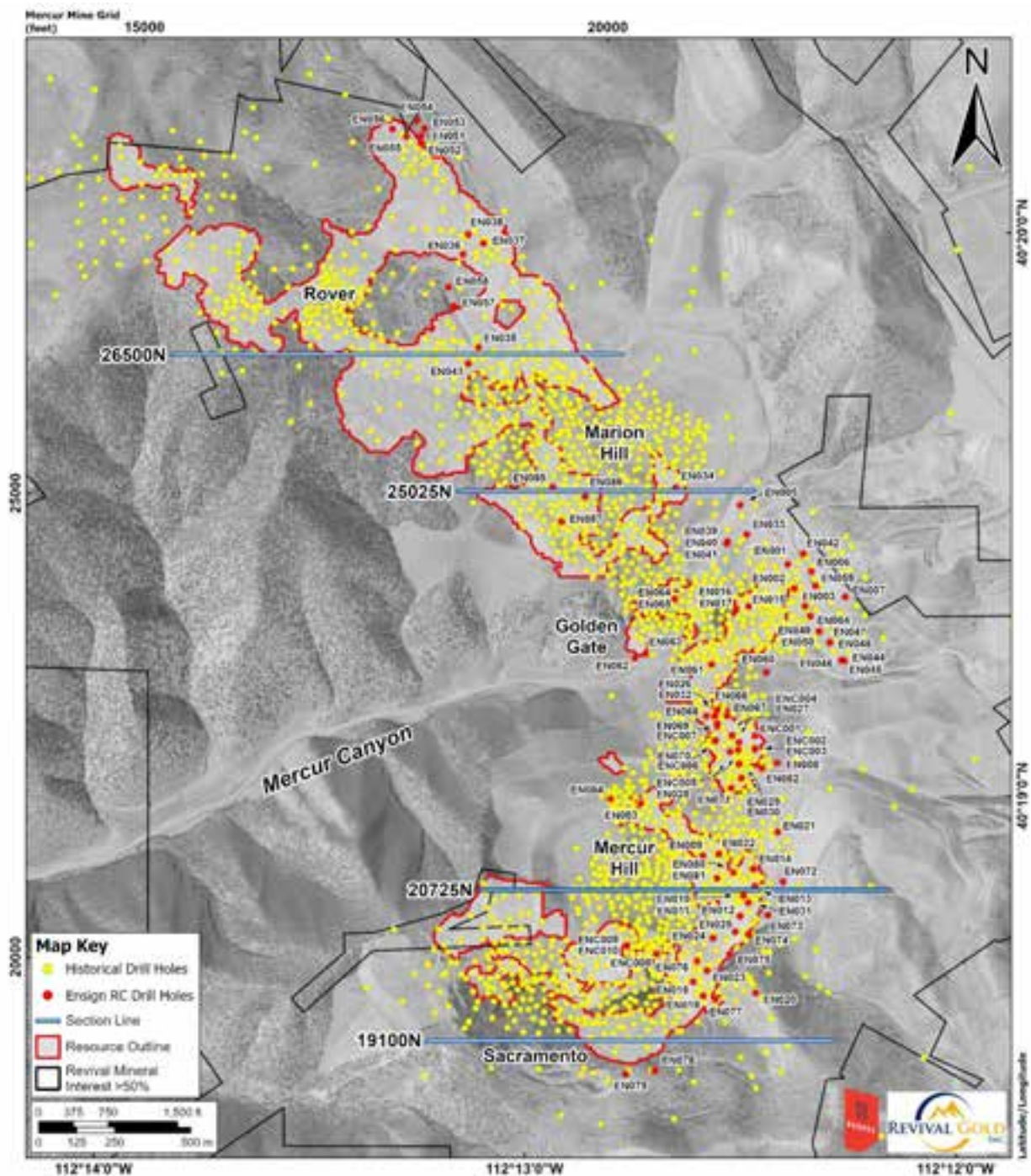
Nine companies, including Newmont, Getty, Barrick, Homestake, Touchstone, Priority, Coeur Rochester, Kennecott and Ensign, have conducted exploration drilling programs in the Main Mercur and South Mercur deposit areas since 1969. Ensign drilled from 2020 to 2022. In all, the Mercur resource database contains 3,007 holes totaling 934,689.82 ft (Table 14-1), of which 2,324 holes (708,422.2 ft) and 578 (166,425.42 ft) were drilled at Main and South Mercur, respectively. West Mercur drilling was received as part of the overall database and is included in Table 14-1, but these holes were not used for the resources presented in this technical report. RC and core drill holes account for 68% and 3% of the footage drilled, respectively, for combined drilling at Main and South Mercur. About 27% of the drilling is of unknown type. No holes were drilled or assays received after the effective date of the database, November 15, 2024. Collar locations for all drill holes used in resource estimation, as well as the Main and South Mercur mineral resource outlines, are shown on Figure 14-1 and Figure 14-2.

**Table 14-1: Summary of Drilling in the Main, South and West Mercur Areas**

Type of Hole	Count	Drilled Feet
<b>Main Mercur</b>		
Core	35	24,737
RC	1587	471,307
Rotary	32	8,430
Unknown	670	203,948
<b>Total</b>	<b>2,324</b>	<b>708,422</b>
<b>South Mercur</b>		
Core	20	3,996
RC	453	126,959
Rotary	19	5,730
Unknown	86	29,740
<b>Total</b>	<b>578</b>	<b>166,425</b>
<b>West Mercur</b>		
Core	1	227
RC	77	41,375
RC/Core Tail	8	3,929
Unknown	19	14,312
<b>Total</b>	<b>105</b>	<b>59,842</b>
<b>Grand Total</b>	<b>3,007</b>	<b>934,690</b>

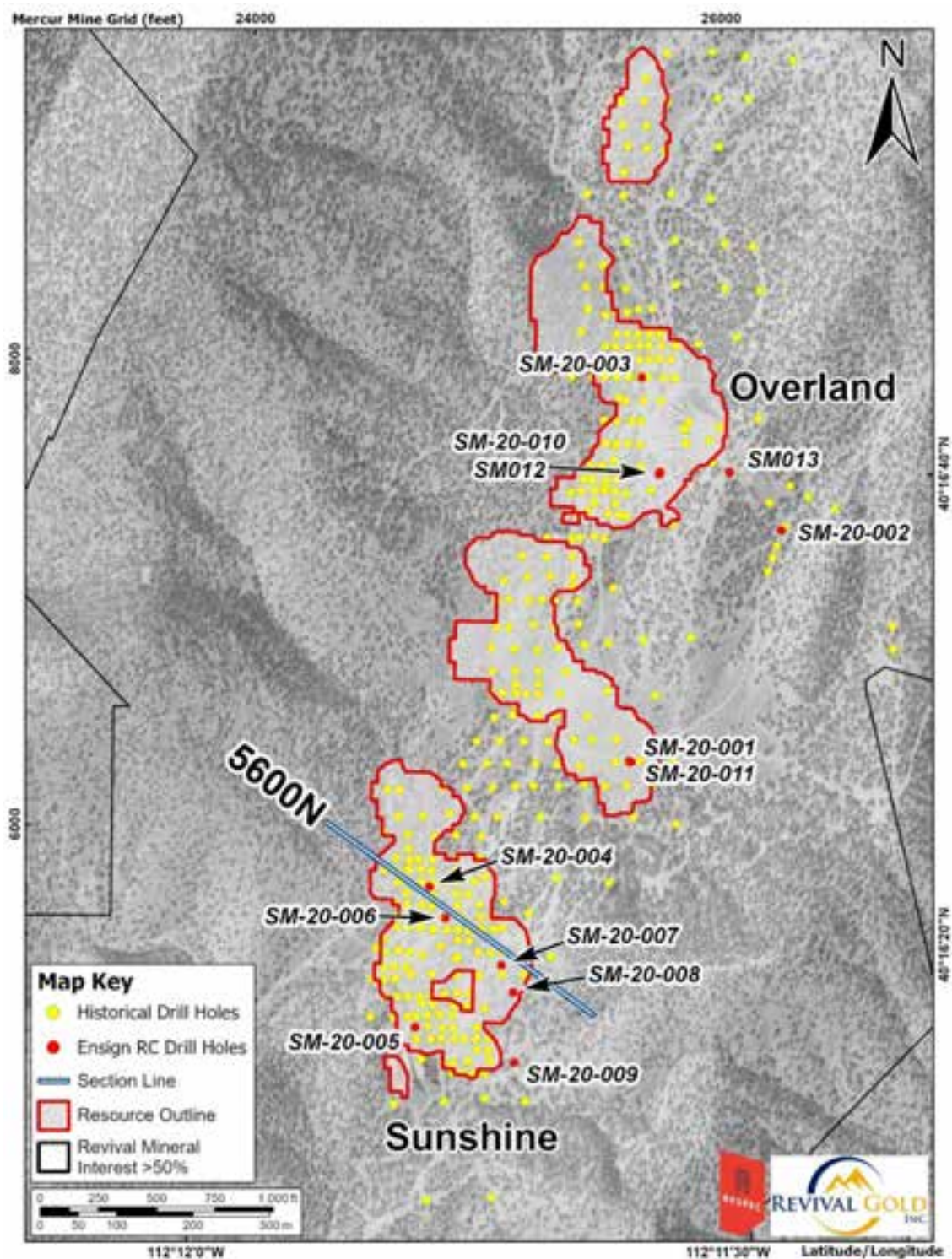
The total number of holes and footages given in Table 14-1 for Main and West Mercur are less than the totals given for all drilling in Section 10. Revival did not include some drilling for which there was insufficient information (e.g. missing collar coordinates) to include in the resource database. Also, Revival located paper records for a number of holes after the effective date of the resource database, which are part of the totals in Section 10 but not Table 14-1.

Figure 14-1: Main Mercur Deposit Drill-Hole Map & Mineral Resource Outlines



From Revival, 2025.

Figure 14-2: South Mercur Deposit Drill-Hole Map & Mineral Resource Outlines



From Revival, 2025.

Table 14-2 presents descriptive statistics of all Main, South and West Mercur drill-hole analytical sample data audited and imported into MinePlan by RESPEC. Cyanide-soluble gold shake test data (AuCN) in Table 14-2), direct cyanide-soluble bottle roll gold recoveries (Au DCN Recovery) and carbon-in-leach bottle roll gold recoveries (Au CIL Recovery) received from Revival are also summarized. Sample assay data not used for resource estimation have been excluded from the table.

**Table 14-2: Descriptive Statistics of Sample Assays in Main, South and West Mercur Drill-Holes**

Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
From	6,783					0	680	ft
To	6,783					0.01	960	ft
Length	6,783	5.003	9.677			0.01	660	ft
Au	6,294	0.0044	0.0216	0.0378	1.7520	0	1.372	oz/ton Au
AuCN	395	0.0047	0.0095	0.0192	2.0158	0.0003	0.2529	oz/ton AuCN
Ag	976	0.19992	0.5428	1.2429	2.2897	0.04	23	oz/ton Ag
Au CIL Recovery	1,375	38.201	42.169	21.414	0.508	0	100	%
Au DCN Recovery	1,169	40.301	42.801	22.095	0.516	0	100	%
<u>Note:</u> Accepted sample data only.								

The Mercur database contains 98,221 accepted gold assay records (Table 14-2). Only 10,265 (10%) of the accepted gold assay samples were analyzed for silver. Of the total gold assay samples, 1,680 (2%), 9,058 (9%) and 4,199 (4%) had AuCN, CIL and DCN data, respectively.

A total of 6,294 gold assays in the Mercur database were excluded from use for resource estimation. These records represent the uppermost portions of drill holes that were logged as dump/backfill, tailings and alluvium (FMTNL = 3, 4 and 5). The samples remain in the database for use in geological or other modeling, however, the assay data is retained only for informational purposes. Eighteen other assays in holes OC-5 to OC-9 with assay intervals from 23 to 287 ft with single assay grades up to 0.006 oz/ton Au were discovered after essentially all resource work was completed. Blocks around these intervals were downgraded below Inferred classification (CLASS = 4) so the associated block grades would not be considered in pit optimizations, but for future work, these assays should not be used in resource estimates.

All assays below detection for Ensign drilling samples were replaced with values of 0.0015 g/t Au (0.00004 oz/ton Au), which was half the lowest detection limit of 0.003 g/t Au (0.00009 oz/ton Au) in the accepted database. For pre-Ensign drilling, nearly all below-detection assays had been entered into the database received from Revival as values of 0 oz/ton Au. Some intervals with no assays had also been assigned values of 0 oz/ton Au. Although some intervals were identified

and corrected to reflect no samples had been assayed, the remainder of the intervals with 0 oz/ton Au grades could not be investigated before the database effective date and were left as '0' values.

### **14.3 Main Mercur Mineral Resources**

#### **14.3.1 Geologic Model – Main Mercur**

Revival provided geologic interpretations as digital 3D surfaces and solids for faults, formations and metallurgically refractive material. The formation solids representing the Main Mercur pre-mining geology include, from oldest to youngest, the Mississippian Deseret Limestone, Humbug Formation and Great Blue Limestone, Tertiary Eagle Hill Rhyolite, and Quaternary Alluvium. The Great Blue Limestone was further sub-divided and modeled as the Lower Limestone Member (oldest), Mercur Member, Long Trail Shale Member and Upper Limestone Member. The Mercur Member is the primary host. Individual subunits such as the Silver Chert Beds, Magazine Sandstone Beds, Barren Limestone Beds, Mercur Beds and Upper Beds, were modeled within the Mercur Member. The upper part of the Lower Limestone Member is a secondary host for mineralization, and the Long Trail Shale Member overlies the Mercur Member gold deposition, although it can also be mineralized. All formational units, as well as faults and controls for mineralization, are summarized in Section 7.

RESPEC geologists reviewed the formation solids provided by Revival. It was apparent that inconsistent historical logging of the geology was a significant issue during the modeling. In particular, logged alluvial, dump, backfill and tailings material appeared to be problematic, and had to be considered during modeling of the pre-mine Quaternary alluvium. Overall, the solids adequately represent the geology of the Main Mercur mineralized areas, although locally there is lower confidence in the location of formation contacts, particularly where backfill overlies bedrock, resulting from the inconsistent historical logging.

Revival's solids were used to code formations into the block model, but the coding was not used to define dump or backfill material. The percentage of material in dumps, which includes heap leach pads and tailings facilities, was calculated as the difference between current and original topographic surfaces. To exclude the inconsistencies between surfaces in undisturbed areas, the calculations of dump material were confined to the footprint of dumps, leach pads and tailing ponds. The percentage of backfill was calculated as the difference between the current and end-of-mine surfaces within pit extents.

Three high-angle fault surfaces were provided by Revival: the northeast-striking North and South Lulu faults in the Sacramento and Mercur Hill pit areas, and the north-striking West Twist fault [zone], which cuts through the Sacramento, Mercur Hill and Golden Gate deposits. Faults within the Main Mercur deposits have been characterized as poorly defined and having minimal offsets, so formation and gold domain models do not show offset along these faults. The northwest-

striking Mercur Fault is mapped on the northeast sides of the Golden Gate and Marion Hill deposits but does not have clearly defined offsets in the current drilling and was therefore not used in the modeling exercise.

Mineralization is generally described as being stratabound and occurs within specific units of the Mississippian sedimentary package, as described above. Faults and fractures, such as the modeled Lulu and West Twist faults, are interpreted as syn-mineralization with little offset, but were important in localizing gold deposition within favorable sedimentary lithologies. Mineralization also tended to be focused where these and similar faults intersected.

All geologic interpretations, in combination with assays and logged data, were used to guide metal domain modeling. The metallurgically refractive material solid was coded into the block model but was not used to estimate or tabulate resources.

### **14.3.2 Gold Domain Modeling – Main Mercur**

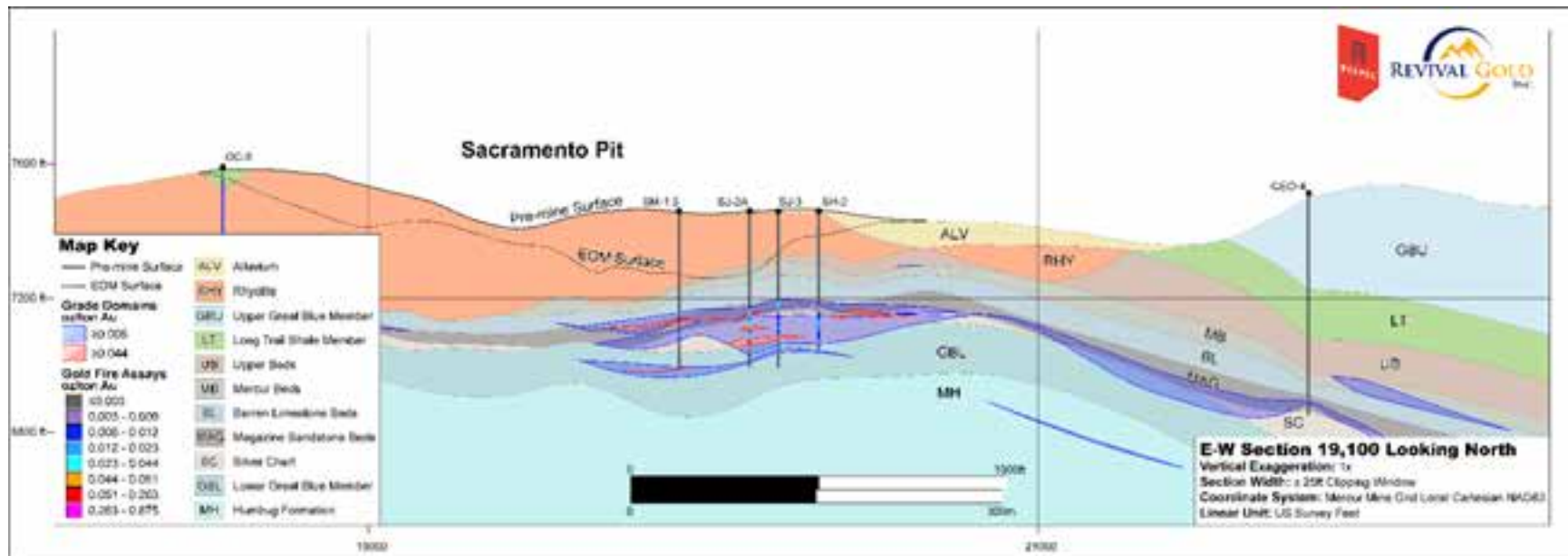
A mineral domain encompasses a volume of rock that is ideally characterized by a single, natural population of metal grades that occur within a specific geologic environment. Two gold domains, given in Table 14-3, were modeled at grade boundaries based on cumulative probability plots (“CPP”) of gold data. The low-grade domain (0.006 - 0.044 oz/ton Au) was modeled by RESPEC, and the high-grade domain (>0.044 oz/ton Au) was modeled by Revival. The boundary between the low- and high-grade domains is actually gradational in nature and occurs from 0.023 oz/ton Au to 0.051 oz/ton Au, although it was modeled as a relatively hard boundary at 0.044 oz/ton Au. A third, higher-grade gold grade population (>0.263 oz/ton Au) was apparent on the CPP but was not modeled because the domain is represented by <1% of the gold assays. Most of the higher grades were in mined-out material, and there was a lack of continuity observed in the data.

**Table 14-3: Gold Grade Domain Ranges**

<b>Domain</b>	<b>Gold Grade (oz/ton Au)</b>
Low-Grade	~0.006 to ~0.044
High-Grade	> ~0.044

The grade domains were created in Leapfrog Geo using interval selection, which allowed the low-grade and high-grade domains to snap to the desired drill intercepts. Interval selection was carried out along regularly spaced, east-west-trending cross-sections to capture the stratigraphic controls of mineralization zones. Domains were modeled as discrete 3D solids, each corresponding to specific stratigraphic horizons. The individual solids for the low- and high-grade domains were merged into a single, unified solid for each grade domain. These merged solids were subsequently coded into the model for grade estimation. Cross sections showing the geology and gold mineral domains for Main Mercur are shown on Figure 14-3, Figure 14-4, Figure 14-5, and Figure 14-6.

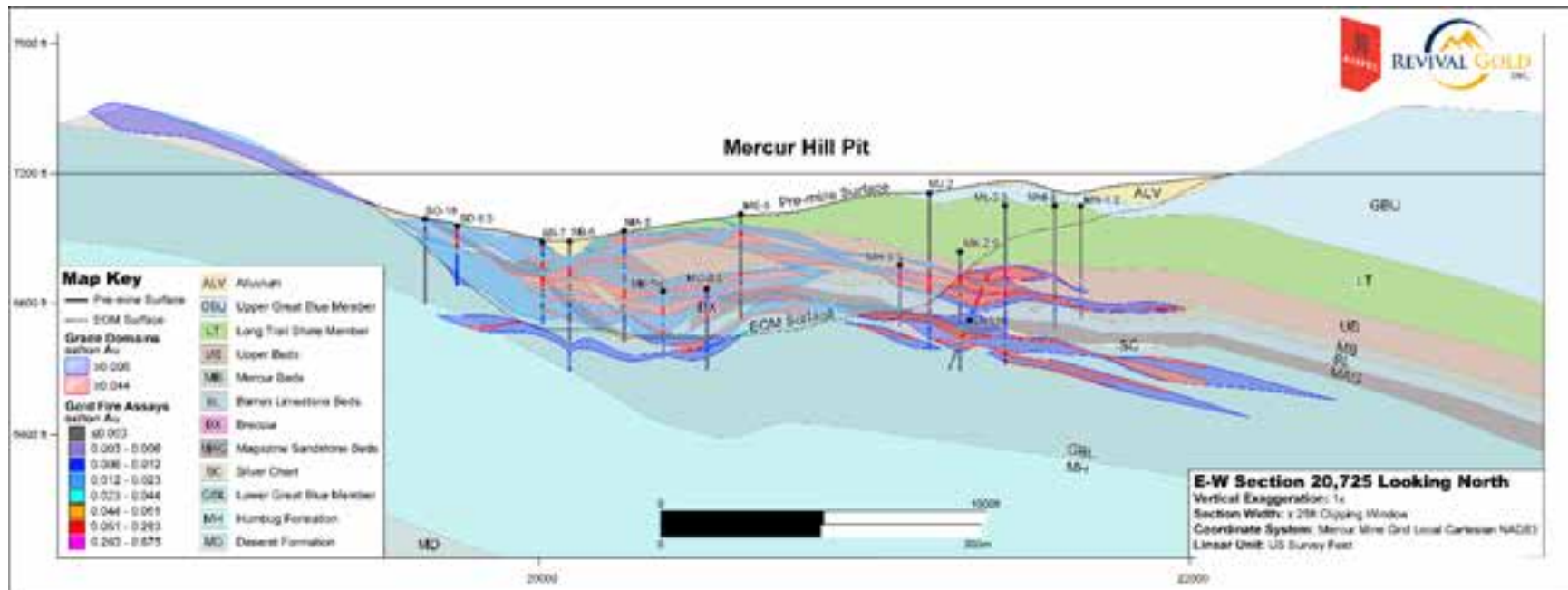
Figure 14-3: Main Mercur Section N19,100 – Geology & Gold Domains in the Sacramento Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-1.
3. There are apparent differences between gold domain solids cut on the two-dimensional section plane and projection of drill holes located off the section plane.

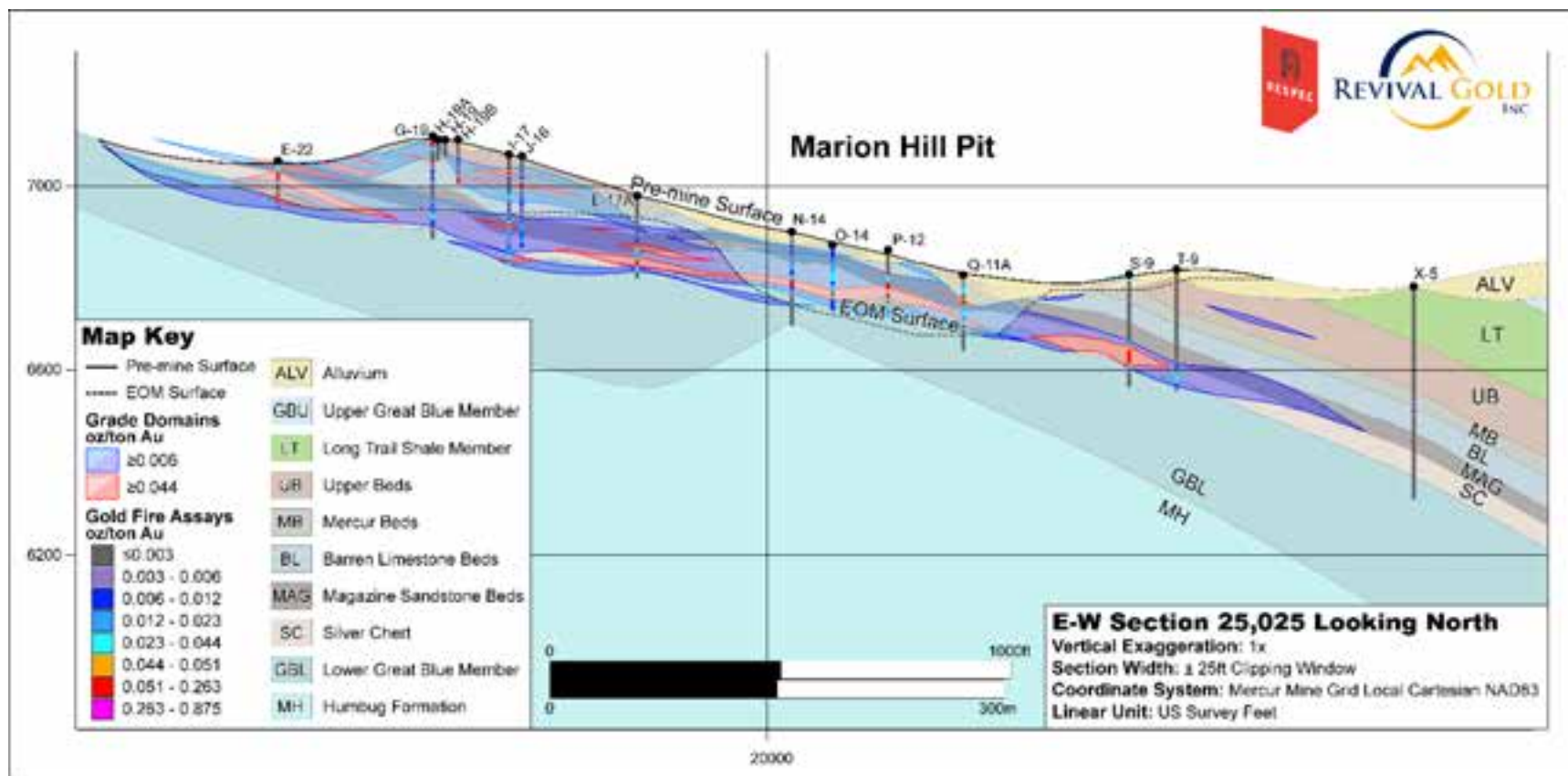
Figure 14-4: Main Mercur Section N20,725 – Geology & Gold Domains in the Mercur Hill Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section is shown on Figure 14-1.
3. There are apparent differences between gold domain solids cut on the two-dimensional section plane and projection of drill holes located off the section plane.

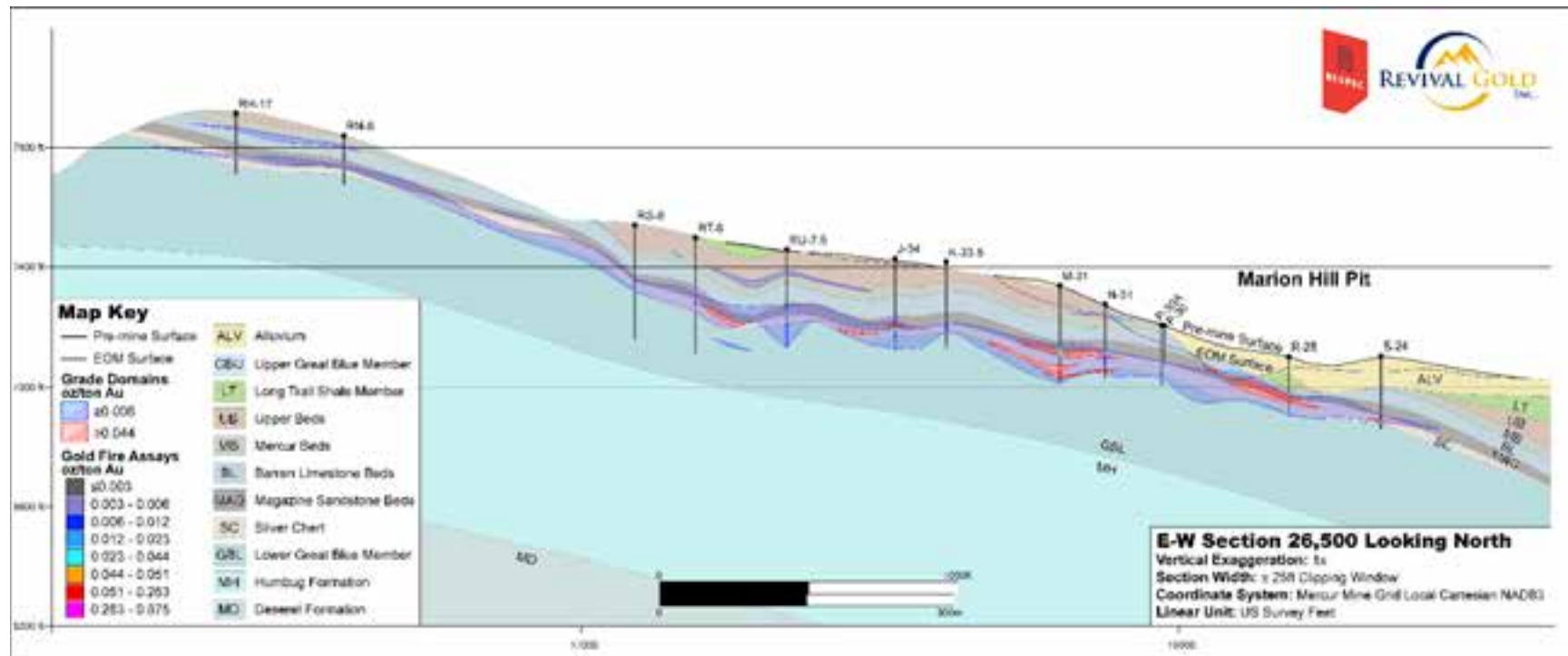
Figure 14-5: Main Mercur Section N25,025 – Geology & Gold Domains in the Marion Hill Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-1.
3. There are apparent differences between gold domain solids cut on the two-dimensional section plane and projection of drill holes located off the section plane.

Figure 14-6: Main Mercur Section N26,500 – Geology & Gold Domains in the Rover Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-1.
3. There are apparent differences between gold domain solids cut on the two-dimensional section plane and projection of drill holes located off the section plane.

Revival and RESPEC geologists used drill-log information and field observations in an effort to determine the geologic characteristics of each domain. The following characteristics were observed with respect to mineralization in general, and to gold domains where applicable:

- Mineralization occurs in three discrete stratigraphic intervals within the Main Mercur deposits:
  - The Upper Zone of mineralization occurs dominantly in the Upper Beds and Mercur Beds of the Mercur Member. Mineralization in these units is primarily stratigraphically controlled. Permeability is higher in the fossiliferous horizons in the Mercer Beds likely contribute to a higher permeability making them receptive host rocks for gold deposition.
  - The Barren Limestone Beds occur between the Upper and Lower zones of mineralization. The Barren Limestone Beds are sometimes mineralized along its upper and lower contacts, as well as where it is cut by zones with high fracture densities. Overall, it is the least favorable zone for mineralization within the Mercur Member, likely due to its massive nature.
  - The Lower Zone of mineralization occurs dominantly within the Magazine Sandstone Beds and Silver Chert Beds. The silica in the Silver Chert Beds is an alteration feature, likely associated with a regional unconformity. The broken and brecciated nature of the Silver Chert Beds and the permeability of the Magazine Sandstone Beds likely contribute to this sequence being a favorable site for gold deposition.
  - The Lower Limestone Member hosts mineralization near the Silver Chert Beds contact as well as in brecciated zones deeper within the package.
- Mineralization locally merges and crosscuts stratigraphy where fracture zones allowed fluids to penetrate through the stratigraphic package. Breccias locally disrupt and cross-cut stratigraphy. Mineralization is variable within the breccias and is typically strongest on their margins or where they are cut by secondary structural zones. These zones have been mostly mined out and are not a significant contributor to the current resource.
- Gold mineralization in each zone is associated with:
  - Upper Zone – Decalcification of host rocks.
  - Lower Zone – Zones of strong limonite stain, decalcification, and brecciation. Most of the silicification within this unit pre-dates gold mineralization.
  - Lower Limestone Member – Zones of strong calcite veins and brecciation.
- Higher grade mineralization is characterized by:
  - Upper Zone – High fracture densities and iron-oxide mineralization. Pyrite and carbon occur in intervals within refractory zones of the deposit.

- Lower Zone - High fracture densities and iron-oxide mineralization
- Lower Limestone Member – Strong hematite and limonite stain and partial decalcification of breccias.
- Gold grades greater than 0.044 oz/ton Au typically occur proximal to structural corridors. These zones are marked by higher fracture densities and strong iron-oxide stain. Individual structures are typically minor with offsets of <20 ft but likely served as fluid pathways for mineralizing fluids that interacted with the surrounding host rocks over areas of 150 ft to 300 ft laterally within favorable stratigraphic units.

To summarize, gold mineralization increases with increasing limonite and pyrite and increasing porosity. More favorable porosity is inherent in coarser-grained sedimentary lithologies or developed by structural preparation and/or decalcification. Structural preparation ranges from localized fractures to wider gouge zones, and to broad zones of fractures, stockwork breccias and solution collapse breccias. Silicification may be indirectly associated with gold grade, *i.e.*, quartz can be abundant along certain stratigraphic horizons but may or may not be related to gold deposition.

#### **14.3.3 Assay Coding, Capping, and Compositing – Main Mercur**

The mineral-domain solids described in Section 14.3.2 were used to code drill-hole assay intervals to their respective gold mineral domains. Assays were evaluated by domain to identify high-grade outliers that might be appropriate for capping. Possible outlier assays were determined from CPPs, and visual reviews of the spatial relationships of the outliers and their potential impacts during grade interpolation were evaluated in the assay cap analysis. Descriptive statistics were also generated and considered with respect to capping levels. Capping levels and number of samples capped in the Main Mercur resource data are presented in Table 14-4, and descriptive statistics of the coded gold assay samples are provided in Table 14-5.

**Table 14-4: Capping Levels for Gold by Domain – Main Mercur**

Domain	Capping Level (oz/ton Au)	Samples Capped
Low-Grade	0.45	8
High-Grade	0.90	9
Outside Modeled Domains	0.10	120

**Table 14-5: Coded Gold Assay Statistics by Domain – Main Mercur**

Low-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	24,726	5.0	5.3			0.01	110.00	ft
Au	24,357	0.012	0.017	0.021	1.27	0.00	0.990	oz/ton Au
Capped Au	24,357	0.012	0.017	0.020	1.20	0.00	0.450	oz/ton Au
AuCN	804	0.009	0.013	0.021	1.59	0.00	0.302	oz/ton AuCN
Ag	980	0.401	4.286	14.917	3.48	0.01	200.0	oz/ton Ag
Au CIL Recovery	4,367	84.40	78.46	19.44	0.25	0.00	100.0	%
Au DCN Recovery	1,486	81.68	72.33	27.99	0.39	0.00	100.0	%
Gold Domain	24,726					1	1	
High-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	8,502	5.0	5.0			0.01	25.00	ft
Au	8,467	0.067	0.094	0.092	0.98	0.00	2.010	oz/ton Au
Capped Au	8,467	0.067	0.094	0.088	0.94	0.00	0.900	oz/ton Au
AuCN	316	0.050	0.073	0.093	1.28	0.00	1.125	oz/ton AuCN
Ag	335	0.401	4.159	10.534	2.53	0.07	83.7	oz/ton Ag
Au CIL Recovery	4,457	87.70	79.98	20.49	0.26	0.00	100.0	%
Au DCN Recovery	2,113	87.52	78.08	24.41	0.31	0.00	100.0	%
Gold Domain	8,502					2	2	
Outside Modeled Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	65,512	5.0	10.1			0.01	1140.00	ft
Au	62,963	0.001	0.004	0.014	3.85	0.00	0.655	oz/ton Au
Capped Au	62,963	0.001	0.003	0.011	3.14	0.00	0.100	oz/ton Au
AuCN	560	0.004	0.020	0.041	2.05	0.00	0.613	oz/ton AuCN
Ag	8,950	0.201	0.395	2.209	5.59	0.01	98.0	oz/ton Ag
Au CIL Recovery	234	81.80	69.62	27.37	0.39	0.00	100.0	%
Au DCN Recovery	600	76.92	65.32	31.53	0.48	0.00	100.0	%
Gold Domain	65,512					99	99	

The assays were composited at 10-ft down-hole intervals, respecting the mineral domain boundaries. The composite length was chosen to avoid de-compositing fractions of the Main and South Mercur original drill-sample data, which consist of nearly 80% 5-ft intervals and about 8% 10-ft intervals. Descriptive statistics of the composites for each domain are given in Table 14-6.

**Table 14-6: Coded Gold Composite Statistics by Domain – South Mercur**

Low-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	15,021	10.000	8.470			0.00	10.000	ft
Au	14,362	0.012	0.016	0.018	1.09	0.00	0.549	oz Au/ton
Capped Au	14,362	0.013	0.016	0.017	1.05	0.00	0.450	oz Au/ton
Au CIL Recovery	3,355	83.75	78.02	19.07	0.24	0.00	100.0	%
Au DCN Recovery	1,020	82.20	74.05	26.42	0.36	0.00	100.0	%
Gold Domain	15,021					1	1	
High-grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	5,031	10.000	8.430			0.00	10.000	ft
Au	4,994	0.069	0.092	0.078	0.85	0.00	1.150	oz Au/ton
Capped Au	4,994	0.069	0.091	0.076	0.83	0.00	0.900	oz Au/ton
Au CIL Recovery	2,733	87.25	80.02	19.65	0.25	0.00	100.0	%
Au DCN Recovery	1,311	87.15	78.15	23.62	0.30	0.00	100.0	%
Gold Domain	5,031					2	2	
Outside Modeled Gold Domains								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	73,461	10.000	8.380			0.00	10.000	ft
Au	63,832	0.000	0.002	0.009	4.49	0.00	0.380	oz Au/ton
Capped Au	63,832	0.000	0.002	0.007	3.79	0.00	0.100	oz Au/ton
Au CIL Recovery	182	81.80	69.92	26.81	0.38	0.00	100.0	%
Au DCN Recovery	380	71.50	65.27	29.05	0.45	0.00	100.0	%
Gold Domain	73,461					99	99	

Correlograms were generated from the composited gold grades to evaluate grade continuity. Correlogram parameters were determined and applied to the kriged estimate, against which the reported inverse distance estimate was compared. The evaluated continuity of grade also contributed to classification of mineral resources. The correlogram results by domain are summarized as follows:

- Low-grade gold domain – The nugget is 25% of the total sill. The first sill is 60% of the total sill with a range of 18 ft to 20 ft depending on direction. The remaining 15% of the total sill has a range of 50 ft to 170 ft depending on direction.
- High-grade gold domain – The nugget is 60% of the total sill. The first sill is 20% of the total sill with a range of 20 ft to 30 ft depending on direction. The second sill is 14% of the total sill with a range of 75 ft to 325 ft depending on direction. The remaining 6% of the total sill has a range of 200 ft to 2200 ft depending on direction.

#### 14.3.4 Tonnage Factors – Main Mercur

There were no rock density measurements in the Main Mercur database at the time the resource was estimated. A tonnage factor (“TF”) of 12 ft<sup>3</sup>/ton (specific gravity = 2.67) was assigned to all mineralized material in block models in historical resource estimates, based on values used during mining by Barrick. Although no documentation was found or reviewed that supports the use of this TF, it is a reasonable average value for the rocks present on the Main Mercur property. Therefore, in the absence of any additional information, Mr. Lindholm applied a TF of 12 ft<sup>3</sup>/ton to all bedrock material in the model. A TF of 17.8 ft<sup>3</sup>/ton (specific gravity = 1.80) was assigned to all alluvium, dump and backfill material that overlies the bottom of mining surface.

Application of average TFs is a reasonable approach given the lack of documentation. However, there is some risk that the density of mineralized and unmineralized sedimentary rocks remaining after mining is not the same as for mined material. It is recommended that density measurements from samples representing all applicable lithologies, alteration and mineralization types should be collected in order to properly assign densities to the resource block model.

#### 14.3.5 Block Model and Coding – Main Mercur

The mineral resources for all deposits at Main Mercur were modeled and estimated in a single, unrotated block model. Dimensions and extents, in local mine grid coordinates, are provided in Table 14-7. The mineral domain solids were used to code 25 ft × 25 ft × 25 ft (x, y, z) blocks that comprised a digital model. The partial percentage volumes of each mineral domain were coded directly by the solids and stored in each block. The portion of the block that lies outside the modeled metal domains was calculated from the domain percentages. Other items, such as geologic formations, non-leach zones, estimation areas, inferred and below inferred classification areas, and royalties were also coded. Pit and dump outlines were projected down into the block model for use in calculating dump and backfill percentages from the original, current and bottom of mining topographic surfaces.

**Table 14-7: Block Model Dimensions, Local Mine Grid in Feet – Main Mercur**

Dimension	Minimum (ft)	Maximum (ft)	Extents (ft)	Block Size (ft)
Easting	12,500	25,200	12,700	25
Northing	16,000	33,900	17,900	25
Elevation	5,000	9,500	4,500	25

#### 14.3.6 Grade Interpolation – Main Mercur

Gold grades were interpolated using inverse-distance, kriged and nearest-neighbor methods. The mineral resources reported herein were estimated by inverse-distance to the third power (“ID<sup>3</sup>”)

in modeled gold domains as this method produced results that most appropriately respected the drill data and geology. The kriged and nearest-neighbor estimations were completed for the purposes of statistical checking of the various estimation iterations. The parameters applied to the grade estimations at Main Mercur are summarized in Table 14-8.

**Table 14-8: Estimation Parameters – Main Mercur**

Description	Parameter
<b>Low-Grade Gold Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.25
Inverse distance power	3
Maximum search distance (ft)	600
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.042 / 200
<b>High-Grade Gold Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.25
Inverse distance power	3
Maximum search distance (ft)	230
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.45 / 115
<b>Outside Modeled Gold Domains</b>	
Samples: minimum/maximum/maximum per hole	2 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.50
Inverse distance power	2
Maximum search distance (ft)	100
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.008 / 25

The search ellipse applied to the estimates, oriented at N30°E dipping 15° to the southeast, represents the overall strike and dip of the mineralized stratigraphy. The search anisotropy for estimation in domains is relatively tight, with the same major and semi-major axes search distances within the plane of bedding, and one-fourth the distance perpendicular to bedding. Grade interpolations were performed using MinePlan's relative elevation function. Three surfaces were modeled that follow the localized curvature of the domains in various areas of the deposit. During interpolation of grade into blocks, distance weighting as applied by the search ellipse orientation essentially followed the relative elevations above and below the modeled surfaces. Length-weighted composites were also used to interpolate grades.

The estimation passes were performed independently for each of the mineral domains, so that only composites coded to a particular domain were used to estimate grade into respective partial blocks of the domain. Multiple grades were interpolated into blocks with partial percentages of more than one domain. A single volume-weighted grade was calculated from the low-grade, high-

grade and outside modeled domain estimated grades in a given block. The total block grades in the resource model are therefore diluted to the full block volumes.

### 14.3.7 Mineral Resources – Main Mercur

The Main Mercur deposit has the potential to be mined by open pit methods. The estimated mineral resources were tabulated to reflect potential open pit mining and heap leach extraction as the primary scenario. To meet the requirement of reasonable prospects for eventual economic extraction, a pit optimization was run using the parameters summarized in Table 14-9. The cutoff grade was calculated using basic input costs and parameters.

**Table 14-9: Pit Optimization Parameters – Main Mercur**

Item	Value	Unit
Mining Cost	2.50	\$/ton
Incremental Mining Cost	0.32	\$/ton processed
Heap Leach Processing cost	4.05	\$/ton processed
Process Rate	20,000	tons-per-day processed
General and Administrative Cost	0.82	\$/ton processed
Gold Price	2,000	\$/oz
Average Gold recovery	74	percent

The pit shell created by the optimization was used to constrain the mineral resources, which are reported at a cutoff grade of 0.005 oz/ton Au for all materials. The gold cutoff grade was calculated using the processing, general and administrative costs, gold price and refining cost that are reasonable for similar deposits mined by open pit methods (Table 14-9). Recoveries are utilized in optimizations on a block-by-block basis and have been applied to the model using values estimated from available Au DCN and Au CIL data modified per guidance from KCA (see discussion of recoveries in Section 13). The mining cost is not included in the determination of the cutoff grade, as all material in the conceptual pit would potentially be mined for processing or waste. The reference point at which the mineral resources are defined is therefore at the top rim of the pit, where material with grade equal to or greater than the cutoff grade would be processed.

The metal prices used for resource reporting, pit optimizations and determination of the gold cutoff grade are derived from the three-year moving-average prices as of April 2025. The three-year moving-average price was about \$2,125/oz Au and rising as of the effective date of this technical report. The Main Mercur mineral resources reported at a cutoff grade of 0.005 oz/ton Au are presented in Table 14-10. Only those model blocks with grades greater than or equal to the gold cutoff grade were included in the mineral resource tabulation. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

**Table 14-10: Main Mercur Indicated and Inferred Gold Mineral Resources**

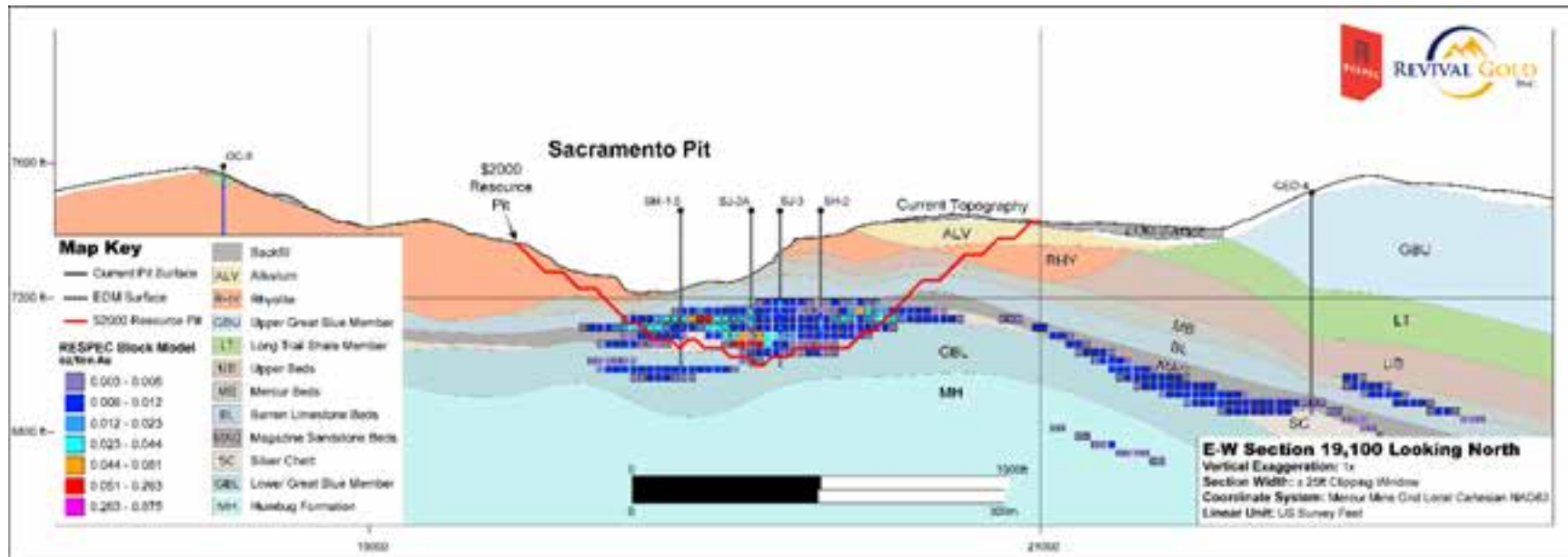
Mineral Resource Classification	Cutoff Grade (oz/ton Au)	Resource Tonnage (tons)	Gold Grade (oz/ton Au)	Contained Gold (oz Au)
Indicated	0.005	31,558,000	0.018	581,000
Inferred	0.005	36,574,000	0.016	567,000

**Notes:**

1. The estimate of mineral resources was done by Michael S. Lindholm, CPG of RESPEC in Imperial units.
2. In-situ mineral resources were classified in accordance with CIM Standards.
3. Mineral Resources comprised all model blocks at a 0.005 oz/ton Au cutoff for all material within optimized pits.
4. The average grades of the mineral resources are comprised of the weighted average of block-diluted grades within the optimized pits. Alluvium, dump and backfill materials are not included in the mineral resources.
5. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
6. Mineral resources potentially amenable to open pit mining methods are reported using a gold price of US\$2,000/oz, a throughput rate of 20,000 tons/day, assumed average metallurgical recoveries of 74% for Au, mining costs of US\$2.50/ton mined, heap leach processing costs of US\$4.05/ton processed, general and administrative costs of \$0.82/ton processed. The gold commodity price was selected based on analysis of the three-year running average at the end of April 2025.
7. The effective date of the mineral resource estimate is March 13, 2025.
8. Rounding may result in apparent discrepancies between tons, grade, and contained metal content.

Figure 14-7 to Figure 14-10 are cross-sections through the Sacramento, Mercur Hill, Marion Hill and Rover deposit areas at Main Mercur that show estimated block-model gold grades. These figures correspond to the mineral-domain cross-sections presented on Figure 14-3 to Figure 14-6, inclusively.

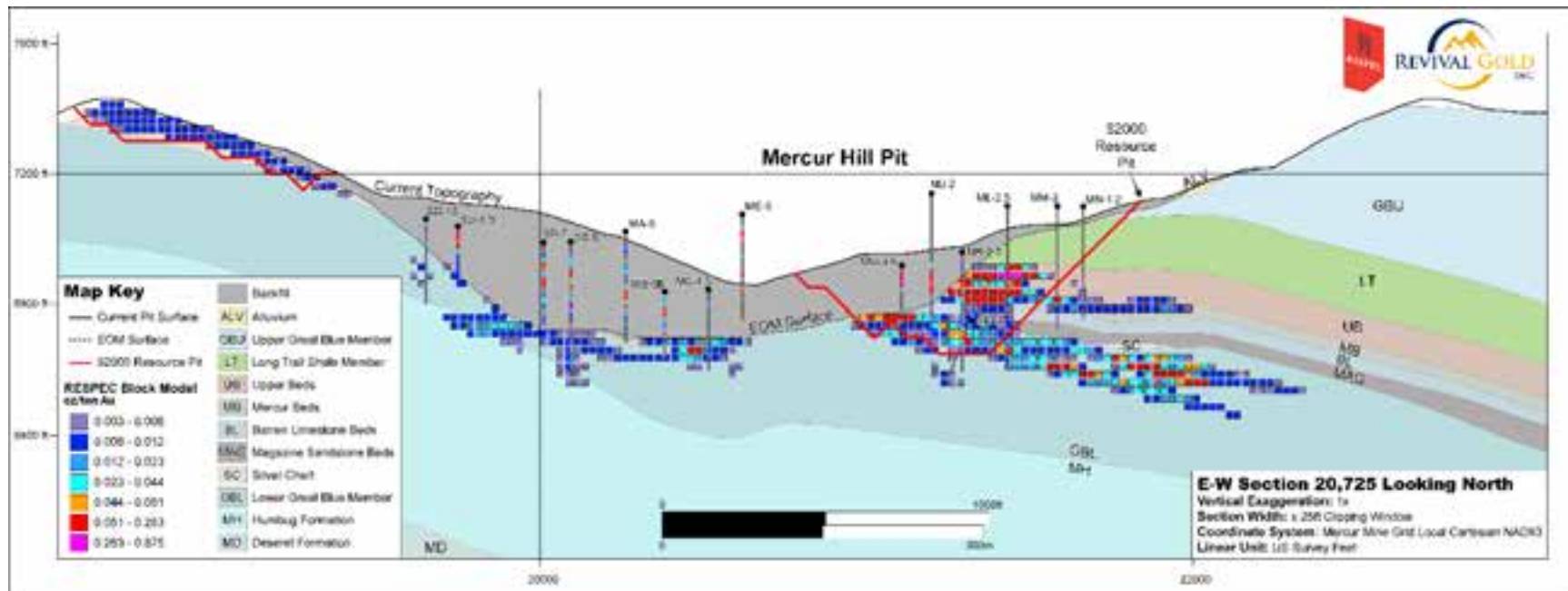
Figure 14-7: Main Mercur Section N19,100 – Geology & Gold Block Model in the Sacramento Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-2.

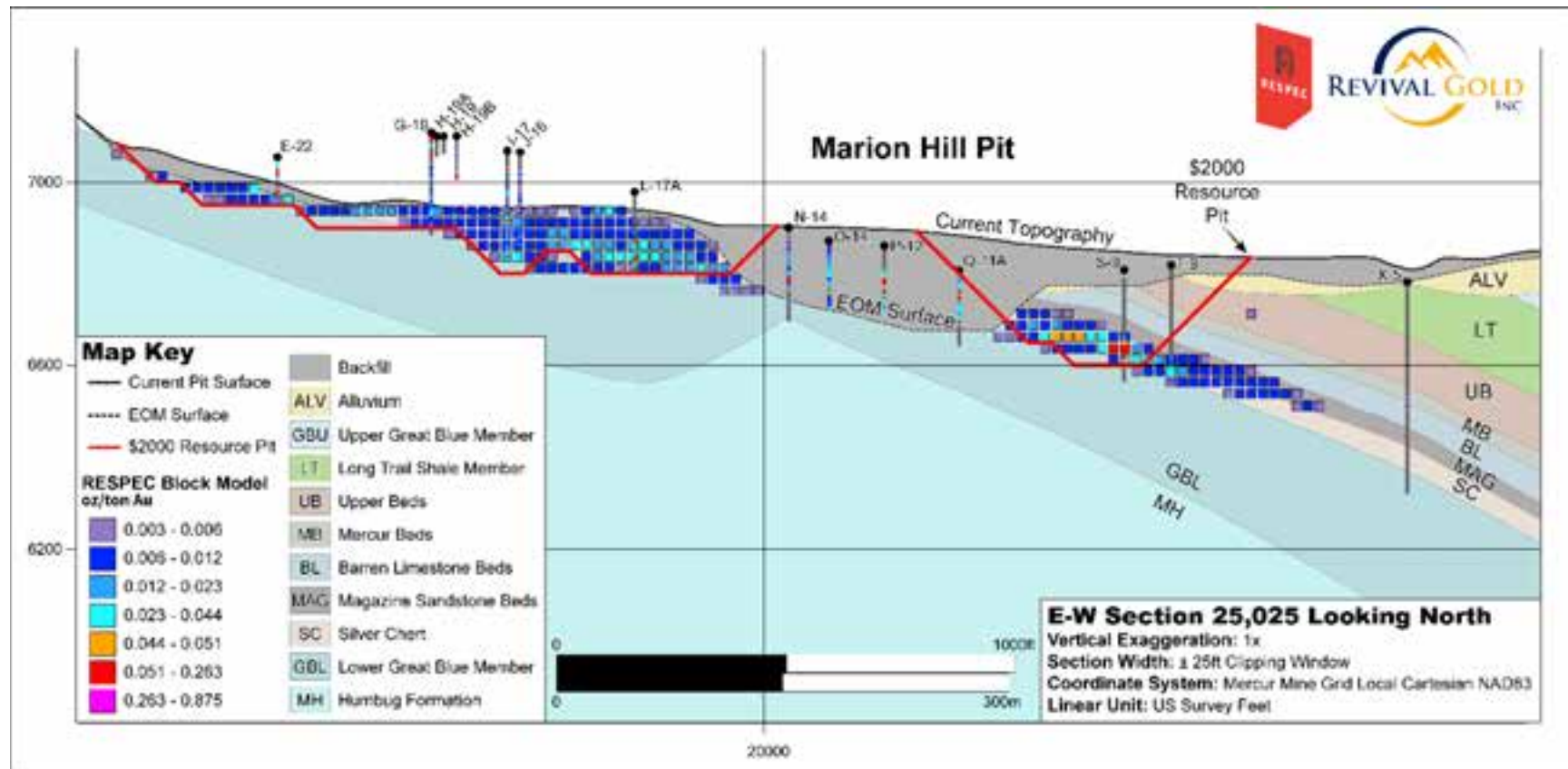
Figure 14-8: Main Mercur Section N20,725 – Geology & Gold Block Model in the Mercur Hill Pit Area



**Notes:**

- Figure developed by Revival, 2025.
- Cross section is shown on Figure 14-2.

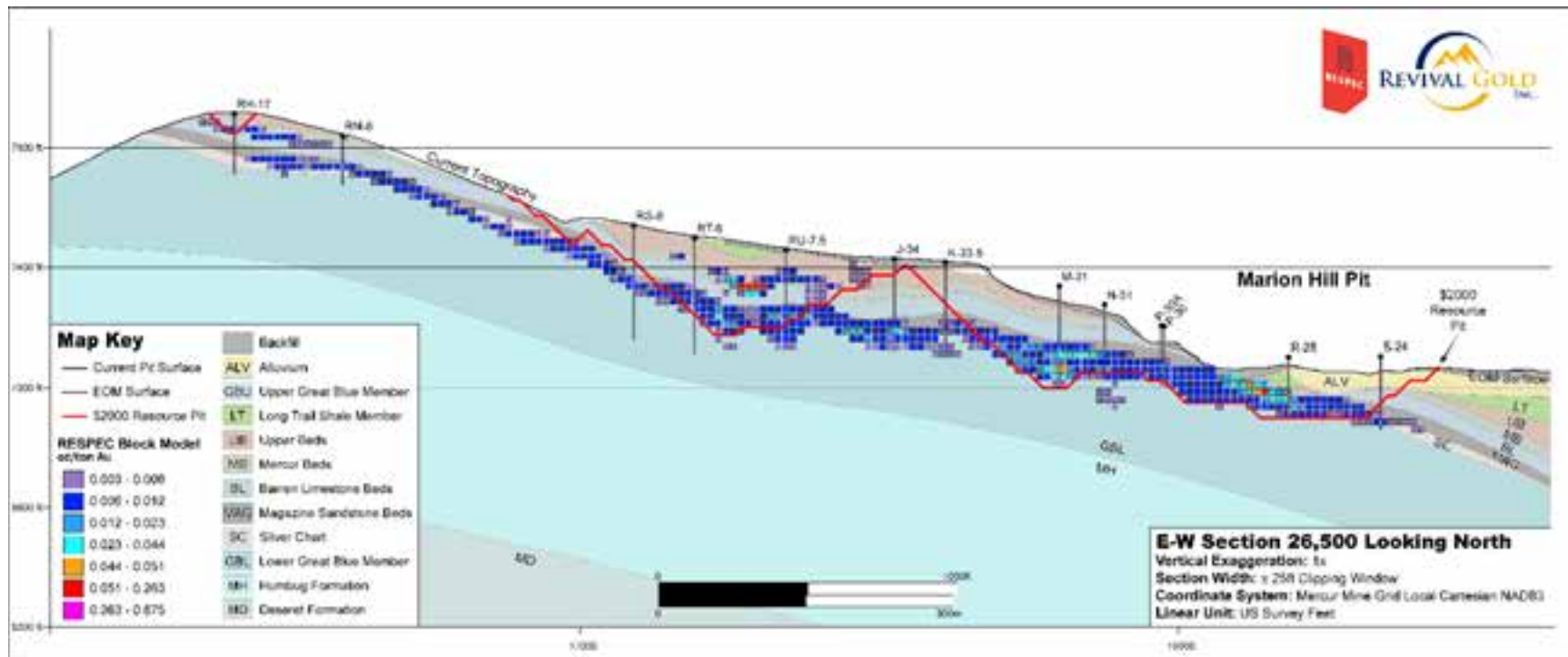
Figure 14-9: Main Mercur Section N25,025 – Geology & Gold Block Model in the Marion Hill Pit Area



Notes:

- Figure developed by Revival, 2025.
- Cross section location is shown on Figure 14-2.

Figure 14-10: Main Mercur Section N26,500 – Geology & Gold Block Model in the Rover Pit Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-2.

Table 14-11 presents the Main Mercur mineral resources tabulated at a cutoff grade of 0.005 oz/ton Au at both increasing and decreasing gold prices. Pits for each case were optimized using the parameters given in Table 14-9 at variable gold prices. The analysis is presented to provide information that allows for an assessment of the sensitivity of project mineral resources to fluctuating gold prices. All tabulations at gold prices lower than the base case of \$2,000/oz Au represent subsets of the current mineral resources. All tabulations at gold prices higher than the base case reflect the potential for increased resources at Main Mercur, although Revival is not relying on these increases in gold prices in the future. However, it should be noted that the spot gold price at of the effective date of this technical report was over \$2,900/oz Au.

**Table 14-11: Main Mercur Sensitivity Evaluation by Gold Price Relative to Base Case Mineral Resources**

Mineral Resource Classification	Cutoff Grade (oz/ton Au)	Resource Tonnage (tons)	Gold Grade (oz/ton Au)	Contained Gold (oz Au)
Mineral Resource Sensitivity at \$1,600/oz Gold				
Indicated	0.005	25,433,000	0.020	496,000
Inferred	0.005	28,229,000	0.017	474,000
Mineral Resource Sensitivity at \$1,800/oz Gold				
Indicated	0.005	28,307,000	0.019	538,000
Inferred	0.005	32,051,000	0.016	516,000
<b>Base Case Mineral Resources \$2,000/oz Gold</b>				
<b>Indicated</b>	<b>0.005</b>	<b>31,558,000</b>	<b>0.018</b>	<b>581,000</b>
<b>Inferred</b>	<b>0.005</b>	<b>36,574,000</b>	<b>0.016</b>	<b>567,000</b>
Mineral Resource Sensitivity at \$2,200/oz Gold				
Indicated	0.005	33,314,000	0.018	610,000
Inferred	0.005	39,369,000	0.015	591,000
Mineral Resource Sensitivity at \$2,400/oz Gold				
Indicated	0.005	36,656,000	0.018	652,000
Inferred	0.005	44,480,000	0.015	676,000
<b>Notes:</b> 1. The estimate of mineral resources was done by Michael S. Lindholm, CPG of RESPEC in Imperial units. 2. In-situ mineral resources are classified in accordance with CIM Standards. 3. The base case reported mineral resources at a gold price of \$2,000/oz Au is shown in bold and has an effective date of March 13, 2025. 4. Tabulations at gold prices higher and lower than the base case are presented to demonstrate sensitivities to fluctuating gold prices. 5. Tabulations comprise all model blocks at a 0.005 oz/ton Au cutoff for all material within the pits optimized at variable gold prices. Pit optimizations used a throughput rate of 20,000 tons/day, assumed average metallurgical recoveries of 74% for gold, mining costs of US\$2.50/ton mined, heap leach processing costs of US\$4.05/ton processed, general and administrative costs of \$0.82/ton processed. 6. Tabulations at gold prices lower than the base case of \$2000/oz Au represent subsets of the current mineral resources. 7. Tabulations at gold prices higher than the base case reflect the potential for increased resources, although Revival is not relying on these increases in gold prices in the future. 8. The average grades of the tabulations are comprised of the weighted average of block-diluted grades within the optimized pits. Alluvium, dump and backfill materials are not included in the tabulations. 9. Mineral resources that are not mineral reserves do not have demonstrated economic viability. 10. Rounding may result in apparent discrepancies between tons, grade, and contained metal content.				

Mr. Lindholm classified the Main Mercur mineral resources considering confidence in the underlying database, sample integrity, analytical precision/reliability, QA/QC results, drilling methods, variography, the status of metallurgical test work, the available density data, and confidence in the top-of-bedrock surface and geological interpretations. The classification parameters are given in Table 14-12. Although the author of this section is not an expert with respect to environmental, permitting, legal, title, taxation, socio-economic, marketing or political matters, the author is not aware of any unusual factors relating to these matters that may materially affect the Main Mercur mineral resources as of the effective date of this technical report.

**Table 14-12: Main Mercur Classification Criteria**

<b>Indicated</b>
In modeled domain, and
Number of Samples $\geq 10$ and isotropic distance $\leq 75$ ft; or
Number of Samples $\geq 7$ and isotropic distance $\leq 40$ ft; or
Number of Samples $\geq 3$ and closest distance $\leq 25$ ft
<b>Indicated Reduced to Inferred if:</b>
Within 50 vertical feet below pit backfill; or
Average distance $\geq 230$ ft; or
Farthest distance $\geq 280$ ft
<b>Inferred</b>
In modeled domain that is not Indicated; or
All estimated blocks outside modeled domains, and isotropic distance $\leq 50$ ft*
<b>Inferred Reduced to CLASS = 4 if:</b>
Blocks around drill holes OC-5 to OC-9
*A strong search restriction on composites $\geq 0.008$ oz/ton Au within this distance (at 25 ft) was applied

The drilling at Main Mercur is at ~100 ft spacing in areas of historical mining but varies from 100 ft to 250 ft, or greater, in areas of the reported resources. As a result, with the distance and other classification criteria applied as given in Table 14-12, the quantity of Indicated gold ounces is 51%. In general, the drill spacing within the high-grade domains is denser than in the low-grade domains. The primary high-grade domain resource areas where drill spacing is wider than 100 ft are in the Rover/Marion Hill deposits, and along the eastern margins of the Golden Gate, Mercur Hill and Sacramento pits.

The geology and gold mineralization of the Main Mercur deposits are well-understood, which is reflected in Revival's geologic model and RESPEC's classification of resources. The primary control for gold mineralization is stratigraphic, so domains were modeled within the preferential formational and lithological host units.

Uncertainties considered in resource classification include: (i) the preponderance of RC holes drilled; (ii) the precise location of the top-of-bedrock surface in backfilled pit areas; (iii) gold domain modeling inconsistencies; and (iv) specific assay issues.

Only 3% of combined Main and South Mercur drilling utilized core. The remainder was done by RC, rotary and unknown methods of drilling. In general, there is an inherent risk of down-hole contamination in RC drilling, particularly below the water table. However, the known water table at the Mercur project is generally below the modeled resources, and since there was no evidence of contamination suspected in drill-hole assays or noted on drilling logs, no further consideration with respect to classification was warranted.

The precise location of the top-of-bedrock surface is not known in backfilled areas within the pits. A reasonable surface has been established based on historical as-builts and blast hole data, but there are many locations where the surface conflicts with logging in holes drilled through backfill material into bedrock. To remediate this issue in the resource model, all blocks within a 50 ft vertical depth below the current top-of-bedrock surface below backfill material have been assigned to Inferred classification.

After the block model and resource estimate had been essentially completed, 23 ft to 287 ft intercepts from 0.000 oz/ton Au to 0.006 oz/ton Au were discovered in drill holes OC-5 to OC-9. The source of these assays is unknown and were considered to be unreliable. These assays will be removed from use in estimation in the future, but for the current resources, classification of blocks around these intervals were downgraded below Inferred (CLASS = 4) to ensure the material was not considered in pit optimizations.

## **14.4 South Mercur Mineral Resources**

### **14.4.1 Geologic Model – South Mercur**

Revival provided geologic interpretations as 3D surfaces and solids for faults, formations and metallurgically refractive material. The formation solids representing the South Mercur geology include, from oldest to youngest, the Mississippian Humbug Formation and Great Blue Limestone, Quaternary Alluvium and tailings. The Lower Great Blue Limestone was combined with the Humbug Formation in a single solid underlying most of the gold mineralization. The Great Blue Limestone was further sub-divided and modeled as the Mercur Member (oldest), Long Trail Shale Member and Upper Limestone Member. The Mercur Member is the primary host for gold mineralization and was modeled as a single combined unit, with the exception of the Magazine Sandstone Beds, which was modeled separately. The upper part of the Lower Limestone Member is a secondary host for mineralization, and the Long Trail Shale Member overlies the Mercur Member gold deposition, although it can also be mineralized. All formational units, as well as faults and controls for mineralization, are summarized in Section 7.

RESPEC reviewed the formation solids provided by Revival. As at Main Mercur, it was apparent that inconsistent historical logging of the geology was an issue during the geologic modeling. Overall, the solids adequately represent the geology of the South Mercur mineralized areas, although locally there is lower confidence in the location of formation contacts resulting from the inconsistent historical logging.

Several high-angle fault surfaces were provided by Revival, including the Clay Canyon and two unnamed faults that strike north-northeast, and a series of six unnamed faults striking northwest.

Faults within the Main Mercur deposits have been characterized as poorly defined and having minimal offsets. The same was assumed for South Mercur, so formation and gold domain modeling does not show offset along these faults.

Mineralization is generally described as being stratabound and occurs within specific units of the Mississippian sedimentary package, as described above. Faults and fractures are syn-mineralization with little offset but were important in localizing gold deposition within favorable sedimentary lithologies. Mineralization also tended to be focused where these and similar faults intersected.

The metallurgically refractive material solid was coded into the block model but was not used to estimate or tabulate resources. All geologic interpretations, in combination with assays and logged data, were used to guide metal domain modeling.

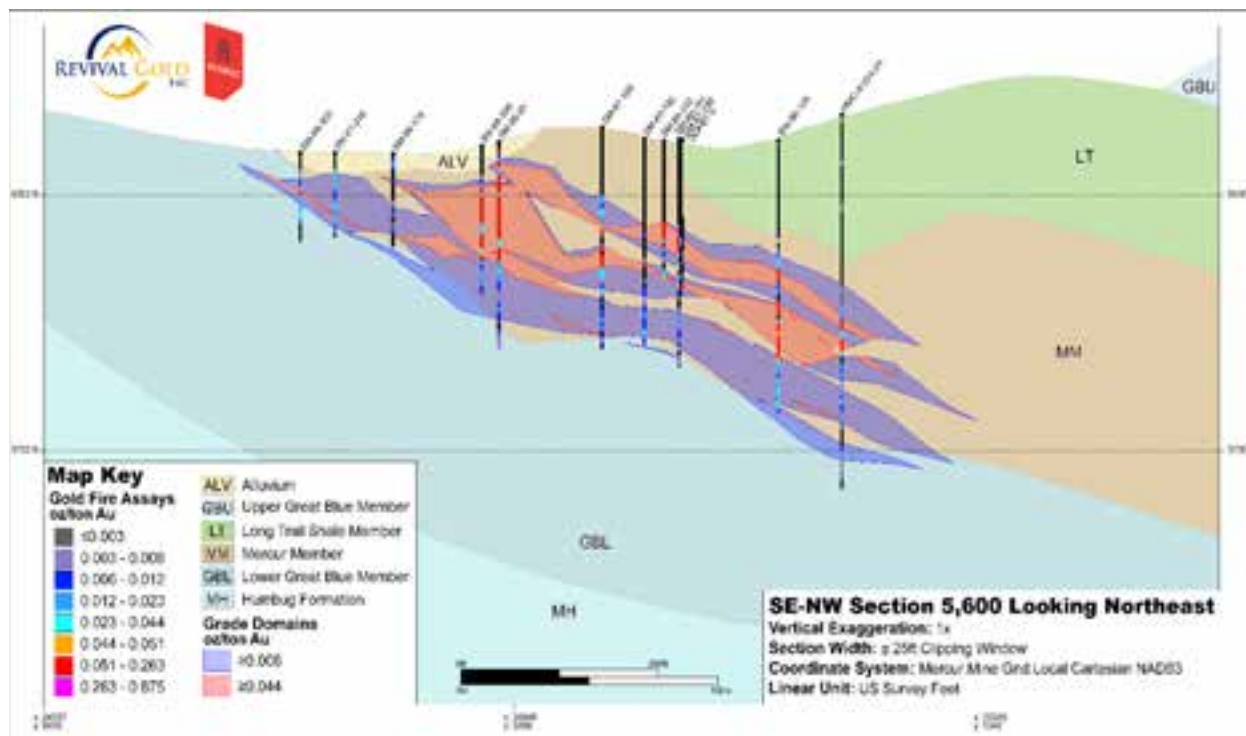
#### **14.4.2 Gold Domain Modeling – South Mercur**

For South Mercur, two gold domains were modeled by Revival using the Main Mercur grade boundaries listed in Table 14-13. Both the low-grade (0.006 – 0.044 oz/ton Au) and high-grade domains (>0.044 oz/ton Au) were modeled using Leapfrog software. The boundary between the low- and high-grade domains is gradational in nature and occurs from 0.023 oz/ton Au to 0.051 oz/ton Au, although it was modeled as a relatively hard boundary at 0.044 oz/ton Au. A third, higher-grade gold grade population (>0.263 oz/ton Au) was apparent on the CPP but was not modeled because the domain is represented by <1% of the gold assays and there was a lack of continuity observed in the data. Cross sections showing the geology and gold mineral domains for South Mercur are shown on Figure 14-11.

**Table 14-13: Gold Grade Domain Ranges**

<b>Domain</b>	<b>Gold Grade (oz/ton Au)</b>
Low-Grade	~0.006 to ~0.044
High-Grade	> ~0.044

Figure 14-11: South Mercur Section NE5,600 – Geology & Gold Domains in the Sunshine Mine Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-2.
3. There are apparent differences between gold domain solids cut on the two-dimensional section plane and projection of drill holes located off the section plane.

Revival used drill-log information and field observations in an effort to determine the geologic characteristics of each domain. The characteristics observed at South Mercur with respect to mineralization in general are the same as those observed at Main Mercur and are discussed in Section 14.3.2. To summarize, gold mineralization increases with increasing limonite and pyrite and increasing porosity. More favorable porosity is inherent in coarser-grained sedimentary lithologies or developed by structural preparation and/or decalcification. Structural preparation ranges from localized fractures to wider gouge zones, and to broad zones of fractures and stockwork breccias. Silicification may be indirectly associated with gold grade, *i.e.*, quartz can be abundant along certain stratigraphic horizons but may or may not be related to gold deposition.

### 14.4.3 Assay Coding, Capping, and Compositing – South Mercur

The mineral-domain solids described in Section 14.4.2 were used to code drill-hole assay intervals to their respective gold mineral domains. Assays were evaluated by domain to identify high-grade outliers that might be appropriate for capping. Possible outlier assays were determined from CPPs, and visual reviews of the spatial relationships of the outliers and their potential impacts during grade interpolation were evaluated in the assay cap analysis. Descriptive statistics were also generated and considered with respect to capping levels. No problematic outlier samples were identified for the high-grade domain, so no capping was applied to the respective assays. Capping levels and number of low-grade and outside modeled domain samples capped in the resource database are presented in Table 14-14 and descriptive statistics of the coded gold assay samples are provided in Table 14-15.

**Table 14-14: Capping Levels for Gold by Domain – South Mercur**

Domain	Capping Level (oz/ton Au)	Samples Capped
Low-Grade	0.20	4
High-Grade	N/A	0
Outside Modeled Domains	0.10	3

**Table 14-15: Coded Gold Assay Statistics by Domain – South Mercur**

Low-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	3,628	5.0	5.0			0.14	85.00	ft
Au	3,625	0.011	0.014	0.016	1.08	0.00	0.404	oz/ton Au
Capped Au	3,625	0.011	0.014	0.013	0.91	0.00	0.200	oz/ton Au
AuCN	120	0.013	0.015	0.015	0.96	0.00	0.120	oz/ton AuCN
Ag	196	0.201	0.248	0.492	1.98	0.02	6.8	oz/ton Ag
AuCIL/AuFA ratio	0	0.00	0.00	0.00	0.00	0.00	0.0	%
AuDCN/AuFA ratio	120	85.62	73.98	27.17	0.37	1.56	100.0	%
Gold Domain	3,628					1	1	
High-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	1,221	5.0	4.9			0.27	10.00	ft
Au	1,215	0.060	0.071	0.058	0.81	0.00	0.880	oz/ton Au
Capped Au	1,215	0.060	0.071	0.058	0.81	0.00	0.880	oz/ton Au
AuCN	140	0.051	0.062	0.065	1.04	0.00	0.613	oz/ton AuCN
Ag	152	0.201	0.329	0.497	1.51	0.04	4.6	oz/ton Ag
AuCIL/AuFA ratio	0	0.00	0.00	0.00	0.00	0.00	0.0	%
AuDCN/AuFA ratio	140	89.34	77.13	28.11	0.36	0.58	100.0	%
Gold Domain	1,221					2	2	

Outside Modeled Gold Domains								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	96,240	5.0	8.6			0.01	1140.00	ft
Au	93,474	0.002	0.014	0.040	2.85	0.00	2.010	oz/ton Au
Capped Au	93,474	0.002	0.011	0.022	1.93	0.00	0.100	oz/ton Au
AuCN	1,420	0.008	0.024	0.054	2.22	0.00	1.125	oz/ton AuCN
Ag	9,917	0.201	0.910	5.640	6.19	0.01	200.0	oz/ton Ag
AuCIL/AuFA ratio	9,058	85.70	78.98	20.27	0.26	0.00	100.0	%
AuDCN/AuFA ratio	3,939	84.80	74.13	27.15	0.37	0.00	100.0	%
Gold Domain	96,240					99	99	

The assays were composited at 10 ft down-hole intervals, respecting the mineral domain boundaries. The composite length was chosen to avoid de-compositing fractions of the combined Main and South Mercur original drill-sample data, which consist of nearly 80% 5-ft intervals and about 8% 10-ft intervals. Descriptive statistics of the composites for each domain are given in Table 14-16.

**Table 14-16: Coded Gold Composite Statistics by Domain – South Mercur**

Low-Grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	2,087	10.000	8.740			0.00	10.000	ft
Au	2,086	0.012	0.015	0.015	1.06	0.00	0.404	oz/ton Au
Capped Au	2,086	0.012	0.014	0.012	0.85	0.00	0.200	oz/ton Au
AuCIL/AuFA ratio	0	0.00	0.00	0.00	0.00	0.00	0.0	%
AuDCN/AuFA ratio	70	81.97	73.43	24.41	0.33	1.77	100.0	%
Gold Domain	2,087					1	1	
High-grade Gold Domain								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	710	10.000	8.450			0.00	10.000	ft
Au	708	0.062	0.071	0.049	0.69	0.00	0.550	oz/ton Au
Capped Au	708	0.062	0.071	0.049	0.69	0.00	0.550	oz/ton Au
AuCIL/AuFA ratio	0	0.00	0.00	0.00	0.00	0.00	0.0	%
AuDCN/AuFA ratio	75	89.88	77.69	26.06	0.34	1.06	99.0	%
Gold Domain	710					2	2	
Outside Modeled Gold Domains								
Parameter	Valid	Median	Mean	Std Dev	CV	Minimum	Maximum	Units
Length	84,566	10.000	9.290			0.00	10.000	ft
Au	80,803	0.001	0.009	0.029	3.37	0.00	1.150	oz/ton Au
Capped Au	80,803	0.001	0.007	0.017	2.41	0.00	0.100	oz/ton Au
AuCIL/AuFA ratio	5,995	85.20	78.67	19.73	0.25	0.00	100.0	%
AuDCN/AuFA ratio	2,483	85.00	74.94	25.69	0.34	0.00	100.0	%
Gold Domain	84,566					99	99	

Correlograms were generated from the composited gold grades to evaluate grade continuity. Correlogram parameters were determined and applied to the kriged estimate, against which the reported inverse distance estimate was compared. The evaluated continuity of grade also contributed to classification of mineral resources. The correlogram results by domain are summarized as follows:

- Low-grade gold domain – The nugget is 35% of the total sill. The first sill is 50% of the total sill with a range of 30 ft to 45 ft depending on direction. The remaining 15% of the total sill has a range of 175 ft to 220 ft depending on direction.
- Hugh-grade gold domain – The nugget is 30% of the total sill. The first sill is 52% of the total sill with a range of 20 ft to 55 ft depending on direction. The remaining 18% of the total sill has a range of 175 ft to 300 ft depending on direction.

#### 14.4.4 Tonnage Factors – South Mercur

There were no rock density measurements in the South Mercur drilling database at the time the resource was estimated. A TF of 12 ft<sup>3</sup>/ton (specific gravity = 2.67) was assigned to all mineralized material in block models in historical resource estimates, based on values used during mining by Barrick at Main Mercur. Although no documentation was found or reviewed that supports the use of this TF, it is a reasonable average value for the rocks present on the Main and South Mercur properties. Therefore, in the absence of any additional information, Mr. Lindholm applied a TF of 12 ft<sup>3</sup>/ton to all bedrock material in the South Mercur model. A TF of 17.8 ft<sup>3</sup>/ton (specific gravity = 1.80) was assigned to all alluvium and dump material.

Application of average TFs is a reasonable approach given the lack of documentation, however, there is some risk that the density of mineralized and unmineralized sedimentary rocks remaining after mining is not the same as for mined material. It is recommended that density measurements from samples representing all applicable lithologies, alteration and mineralization types should be collected in order to properly assign densities to the South Mercur model. The densities data should be spatially representative as well.

#### 14.4.5 Block Model and Coding – South Mercur

The mineral resources for all deposits at South Mercur were modeled and estimated in a single, unrotated block model. Dimensions and extents, in local mine grid coordinates, are provided in Table 14-17. The mineral domain solids were used to code 25 ft × 25 ft × 25 ft (x, y, z) blocks that comprised a digital model. The partial percentage volumes of each mineral domain were coded directly by the solids and stored in each block. The portion of the block that lies outside the modeled metal domains was calculated from the domain percentages. Other items, such as

geologic formations, non-leach zones, estimation areas, inferred and below inferred classification areas, and royalties were also coded.

**Table 14-17: Block Model Dimensions, Local Mine Grid in Feet – South Mercur**

Dimension	Minimum (ft)	Maximum (ft)	Extents (ft)	Block Size (ft)
Easting	22,000	30,000	8,000	25
Northing	2,000	14,000	12,000	25
Elevation	4,000	8,000	4,000	25

#### 14.4.6 Grade Interpolation – South Mercur

Gold grades were interpolated using inverse-distance, kriged and nearest-neighbor methods. The mineral resources reported herein were estimated by inverse-distance to the third power (“ID<sup>3</sup>”) in modeled gold domains as this method produced results that most appropriately respected the drill data and geology of the resources. The kriged and nearest-neighbor estimations were completed for the purposes of statistical checking of the various estimation iterations. The parameters applied to the grade estimations at South Mercur are summarized in Table 14-18.

**Table 14-18: Estimation Parameters – Main Mercur**

Description	Parameter
<b>Low-Grade Gold Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.25
Inverse distance power	3
Maximum search distance (ft)	600
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.045 / 300
<b>High-Grade Gold Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.25
Inverse distance power	3
Maximum search distance (ft)	500
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.20 / 170

Description	Parameter
<b>Outside Modeled Gold Domains</b>	
Samples: minimum/maximum/maximum per hole	2 / 12 / 3
Search anisotropies (ft): major/semimajor/minor (vertical)	1 / 1 / 0.50
Inverse distance power	2
Maximum search distance (ft)	100
High-grade restrictions (grade in oz/ton Au, distance in ft)	0.008 / 25

The search ellipse applied to the estimates, oriented at N15°E dipping 25° to the southeast, represents the overall strike and dip of the mineralized stratigraphy. The search anisotropy for estimation in domains is relatively tight, with the same major and semi-major axes search distances within the plane of bedding, and one-fourth the distance perpendicular to bedding. Grade interpolations were performed using MinePlan's relative elevation function. A single surface was modeled that follows the localized curvature of the domains in various areas of the deposit. During interpolation of grade into blocks, distance weighting as applied by the search ellipse orientation essentially follows the relative elevations above and below the modeled surfaces. Length-weighted composites were also used to interpolate grades.

The estimation passes were performed independently for each of the mineral domains, so that only composites coded to a particular domain were used to estimate grade into respective partial blocks of the domain. Multiple grades were interpolated into blocks with partial percentages of more than one domain. A single volume-weighted grade was calculated from the low-grade, high-grade and outside modeled domain estimated grades in a given block. The total block grades in the resource model are therefore diluted to the full block volumes.

#### **14.4.7 Mineral Resources – South Mercur**

The South Mercur deposit has the potential to be mined by open pit methods. The mineral resources were tabulated to reflect potential open pit mining and heap leach extraction as the primary scenario. To meet the requirement of reasonable prospects for eventual economic extraction, a pit optimization was run using the parameters summarized in Table 14-19.

The cutoff grade was calculated using basic input costs and parameters. The costs and parameters are essentially the same as for Main Mercur, except for a higher incremental mining cost which reflects the longer haulage distance to facilities from South Mercur.

**Table 14-19: Pit Optimization Parameters – South Mercur**

Item	Value	Unit
Mining Cost	2.50	\$/ton
Incremental Mining Cost	0.82	\$/ton processed
Heap Leach Processing Cost	4.05	\$/ton processed
Process Rate	20,000	tons-per-day processed
General and Administrative Cost	0.82	\$/ton processed
Au Price	2,000	\$/oz
Average Au Recovery	79	percent

The pit shell created by the optimization was used to constrain the mineral resources, which are reported at a cutoff grade of 0.005 oz/ton Au for all materials. The gold cutoff grade was calculated using the processing, general and administrative costs, gold price and refining cost that are reasonable for similar deposits mined by open pit methods (Table 14-19). Recoveries are utilized in optimizations on a block-by-block basis and have been applied to the model using values estimated from available Au DCN and Au CIL data modified per guidance from KCA (see discussion of recoveries in Section 13). The mining cost is not included in the determination of the cutoff grade, as all material in the conceptual pit would potentially be mined as either process material or waste. The reference point at which the mineral resources are defined is therefore at the top rim of the pit, where material equal to or greater than the cutoff grade would be processed.

The metal prices used for resource reporting, pit optimizations and determination of the gold cutoff grade is derived from the three-year moving-average prices as of April 2025. The three-year moving-average price was about \$2,125/oz Au and rising as of the effective date of this technical report. The South Mercur mineral resources reported at a cutoff grade of 0.005 oz/ton Au are presented in Table 14-20. Only those model blocks with grades at or above the minimum gold cutoff grade were included in the mineral resource tabulation. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

**Table 14-20: South Mercur Indicated and Inferred Gold Mineral Resources**

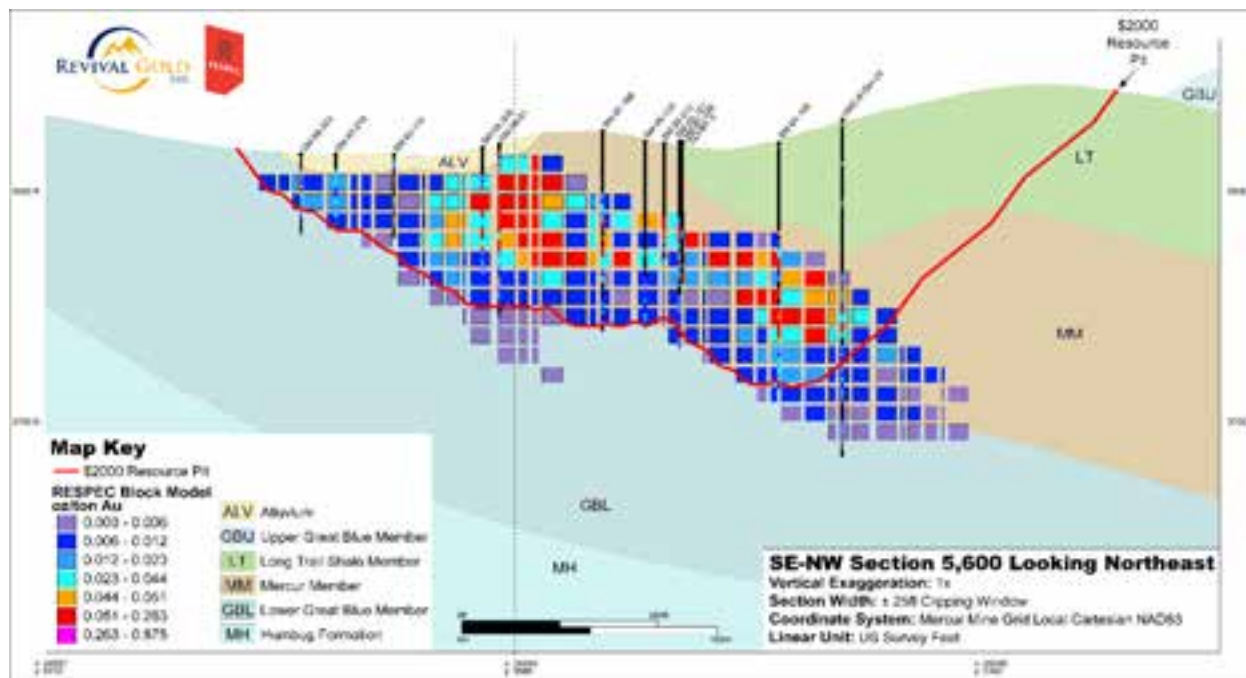
Mineral Resource Classification	Cutoff Grade (oz/ton Au)	Resource Tonnage (tons)	Gold Grade (oz/ton Au)	Contained Gold (oz Au)
Indicated	0.005	7,352,000	0.023	165,000
Inferred	0.005	3,380,000	0.018	59,000

**Notes:**

1. The estimate of mineral resources was done by Michael S. Lindholm, CPG of RESPEC in Imperial units.
2. In-situ mineral resources are classified in accordance with CIM Standards.
3. Mineral resources comprised all model blocks at a 0.005 oz/ton Au cutoff for all material within optimized pits.
4. The average grades of the mineral resources are comprised of the weighted average of block-diluted grades within the optimized pits. Alluvial material is not included in the mineral resources.
5. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
6. Mineral resources potentially amenable to open pit mining methods are reported using a gold price of US\$2,000/oz, a throughput rate of 20,000 tons/day, assumed average metallurgical recoveries of 79% for Au, mining costs of US\$2.50/ton mined, heap leach processing costs of US\$4.05/ton processed, general and administrative costs of \$0.82/ton processed. The gold commodity price was selected based on analysis of the three-year running average at the end of April 2025.
7. The effective date of the mineral resource estimate is March 13, 2025.
8. Rounding may result in apparent discrepancies between tons, grade, and contained metal content.

Figure 14-12 is a cross-section through the Sunshine mine area at South Mercur that shows estimated block-model gold grades. The figure corresponds to the mineral-domain cross-section presented on Figure 14-11.

Figure 14-12: South Mercur Section NE5,600 – Geology & Gold Block Model in the Sunshine Mine Area



Notes:

1. Figure developed by Revival, 2025.
2. Cross section location is shown on Figure 14-2.

Table 14-21 presents the South Mercur mineral resources tabulated at a cutoff grade of 0.005 oz/ton Au at both increasing and decreasing gold prices. Pits for each case were optimized using the parameters given in Table 14-18 at variable gold prices. The analysis is presented to provide information that allows for an assessment of the sensitivity of project mineral resources to fluctuating gold prices. All tabulations at gold prices lower than the base case of \$2,000/oz Au represent subsets of the current mineral resources. All tabulations at gold prices higher than the base case reflect the potential for increased resources at South Mercur, although Revival is not relying on these increases in gold prices in the future. However, it should be noted that the spot gold price at the effective date of this technical report was over \$2,900/oz Au.

**Table 14-21: South Mercur Sensitivity Evaluation by Gold Price Relative to Base Case Mineral Resources**

Mineral Resource Category and Gold Price	Cutoff Grade (oz/ton Au)	Resource Tonnage (tons)	Gold Grade (oz/ton Au)	Contained Gold (oz Au)
Mineral Resource Sensitivity at \$1,600/oz Gold				
South Mercur Indicated	0.005	6,138,000	0.023	140,000
South Mercur Inferred	0.005	2,207,000	0.018	40,000
Mineral Resource Sensitivity at \$1,800/oz Gold				
South Mercur Indicated	0.005	6,482,000	0.022	145,000
South Mercur Inferred	0.005	2,680,000	0.017	46,000
<b>Base Case Mineral Resource \$2,000/oz Gold</b>				
<b>South Mercur Indicated</b>	<b>0.005</b>	<b>7,352,000</b>	<b>0.023</b>	<b>165,000</b>
<b>South Mercur Inferred</b>	<b>0.005</b>	<b>3,380,000</b>	<b>0.018</b>	<b>59,000</b>
Mineral Resource Sensitivity at \$2,200/oz Gold				
South Mercur Indicated	0.005	7,570,000	0.022	169,000
South Mercur Inferred	0.005	3,645,000	0.017	63,000
Mineral Resource Sensitivity at \$2,400/oz Gold				
South Mercur Indicated	0.005	7,699,000	0.022	170,000
South Mercur Inferred	0.005	3,913,000	0.017	67,000
<b>Notes:</b> 1. The estimate of mineral resources was done by Michael S. Lindholm, CPG of RESPEC in Imperial units. 2. In-situ mineral resources are classified in accordance with CIM Standards. 3. The base case reported mineral resources at a gold price of \$2,000/oz Au is shown in bold and has an effective date of March 13, 2025. 4. Tabulations at gold prices higher and lower than the base case are presented to demonstrate sensitivities to fluctuating gold prices. 5. Tabulations comprise all model blocks at a 0.005 oz/ton Au cutoff for all material within the pits optimized at variable gold prices. Pit optimizations used a throughput rate of 20,000 tons/day, assumed average metallurgical recoveries of 79% for gold, mining costs of US\$2.50/ton mined, heap leach processing costs of US\$4.05/ton processed, general and administrative costs of \$0.82/ton processed. 6. Tabulations at gold prices lower than the base case of \$2000/oz Au represent subsets of the current mineral resources. 7. Tabulations at gold prices higher than the base case reflect the potential for increased resources, although Revival is not relying on these increases in gold prices in the future. 8. The average grades of the tabulations are comprised of the weighted average of block-diluted grades within the optimized pits. Alluvium, dump and backfill materials are not included in the tabulations. 9. Mineral resources that are not mineral reserves do not have demonstrated economic viability. 10. Rounding may result in apparent discrepancies between tons, grade, and contained metal content.				

Mr. Lindholm classified the South Mercur mineral resources considering confidence in the underlying database, sample integrity, analytical precision/reliability, QA/QC results, drilling methods, variography, the status of metallurgical test work, the available density data, and confidence in the top-of-bedrock surface and geological interpretations. The classification parameters are given in Table 14-22. Although the author of this section is not an expert with respect to environmental, permitting, legal, title, taxation, socio-economic, marketing or political

matters, the author is not aware of any unusual factors relating to these matters that may materially affect the South Mercur mineral resources as of the effective date of this technical report.

**Table 14-22: South Mercur Classification Criteria**

<b>Indicated</b>
In modeled domain, and
Number of Samples $\geq 7$ and isotropic distance $\leq 50$ ft; or
Number of Samples $\geq 3$ and closest distance $\leq 25$ ft
<b>Indicated Reduced to Inferred if:</b>
Average distance $\geq 230$ ft; or
Farthest distance $\geq 280$ ft; or
Within 40 ft of possible underground workings ( $\geq 2$ no sample intervals)
<b>Inferred</b>
In modeled domain that is not Indicated; and
Number of Samples $\geq 1$ and isotropic distance $\leq 150$ ft; or
Number of Samples $\geq 3$ and isotropic distance $\leq 250$ ft; or
All estimated blocks outside modeled domains, and isotropic distance $\leq 50$ ft*
<b>Inferred Reduced to CLASS = 4 if:</b>
Blocks around drill holes OC-5 to OC-9
*A strong search restriction on composites $\geq 0.008$ oz/ton Au within this distance (at 25 ft) was applied

The drilling at South Mercur is very regular and dense at ~50 ft to 100 ft in the vicinity of the reported resources. As a result, even with minimal distances required for classification higher than Inferred, the quantity of Indicated gold ounces is high at 74%. Outside the resource pit areas, the drilling density decreases rapidly, so that the quantity of Indicated material relative to Inferred is sharply reduced.

The geology and gold mineralization of the South Mercur deposits is well-understood, which is reflected in Revival's geologic model and RESPEC's classification of resources. The primary control for gold mineralization is stratigraphic, so domains were modeled within the preferential formational and lithological host units.

Uncertainties considered in resource classification include: (i) the preponderance of RC holes drilled; (ii) gold domain modeling inconsistencies; and (iii) the unknown location and extent of underground workings.

Only 3% of combined Main and South Mercur drilling utilized core. The remainder was done by RC, rotary and unknown methods of drilling. In general, there is an inherent risk of down-hole contamination in RC drilling, particularly below the water table. However, the known water table at the Mercur project is generally below the modeled resources, and since there was no evidence

of contamination suspected in drill-hole assays or noted on drilling logs, no further consideration with respect to classification was warranted.

At South Mercur, domain modeling was limited to reasonable distances from drill-hole data, so all blocks with at least 1% low- or high-grade domain volume were classified as Inferred. However, at South Mercur, some low-grade domains were modeled for much longer distances from drill data. As a result, the classification of Inferred resources was limited to within 250 ft of drill data.

There was a small amount of historical production from the Overland and Sunshine underground mines. Existing maps and other records are inadequate for determining the location and extent of the workings. There are numerous missing sample intervals in drilling clustered in the underground mine areas, although these intervals have not been evaluated to determine if they were drilled through underground workings, stope backfill or broken and fractured bedrock. Revival included these intervals in the gold domains, such that grade would be estimated across the zones of voids or unknown material type. To account for the lack of knowledge regarding the underground workings, a downgrade to Inferred classification was applied to blocks within 40 ft of intervals with at least two consecutive missing samples.

#### **14.5 Discussion of the Mercur Resources, Risks, and Recommendations**

The block size (25 ft x 25 ft x 25 ft) of the Main and South Mercur block models was chosen in consideration of potential exploitation by open pit mining and heap leach extraction, and resources were reported within pits optimized using current economic parameters. However, all modeling processes and inputs that were used to estimate the gold resources, including the mineral domain modeling, grade capping, grade estimation, and density assignment, were completed independent of potential mining methods.

The geology and the Carlin-type gold mineralization of the Main Mercur deposits is well-understood, which is reflected in Revival's geologic model. The primary control for gold mineralization is stratigraphic, so domains were modeled within the preferential formational and lithological host units.

The average drill spacing in mined areas of the Main Mercur deposits is about 100 ft and appears to have been adequate for historical resources and to guide past mining activities. Portions of the current resources lie outside these areas, and the existing drilling density is commonly lower. Infill drilling will be necessary to properly define gold mineralization in some areas of the resources, particularly in the Rover and Marion Hill areas. It is also recommended that some holes be drilled to specifically test the gold domain model. If the model is reasonably confirmed in areas where the drill spacing is greater than 100 ft, it will indicate that a wider spacing will likely properly define the deposit. Confirmation of the gold domain model will also increase confidence in the resource

estimate and allow for conversion of Inferred material to Indicated or even Measured classification.

The average drill spacing in the South Mercur deposits is ~50 ft to 100 ft in the vicinity of the reported resources. Outside the resource pit areas, the drilling density decreases rapidly. Infill drilling will be necessary outside the densely drilled core in order to (i) properly define the extent and distribution of gold mineralization; (ii) upgrade classification above Inferred; and (iii) potentially discover new or extend high-grade mineralization between widely spaced drill holes. It is also recommended that some holes be drilled to specifically test the gold domain model. Confirmation of the gold domain model will increase confidence in the resource estimate and allow for further conversion of Inferred material to Indicated or even Measured classification.

Gold domain wireframes were modeled in Leapfrog software for the Main and South Mercur deposits. For Main Mercur, RESPEC staff modeled the low-grade and Revival modeled the high-grade domains independently to facilitate the work. Revival modeled both the low- and high-grade domains for South Mercur. Revival's domains do not always coincide, such that the high-grade domains may cross into and out of the low-grade solids rather than sub-parallel to and within the low-grade domains. RESPEC clipped the high-grade domains with the low-grade domain solids, which has resulted in an overall loss of high-grade volume in the model that is replaced by low-grade material. For this PEA-level technical report, Mr. Lindholm accepted the clipped high-grade domains because the overall resources are likely understated. However, it is recommended that the low- and high-grade domains be modeled consistently for higher-level studies. At the same time, there is an opportunity to increase gold resources in the future with more consistency in modeling of the high-grade domain with the low-grade domain.

Original certificates were available for all Ensign drill-hole assays, and for nearly all assays associated with older drilling. The audit conducted by RESPEC on the combined Main, South and West Mercur drill-hole assays yielded an error rate of less than one percent, and all errors found were corrected. Evaluation of the Ensign QA/QC data, and remedial actions performed by Ensign, indicated there were no significant issues associated with the assay data. However, there was no QA/QC data available for any of the pre-Ensign assay data. There is some risk associated with the historical assays due to the lack of QA/QC information, however, that risk is lessened by the positive results of the audit of that data.

Only 3% of combined Main and South Mercur drilling utilized core. The remainder was done by RC, rotary and unknown drilling. In general, there is an inherent risk of down-hole contamination in RC drilling, particularly below the water table. However, the known water table at the Mercur project is generally below the modeled resources, and there was no evidence of contamination suspected in drill-hole assays or noted on the drilling logs reviewed by Revival. Any risk associated with the RC drilling is considered to be low.

At Main Mercur, the precise location of the top-of-bedrock surface is not known in some backfilled areas within the pits. A reasonable surface has been established based on historical as-builts and blasthole data, but there are many locations where the surface conflicts with logging in holes drilled through backfill material into bedrock. To remediate this issue in the resource model, all blocks within a 50 ft vertical depth below the current top-of-bedrock surface below backfill material have been assigned to no higher than Inferred classification. Mr. Lindholm recommends drilling a few holes through backfill in the areas with limited or no information to define the top-of-bedrock surface.

Revival provided current, original and top-of-bedrock topographic surfaces for the Main and South Mercur project areas, although only the current topographic surface is relevant at South Mercur. At Main Mercur, RESPEC observed that in undisturbed areas, all three surfaces do not always coincide, and can differ significantly locally. In some areas, it appears that there is a lateral shift of one surface relative to another. Each surface was obtained from different sources and are not perfectly coincident as a result. Any discrepancies between surfaces in undisturbed areas were treated as alluvial material and assigned tonnage factors of 17.8 ft<sup>3</sup>/ton.

At South Mercur, there was a small amount of historical production from the Overland and Sunshine underground mines. There are no maps or other records that indicate the location and extent of the workings. Classification was downgraded to Inferred within 40 ft of numerous missing sample intervals in drilling clustered in the underground mine areas that could be underground workings, stope backfill or broken and fractured bedrock. Mr. Lindholm recommends that some drilling targets the longer missing sample intervals to determine the character of the material or voids. This will help to determine how the assays are treated in the model and resource estimate, and provide information regarding the nature and extent of underground workings.

Gold was initially mined from underground in many of the deposit areas at Main Mercur. Although documentation of historic workings is insufficient to accurately model their extent, it is likely that most of these areas have been consumed by subsequent open pit mining. Still, it is possible that some underground workings exist in resource areas that are not accounted for in the block model, although the associated risk is low because the tonnage of material extracted was relatively small.

There was no density data available for the Mercur project other than those applied during past open pit mining. While application of a global tonnage factor based on mining is a reasonable approach in the absence of other data, there are likely local variances in bedrock densities related to lithology, alteration and oxidation types. Also, there is no certainty that the density of mined material is equivalent to the densities of all remaining bedrock, particularly at South Mercur located several miles from the historical mining at Main Mercur. Mr. Lindholm recommends that new density data be obtained from drill core, pit wall samples, or other sources during the

exploration program proposed in Section 26. The density data should be spatially representative, and sufficiently distinguish the various lithologic, alteration and oxidation types.

There is significant information regarding gold recoveries in the Main and South Mercur deposits, including abundant bottle roll test and some column test data. However, the potential effects of redox state and carbonaceous material on recoveries are not yet fully understood. Revival recognizes the need for continued metallurgical test work and evaluation for the Mercur project mineralization, and additional studies are planned during the exploration program proposed in Section 26. If results of future test work indicate that application of different cutoff grades for different material types will be necessary during mining, the appropriate geologic characteristics should be modeled (e.g. oxide, transition and reduced zones) so that mineral resources can be reported separately for the respective material types.

Mr. Lindholm is not an expert regarding environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors. As of the date of this report, Mr. Lindholm is not aware of any issues related to these factors that may materially affect the Mercur mineral resources that are not otherwise discussed in this report.

## **15 MINERAL RESERVE ESTIMATES**

There are no current Mineral Reserve estimates associated with the Mercur Gold Project.

## SECTION 16 CONTENTS

16	MINING METHODS.....	16-3
16.1	Pit Optimization.....	16-3
16.1.1	Economic Parameters .....	16-3
16.1.2	Cutoff Grades .....	16-4
16.1.3	Geometric Parameters .....	16-4
16.2	Pit Designs.....	16-5
16.2.1	Pit Design Slope Parameters .....	16-6
16.2.2	Haul Roads.....	16-7
16.2.3	Dilution .....	16-7
16.2.4	Pit Phasing .....	16-7
16.2.5	In-Pit Gold Resources .....	16-18
16.3	Mine-Waste Facilities.....	16-19
16.4	Production Scheduling.....	16-22
16.4.1	Mine Equipment Requirements .....	16-26
16.4.2	Mine Operations Personnel .....	16-28

## SECTION 16 TABLES

Table 16-1:	Economic Parameters.....	16-4
Table 16-2:	In-Pit Resources and Associated Waste Material .....	16-19
Table 16-3:	Waste Rock Storage Facility Capacities .....	16-22
Table 16-4:	Yearly Mine Production Schedule .....	16-23
Table 16-5:	Yearly Stockpile Balances .....	16-26
Table 16-6:	Yearly Required Equipment .....	16-27
Table 16-7:	Yearly Personnel Requirements .....	16-29

## SECTION 16 FIGURES

Figure 16-1:	Main Mercur Ultimate Pit General Layout .....	16-5
Figure 16-2:	Rock Design Slope Parameters.....	16-6
Figure 16-3:	Dump Material Design Slope Parameters.....	16-7
Figure 16-4:	Main Mercur Phase 1.....	16-8
Figure 16-5:	Main Mercur Phase 2.....	16-10

Figure 16-6: Main Mercur Phase 3.....	16-11
Figure 16-7: Main Mercur Phase 4.....	16-12
Figure 16-8: Main Mercur Phase 5.....	16-13
Figure 16-9: Main Mercur Phase 6.....	16-14
Figure 16-10: Main Mercur Phase 7.....	16-15
Figure 16-11: South Mercur Ultimate Pit.....	16-16
Figure 16-12: South Mercur Phase 1 .....	16-17
Figure 16-13: South Mercur Phase 2 .....	16-18
Figure 16-14: Mining General Arrangement-for Main Mercur Pits, WRSFs and Backfills .....	16-20
Figure 16-15: Mining General Arrangement-for South Mercur Pit and WRSF .....	16-21

## 16 MINING METHODS

The PEA for the Mercur project presented in Section 21 of this report envisions the use of conventional open-pit, truck-and-shovel methods for mining the Main Mercur and South Mercur deposits with extraction of gold by cyanide heap-leaching. Waste material would be extracted using 150-ton haul trucks and transported to designated waste rock storage facilities (“WRSF”s). Leach material would be mined from two pits, processed through a crusher and stacked on heap leach pad for leaching gold. Ultimate pit limits were developed using pit optimization techniques based on the block models of estimated mineral resources summarized in Section 14 of this report. Production schedules have been developed using the preliminary pit designs and the estimated mineral resources with these pit designs for a total expected mine life of 10 years after a one-year pre-production period.

Indicated and Inferred mineral resources have been used to determine potentially mineable resources for the PEA. Note that:

***A preliminary economic assessment is preliminary in nature, and it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied that would enable them to be classified as mineral reserves, and there is no certainty that the preliminary assessment will be realized.***

The following subsections discuss the methodology used to define the pit designs, waste dump designs, and the production schedule and equipment requirements with relation to the PEA.

### 16.1 Pit Optimization

Pit optimization was completed using Whittle software (version 2022). Economic and geometrical parameters were input into Whittle to complete the work. The economic parameters were developed assuming a processing method of crushing and leaching with throughput rate of 20,000 tons per day.

Whittle pit shells for varied metal prices and processing throughputs were used to determine pit phases and ultimate pits for each scenario.

#### 16.1.1 Economic Parameters

Economic parameters were developed included mining cost, incremental ore haulage cost, process cost, and General and Administrative (“G&A”) costs as shown in Table 16-1 based on an anticipated throughput of 20,000 tpd.

**Table 16-1: Economic Parameters**

	<b>Main Mercur</b>	<b>South Mercur</b>	<b>Unit</b>
Mining - Rock	\$ 2.50	\$ 2.50	\$/t Mined
Mining - Fill	\$ 2.14	N / A	\$/t Mined
Incremental Ore Mining Cost	\$ 0.32	\$ 0.82	\$/t Processed
Leaching	\$ 4.05	\$ 4.05	\$/t Processed
G&A per Year	\$ 6,000	\$ 6,000	k \$/yr
Processed per day	20,000	20,000	t/day
Processed per year	7,300	7,300	k t/yr
G&A per Ton	\$ 0.82	\$ 0.82	\$/t Processed
Royalty	Variable	Variable	NSR
Refining	\$ 5.00	\$ 5.00	\$/oz Au Recovered

The PEA assumes owner mining. Process and G&A costs were provided by KCA. Recoveries were estimated as discussed in Section 13.

Various metal prices were considered in the pit optimizations with the base metal prices of \$2,000 Au oz/t. Royalties were applied based on the applicable pit region as detailed in Section 4.

### **16.1.2 Cutoff Grades**

Pit optimizations were completed using a minimum gold grade of 0.005 oz/ton. The Whittle pit optimization uses modeled cash-flow to determine if material should be processed or designated waste material, except for material that may be below the minimum cutoff grade. The resulting cutoff grades that the pit optimizations use are the breakeven cutoff grades. These cutoff grades are applied to the pit designs to differentiate the material that is sent to the leach pad from material sent to WRSFs.

### **16.1.3 Geometric Parameters**

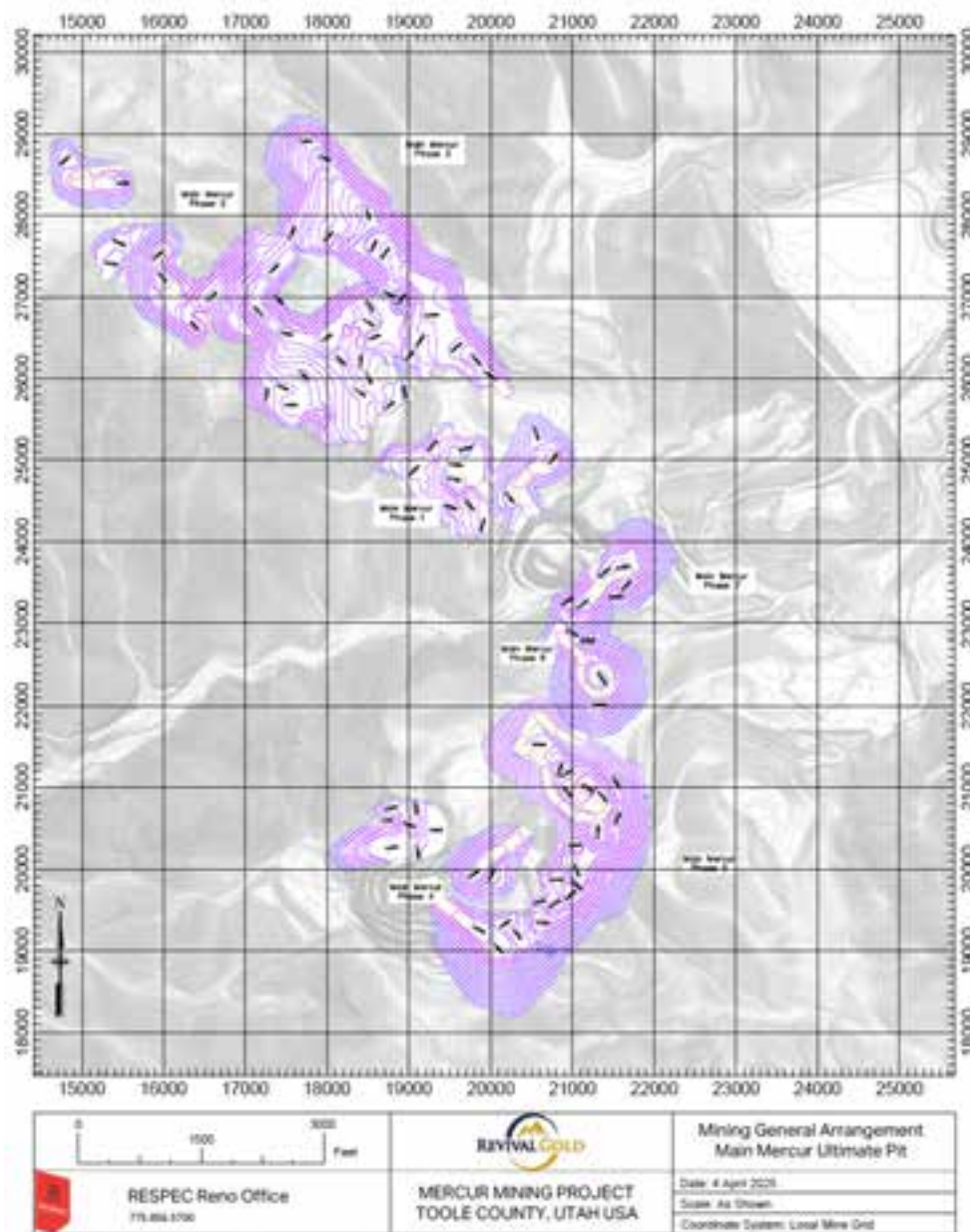
Geometric parameters include property and pit slope parameters. The property boundary was included as a constraint in the Whittle pit optimization as well as pit and waste dump design.

The Main and South Mercur deposits have no current pit slope stability studies available as of the effective date of this report. Pit slopes for the PEA are assumed to have 45-degree inter-ramp slopes for rock and 34-degree slopes for previous dump fill. Some flattening was applied in select areas to accommodate road design widths. Revival has not conducted geotechnical studies to support pit slope designs and facilities siting and designs.

## 16.2 Pit Designs

Utilizing the resource block models discussed in Section 14, detailed pit designs were completed for the Main Mercur area as shown in the ultimate pit general layout drawing on Figure 16-1. All pit designs were completed in Surpac software (version 2024).

**Figure 16-1: Main Mercur Ultimate Pit General Layout**

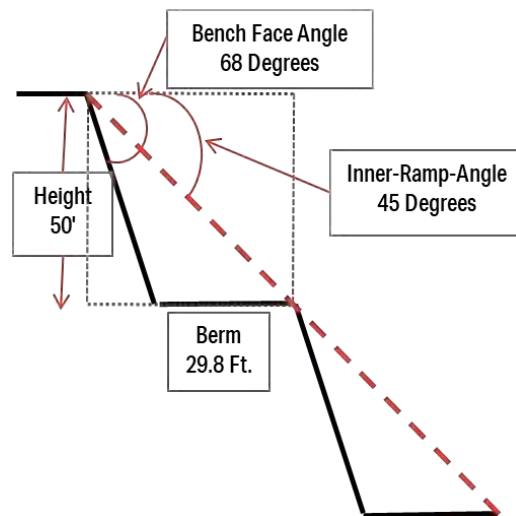


### 16.2.1 Pit Design Slope Parameters

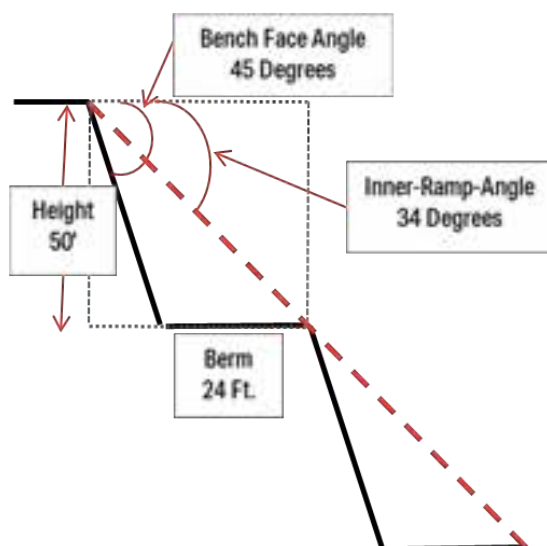
While no current geotechnical study has been provided to Mr. Anderson, designed pits targeted an inner-ramp angle of 45 degrees for rock and 34 degrees for dump material. This is reasonable at a PEA level of study, but geotechnical studies should be conducted prior to construction of the pits.

Pit slopes were defined using bench height as the height between catch benches or berms, bench face angle, and berm width. The pits will be mined on 25-ft benches and every other bench will have a berm of 29.8 ft wide in rock and 24 ft wide in previous dumped material. A bench face angle of  $68^{\circ}$  has been assumed in rock, providing an inner-ramp slope of  $45^{\circ}$ . For previous dumped fill the design bench face angle is  $45^{\circ}$ . The slope design parameters are shown on Figure 16-2 and Figure 16-3.

**Figure 16-2: Rock Design Slope Parameters**



**Figure 16-3: Dump Material Design Slope Parameters**



### 16.2.2 Haul Roads

In-pit ramps and haul roads were designed to allow safe operation of haul trucks while allowing for two-way traffic. A ramp width of 100 ft was used in the pits and allows for 3.5 times the running width of a 150-ton truck and a safety berm of 17 ft. Ramps are intended to have a maximum design gradient of 10%; however, some steeper sections may exist on the inside of curves for short distances. Haulage outside of the pit is required to deliver material to the WRSFs and heap leach pad. In cases where these roads require a berm on each side, the road design width is 120 ft. This allows for an 87-ft running width for the 150-ton trucks.

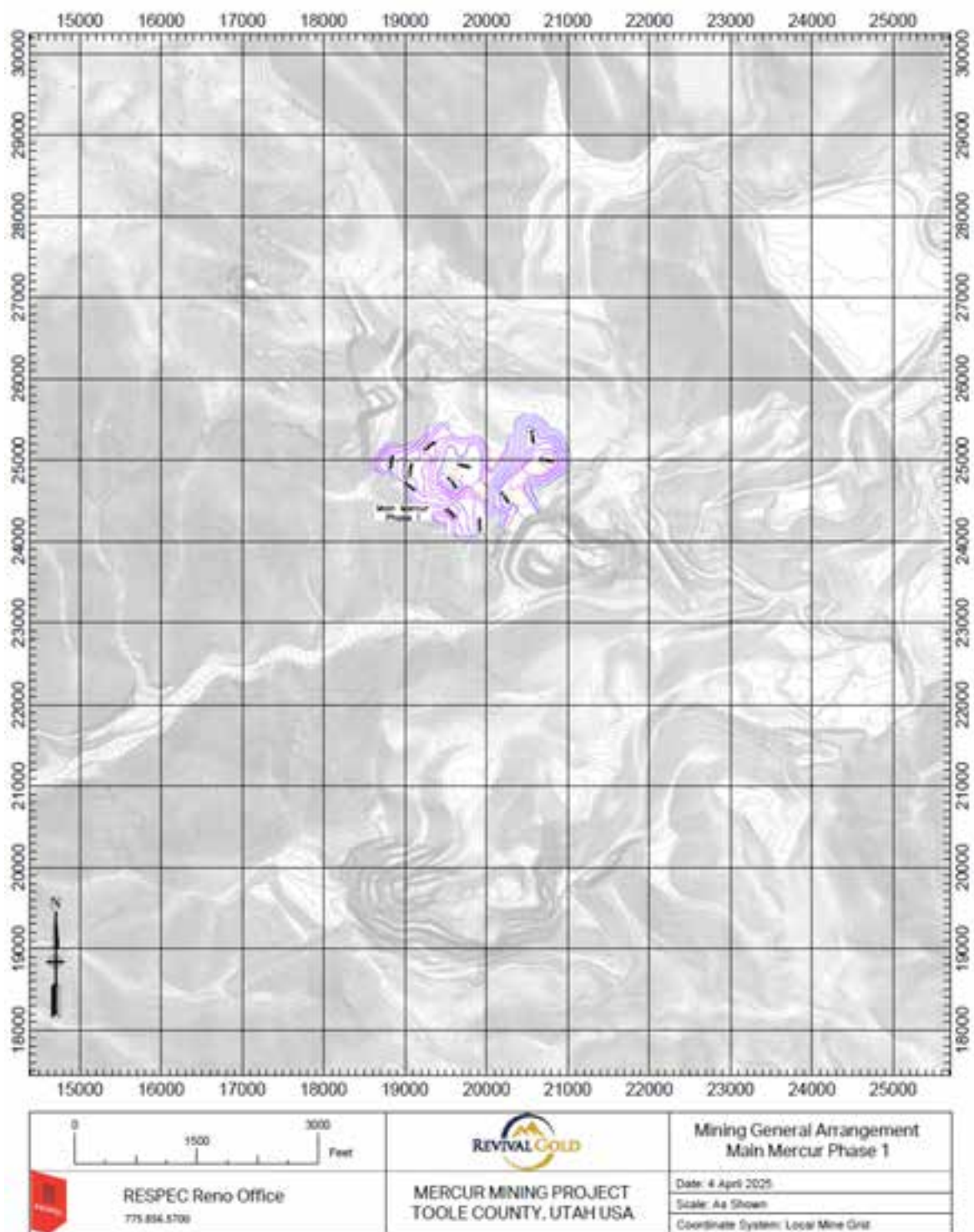
### 16.2.3 Dilution

The resource block model is 25 ft by 25 ft by 25 ft high and contains grades that are diluted to this block size. The block size represents an appropriate selective mining unit ("SMU") for the equipment considered in this PEA and will provide reasonable selectivity with respect to the mining of these deposits without any additional dilution factors.

### 16.2.4 Pit Phasing

The pit for the Main Mercur deposit was designed in two sections: north and south. The north pits are to be mined in three phases. Phase 1 is the smallest with an approximate depth of 450 ft, a 1,260-ft width and 2,450-ft length (Figure 16-4).

**Figure 16-4: Main Mercur Phase 1**



Phase 2 will consist of two separate pits to the northwest of Phase 1 with the larger pit reaching an approximate depth of 1,060 ft and 303 ft for the smaller pit (Figure 16-5). The large Phase 2 pit is approximately 4,300 ft by 2,200 ft at the widest and longest points. The smaller Phase 2 pit is approximately 1,000 ft by 585 ft (Figure 16-5).

Phase 3 will be the final and easternmost pit in the north section of Main Mercur deposit (Figure 16-1 and Figure 16-6). This pit reaches an approximate depth of 975 ft with a length of 4,430 ft and a width of 1,150 ft.

The south pits of the Main Mercur deposit are planned as Phases 4 through 7 as shown on Figure 16-7, Figure 16-8, Figure 16-9, and Figure 16-10. These pits will all be interconnected except two smaller pits in Phase 4. Phase 4 is comprised of three total pits (Figure 16-7) with the deepest pit reaching a depth of approximately 760 ft. Phase 5 is 3,500 ft long and 1,090 ft wide and reaching 6,600 ft elevation. Phase 6 pit is 1,690 ft long and 1,233 ft wide reaching a depth of 500 ft. The final phase of mining at Main Mercur is to be Phase 7, which is 1,680 ft long and 820 ft wide reaching a depth of 364 ft.

Figure 16-5: Main Mercur Phase 2

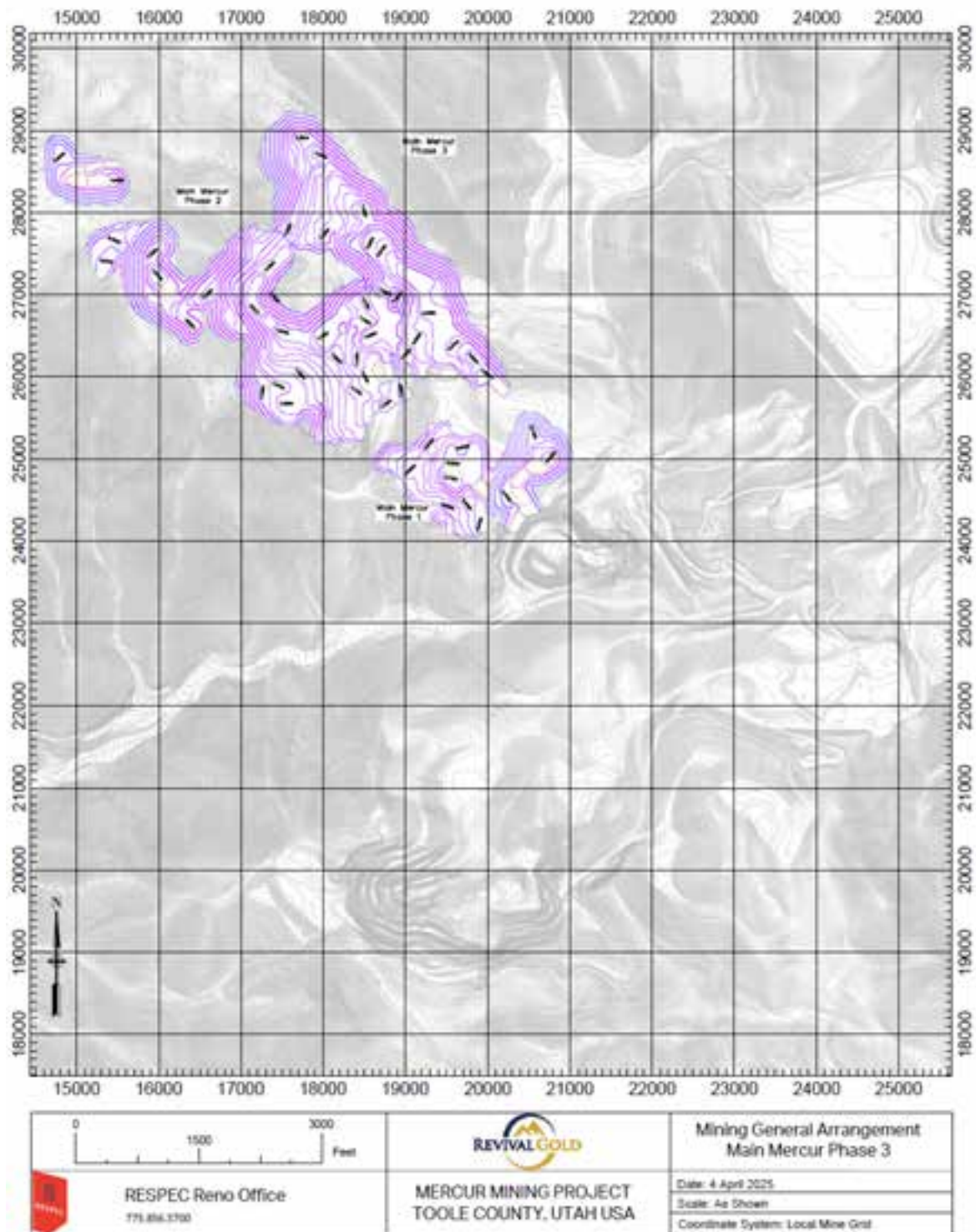


Figure 16-6: Main Mercur Phase 3

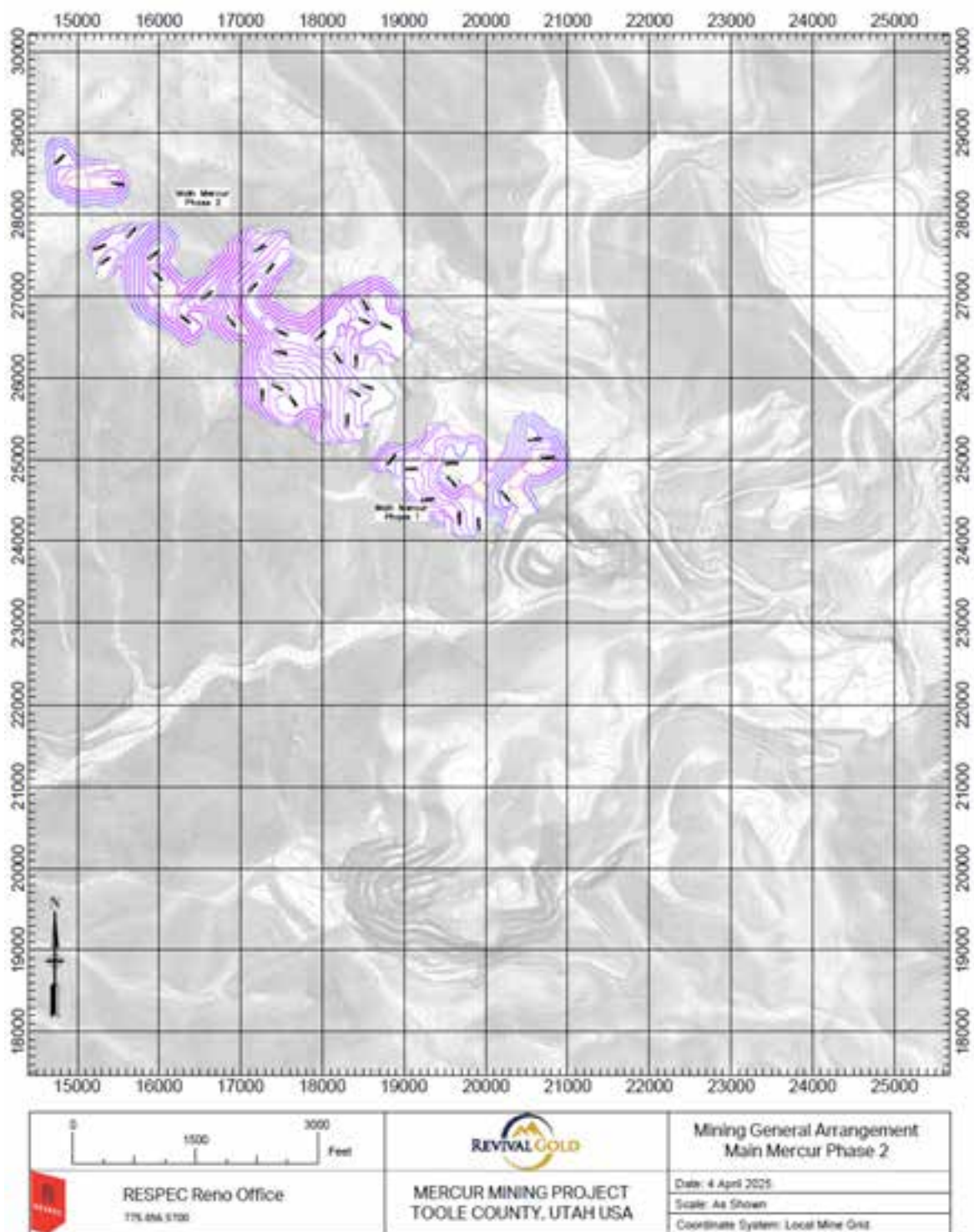


Figure 16-7: Main Mercur Phase 4

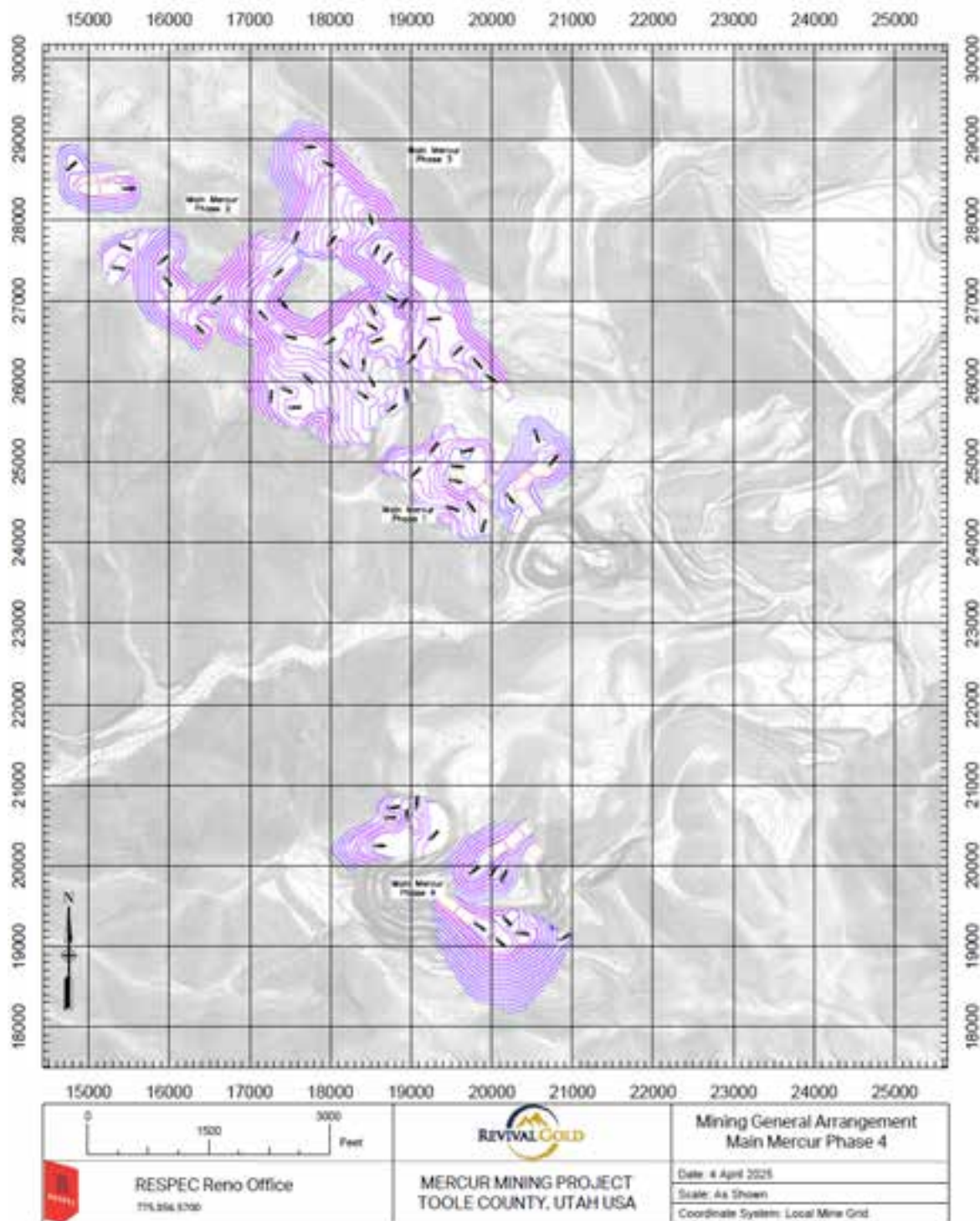


Figure 16-8: Main Mercur Phase 5

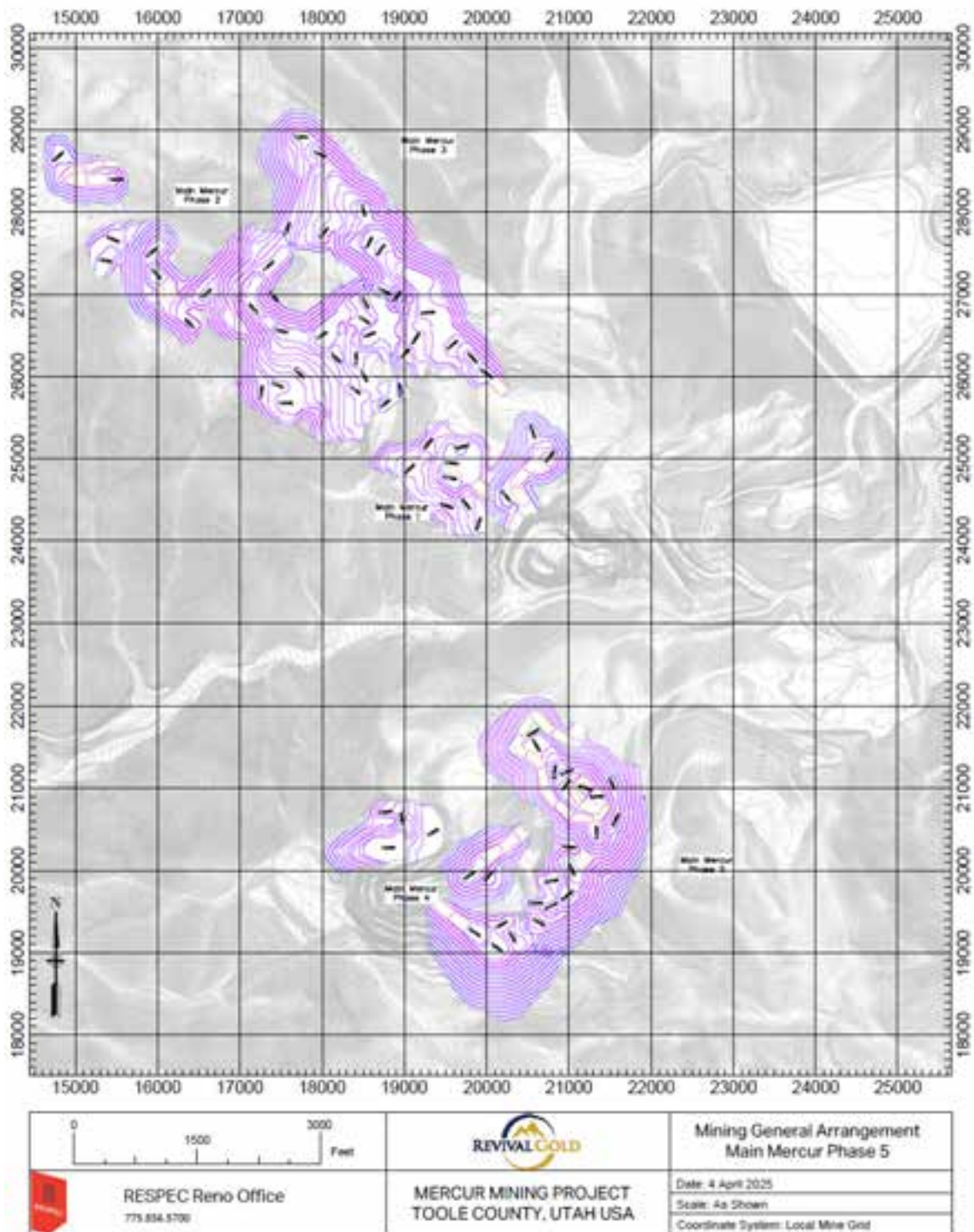


Figure 16-9: Main Mercur Phase 6

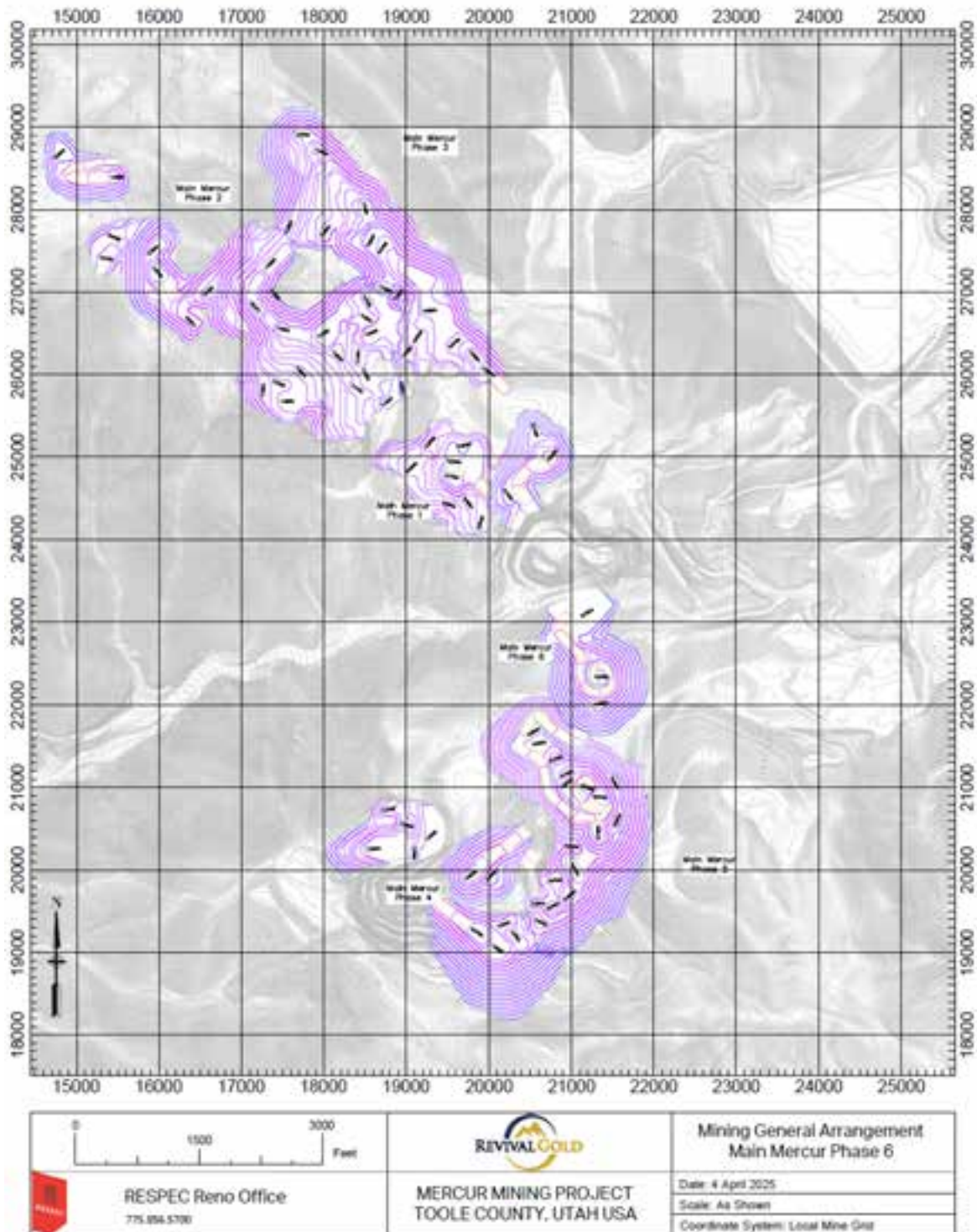
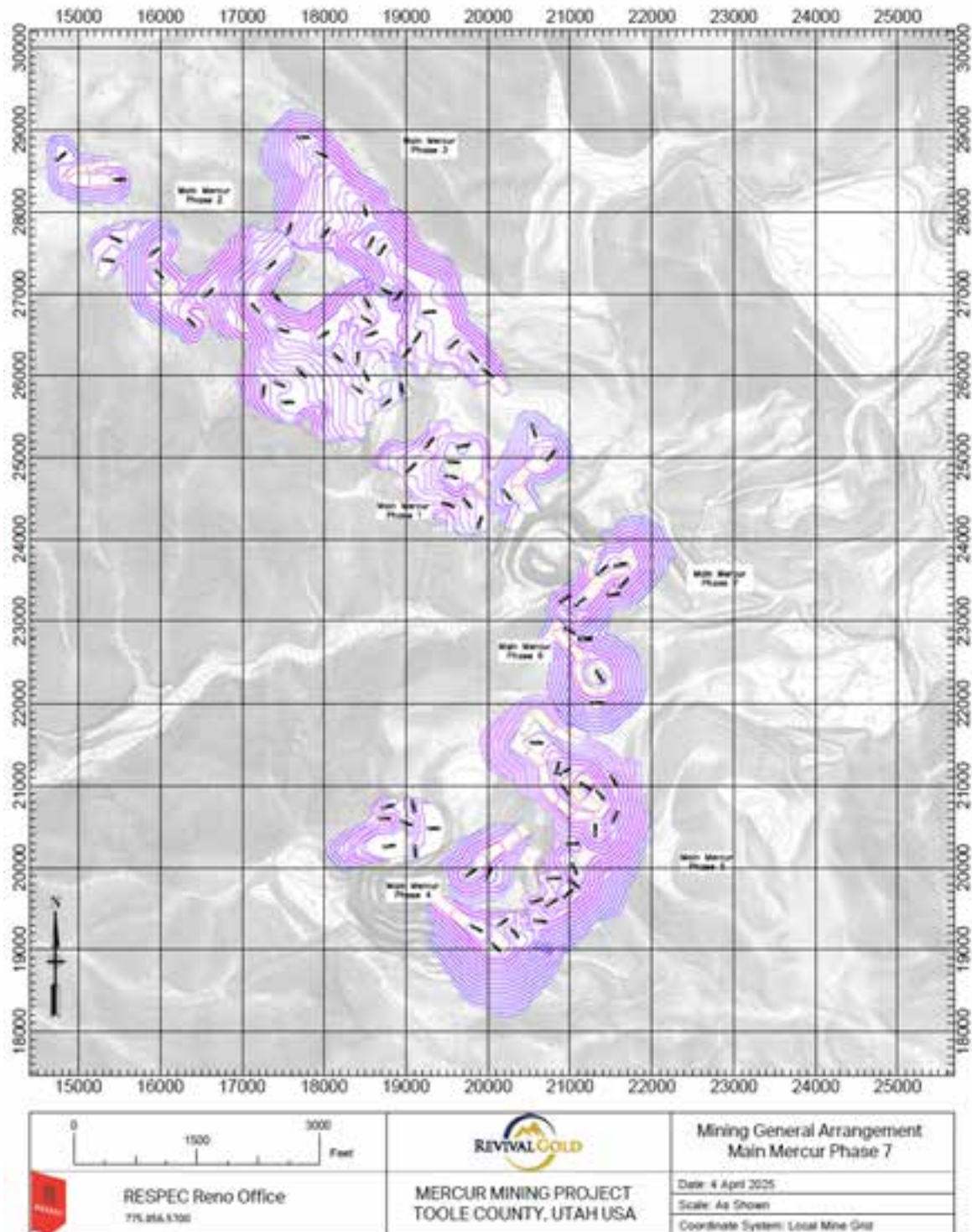
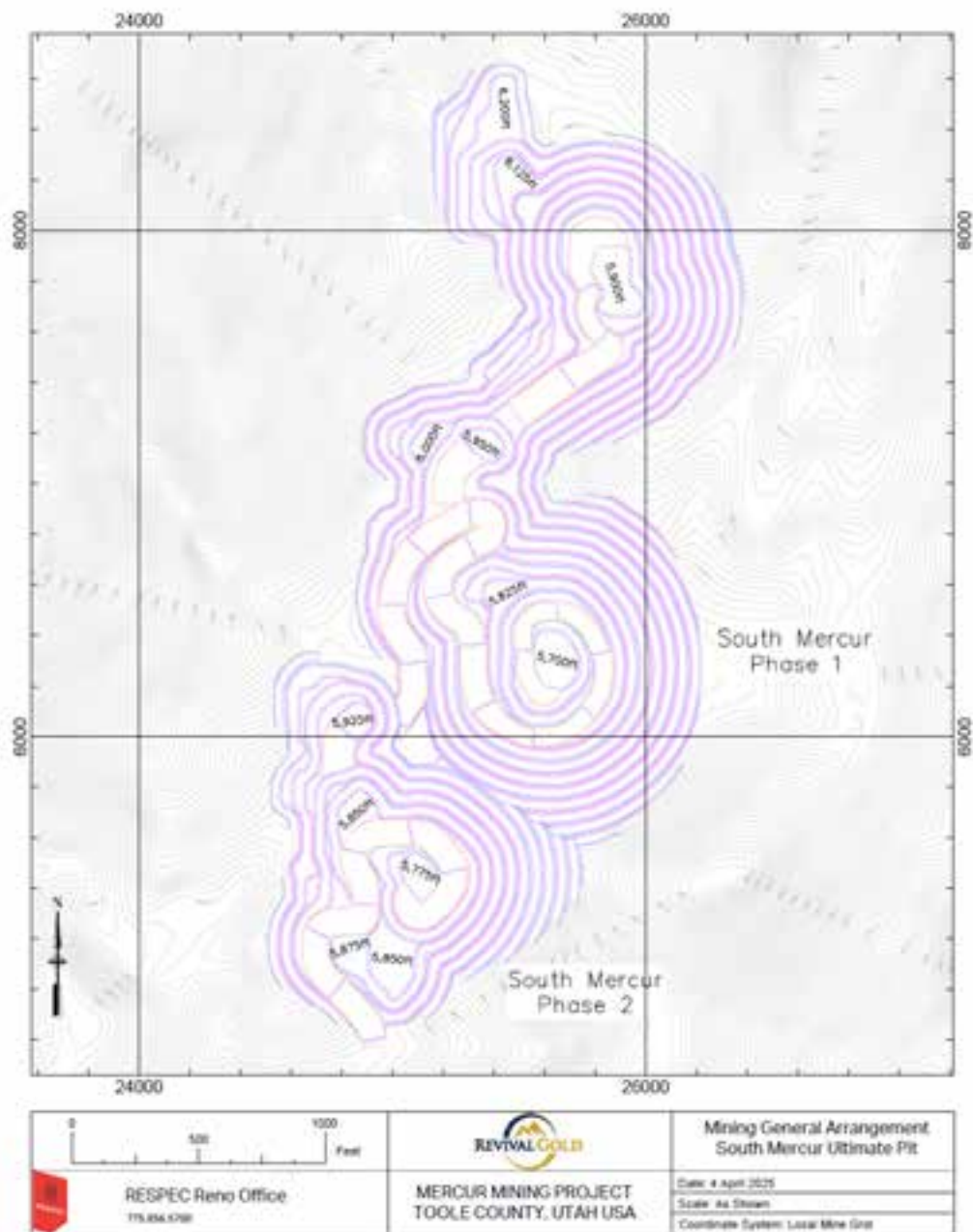


Figure 16-10: Main Mercur Phase 7



### Figure 16-11: South Mercur Ultimate Pit



**Figure 16-12: South Mercur Phase 1**

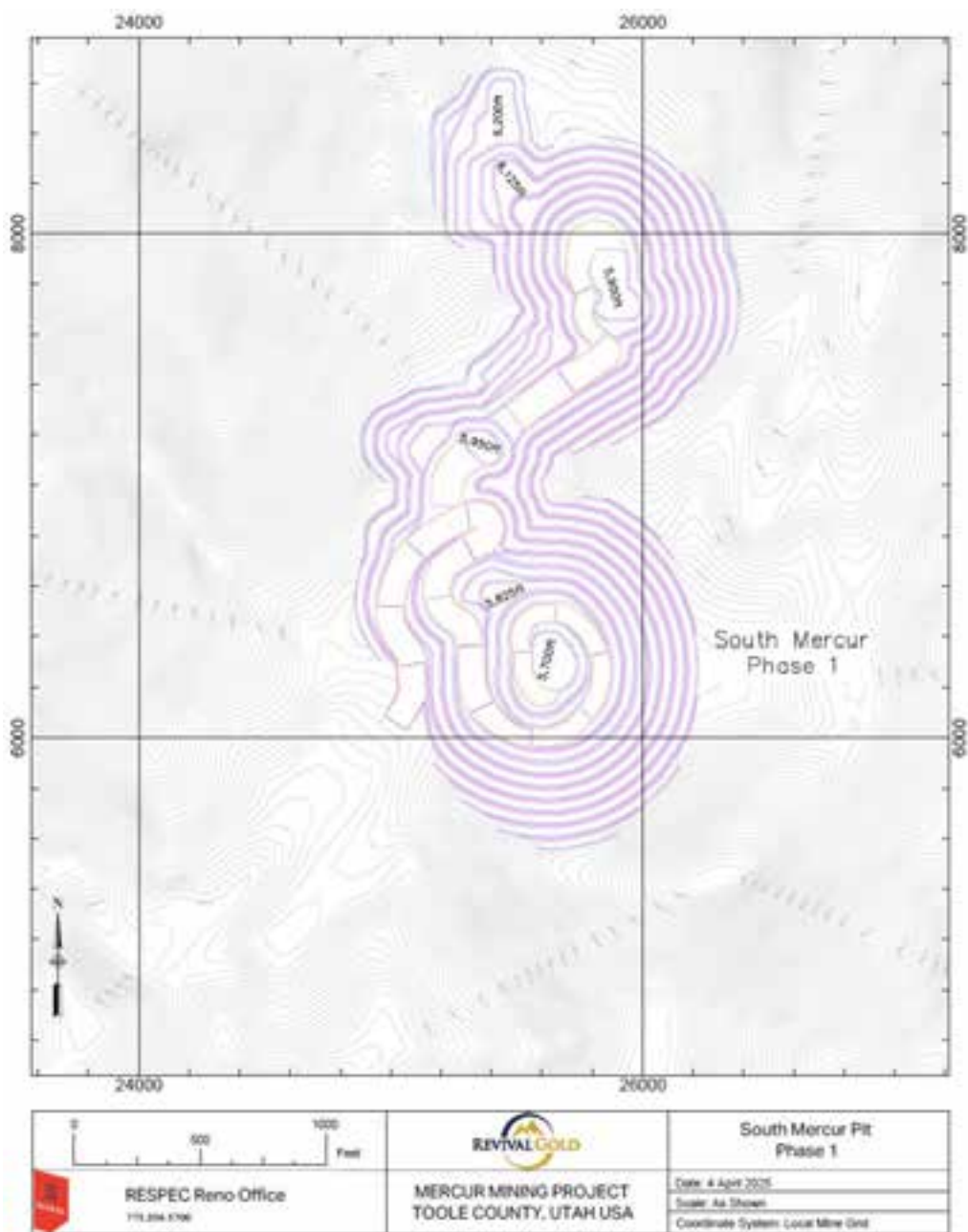
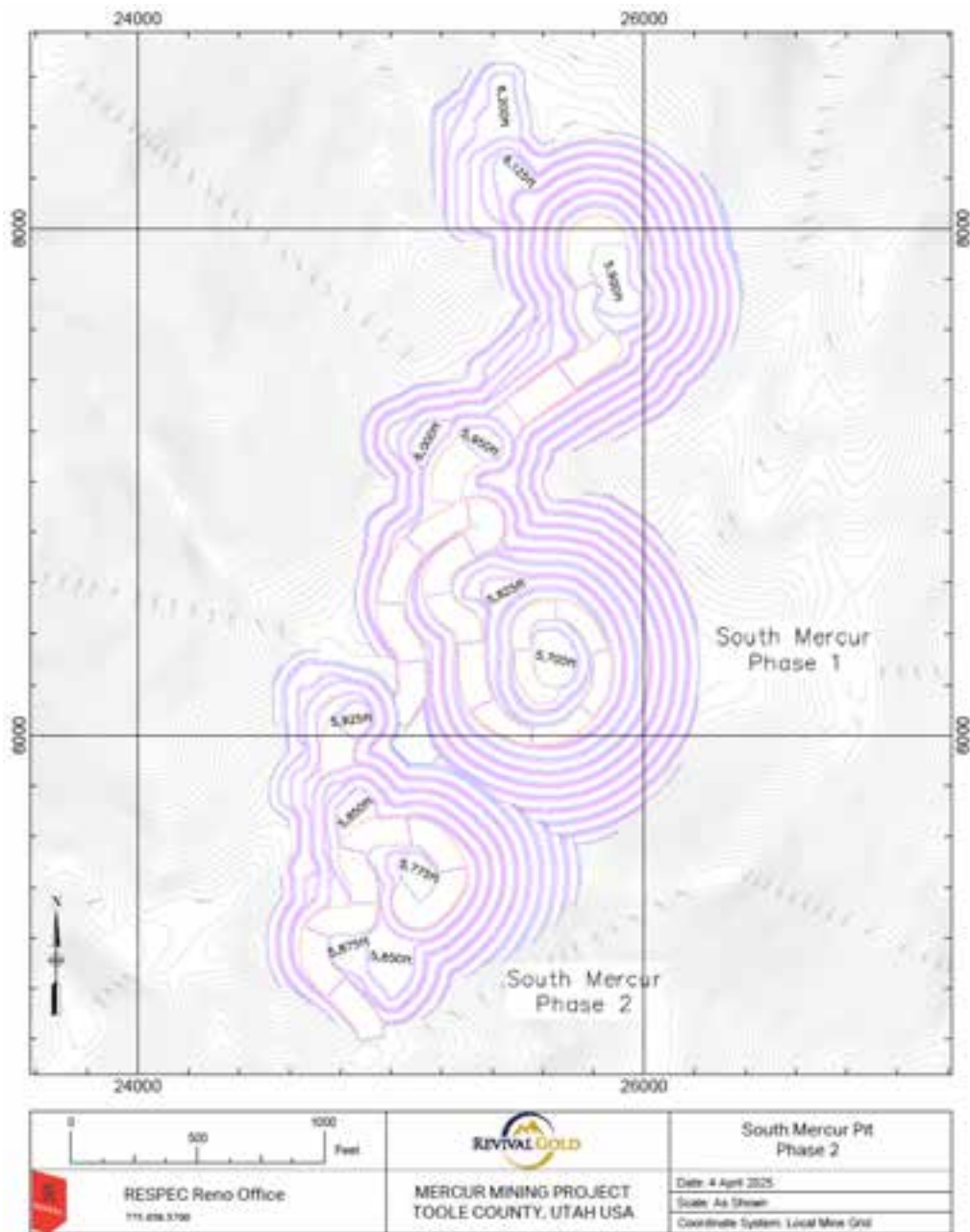


Figure 16-13: South Mercur Phase 2



### 16.2.5 In-Pit Gold Resources

Estimated resources inside of the final pit designs were calculated using Surpac software. The in-pit gold resources are shown in Table 16-2. Waste material associated with the Indicated and Inferred resources are assumed to be sent to WRSFs.

**Table 16-2: In-Pit Resources and Associated Waste Material**

		Total		Mined Waste	Mined Total	Strip Ratio
		Indicated	Inferred			
<b>Main Mercur</b>	K Tons	29,649	32,915	160,914	223,477	2.57
	Oz/Ton Au	0.019	0.016			
	K Ozs Au	551	514			
<b>South Mercur</b>	K Tons	6,868	2,915	38,421	48,204	3.93
	Oz/Ton Au	0.023	0.018			
	K Ozs Au	158	53			
<b>Total Project</b>	K Tons	36,516	35,830	199,335	271,681	2.76
	Oz/Ton Au	0.019	0.016			
	K Ozs Au	708	567			

Note: Mineralized Material is based on indicated and inferred resources and is meant only to allow a calculation of the cash-flow value and does not imply that any economics will be realized from the mining of the leachable material.

### 16.3 Mine-Waste Facilities

Three WRSFs and three pit backfills were designed for the Main Mercur area and are shown on the site-plan map on Figure 16-14. WRSF 1 is to be created at the pit exit for Main Mercur Phase 1 and will be constructed to provide access to both the northern mining and waste storage areas, as well as access to the bottom of the later Phase 7 pit. WRSF 2 will be a combined pit backfill and expit dump location. WRSF 2 will backfill Phase 1 and portions of Phase 2, and Phase 3 pit as well as building a WRSF at the base of the historical mine tailings storage facility. WRSF 3 will be constructed to the southeast of Phase 7 and will span the top of the historical mine's waste dump. Backfill 4 is designed to deposit waste material in the Phase 4 pit. Backfill 5 is planned in the Phase 5 pit and lastly, backfill 6 will be in the Phase 6 pit.

A single WRSF was designed for the South Mercur area. WRSF 4 is located as shown on Figure 16-15 to the southwest of the pit and will provide all waste storage for the two mining phases.

The WRSF designs use an assumed angle of repose of 34° for dump faces. The design was completed using a 50-ft lift height. Catch benches of 75 ft were used on each lift providing an overall design slope of 3H:1V. This allows for final reclamation at the overall slope.

The WRSF 1 will be used for waste from the Main Mercur Phase 1 pit. WRSF 2 is sequenced to fill in multiple stages as pit phases are completed and takes waste from multiple locations. WRSF 3 will receive material from pit Phase 4 and 5. Phase 4 backfill will be utilized to store waste material from pit Phase 5 and 7. The Phase 5 backfill will store waste material from mining Phase 6 and 7, and the Phase 6 backfill will store waste material from mining Phase 7.

Figure 16-14: Mining General Arrangement-for Main Mercur Pits, WRSFs and Backfills

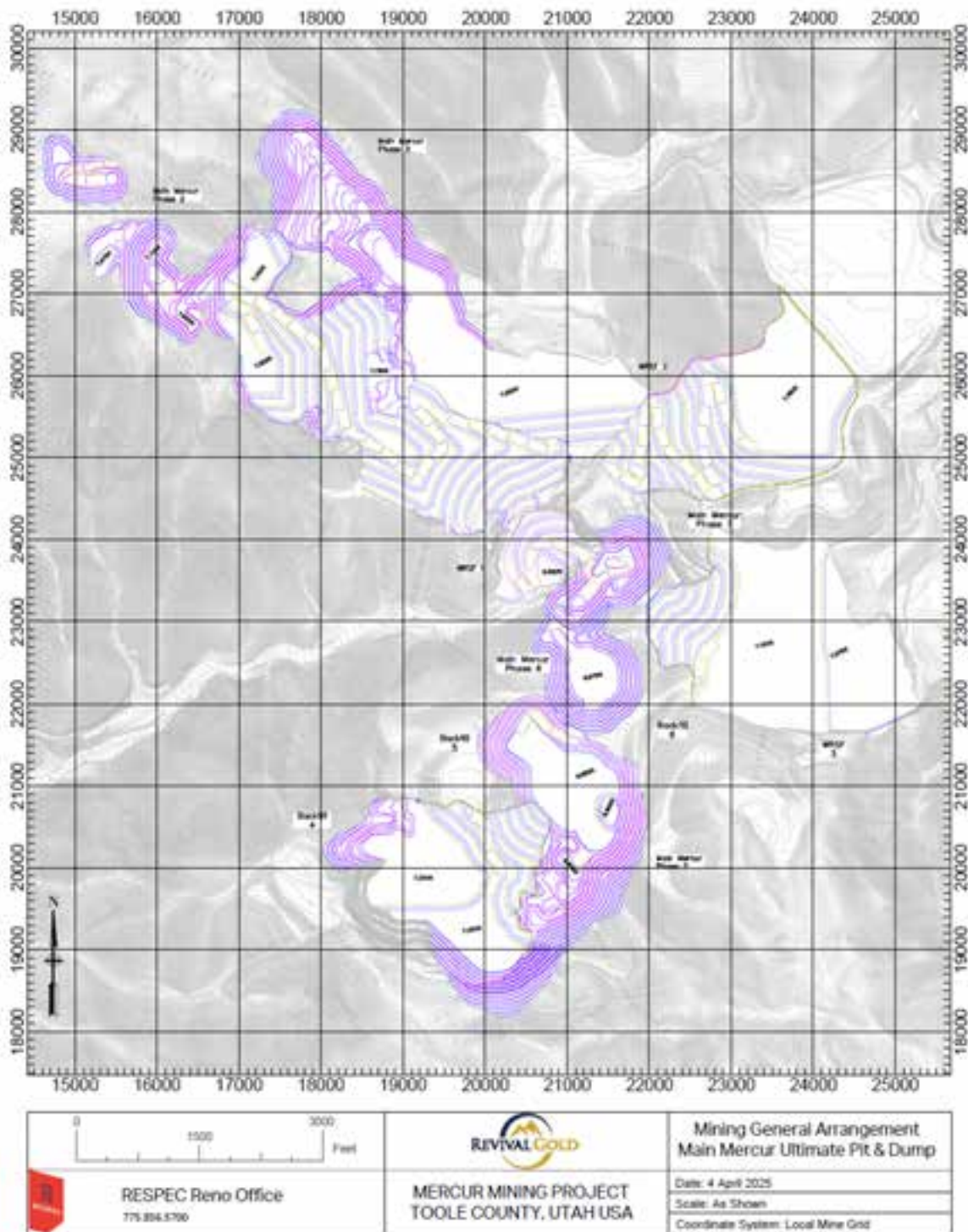
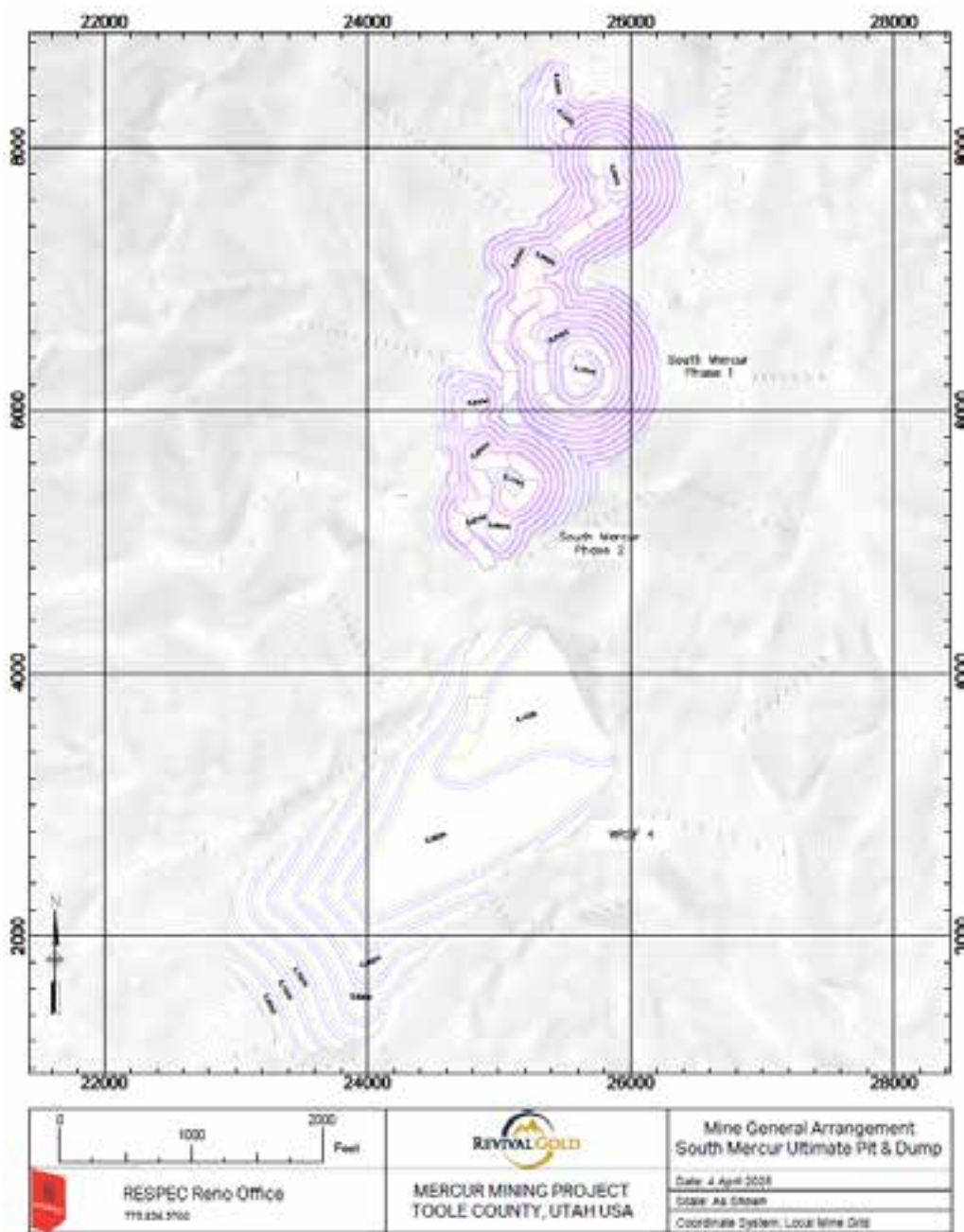


Figure 16-15: Mining General Arrangement-for South Mercur Pit and WRSF



The total waste storage capacity designed for Main Mercur is 177.5 million tons, and for South Mercur 40.2 million tons, assuming a swell factor of 1.3 and a loose density of 0.058 tons per ft<sup>3</sup>. This is about 10% more and 5% more than required, respectively, based on the PEA waste material mined. Waste storage facility capacities are shown in Table 16-3.

**Table 16-3: Waste Rock Storage Facility Capacities**

<b>Location</b>	<b>Volume K Cu Yd</b>	<b>Tonnage K Tons</b>
WRSF 1	1,630	2,553
WRSF 2	63,952	100,148
WRSF 3	12,278	19,227
Backfill 4	30,623	47,956
Backfill 5	3,796	5,945
Backfill 6	1,046	1,638
<b>Main Mercur Total</b>	<b>113,325</b>	<b>177,467</b>
WRSF 4	24,073	40,299
<b>South Mercur Total</b>	<b>24,073</b>	<b>40,299</b>
<b>Project Total</b>	<b>137,399</b>	<b>217,766</b>

## 16.4 Production Scheduling

Mine production scheduling was done using MineSched software (version 2024). Scheduling targets production of 7.3 million tons of leachable material per year.

The production schedule for the life of mine (“LOM”) was created using monthly periods so that appropriate lag times for gold recovery could be used for the process production schedule. The schedule was then summarized in yearly periods. The Mercur mining schedules are shown in Table 16-4. Note that “Yr-1” is used to represent pre-production. While some material is sent to the leach pad during pre-production, no metal production is attributed to this material until year 1. As discussed in Section 13, carbonaceous, potentially preg-robbing mineralized material (PPR) will be placed into a stockpile until the last 2 years of the mine life. The stockpile material balances by year are summarized in Table 16-5.

**Table 16-4: Yearly Mine Production Schedule**

<b>Yearly Summary</b>		<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Total</b>
<b>MM_Ph_1</b>	Pit to Crush StkPl	K Tons	938	1,812	-	-	-	-	-	-	-	-	-	2,750
		Oz Au/ton	0.016	0.009	-	-	-	-	-	-	-	-	-	0.011
		K Ozs Au	15	16	-	-	-	-	-	-	-	-	-	31
	Pit to Crush	K Tons	-	3,455	-	-	-	-	-	-	-	-	-	3,455
		Oz Au/ton	-	0.021	-	-	-	-	-	-	-	-	-	0.021
		K Ozs Au	-	72	-	-	-	-	-	-	-	-	-	72
	Total Mined Above COG	K Tons	938	5,267	-	-	-	-	-	-	-	-	-	6,205
		Oz Au/ton	0.016	0.017	-	-	-	-	-	-	-	-	-	0.017
		K Ozs Au	15	88	-	-	-	-	-	-	-	-	-	102
	Total to Dumps	K Tons	1,575	6,296	-	-	-	-	-	-	-	-	-	7,871
<b>MM_Ph_2</b>	Total Mined	K Tons	2,513	11,563	-	-	-	-	-	-	-	-	-	14,076
	Strip Ratio	K Tons	1.68	1.20										1.27
	Pit to Crush StkPl	K Tons	-	38	2,199	2,407	2,367	2,204	517	-	-	-	-	9,731
		Oz Au/ton	-	0.007	0.009	0.008	0.008	0.010	0.012	-	-	-	-	0.009
		K Ozs Au	-	0	19	19	19	22	6	-	-	-	-	87
	Pit to Crush	K Tons	-	26	2,451	2,555	2,768	3,925	538	-	-	-	-	12,263
		Oz Au/ton	-	0.015	0.020	0.016	0.016	0.019	0.017	-	-	-	-	0.018
		K Ozs Au	-	0	48	40	45	75	9	-	-	-	-	218
	Total Mined Above COG	K Tons	-	63	4,650	4,961	5,135	6,129	1,056	-	-	-	-	21,994
		Oz Au/ton	-	0.010	0.015	0.012	0.012	0.016	0.015	-	-	-	-	0.014
<b>MM_Ph_3</b>		K Ozs Au	-	1	68	60	64	97	16	-	-	-	-	305
	Total to Dumps	K Tons	-	2,555	8,490	9,963	7,382	7,190	177	-	-	-	-	35,757
	Total Mined	K Tons	-	2,618	13,140	14,924	12,517	13,319	1,233	-	-	-	-	57,751
	Strip Ratio	K Tons		40.46	1.83	2.01	1.44	1.17	0.17					1.63
	Pit to Crush StkPl	K Tons	-	-	-	-	39	1,916	2,548	1,130	-	-	-	5,633
		Oz Au/ton	-	-	-	-	0.008	0.010	0.013	0.008	-	-	-	0.011
		K Ozs Au	-	-	-	-	0	20	32	9	-	-	-	61
	Pit to Crush	K Tons	-	-	-	-	14	2,067	2,510	2,992	-	-	-	7,583
		Oz Au/ton	-	-	-	-	0.014	0.019	0.020	0.019	-	-	-	0.019
		K Ozs Au	-	-	-	-	0	38	50	56	-	-	-	144
<b>MM_Ph_4</b>	Total Mined Above COG	K Tons	-	-	-	-	53	3,983	5,058	4,122	-	-	-	13,216
		Oz Au/ton	-	-	-	-	0.010	0.015	0.016	0.016	-	-	-	0.016
		K Ozs Au	-	-	-	-	1	58	81	65	-	-	-	205
	Total to Dumps	K Tons	-	-	-	-	4,522	12,192	12,858	2,066	-	-	-	31,638
	Total Mined	K Tons	-	-	-	-	4,575	16,175	17,916	6,188	-	-	-	44,854
	Strip Ratio	K Tons					85.58	3.06	2.54	0.50				2.39
	Pit to Crush StkPl	K Tons	-	-	-	-	-	66	1,728	1,363	-	-	-	3,157
		Oz Au/ton	-	-	-	-	-	0.008	0.009	0.007	-	-	-	0.008
		K Ozs Au	-	-	-	-	-	1	16	10	-	-	-	26
	Pit to Crush	K Tons	-	-	-	-	-	11	2,324	1,847	-	-	-	4,182
<b>MM_Ph_4</b>		Oz Au/ton	-	-	-	-	-	0.012	0.022	0.024	-	-	-	0.023
		K Ozs Au	-	-	-	-	-	0	51	44	-	-	-	95
	Total Mined Above COG	K Tons	-	-	-	-	-	77	4,053	3,210	-	-	-	7,339
		Oz Au/ton	-	-	-	-	-	0.008	0.016	0.017	-	-	-	0.017
		K Ozs Au	-	-	-	-	-	1	67	55	-	-	-	122
	Total to Dumps	K Tons	-	-	-	-	-	8,982	13,516	4,319	-	-	-	26,817
	Total Mined	K Tons	-	-	-	-	-	9,059	17,569	7,529	-	-	-	34,157
	Strip Ratio	K Tons						117.14	3.34	1.35				3.65

Yearly Summary		Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
MM_Ph_5	Pit to Crush StkPl	K Tons	-	-	-	-	-	-	-	4	2,525	1,432	-	3,961
		Oz Au/ton	-	-	-	-	-	-	-	0.007	0.027	0.018	-	0.024
		K Ozs Au	-	-	-	-	-	-	-	0	67	26	-	93
	Pit to Crush	K Tons	-	-	-	-	-	-	-	-	2,327	1,762	-	4,089
		Oz Au/ton	-	-	-	-	-	-	-	-	0.029	0.028	-	0.029
		K Ozs Au	-	-	-	-	-	-	-	-	67	50	-	117
	Total Mined Above COG	K Tons	-	-	-	-	-	-	-	4	4,852	3,194	-	8,050
		Oz Au/ton	-	-	-	-	-	-	-	0.007	0.028	0.024	-	0.026
		K Ozs Au	-	-	-	-	-	-	-	0	135	76	-	211
	Total to Dumps	K Tons	-	-	-	-	-	-	-	4,557	24,806	5,320	-	34,684
MM_Ph_6	Total Mined	K Tons	-	-	-	-	-	-	-	4,561	29,658	8,514	-	42,733
	Strip Ratio	K Tons								1,118.13	5.11	1.67		4.31
	Pit to Crush StkPl	K Tons	-	-	-	-	-	-	-	-	-	1,011	39	1,050
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.009	0.007	0.009
		K Ozs Au	-	-	-	-	-	-	-	-	-	9	0	9
	Pit to Crush	K Tons	-	-	-	-	-	-	-	-	-	1,587	120	1,707
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.028	0.040	0.029
		K Ozs Au	-	-	-	-	-	-	-	-	-	45	5	50
	Total Mined Above COG	K Tons	-	-	-	-	-	-	-	-	-	2,598	158	2,757
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.021	0.032	0.021
MM_Ph_7		K Ozs Au	-	-	-	-	-	-	-	-	-	54	5	59
	Total to Dumps	K Tons	-	-	-	-	-	-	-	-	-	16,578	222	16,801
	Total Mined	K Tons	-	-	-	-	-	-	-	-	-	19,177	381	19,557
	Strip Ratio	K Tons										6.38	1.40	6.09
	Pit to Crush StkPl	K Tons	-	-	-	-	-	-	-	-	-	40	1,750	1,790
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.006	0.019	0.018
		K Ozs Au	-	-	-	-	-	-	-	-	-	0	33	33
	Pit to Crush	K Tons	-	-	-	-	-	-	-	-	-	16	1,196	1,212
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.012	0.023	0.023
		K Ozs Au	-	-	-	-	-	-	-	-	-	0	27	28
Main Mercur Total	Total Mined Above COG	K Tons	-	-	-	-	-	-	-	-	-	56	2,946	3,002
		Oz Au/ton	-	-	-	-	-	-	-	-	-	0.008	0.020	0.020
		K Ozs Au	-	-	-	-	-	-	-	-	-	0	60	61
	Total to Dumps	K Tons	-	-	-	-	-	-	-	-	-	3,091	4,256	7,346
	Total Mined	K Tons	-	-	-	-	-	-	-	-	-	3,147	7,202	10,349
	Strip Ratio	K Tons										54.97	1.44	2.45
	Pit to Crush StkPl	K Tons	938	1,850	2,199	2,407	2,406	4,119	3,131	2,862	3,888	2,483	1,789	28,072
		Oz Au/ton	0.016	0.009	0.009	0.008	0.008	0.010	0.012	0.009	0.020	0.014	0.018	0.012
		K Ozs Au	15	16	19	19	20	42	39	25	77	35	33	341
	Pit to Crush	K Tons	-	3,481	2,451	2,555	2,782	5,992	3,059	5,316	4,174	3,365	1,316	34,491
Main Mercur Total		Oz Au/ton	-	0.021	0.020	0.016	0.016	0.019	0.019	0.020	0.027	0.028	0.024	0.021
		K Ozs Au	-	72	48	40	45	113	59	107	112	95	32	724
	Total Mined Above COG	K Tons	938	5,331	4,650	4,961	5,188	10,112	6,191	8,179	8,062	5,848	3,104	62,563
		Oz Au/ton	0.016	0.017	0.015	0.012	0.012	0.015	0.016	0.016	0.023	0.022	0.021	0.017
		K Ozs Au	15	88	68	60	65	155	98	132	189	130	65	1,064
	Total to Dumps	K Tons	1,575	8,851	8,490	9,963	11,904	19,382	22,017	20,139	29,126	24,989	4,478	160,914
	Total Mined	K Tons	2,513	14,182	13,140	14,924	17,092	29,494	28,208	28,318	37,188	30,837	7,582	223,477
	Strip Ratio	K Tons	1.68	1.66	1.83	2.01	2.29	1.92	3.56	2.46	3.61	4.27	1.44	2.57

Yearly Summary		Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
SM_Ph_1	Pit to Crush StkPl	K Tons	-	867	822	303	-	-	-	-	-	-	-	1,992
		Oz Au/ton	-	0.007	0.007	0.007	-	-	-	-	-	-	-	0.007
		K Ozs Au	-	6	6	2	-	-	-	-	-	-	-	15
	Pit to Crush	K Tons	-	1,246	1,942	1,139	-	-	-	-	-	-	-	4,327
		Oz Au/ton	-	0.024	0.028	0.026	-	-	-	-	-	-	-	0.026
		K Ozs Au	-	30	55	30	-	-	-	-	-	-	-	114
	Total Mined Above COG	K Tons	-	2,113	2,764	1,442	-	-	-	-	-	-	-	6,320
SM_Ph_2		Oz Au/ton	-	0.017	0.022	0.022	-	-	-	-	-	-	-	0.020
		K Ozs Au	-	37	61	32	-	-	-	-	-	-	-	129
	Total to Dumps	K Tons	-	15,234	10,469	4,585	-	-	-	-	-	-	-	30,287
	Total Mined	K Tons	-	17,347	13,233	6,027	-	-	-	-	-	-	-	36,606
	Strip Ratio	K Tons	-	7.21	3.79	3.18	-	-	-	-	-	-	-	4.79
	Pit to Crush StkPl	K Tons	-	-	-	188	799	-	-	-	-	-	-	987
		Oz Au/ton	-	-	-	0.007	0.007	-	-	-	-	-	-	0.007
South Mercur Total		K Ozs Au	-	-	-	1	6	-	-	-	-	-	-	7
	Pit to Crush	K Tons	-	-	-	580	1,896	-	-	-	-	-	-	2,476
		Oz Au/ton	-	-	-	0.031	0.030	-	-	-	-	-	-	0.030
		K Ozs Au	-	-	-	18	57	-	-	-	-	-	-	74
	Total Mined Above COG	K Tons	-	-	-	768	2,695	-	-	-	-	-	-	3,463
		Oz Au/ton	-	-	-	0.025	0.023	-	-	-	-	-	-	0.024
		K Ozs Au	-	-	-	19	62	-	-	-	-	-	-	82
Total Mercur	Total to Dumps	K Tons	-	-	-	4,168	3,967	-	-	-	-	-	-	8,135
	Total Mined	K Tons	-	-	-	4,936	6,662	-	-	-	-	-	-	11,598
	Strip Ratio	K Tons	-	-	-	5.43	1.47	-	-	-	-	-	-	2.35
	Pit to Crush StkPl	K Tons	-	867	822	491	799	-	-	-	-	-	-	2,979
		Oz Au/ton	-	0.007	0.007	0.007	0.007	-	-	-	-	-	-	0.007
		K Ozs Au	-	6	6	4	6	-	-	-	-	-	-	22
	Pit to Crush	K Tons	-	1,246	1,942	1,719	1,896	-	-	-	-	-	-	6,804
Total Mercur		Oz Au/ton	-	0.024	0.028	0.028	0.030	-	-	-	-	-	-	0.028
		K Ozs Au	-	30	55	47	57	-	-	-	-	-	-	189
	Total Mined Above COG	K Tons	-	2,113	2,764	2,210	2,695	-	-	-	-	-	-	9,783
		Oz Au/ton	-	0.017	0.022	0.023	0.023	-	-	-	-	-	-	0.022
		K Ozs Au	-	37	61	51	62	-	-	-	-	-	-	211
	Total to Dumps	K Tons	-	15,234	10,469	8,753	3,967	-	-	-	-	-	-	38,421
	Total Mined	K Tons	-	17,347	13,233	10,963	6,662	-	-	-	-	-	-	48,204
Total Mercur	Strip Ratio	K Tons	-	7.21	3.79	3.96	1.47	-	-	-	-	-	-	3.93
	Pit to Crush StkPl	K Tons	938	2,716	3,021	2,898	3,205	4,119	3,131	2,862	3,888	2,483	1,789	31,051
		Oz Au/ton	0.016	0.008	0.008	0.008	0.008	0.010	0.012	0.009	0.020	0.014	0.018	0.012
		K Ozs Au	15	22	25	23	25	42	39	25	77	35	33	363
	Pit to Crush	K Tons	-	4,727	4,393	4,274	4,678	5,992	3,059	5,316	4,174	3,365	1,316	41,295
		Oz Au/ton	-	0.022	0.023	0.020	0.022	0.019	0.019	0.020	0.027	0.028	0.024	0.022
		K Ozs Au	-	102	103	87	102	113	59	107	112	95	32	913
Total Mercur	Total Mined Above COG	K Tons	938	7,444	7,414	7,172	7,883	10,112	6,191	8,179	8,062	5,848	3,104	72,346
		Oz Au/ton	0.016	0.017	0.017	0.015	0.016	0.015	0.016	0.016	0.023	0.022	0.021	0.018
		K Ozs Au	15	125	128	110	127	155	98	132	189	130	65	1,275
	Total to Dumps	K Tons	1,575	24,085	18,958	18,716	15,870	19,382	22,017	20,139	29,126	24,989	4,478	199,335
	Total Mined	K Tons	2,513	31,528	26,373	25,887	23,753	29,494	28,208	28,318	37,188	30,837	7,582	271,681
	Strip Ratio	K Tons	1.68	3.24	2.56	2.61	2.01	1.92	3.56	2.46	3.61	4.27	1.44	2.76

This PEA mine production schedule (Table 16-4) shows “Material Above COG” based on the contained Indicated and Inferred Resources. This is meant only to allow calculation of the cash-flow value and does not imply that any economics will be realized from the mining of the leachable material.

**Table 16-5: Yearly Stockpile Balances**

<b>NPR Stockpile Total</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>
Added to StkPI	K Ton	922	2,045	674	368	1,421	2,369	810	1,655	875	201	-
	Oz Au/t	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-
	K Ozs Au	15	16	5	3	11	19	7	14	6	1	-
Removed from StkPI	K Ton	-	1,841	837	723	1,039	476	2,888	1,018	1,397	1,123	-
	Oz Au/t	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-
	K Ozs Au	-	22	6	5	8	5	23	8	11	8	-
StkPI Balance	K Ton	922	1,126	964	609	991	2,885	807	1,444	922	-	-
	Oz Au/t	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	K Ozs Au	15	8	7	5	7	22	6	12	7	-	-

<b>PPR Stockpile Total</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>
Added to StkPI	K Ton	16	276	277	206	201	919	968	222	1,285	673	819
	Oz Au/t	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.02	0.05	0.03	0.03
	K Ozs Au	0	4	5	3	3	17	22	4	59	22	26
Removed from StkPI	K Ton	-	-	-	-	-	-	-	-	-	1,203	4,657
	Oz Au/t	-	-	-	-	-	-	-	-	-	0.02	0.03
	K Ozs Au	-	-	-	-	-	-	-	-	-	26	137
StkPI Balance	K Ton	16	292	568	774	975	1,894	2,862	3,084	4,368	3,838	-
	Oz Au/t	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	-
	K Ozs Au	0	4	9	12	15	32	53	57	116	111	-

<b>All Stockpile Total</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>
Added to StkPI	K Ton	938	2,321	951	574	1,622	3,288	1,778	1,876	2,159	875	819
	Oz Au/t	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.03	0.03	0.03
	K Ozs Au	15	20	10	6	14	36	29	18	65	23	26
Removed from StkPI	K Ton	-	1,841	837	723	1,039	476	2,888	1,018	1,397	2,327	4,657
	Oz Au/t	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03
	K Ozs Au	-	22	6	5	8	5	23	8	11	35	137
StkPI Balance	K Ton	938	1,418	1,532	1,384	1,967	4,779	3,669	4,528	5,290	3,838	-
	Oz Au/t	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	-
	K Ozs Au	15	12	16	17	22	53	59	69	123	111	-

Non-preg-robbing mineralized material (NPR) and potentially preg-robbing mineralized material (PPR) will be stockpiled separately to limit the potential impacts.

#### 16.4.1 Mine Equipment Requirements

The PEA assumes mining will utilize an equipment fleet with a maximum of 16 150-ton trucks, a 29-cu yd shovel and 30-cu yd loader as the primary mining equipment (Table 16-6). Equipment requirements were estimated based on a 24-hour per day mine operating schedule with two shifts per day for 365 days per year. A total of four crews were assumed to be working a rotation of four days on and four days off. Primary equipment hours were estimated using a shift utilization of 87.5%, to account for standbys and an operating efficiency of 83% to account for operating delays. Mechanical availability was adjusted each year based on the age of equipment. The availability started at 90% for new equipment and decreased 1.0% per year to a minimum of 85%. Support equipment availability varies based on the type of equipment.

**Table 16-6: Yearly Required Equipment**

<b>Primary Equipment</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Max</b>
Production Drill	#	1	2	2	2	2	2	2	2	2	2	2	2
30 yrd Loader	#	-	1	1	1	1	1	1	1	1	1	1	1
29 yrd Hyd. Shovel	#	1	1	1	1	1	1	1	1	1	1	1	1
150 ton Haul Trucks	#	5	12	12	12	12	16	16	16	15	14	11	16
<b>Support Equipment</b>													
600 HP Dozer	#	3	3	3	3	3	3	3	3	3	3	3	3
680 HP RTD	#	1	1	1	1	1	1	1	1	1	1	1	1
18' Motor Grader	#	2	3	3	3	3	3	3	3	3	3	3	3
Water Truck - 20,000 Gallon	#	1	2	2	2	2	2	2	2	2	2	2	2
Truck and Lowboy	#	1	1	1	1	1	1	1	1	1	1	1	1
4.7-7.3 cu yd backhoe	#	1	1	1	1	1	1	1	1	1	1	1	1
Pit Pumps (1450 gpm)	#	2	2	2	2	2	2	2	2	2	2	2	2
132 ton Crane	#	1	1	1	1	1	1	1	1	1	1	1	1
Flatbed	#	2	2	2	2	2	2	2	2	2	2	2	2
<b>Blasting</b>													
Skid Loader	#	1	1	1	1	1	1	1	1	1	1	1	1
<b>Mine Maintenance</b>													
Lube/Fuel Truck	#	1	1	1	1	1	1	1	1	1	1	1	1
Mechanics Truck	#	2	2	2	2	2	2	2	2	2	2	2	2
Tire Truck	#	1	1	1	1	1	1	1	1	1	1	1	1

#### 16.4.1.1 Drilling Equipment

Production drills are anticipated to be track-mounted rotary blast-hole drills. Penetration rates of 135.3 and 157.9 ft/hr were used along with 2.8 and 3.0 minutes per hole of non-drilling times for production and trim drilling, respectively. Two production drills are estimated to be required for the life of the project. Along with the shift utilization and operating efficiency, an availability of 85% has been assumed.

Drilling patterns for production material have been estimated using 21-ft spacing between holes and 17 ft burden with 3.0-ft sub drill. With 7.875-inch diameter drill holes and stemming of 11 ft, this results in a powder factor of 0.44 lbs of explosive per ton of material blasted.

Trim row shot patterns are to be used with lower powder factors and tighter spacing of drill holes near pit high walls to minimize damage to the walls. The trim row drill pattern was estimated using 17 ft hole spacing and 15-ft burden with 1.0-ft sub drill. With 6.75-inch diameter drill holes and stemming of 13 ft, this results in a powder factor of 0.32 lbs of explosive per ton of material blasted. The PEA assumes that 5% of the blasted material will be in the form of trim row blasting. Trim row patterns are to be drilled using the production drills.

#### 16.4.1.2 Loading Equipment

Loading equipment is anticipated to include one 30 cu yd loader and one 29 cu yd hydraulic shovel. The theoretical productivity for the loader was estimated to be 3,089 tons per hour, or 2,570 tons per hour after an operating efficiency of 83%. The assumed availability starts at 90%

and is reduced 1% per year until it reaches 85%, and then is held constant through the life of the loader. No replacement loaders were assumed for the LOM.

One hydraulic shovel will be used as the primary loading tool. The theoretical productivity was estimated to be 3,845 tons per hour, or 3,200 tons per hour after applying 83% efficiency. As with the loader, the assumed availability starts at 90% and declines at 1% per year to a low of 85% and then remains the same through the LOM.

#### 16.4.1.3 Haulage Equipment

Haul trucks are assumed to be 150-ton capacity, rigid frame trucks. Haulage profiles were used inside of MineSched based on effective haulage gradients for empty and full routes. A rolling resistance of 3% was also used for the haulage speed calculations. In addition, bench haulage strings were created which depict the planned haulage routes on each bench where mining occurs.

Hydraulic shovel loading time of 2.25 minutes was used, plus 0.5 minutes and a spot and dump time of 2.15 minutes was added. Loading time was adjusted in spreadsheets to 2.80 minutes plus 0.5 minutes for spotting at the loader for trucks that would be loaded using a loader.

A capacity of 144 tons per load was used as dry tonnage to reflect the dry densities in the mineral resource block model. The number of trucks was calculated to increase over time due to farther haulage with some pit phases. A total of 16 haul trucks are put into service to maintain the production schedule. This assumes a 1% per year declining availability from 90% down to 85%.

#### 16.4.1.4 Support Equipment

Support equipment (Table 16-6) is to be used to maintain the roads, pits, and dumps to enable mining equipment to operate in an efficient manner. Pit pumps are included in the supporting equipment listed. Revival's current hydrologic studies show the water table below the pit with some perched water in some areas of the shale. Mine maintenance equipment will be used on site to maintain the mining equipment. The total numbers and types of equipment to be put into service on the Mercur mine site are shown in Table 16-6.

### 16.4.2 Mine Operations Personnel

Mine operations personnel have been estimated based on the equipment fleet required to meet the production rate of 7.3 million tons processed per year. The estimated personnel allocation is shown for both salary and hourly personnel in Table 16-7. The Mercur project has a peak headcount of 211 in years five through seven.

**Table 16-7: Yearly Personnel Requirements**

<i>Mining General Personnel</i>	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Max
Mine Manager	#	1	1	1	1	1	1	1	1	1	1	-	1
Mine Superintendent	#	1	1	1	1	1	1	1	1	1	1	1	1
Mine Foreman	#	5	5	5	5	5	5	5	5	5	5	5	5
Mine Trainer	#	1	1	1	1	1	1	1	1	1	1	1	1
Chief Mine Engineer	#	1	1	1	1	1	1	1	1	1	1	1	1
Mine Engineer	#	1	2	2	2	2	2	2	2	2	2	2	2
Geotech Engineer	#	1	1	1	1	1	1	1	1	1	1	1	1
Surveyor	#	1	2	2	2	2	2	2	2	2	2	2	2
Chief Geologist	#	1	1	1	1	1	1	1	1	1	1	-	1
Ore Control Geologist	#	2	2	2	2	2	2	2	2	2	2	1	2
Dispatchers	#	-	4	4	4	4	4	4	4	4	4	4	4
Mine Business Assistant	#	-	1	1	1	1	1	1	1	1	1	1	1
<b>Total Mine General</b>	<b>#</b>	<b>15</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>19</b>	<b>22</b>
<i>Mine Operations Hourly Personnel</i>													
<b>Operators</b>													
Blasters	#	2	2	2	2	2	2	2	2	2	2	2	2
Blaster's Helpers	#	2	2	2	2	2	2	2	2	2	2	2	2
Drill Operators	#	4	8	8	8	8	8	8	8	8	8	8	8
Loader Operators	#	5	10	10	10	10	10	10	10	10	10	10	10
Haul Truck Operators	#	20	48	48	48	48	64	64	64	60	56	44	64
Support Equipment Operators	#	26	33	33	33	33	33	33	33	33	33	33	33
General Mine Labors	#	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Operators</b>	<b>#</b>	<b>59</b>	<b>103</b>	<b>103</b>	<b>103</b>	<b>103</b>	<b>119</b>	<b>119</b>	<b>119</b>	<b>115</b>	<b>111</b>	<b>99</b>	<b>119</b>
<b>Mechanics</b>													
Mechanics - Drilling	#	2	4	4	4	4	4	4	4	4	4	4	4
Mechanics - Loading	#	2	4	4	4	4	4	4	4	4	4	4	4
Mechanics - Haulage	#	8	19	19	19	19	26	26	26	24	22	18	26
Mechanics - Support	#	10	13	13	13	13	13	13	13	13	13	13	13
<b>Total Mechanics</b>	<b>#</b>	<b>22</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>45</b>	<b>44</b>	<b>39</b>	<b>47</b>
<b>Maintenance</b>													
Maintenance Superintendent	#	1	1	1	1	1	1	1	1	1	1	-	1
Maintenance Foreman	#	4	4	4	4	4	4	4	4	4	4	4	4
Maintenance Planners	#	1	2	2	2	2	2	2	2	2	2	2	2
Light Vehicle Mechanic	#	1	2	2	2	2	2	2	2	2	2	2	2
Welder	#	2	4	4	4	4	4	4	4	4	4	2	4
Servicemen	#	2	4	4	4	4	4	4	4	4	4	2	4
Tireman	#	1	2	2	2	2	2	2	2	2	2	2	2
Maintenance Labor	#	2	4	4	4	4	4	4	4	4	4	2	4
<b>Total Maintenance</b>	<b>#</b>	<b>14</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>16</b>	<b>23</b>
<b>Total Personnel - Mining Personnel</b>	<b>#</b>	<b>110</b>	<b>188</b>	<b>188</b>	<b>188</b>	<b>188</b>	<b>211</b>	<b>211</b>	<b>211</b>	<b>205</b>	<b>200</b>	<b>173</b>	<b>211</b>

## SECTION 17 CONTENTS

17	RECOVERY METHODS.....	17-2
17.1	Process Design Basis.....	17-2
17.2	Crushing .....	17-6
17.3	Reclamation and Conveyor Stacking.....	17-7
17.4	Solution Application and Storage.....	17-8
17.5	Process Water Balance .....	17-9
17.5.1	Precipitation Data .....	17-9
17.5.2	Water Balance .....	17-10
17.6	Recovery Plant .....	17-11
17.6.1	Adsorption .....	17-12
17.6.2	Acid Washing.....	17-12
17.6.3	Desorption .....	17-13
17.6.4	Electrowinning and Refining.....	17-14
17.6.5	Carbon Handling & Regeneration.....	17-15
17.7	Process Reagents and Consumables.....	17-16
17.7.1	Lime.....	17-16
17.7.2	Sodium Cyanide .....	17-16
17.7.3	Activated Carbon.....	17-17
17.7.4	Sodium Hydroxide (Caustic).....	17-17
17.7.5	Hydrochloric Acid.....	17-17
17.7.6	Antiscalant.....	17-17
17.7.7	Fluxes .....	17-17

## SECTION 17 TABLES

Table 17-1:	Process Design Criteria Summary .....	17-2
Table 17-2:	Annual Precipitation and Evaporation Data .....	17-10
Table 17-3:	Water Balance Model Inputs.....	17-11
Table 17-4:	Projected Annual Reagents and Consumables .....	17-16

## SECTION 17 FIGURES

Figure 17-1:	Overall Process Flowsheet (KCA, 2025) .....	17-3
Figure 17-2:	Overall Project Site (KCA, 2025) .....	17-4
Figure 17-3:	West Mercur Process Area (KCA, 2025) .....	17-5

## 17 RECOVERY METHODS

### 17.1 Process Design Basis

Test work results completed to date indicate that the minable Mineral Resource for the Mercur project, including pits at the Main Mercur and South Mercur sites, are amenable to cyanide leaching for the recovery of gold. Based on the minable Mineral Resource of 72.3 million tons, including 62.6 million tons at Main Mercur and 9.8 million tons at South Mercur, and established processing rate of 20,000 tons per day, the project has an estimated life of 10 years.

Mineralized material from the Main Mercur and South Mercur pits will be hauled to the central West Mercur processing site and crushed to 100% passing ½" (12.5 mm) at an average rate of 20,000 tons (18,144 tonnes) per day using a three-stage closed crushing circuit. Lime will be added to the crushed material for pH control before being stacked in 33-foot (10 m) lifts and leached with a dilute cyanide solution. Solution will flow by gravity to a pregnant solution pond before being pumped to a carbon adsorption circuit. Gold values will be loaded onto activated carbon and then periodically stripped from the carbon in a desorption circuit and recovered by electrowinning. The resulting precious metal sludge will be treated in a retort to recover mercury values before being smelted to produce the final doré product.

A summary of the processing design criteria is presented in Table 17-1.

**Table 17-1: Process Design Criteria Summary**

Item	Design Criteria
Annual Tonnage Processed	7,300,000 tons
Crushing Production Rate	20,000 tons/day average
Crushing Operation	12 hours/shift, 2 shifts/day, 7 days/week, 365 days/year
Crusher Availability	75%
Crushing Product Size	100% -1/2 inches
Conveyor Stacking System Availability	80%
Leaching Cycle	80 days
LOM Average Sodium Cyanide Consumption	0.36 lbs/short ton
LOM Average Lime Consumption	1.8 lbs/short ton
LOM Average Gold Recovery	75%

The overall process flowsheet is presented in Figure 17-1. The project site and West Mercur process areas are presented in Figure 17-2 and Figure 17-3, respectively.

Figure 17-1: Overall Process Flowsheet (KCA, 2025)

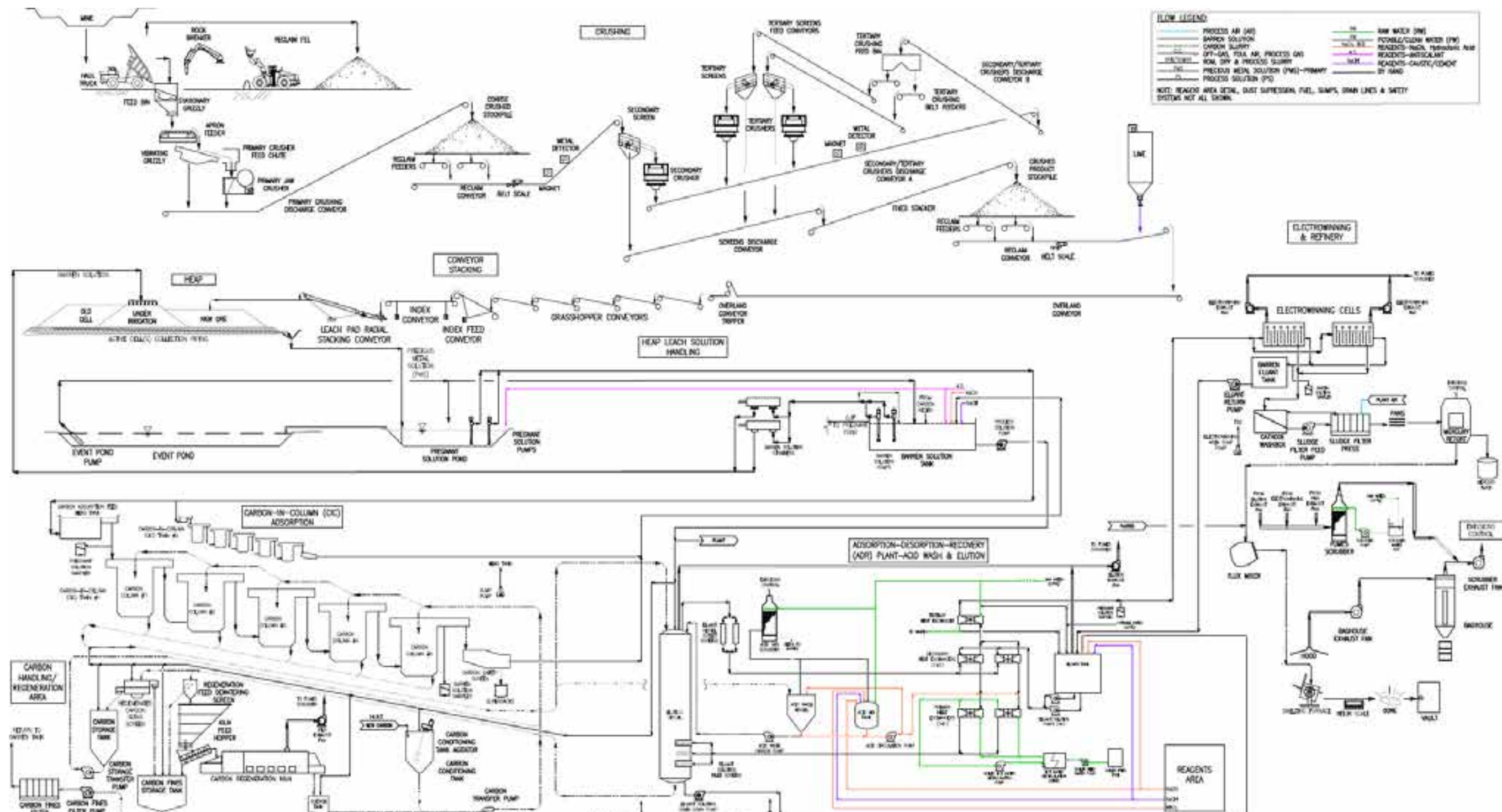


Figure 17-2: Overall Project Site (KCA, 2025)

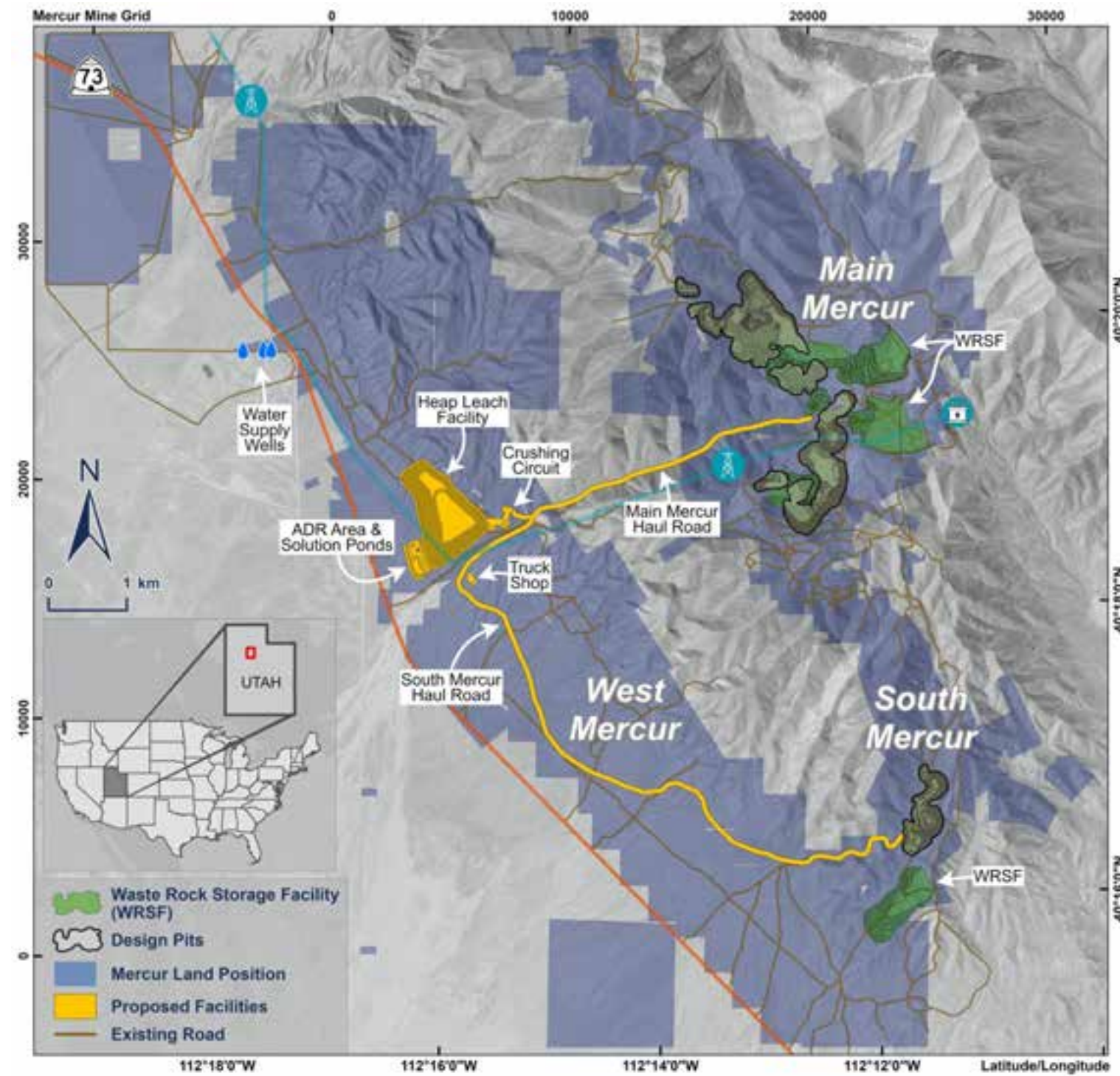
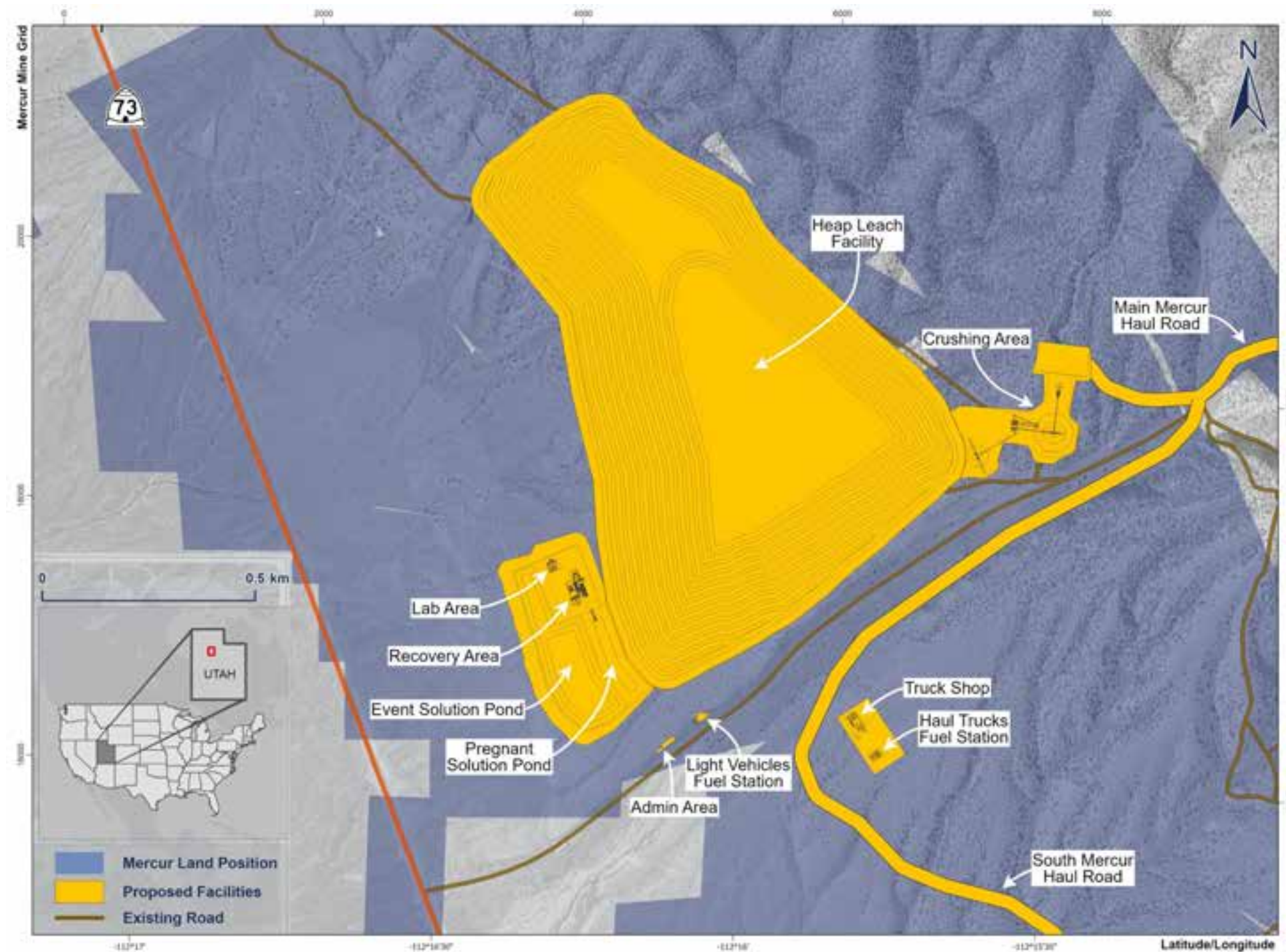


Figure 17-3: West Mercur Process Area (KCA, 2025)



Electric power will be provided to the project from the grid, and it is assumed that the project can tie into the existing power line to the Main Mercur project site.

An event pond is included to manage contact solution from storm events and seasonal snow melt. Solution collected in the event pond will be returned to the process as makeup solution as soon as practical.

## 17.2 Crushing

The crushing circuit for the Mercur Project will be located at the West Mercur site and is designed to process 1,111 tons of material per hour with an overall availability of 75% and will operate 365 days per year.

ROM material will be transported from the Main Mercur and South Mercur mine pits in 150-ton haul trucks and will either be directly dumped into the Crusher Feed Bin or stockpiled in a ROM stockpile. Stockpiled material from the ROM stockpile will be fed to the primary crushing system using a front-end loader as needed. The feed bin will be equipped with an apron feeder and vibrating grizzly which will scalp material at 4.0 inches, with oversize material being fed to a primary jaw crusher and undersize material being combined with the primary crushed product on the Primary Jaw Crusher Discharge Conveyor. A rock breaker positioned at the Jaw crusher will be used to break any oversize rocks.

The primary jaw crusher will operate with a closed side setting of 6.9 inches. Material from the Primary Jaw Crusher Discharge Conveyor will be stacked on the coarse crushed stockpile, reclaimed by either of two apron feeders, and transferred to the secondary crushing circuit by the Coarse Crushed Stockpile Reclaim Conveyor. The Coarse Crushed Stockpile Reclaim Conveyor will be equipped with a cross-belt magnet and metal detector to protect downstream equipment from any tramp metal. Tramp metal collected by the magnet will be collected in a tramp metal bin to be discarded. The metal detector will sense any metals that pass beyond the magnet. If metal is detected, an alarm will sound and the conveyor will be stopped, which in turn will stop all upstream equipment. The metal detector will deploy a marker where the metal is detected.

The secondary crushing circuit will consist of one secondary screen and secondary standard cone crusher which will operate in an open circuit. Reclaimed material from the coarse crushed stockpile will be fed to a secondary triple-deck vibrating screen with 3", 2" and ½" screen deck openings, respectively. Oversize material (+½ inches) will be fed to the secondary cone crusher and undersize material (-½") will be combined with the tertiary screen undersize material and conveyed to a crushed product stockpile. The Secondary Cone Crusher will operate with a closed side setting of 1½ inches with crushed material discharging onto the common Secondary/Tertiary

Crushers Discharge Conveyor #1, which is shared with the tertiary cone crushers, to be fed to the Tertiary Crushing Feed Bin via Secondary/Tertiary Crushers Discharge Conveyor #2. The Secondary/Tertiary Crusher Discharge Conveyor #1 will be equipped with a cross-belt magnet and metal detector to protect downstream equipment from any tramp metal.

The tertiary crushing circuit will consist of two tertiary screens and tertiary short head cone crushers which will operate in parallel in a closed circuit. Material from the Tertiary Crushing Feed Bin will be reclaimed using belt feeders and fed to the tertiary triple-deck vibrating screens by the Tertiary Screens Feed Conveyors (A and B). The Tertiary Screens will have 3", 1" and ½" screen deck openings, respectively with oversize material (+½ inches) being fed to the tertiary cone crushers and undersize material (-½") being combined with the secondary screen undersize material on the Screen Undersize Conveyor. The tertiary cone crushers will operate with a closed side setting of ½ inch with crushed material discharging onto the common Secondary/Tertiary Crushers Discharge Conveyor #1, which feeds Secondary/Tertiary Crushers Discharge Conveyor #2 and recycles the cone crushed material back to the Tertiary Crushing Feed Bin. The secondary and tertiary screen undersize material (-½") represents the final crushed product which will be stockpiled onto a crushed product stockpile via the Screen Undersize Conveyor and Crushed Product Fixed Stacker.

All the conveyors will be interlocked so that if one conveyor is tripped, all upstream conveyors and the apron feeder will also stop. These features are considered necessary for safe operation as well as to meet the design utilization for the system.

Water sprays will be located at all material transfer points to reduce dust generation by the crushing circuit.

### **17.3 Reclamation and Conveyor Stacking**

Material from the crushed product stockpile will be reclaimed by one of two belt feeders and fed onto the Crushed Product Reclaim conveyor. Lime from a lime silo system will be metered directly onto the crushed product reclaim conveyor at an average rate of 1.8 lbs per ton of material for pH control which will be controlled by a belt weigh scale that will provide a signal to the lime feeder to maintain the correct lime addition rate. The Crushed Product Reclaim Conveyor will also include a cross-belt sampler, which will take a sample of the material at regular intervals to generate a composite sample of the material delivered to the heap.

The heap will be constructed in 33-foot-high lifts, in cells 260 feet wide, using a mobile conveyor stacking system. The heap stacking system will consist of fifteen (10) total ramp grasshopper conveyors, nineteen (14) standard grasshopper conveyors, an index feed conveyor, a horizontal index conveyor and a radial stacker. Crushed material will be fed to the grasshopper conveyors

in the active stacking zone by an overland conveyor with a tripper conveyor which is fed by the Crushed Product Reclaim Conveyor. The grasshopper conveyor line will transfer the material to the index feed conveyor, horizontal index, and radial stacker conveyor with the horizontal index and radial stacker being able to retreat to stack material onto the heap. The number of grasshopper conveyors required will vary depending on the area of the heap being stacked, with a maximum of 24 grasshopper and ramp conveyors being required.

Each of the grasshopper and stacking conveyors will include an onboard transformer and interlocked PLC to allow for the removal or addition of conveyors. The master PLC will be installed at the radial stacker for initiating the conveyor start sequence. Each of the stacking system conveyors will include a strobe and horn alarm which will sound before the equipment starts up. Movement for the radial stacker and horizontal index conveyor will be controlled manually at the equipment. Each conveyor will be equipped with pull-cords and emergency stops. If one conveyor in the stacking line is tripped, all upstream conveyors will also stop.

Once a lift of cells has finished leaching and is sufficiently drained, a new lift can be stacked over the top of the old lift. The old lift will be cross-ripped prior to stacking new material on top of any old heap area or access road/ramp to break up any compacted or cemented sections.

Stacked lifts will progress in a stair-step manner. The planned leach pad will have a total of nine (9) lifts and a maximum planned height of 300 feet.

## 17.4 Solution Application and Storage

Process solution storage for the Mercur Project will include a pregnant and event/overflow pond as well as a barren solution tank. The event pond will be maintained empty or at low levels whenever possible. Solution diverted to the event pond will be returned to the system as make-up water as soon as practical with every effort made to avoid storing excess solution over a long period of time.

Crushed material will be leached in a single stage using barren solution consisting of a dilute sodium cyanide solution; additional residual leaching of material will occur as leach solution from higher lifts percolate downward. Barren solution will be pumped from the barren solution tank to the active leach site using a dedicated set of vertical pumps (one operating, one standby) and will be applied to the heap by a system of drip emitters. The barren solution piping design considers insulated and heat-traced pipe to reduce the risk of freezing during winter operations. Buried drip emitters will be used for solution application and will be buried a minimum of 3 feet below the heap surface during the winter. Barren solution will be applied to the heap at an average rate of 0.004 gpm/ft<sup>2</sup>. Based on metallurgical test work results, a leach cycle of 80 days has been estimated. Concentrated cyanide will be added to the barren solution tank by metering pumps to

maintain the cyanide in solution at 200 to 300 ppm NaCN. The barren solution tank has been sized for 5 minutes of residence time at the recovery plant design flow rate of 5,000 gpm. Antiscalant polymer will be continuously added to the leach solutions at an average rate of 6 ppm to reduce the potential for scaling problems within the irrigation system.

Pregnant leach solution containing gold values from the heap will drain by gravity to the pregnant solution pond. Pregnant leach solution leaving the heap will be transferred to the pregnant solution pond via pipe in a lined solution collection ditch. Pregnant leach solution will then be pumped to the carbon adsorption circuit by the pregnant solution pumps (one operating one standby) where the gold and silver values will be adsorbed from the pregnant solution, and the resulting barren solution will then be returned to the barren solution tank.

The solution storage system will be designed so that the barren solution tank overflows to the pregnant solution pond, and the pregnant solution pond overflows to the event/overflow pond in case of an emergency or significant storm event. The pond design considers normal working solution volumes entering the pregnant solution pond, ensuring that the event/overflow solution pond will be used very infrequently during operation.

The pregnant pond and event/overflow pond will each be equipped with a submersible high flow pump to return solution to the system. The submersible pumps will be mounted on pump slides on the pond side walls to facilitate the placement and extraction of the pumps in the pond. An additional textured protective liner panel and conveyor belting will be installed on the pond sidewalls in the area the pump slide is located to protect the pond liner.

## **17.5 Process Water Balance**

### **17.5.1 Precipitation Data**

Precipitation data used for the Mercur Project process water balance has been taken from historic site precipitation data taken between 1983 and 2024 (no data from 1996 to 2010 is included due to incomplete data sets) and compared historic records from the Tooele weather station for reasonableness. Pan evaporation data was not measured at the site weather station and has been estimated for process water balance based on records from the Tooele weather station (elevation 4,935 feet) and Rocky Basin weather station (elevation 8,900 feet) which were interpolated for the heap leach pad location at site (elevation 5,875 feet). Precipitation and evaporation data are presented in Table 17-2 in inches of water equivalent. All precipitation between the months of November and March are assumed to occur as snowfall with snow melt occurring during April and May.

The 100-year, 24-hour storm event is estimated at 2.0 inches. The 100-year snowpack is estimated at 14.9 water equivalent inches. Snow loss due to sublimation is assumed to average 20%.

**Table 17-2: Annual Precipitation and Evaporation Data**

Month	Average Year Precipitation (inches)	Wet Year Precipitation (inches)	Dry Year Precipitation (inches)	Pan Evaporation (inches)
January	0.53	0.89	0.92	0.83
February	1.41	2.69	0.66	1.18
March	1.03	2.23	1.34	2.28
April	1.15	5.66	0.36	3.44
May	0.77	1.03	0.69	4.91
June	0.52	1.58	1.94	6.18
July	1.63	3.47	0.16	7.07
August	2.8	1.12	0.05	6.05
September	3.77	1.88	0.23	4.12
October	0.03	3.9	0.26	2.44
November	0.57	1.9	0.67	1.19
December	2.4	1.08	0.38	0.75
<b>Total</b>	<b>16.61</b>	<b>27.43</b>	<b>7.66</b>	<b>40.44</b>

## 17.5.2 Water Balance

Based on the preceding precipitation and evaporation data, active water balances were calculated based on the requirement for processing 20,000 tons of material per day. The model approximates the circulation of solutions within the heap leach and process facility, as well as the introduction of precipitation and evaporation as a function of time. The results of the water balance model predict make-up water flow rates and operation control strategies necessary in order to achieve a zero-discharge system. The model is based on the leach area of the heap over time based on normal operations at the project.

The model uses time steps of months, which provides monthly average flow rates and volumes, as opposed to peak daily or peak instantaneous rates. This approach may attenuate the peak rate, as it averages the volumes over a monthly period.

Water balance models were prepared based on average, wet, and dry precipitation years. Inputs for the water balance models are presented in Figure 17-3. Pond evaporation is assumed to equal 60% of the pan evaporation over 50% of the pond area. Idle heap evapotranspiration is assumed to be 67% of the pan evaporation or rainfall, whichever is less, for the inactive heap area.

**Table 17-3: Water Balance Model Inputs**

Parameter	Unit	Input Values	
		Years 1 – 4	Years 5 – 10
Active Leach Area	ft <sup>2</sup>	1,014,780	1,014,780
Lined Pad/Ditch Collection Area	ft <sup>2</sup>	4,130,343	8,317,242
Lined Pond Collection Area	ft <sup>2</sup>	635,700	635,700
Total Nominal Flow to Heap	gpm	4,150	4,150
Evaporation System Flow	gpm	0	0
Wet Season Material Moisture	%	6	6
Dry Season Material Moisture	%	4	4
Retained Moisture After Draindown	%	8.9	8.9
Average Annual Emitter Evaporation (summer and spring months only)	%	1.3	1.3
Average Annual Sprinkler Evaporation	%	0	0
Material Throughput per Year	ton	7,300,000	7,300,000

For all modeled scenarios, the Mercur process will have a net annual water deficit during production and make-up water will be required. Makeup water requirements for the heap during the initial stage ranged from 81 to 149 gpm (128 gpm for an average year) and from 36 to 149 gpm (120 gpm for an average year) during the second stage. Treatment and discharge of heap process should not be required based on the models.

An additional 120 gpm on average is assumed to be required for the project including road dust control, crusher dust control, mine truck shop wash down and other domestic uses. Maximum average annual makeup water requirements are estimated at 269 gpm.

## 17.6 Recovery Plant

The recovery plant will be located at the West Mercur site and will be designed to recover gold values using an Adsorption-Desorption-Recovery (ADR) process. Pregnant leach solution from the heap leach will be pumped to the carbon in column circuit (CIC) and adsorbed onto activated carbon (adsorption). Loaded carbon from the CIC circuit will then be desorbed or stripped in a high-temperature elution process coupled to an electrowinning circuit (desorption), followed by retorting to recover mercury and smelting of the resulting sludge to produce doré (recovery). Prior to elution, each batch of carbon will be acid washed to remove any scale and other inorganic contaminants that might inhibit gold adsorption on carbon. All activated carbon will be thermally reactivated using a rotary kiln after each elution batch.

The recovery plant will be semi-automatic with local human machine interfaces (HMI) panels displaying unit functions and controlling primary flow streams. Non primary, or batch flow streams, such as acid washing, will be controlled manually. All local sensors will provide a signal for monitoring to the main PLC/control station.

The recovery plant and refinery will be indoors in the existing recovery plant building.

### 17.6.1 Adsorption

Adsorption of gold onto activated carbon will be accomplished in the carbon adsorption circuit comprised of two column trains of five (5) cascade type, open-top adsorption columns. Each column will have capacity for 4.4 tons of carbon. Pregnant solution from the pregnant solution pond will be pumped to the adsorption circuit at a nominal rate of 4,150 gpm (4,980 gpm design). Barren solution exiting the last carbon adsorption column in the train will pass through a static carbon safety screen to separate any floating carbon from the solution, then flow by gravity into the barren tank.

Antiscalant will be added at the pregnant solution pond to prevent scaling of the carbon which reduces the carbon loading ability. Magnetic flowmeters equipped with totalizers will measure solution flow to the adsorption circuit. Pregnant solution will flow by gravity through each of the five (5) columns in series in each column train, exiting the lowest column as barren solution. Continuous samplers of the pregnant and barren solutions will be installed at the feed and discharge ends of the carbon column trains. Solution samples will be used to measure gold concentrations in the pregnant and barren solutions, and to monitor the carbon adsorption efficiency.

The process of gold adsorption from the pregnant leach solution is continuous. Once the carbon in the lead column achieves the desired precious metal loading, it will be transferred to the carbon acid wash circuit using a screw impeller carbon transfer pump (one per column train). Carbon in the remaining columns will then be advanced, counter current to the solution flow, to each preceding column in series. New or acid washed/regenerated carbon will be added to the final column in the train.

### 17.6.2 Acid Washing

Acid washing consists of circulating a dilute acid solution through a bed of activated carbon to dissolve and remove scale and other inorganic contaminants. Acid washing of the Mercur carbon will be completed before each desorption cycle on a batch basis.

Loaded carbon from the adsorption circuit will be transferred to the acid wash vessel. The acid wash vessel is designed for a total capacity of 4.4 tons of loaded activated carbon. After the carbon is transferred to the acid wash vessel, but before any acid is introduced, fresh water will be circulated through the carbon bed to remove any entrained alkaline cyanide solution. After rinsing, a dilute hydrochloric acid solution will be prepared in the acid mix tank and cycled through the acid wash vessel and the acid mix tank using the acid wash circulation pump. Concentrated acid will be injected into the recycle stream to achieve and maintain a pH ranging from 1.0 to 2.0.

Completion of the acid wash cycle is indicated when the pH stabilizes between 1.0 and 2.0 without acid addition for a minimum of one hour of circulation.

After acid washing has been completed, the spent acid solution will be drained from the acid wash vessel into the acid mix tank. The spent acid solution can either be retained for reuse or neutralized to a pH ranging between 7.0 and 8.0 by adding caustic before being pumped to the barren tank.

To remove any residual acid in the acid washed carbon, carbon will be rinsed with fresh water. After the rinsing, the acid washed carbon will be pumped to the elution vessel using the acid wash carbon transfer pump. Total time required for acid washing a 4.4-ton batch of carbon is approximately 6 hours.

### **17.6.3 Desorption**

A Zadra pressure elution, hot caustic desorption circuit has been selected for the Mercur Project. This type of circuit requires less than 24 hours to complete a cycle and is sized for 4.4-ton batches of carbon. During the desorption process, gold will be eluted, or “stripped,” from the batch of carbon into pregnant eluate solution. The gold is then extracted by electrowinning from the pregnant eluate produced by the desorption circuit. A complete desorption cycle will require approximately 18 hours.

After a batch of carbon has been transferred to the elution vessel, barren strip solution (eluant) containing sodium hydroxide and sodium cyanide will be pumped through a recovery heat exchanger and solution heating system, which will include an electric hot water boiler, hot water circulation pump, and primary heat exchanger. Hot water from the boiler will be pumped through the primary heat exchanger to heat the strip solution to the strip temperature of 275°F, before being introduced to the elution vessel with a nominal operating pressure of approximately 65 psig. The final gold content of the stripped carbon will typically be less than five ounces per ton of carbon.

The elution vessel will contain internal stainless-steel inlet screens to hold carbon inside the vessel and to distribute incoming stripping solution evenly. Pregnant eluant solution leaving the elution vessel will pass through external stainless-steel strip solution discharge screens, before passing through the recovery heat exchanger and tertiary heat exchanger to reduce the eluate temperature to 195°F or less (to prevent boiling). The cooled pregnant eluate solution will then discharge to the electrowinning cells.

After desorption is complete, the stripped carbon will be pumped to either the kiln feed dewatering screen to dewater the carbon and remove fines before thermal regeneration, or to a carbon storage tank to be added back to the circuit.

#### 17.6.4 Electrowinning and Refining

The electrowinning circuit will be operated in series with the elution circuit. Cooled pregnant eluate from the elution circuit will pass through the electrowinning cells with gold values being recovered from the pregnant eluant solution as the solution passes through the electrowinning cells. Barren eluate solution leaving the electrowinning cells will flow by gravity to the barren eluant return tank where it will then be pumped by the barren eluant return pump to the eluant storage tank.

Gold will be won from the eluant in the electrowinning cells using stainless steel cathodes at a current density of approximately 5 amperes per square foot of anode surface. Caustic soda (sodium hydroxide) in the eluate solution will act as an electrolyte to encourage free flow of electrons and promote precious metal winning from solution. To keep the electrical resistance of the solution low during the electrowinning cycle, make-up caustic soda will occasionally be added to the eluant storage tank.

Periodically, all or part of the barren eluant will be dumped to the carbon fines tank and new solution will be added to the eluant storage tank. Typically, about one-third of the barren eluant will be discarded after each elution or strip cycle. Sodium hydroxide and sodium cyanide will be added as required from the reagent handling systems to the eluant storage tank during fresh solution make-up.

The precious metal-laden cathodes in the electrowinning cells will be removed periodically and processed to produce the final doré product. The loaded cathodes will be transferred to the cathode wash box using a cathode hoist. Precipitated precious metals will then be removed from the cathodes with a high-pressure sprayer. The resulting sludge will be pumped using a sludge filter feed pump to a plate-and-frame sludge filter press to remove water. The filter cake will then be loaded into pans and sent to the refinery to be treated in the mercury retort furnace. To volatilize the mercury, the sludge filter cake will be placed into pans and heated in the retort for up to 48 hours at approximately 900°F.

A vacuum pump system will continuously remove mercury vapor from the retort oven and pass the vapor through the water-cooled retort primary condenser. Condensed mercury will be trapped in the mercury collector and then transferred and stored in flasks. Cooled exhaust leaving the mercury collector will pass through the retort scrubbing system to remove any residual mercury. The retort scrubbing system will be comprised of three (3) units connected in series: the mercury after cooler condenser, retort air filter, and retort carbon scrubber filled with sulfur-impregnated activated carbon.

After mercury removal, the dried cathode filter cake will be mixed with fluxes and fed to a tilting crucible induction furnace. After melting, slag will be poured off into cast iron molds until the

remaining molten furnace charge is mostly molten metal (doré). Doré will then be poured off into bar molds, cooled, cleaned, and stored in a vault pending shipment to a third-party refiner. The doré poured from the furnace represents the final product of the processing circuit.

Periodically, slag produced from the smelting operation will be re-smelted on a batch basis to recover residual metal values. Reprocessed slag will be jaw crushed and placed on the heap leach pad.

Furnace fumes will be pulled through the furnace fume hood by the furnace exhaust fan. Collected fumes will pass through the refinery bag house to remove particulates, then through the furnace carbon bed scrubber as a final exhaust cleaning step. The system will be designed to remove over 99.5% of the particulates present in the exhaust fumes.

#### **17.6.5 Carbon Handling & Regeneration**

The carbon handling and regeneration circuit will include all equipment required to regenerate, store, prepare, and transfer carbon. The carbon regeneration system will include a kiln dewatering screen, kiln feed hopper with screw feeder, carbon regeneration kiln, carbon quench tank, and carbon quench pump. The carbon preparation and storage system will include a carbon sizing screen, a 4.4-ton carbon storage tank, a carbon conditioning tank with agitated mixer, a carbon fines tank, a carbon fines filter press, and various carbon transfer pumps.

Thermal regeneration will consist of drying the carbon thoroughly and heating it to approximately 1,400°F for ten minutes to maintain carbon activity levels.

Carbon from the desorption circuit to be thermally reactivated will first be dewatered using a static kiln dewatering screen, then transferred to the kiln feed hopper and fed to the carbon regeneration kiln by the kiln screw feeder. The kiln dewatering screen undersize will discharge to the carbon fines tank. Carbon fines collected in the carbon fines tank will be periodically pumped through the carbon fines filter press; carbon fines from the filter press are stored in bulk bags for removal from the system.

Hot, regenerated carbon leaving the kiln will pass into a water-filled quench tank for cooling before being transferred to the carbon sizing screen by the carbon quench pump. New carbon being added to the circuit will first be processed in the carbon conditioning tank and then transferred to the carbon sizing screen. The sizing screen undersize will discharge into the carbon fines tank, and the screen oversize will discharge into the carbon storage tank. The new and regenerated carbon stored in the carbon storage tank will be returned to the CIC circuit.

## 17.7 Process Reagents and Consumables

The reagent handling system will include equipment used to mix and/or store all reagents required for the Mercur process. Reagent mixing and storage will be at ambient temperature and pressure.

Average estimated annual reagent and consumable consumption quantities for the processing area are shown in Table 17-4.

**Table 17-4: Projected Annual Reagents and Consumables**

Item	Form	Average Annual Usage
Sodium Cyanide	Briquettes (SLS) or Liquid	1,300 tons
Lime	Bulk Delivery Trucks	6,600 tons
Activated Carbon	1,100 lb Supersacks	35 tons
Sodium Hydroxide	Liquid Delivery Trucks	14 tons
Antiscalant	Liquid Bulk	23,000 gallons
Hydrochloric Acid 32%	Liquid Totes	36,000 gallons
Fluxes	Dry Solid Sacks	11 tons

### 17.7.1 Lime

Pebble lime (CaO) is used to treat crushed material to maintain an alkaline pH. Lime will be delivered in bulk by 20-ton trucks, which off-load pneumatically into the lime silo with a total capacity of 100 tons.

Lime from the lime silo system will be metered directly onto the crushed product reclaim conveyor by the lime silo screw conveyor at an average rate of 1.8 lbs per ton of material.

### 17.7.2 Sodium Cyanide

Sodium cyanide (NaCN) is used in the leaching process and will be mixed in 20-ton batches onsite using an SLS (solid to Liquid) cyanide mix system. Cyanide will be delivered in certified iso-containers in solid form. At site, process solution will be added to the existing NaCN dissolution tank and circulated through the delivery container and back to the dissolution tank at ambient temperature. Once the cyanide is completely dissolved, the connecting hoses and pipes are cleared pneumatically to ensure there is no remaining cyanide solution in the delivery container or piping. The concentrated cyanide solution (~25% NaCN by weight) is then transferred to the cyanide storage tank for delivery to the process by metering pumps.

Cyanide is primarily consumed during the leaching process at an average rate of 0.36 lbs per ton processed. A small amount of cyanide will also be added to the elution circuit.

### 17.7.3 Activated Carbon

Activated carbon will be used to adsorb precious metals from the leach solution in the adsorption columns. Make-up carbon will be 6 x 12 mesh and will be delivered in 1,100 lb. supersacks. It is estimated that approximately 3% of the carbon stripped will have to be replaced due to carbon fines losses. Carbon consumption has been estimated at 35 tons per year.

### 17.7.4 Sodium Hydroxide (Caustic)

Sodium hydroxide (caustic) solution will be delivered to site as a 50% liquid concentrate. The delivered high concentrate caustic solution will be diluted to yield a solution containing 20% by weight sodium hydroxide for use in the process. Distribution of the caustic solution will be by the caustic transfer pump to points of use.

Sodium hydroxide will primarily be used in the elution strip solution and will be consumed at an estimated rate of 105 lbs per strip. Sodium hydroxide will also be consumed during the acid neutralization process as well as during cyanide mixing.

### 17.7.5 Hydrochloric Acid

Hydrochloric acid is used in the acid wash section of the elution circuit. Hydrochloric acid (28-32% by weight, 1.16 s.g.) will be delivered to site in 264-gallon tote bins and will be added directly to the acid mix tank using a variable speed acid metering pump.

Acid washing consists of circulating a dilute acid solution through the bed of carbon to dissolve and remove scale from the carbon and is completed prior to each desorption cycle. Consumption of 32% HCl is estimated at 135 gallons per strip.

### 17.7.6 Antiscalant

Antiscalant is used to prevent the build-up of scale in process solutions and heap irrigation lines. Antiscalant will be delivered to site in liquid form in bulk trucks. Antiscalant will be added directly to the pregnant solution pond pump inlet, barren tanks, and the elution vessel feed line using variable speed, chemical-metering pumps.

Antiscalant consumption will vary depending on the concentration of scale-forming species in each treated process stream. On average, antiscalant consumption is expected to be about 6 ppm for leach solutions and up to 10 ppm for strip solutions.

### 17.7.7 Fluxes

Various fluxes are used in the smelting process to remove impurities from the bullion in the form of a glass slag. Dry fluxes will be delivered in 50 lb bags.

The normal flux components will be a mix of silica sand, borax, and sodium carbonate (soda ash). The flux mix composition is variable and will be adjusted to meet individual project smelting needs: fluorspar and/or potassium nitrate (niter) may also be added to the mix. Average consumption of the mixed fluxes is estimated to be 1 lb of flux per lb of gold produced.

## SECTION 18 CONTENTS

18	PROJECT INFRASTRUCTURE .....	18-2
18.1	Existing Installations .....	18-2
18.2	Access Roads .....	18-2
18.3	Haulage Roads .....	18-2
18.4	Project Buildings .....	18-2
18.4.1	Offices Buildings .....	18-2
18.4.2	Recovery Plant .....	18-3
18.4.3	Laboratory .....	18-3
18.4.4	Truck Shop / Warehouse .....	18-3
18.5	Leach Pad Design .....	18-3
18.6	Solution Storage Ponds Design .....	18-5
18.7	Fuel Storage .....	18-7
18.8	Power Supply, Communications & IT .....	18-7
18.8.1	Power Supply .....	18-7
18.8.2	Site Distribution .....	18-7
18.8.3	Estimated Electrical Power Consumption .....	18-7
18.8.4	Emergency Power .....	18-8
18.8.5	Communications .....	18-8
18.9	Waste Rock Storage .....	18-8
18.10	Water .....	18-9
18.10.1	Water Supply & Distribution .....	18-9
18.10.2	Potable and Domestic Water .....	18-9
18.10.3	Fire Water .....	18-9
18.11	Sewage .....	18-9

## SECTION 18 TABLES

Table 18-1:	Heap Leach Design Parameters .....	18-5
Table 18-2:	Mercur Project Power Demand .....	18-8

## **18 PROJECT INFRASTRUCTURE**

### **18.1 Existing Installations**

Much of the infrastructure from the original Mercur mining operation was removed as part of site reclamation and will need to be replaced for new operations. Remaining infrastructure includes the water supply wells, the main site access road and gate, 43.8 kV transmission power line to the Main Mercur project area, gravel and dirt roads around the Mercur project area and the administration building at the Main Mercur site. Existing infrastructure is planned to be upgraded and used as appropriate for the planned operation.

### **18.2 Access Roads**

The Mercur site is accessible year-round from Salt Lake City, Utah via Interstate 80 and State Routes 36 and 73. All roads to the Mercur Mine turn-off are paved and kept plowed during the winter by the Utah State Highway Department. The existing access road also provides access to the West Mercur site.

The south Mercur site is currently accessed via a dirt road from State Route 73. During operation, access to the South Mercur site will primarily be via the two-way haul road between the South Mercur and West Mercur sites. The existing dirt road will be upgraded to accommodate light vehicle traffic.

### **18.3 Haulage Roads**

Haul roads will be constructed to transport mineralized material from the Main Mercur and South Mercur pits to the processing facility at West Mercur and will be designed to accommodate two-way traffic with 150-ton haul trucks. The haul road from Main Mercur to West Mercur will utilize the existing site access road, which will require widening approximately 2.6 miles of the road. A new 5.7-mile haul road from South Mercur to West Mercur will be constructed during Year 1 of operation.

### **18.4 Project Buildings**

#### **18.4.1 Offices Buildings**

Office buildings will include a process office trailer and administration office trailer and will be located at the West Mercur site. The process office trailer will be a single-wide, 12 ft x 60 ft prefabricated trailer with two office areas, a washroom and central common area. The administration office will be a double-side, 24 ft x 60 ft prefabricated trailer with four office areas, men's and women's washrooms, a storage area and a central common area.

#### **18.4.2 Recovery Plant**

The recovery plant will be an insulated steel-sided building and will be located adjacent to the process solution ponds. The building will house the stripping and acid wash circuits as well as the refinery and carbon handling and regeneration circuits and will include all necessary eyewash/safety shower water and fire water provisions. The cyanide mixing and storage system will be located in a covered area adjacent to the recovery plant building. The carbon adsorption columns will also be located outside, uncovered near the pregnant solution pond.

#### **18.4.3 Laboratory**

The laboratory facility will process samples from the mine and process. The lab will be an insulated, pre-engineered, insulated steel building with atomic adsorption and fire assay capabilities as well as a full wet lab and met lab for monthly column and bottle roll tests on production composite samples. The lab will have capacity to process 150 samples per day and includes all necessary eye wash/safety shower and fire water distribution for safety requirements.

#### **18.4.4 Truck Shop / Warehouse**

The mine truck shop and warehouse will be an insulated steel-sided building with three bays, which will be utilized for fleet maintenance. An attached wash bay will be used for washing mine equipment. An oil skimmer will be installed adjacent to the wash bay to collect any oil in the wash water drained from the wash bay. Offices, lunchroom, men and women's washrooms and dry facilities, and warehouse area will also be included. The facility will be fully equipped with a fire water supply and distribution system.

Crane work will be conducted within the mine truck shop with a 10-ton overhead crane. Maintenance fluids will be distributed to each bay by means of lubrication stations, each with a supply of compressed air, clean water, grease, and lubricants.

#### **18.5 Leach Pad Design**

The project considers one leach pad which will be constructed at the West Mercur site and will be used to leach material from both Main and South Mercur.

The Mercur leach pad will be a single-use, multi-lift type heap and has been designed with a lining system in accordance with International Cyanide Code requirements and meets or exceeds the lining system requirements set forth by the Utah Department of Environmental Quality to minimize the environmental risk of the facilities impacting local soils, surface water and ground water in and around the site. The final pad design considers a total of nine (9) lifts and 70 million tons of material. Pad drainage will be constructed to transfer process solution to the pregnant solution pond.

The leach pad will be constructed by clearing the pad area and stripping any vegetation and growth media followed by grading to ensure drainage and heap stability. The leach pad liner will be composed of the following lining system from top to bottom:

- Overliner consisting of 24 inches of crushed and screened material (-5/8", +40 mesh)
- 80 mil single side textured Linear Low-Density Polyethylene (LLDPE) geomembrane
- Leak detection system below primary solution collection pipes which route solution to the solution collection trench
- 24 inches of compacted soil liner with a minimum permeability of  $1 \times 10^{-7}$  cm/s
- Prepared subgrade.

Perforated gravity solution collection pipes will be installed on top of the geomembrane liner and covered with overliner material. These pipes are designed to operate at 50% full to contain the design production flows from the upgradient tributary area, allowing additional capacity to accommodate excess solution from storm events. The primary solution collection pipes will exit the heap through a concrete weir to the solution collection channel. The pipes will be solid walled as they enter the solution collection channel that flows into the pregnant pond.

Should solution flows exceed the capacity of the heap outlet pipes, solution head will build at the leach pad discharge area, causing excess solution to overflow the concrete weir into the solution collection channel.

The overliner material will act as a protective layer that resides above the LLDPE geomembrane. The main purpose of this material is to promote solution collection, reduce hydraulic heads over the liner and protect the composite liner system and solution collection piping from damage during material placement.

The leak detection system will consist of 2" perforated corrugated pipe which will be installed under the main solution collection pipes. The leak detection pipes will discharge to the solution collection channel outside of the heap perimeter berm. At the perimeter berm the perforated pipe will transition to solid pipe and will pass through a 3-foot bentonite plug to ensure solutions are contained. The leak detection pipes will be checked daily to ensure no leaks are present.

A summary of the heap design parameters is presented in Table 18-1.

**Table 18-1: Heap Leach Design Parameters**

Design Parameter	Design Criteria
Stacking Rate, tons/day	20,000
Total Capacity, tons	74 million
Lift Height, feet	33
Maximum number of complete lifts	9
Maximum stacking height, feet	300
Stacked Density, lb/ft <sup>3</sup>	96.1
Front of Heap Slope, H:V	2.5
Side and Back Slopes of Heap, H:V	2.5
Setback Between Lifts, feet	35
Angle of Repose, degrees	37
Leaching Cycle, days	80
Number of Leach Cycles	1
Leaching Schedule, hours per day / days per year	24 / 365
Tons Under Leach, tons	1,600,000
Active Leach Area, ft <sup>2</sup>	1,014,780
Solution Application Method	Buried Driplines
Solution Application Rate, Nominal, gpm/ft <sup>2</sup>	0.004
Heap Irrigation Rate, Nominal, gpm	4,150
Heap Leach Material Moisture Retention, % of Total Material Weight	8.90%

## 18.6 Solution Storage Ponds Design

Solution storage at the Mercur project includes the pregnant solution and event/overflow ponds as well as a barren solution tank.

During normal operations, the pregnant solution pond will be maintained in the mid-to-lower range of its working capacity with the event pond being maintained empty, or at low levels whenever possible. It is important that the event pond be at minimum levels at the start of spring (April to May) to ensure that the ponds will have the required capacity to contain the large influx of solution from seasonal snow melt, as well as a short-term extreme precipitation event.

The pregnant solution pond considers a total volume of 21.7 million gallons and has sufficient capacity for the following criteria being contained within the pond:

- Working volume for 24 hours at 4,150 gpm of solution
- A 48-hour heap drain down volume of leach solution (due to an event such as loss of power or pump) also at the solution application rate of 4,150 gpm

- Dead storage volume assuming 3.3 feet of slimes at the bottom of the pond
- Freeboard of 3.3 feet

The pregnant solution pond will be equipped with two submersible, high flow pumps (one operating, one standby) which will pump solution to the carbon adsorption circuit. The submersible pumps will be mounted on pump slides on the pond side walls to facilitate the placement and extraction of the pumps in the pond. An additional textured protective liner panel and conveyor belting will be installed on the pond sidewalls in the area where the pump slide is located to protect the pond liner.

The pregnant solution pond will be composed of the following composite liner system from top to bottom:

- 80 mil smooth HDPE primary liner
- Geonet
- 80 mil smooth HDPE secondary liner
- 24 inches compacted soil liner with a permeability of  $1 \times 10^{-7}$  cm/s
- Prepared subgrade

Leak detection pipes are provided beneath the primary pond liner to allow for monitoring and pumping of solutions from within the leak detection sumps.

The event/overflow pond considers a total volume of 82.9 million gallons and has sufficient capacity for the following criteria being contained within the pond:

- A 100-year, 24-h storm event of 1.99 inches over the Mercur heap, pond and solution collection ditch lined area
- A 100-year snowpack of 14.9 inches of snow water equivalent over the Mercur heap lined area
- Dead storage volume assuming 1.7 feet of slimes at the bottom of the pond
- Freeboard of 3.3 feet

The event/overflow solution pond will be composed of the following composite liner system from top to bottom with leak detection pipes provided beneath the primary pond liner to allow for monitoring and pumping of solutions from within the leak detection sump:

- 80 mil smooth HDPE primary liner
- Geonet

- 80 mil smooth HDPE secondary liner
- 12 inches compacted soil liner with a permeability of  $1 \times 10^{-7}$  cm/s
- Prepared subgrade

The event pond will include a submersible pump mounted on a pump slide on the pond side slope to return solution to the active leach circuit.

## **18.7 Fuel Storage**

The fuel storage system will consist of several above ground tanks; including a diesel tank, a gasoline tank, and various propane tanks. The diesel and gasoline fuel tanks will be equipped with all necessary fuel dispensing equipment for operation. Fuel will be delivered to the mine site via tanker trucks.

The diesel and gasoline tanks will be insulated and heated to prevent fuel gelling and will be contained within in a lined containment berm to ensure fuel cannot leak into the environment.

## **18.8 Power Supply, Communications & IT**

### **18.8.1 Power Supply**

Power will be supplied by Rocky Mountain Power to the Mercur Site via an existing 43.8 kV transmission line. The transmission line currently runs to the Main Mercur Project site, and it is assumed that the project will be able to tie into the existing line with a new switchgear and substation installed at the West Mercur site. The process requires a peak load of 8.0 MW and site power distribution will be at 4.16 kV. Peak demand is estimated based on preliminary electrical loads with estimated utilization and demand factors.

### **18.8.2 Site Distribution**

Power will be distributed through the site using overhead powerlines at 4.16 kV, 3 phase, 60 Hz, and stepped down to 480 V, 220 V and 110 V as required. Power will be supplied at 480 V or 220/110 V to motor control centers or distribution panels in their respective areas; power to the conveyor stacking system will be supplied at the distribution voltage. All overhead distribution power lines will be connected to the main switchgear, which will include synchronization, control panels, disconnects, circuit breakers, instrumentation and data logging.

### **18.8.3 Estimated Electrical Power Consumption**

The estimated electrical power demand for the project is presented in Table 18-2.

**Table 18-2: Mercur Project Power Demand**

Area	Attached Power (kW)	Operating Demand (kW)	Peak Demand (kW)
Area 110 – Site & Utilities General	42.8	24.0	32.1
Area 140 – Water Distribution & Treatment	315.5	130.5	172.3
Area 160 – Emergency Power	0.0	0.0	0.0
Area 190 – Mobile Equipment	0.0	0.0	0.0
Area 210 – Crushing	3,486.9	2,226.7	2,968.9
Area 350 – Conveyor Stacking	1,939.4	816.3	1,450.3
Area 400 – Heap Leach & Solution Handling	1,781.9	673.7	687.5
Area 610 – Recovery Plant	2,672.3	1,958.6	1,998.6
Area 610 – Electrowinning & Refining (incl. Recovery Plant)	414.0	304.3	310.5
Area 610 – Reagents	75.9	55.8	56.9
Area 610 – Laboratory	450.0	253.1	337.5
<b>Total</b>	<b>11,178.7</b>	<b>6,443.2</b>	<b>8,014.7</b>

#### **18.8.4 Emergency Power**

In the event of a power failure or power interruption, a diesel-fired backup generator will be used to supply emergency power for project safety and security.

To maintain critical solution balances in the solution handling systems during power outages, a 1,500-kW generator is required for the recovery area for the critical pumps. This emergency generator will be located next to the recovery plant. A fuel tank will be provided for the generator to maintain a 24-hr fuel supply. The fuel storage system will also include a concrete containment area sized for 110% of the capacity of the tank.

#### **18.8.5 Communications**

The site will be connected to the local phone and internet data network using a microwave or other through the air method. Currently, the site uses a satellite system to support basic internet and phone communications.

#### **18.9 Waste Rock Storage**

Waste rock will be managed through both ex-pit storage and in-pit backfilling, as outlined in Section 16. Ex-pit storage areas will be developed above the natural topography and constructed with overall slopes of 3:1 (horizontal:vertical) to facilitate long-term stability and allow for effective reclamation.

## **18.10 Water**

### **18.10.1 Water Supply & Distribution**

Raw water for process requirements and makeup water will be taken from the existing historical production wells located approximately 3 miles from the West Mercur site and will be pumped to a head tank for distribution to other areas. A portion of the head tank will be used to provide fire water storage.

Water from the head tank will be distributed to a water storage tank at the recovery plant and other project areas by transfer pumps. Water piping will be a combination of buried and insulated / heat traced pipes to prevent freezing.

Water rights for the historical production well are currently owned by Tooele County. An agreement to purchase water from the county will be required for the project and is not anticipated to be an issue.

### **18.10.2 Potable and Domestic Water**

Potable water is planned to be delivered to the site and distributed using a potable water storage and transfer pumping system.

### **18.10.3 Fire Water**

Fire water storage will be accommodated using the raw water head tank and will supply fire water to automatic sprinklers, standpipe systems, and hydrants as applicable. An electric fire water pump with diesel backup pump will supply fire water from the tank at the required pressure and flow rates.

## **18.11 Sewage**

Sewage for the planned operations will be treated in a sewage disposal system consisting of septic tank system with leach field.

## **19 MARKET STUDIES & CONTRACTS**

No market studies were completed, and no contracts are in place in support of this Technical Report. Gold production can generally be sold to any of a number of financial institutions or refining houses and therefore no market studies are required.

It is assumed that the doré produced at Mercur will be of a specification comparable with other gold and silver producers and as such, acceptable to all refineries.

Gold produced by the Mercur Gold Project would be sold to Bullion Banks or other financial institutions and the settlement price would be based on the then-current spot prices for gold and silver on public markets. There would be no direct marketing of the metal. The base case financial model for the project utilizes a gold price of US\$2,175/oz based on the average long-term consensus gold price from a recent survey of major brokers.

Currently, there are no contracts material to Revival that are required for property development, including mining, concentrating, smelting, refining, transportation, handling, sales and hedging and forward sales.

## SECTION 20 CONTENTS

20	Environmental Studies, Permitting & Social or Community Impact .....	20-3
20.1	Mercur Mining History and Previously Permitted Mining Activities .....	20-3
20.2	Historical Environmental Baseline Studies .....	20-3
20.3	Current Mine Water Management.....	20-3
20.4	Mercur Project Permitting Requirements .....	20-4
20.5	State Permitting Environmental Baseline Studies.....	20-5
20.5.1	Cultural Resources .....	20-5
20.5.2	Vegetation and Wildlife Resources .....	20-6
20.5.3	Water Resources.....	20-7
20.5.4	Soils Resources .....	20-8
20.5.5	Recreation .....	20-8
20.5.6	Geochemistry .....	20-9
20.6	Federal Permitting Environmental Baseline Studies .....	20-9
20.6.1	Cultural Resources .....	20-9
20.6.2	Wildlife Resources including Migratory Birds .....	20-9
20.6.3	Botanical Resources including Noxious Weeds .....	20-9
20.6.4	Soils Resources .....	20-9
20.6.5	Water Resources.....	20-9
20.6.6	Geochemistry .....	20-10
20.7	Plans to Supplement the Notice of Intention and Reclamation Plan.....	20-10
20.8	State of Utah Permitting Requirements .....	20-10
20.8.1	UDOGM Mining Permit.....	20-10
20.8.2	UDOGM Reclamation Permit .....	20-11
20.8.3	SITLA Mining Lease .....	20-11
20.8.4	UDEQ Air Quality Permit .....	20-11
20.8.5	UDEQ Groundwater Discharge Permit.....	20-11
20.8.6	UDWR Dam Safety Permit .....	20-11
20.8.7	Other Permits Required for Mining Projects in Utah.....	20-11
20.9	Federal Permitting .....	20-12
20.9.1	Rights-of-Way Bureau of Land Management .....	20-12
20.9.2	Other Potential Permits Required on Federal Lands.....	20-13
20.9.3	National Environmental Policy Act.....	20-13
20.10	Tooele County Agreements and Permits .....	20-13
20.11	City of Tooele Water Rights Agreement .....	20-14

20.12	Social or Community Related Requirements and Plans .....	20-14
20.13	Mine Closure Requirements and Costs .....	20-14
20.14	References .....	20-15

## **SECTION 20 TABLES**

Table 20-1: Potential Permits for the Mercur Gold Project .....	20-4
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## **20 Environmental Studies, Permitting & Social or Community Impact**

### **20.1 Mercur Mining History and Previously Permitted Mining Activities**

The Mercur Project area began with underground mining of small bonanza-grade silver deposits in 1870-1881. Sedimentary rock-hosted, disseminated gold deposits (Carlin-type) were discovered at Mercur in 1883 and in 1890, the first commercial use of cyanide for gold extraction was developed and used at Mercur until 1917. Renewed activity occurred on a small scale between 1931 and 1945. In the 1970s and early 1980s, Getty Oil Company consolidated a large land position at Mercur and Homestake Mining Company consolidated a large land position around the historical underground mines at South Mercur. Getty's work ultimately led to the development of the Mercur open pit mine and CIL mill complex in 1983. In 1985, Getty sold the Mercur mine to a subsidiary of American Barrick Resources Corporation (later renamed Barrick Gold Corporation). Barrick added a dump leach circuit for low-grade material and added an autoclave to pretreat refractory material for the CIL mill. Mining ended and Barrick initiated final closure work in 1998. Ensign Minerals initiated consolidation of the district and exploration activities in 2020.

Revival Gold acquired Ensign Minerals and the Mercur Gold Project in May 2024. The project consists of approximately 6,628 hectares (16,378 acres) of mineral interests in Utah's Mercur District, where the known mineralization occurs primarily on patented claims. The property holdings include Mercur, West Mercur, South Mercur and North Mercur. Most reclamation activities have been successfully completed; however, final closure of heap leach areas, tailing impoundments, and facilities decommissioning continue under Barrick permits.

### **20.2 Historical Environmental Baseline Studies**

Barrick completed numerous baseline studies prior to obtaining permits for mining (Barrick, 1998). These studies included hydrology studies, wildlife and botanical surveys, and cultural resource studies and mitigation. There were no known sensitive resource issues identified at that time, and none are expected in any new proposed mining operations.

### **20.3 Current Mine Water Management**

Barrick has a current Utah Department of Environmental Quality ("UDEQ") Groundwater Quality Discharge Permit – No. UGW450002 that is transferrable. Any significant changes to the current site water management approach would require a permit modification or a new permit, which includes a 30-day public comment period.

## 20.4 Mercur Project Permitting Requirements

The primary regulatory authorities that would be involved in future Project permitting include Utah Division of Oil, Gas, & Mining (“UDOGM”), UDEQ, Utah State Historic Preservation Office (“SHPO”), and the U.S. Bureau of Land Management (“BLM”).

UDOGM has a very organized approach for permitting on State of Utah lands. Required forms for exploration and mining applications define topics and requirements that must be addressed prior to approval. The primary resource that needs detailed surveys and reports relates to cultural resources. Other resources such as wildlife and botany are covered initially through desktop analysis using existing official databases. This includes the federal Endangered Species Act of 1973 (“ESA”) (16 U.S.C.A. §§ 1531 et seq.). If sensitive or endangered species are identified then field surveys, at the relevant time of year, and reports are required. Noxious weed identification and control is required. Hydrologic studies are generally required; however, the work completed by Barrick for previous mining would likely suffice for future mining as groundwater aquifers are very deep and not impacted by mining activities. Some perched aquifers are present due to karst features in limestone but are minor.

School and Institutional Trust Lands Administration (“SITLA”) works with UDOGM to determine any impacts to SITLA Trust Lands. Leases can be negotiated for Trust Lands utilized for waste rock and tailings storage facilities, or other processing operations. A royalty collected for educational purposes is required for Trust Lands that contain mined economic minerals.

Permits on BLM-administered land (federal) are more extensive and analysis under the National Environmental Policy Act (“NEPA”) is required to determine impacts to federal land.

A summary of the major permits for the Project is provided in Table 20-1. It is noted that not all the identified permits may be required for the Mercur Project.

**Table 20-1: Potential Permits for the Mercur Gold Project**

Permit	Authority
<b>Utah State Permits</b>	
Notice of Intention (“NOI”) for a Large Mining Operation (R647-4-103).	Utah Division of Oil, Gas, & Mining (“UDOGM”)
Reclamation Plan Form MR-REV Utah Mined Land Reclamation Act of 1975 “Amended and New Rules, Mineral Reclamation Program” (R647-1 through 5).	UDOGM
Mineral and Material Resources, Mineral Leases and Material Permits: Royalties and Leases (R850-24).	Utah School and Institutional Trust Lands Administration (“SITLA”)
Title V Air Quality Operating Permit	Utah Department of Environmental Quality (“UDEQ”)/ Division of Air Quality
Groundwater Discharge Permit	UDEQ/ Division of Water Quality

Permit	Authority
Permit to Operate a Solid Waste Landfill	UDEQ/Division of Waste Management & Radiation Control
Hazardous Waste Management Permit	UDEQ/Division of Waste Management & Radiation Control
Utah Pollutant Discharge Elimination System Permit	UDEQ/ Division of Water Quality
Multi-Sector General Stormwater Discharge Permit	UDEQ/Division of Water Quality
Permit to Construct a Dam (required for pregnant solution storage ponds)	Utah Division of Water Rights (“UDWR”) Dam Safety Section
Potable Water System Permit	UDEQ/Division of Drinking Water
Large Underground Wastewater Disposal System Permit	Utah Division of Water Quality Wastewater Program
Blasting Permit	Utah State Fire Marshal
State Business License	Utah Division of Corporations and Commercial Code
<b>Federal Permits</b>	
Right-of-Way (43 CFR Part 2800). Discretionary permit required for haul road corridor on BLM-administered land and water pipeline from wellhead to processing facility).	Bureau of Land Management
Explosives Permit	U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives
EPA Hazardous Waste ID No.	U.S. Environmental Protection Agency
Notification of Commencement of Operations	Mine Safety and Health Administration
Federal Communications Commission Permit	Federal Communications Commission
<b>Local Permits for Tooele County</b>	
Building Permit	Tooele County
Business License	Tooele County
Conditional Use Permit	Tooele County
Road Agreement	Tooele County
Use of Existing Water Rights and wells	City of Tooele

State and federal permits to support future mining activities will require environmental baseline studies and descriptions of those studies are discussed herein.

## 20.5 State Permitting Environmental Baseline Studies

### 20.5.1 Cultural Resources

For private land, no permit/authorization for a cultural survey is required from any agency (patented mining claims are private land). The landowner can make the decision to conduct a cultural survey. Permission of non-operator-controlled landowners is required; however, this has not been a problem in the past. A cultural survey and report are only valid for 10 years. At this point everything for a new mining project will need to be re-evaluated. The Barrick disturbed areas that have been mined do not need to be re-surveyed; however, the cultural report must discuss what was originally found and what is there now (i.e., mine dump, open pit, etc.), and how any

eligible site was mitigated. Only new areas need to be surveyed. Block studies where potential impacts are expected through new disturbance are encouraged and can be conducted at any time on non-federal land. Once the survey is conducted and the findings are documented in a report, the report is submitted to the UDOGM archaeologist who determines if there are issues or impacts not addressed. When UDOGM is satisfied, the report is submitted to SHPO. SHPO either concurs or requires additional information. UDOGM deals directly with SHPO. Any eligible site that cannot be avoided must be mitigated (treated). For example, Barrick provided student internships/research at local universities to mitigate the historic Mercur townsite.

Any Trust Lands administered by SITLA must also be cleared with a cultural survey and can be completed at the same time as private land and included in the same report. SITLA does not have any archaeologists and works with UDOGM to determine if there are any impacts. A lease and/or a royalty agreement needs to be negotiated with SITLA prior to any disturbance on Trust Lands.

It is our understanding that all the known archaeological sites at Mercur are associated with historical mining in the area.

#### **20.5.2     Vegetation and Wildlife Resources**

Site-specific vegetation studies were conducted by Mariah Associates in 1980. These studies were patterned after UDOGM's guidelines for vegetative studies at surface coal mines. Fifty meter-spaced transects (150 feet) were randomly located in the original proposed disturbance areas and on control sites outside the proposed disturbed sites. The same transects were surveyed again in 1985 to determine the extent of change in ground cover during that period. In September 1996, a vegetation study was conducted to describe plant communities for the reclamation plan. Details of these studies are included in Barrick's Notice of Intention ("NOI") and Reclamation Plan (Barrick, 1998).

Wildlife studies were completed by Mariah Associates in 1981. JBR Environmental Consultants, Inc. then conducted additional studies on bald eagle use areas, raptor nests in disturbance areas, and raptor and mule deer use of the permit area. The Mercur Canyon area extends from the low valley elevations at ~6,500 feet above mean sea level ("amsl") to the higher elevations of Lewiston Peak at 10,411 feet amsl. Vegetation communities change with elevation providing a variety of wildlife habitat. The change in vegetation communities from low to higher elevations include sagebrush communities, piñon-juniper woodlands, mixed brush community, the most extensive community in the area, aspen – sagebrush parklands, and subalpine communities on Lewiston Peak. Many of the wildlife species utilizing the higher elevations either migrate south during the winter months or move to lower elevations. Details of these studies are included in Barrick's NOI and Reclamation Plan (Barrick, 1998).

For new undertakings, UDOGM requires a desktop analysis of potential biological resources. If a newly identified special status/endangered species is determined to be present, additional field work will be required. During Barrick's tenure at the project there were no special status species identified that would be impacted by mining. Any noxious weed infestations would be treated in conformance with UDOGM practices.

### **20.5.3 Water Resources**

#### **20.5.3.1 Surface Waters**

The Mercur Mine is located near the headwaters of Mercur Canyon, an ephemeral canyon that drains westward into Rush Valley. Due to the high infiltration, low precipitation and high evaporation that characterize the site, runoff from the canyon is minimal. Most of the water is lost to infiltration in the slopes at the canyon mouth (Barrick, 1998). Due to the ephemeral nature of intermittent flow in most of the canyons along the eastern side of Rush Valley, undisturbed stream water-quality data are very limited. However, available data suggest total dissolved solids concentrations are normally less than 500 milligrams per liter (mg/l) upstream of the canyon mouths (Barrick, 1998). Total suspended solids concentrations are probably in excess of several thousand mg/l, as is typical of ephemeral drainage basins.

Stream flows within all sub-basins in Mercur Canyon, including the main Mercur Canyon drainage, are ephemeral. Due to the ephemeral nature of intermittent flows in the area, undisturbed streamflow data is not available. Estimates of peak flow during storm events from upgradient drainage basins and sub-basins were derived using from estimates of past peak flows in the downgradient channel and from the Soil Conservation Service Curve Number method to generate synthetic hydrographs (Barrick, 1998).

Examination of the Mercur USGS 7.5 minute topographic map shows five distinct upgradient ephemeral drainage basins, which contribute runoff to the permitted area from the north.

#### **20.5.3.2 Groundwater**

Bedrock in the vicinity of the operations consists of interbedded limestones, shales and clastic units which generally dip to the east or northeast. The shale lithologies act as aquicludes while the main aquifer flow occurs in the limestones. The limestones are aquifers by nature of their secondary permeability, which can be quite variable depending on the local fracture frequency and aperture size. Drill holes completed in the limestones are generally dry unless they intercept perched water on top of the Long Trail Shale. Although exploration and monitoring drill holes encountered groundwater at depths of over 1,000 feet in the vicinity of the operations, attempts

in 1981-1982 to develop a source of groundwater in the operations area was unsuccessful. It was acknowledged by UDOGM, that no viable aquifers are located in Mercur Canyon (Barrick, 1998).

Infiltration from the snowmelt in the Mercur area is thought to migrate four to five miles down dip to the east where it recharges the Cedar Valley alluvial aquifers (Barrick, 1998). Most of this recharge likely occurs as a result of groundwater flow in the Oquirrh Formation, which overlies the Manning Canyon Shale. The groundwater contained in the limestones in Cedar Valley occurs entirely within the alluvium, with none below the Manning Canyon Shale. Since most of the Mercur Mine operations were located in rocks stratigraphically below the Manning Canyon Shale, effects on the local groundwater, if any, were not expected to impact the Cedar Valley aquifers. Well records from the State Engineer's Office indicate the water wells in Cedar Valley are completed in the alluvium and none have penetrated the Manning Canyon Shale (Barrick, 1998).

Hydrologic studies are generally required; however, the work completed by Barrick (Barrick, 1998) for previous mining would likely suffice for future mining operations as groundwater aquifers are very deep and have not been impacted by previous mining activities. Some perched aquifers are present due to karst features in limestone. There is one seep/spring in an area of existing disturbance but no perennial streams. There are no waters of the United States identified in the project area. The current scenario for mining would not be appreciably different than the mining conducted by Barrick.

#### **20.5.4     Soils Resources**

Detailed mapping, sampling, and description of soils were performed in the permit area and a reconnaissance type survey was completed outside of this area for Barrick's original Mercur Mine application. The purpose of the soils assessment was to provide an understanding of which topsoil materials would be impacted by the proposed project and provide a basis for designing methods for proper removal, handling, storage and replacement of topsoil materials (Barrick, 1998). Any areas not covered by soil surveys under the original work completed by Barrick would require soil surveys prior to disturbance.

#### **20.5.5     Recreation**

Recreation use is very heavy in the Oquirrh Mountains because of the proximity to the metropolitan areas along the Wasatch Front. Off-road vehicle enthusiasts utilize the area year-round for unregulated travel and other organized activities. Relic hunters have used the area extensively in the past and historic sites have been vandalized (Barrick, 1998). Modern recreational use would need to be assessed.

### **20.5.6 Geochemistry**

Revival has not yet initiated a geochemical characterization program. The geochemical analysis completed for Barrick's Mercur Mine would not likely need to be updated because there are no new rock types to be considered.

## **20.6 Federal Permitting Environmental Baseline Studies**

### **20.6.1 Cultural Resources**

The National Historic Preservation Act [16 U.S.C. 470h-2(a)(2)(E)(ii)] and the Section 106 implementing regulations, require federal agencies to consult with other parties in the course of the Section 106 process. Section 106 includes government to government consultation between the federal and Tribal entities. This is ongoing throughout the NEPA process. Any Class III cultural surveys on BLM-administered land require a field authorization and these permits can take up to six months to obtain for plan of development-level work for a ROW. It is recommended to complete a block area survey, i.e., a larger area than the currently proposed ROW corridors for the haul road and water conveyance to provide for avoidance of any eligible sites along the route. The report needs to be completed and submitted to the BLM that works with SHPO for concurrence of identified resources and impacts. The SHPO must concur or approve the historic/cultural resources assessment provided by the permitting agencies. This scope of work needs consultation with the BLM ROW specialists.

### **20.6.2 Wildlife Resources including Migratory Birds**

General wildlife surveys, including migratory birds, would likely be required for the ROW routes. These surveys would be initiated after pre-ROW meetings with the BLM wildlife specialists.

### **20.6.3 Botanical Resources including Noxious Weeds**

Vegetation surveys, including noxious weed identification, would be required for the ROW routes. These surveys would be initiated after pre-ROW meetings with the BLM vegetation specialists.

### **20.6.4 Soils Resources**

Soils surveys would be conducted or a desktop analysis utilizing existing data would be required. These surveys would be initiated after pre-ROW meetings with the BLM soils specialist.

### **20.6.5 Water Resources**

There are no surface water resources in the potential ROWs. Surface disturbing activities associated with the haul road or upkeep of existing water conveyance routes would have no

impact on groundwater aquifers. The BLM ROW hydrology specialist would provide input for water resources.

#### **20.6.6 Geochemistry**

The potential haul road route could intersect historical mining tailings. An analysis of these tailings needs to be completed. Potential mitigation could involve the use of inert local limestone/limy sediments as road building material rather than disturbing the tailings. The BLM ROW geochemistry specialist would provide input concerning existing historical tailings.

### **20.7 Plans to Supplement the Notice of Intention and Reclamation Plan**

Barrick provided the following management plans in their NOI and Reclamation Plan (Barrick, 1998):

- Topsoil Management Plan
- Runoff and Sediment Control Plan
- Rock Characterization and Handling Plan
- Reclamation Plan
- Monitoring Plan

Similar plans would be developed for continued mining of the Mercur deposits. Additional plans could be required for future work and would be determined by the agencies involved.

### **20.8 State of Utah Permitting Requirements**

All mining and processing activities will occur on land managed by the State of Utah. The majority of the land slated for mining is private. The State of Utah requires a number of operational mining permits regardless of the land status.

#### **20.8.1 UDOGM Mining Permit**

A UDOGM NOI to Commence Large Mining Operations applies only to mining operations that will disturb more than five surface acres in incorporated areas or more than ten acres in unincorporated areas. The requirements for the NOI are outlined in Section R647-4-103.

### **20.8.2 UDOGM Reclamation Permit**

In accordance with Utah Admin. Code 647-4-110, Reclamation Plan, each NOI processed by UDOGM requires a reclamation plan including maps or drawings as necessary, consisting of a narrative description of the proposed reclamation.

### **20.8.3 SITLA Mining Lease**

Information for activities on SITLA Trust Lands is detailed in Section R850-24, Mineral and Material Resources, Mineral Leases and Material Permits: Royalties and Leases.

### **20.8.4 UDEQ Air Quality Permit**

The Permitting Branch is responsible for issuing permits to commercial and industrial pollution sources in Utah. A New Source Review Approval Order is required if emissions of criteria pollutants are five tons per year or greater, or hazardous air pollutant (“HAP”) emissions are greater than 500 pounds per year for an individual HAP or 2000 pounds for all HAPs combined. Title V permits (Operating Permits) are required for major sources, incinerators, landfills, and acid rain (Title IV) sources. The Clean Air Act is a federal law covering the entire country. Under this law, EPA sets limits on how much of a pollutant can be in the air anywhere in the United States. The Utah Conservation Act under Title 19, Chapter 2 of the Utah Code empowers the Utah Air Quality Board to enact rules pertaining to Air Quality activities.

### **20.8.5 UDEQ Groundwater Discharge Permit**

The Groundwater Discharge Permit prevents degradation of groundwater from mining and establishes minimum facility design and containment requirements.

### **20.8.6 UDWR Dam Safety Permit**

The UDWR Permit to Construct a Dam, Dam Safety Section regulates any impoundment impounding more than 20 acre-feet. Process water ponds associated with the heap leach facility pregnant solution management will require dam safety permits.

### **20.8.7 Other Permits Required for Mining Projects in Utah**

- UDEQ/Division of Waste Management & Radiation Control Permit to Operate a Solid Waste Landfill: Requires authorization to operate an on-site landfill.
- UDEQ/Division of Waste Management & Radiation Control Hazardous Waste Management Permit: Required for management of hazardous wastes if greater than 2,200 pounds of hazardous wastes are generated monthly.

- UDEQ/Division of Water Quality Utah Pollutant Discharge Elimination System Permit: requires a general permit for management of site discharges if treated groundwater is involved.
- UDEQ/Division of Water Quality Management Multi-Sector General Stormwater Discharge Permit: Required for management of site stormwater discharges in compliance with federal Clean Water Act, based on Standard Industrial Code.
- UDEQ/Division of Drinking Water Potable Water System Permit: Required for non-transient non-community water system for drinking water and other domestic uses (e.g., lavatories), if there are plans to construct and operate a potable water system.
- Utah Division of Water Quality Wastewater Program Large Underground Wastewater Disposal System Permit: The design, operation, and monitoring of septic and sewage disposal systems would be required if a septic system(s) is proposed.
- Utah State Fire Marshal Blasting Permit: Required to maintain, store, use or handle explosive materials.
- Utah Division of Corporations and Commercial Code State Business License: License is required to operate in the State of Utah.

## 20.9 Federal Permitting

The only projected activities to occur on BLM-administered land are right(s)-of-way (“ROW”) for a haul road to transfer ore to the processing facility and a water conveyance pipeline, a portion of which is already in place.

### 20.9.1 Rights-of-Way Bureau of Land Management

Under 43 CFR Part 2800, a ROW authorizes specific use of parcels of public land for a specified period of time that is appropriate for the life of the project. The BLM has discretion to grant a ROW when doing so is in the public interest. A ROW is needed whenever an operator proposed to build on public land or conduct any activity that would involve appreciable disturbance, alteration or damage to public lands.

A pre-application meeting with the BLM is required to access the proposed ROW(s). A completed SF-299 form that includes details of the project is then prepared. Once the complete SF-299 is submitted -- including maps, a plan of development (“POD”) and other project details – the BLM will evaluate the application to ensure that it conforms with the relevant resource management plan (“RMP”) for the area and determine there are no conflicts with other authorizations or valid existing rights.

### 20.9.2 Other Potential Permits Required on Federal Lands

- U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives Permit: Required if storage and use of explosives are required for development of the haul road.
- U.S. Environmental Protection Agency Registration EPA Hazardous Waste ID Number: This could apply to disturbance of historical tailings as a small-quantity generator of wastes regulated as hazardous.
- Mine Safety and Health Administration Mine Notification of Commencement of Operations: Safety issues, training plan, and mine registration is required for all mining operations in Utah. The haul road may be exempt.
- Federal Communications Commission Federal Communications Commission Permit: Required for frequency registrations for radio/microwave communication facilities if business radios are used to transmit on separate mine frequency

### 20.9.3 National Environmental Policy Act

The level of environmental analysis is determined by the BLM and could include a categorical exclusion (“CX”), a Determination of NEPA Adequacy (“DNA”), an Environmental Assessment (“EA”), or an Environmental Impact Statement (“EIS”). It is likely the analysis would be covered under an EA due to the lack of sensitive resources and the studies that were covered for Barrick’s Mercur Mine. Baseline surveys for all BLM-identified resources will be completed for the analysis. A list of potential baseline is described in Section 20.1.

### 20.10 Tooele County Agreements and Permits

The Tooele County Zoning Commission presently classifies the Mercur area as MG (General Manufacturing) with a minor number of parcels zoned as MU-40 (Multiple Use). The road that traverses Mercur Canyon up to the locked mine gate is a county road. For this road to be modified and used as a mine haul road a new agreement with Tooele County will be required. In addition, Tooele County requires several permits associated with building and operating a mine at Mercur including:

- Tooele County Building Permit: Required to ensure compliance with local building codes and requirements.
- Tooele County Business License: Required for all businesses conducted within the unincorporated areas of the county.
- Tooele County Conditional Use Permit: A conditional use permit is required for all uses listed as conditional uses in the zoning district regulations where they are, or will be

located, or if the use is specified as conditional use elsewhere in this Tooele County Land Use Ordinance.

- Tooele County Road Agreement: May be required for the re-alignment of the County Road through Mercur Canyon following mine closure.

### **20.11 City of Tooele Water Rights Agreement**

An agreement with the City of Tooele for the use of existing water rights and wells will be required. Barrick developed this resource for the Mercur Mine and after mining was completed, turned the resource over to the City of Tooele.

### **20.12 Social or Community Related Requirements and Plans**

The project is located in a rural part of Tooele County whose population in 2023 was 82,051. The nearest sizeable community is the City of Tooele with a population in 2023 of 39,263. The City of Tooele has grown as a bedroom community to Salt Lake City 34 miles to the northeast. Salt Lake City in 2023 had a population of 209,593. There are no social or community related requirements and plans for the Mercur project. The local community benefits from high paying jobs in a variety of occupations. In general, Utah is a pro-industry state. Most State of Utah permit applications are available for public comment prior to final approval by the agencies. The BLM is required to invite public comment for NEPA actions on BLM-administered land.

### **20.13 Mine Closure Requirements and Costs**

In accordance with Utah Admin. Code 647-4-110, Reclamation Plan, each NOI processed by UDOGM requires a reclamation plan including maps or drawings as necessary, consisting of a narrative description of the proposed reclamation including, but not limited to these items found in Code 657-4-110:

- A statement of the current land use and proposed post-mining land use for the disturbed area;
- A description of the manner and the extent to which roads, highwalls, slopes, impoundments, drainages, pits and ponds, piles, shafts and adits, drill holes, and similar structures will be reclaimed;
- A detailed description of any surface facilities to be left as part of the post-mining land use, including but not limited to buildings, utilities, roads, pads, ponds, pits, and surface equipment;

- A description of treatment, location and disposition of any deleterious or acid-forming materials generated and left on site, including a map showing the location of such materials upon the stabilization procedures, topsoil replacement, seed bed preparation, seed mixture(s) and rate(s), and timing of seeding (fall seeding is preferred timing);
- Where there is no original protective cover, an alternate practical procedure must be proposed to minimize or control erosion or siltation; and,
- A statement that the operator will conduct reclamation as required by these rules.

The BLM requires actions to terminate the use of ROWs and how the ROW area will be rehabilitated. All facilities will be removed with the exception of the water pipeline.

To the extent practicable, reclamation and closure activities will be conducted concurrently to reduce the overall reclamation and closure costs, minimize environmental liabilities, and limit bond exposure.

At the current phase of the Mercur project, a reclamation cost estimate has not yet been developed.

## **20.14      References**

Barrick Resources (USA) Inc. (Barrick). 1998. Notice of Intention to Amend Mining and Reclamation Plan for the Mercur Mine – M/045/017-88(1).

## SECTION 21 CONTENTS

21	CAPITAL & OPERATING COSTS.....	21-3
21.1	Capital and Operating Costs Summary .....	21-3
21.2	Capital Expenditures.....	21-4
21.2.1	Mining Capital Costs.....	21-5
21.2.2	Process and Infrastructure Capital Cost Estimate .....	21-7
21.2.3	Construction Indirect Costs & Other Owner Construction Costs .....	21-10
21.2.4	Engineering, Procurement and Construction Management .....	21-11
21.2.5	Contingency .....	21-11
21.2.6	Working Capital and Initial Fills .....	21-12
21.2.7	Project Sustaining Capital .....	21-12
21.2.8	Exclusions .....	21-13
21.3	Operating Expenditures .....	21-13
21.3.1	Mining Operating Costs .....	21-14
21.3.2	Detailed LOM Mining Cost Estimate.....	21-14
21.3.3	Process Operating Costs.....	21-20
21.3.4	General and Administrative .....	21-24
21.4	Reclamation and Closure Costs .....	21-24

## SECTION 21 TABLES

Table 21-1:	Capital Cost Summary .....	21-3
Table 21-2:	Operating Cost Summary .....	21-4
Table 21-3:	Preproduction Capital Cost Summary .....	21-5
Table 21-4:	Mine Capital Costs Summary .....	21-6
Table 21-5:	Process & Infrastructure Pre-Production Capital Costs by Discipline .....	21-8
Table 21-6:	Project Preproduction Contingency.....	21-12
Table 21-7:	Mine Operating Cost Summary.....	21-14
Table 21-8:	Yearly Mining Cost Estimate .....	21-16
Table 21-9:	Mining General Services Cost Estimate.....	21-17
Table 21-10:	Mine Maintenance Cost Estimate .....	21-18
Table 21-11:	Drilling Cost Estimate.....	21-18
Table 21-12:	Yearly Blasting Cost Estimate.....	21-19
Table 21-13:	Yearly Loading Cost Estimate.....	21-19

Table 21-14: Yearly Haulage Cost Estimate .....	21-20
Table 21-15: Yearly Support Cost Estimate .....	21-20
Table 21-16: Process and Support Services Annual Operating Costs.....	21-21

## 21 CAPITAL & OPERATING COSTS

### 21.1 Capital and Operating Costs Summary

Capital and operating cost expenditures (“CAPEX” and “OPEX”, respectively) for the process, infrastructure, and general and administrative (“G&A”) components of the Project were estimated by KCA. CAPEX and OPEX for them mining components of the Project were estimated by RESPEC. Reclamation and closure costs were estimated by KCA as an allowance based on total tons of material processed. All CAPEX and OPEX estimates were based on first quarter 2025 US dollars and are considered to have an accuracy of +/-35%.

The total Life of Mine (“LOM”) CAPEX for the Project is \$344.3 million, which includes all applicable sales tax and costs for reclamation and closure and excluding working capital which is estimated at \$13.9 million. Table 21-1 presents the CAPEX requirements for the Project.

**Table 21-1: Capital Cost Summary**

Description	Costs (\$,000)
<b>Pre-Production Capital</b>	
Process & Infrastructure (including spare parts)	\$115,036
Mining Capital & Mining Pre-Production	\$32,586
Indirect & Owner's Costs	\$4,258
Engineering, Procurement & Construction Management (EPCM)	\$13,804
Contingency	\$28,753
<b>Total Pre-Production Capital</b>	<b>\$194,439</b>
<b>Working Capital &amp; Initial Fills</b>	
Mining Working Capital	\$9,343
Process Working Capital	\$3,782
G&A Working Capital	\$567
Initial Fills	\$201
<b>Total Working Capital</b>	<b>\$13,893</b>
<b>Total Pre-Production &amp; Working Capital</b>	<b>\$208,332</b>
<b>Sustaining Capital</b>	
Process & Infrastructure	\$13,496
Indirect & EPCM	\$2,024
Mining	\$87,132
Contingency	\$7,461
<b>Total Sustaining Capital</b>	<b>\$110,113</b>
Reclamation & Closure Allowance	\$39,790
<b>LoM Total Capital Costs (Excluding Working Capital)</b>	<b>\$344,342</b>

Table 21-2 presents the LOM operating cost requirements for the Project.

**Table 21-2: Operating Cost Summary**

Description	Operating Cost (\$/ton processed)
Mining OPEX	\$10.38
Processing & Support OPEX	\$4.20
G&A OPEX	\$0.63
<b>Total OPEX</b>	<b>\$15.21</b>

Sales Tax is excluded from the operating cost estimate.

## **21.2 Capital Expenditures**

The CAPEX estimates were developed based on the designs outlined in this PEA. The scope of these costs includes all preproduction and sustaining capital expenditures for mining and process facilities and equipment, mine preproduction, infrastructure, and construction indirect costs for the Project.

CAPEX estimates were made primarily from budgetary supplier quotes for all major and most minor equipment as well as contractor quotes for major construction contracts. Where Project specific quotes were not available, an estimate was developed based on recent quotes from similar projects.

All CAPEX estimates were based on the purchase of equipment quoted new from the manufacturer or estimated to be fabricated new.

Construction costs by area are presented in Table 21-3. Numbers may not sum due to rounding.

**Table 21-3: Preproduction Capital Cost Summary**

<b>Process &amp; Infrastructure Direct Costs</b>	<b>Supply Cost (\$,000)</b>	<b>Install Cost (\$,000)</b>	<b>Total Cost (\$,000)</b>
Area 0110 – Site & Utilities General	\$4,962	\$9,055	\$14,017
Area 140 – Water Distribution & Treatment	\$1,730	\$682	\$2,412
Area 160 – Emergency Power	\$1,178	\$325	\$1,503
Area 190 – Mobile Equipment	\$3,660	\$0	\$3,660
Area 210 – Crushing	\$18,589	\$5,816	\$24,405
Area 220 – Secondary Crushing	\$0	\$0	\$0
Area 350 – Conveyor Stacking	\$14,420	\$3,669	\$18,089
Area 400 – Heap Leach & Solution Handling	\$9,317	\$20,866	\$30,183
Area 610 – Recovery Plant	\$12,981	\$2,990	\$15,971
Area 610 – Electrowinning & Refining	\$6	\$7	\$13
Area 610 – Reagents	\$293	\$321	\$614
Area 610 – Laboratory	\$2,157	\$600	\$2,757
<b>Process &amp; Infrastructure Direct Costs Totals</b>	<b>\$69,292</b>	<b>\$44,333</b>	<b>\$113,625</b>
Spare Parts	\$1,412		\$1,412
<b>Sub Total with Spare Parts</b>			<b>\$115,037</b>
Mine Equipment (Leased)			\$13,809
Other Support Equipment			\$8,909
Mine Pre-Production			\$9,868
<b>Mining Totals</b>			<b>\$32,586</b>
Indirect Field Costs			\$1,838
Owner's Construction Costs			\$2,420
EPCM			\$13,804
Contingency			\$28,753
<b>TOTAL Pre-Production Capital Cost Excluding Working Capital)</b>			<b>\$194,439</b>
Working Capital (45 days)			\$13,692
Initial Fills			\$201
<b>Total Pre-Production &amp; Working Capital</b>			<b>\$208,332</b>

### 21.2.1 Mining Capital Costs

Mine CAPEX for this PEA assumes owner operations of mining equipment and was based on the equipment and facilities required to achieve the production schedule. Capital costs were estimated based on recent vendor quotations, estimation guides, and benchmarks of recent costs for similar projects. Mining capital includes assumptions for leased-to-own equipment along with equipment purchases. These assumptions include terms of 20% down and 7.63% annual effective interest rates for primary and support equipment while mine maintenance equipment is

planned to be purchased outright. The down payments and principal portions of quarterly payments have been applied to capital while quarterly interest payments are applied to operating costs.

Leased-to-own equipment includes production drills, one large loader, a hydraulic shovel, haul trucks, dozers, graders, water trucks, equipment hauler, and backhoe. The mining capital estimate is summarized by year in Table 21-4.

**Table 21-4: Mine Capital Costs Summary**

<b>Total Mining Capital</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Total</b>
Primary Equipment	KUSD	\$ 4,928	\$12,696	\$ 8,153	\$ 8,793	\$ 9,484	\$13,944	\$ 3,415	\$ 1,923	\$ 2,074	\$ 2,237	\$ 586	\$ 68,234
Support Equipment	KUSD	\$ 6,608	\$ 4,302	\$ 4,007	\$ 4,322	\$ 4,661	\$ 4,722	\$ 267	\$ -	\$ -	\$ -	\$ -	\$ 28,888
Blasting Equipment	KUSD	\$ 107	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 107
Mine Maintenance Equipment	KUSD	\$ 2,166	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,166
Other Mine Capital	KUSD	\$ 8,909	\$ 1,310	\$ -	\$ -	\$ 230	\$ 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,455
Mine Preproduction	KUSD	\$ 9,868	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,868
Mining Equipment Salvage	KUSD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (205)	\$ (17,422)	\$ (17,626)
<b>Total Mine Capital</b>	<b>KUSD</b>	<b>\$32,586</b>	<b>\$18,309</b>	<b>\$12,160</b>	<b>\$13,115</b>	<b>\$14,374</b>	<b>\$18,672</b>	<b>\$ 3,682</b>	<b>\$ 1,923</b>	<b>\$ 2,074</b>	<b>\$ 2,032</b>	<b>\$ (16,835)</b>	<b>\$102,092</b>

The primary equipment category includes production drilling equipment, 150-ton haul trucks, and the hydraulic shovel and loader. This estimate is for all costs including the delivery of the equipment. The estimated, LOM primary equipment capital cost is approximately \$68.2 million.

Support equipment includes all equipment required to support the primary fleet such as dozers, motor graders, water trucks, and pit pumps. The estimated, LOM support equipment capital cost comprises \$28.9 million.

Mine maintenance equipment includes supporting maintenance equipment such as fuel and lube equipment, mechanics trucks and tire handling equipment. The capital cost associated with the mine maintenance equipment is \$2.2 million.

Other mine capital generally comprises costs related to mining from fixed equipment or structures. The costs associated with this category are items such as explosive storage facilities, maintenance shop construction and outfitting, access road construction, and mine office construction and equipping. This category of costs totals approximately \$10.5 million over the life of mining.

The largest component of mining capital is for pre-stripping during year -1. This is based on the mining operating costs which are discussed in Section 21.3. Total pre-stripping costs were estimated to be \$9.9 million, bringing the total mining capital cost to \$102 million as shown in Table 21-4.

The total mining capital estimate also includes the salvage value that is estimated to exist at the end of mining. Most equipment utilized in this project will be fully utilized during mining; however,

some support equipment will have remaining value. The value estimated for salvage is \$17.6 million.

## **21.2.2 Process and Infrastructure Capital Cost Estimate**

### **21.2.2.1 Process and Infrastructure Capital Cost Basis**

All equipment and material requirements are based on the design information described in previous sections of this PEA. Budgetary capital cost estimates were developed based on Project specific quotes or recent quotes from similar projects in KCA's files for all major and most minor equipment. Where recent quotes were not available, reasonable cost estimates or allowances were made based on cost guide data. All capital cost estimates were based on the purchase of equipment quoted new from the manufacturer or to be fabricated new.

Each area from Table 21-3 in the process cost build-up was separated into the following disciplines, as applicable:

- Major earthworks & liner;
- Civil (concrete);
- Structural steel;
- Platework;
- Mechanical equipment;
- Piping;
- Electrical;
- Instrumentation; and
- Infrastructure & Buildings.

Pre-production process and infrastructure costs by discipline are presented in Table 21-5.

**Table 21-5: Process & Infrastructure Pre-Production Capital Costs by Discipline**

<b>Process &amp; Infrastructure Totals</b>	<b>Cost @ Source (\$,000)</b>	<b>Freight Cost (\$,000)</b>	<b>Sales Tax (\$,000)</b>	<b>Supply Cost (\$,000)</b>	<b>Install Cost (\$,000)</b>	<b>Total Cost (\$,000)</b>
Major Earthworks & Liner	\$4,320	incl	\$285	\$4,605	\$29,085	\$33,691
Civils (Supply & Install)	\$8,609	incl	incl	\$8,609	incl	\$8,609
Structural Steelwork (Supply & Install)	\$2,172	incl	incl	\$2,172	incl	\$2,172
Platwork (Supply & Install)	\$2,622	incl	incl	\$2,622	\$1,391	\$4,013
Mechanical Equipment	\$35,294	\$3,163	\$2,088	\$40,545	\$9,508	\$50,053
Piping	\$3,284	\$305	incl	\$3,589	\$1,255	\$4,844
Electrical	\$4,435	\$391	\$219	\$5,044	\$2,390	\$7,434
Instrumentation	\$816	\$33	\$27	\$877	\$365	\$1,241
Infrastructure	\$1,088	\$70	\$72	\$1,229	\$338	\$1,567
<b>Total Process &amp; Infrastructure Direct Costs</b>	<b>\$62,640</b>	<b>\$3,962</b>	<b>\$2,691</b>	<b>\$69,292</b>	<b>\$44,333</b>	<b>\$113,625</b>

Freight, sales tax, and installation costs were also considered for each discipline. Freight costs were based on loads as bulk freight and were estimated at 10% of the equipment cost.

Sales tax for Tooele County in Utah is 6.6% and was applied to the supply cost of all equipment and materials.

Installation estimates were based on the equipment type and included all installation labor, tools and equipment usage at an average hourly installation rate of \$124.73 based on KCA's experience from recent projects.

#### **21.2.2.2 Major Earthworks and Liner**

Earthworks and liner quantities for the Project were estimated by KCA for all Project areas. Earthworks and liner supply and installation were assumed to be performed by contractors. Cost estimates for these activities were developed based on recent contractor quotes. The earthworks and liner discipline also includes cost for materials to construct the crushing retaining wall.

#### **21.2.2.3 Civils**

Civils include detailed earthworks and concrete. Concrete quantities were estimated by KCA based on layouts, similar equipment installations, vibrating equipment, major equipment weights and on slab areas. Unit costs for concrete supply, which include production (supply of aggregates, water, and cement, batching and mixing), and delivery of concrete and concrete installation which include all excavations, formwork, rebar, placement, and curing were based on recent contractor quotes in KCA's files.

#### **21.2.2.4 Structural Steel**

Costs for structural steel, including steel grating, and handrails was estimated based on equipment sizes, and recent quotes from contractors for similar projects. The costs assume the fabrication and installation of the structural steel. The structural steel costs for the Recovery, Refinery and Reagents Areas were included as part of the equipment supply package.

#### **21.2.2.5 Platework**

The platework discipline includes costs for the supply and installation of steel tanks, bins, and chutes. Platework costs were estimated based on preliminary weights and recent supplier cost information or included as part of complete equipment supply packages.

#### **21.2.2.6 Mechanical Equipment**

Costs for mechanical equipment were based on a detailed equipment list developed of all major equipment for the process. Costs for all major and most minor equipment items were based on budgetary quotes from suppliers. Where Project specific supplier quotes were not available, reasonable allowances were made based on recent quotes from KCA's files. All costs assume equipment purchased new from the manufacturer or to be fabricated new.

Installation costs for mechanical equipment were based on estimated installation hours and hourly contractor rates from KCA's experience on recent similar projects.

#### **21.2.2.7 Piping**

Major piping, including heap irrigation and gravity solution collection pipes, were based on recent estimates from similar sized projects in the United States. An allowance of \$1 million was included for water delivery and distribution for the West Mercur site. Additional ancillary piping, fittings, and valve costs were estimated on a percentage basis of the mechanical equipment supply costs by area ranging from 0% to 25%.

Installation costs for mechanical equipment were based on estimated installation hours and hourly contractor rates from KCA's experience on recent similar projects.

#### **21.2.2.8 Electrical**

Major electrical equipment including transformers, substations, motor control centres were considered in the electrical equipment list and have been costed based on recent supplier / contractor quotes for similar items.

Miscellaneous electrical costs were estimated as percentages of the mechanical equipment supply cost for each process area and range between 0% and 17%.

Installation of electrical equipment and ancillary electrical items were estimated based on estimated installation hours and hourly contractor rates from KCA's experience on recent projects.

#### 21.2.2.9 Instrumentation

Instrumentation costs were primarily estimated as percentages of the mechanical equipment supply cost for each process area and range between 0% and 2.5%. An allowance of \$400,000 was included for the Programmable Logic Controller ("PLC") system.

#### 21.2.2.10 Infrastructure & Buildings

New buildings for the Project will include an administration office trailer, process office trailer, recovery plant and laboratory. Costs for the buildings were based on recent budgetary quotes from suppliers and reasonable allowances based on KCA experience.

#### 21.2.2.11 Process Mobile Equipment

Process mobile equipment includes a 2-ton forklift, 5-ton boom truck, 10-ton telehandler, mechanic service truck, flatbed truck, backhoe loader (CAT 430E or equivalent), skid steer, heap leach pad dozer (CAT D6 or equivalent), crusher area loader (CAT 988 or equivalent), personnel van and six each  $\frac{3}{4}$  ton pickup trucks. Costs for mobile equipment are included in the mechanical equipment discipline.

#### 21.2.2.12 Spare Parts

Spare parts costs were estimated at 4% of the mechanical equipment supply costs.

### 21.2.3 Construction Indirect Costs & Other Owner Construction Costs

Indirect construction field costs include temporary construction facilities, construction services, quality control, survey support, warehouse and fenced yards, support equipment, etc. These costs were estimated based on the preliminary construction schedule, recent contractor quotes, and reasonable allowances based on KCA's recent experience. Most of the construction indirect costs will be the responsibility of the construction contractors and these costs were built into the contractor quotes.

Other Owner's construction costs are intended to cover the owner's team costs for labor, offices, home office support, travel during construction, software, taxes and permit fees, legal fees and workplace health safety during construction. Other Owner's costs were estimated based on the

preliminary construction schedule using reasonable allowances based on KCA's recent experience on other similar projects.

#### **21.2.4 Engineering, Procurement and Construction Management**

The estimated Engineering, Procurement and Construction Management ("EPCM") costs for the development, construction, and commissioning are based on a percentage of the direct capital cost. The total EPCM cost was estimated at 12% of the process and infrastructure direct costs. EPCM for sustaining capital costs have been estimated at 10% of the sustaining capital direct costs and are presented with the sustaining capital costs.

The EPCM costs cover services and expenses for the following areas:

- Project Management.
- Detailed Engineering.
- Engineering Support.
- Procurement.
- Construction Management.
- Commissioning.
- Vendors Reps.

#### **21.2.5 Contingency**

Contingency for the Project was applied to the total direct costs by discipline and category. Contingency was applied ranging from 15% to 25% for process and infrastructure, 20% for indirect and other Owner construction costs and 5% for mining as detailed in Table 21-6 for all preproduction costs. The overall contingency for process and infrastructure, including indirect and owner's construction costs, was estimated at 20.4% of the direct costs and the overall pre-production contingency including mining was estimated at 17.4%.

Contingency for process and infrastructure sustaining capital was estimated at 20% of the sustaining costs with mining sustaining contingency estimated at 5% of the sustaining costs. Sustaining capital contingency is included in the sustaining cost estimate.

**Table 21-6: Project Preproduction Contingency**

<b>Contingency</b>	<b>%</b>	<b>Total (\$,000s)</b>
Major Earthworks	25%	\$8,423
Civils (Supply & Install)	25%	\$2,152
Structural Steelwork (Supply & Install)	25%	\$543
Platework (Supply & Install)	25%	\$1,003
Mechanical Equipment	15%	\$7,508
Piping	20%	\$969
Electrical	25%	\$1,859
Instrumentation	25%	\$310
Infrastructure	25%	\$392
Spare Parts	25%	\$353
Indirect Contingency	20%	\$368
Owner's Costs Contingency	20%	\$484
EPCM Contingency	20%	\$2,761
Mining Contingency	5%	\$1,629
<b>Total Contingency Cost</b>	<b>17.4%</b>	<b>\$28,753</b>

### **21.2.6 Working Capital and Initial Fills**

Working capital is funds that will be used to cover operating costs from start-up until a positive cash flow is achieved. Once a positive cash flow is attained, Project expenses will be paid from earnings. Working capital for the Project was estimated based on 45 days of operation and includes all mine, process, and G&A operating costs.

The initial fills consist of consumable items stored on site at the outset of operations, which includes sodium cyanide (NaCN), lime, activated carbon, hydrochloric acid (HCl), caustic soda (NaOH), antiscalants and fluxes.

### **21.2.7 Project Sustaining Capital**

Sustaining capital for process and infrastructure includes the costs for constructing Phase 2 of the leach pad in Year 2 of operations. Contingency, construction indirect costs, and ECPM were included in the sustaining capital estimates as a percentage of the direct costs. Total process and infrastructure sustaining capital was estimated at \$18.6 million including \$13.5 million in direct costs, \$2.0 million for EPCM and construction indirect costs and \$3.1 million for contingency.

Mining sustaining capital includes additional required equipment through the life of mine as summarized in Section 16. Mining contingency was applied at 5% of the leased equipment and other supporting equipment costs by year with a total mine sustaining contingency of \$4.4 million.

### **21.2.8 Exclusions**

The following capital cost considerations have been excluded from the scope of supply and estimate:

- Finance charges and interest during construction.
- Escalation costs.
- Currency exchange fluctuations.

### **21.3 Operating Expenditures**

Process OPEX for the Project were estimated based on information presented in earlier sections of this PEA. Mining OPEX were provided by RESPEC at \$2.76 per ton moved (LOM \$10.38 per ton processed) and were based on leased equipment and owner operation.

Process OPEX were estimated by KCA from first principles. Labor costs were estimated using project specific staffing, salary and wage and benefit requirements. Unit consumptions of materials, supplies, power, water and delivered supply costs were also estimated. LOM average processing OPEX were estimated at \$4.20 per ton processed.

G&A was estimated by KCA with input from Revival. G&A costs include project specific labor and salary requirements and operating expenses. G&A costs were estimated at \$0.63 per ton processed.

Operating costs were estimated based on first quarter 2025 US dollars and are presented with no added contingency based upon the design and operating criteria present in this report and are considered to have an accuracy of +/-35%. Sales tax was not included in the operating cost estimate.

The operating costs presented are based upon the ownership of all process production equipment and site facilities, including the onsite laboratory. The owner will employ and direct all operating maintenance and support personnel for all site activities.

Operating costs estimates have been based upon information obtained from the following sources:

- Owner operated mining costs from RESPEC;
- G&A costs estimated by KCA with input from Revival;
- Project metallurgical test work and process engineering;
- Recent supplier quotes for reagents and fuel;
- Recent KCA project file data; and

- Experience of KCA staff with other similar operations.

Where specific data do not exist, cost allowances were based upon consumption and operating requirements from other similar properties for which reliable data exist. Freight costs were estimated where delivered prices were not available.

### 21.3.1 Mining Operating Costs

The mine operating costs have been estimated based on anticipated equipment hours and personnel requirements to meet the mine production schedule. Mine equipment hourly rates have been estimated based on estimation guides. For off-road red-dye diesel fuel, a price of \$3.25 per gallon was assumed.

Table 21-7 shows the LOM cost estimate along with the cost per ton mined. The total estimated LOM operating cost after pre-stripping capital is \$751.1 million or \$2.76/ton mined. Numbers may not add due to rounding.

**Table 21-7: Mine Operating Cost Summary**

<b>Mine Operating Cost Area</b>	<b>Total Costs (\$,000)</b>	<b>Unit Costs (\$/ton)</b>
Mine General Service	\$17,222	\$0.06
Mine Maintenance	\$47,468	\$0.17
Engineering	\$10,576	\$0.04
Geology	\$6,459	\$0.02
Drilling	\$38,876	\$0.14
Blasting	\$59,858	\$0.22
Loading	\$82,685	\$0.30
Hauling	\$347,189	\$1.28
Mine Support	\$134,399	\$0.49
<b>Total Mining Cost</b>	<b>\$744,733</b>	<b>\$2.74</b>
Leased Equipment Interest	\$16,195	\$0.06
<b>Net Total Mining Cost</b>	<b>\$760,928</b>	<b>\$2.80</b>
Prestrip Mining Capital	\$9,868	\$0.04
<b>Net Mine Operating Cost</b>	<b>\$751,060</b>	<b>\$2.76</b>

### 21.3.2 Detailed LOM Mining Cost Estimate

Mine operating costs have been estimated using first principles. This was done using estimated hourly costs of equipment and personnel for the anticipated hours of work. The equipment hourly costs were estimated for fuel, oil and lubrication, tires, under-carriage wear, repair and

maintenance costs, and special wear items. The costs are categorized in the following areas: drill, blast, load, haul, support, maintenance and mine general. The largest consumable mine operating costs are for tires and fuel. Tire costs vary by equipment and assume a cost per hour. Fuel cost was assumed to be \$3.25 per gallon.

Personnel costs include fully burdened supervision, operating labor and maintenance labor. The yearly operation costs are summarized in Table 21-8.

**Table 21-8: Yearly Mining Cost Estimate**

<b>Mine Op Cost Summary</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Total</b>
Mine General Service	K USD	\$ 594	\$ 1,783	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,767	\$ 680	\$ 17,222
Mine Maintenance	K USD	\$ 1,140	\$ 4,738	\$ 4,770	\$ 4,775	\$ 4,576	\$ 5,093	\$ 5,093	\$ 5,098	\$ 5,093	\$ 5,093	\$ 2,001	\$ 47,468
Engineering	K USD	\$ 331	\$ 1,122	\$ 1,133	\$ 1,065	\$ 980	\$ 1,133	\$ 1,133	\$ 1,133	\$ 1,133	\$ 1,133	\$ 281	\$ 10,576
Geology	K USD	\$ 174	\$ 721	\$ 721	\$ 685	\$ 623	\$ 721	\$ 721	\$ 721	\$ 721	\$ 535	\$ 114	\$ 6,459
Drilling	K USD	\$ 391	\$ 4,246	\$ 4,164	\$ 4,118	\$ 3,917	\$ 4,411	\$ 4,292	\$ 4,174	\$ 4,088	\$ 3,821	\$ 1,254	\$ 38,876
Blasting	K USD	\$ 787	\$ 6,665	\$ 6,374	\$ 6,288	\$ 5,910	\$ 6,838	\$ 6,614	\$ 6,393	\$ 6,231	\$ 5,730	\$ 2,028	\$ 59,858
Loading	K USD	\$ 783	\$ 9,210	\$ 7,897	\$ 7,716	\$ 7,265	\$ 8,672	\$ 8,909	\$ 8,537	\$ 10,495	\$ 9,347	\$ 3,853	\$ 82,685
Hauling	K USD	\$ 2,335	\$ 31,700	\$ 33,510	\$ 33,293	\$ 32,947	\$ 43,136	\$ 43,787	\$ 41,833	\$ 38,761	\$ 35,139	\$ 10,748	\$ 347,189
Mine Support	K USD	\$ 3,237	\$ 13,435	\$ 14,038	\$ 14,058	\$ 14,039	\$ 14,038	\$ 14,039	\$ 14,058	\$ 14,038	\$ 14,038	\$ 5,380	\$ 134,399
<b>Total Mining Cost</b>	<b>K USD</b>	<b>\$ 9,772</b>	<b>\$ 73,619</b>	<b>\$ 74,379</b>	<b>\$ 73,770</b>	<b>\$ 72,028</b>	<b>\$ 85,814</b>	<b>\$ 86,359</b>	<b>\$ 83,719</b>	<b>\$ 82,331</b>	<b>\$ 76,603</b>	<b>\$ 26,339</b>	<b>\$ 744,733</b>
Leased Equipment Interest	K USD	\$ 96	\$ 4,198	\$ 3,951	\$ 2,996	\$ 1,966	\$ 1,396	\$ 647	\$ 466	\$ 315	\$ 152	\$ 11	\$ 16,195
<b>Net Total Mining Cost</b>	<b>K USD</b>	<b>\$ 9,868</b>	<b>\$ 77,817</b>	<b>\$ 78,330</b>	<b>\$ 76,766</b>	<b>\$ 73,994</b>	<b>\$ 87,210</b>	<b>\$ 87,006</b>	<b>\$ 84,186</b>	<b>\$ 82,646</b>	<b>\$ 76,755</b>	<b>\$ 26,351</b>	<b>\$ 760,928</b>
Prestrip Mining Capital	K USD	\$ 9,868	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,868
<b>Net Mine Operating Cost</b>	<b>K USD</b>	<b>\$ -</b>	<b>\$ 77,817</b>	<b>\$ 78,330</b>	<b>\$ 76,766</b>	<b>\$ 73,994</b>	<b>\$ 87,210</b>	<b>\$ 87,006</b>	<b>\$ 84,186</b>	<b>\$ 82,646</b>	<b>\$ 76,755</b>	<b>\$ 26,351</b>	<b>\$ 751,060</b>
<b>Cost per Ton</b>													
Mine General Service	\$/ton	\$ 0.24	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.09	\$ 0.06
Mine Maintenance	\$/ton	\$ 0.45	\$ 0.15	\$ 0.18	\$ 0.18	\$ 0.19	\$ 0.17	\$ 0.18	\$ 0.18	\$ 0.14	\$ 0.17	\$ 0.26	\$ 0.17
Engineering	\$/ton	\$ 0.13	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04
Geology	\$/ton	\$ 0.07	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02
Drilling	\$/ton	\$ 0.16	\$ 0.13	\$ 0.16	\$ 0.16	\$ 0.16	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.11	\$ 0.12	\$ 0.17	\$ 0.14
Blasting	\$/ton	\$ 0.31	\$ 0.21	\$ 0.24	\$ 0.24	\$ 0.25	\$ 0.23	\$ 0.23	\$ 0.23	\$ 0.17	\$ 0.19	\$ 0.27	\$ 0.22
Loading	\$/ton	\$ 0.31	\$ 0.29	\$ 0.30	\$ 0.30	\$ 0.31	\$ 0.29	\$ 0.32	\$ 0.30	\$ 0.28	\$ 0.30	\$ 0.51	\$ 0.30
Hauling	\$/ton	\$ 0.93	\$ 1.01	\$ 1.27	\$ 1.29	\$ 1.39	\$ 1.46	\$ 1.55	\$ 1.48	\$ 1.04	\$ 1.14	\$ 1.42	\$ 1.28
Mine Support	\$/ton	\$ 1.29	\$ 0.43	\$ 0.53	\$ 0.54	\$ 0.59	\$ 0.48	\$ 0.50	\$ 0.50	\$ 0.38	\$ 0.46	\$ 0.71	\$ 0.49
<b>Total Mining Cost</b>	<b>\$/ton</b>	<b>\$ 3.89</b>	<b>\$ 2.33</b>	<b>\$ 2.82</b>	<b>\$ 2.85</b>	<b>\$ 3.03</b>	<b>\$ 2.91</b>	<b>\$ 3.06</b>	<b>\$ 2.96</b>	<b>\$ 2.21</b>	<b>\$ 2.48</b>	<b>\$ 3.47</b>	<b>\$ 2.74</b>
Leased Equipment Interest	\$/ton	\$ 0.04	\$ 0.13	\$ 0.15	\$ 0.12	\$ 0.08	\$ 0.05	\$ 0.02	\$ 0.02	\$ 0.01	\$ 0.00	\$ 0.00	\$ 0.06
<b>Net Total Mining Cost</b>	<b>\$/ton</b>	<b>\$ 3.93</b>	<b>\$ 2.47</b>	<b>\$ 2.97</b>	<b>\$ 2.97</b>	<b>\$ 3.12</b>	<b>\$ 2.96</b>	<b>\$ 3.08</b>	<b>\$ 2.97</b>	<b>\$ 2.22</b>	<b>\$ 2.49</b>	<b>\$ 3.48</b>	<b>\$ 2.80</b>
Prestrip Mining Capital	\$/ton	\$ 3.93	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.04
<b>Net Mine Operating Cost</b>	<b>\$/ton</b>	<b>\$ -</b>	<b>\$ 2.47</b>	<b>\$ 2.97</b>	<b>\$ 2.97</b>	<b>\$ 3.12</b>	<b>\$ 2.96</b>	<b>\$ 3.08</b>	<b>\$ 2.97</b>	<b>\$ 2.22</b>	<b>\$ 2.49</b>	<b>\$ 3.48</b>	<b>\$ 2.76</b>

### 21.3.2.1 Mine General Costs

Mine general services costs include mining supervision along with engineering and geology services. Supervision allows for a mine manager, superintendent, general foreman, shift foremen, trainer, dispatchers, and business assistant. Engineering personnel include a chief engineer along with engineers and surveying crew to support mine planning and operations. Geology is intended to support ore control, geological mapping, and sampling requirements. The general services cost estimate is shown in Table 21-9.

**Table 21-9: Mining General Services Cost Estimate**

<i>Mine General Services</i>	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Supervision	K USD	\$ 535	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 1,352	\$ 510	\$13,211
Hourly Personnel	K USD	\$ -	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 38	\$ 1,058
<b>Total</b>	<b>K USD</b>	<b>\$ 535</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 1,465</b>	<b>\$ 548</b>	<b>\$14,269</b>
<b>Engineering</b>													
Salaried Personnel	K USD	\$ 267	\$ 833	\$ 833	\$ 799	\$ 747	\$ 833	\$ 833	\$ 833	\$ 833	\$ 833	\$ 190	\$ 7,833
Hourly Personnel	K USD	\$ 56	\$ 258	\$ 270	\$ 236	\$ 202	\$ 270	\$ 270	\$ 270	\$ 270	\$ 270	\$ 79	\$ 2,449
<b>Total</b>	<b>K USD</b>	<b>\$ 323</b>	<b>\$ 1,091</b>	<b>\$ 1,102</b>	<b>\$ 1,035</b>	<b>\$ 950</b>	<b>\$ 1,102</b>	<b>\$ 1,102</b>	<b>\$ 1,102</b>	<b>\$ 1,102</b>	<b>\$ 1,102</b>	<b>\$ 269</b>	<b>\$10,282</b>
<b>Mine Geology</b>													
Salaried Personnel	K USD	\$ 164	\$ 571	\$ 571	\$ 534	\$ 473	\$ 571	\$ 571	\$ 571	\$ 571	\$ 385	\$ 61	\$ 5,043
Hourly Personnel	K USD	\$ -	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 113	\$ 38	\$ 1,058
<b>Total</b>	<b>K USD</b>	<b>\$ 164</b>	<b>\$ 684</b>	<b>\$ 684</b>	<b>\$ 648</b>	<b>\$ 586</b>	<b>\$ 684</b>	<b>\$ 684</b>	<b>\$ 684</b>	<b>\$ 684</b>	<b>\$ 498</b>	<b>\$ 99</b>	<b>\$ 6,102</b>
<b>Supplies &amp; Other</b>													
Mine General Services Supplies	K USD	\$ 3	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 5	\$ 118
Engineering Supplies	K USD	\$ 8	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 13	\$ 294
Geology Supplies	K USD	\$ 9	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37	\$ 15	\$ 358
Software Maintenance & Support	K USD	\$ 12	\$ 49	\$ 49	\$ 49	\$ 49	\$ 49	\$ 49	\$ 49	\$ 49	\$ 49	\$ 20	\$ 474
Outside Services	K USD	\$ 25	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 42	\$ 967
Office Power	K USD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Light Vehicles	K USD	\$ 31	\$ 206	\$ 194	\$ 194	\$ 194	\$ 194	\$ 194	\$ 194	\$ 194	\$ 190	\$ 85	\$ 1,868
<b>Total</b>	<b>K USD</b>	<b>\$ 88</b>	<b>\$ 434</b>	<b>\$ 422</b>	<b>\$ 423</b>	<b>\$ 422</b>	<b>\$ 422</b>	<b>\$ 422</b>	<b>\$ 423</b>	<b>\$ 422</b>	<b>\$ 418</b>	<b>\$ 180</b>	<b>\$ 4,078</b>
<b>Totals - Mining General</b>													
Mine General	K USD	\$ 594	\$ 1,783	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,771	\$ 1,767	\$ 680	\$17,222
Engineering	K USD	\$ 331	\$ 1,122	\$ 1,133	\$ 1,065	\$ 980	\$ 1,133	\$ 1,133	\$ 1,133	\$ 1,133	\$ 1,133	\$ 281	\$10,576
Geology	K USD	\$ 174	\$ 721	\$ 721	\$ 685	\$ 623	\$ 721	\$ 721	\$ 721	\$ 721	\$ 535	\$ 114	\$ 6,459
<b>Totals</b>	<b>K USD</b>	<b>\$ 1,099</b>	<b>\$ 3,626</b>	<b>\$ 3,625</b>	<b>\$ 3,521</b>	<b>\$ 3,374</b>	<b>\$ 3,625</b>	<b>\$ 3,625</b>	<b>\$ 3,626</b>	<b>\$ 3,625</b>	<b>\$ 3,435</b>	<b>\$ 1,076</b>	<b>\$34,258</b>
<b>Cost per Ton Mined</b>													
Mine General	\$/ton	\$ 0.24	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.09	\$ 0.06
Engineering	\$/ton	\$ 0.13	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04
Geology	\$/ton	\$ 0.07	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02
<b>Totals</b>	<b>\$/ton</b>	<b>\$ 0.44</b>	<b>\$ 0.12</b>	<b>\$ 0.14</b>	<b>\$ 0.14</b>	<b>\$ 0.14</b>	<b>\$ 0.12</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.10</b>	<b>\$ 0.11</b>	<b>\$ 0.14</b>	<b>\$ 0.13</b>

### 21.3.2.2 Mine Maintenance Cost

Mine maintenance costs include the cost of personnel for maintenance, supervision, and planning, along with shop support personnel. These include light vehicle mechanics, welders, servicemen, tire men, and maintenance labor.

The estimated mine maintenance costs are shown in Table 21-10. Note that these costs do not include the maintenance labor directly allocated to the various equipment which is accounted for in the other mining cost categories.

**Table 21-10: Mine Maintenance Cost Estimate**

<i>Wages &amp; Salaries</i>	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Supervision	K USD	\$ 265	\$ 784	\$ 784	\$ 784	\$ 784	\$ 784	\$ 784	\$ 784	\$ 784	\$ 784	\$ 209	\$ 7,529
Planners	K USD	\$ 59	\$ 271	\$ 283	\$ 283	\$ 283	\$ 283	\$ 283	\$ 283	\$ 283	\$ 283	\$ 177	\$ 2,770
Hourly Personnel	K USD	\$ 318	\$ 1,699	\$ 1,719	\$ 1,719	\$ 1,525	\$ 2,042	\$ 2,042	\$ 2,042	\$ 2,042	\$ 2,042	\$ 781	\$ 17,972
<b>Total</b>	<b>K USD</b>	<b>\$ 642</b>	<b>\$ 2,754</b>	<b>\$ 2,786</b>	<b>\$ 2,786</b>	<b>\$ 2,592</b>	<b>\$ 3,109</b>	<b>\$ 3,109</b>	<b>\$ 3,109</b>	<b>\$ 3,109</b>	<b>\$ 3,109</b>	<b>\$ 1,167</b>	<b>\$ 28,271</b>
<i>Other Costs</i>													
Supplies	K USD	\$ 36	\$ 144	\$ 144	\$ 144	\$ 144	\$ 144	\$ 144	\$ 144	\$ 144	\$ 144	\$ 60	\$ 1,392
Light Vehicles	K USD	\$ 4	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 217
<b>Total</b>	<b>K USD</b>	<b>\$ 40</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 165</b>	<b>\$ 81</b>	<b>\$ 1,609</b>
Consumables & Other Costs	K USD	\$ 441	\$ 1,756	\$ 1,756	\$ 1,761	\$ 1,756	\$ 1,756	\$ 1,756	\$ 1,761	\$ 1,756	\$ 1,756	\$ 739	\$ 16,994
Parts / MARC Cost	K USD	\$ 57	\$ 228	\$ 228	\$ 228	\$ 228	\$ 228	\$ 228	\$ 228	\$ 228	\$ 228	\$ 94	\$ 2,203
Wages & Salaries	K USD	\$ 642	\$ 2,754	\$ 2,786	\$ 2,786	\$ 2,592	\$ 3,109	\$ 3,109	\$ 3,109	\$ 3,109	\$ 3,109	\$ 1,167	\$ 28,271
<b>Total</b>	<b>K USD</b>	<b>\$ 1,140</b>	<b>\$ 4,738</b>	<b>\$ 4,770</b>	<b>\$ 4,775</b>	<b>\$ 4,576</b>	<b>\$ 5,093</b>	<b>\$ 5,093</b>	<b>\$ 5,098</b>	<b>\$ 5,093</b>	<b>\$ 5,093</b>	<b>\$ 2,001</b>	<b>\$ 47,468</b>
Consumables	\$/ton	\$ 0.18	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.10	\$ 0.06
Parts / MARC Cost	\$/ton	\$ 0.02	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
Maintenance Labor	\$/ton	\$ 0.26	\$ 0.09	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.08	\$ 0.10	\$ 0.15	\$ 0.10
<b>Total</b>	<b>\$/ton</b>	<b>\$ 0.45</b>	<b>\$ 0.15</b>	<b>\$ 0.18</b>	<b>\$ 0.18</b>	<b>\$ 0.19</b>	<b>\$ 0.17</b>	<b>\$ 0.18</b>	<b>\$ 0.18</b>	<b>\$ 0.14</b>	<b>\$ 0.17</b>	<b>\$ 0.26</b>	<b>\$ 0.17</b>

### 21.3.2.3 Drilling Cost

Drilling cost estimates are shown in Table 21-11. The LOM drilling costs are estimated to be \$38.9 million or \$0.14 per ton including pre-production.

**Table 21-11: Drilling Cost Estimate**

<i>Drilling Costs</i>	Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Total Drill Fuel Consumption	K Gal	20	303	285	279	256	314	300	286	276	244	79	2,643
Total Drill Fuel Cost	K USD	\$ 66	\$ 985	\$ 926	\$ 908	\$ 831	\$ 1,021	\$ 975	\$ 930	\$ 897	\$ 794	\$ 257	\$ 8,590
Total Drill Lube & Oil	K USD	\$ 19	\$ 286	\$ 269	\$ 264	\$ 241	\$ 297	\$ 283	\$ 270	\$ 261	\$ 231	\$ 75	\$ 2,496
Total Drill Drill Bits & Steel	K USD	\$ 39	\$ 575	\$ 541	\$ 530	\$ 485	\$ 596	\$ 569	\$ 543	\$ 523	\$ 463	\$ 150	\$ 5,015
<b>Total Drill Total Consumables</b>	<b>K USD</b>	<b>\$ 124</b>	<b>\$ 1,847</b>	<b>\$ 1,736</b>	<b>\$ 1,702</b>	<b>\$ 1,557</b>	<b>\$ 1,914</b>	<b>\$ 1,828</b>	<b>\$ 1,743</b>	<b>\$ 1,681</b>	<b>\$ 1,488</b>	<b>\$ 482</b>	<b>\$ 16,101</b>
Total Drill Parts / MARC Cost	K USD	\$ 48	\$ 714	\$ 670	\$ 658	\$ 602	\$ 739	\$ 706	\$ 673	\$ 649	\$ 575	\$ 186	\$ 6,220
Total Drill Maintenance Labor	K USD	\$ 76	\$ 579	\$ 604	\$ 604	\$ 604	\$ 604	\$ 604	\$ 604	\$ 604	\$ 604	\$ 201	\$ 5,692
Total Drill Maintenance Allocation	K USD	\$ 123	\$ 1,293	\$ 1,275	\$ 1,262	\$ 1,206	\$ 1,344	\$ 1,310	\$ 1,278	\$ 1,254	\$ 1,179	\$ 388	\$ 11,911
Total Operator Wages & Burden	K USD	\$ 144	\$ 1,106	\$ 1,154	\$ 1,154	\$ 1,154	\$ 1,154	\$ 1,154	\$ 1,154	\$ 1,154	\$ 1,154	\$ 385	\$ 10,863
<b>Total Drilling Cost</b>	<b>K USD</b>	<b>\$ 391</b>	<b>\$ 4,246</b>	<b>\$ 4,164</b>	<b>\$ 4,118</b>	<b>\$ 3,917</b>	<b>\$ 4,411</b>	<b>\$ 4,292</b>	<b>\$ 4,174</b>	<b>\$ 4,088</b>	<b>\$ 3,821</b>	<b>\$ 1,254</b>	<b>\$ 38,876</b>
<i>Drilling Cost per Ton Mined by Item</i>													
Fuel Cost	\$/ton	\$ 0.03	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.03
Lube & Oil	\$/ton	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
Drill Bits & Steel	\$/ton	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.01	\$ 0.02	\$ 0.02	\$ 0.02
<b>Total Consumables</b>	<b>\$/ton</b>	<b>\$ 0.05</b>	<b>\$ 0.06</b>	<b>\$ 0.07</b>	<b>\$ 0.07</b>	<b>\$ 0.07</b>	<b>\$ 0.06</b>	<b>\$ 0.06</b>	<b>\$ 0.06</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.06</b>	<b>\$ 0.06</b>
Parts / MARC Cost	\$/ton	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02
Maintenance Labor	\$/ton	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.02
<b>Total Maintenance Allocation</b>	<b>\$/ton</b>	<b>\$ 0.05</b>	<b>\$ 0.04</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.05</b>	<b>\$ 0.03</b>	<b>\$ 0.04</b>	<b>\$ 0.05</b>	<b>\$ 0.04</b>
Operator Wages & Burden	\$/ton	\$ 0.06	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.04	\$ 0.05	\$ 0.04
<b>Total Drilling Cost</b>	<b>\$/ton</b>	<b>\$ 0.16</b>	<b>\$ 0.13</b>	<b>\$ 0.16</b>	<b>\$ 0.16</b>	<b>\$ 0.16</b>	<b>\$ 0.15</b>	<b>\$ 0.15</b>	<b>\$ 0.15</b>	<b>\$ 0.11</b>	<b>\$ 0.12</b>	<b>\$ 0.17</b>	<b>\$ 0.14</b>

### 21.3.2.4 Blasting Cost

Blasting costs including pre-production Year -1 are shown in Table 21-12. These costs are based on owner operated drilling with contracted loading of the holes. The LOM blasting costs are estimated to be \$59.9 million or \$0.22 per ton including pre-production.

**Table 21-12: Yearly Blasting Cost Estimate**

Blasting Costs		Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Fuel	K Gal		11	96	92	91	85	99	96	93	90	83	29	866
Blasting Consumables	K USD		\$ 322	\$ 4,806	\$ 4,515	\$ 4,429	\$ 4,051	\$ 4,979	\$ 4,755	\$ 4,534	\$ 4,373	\$ 3,871	\$ 1,254	\$41,889
Equipment Consumables	K USD		\$ 23	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 90	\$ 37	\$ 868
Equipment Maintenance Allocations	K USD		\$ 1	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 2	\$ 39
Personnel	K USD		\$ 144	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575	\$ 240	\$ 5,559
Supplies	K USD		\$ 3	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 12	\$ 5	\$ 116
Outside Services	K USD		\$ 295	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 1,178	\$ 491	\$11,387
<b>Total Blasting Costs</b>	<b>K USD</b>		<b>\$ 787</b>	<b>\$ 6,665</b>	<b>\$ 6,374</b>	<b>\$ 6,288</b>	<b>\$ 5,910</b>	<b>\$ 6,838</b>	<b>\$ 6,614</b>	<b>\$ 6,393</b>	<b>\$ 6,231</b>	<b>\$ 5,730</b>	<b>\$ 2,028</b>	<b>\$59,858</b>
Cost per Ton														
Blasting Consumables	\$/ton		\$ 0.13	\$ 0.15	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.17	\$ 0.16	\$ 0.12	\$ 0.13	\$ 0.17	\$ 0.15
Equipment Consumables	\$/ton		\$ 0.01	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Equipment Maintenance Allocations	\$/ton		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Personnel	\$/ton		\$ 0.06	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.02
Supplies	\$/ton		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Outside Services	\$/ton		\$ 0.12	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.05	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.04	\$ 0.06	\$ 0.04
<b>Total</b>	<b>\$/ton</b>		<b>\$ 0.31</b>	<b>\$ 0.21</b>	<b>\$ 0.24</b>	<b>\$ 0.24</b>	<b>\$ 0.25</b>	<b>\$ 0.23</b>	<b>\$ 0.23</b>	<b>\$ 0.23</b>	<b>\$ 0.17</b>	<b>\$ 0.19</b>	<b>\$ 0.27</b>	<b>\$ 0.22</b>

### 21.3.2.5 Loading Cost

Loading costs have assumed a 29-cu yd shovel and 30-cu yd loader will be owner operated to load 150-ton capacity haul trucks. The front-end loader would also be used to load haul trucks at long term stockpiles. Thus, the costs include rehandle loading costs. The LOM loading costs are estimated to be \$82.7 million or \$0.30 per ton including pre-production. The yearly loading costs are shown in Table 21-13.

**Table 21-13: Yearly Loading Cost Estimate**

Total Loading Cost		Units	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Fuel Consumption	K Gal		68	834	713	698	656	772	797	757	966	844	292	7,397
Fuel Cost	K USD		\$ 221	\$ 2,710	\$ 2,317	\$ 2,269	\$ 2,131	\$ 2,509	\$ 2,590	\$ 2,461	\$ 3,141	\$ 2,742	\$ 949	\$24,039
Lube & Oil	K USD		\$ 61	\$ 821	\$ 673	\$ 658	\$ 611	\$ 747	\$ 777	\$ 731	\$ 974	\$ 831	\$ 315	\$ 7,197
Tires / Under Carriage	K USD		\$ -	\$ 811	\$ 370	\$ 350	\$ 246	\$ 605	\$ 693	\$ 571	\$ 1,196	\$ 832	\$ 597	\$ 6,268
Wear Items & GET	K USD		\$ 21	\$ 183	\$ 184	\$ 182	\$ 178	\$ 182	\$ 182	\$ 180	\$ 190	\$ 184	\$ 37	\$ 1,702
<b>Total Consumables</b>	<b>K USD</b>		<b>\$ 303</b>	<b>\$ 4,525</b>	<b>\$ 3,544</b>	<b>\$ 3,458</b>	<b>\$ 3,165</b>	<b>\$ 4,043</b>	<b>\$ 4,241</b>	<b>\$ 3,942</b>	<b>\$ 5,500</b>	<b>\$ 4,588</b>	<b>\$ 1,898</b>	<b>\$39,207</b>
Parts / MARC Cost	K USD		\$ 245	\$ 2,542	\$ 2,355	\$ 2,313	\$ 2,219	\$ 2,436	\$ 2,475	\$ 2,401	\$ 2,802	\$ 2,565	\$ 715	\$23,068
<b>Total Equip. Allocation (no labor)</b>	<b>K USD</b>		<b>\$ 548</b>	<b>\$ 7,067</b>	<b>\$ 5,899</b>	<b>\$ 5,771</b>	<b>\$ 5,384</b>	<b>\$ 6,479</b>	<b>\$ 6,716</b>	<b>\$ 6,344</b>	<b>\$ 8,301</b>	<b>\$ 7,154</b>	<b>\$ 2,612</b>	<b>\$62,275</b>
Maintenance Labor	K USD		\$ 63	\$ 579	\$ 541	\$ 529	\$ 504	\$ 604	\$ 604	\$ 604	\$ 604	\$ 604	\$ 340	\$ 5,578
Operator Wages & Burden	K USD		\$ 172	\$ 1,536	\$ 1,456	\$ 1,417	\$ 1,377	\$ 1,589	\$ 1,589	\$ 1,589	\$ 1,589	\$ 1,589	\$ 900	\$14,802
<b>Total Loading Costs</b>	<b>K USD</b>		<b>\$ 783</b>	<b>\$ 9,182</b>	<b>\$ 7,897</b>	<b>\$ 7,716</b>	<b>\$ 7,265</b>	<b>\$ 8,672</b>	<b>\$ 8,909</b>	<b>\$ 8,537</b>	<b>\$10,495</b>	<b>\$ 9,347</b>	<b>\$ 3,853</b>	<b>\$82,656</b>
Cost per Ton														
Fuel Cost	\$/ton		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.08	\$ 0.09	\$ 0.13	\$ 0.09
Lube & Oil	\$/ton		\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.04	\$ 0.03
Tires / Under Carriage	\$/ton		\$ -	\$ 0.03	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.03	\$ 0.08	\$ 0.02
Wear Items & GET	\$/ton		\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.00	\$ 0.01
<b>Total Consumables</b>	<b>\$/ton</b>		<b>\$ 0.12</b>	<b>\$ 0.14</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.13</b>	<b>\$ 0.14</b>	<b>\$ 0.15</b>	<b>\$ 0.14</b>	<b>\$ 0.15</b>	<b>\$ 0.15</b>	<b>\$ 0.25</b>	<b>\$ 0.14</b>
Parts / MARC Cost	\$/ton		\$ 0.10	\$ 0.08	\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.08	\$ 0.09	\$ 0.08	\$ 0.08	\$ 0.08	\$ 0.09	\$ 0.08
<b>Total Equip. Allocation (no labor)</b>	<b>\$/ton</b>		<b>\$ 0.22</b>	<b>\$ 0.22</b>	<b>\$ 0.22</b>	<b>\$ 0.22</b>	<b>\$ 0.23</b>	<b>\$ 0.22</b>	<b>\$ 0.24</b>	<b>\$ 0.22</b>	<b>\$ 0.22</b>	<b>\$ 0.23</b>	<b>\$ 0.34</b>	<b>\$ 0.23</b>
Maintenance Labor	\$/ton		\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.04	\$ 0.02
Operator Wages & Burden	\$/ton		\$ 0.07	\$ 0.05	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.06	\$ 0.04	\$ 0.05	\$ 0.12	\$ 0.05
<b>Total Loading Cost</b>	<b>\$/ton</b>		<b>\$ 0.31</b>	<b>\$ 0.29</b>	<b>\$ 0.30</b>	<b>\$ 0.30</b>	<b>\$ 0.31</b>	<b>\$ 0.29</b>	<b>\$ 0.32</b>	<b>\$ 0.30</b>	<b>\$ 0.28</b>	<b>\$ 0.30</b>	<b>\$ 0.51</b>	<b>\$ 0.30</b>

### 21.3.2.6 Haulage Cost

Haulage costs were estimated based on the truck hour estimates discussed in Section 16. The LOM haulage costs are estimated to be \$347.2 million or \$1.28 per ton including pre-production. The yearly haulage costs are shown in Table 21-14.

**Table 21-14: Yearly Haulage Cost Estimate**

<b>Haulage Cost</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Total</b>
Fuel Consumption	K Gal	181	2,464	2,591	2,564	2,522	3,307	3,345	3,189	2,950	2,674	812	26,598
Fuel Cost	K USD	\$ 588	\$ 8,009	\$ 8,421	\$ 8,334	\$ 8,195	\$10,748	\$10,870	\$10,365	\$ 9,586	\$ 8,691	\$ 2,638	\$ 86,445
Lube & Oil	K USD	\$ 231	\$ 3,143	\$ 3,305	\$ 3,271	\$ 3,216	\$ 4,218	\$ 4,266	\$ 4,067	\$ 3,762	\$ 3,410	\$ 1,035	\$ 33,923
Tires	K USD	\$ 318	\$ 4,328	\$ 4,551	\$ 4,504	\$ 4,429	\$ 5,808	\$ 5,874	\$ 5,601	\$ 5,180	\$ 4,697	\$ 1,425	\$ 46,716
Wear Items & GET	K USD	\$ 82	\$ 1,112	\$ 1,170	\$ 1,157	\$ 1,138	\$ 1,493	\$ 1,510	\$ 1,439	\$ 1,331	\$ 1,207	\$ 366	\$ 12,005
Total Consumables	K USD	\$ 1,218	\$16,592	\$17,446	\$17,266	\$16,978	\$22,267	\$22,520	\$21,473	\$19,859	\$18,005	\$ 5,465	\$179,089
Parts / MARC Cost	K USD	\$ 248	\$ 3,373	\$ 3,547	\$ 3,510	\$ 3,452	\$ 4,527	\$ 4,578	\$ 4,366	\$ 4,038	\$ 3,661	\$ 1,111	\$ 36,410
Total Equip. Allocation (no labor)	K USD	\$ 1,465	\$19,965	\$20,993	\$20,776	\$20,430	\$26,794	\$27,098	\$25,839	\$23,897	\$21,665	\$ 6,576	\$215,499
Maintenance Labor	K USD	\$ 435	\$ 5,867	\$ 6,259	\$ 6,259	\$ 6,259	\$ 8,171	\$ 8,345	\$ 7,997	\$ 7,432	\$ 6,737	\$ 2,086	\$ 65,845
Operator Wages & Burden	K USD	\$ 435	\$ 5,867	\$ 6,259	\$ 6,259	\$ 6,259	\$ 8,171	\$ 8,345	\$ 7,997	\$ 7,432	\$ 6,737	\$ 2,086	\$ 65,845
Total Haulage Costs	K USD	\$ 2,335	\$31,700	\$33,510	\$33,293	\$32,947	\$43,136	\$43,787	\$41,833	\$38,761	\$35,139	\$10,748	\$347,189
<b>Cost per Ton Moved</b>													
Fuel Cost	\$/ton	\$ 0.23	\$ 0.25	\$ 0.32	\$ 0.32	\$ 0.35	\$ 0.36	\$ 0.39	\$ 0.37	\$ 0.26	\$ 0.28	\$ 0.35	\$ 0.32
Lube & Oil	\$/ton	\$ 0.09	\$ 0.10	\$ 0.13	\$ 0.13	\$ 0.14	\$ 0.14	\$ 0.15	\$ 0.14	\$ 0.10	\$ 0.11	\$ 0.14	\$ 0.12
Tires	\$/ton	\$ 0.13	\$ 0.14	\$ 0.17	\$ 0.17	\$ 0.19	\$ 0.20	\$ 0.21	\$ 0.20	\$ 0.14	\$ 0.15	\$ 0.19	\$ 0.17
Wear Items & GET	\$/ton	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.04
Total Consumables	\$/ton	\$ 0.48	\$ 0.53	\$ 0.66	\$ 0.67	\$ 0.71	\$ 0.75	\$ 0.80	\$ 0.76	\$ 0.53	\$ 0.58	\$ 0.72	\$ 0.66
Parts / MARC Cost	\$/ton	\$ 0.10	\$ 0.11	\$ 0.13	\$ 0.14	\$ 0.15	\$ 0.15	\$ 0.16	\$ 0.15	\$ 0.11	\$ 0.12	\$ 0.15	\$ 0.13
Total Equip. Allocation (no labor)	\$/ton	\$ 0.58	\$ 0.63	\$ 0.80	\$ 0.80	\$ 0.86	\$ 0.91	\$ 0.96	\$ 0.91	\$ 0.64	\$ 0.70	\$ 0.87	\$ 0.79
Maintenance Labor	\$/ton	\$ 0.17	\$ 0.19	\$ 0.24	\$ 0.24	\$ 0.26	\$ 0.28	\$ 0.30	\$ 0.28	\$ 0.20	\$ 0.22	\$ 0.28	\$ 0.24
Operator Wages & Burden	\$/ton	\$ 0.17	\$ 0.19	\$ 0.24	\$ 0.24	\$ 0.26	\$ 0.28	\$ 0.30	\$ 0.28	\$ 0.20	\$ 0.22	\$ 0.28	\$ 0.24
Total Haulage Costs	\$/ton	\$ 0.93	\$ 1.01	\$ 1.27	\$ 1.29	\$ 1.39	\$ 1.46	\$ 1.55	\$ 1.48	\$ 1.04	\$ 1.14	\$ 1.42	\$ 1.28

### 21.3.2.7 Mine Support Cost

Mine support costs have been estimated based on the estimated support hours. The LOM support costs are estimated to be \$134.4 million or \$0.49 per ton including pre-production. The yearly support costs are shown in Table 21-15.

**Table 21-15: Yearly Support Cost Estimate**

<b>Total Mine Support Costs</b>	<b>Units</b>	<b>Yr -1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Total</b>
Consumables	K USD	\$ 1,145	\$ 5,214	\$ 5,355	\$ 5,371	\$ 5,356	\$ 5,355	\$ 5,356	\$ 5,371	\$ 5,355	\$ 5,355	\$ 2,031	\$ 51,265
Parts / MARC Cost	K USD	\$ 387	\$ 1,731	\$ 1,793	\$ 1,798	\$ 1,793	\$ 1,793	\$ 1,793	\$ 1,798	\$ 1,793	\$ 1,793	\$ 687	\$ 17,156
Maintenance Labor	K USD	\$ 471	\$ 1,793	\$ 1,903	\$ 1,903	\$ 1,903	\$ 1,903	\$ 1,903	\$ 1,903	\$ 1,903	\$ 1,903	\$ 735	\$ 18,227
Operating Labor	K USD	\$ 1,234	\$ 4,697	\$ 4,987	\$ 4,987	\$ 4,987	\$ 4,987	\$ 4,987	\$ 4,987	\$ 4,987	\$ 4,987	\$ 1,927	\$ 47,751
Total	K USD	\$ 3,237	\$13,435	\$14,038	\$14,058	\$14,039	\$14,038	\$14,039	\$14,058	\$14,038	\$14,038	\$ 5,380	\$134,399
<b>Cost per Ton Mined</b>													
Consumables	\$/ton	\$ 0.46	\$ 0.17	\$ 0.20	\$ 0.21	\$ 0.23	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.14	\$ 0.17	\$ 0.27	\$ 0.19
Maintenance Allocations	\$/ton	\$ 0.15	\$ 0.05	\$ 0.07	\$ 0.07	\$ 0.08	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.05	\$ 0.06	\$ 0.09	\$ 0.06
Maintenance Labor	\$/ton	\$ 0.19	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.08	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.05	\$ 0.06	\$ 0.10	\$ 0.07
Operating Labor	\$/ton	\$ 0.49	\$ 0.15	\$ 0.19	\$ 0.19	\$ 0.21	\$ 0.17	\$ 0.18	\$ 0.18	\$ 0.13	\$ 0.16	\$ 0.25	\$ 0.18
Total Costs	\$/ton	\$ 1.29	\$ 0.43	\$ 0.53	\$ 0.54	\$ 0.59	\$ 0.48	\$ 0.50	\$ 0.50	\$ 0.38	\$ 0.46	\$ 0.71	\$ 0.49

### 21.3.3 Process Operating Costs

Average annual process and support services operating costs for the Main Mercur and South Mercur deposits are presented in Table 21-16.

**Table 21-16: Process and Support Services Annual Operating Costs**

Area	Units	Unit Costs US\$	OPERATING COSTS					
			Main Mercur			South Mercur		
			Quantity	Annual Costs \$,000	Opex \$/ton	Quantity	Annual Costs \$,000	Opex \$/ton
Labor - All Process Areas								
Process Labor	persons		82	\$10,111	\$1.385	82	\$10,111	\$1.385
SUBTOTAL				\$10,111	\$1.385		\$10,111	\$1.385
Area 13 Crushing								
Power	kWh/t	\$0.082	19,505,805	\$1,596	\$0.219	19,505,805	\$1,596	\$0.219
988 Loader	h/mo	\$106	547.5	\$698	\$0.096	547.5	\$698	\$0.096
Jaw Wear	lb/year	\$3.429	61,010	\$209	\$0.029	61,010	\$209	\$0.029
Cone Crusher Liners	lb/year	\$3.429	763,813	\$2,619	\$0.359	763,813	\$2,619	\$0.359
Screen Panels	set/year	\$35,000	6	\$210	\$0.029	6	\$210	\$0.029
Overhaul / Maintenance	\$/ton			\$2,190	\$0.300		\$2,190	\$0.300
SUBTOTAL				\$7,522	\$1.030		\$7,522	\$1.030
Area 15 - Crushed Material Stockpile & Reclaim								
Power	kWh/t	\$0.082	7,150,858	\$584,940	\$0.080	7,150,858	\$584,940	\$0.080
Maintenance Supplies	\$/t			\$0	\$0.000		\$0	\$0.000
SUBTOTAL				\$584,940	\$0.155		\$584,940	\$0.155
Area 22 - Heap Leach Pad & Ponds								
Power	kWh/t	\$0.082	5,901,752	\$483	\$0.066	5,901,752	\$483	\$0.066
Heap Dozer (D6 or equivalent)	h/mo	\$52.41	360.0	\$226	\$0.031	360.0	\$226	\$0.031
Piping/Drip tubing	\$/ton processed			\$219	\$0.030		\$219	\$0.030
Maintenance Supplies	\$/ton processed			\$146	\$0.020		\$146	\$0.020
SUBTOTAL				\$1,074	\$0.147		\$1,074	\$0.147
Area 28 - Carbon Adsorption								
Power	kWh/t	\$0.082	336,088	\$27	\$0.004	336,088	\$27	\$0.004
Maintenance Supplies	\$/ton processed			\$146	\$0.020		\$146	\$0.020
SUBTOTAL				\$173	\$0.024		\$173	\$0.024
Area 29 - Carbon Desorption & Reactivation								
Power	kWh/t	\$0.082	16,821,515	\$1,376	\$0.188	16,821,515	\$1,376	\$0.188
Carbon	lb/year	\$1.22	70,399	\$86	\$0.012	95,112	\$116	\$0.016
Misc. Operating Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
Maintenance Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
SUBTOTAL				\$1,608	\$0.220		\$1,638	\$0.224
Area 31 – Refinery								
Power		\$0.082	1,965,773	\$161	\$0.022	1,965,773	\$161	\$0.022
Fluxes	lb/year	\$1.249	21,119.9	\$26	\$0.004	28,533.6	\$36	\$0.005
Misc. Operating Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
Maintenance Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
SUBTOTAL				\$333	\$0.046		\$342	\$0.047
Area 34 – Reagents								
Power	kWh/year	\$0.082	488,757	\$40	\$0.005	488,757	\$40	\$0.005
Cyanide (Processed Material)	lb/t	\$1.225	0.360	\$3,219	\$0.441	0.360	\$3,219	\$0.441
Cyanide (Elution)	lbs/year	\$1.225	35,392	\$43	\$0.006	47,816	\$59	\$0.008
Lime	lb/ton processed	\$0.17	1.8	\$2,265	\$0.310	1.8	\$2,265	\$0.310

Area	Units	Unit Costs US\$	OPERATING COSTS					
			Main Mercur			South Mercur		
			Quantity	Annual Costs \$,000	Opex \$/ton	Quantity	Annual Costs \$,000	Opex \$/ton
Caustic	lbs/year	\$0.620	27,941	\$17	\$0.002	37,749	\$23	\$0.003
Hydrochloric Acid	gal/year	\$0.899	35,924	\$32	\$0.004	48,535	\$44	\$0.006
Antiscalant	lbs/year	\$1.715	218,497	\$375	\$0.051	218,497	\$375	\$0.051
Maintenance Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
SUBTOTAL				\$6,064	\$0.831		\$6,097	\$0.835
<b>Area 38 – Laboratory</b>								
Power		\$0.082	2,217,375	\$181	\$0.025	2,217,375	\$181	\$0.025
Assays, Solids	No./day	\$6.000	150	\$329	\$0.045	150	\$329	\$0.045
Assays, Solutions	No./day	\$3.000	150	\$164	\$0.023	150	\$164	\$0.023
Miscellaneous Supplies	\$/ton processed			\$73	\$0.010		\$73	\$0.010
SUBTOTAL				\$747	\$0.102		\$747	\$0.102
<b>Area 60 – Power</b>								
Power		\$0.082	0	\$0	\$0.000	0.00	\$0	\$0.000
Overhaul & Maintenance	\$/ton processed			\$365	\$0.050		\$365	\$0.050
SUBTOTAL				\$365	\$0.050		\$365	\$0.050
<b>Area 62 - Water Supply, Storage &amp; Distribution</b>								
Power		\$0.082	1,143,517	\$94	\$0.013	1,143,517	\$94	\$0.013
Water	\$/Acre-ft	\$50.000	419	\$21	\$0.003	419	\$21	\$0.003
Maintenance Supplies	\$/ton processed			\$183	\$0.025		\$183	\$0.025
SUBTOTAL				\$297	\$0.041		\$297	\$0.041
<b>Area 66 - Facilities, Area 08 - Plant Mobile Equipment</b>								
Facilities / Infrastructure								
Power - Buildings/Misc.	kWh/year	\$0.082	210,651	\$17	\$0.002	210,650.6	\$17	\$0.002
Heating - WH/Admin	LPG gallon/yr	\$0.465	325,000	\$151	\$0.021	325,000	\$572	\$0.078
Heating - Truckshop	LPG gallon/yr	\$0.465	325,000	\$151	\$0.021	325,000	\$572	\$0.078
<u>Mobile Equipment</u>								
Fork Lift	h/mo	\$7.80	120	\$11	\$0.002	120	\$11	\$0.002
Boom Truck	h/mo	\$50.55	90	\$55	\$0.007	90	\$55	\$0.007
Mechanic Service Truck	h/mo	\$48.54	120	\$70	\$0.010	120	\$70	\$0.010
Backhoe/Loader	h/mo	\$25.38	120	\$37	\$0.005	120	\$37	\$0.005
Crew Van, personnel transportation on site	h/mo	\$12.00	720	\$104	\$0.014	720	\$104	\$0.014
Pickup Truck	h/mo	\$26.32	1,440	\$455	\$0.062	1,440	\$455	\$0.062
Ambulance	h/mo	\$12.00	60	\$9	\$0.001	60	\$9	\$0.001
Telehandler	h/mo	\$31.58	80	\$30	\$0.004	80	\$30	\$0.004
Flatbed Truck	h/mo	\$23.48	120	\$34	\$0.005	120	\$34	\$0.005
Skid Steer / Bobcat Loader	h/mo	\$9.45	180	\$20	\$0.003	180	\$20	\$0.003
SUBTOTAL				\$1,143	\$0.157		\$1,985	\$0.272
TOTAL PROCESS & SUPPORT SERVICES				\$614,378	\$4.188		\$615,292	\$4.313

#### 21.3.3.1 *Personnel and Staffing*

Staffing requirements for process were estimated by KCA based on experience with similar sized operations and input from Revival. Total process personnel were estimated at 82 persons including 13 laboratory workers.

#### 21.3.3.2 *Power*

Power usage for the process and process-related infrastructure was derived from estimated connected loads assigned to powered equipment from the mechanical equipment list. Equipment power demands under normal operation were assigned and coupled with estimated on-stream times to determine the average energy usage and cost. Power requirements for the Project are presented in Section 18.

Power will be supplied by an existing transmission line. The transmission line runs to the Main Mercur Project Site, and it is assumed the site will be able to tie into the existing line with a new switch gear and substation at the West Mercur Site. The approximate power cost is estimated at \$0.082 /kWh and is based on published rates from Rocky Mountain Power.

#### 21.3.3.3 *Consumable Items*

Operating supplies were estimated based upon unit costs and consumption rates predicted by metallurgical tests and have been broken down by area. Freight costs were included in all operating supply and reagent estimates. Reagent consumptions were estimated from test work and from design criteria considerations. Other consumable items were estimated by KCA based on experience with other similar operations.

Operating costs for consumable items were distributed based on tonnage and gold production or smelting batches, as appropriate.

#### 21.3.3.4 *Laboratory*

Fire assaying and solution assaying of samples will be conducted in the on-site laboratory. It was estimated that approximately 150 solids assays and solutions assays will need to be performed each day.

#### 21.3.3.5 *Miscellaneous Operating and Maintenance Supplies*

Overhaul and maintenance of equipment along with miscellaneous operating supplies for each area were estimated as allowances based on tons processed. The allowances for each area were developed based on published data as well as KCA's experience with similar operations.

#### **21.3.3.6 Mobile Support Equipment**

Mobile and support equipment will be required for the process and include a 2-ton forklift, 5-ton boom truck, 10-ton telehandler, mechanic service truck, flatbed truck, backhoe loader (CAT 430E or equivalent), skid steer, heap leach pad dozer (CAT D6 or equivalent), crusher area loader (CAT 988 or equivalent), personnel van and six each  $\frac{3}{4}$  ton pickup trucks. The costs to operate and maintain each piece of equipment were estimated primarily using published information and project specific fuel costs. Where published information was not available, allowances were made based on KCA's experience from similar operations.

#### **21.3.4 General and Administrative**

General and Administrative ("G&A") costs include administration labor costs and expenses associated with the project. G&A labor requirements were estimated by KCA with input from Revival and include 22 persons. G&A expenses are expected to average \$2.1 million per year and include costs for offsite offices, insurance, office supplies, communications, environmental and social management, health and safety supplies, security, travel, and legal expenses. For the cost estimate, G&A expenses were represented primarily as fixed costs.

#### **21.4 Reclamation and Closure Costs**

Costs for concurrent reclamation and closure activities were estimated by KCA as an allowance based on the total tons processed and are in addition to any normal operating and sustaining cost estimates. Reclamation and closure costs were estimated at \$0.55 per ton processed, or \$39.8 million.

Activities included as part of reclamation and closure are described in Section 20 of this report.

## SECTION 22 CONTENTS

22	ECONOMIC ANALYSIS .....	22-2
22.1	Economic Analysis Summary .....	22-2
22.2	Methodology .....	22-4
22.3	Capital and Operating Expenditures .....	22-5
22.4	Metal Production and Revenue .....	22-6
22.5	Royalties .....	22-6
22.6	Closure Costs .....	22-7
22.7	Taxation .....	22-7
	22.7.1 Depreciation .....	22-7
	22.7.2 Depletion .....	22-7
	22.7.3 Loss Carry Forward .....	22-7
22.8	Economic Model and Cashflow.....	22-8
22.9	Sensitivity Analysis .....	22-10

## SECTION 22 TABLES

Table 22-1: Key Economic Parameters .....	22-3
Table 22-2: Economic Analysis Summary .....	22-4
Table 22-3: Royalties Payable Summary .....	22-6
Table 22-4: Mercur Gold Project Economic Model (KCA, 2025) .....	22-9
Table 22-5: After-Tax Sensitivity Analysis .....	22-10

## SECTION 22 FIGURES

Figure 22-1: Annual Gold Production and After-Tax Cumulative Cashflow (KCA, 2025) .....	22-6
Figure 22-2: After-Tax Sensitivity Analysis – IRR (KCA, 2025) .....	22-11
Figure 22-3: After-Tax Sensitivity Analysis – NPV @5% (KCA, 2025) .....	22-11

## 22 ECONOMIC ANALYSIS

This PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the PEA will be realized.

### 22.1 Economic Analysis Summary

Based on the estimated production schedule, capital costs, operating costs, royalties, and taxes, KCA prepared a Microsoft Excel spreadsheet-based Discounted Cash Flow (“DCF”) model for the Project, which measures the Net Present Value (“NPV”) of future cash flow streams. All information incorporated into this economic model has been derived from work completed by KCA and other consultants working on this Project as described in previous sections of this PEA.

The results of the economic analyses represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to several known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

The PEA economic model was developed based on the following inputs and assumptions:

- The cash flow model is based on the mine production schedule from RESPEC.
- The period of analysis is 15 years including one year of investment and pre-production, 10 years of production and four years for reclamation and closure.
- Gold price of \$2,175/oz.
- Average processing rate of 20,000 tpd.
- Overall recoveries of 75% for gold.
- Capital and operating costs as developed in Section 21.
- Working capital equal to 45 days of operating costs during the pre-production and ramp up period is included for process, mining, and G&A costs as well as initial fills for process reagents and consumables. The assumption is made that all working capital and initial fills can be recovered in the final years of operation and the effective sum of working capital and initial fills over the life of mine is zero.
- Depreciation allowances for eligible items are included in the model.
- Royalties payable as described in Section 4.3 are included.
- A 0.994% Property tax for Tooele County, Utah and 2.6% Utah Mining Severance tax are considered.
- A state income tax of 4.55% and federal income tax of 21% are considered.

- A refinery and transportation cost of \$2.13/oz for gold is used in the model, including insurance. Gold is assumed to be 99.9% payable.
- A loss carry-forward of \$5.7 million, which includes expenses for the Project to date, is included and is based on information provided by Revival.
- All-in sustaining costs ("AISC") per payable ounce represent the mine site operating costs including mining, processing, metal transport, refining, administration costs and royalties as well as the LOM sustaining capital and reclamation and closure costs.
- Cash costs per payable ounce represents the mine site operating costs including mining, processing, metal transportation, refining, administration costs and royalties.
- The cash flow analysis evaluates the Project on a stand-alone basis. No withholding taxes or dividends are included. No head office or overheads for the parent company are included.

The key economic parameters are presented in Table 22-1 and the economic summary is presented in Table 22-2.

**Table 22-1: Key Economic Parameters**

Item	Value	Unit
Au Price	2,175	US\$/oz
Au Avg. Recovery	74.6	%
Treatment Rate	20,000	t/d
Refining & Transportation Cost, Au	2.13	US\$/oz
Payable Factor, Au	99.90%	%
Annual Produced Au, Avg.	95.58	koz
Royalties	Variable	%
Taxes		
Federal Income Tax	21	%
Utah State Income Tax	4.55	%
Tooele County Property Tax	0.994	%
Mining Severance Tax	2.6	%

**Table 22-2: Economic Analysis Summary**

<b>Production Data</b>	<b>Results</b>
Life of Mine	9.95 years
Mine Throughput (Ore), average	7.3 Mtpy
Metallurgical Recovery Au (Overall)	75 %
Average Annual Gold Production	96 koz
Total Gold Produced	951 koz
LOM Strip Ratio (Waste: Process)	2.76
<b>Capital Costs (Sales Tax Included)</b>	
Initial Capital	\$194 M
Working Capital & Initial Fills	\$14 M
LOM Sustaining Capital	\$110 M
Reclamation & Closure	\$40 M
<b>Operating Costs (Average LOM)</b>	
Mining	\$10.38 /ton
Processing & Support	\$4.20 /ton
G&A	\$0.63 /ton
All-in Sustaining Cost	\$1,363 /ounce
Cash Cost	\$1,205 /ounce
<b>Financial Analysis</b>	
Internal Rate of Return (IRR), Pre-Tax	30.8 %
Internal Rate of Return (IRR), After-Tax	26.5 %
Average Annual Cashflow (Pre-Tax)	\$83 M
<b>NPV @ 5% (Pre-Tax)</b>	<b>\$373 M</b>
Average Annual Cashflow (After-Tax)	\$71.0 M
<b>NPV @ 5% (After-Tax)</b>	<b>\$295 M</b>
Gold Price Assumption (US\$/Ounce)	\$2,175 /ounce
Pay-Back Period (Years based on After-Tax)	3.6 years

## 22.2 Methodology

The Mercur Gold Project economics are evaluated using a discounted cash flow method. The DCF method requires that annual cash inflows and outflows are projected, from which the resulting net annual cash flows are discounted back to the Project evaluation date. Considerations for this analysis include the following:

- The cash flow model has been developed by KCA with input from Revival.
- Gold production and revenue in the model are delayed from the time material is stacked based on the mine production schedule and leach curves to account for time required for metal values to be recovered from the heap.

- All cost estimates and cash flow amounts are in first quarter 2025 US dollars. Inflation is not considered in this model.
- The Internal Rate of Return ("IRR") is calculated as the discount rate that yields a zero NPV.
- The NPV is calculated by discounting the annual cash back to Year -1 at different discount rates. All annual cash flows are assumed to occur at the end of each respective year.
- The payback period is the amount of time, in years, required to recover the initial construction capital cost.
- Working capital and initial fills are considered in this model and include mining, processing, and G&A operating costs. The model assumes working capital and initial fills are recovered during the final two years of operation.
- Royalties and government taxes are included in the model.
- The model is built on an unlevered basis.
- Salvage value for the mining fleet and process equipment is considered and is applied at the end of the Project.
- Reclamation and closure costs are included.

The economic analysis is performed on a before and after-tax basis in constant dollar terms, with the cash flows estimated on a project basis.

### **22.3 Capital and Operating Expenditures**

Capital expenditures include initial capital (pre-production or construction costs), sustaining capital and working capital. The capital expenditures are presented in detail in Section 21 of this Report.

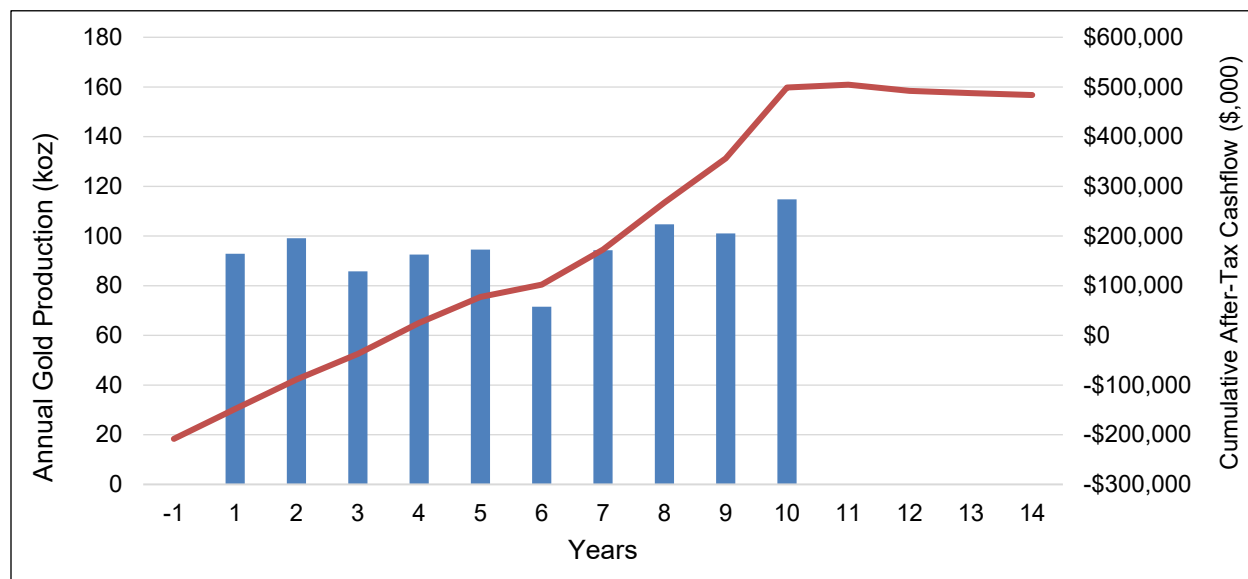
The economic model assumes working capital and initial fills will be recovered at the end of the operation and are applied as credits against the capital cost. Working capital and initial fills are assumed to be recovered during mine year 8 and 9. Salvage value for the mining fleet, as well as the mechanical process equipment is included and is applied during years 11 through 13 after equipment items are no longer in service.

Operating costs for mining, processing and G&A as described in Section 21 of this report are considered in the model. The LOM average operating cost is \$15.21 per ton of material processed.

## 22.4 Metal Production and Revenue

Total metal production for the Main and South Mercur deposits is estimated at 951,100 ounces of recovered gold. The annual gold production and after-tax cumulative cashflow is presented on Figure 22-1. LOM average annual gold production is approximately 95,600 ounces.

**Figure 22-1: Annual Gold Production and After-Tax Cumulative Cashflow (KCA, 2025)**



## 22.5 Royalties

The Mercur Gold Project is subject to several royalties which are payable to different parties as detailed in Section 4 of this report. Royalties have been applied on a block-by-block as summarized in Table 22-3.

**Table 22-3: Royalties Payable Summary**

Royalty Number	Claim	NSR
1	0.0_royalty	1.000%
2	0.875_royalty	0.875%
3	1.0_Royalty	1.000%
4	1.481_Royalty	1.481%
5	1.5_Royalty	1.500%
6	2.0_Royalty	2.000%
7	2.481_Royalty	2.481%
8	2.5_Royalty	2.500%
9	3.25_Royalty	3.250%
10	3.499_Royalty	3.499%
11	7.0_Royalty	7.000%
12	Outside all royalty solids	100.000%

Total royalty payments are estimated at \$42.5 million for the life of the project.

## **22.6 Closure Costs**

Reclamation and closure include costs for works to be conducted for the closure of the mine at the end of operations and have been estimated as an allowance based on tons of material processed. The estimated LOM reclamation and closure costs is \$39.8 million, or \$0.55 per ton processed. Reclamation and closure activities are summarized in Section 20 of this Report.

## **22.7 Taxation**

Taxation for the Project is based on the current laws and regulations as of the writing of this Report and projected project implementation date. The following taxes are considered in the economic model:

- Tooele County Property Tax at 0.994% of the net revenue
- Utah Mining Severance Tax at 2.4% of 30% of the gross proceeds after an annual \$50,000 exemption
- Utah Corporate Income Tax at 4.55% less allowable deductions
- Federal income tax at 21% less allowable deductions

### **22.7.1 Depreciation**

Depreciation is considered for the Utah Corporate Income Tax and Federal Income Tax calculations and is based on the 7-year modified accelerated recovery system (“MACRS”) method for mining and process equipment, 39-year MACRS for buildings and structures and units of production for mining pre-production costs. Salvage value is considered in the depreciation calculations.

### **22.7.2 Depletion**

Depletion is considered for the calculation of the Utah Corporate Income Tax and Federal Income Tax and is calculated as 15% of the annual gross income or 50% of the taxable income, whichever is less.

### **22.7.3 Loss Carry Forward**

An opening loss carried forward balance of \$5.7 million is included and is based on information provided by Revival.

## **22.8 Economic Model and Cashflow**

The DCF model for the Mercur Gold Project is presented in Table 22-4 and is based on the inputs and assumptions detailed in this section.

The Mercur Gold Project cash flows are net of royalties and taxes. The Project yields an after-tax internal rate of return of 26.5%.



Table 22-4: Mercur Gold Project Economic Model (KCA, 2025)

Item		-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
<b>Mined Mineral tons</b>																	
Main Mercur		937,985	5,330,589	4,649,832	4,961,176	5,187,963	10,111,936	6,190,717	8,178,521	8,062,029	5,848,131	3,104,291	-	-			62,563,170
South Mercur		-	2,113,018	2,764,415	2,210,382	2,695,033	-	-	-	-	-	-	-	-			9,782,849
<b>Total Mineral, tons</b>		<b>937,985</b>	<b>7,443,608</b>	<b>7,414,247</b>	<b>7,171,558</b>	<b>7,882,996</b>	<b>10,111,936</b>	<b>6,190,717</b>	<b>8,178,521</b>	<b>8,062,029</b>	<b>5,848,131</b>	<b>3,104,291</b>	<b>0</b>	<b>0</b>			<b>72,346,019</b>
<b>Waste, tons</b>																	
Main Mercur		1,574,803	8,851,266	8,489,694	9,962,977	11,903,816	19,382,171	22,016,962	20,139,409	29,125,799	24,989,077	4,478,004	-	-			160,913,978
South Mercur		-	15,233,599	10,468,707	8,752,531	3,966,629	-	-	-	-	-	-	-	-			38,421,466
<b>Total Waste, tons</b>		<b>1,574,803</b>	<b>24,084,865</b>	<b>18,958,401</b>	<b>18,715,509</b>	<b>15,870,445</b>	<b>19,382,171</b>	<b>22,016,962</b>	<b>20,139,409</b>	<b>29,125,799</b>	<b>24,989,077</b>	<b>4,478,004</b>					<b>199,335,444</b>
<b>Total Mined, tons</b>		<b>2,512,788</b>	<b>31,528,473</b>	<b>26,372,648</b>	<b>25,887,067</b>	<b>23,753,442</b>	<b>29,494,106</b>	<b>28,207,679</b>	<b>28,317,931</b>	<b>37,187,828</b>	<b>30,837,208</b>	<b>7,582,296</b>	<b>0</b>	<b>0</b>			
Strip Ratio (W:O)		1.7	4.5	4.1	3.8	3.1	1.9	3.6	2.5	3.6	4.3	1.4	0.0	0.0			2.76
<b>Tons to Process</b>																	
Main Mercur		0	5,226,102	4,444,114	4,963,035	4,675,694	7,181,790	7,221,042	7,311,672	7,297,737	7,299,544	6,942,439	0	0			62,563,170
South Mercur		0	1,737,478	2,855,886	2,356,965	2,624,306	118,210	78,958	8,328	2,263	456	0	0	0			9,782,849
<b>Total Processed, tons</b>		<b>0</b>	<b>6,963,580</b>	<b>7,300,000</b>	<b>7,320,000</b>	<b>7,300,000</b>	<b>7,300,000</b>	<b>7,300,000</b>	<b>7,320,000</b>	<b>7,300,000</b>	<b>7,300,000</b>	<b>6,942,439</b>	<b>0</b>	<b>0</b>			<b>72,346,019</b>
<b>Gold Grade Au, oz/t</b>																	
Main Mercur		0.000	0.018	0.014	0.012	0.013	0.017	0.013	0.017	0.019	0.019	0.025	0.000	0.000			0.017
South Mercur		0.000	0.020	0.021	0.022	0.024	0.007	0.007	0.007	0.007	0.007	0.000	0.000	0.000			0.022
<b>Au, oz/t total</b>		<b>0.000</b>	<b>0.018</b>	<b>0.017</b>	<b>0.015</b>	<b>0.017</b>	<b>0.017</b>	<b>0.013</b>	<b>0.017</b>	<b>0.019</b>	<b>0.019</b>	<b>0.025</b>	<b>0.000</b>	<b>0.000</b>			<b>0.0176</b>
contained Au, oz		0	127,562	124,182	110,180	121,460	124,689	91,497	122,053	135,861	140,964	176,651	0	0			1,275,100
<b>Tons Processed</b>																	
Total Tons Processed		0	6,963,580	7,300,000	7,320,000	7,300,000	7,300,000	7,300,000	7,320,000	7,300,000	7,300,000	6,942,439	0	0			72,346,019
Au oz/t		0.00	0.018	0.017	0.015	0.017	0.017	0.013	0.017	0.019	0.019	0.025	0.000	0.000			0.018
contained Au, oz		0	127,562	124,182	110,180	121,460	124,689	91,497	122,053	135,861	140,964	176,651	0	0			1,275,100
<b>Total Recoverable Gold, oz</b>																	
Main Mercur	74%	0	77,191	49,388	44,811	45,350	94,006	67,601	98,165	105,663	100,367	101,730	0	0			784,273
South Mercur	79%	0	29,574	48,536	39,136	48,435	670	447	47	13	3	0	0	0			166,860
<b>Total Recoverable Gold, koz</b>	Kozs		106.8	97.9	83.9	93.8	94.7	68.0	98.2	105.7	100.4	101.7	0.0	0.0			951.1
Recoverable Gold Delayed	Kozs		13.9	12.7	10.9	12.2	12.3	8.8	12.8	13.7	13.0		0.0	0.0			951.1
Gold Produced	Kozs		92.9	99.1	85.8	92.5	94.6	71.5	94.3	104.7	101.1	114.8	0	0			950,182
Gold payable, oz	99.90%		92,793	98,974	85,678	92,414	94,465	71,439	94,197	104,601	100,958	114,663	0	0			951,133
Gold Produced			92,886	99,073	85,764	92,506	94,560	71,510	94,291	104,705	101,059	114,778	0	0			951,133
Gold Payable			92,793	98,974	85,678	92,414	94,465	71,439	94,197	104,601	100,958	114,663	0	0			950,182
Gold Price			\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175	\$2,175			
Gross Revenue, \$000s			201,824	215,269	186,350	201,000	205,462	155,379	204,878	227,507	219,584	249,393	0	0			\$2,066,646
Refining & Transportation Charge, \$000s	\$2.13		\$198	\$211	\$182	\$197	\$201	\$152	\$201	\$223	\$215	\$244	\$0	\$0			2,024
<b>Net Revenue, \$000s</b>			<b>\$201,627</b>	<b>\$215,058</b>	<b>\$186,168</b>	<b>\$200,804</b>	<b>\$205,261</b>	<b>\$155,227</b>	<b>\$204,677</b>	<b>\$227,284</b>	<b>\$219,369</b>	<b>\$249,148</b>	<b>\$0</b>	<b>\$0</b>			<b>2,064,622</b>
Mining Opex, \$000s	\$10.38		77,817	78,330	76,766	73,994	87,210	87,006	84,186	82,646	76,755	26,351	0	0			751,060
Processing Opex, \$000s	\$4.20		29,742	30,577	30,622	30,575	30,550	30,550	30,598	30,549	30,549	29,674					303,988
G&A Opex,\$000s	\$0.63		4,559	4,559	4,559	4,559	4,559	4,559	4,559	4,559	4,559	4,559					45,595
<b>Operating Costs, \$000s</b>	\$15.21		<b>112,119</b>	<b>113,467</b>	<b>111,947</b>	<b>109,129</b>	<b>122,320</b>	<b>122,115</b>	<b>119,343</b>	<b>117,755</b>	<b>111,864</b>	<b>60,584</b>	<b>0</b>	<b>0</b>			<b>1,100,643</b>
<b>Operating Profit</b>			<b>89,508</b>	<b>101,591</b>	<b>74,221</b>	<b>91,675</b>	<b>82,941</b>	<b>33,111</b>	<b>85,334</b>	<b>109,529</b>	<b>107,506</b>	<b>188,565</b>	<b>0</b>	<b>0</b>			<b>963,980</b>
<b>Total Royalties, \$000s</b>		<b>\$0</b>	<b>\$2,147</b>	<b>\$2,700</b>	<b>\$3,697</b>	<b>\$5,674</b>	<b>\$3,086</b>	<b>\$2,926</b>	<b>\$4,312</b>	<b>\$6,564</b>	<b>\$5,201</b>	<b>\$6,179</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>42,486</b>
Pre-tax Operating Cashflow, \$000s		\$0	\$87,361	\$98,891	\$70,524	\$86,001	\$79,855	\$30,186	\$81,022	\$102,965	\$102,304	\$182,385	\$0	\$0	\$0		\$921,493
<b>Capital, \$000s</b>		<b>\$194,439</b>	<b>\$19,224</b>	<b>\$31,392</b>	<b>\$13,770</b>	<b>\$15,093</b>	<b>\$19,605</b>	<b>\$3,866</b>	<b>\$2,019</b>	<b>\$2,178</b>	<b>\$2,349</b>	<b>\$615</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$304,551</b>
Working Capital + Initial Fills (recovery)		\$13,893															\$0
Reclamation & Closure, \$000s	\$0.55											\$3,979	\$7,958	\$15,916	\$7,958	\$3,979	\$39,790
Salvage Value, \$000s													-\$14,630	-\$3,525	-\$3,525		-\$21,681
<b>Net Pre-tax Free Cashflow, \$000s</b>		<b>-\$208,331</b>	<b>\$68,137</b>	<b>\$67,499</b>	<b>\$56,753</b>	<b>\$70,908</b>	<b>\$60,250</b>	<b>\$26,319</b>	<b>\$79,003</b>	<b>\$109,122</b>	<b>\$105,513</b>	<b>\$177,791</b>	<b>\$6,672</b>	<b>-\$12,391</b>	<b>-\$4,433</b>	<b>-\$3,979</b>	<b>\$598,832</b>
Taxes, \$000s		\$0	\$7,759	\$8,342	\$5,353	\$8,268	\$8,319	\$1,511	\$8,479	\$14,302	\$16,761	\$35,697	\$0	\$0	\$0	\$0	114,790
<b>Net After-tax Free Cashflow, \$000s</b>		<b>-\$208,331</b>	<b>\$60,378</b>	<b>\$59,157</b>	<b>\$51,400</b>	<b>\$62,640</b>	<b>\$51,931</b>	<b>\$24,809</b>	<b>\$70,524</b>	<b>\$94,820</b>	<b>\$88,752</b>	<b>\$142,093</b>	<b>\$6,672</b>	<b>-\$12,391</b>	<b>-\$4,433</b>	<b>-\$3,979</b>	<b>\$484,042</b>

## 22.9 Sensitivity Analysis

To estimate the relative economic strength of the Project, base case sensitivity analyses have been completed analyzing the economic sensitivity to several parameters including changes in gold price, capital costs and average operating cash cost per ton processed. The sensitivities are based on +/- 25% of the base case for capital costs and operating costs and select gold prices. The after-tax analysis is presented in Table 22-5.

**Table 22-5: After-Tax Sensitivity Analysis**

Parameter / Variation (%)	Variation	IRR	NPV at Discount Rate (\$,000)		
		(%)	0%	5%	10%
Gold Price					
74%	\$1,600	2.0%	\$33,856	-\$38,979	-\$80,547
86%	\$1,875	14.2%	\$248,048	\$121,086	\$42,667
100%	\$2,175	26.5%	\$484,042	\$294,617	\$174,549
111%	\$2,425	36.3%	\$679,437	\$437,912	\$283,177
124%	\$2,700	46.3%	\$886,327	\$589,193	\$397,567
Capital Costs					
75%	\$228,414	38.5%	\$560,180	\$363,327	\$237,311
90%	\$274,096	30.6%	\$514,497	\$322,101	\$199,654
100%	\$304,551	26.5%	\$484,042	\$294,617	\$174,549
110%	\$335,007	23.1%	\$453,587	\$267,133	\$149,444
125%	\$380,689	18.8%	\$407,904	\$225,907	\$111,786
Operating Costs					
75%	\$825,482	38.0%	\$704,166	\$458,387	\$300,054
90%	\$990,578	31.3%	\$575,351	\$362,652	\$226,752
100%	\$1,100,643	26.5%	\$484,042	\$294,617	\$174,549
110%	\$1,210,707	21.6%	\$393,492	\$226,897	\$122,398
125%	\$1,375,803	14.1%	\$255,405	\$123,731	\$43,045

Figure 22-2 and Figure 22-3 present graphical representations of the after-tax sensitivities. Variations in gold price have the largest influence on the sensitivity of the Project. The economic indicators chosen for sensitivity evaluation are the IRR and NPV at 5% discount rate.

Figure 22-2: After-Tax Sensitivity Analysis – IRR (KCA, 2025)

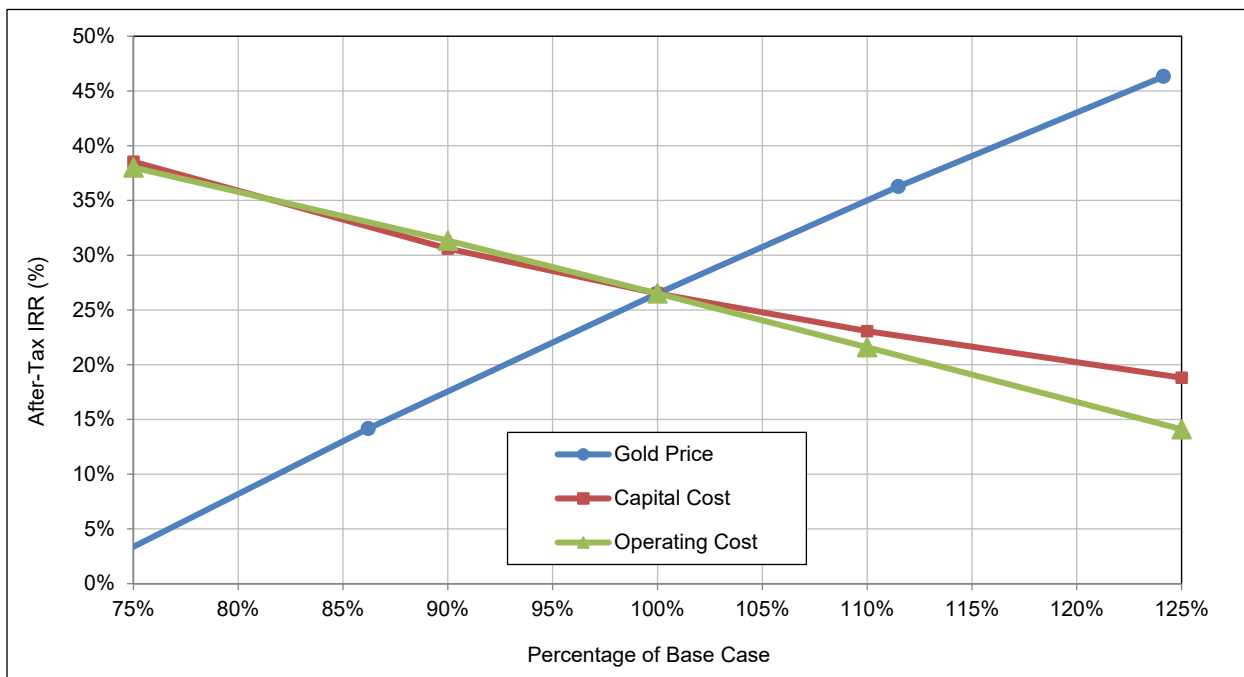
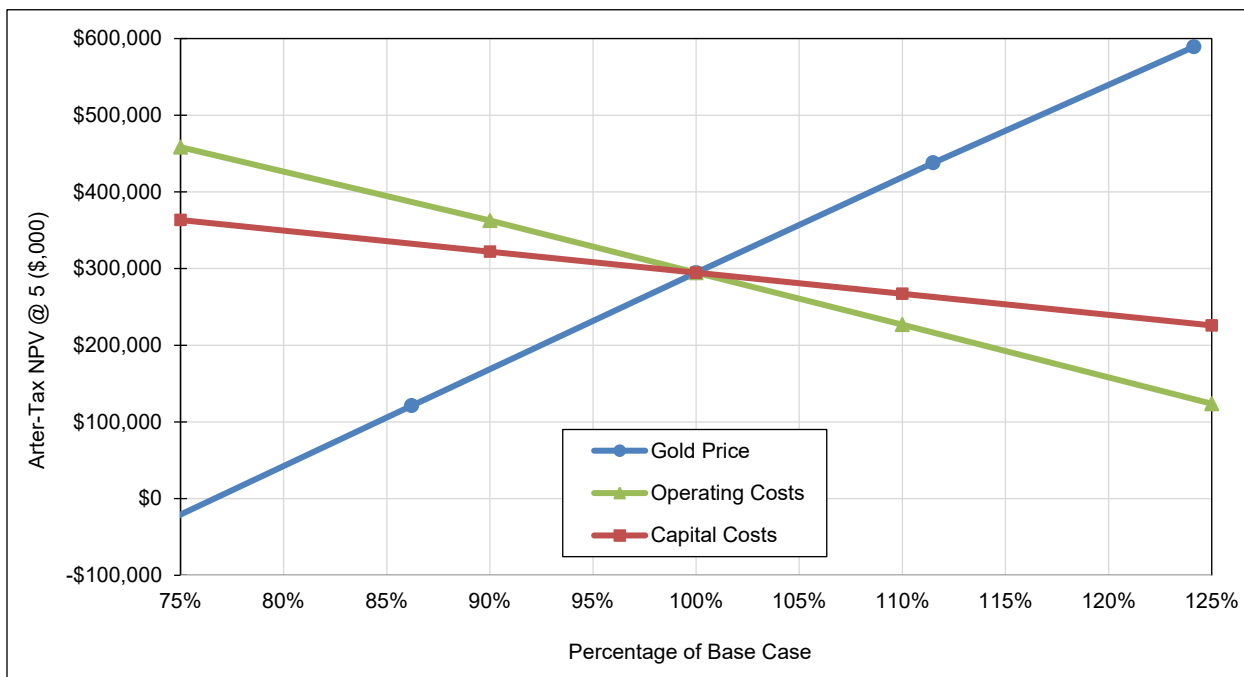


Figure 22-3: After-Tax Sensitivity Analysis – NPV @5% (KCA, 2025)



## **23      ADJACENT PROPERTIES**

There are no active exploration properties or producing mines immediately adjacent to the Mercur Gold Project.

## **SECTION 24 CONTENTS**

24	OTHER RELEVANT DATA & INFORMATION .....	24-2
24.1	Project Implementation .....	24-2

## **SECTION 24 FIGURES**

Figure 24-1:	Mercur Project Implementation Schedule .....	24-2
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## 24 OTHER RELEVANT DATA & INFORMATION

### 24.1 Project Implementation

Development of the Mercur Gold Project would continue with environmental baseline studies, mineral resource drilling, geotechnical investigations and confirmatory metallurgical test work programs. Once the baseline studies and test work are sufficiently advanced, a pre-feasibility study (“PFS”) would be prepared.

Environmental and permitting activities are expected to take approximately two-years with the Notice of Intention (“NOI”) to commence large scale mining being submitted after completing the PFS and necessary baseline studies.

A feasibility study (“FS”) would be completed during the permitting phase and would provide engineering support for the permit applications. A proposed project development schedule through the FS is presented on Figure 24-1.

**Figure 24-1: Mercur Project Implementation Schedule**

Project Development Activity	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Resource, Geotechnical & Metallurgical Drilling												
Metallurgical Test Work												
Environmental Baseline Studies												
Pre-Feasibility Study												
Environmental & Permitting												
Feasibility Study												

The FS would be followed by owner’s team ramp-up, detailed engineering, and procurement with construction commencing once all necessary permits have been received and project financing is in place.

## **SECTION 25 CONTENTS**

25	INTERPRETATIONS & CONCLUSIONS .....	25-2
25.1	Conclusions .....	25-2
25.1.1	Mineral Tenure, Surface Rights and Royalties .....	25-2
25.1.2	Geology, Data Verification and Mineral Resources .....	25-2
25.1.3	Mining .....	25-3
25.1.4	Metallurgy & Process .....	25-3
25.1.5	Environmental & Permitting .....	25-4
25.2	Opportunities .....	25-4
25.2.1	Mineral Resources .....	25-4
25.2.2	Mining .....	25-5
25.2.3	Metallurgy & Process .....	25-5
25.3	Risks .....	25-6
25.3.1	Mineral Resources .....	25-6
25.3.2	Mining .....	25-7
25.3.3	Metallurgy & Process .....	25-7
25.3.4	Other Risks .....	25-7

## **25 INTERPRETATIONS & CONCLUSIONS**

### **25.1 Conclusions**

The work that has been completed to date has demonstrated that the Mercur Gold Project is technically and economically viable. The Project site is accessible year-round via well maintained roads from Salt Lake City, Utah and benefits from existing infrastructure from the previous operation. Based on the preliminary results, additional technical studies and project development is warranted.

More specific and detailed conclusions are presented in the sections below.

#### **25.1.1 Mineral Tenure, Surface Rights and Royalties**

Revival Gold owns or controls an exclusive 100% working interest in the Mercur Property which covers approximately 16,378 acres of mineral rights including 450 unpatented lode claims, three unpatented millsite claims, 475 patented mining claims, 426 fee land tax parcels and six Utah state metalliferous minerals leases. The project is subject to various Royalty agreements ranging between 0% and 7% NSR with an estimated weighted average NSR of 2.1% in the areas of known gold mineralization.

#### **25.1.2 Geology, Data Verification and Mineral Resources**

Carlin-type gold deposits have successfully been mined in the Mercur Project area since 1890, yielding total gold production of more than 2.6 million ounces. The vast majority of this production came from the Main Mercur area on the east flank of the Ophir anticline, initially from underground mines, and later by open pit mines. The known mineralization at West Mercur occurs in different stratigraphic units (Upper Great Blue member) from those hosting gold at the Mercur mine (Mercur member). The stratigraphic units have undergone structural preparation prior to deposition of disseminated gold mineralization.

In consideration of the information summarized in this report, Mr. Lindholm has verified that the Mercur Project data are acceptable as used in this report, specifically for project description, to guide future exploration and to support gold domain modeling and resource estimation. With respect to historical collar coordinate information, transformations between local grids and State Plane systems are not known and were developed to the extent possible from known drill sites and control points. Verification conducted by RESPEC on the combined Main, South and West Mercur drill-hole assays yielded an error rate of less than one percent, and all errors found were corrected. Original certificates were available for all Ensign drill-hole assays, and for nearly all assays associated with older drilling. Evaluation of the Ensign QA/QC data, and remedial actions

performed by Ensign, indicated there were no significant issues. However, there was no QA/QC data available for the pre-Ensign assay data.

The block size (25 ft x 25 ft x 25 ft) of the Main and South Mercur block models was chosen in consideration of potential exploitation by open pit mining and heap leach extraction, and resources were reported within pits optimized using current economic parameters. However, all modeling processes and inputs that were used to estimate the gold resources, including the mineral domain modeling, grade capping, grade estimation, and density assignment, were completed independent of potential mining methods. The Main and South Mercur mineral resources were classified considering confidence in the underlying database, sample integrity, analytical precision/reliability, QA/QC results, drilling methods, variography, the status of metallurgical test work, the available density data, and confidence in the top-of-bedrock surface and geological interpretations.

### **25.1.3 Mining**

The PEA considers a standard truck shovel open pit mining 36.5 million tons of indicated material and 35.8 million tons of inferred material to be processed over a 10 year period after a year of pre-production.

Reasonable open pit mine designs, production schedules, capital and operating costs have been developed for the Mercur Gold Project. Pit designs and operational targets align with typical open pit gold operations and have been shown effective for other operations.

The mine plan and estimated mine capital and operating cost are reasonable at a scoping level of engineering and support the cash flow model and financials developed for the PEA.

### **25.1.4 Metallurgy & Process**

The PEA considers primarily recovering gold values from material mined from multiple pits. Mineralized material will be crushed to 100% passing ½" and conveyor stacked onto a permanent heap leach facility located at the West Mercur site at an average rate of 20,000 tons/day. The stacked material will be leached with a low-grade cyanide solution with the resulting pregnant leach solution being processed through an ADR plant where gold values will be loaded onto activated carbon, stripped, and recovered by electrowinning followed by treatment in a mercury retort and smelting to produce the final doré product.

Metallurgical test work indicates that the material is amenable to cyanide leaching for the recovery of gold with moderate reagent requirements. Limited test work results available suggest that the recovery of gold is effected more by depth and sulfide content than by specific geochemical

formation and that there appears to be a correlation between the column leach test and fine bottle roll leach test recoveries.

Overall recoveries have been estimated on a block-by-block basis by applying a discount derived from the column and bottle roll leach test results to the expansive historical DCN and CIL test database. The average gold recovery is estimated at 74% for the Main Mercur area and 79% for the South Mercur area with an overall average recovery of 75%.

### **25.1.5 Environmental & Permitting**

The Project is located on a brownfield site that has been almost completely reclaimed, with successful revegetation. The exception to this is the unreclaimed open pits, office and core storage areas, and portions of the road network used to access monitoring sites and exploration areas. This disturbance footprint would be utilized in future mining as well as undisturbed land adjacent to the original mine and other prospects. The environmental impacts would be minimized through the use of existing disturbance. The expanded footprint would not likely contain sensitive resources, and the impacts would be similar to the originally permitted mine. The successful revegetation of future mine closure would likely mimic the current conditions.

The State of Utah has a well-developed regulatory framework and a willingness to promote business in the state. All mine permitting would be on lands overseen by the State of Utah. Rights-of-Way (ROWs) on federal land administered by the BLM would be permitted for the use of a haul road between the mine area and the water conveyance system from the existing well site. No mining would be permitted on BLM-administered land so the State of Utah would be the lead authority. ROWs are permitted under different authorities than mining and although permits are discretionary, it is likely there would not be a problem with the separate permits. Environmental impacts would be analyzed for both the State of Utah and federal land. County permits can also be obtained through a well-established process. It is reasonable to expect all required permits and authorizations can be obtained for the Project.

## **25.2 Opportunities**

### **25.2.1 Mineral Resources**

There is potential to upgrade and expand the mineral resources at Main and South Mercur by conducting low-risk infill and step-out drilling. The primary resource areas where drill spacing is relatively wide and would benefit from infill drilling are in the Rover/Marion Hill deposits, and along the eastern margins of the Golden Gate, Mercur Hill and Sacramento pits. Classification could also be upgraded outside the densely drilled core of the deposits, particularly at shallow levels to the northwest in the Sunshine mine and Sunshine Flats areas. The best potential to expand

resources at Main and South Mercur with step-out drilling is in local areas down-dip to the east, although pit expansion is more difficult due to increasing overburden in that direction.

In addition to the exploration and delineation opportunities to expand and upgrade mineralization in the Main and South Mercur areas, there are opportunities to add new resources outside the existing modeled deposits. At Main Mercur, the potential for mineralized feeder structures and deeper stratigraphic host units is under-explored, as is the northeast extension of the favorable Mercur Series host units. At South Mercur, where mineralization appears to be associated with the intersection of the northerly strike of the Mercur Member beds and northwest-trending structural zones, there is potential for the discovery of new en echelon pods of mineralization. The West Mercur pediment is a greenfields area where undiscovered deposits could be concealed beneath relatively thin alluvial cover. North Mercur is an early-stage exploration area that has permissive geology for new silver and gold discoveries.

Each set of low- and high-grade domains for Main and South Mercur do not always coincide. As a result, there was an overall loss of high-grade volume in the model and likely a slight reduction in gold resources. There is an opportunity to increase gold resources in the future with more consistency in modeling of the high-grade domain with the low-grade domain.

### **25.2.2 Mining**

Pit designs and schedules should undergo various iterations to investigate potential improvements to the mine plan as engineering continues in subsequent studies. These iterations could include phase and backfill sequencing to optimize haulage, geotechnical optimization with further studies, and equipment sizing and funding trade-offs.

### **25.2.3 Metallurgy & Process**

The processing rate was selected at 20,000 tons per day to maintain a reasonable project mine life; however, throughput trade-off studies suggest that there is an opportunity for improved project economics and faster payback at a higher production rate. As exploration drilling advances, and with the potential to reprocess the old South Mercur tailings and Main Mercur run-of-mine ("ROM") heaps, it is likely that the minable resources amenable to cyanide leaching will increase, justifying a higher production rate.

A significant amount of historical data has been generated for the Mercur site from past operations and only a small portion of this data has been reviewed in detail. It is likely that additional insights with regards to the site geology, geotechnical and hydrogeological conditions and metallurgical behavior could be realized which would provide a better understanding of the project. This better understanding could inform future work and allow for improvements to the project.

Silver was originally recovered during the past operations and has not been considered in the PEA project economics. Although the amount of recoverable silver is not expected to be very much, this will provide a minor benefit to the overall project.

## **25.3 Risks**

### **25.3.1 Mineral Resources**

The original datum, projections and precise base point for the local Mercur Mine and South Mercur grids are not known. Transformations were developed by Barrick to convert between the global and local coordinate systems. Ensign verified collar locations using various historical maps, LiDAR surveys and aerial imagery, and modified coordinates as warranted. Although these efforts improved confidence in the Mercur drill-hole database, there is still risk associated with the collar locations.

The available information regarding sample preparation, analysis, security and QA/QC data is limited for pre-Ensign exploration sampling and drilling programs. As a result, there is risk associated with the historical assays, however, the risk is mitigated to some degree because the assay data was verifiable. The available QA/QC and other information were considered in classification of the resources.

The precise location of the top-of-bedrock surface at Main Mercur is not known in backfilled areas within the pits. A reasonable surface has been established based on historical as-builts and blast hole data, but there are many locations where the surface conflicts with logging in holes drilled through backfill material into bedrock. To remediate this risk in the resource model, all blocks within a 50 ft vertical depth below the current top-of-bedrock surface below backfill material have been assigned to Inferred classification.

At South Mercur, there was a small amount of historical production from the Overland and Sunshine underground mines, and there is a risk that some material predicted by the resource model no longer exists. To remediate this risk, classification was downgraded to Inferred within 40 ft of consecutive missing sample intervals in drilling. A similar risk may be associated with unknown underground workings at Main Mercur, although it is likely that most of these areas have been consumed by past open pit mining. Overall, the risk associated with the undocumented grade and extent of underground mined material is low, because the tonnage historically extracted was likely very small.

There was no density data available for the Mercur project other than those applied during past open pit mining. There are likely local variances in bedrock densities related to lithology, alteration and oxidation types that are not applied to the resource model. There is some risk that tonnages

of ore and waste mined will not be as predicted by the Main and South Mercur models due to the lack of density data.

### **25.3.2 Mining**

Some uncertainty remains in the post-mining surface in areas that were backfilled with waste rock and reclaimed during the prior operation. This could lead to changes in pit designs with additional capital and operating costs.

Geotechnical studies are required to verify the pit slope assumptions for both Main and South Mercur. These could lead to additional capital and operating costs or loss of processed material.

### **25.3.3 Metallurgy & Process**

Samples used for the column leach tests were derived from a limited number of core holes that do not represent the full range of metallurgical behavior of the Mercur mineral resources. Additional drilling, sampling and testing will be required to increase confidence in the heap leach recovery estimates to support a Preliminary Feasibility Study and continued project development. Further, the Mercur mine pits have known carbonaceous material that could impact overall heap performance if this material is not well understood and managed in any future operation. Steps have been taken to identify this material, and the PEA mine schedule was developed such that the material is stockpiled and leached at the end of mine life where the overall risk of processing this material is low.

### **25.3.4 Other Risks**

The project is subject to normal risks regarding access, title, permitting and security. Regulations for both the State of Utah and the federal government are in place to permit the project without substantial risk. Both agencies must comply with the Clean Water Act, Clean Air Act, and Endangered Species Act, as well as other regulations. Tooele County oversees local regulations and permits. The federal action on BLM-administered land is regulated under 43 CFR 2800 (ROWs) not 43 CFR 3809 regulations for mining since no mining activities are located on federal land. NEPA is required for the ROWs but the State of Utah does not have a similar policy; however, all sensitive resources are protected and a robust reclamation and bonding program is in place to protect the environment.

The Mercur land position includes claim interests optioned from Barrick Resources (USA) Inc. and others and requires future lease fees and earn-in payments.

## **SECTION 26 CONTENTS**

26	RECOMMENDATIONS .....	26-2
26.1	KCA Recommendations .....	26-2
26.2	RESPEC Recommendations .....	26-3
26.2.1	Mineral Resource .....	26-3
26.2.2	Mining .....	26-4

## **SECTION 26 TABLES**

Table 26-1:	Estimated Costs for Recommended Future Work.....	26-2
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## 26 RECOMMENDATIONS

This section provides recommendations from KCA and RESPEC. Costs for each recommended task have been estimated and are summarized in Table 26-1. Recommended future work costs have been divided into “Core Items” which are critical to the understanding and future development of the project and “Discretionary Items” which would provide useful information but is not critical for this work to be done at this time.

**Table 26-1: Estimated Costs for Recommended Future Work**

Recommendations	Estimated Costs	
	Core Items (\$ millions)	Discretionary (\$ millions)
Resource Conversion Core Drilling – Phase 1 (±4,600 m)	\$3.09	-
Resource Conversion Core Drilling – Phase 2 (±800 m)	\$0.54	-
Resource Conversion RC Drilling – Phase 1 (±10,200 m)	\$1.73	-
Resource Conversion RC Drilling – Phase 2 (±5,600 m)	\$0.95	-
Geophysics to Define Bedrock/Backfill Contact	\$0.20	-
Resource Expansion Core Drilling (±2,300 m)	-	\$1.55
Resource Expansion RC Drilling (±2,600 m)	-	\$0.44
Exploration RC Drilling (±3,700 m)	-	\$0.63
Mineral Resource Estimating	\$0.20	-
PFS Open Pit Geotechnical Program	\$0.50	-
PFS Metallurgical Program	\$0.30	-
PFS Foundation Geotechnical Program	\$0.30	-
PFS Design & Financial Analysis	\$1.00	-
Baseline Environmental Studies	\$0.15	\$0.30
<b>Totals</b>	<b>\$8.96</b>	<b>\$2.92</b>
<i>Note:</i> Estimated costs for the drilling activities assumed unit costs of \$170/m for RC drilling and \$672/m for core drilling.		

### 26.1 KCA Recommendations

The Mercur PEA presents an economically viable project that warrants continued investment and development. KCA recommends the following additional work:

- Undertake additional heap leach metallurgical testing including column leach and compacted permeability tests to determine the optimum crush size, increase confidence in the recovery model for a range of rock types including potentially carbonaceous and sulfidic materials, and validate the reagent requirements.

- A PFS should be completed on the Project once supporting lab and field studies referenced above have been sufficiently advanced, and the Mineral Resource estimate has been updated.

Recommended environmental baseline studies and permitting are as follows:

- Conduct Class I desktop analysis to identify potential impacts to known cultural sites.
- Conduct Class III cultural resources surveys on private land utilizing a block survey approach that would allow for moving facility locations to avoid impacts to eligible sites.
- If facilities cannot avoid eligible sites, then the sites would need to be treated with activities overseen by the State of Utah, SHPO, or the BLM.
- Conduct desktop analysis utilizing current state and federal databases for areas outside the current disturbance and permit footprint to determine if detailed field surveys will be required for biological resources.
- Develop a draft Notice of Intention and Reclamation Application.
- Determine the route of the haul road, conduct a Class I desktop analysis to see if any eligible sites would be impacted, and adjust the route if needed.
- Set up the pre-application meeting for a ROW application with the BLM to determine the baseline studies deemed necessary. Obtain scopes of work for the baseline studies and determine the proper time of year for the surveys. Determine what is needed for the water conveyance system ROW, which was previously approved under Barrick's Mercur Mine Project.
- Complete all BLM ROW surveys prior to submission of 299 Form and plan of development.
- Prepare the 299 Form and plan of development for the haul road ROW.

## 26.2 RESPEC Recommendations

### 26.2.1 Mineral Resource

Mr. Lindholm recommends the following work be undertaken in order to increase understanding in the geology and distribution of gold in the deposits, increase confidence in the gold domain and mineral resource models, potentially discover new resources, and advance the Mercur project to the PFS or FS level:

- Complete additional infill and step-out drilling in the Main and South Mercur Mineral Resource areas to increase confidence in and upgrade classification of the current models, and to expand the existing deposits.

- Conduct additional infill drilling to specifically test the gold domain model. If the model is reasonably confirmed, it will indicate that drill spacing is currently adequate or that wider spacing could properly define the deposits. Confirmation of the gold domain model will also increase confidence in the resource estimate and allow for conversion of Inferred material to Indicated or even Measured classification.
- Conduct additional core drilling to collect samples for metallurgical and geotechnical testing.
- In addition to exploration drilling, conduct rock sample, soil sample and geophysical surveys to explore for potential new discoveries from targets in Main, North, West and South Mercur that could extend the LOM.
- More consistently model the high-grade gold domains within the low-grade domains to increase gold resources.
- Drill a few holes and conduct geophysical surveys in backfill areas to confirm or define the top-of-bedrock surface.
- Conduct drilling to target the longer missing sample intervals in the Sunshine and Overland mine areas at South Mercur to determine the character of the material or voids. This will help to determine how the assays are treated in the model and resource estimate and provide information regarding the nature and extent of underground workings.
- Obtain new density data from drill core, pit wall samples, or other sources. The density data should be spatially representative, and sufficiently distinguish the various lithologic, alteration and oxidation types.
- Existing historical collar coordinate information, particularly transformations between local and State Plane systems, should be searched for in files currently in Revival's possession. The surveyed coordinate system in historical records should continue to be investigated.
- Continue studying the relationship between redox state and carbon content with gold recovery. If these studies indicate that application of different cutoff grades for different material types will be necessary during mining, model the appropriate zone(s) so that mineral resources can be reported separately for these features.

#### **26.2.2 Mining**

- Complete geotechnical studies for the mine pits and in the key infrastructure areas at West Mercur and incorporate findings into designs of open pits and waste rock storage facilities.
- Mine operational and cost trade-off studies should be included in the PFS examining contractor vs owner mining, lease vs purchase of equipment, and equipment sizing.

## **27 REFERENCES**

For convenience, references throughout this technical report are included at the end of each section.

## **Appendix A**

### **Property Interests**

#### **LISTING OF PATENTED AND UNPATENTED FEDERAL MINING CLAIMS, FEE LANDS AND LEASED STATE LANDS OWNED OR CONTROLLED BY ENSIGN GOLD (US) CORP.**

**Part 1 – Properties assigned to Ensign Gold (US) Corp.**  
**by Rush Valley Exploration Inc.**

**Part 1A – Unpatented Lode Mining Claims owned by Ensign Gold (US) Corp.**

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
1	WM-01	UT101752996	UMC417451	3/28/2012		West Mercur
2	WM-04	UT101752997	UMC417454	3/28/2012		West Mercur
3	WM-05	UT101752998	UMC417455	3/28/2012		West Mercur
4	WM-10	UT101752999	UMC417460	3/28/2012		West Mercur
5	WM-11	UT101753000	UMC417461	3/28/2012		West Mercur
6	WM-16	UT101753001	UMC417466	3/28/2012		West Mercur
7	WM-17	UT101753002	UMC417467	3/27/2012		West Mercur
8	WM-18	UT101753003	UMC417468	3/27/2012		West Mercur
9	WM-19	UT101753004	UMC417469	3/27/2012		West Mercur
10	WM-20	UT101753005	UMC417470	3/27/2012		West Mercur
11	WM-21	UT101753006	UMC417471	3/27/2012		West Mercur
12	WM-22	UT101753007	UMC417472	3/27/2012		West Mercur
13	WM-23	UT101753008	UMC417473	3/27/2012		West Mercur
14	WM-24	UT101753009	UMC417474	3/27/2012		West Mercur
15	WM-25	UT101753010	UMC417475	3/27/2012		West Mercur
16	WM-26	UT101753011	UMC417476	3/27/2012		West Mercur
17	WM-27	UT101753012	UMC417477	3/27/2012		West Mercur
18	WM-28	UT101753013	UMC417478	3/27/2012		West Mercur
19	WM-33	UT101753014	UMC417483	3/27/2012		West Mercur
20	WM-34	UT101753015	UMC417484	3/27/2012		West Mercur
21	GR-01	UT101359305	UMC420548	9/1/2013		West Mercur
22	GR-02	UT101359306	UMC420549	9/1/2013		West Mercur
23	BUF-09	UT101356774	UMC422923	2/16/2014	Part 3 <sup>rd</sup> party surface	West Mercur
24	BUF-10	UT101356775	UMC422924	2/16/2014	Part 3 <sup>rd</sup> party surface	West Mercur
25	SUN-01	UT101356776	UMC422927	2/16/2014	3 <sup>rd</sup> party surface	West Mercur
26	SUN-02	UT101357766	UMC422928	2/16/2014	3 <sup>rd</sup> party surface	West Mercur
27	SUN-07	UT101357767	UMC422933	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
28	SUN-09	UT101357768	UMC422935	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
29	SUN-11	UT101357769	UMC422937	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
30	SUN-13	UT101357770	UMC422939	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
31	SUN-14	UT101357771	UMC422940	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
32	SUN-15	UT101357772	UMC422941	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
33	SUN-16	UT101358768	UMC422942	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
34	SUN-18	UT101358769	UMC422944	2/17/2014	3 <sup>rd</sup> party surface	West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
35	SUN-20	UT101358770	UMC422946	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
36	SUN-22	UT101358771	UMC422948	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
37	SUN-24	UT101358772	UMC422950	2/17/2014	3 <sup>rd</sup> party surface	West Mercur
38	SW-01	UT101489039	UMC423056	7/2/2014		West Mercur
39	SW-02	UT101489040	UMC423057	7/2/2014		West Mercur
40	SW-03	UT101489041	UMC423058	7/2/2014		West Mercur
41	SW-04	UT101489042	UMC423059	7/2/2014		West Mercur
42	SW-06	UT101489043	UMC423061	7/2/2014		West Mercur
43	SW-08	UT101489044	UMC423063	7/2/2014		West Mercur
44	SW-19	UT101489045	UMC423074	7/3/2014		West Mercur
45	SW-21	UT101489046	UMC423076	7/3/2014		West Mercur
46	SW-23	UT101489047	UMC423078	7/3/2014		West Mercur
47	SW-25	UT101489048	UMC423080	7/3/2014		West Mercur
48	SW-27	UT101489049	UMC423082	7/3/2014		West Mercur
49	SW-28	UT101489050	UMC423083	7/3/2014		West Mercur
50	SW-29	UT101489051	UMC423084	7/3/2014		West Mercur
51	SW-30	UT101490065	UMC423085	7/3/2014		West Mercur
52	SW-32	UT101490066	UMC423087	7/3/2014		West Mercur
53	SW-39	UT101490067	UMC423094	7/3/2014		West Mercur
54	SW-40	UT101490068	UMC423095	7/4/2014		West Mercur
55	SW-41	UT101490069	UMC423096	7/4/2014		West Mercur
56	SW-42	UT101490070	UMC423097	7/4/2014		West Mercur
57	SW-43	UT101490071	UMC423098	7/4/2014		West Mercur
58	SW-44	UT101490072	UMC423099	7/4/2014		West Mercur
59	SW-45	UT101490073	UMC423100	7/4/2014		West Mercur
60	SW-46	UT101490074	UMC423101	7/4/2014		West Mercur
61	SW-53	UT101490075	UMC423108	7/5/2014		West Mercur
62	SW-54	UT101490076	UMC423109	7/5/2014		West Mercur
63	SW-55	UT101490077	UMC423110	7/5/2014		West Mercur
64	SW-56	UT101490078	UMC423111	7/5/2014		West Mercur
65	SW-57	UT101490079	UMC423112	7/5/2014		West Mercur
66	SW-58	UT101490080	UMC423113	7/5/2014		West Mercur
67	SW-59	UT101490081	UMC423114	7/5/2014		West Mercur
68	SW-60	UT101490082	UMC423115	7/5/2014		West Mercur
69	GR-03	UT101490083	UMC423117	7/6/2014		West Mercur
70	GR-04	UT101490084	UMC423118	7/6/2014		West Mercur
71	GR-05	UT101490085	UMC423119	7/6/2014		West Mercur
72	GR-06	UT101351096	UMC423120	7/6/2014		West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
73	GR-07	UT101351097	UMC423121	7/6/2014		West Mercur
74	GR-08	UT101351098	UMC423122	7/6/2014		West Mercur
75	GR-09	UT101893698	UMC425257	10/26/2014		West Mercur
76	GR-10	UT101893699	UMC425258	10/26/2014		West Mercur
77	GR-11	UT101893700	UMC425259	10/26/2014		West Mercur
78	GR-12	UT101893701	UMC425260	10/26/2014		West Mercur
79	GR-13	UT101893702	UMC425261	10/26/2014		West Mercur
80	GR-14	UT101893703	UMC425262	10/26/2014		West Mercur
81	GR-15	UT101893704	UMC425263	10/26/2014		West Mercur
82	RV-1	UT101649492	UMC426669	4/12/2016		West Mercur
83	RV-2	UT101649493	UMC426670	4/12/2016		West Mercur
84	RV-3	UT101649494	UMC426671	4/12/2016		West Mercur
85	BUFR-01	UT101890715	UMC428912	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
86	BUFR-02	UT101890716	UMC428913	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
87	BUFR-07	UT101890717	UMC428915	9/1/2016	3 <sup>rd</sup> party surface	West Mercur
88	BUFR-08	UT101890718	UMC428916	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
89	SUNR-03	UT101892044	UMC428918	9/1/2016	3 <sup>rd</sup> party surface	West Mercur
90	SUNR-04	UT101892045	UMC428919	9/1/2016	3 <sup>rd</sup> party surface	West Mercur
91	SUNR-05	UT101892046	UMC428920	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
92	SUNR-06	UT101892047	UMC428921	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
93	SUNR-12	UT101892048	UMC428924	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
94	SUNR-17	UT101892049	UMC428925	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
95	SUNR-19	UT101892050	UMC428926	9/1/2016	3 <sup>rd</sup> party surface	West Mercur
96	SUNR-21	UT101892051	UMC428927	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
97	SUNR-23	UT101892052	UMC428928	9/1/2016	Part 3 <sup>rd</sup> party surface	West Mercur
98	SUNR-26	UT101892053	UMC428930	9/3/2016	Part 3 <sup>rd</sup> party surface	West Mercur
99	SUNR-27	UT101892054	UMC428931	9/3/2016	Part 3 <sup>rd</sup> party surface	West Mercur
100	SUNR-29	UT101892055	UMC428933	9/3/2016	3 <sup>rd</sup> party surface	West Mercur
101	SUNR-30	UT101892056	UMC428934	9/3/2016	Part 3 <sup>rd</sup> party surface	West Mercur
102	SUNR-31	UT101892057	UMC428935	9/3/2016	3 <sup>rd</sup> party surface	West Mercur
103	SUNR-32	UT101892058	UMC428936	9/3/2016	Part 3 <sup>rd</sup> party surface	West Mercur
104	SUNR-33	UT101892059	UMC428937	9/3/2016	3 <sup>rd</sup> party surface	West Mercur
105	SUNR-34	UT101892060	UMC428938	9/3/2016	3 <sup>rd</sup> party surface	West Mercur
106	SWR-20	UT101892061	UMC428959	9/2/2016		West Mercur
107	SWR-22	UT101892062	UMC428960	9/2/2016		West Mercur
108	SWR-24	UT101892063	UMC428961	9/2/2016		West Mercur
109	SWR-26	UT101892064	UMC428962	9/2/2016		West Mercur
110	SWR-48	UT101893307	UMC428968	9/3/2016		West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
111	SWR-61	UT101893308	UMC428973	9/1/2016		West Mercur
112	GTO-1	UT101893309	UMC428974	9/2/2016		West Mercur
113	GTO-2	UT101893310	UMC428975	9/2/2016		West Mercur
114	GTO-3	UT101893311	UMC428976	9/2/2016		West Mercur
115	GTO-4	UT101893312	UMC428977	9/2/2016		West Mercur
116	GTO-5	UT101893313	UMC428978	9/2/2016		West Mercur
117	RVX 22	UT101646420	UMC433775	3/25/2017		West Mercur
118	RVX 23	UT101646421	UMC433776	3/26/2017		West Mercur
119	RVX 24	UT101647622	UMC433777	3/26/2017		West Mercur
120	RVX 25	UT101647623	UMC433778	3/26/2017		West Mercur
121	RVX 26	UT101647624	UMC433779	3/26/2017		West Mercur
122	RVX 27	UT101647625	UMC433780	3/26/2017		West Mercur
123	RVX 28	UT101647626	UMC433781	3/26/2017		West Mercur
124	RVX 29	UT101647627	UMC433782	3/26/2017		West Mercur
125	RVX 30	UT101647628	UMC433783	3/26/2017		West Mercur
126	RVX 31	UT101647629	UMC433784	3/27/2017		West Mercur
127	RVX 32	UT101647630	UMC433785	3/27/2017		West Mercur
128	RVX 33	UT101647631	UMC433786	3/27/2017		West Mercur
129	RVX 34	UT101647632	UMC433787	3/27/2017		West Mercur
130	RVX 35	UT101647633	UMC433788	3/27/2017		West Mercur
131	RVX 81	UT101647634	UMC433834	3/28/2017		West Mercur
132	RVX 82	UT101647635	UMC433835	3/28/2017		West Mercur
133	RVX 83	UT101647636	UMC433836	3/28/2017		West Mercur
134	RVX 84	UT101647637	UMC433837	3/28/2017		West Mercur
135	RVX 85	UT101647638	UMC433838	3/28/2017		West Mercur
136	RVX 86	UT101647639	UMC433839	3/28/2017		West Mercur
137	RVX 87	UT101647640	UMC433840	3/28/2017		West Mercur
138	RVX 88	UT101647641	UMC433841	3/28/2017		West Mercur
139	RVX 89	UT101647642	UMC433842	3/28/2017		West Mercur
140	RVX 90	UT101649022	UMC433843	3/28/2017		West Mercur
141	RVX 91	UT101649023	UMC433844	3/28/2017		West Mercur
142	RVX 92	UT101649024	UMC433845	3/28/2017		West Mercur
143	RVX 93	UT101649025	UMC433846	3/28/2017		West Mercur
144	RVX 94	UT101649026	UMC433847	3/28/2017		West Mercur
145	RVX 95	UT101649027	UMC433848	3/28/2017		West Mercur
146	RVX 96	UT101649028	UMC433849	3/28/2017		West Mercur
147	RVX 97	UT101649029	UMC433850	3/25/2017		West Mercur
148	RVX 98	UT101649030	UMC433851	3/28/2017		West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
149	RVX 99	UT101649031	UMC433852	3/28/2017		West Mercur
150	RVX 100	UT101649032	UMC433853	3/28/2017		West Mercur
151	RVX 101	UT101649033	UMC433854	3/29/2017		West Mercur
152	RVX 102	UT101649034	UMC433855	3/29/2017		West Mercur
153	RVX 103	UT101649035	UMC433856	3/29/2017		West Mercur
154	RVX 104	UT101649036	UMC433857	3/29/2017		West Mercur
155	RVX 105	UT101649037	UMC433858	3/29/2017		West Mercur
156	RVX 106	UT101649038	UMC433859	3/29/2017		West Mercur
157	RVX 115	UT101649039	UMC433868	3/28/2017		West Mercur
158	RVX 116	UT101649040	UMC433869	3/28/2017		West Mercur
159	RVX 117	UT101649041	UMC433870	3/28/2017		West Mercur
160	RVX 118	UT101649042	UMC433871	3/28/2017		West Mercur
161	RVX 119	UT101650222	UMC433872	3/28/2017		West Mercur
162	RVX 120	UT101650223	UMC433873	3/28/2017		West Mercur
163	RVX 121	UT101650224	UMC433874	3/29/2017		West Mercur
164	RVX 122	UT101650225	UMC433875	3/29/2017		West Mercur
165	RVX 123	UT101650226	UMC433876	3/29/2017		West Mercur
166	RVX 124	UT101650227	UMC433877	3/29/2017		West Mercur
167	RVX 125	UT101650228	UMC433878	3/29/2017		West Mercur
168	RVX 140	UT101650229	UMC433893	3/28/2017		West Mercur
169	RVX 141	UT101650230	UMC433894	3/28/2017		West Mercur
170	RVX 142	UT101650231	UMC433895	3/28/2017		West Mercur
171	RVX 143	UT101650232	UMC433896	3/28/2017		West Mercur
172	RVX 144	UT101650233	UMC433897	3/29/2017		West Mercur
173	RVX 152	UT101650234	UMC433905	3/29/2017		West Mercur
174	RVX 153	UT101650235	UMC433906	3/29/2017		West Mercur
175	RVX 154	UT101650236	UMC433907	3/29/2017		West Mercur
176	RVX 155	UT101650237	UMC433908	3/29/2017		West Mercur
177	RVX 156	UT101650238	UMC433909	3/29/2017		West Mercur
178	LARK	UT101614311	UMC446057	2/20/2020		West Mercur
179	OW 1	UT101568703	UMC446977	5/19/2020		South Mercur
180	OW 2	UT101570026	UMC446978	5/19/2020		South Mercur
181	OW 3	UT101570027	UMC446979	5/19/2020		South Mercur
182	ALN 1	UT101570028	UMC446980	5/19/2020		South Mercur
183	ALN 2	UT101570029	UMC446981	5/19/2020		South Mercur
184	CC 1	UT101570030	UMC446982	5/19/2020		South Mercur
185	CC 2	UT101570031	UMC446983	5/19/2020		South Mercur
186	CC 3	UT101570032	UMC446984	5/19/2020		South Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
187	CC 4	UT101570033	UMC446985	5/19/2020		South Mercur
188	CC 5	UT101570034	UMC446986	5/19/2020		South Mercur
189	CC 6	UT101570035	UMC446987	5/19/2020		South Mercur
190	CC 7	UT101570036	UMC446988	5/19/2020		South Mercur
191	VR 1	UT101570037	UMC446989	5/18/2020		South Mercur
192	VR 2	UT101570038	UMC446990	5/18/2020		South Mercur
193	VR 3	UT101570039	UMC446991	5/18/2020		South Mercur
194	VR 4	UT101570040	UMC446992	5/18/2020		South Mercur
195	VR 5	UT101570041	UMC446993	5/18/2020		South Mercur
196	VR 6	UT101570042	UMC446994	5/18/2020		South Mercur
197	VR 7	UT101570043	UMC446995	5/18/2020		South Mercur
198	SH 1	UT101570044	UMC446996	5/19/2020		North Mercur
199	SH 2	UT101570045	UMC446997	5/19/2020		North Mercur
200	SH 3	UT101570046	UMC446998	5/19/2020		North Mercur
201	SH 4	UT101570047	UMC446999	5/19/2020		North Mercur
202	SH 5	UT101891339	UMC447000	5/19/2020		North Mercur
203	SH 6	UT101891340	UMC447001	5/19/2020		North Mercur
204	SH 7	UT101891341	UMC447002	5/19/2020		North Mercur
205	SH 8	UT101891342	UMC447003	5/19/2020		North Mercur
206	SH 9	UT101891343	UMC447004	5/19/2020		North Mercur
207	SH 10	UT101891344	UMC447005	5/19/2020		North Mercur
208	SH 11	UT101891345	UMC447006	5/19/2020		North Mercur
209	SH 12	UT101891346	UMC447007	5/19/2020		North Mercur
210	SH 13	UT101891347	UMC447008	5/19/2020		North Mercur
211	SH 14	UT101891348	UMC447009	5/19/2020		North Mercur
212	SH 15	UT101891349	UMC447010	5/19/2020		North Mercur
213	SH 16	UT101891350	UMC447011	5/19/2020		North Mercur

**Part 1B – Utah SITLA Metalliferous Minerals Leases held by Ensign Gold (US) Corp.**

Lease #	Date	Legal Description (Salt Lake B&M)	Acres	Area	Interests
ML 51995	6/1/2011	T6S, R4W, Section 2: Lots 1-6, S $\frac{1}{2}$ NE $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$	587	West Mercur	min only
ML 52080	1/1/2012	T6S, R4W, Section 36	640	West Mercur	min only
ML 52081	1/1/2012	T5S, R4W, Section 28: S $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 29: NE $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 32: NE $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$	680	West Mercur	minerals, 480 acres of surface

Lease #	Date	Legal Description (Salt Lake B&M)	Acres	Area	Interests
ML 52082	1/1/2012	T5S, R4W, Section 29: W½, Section 32: W½	640	West Mercur	minerals, 600 acres of surface
ML 52083	2/1/2012	T6S, R3W, Section 32: Lots 1-10, S½S½, N½SW¼, W½NW¼	570	West Mercur	minerals & surface

### Part 1C – Private Party Properties Leased by Ensign Gold (US) Corp.

#### Party A – Ash-ley Woods LLC Lease – Patented Claims

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Rush Valley	3145	West Mercur	20.34	50% <sup>1</sup>
2	Snow Storm No. 7	3883	West Mercur	20.522	50% <sup>1</sup>
3	Snow Storm No. 8	3884	West Mercur	18.41	50% <sup>1</sup>
4	Snow Storm No. 9	3885	West Mercur	14.47	50% <sup>1</sup>
5	Lillian Russell	3348	West Mercur	20.53	50% <sup>2</sup>
6	La Cigale	3348	West Mercur	19.352	50% <sup>2</sup>
7	La Cigale No. 2	3348	West Mercur	19.71	50% <sup>2</sup>
8	La Cigale No. 4	3348	West Mercur	20.526	50% <sup>2</sup>
9	La Cigale No. 6	3348	West Mercur	13.268	50% <sup>2</sup>
10	La Cigale No. 8	3348	West Mercur	3.563	50% <sup>2</sup>
11	La Cigale No. 3	3348	West Mercur	18.932	50% <sup>2</sup>
12	La Cigale No. 5	3348	West Mercur	15.246	50% <sup>2</sup>
13	La Cigale No. 12	3348	West Mercur	9.996	50% <sup>3</sup>
14	La Cigale No. 13	3348	West Mercur	6.866	50% <sup>3</sup>
15	La Cigale No. 14	3348	West Mercur	1.651	50% <sup>3</sup>
16	La Cigale No. 19	3348	West Mercur	3.941	50% <sup>2</sup>
17	La Cigale No. 20	3348	West Mercur	7.006	50% <sup>3</sup>

<sup>1</sup> The remaining 50% is leased from Party F.

<sup>2</sup> The remaining 50% is leased from Party C.

<sup>3</sup> The remaining 50% is held by a third party. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

#### Party A – Ash-ley Woods Lease – Unpatented Lode Mining Claims

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Location Date	Area
1	ISURUS-01	UT101428297	UMC413344	4/21/2011	West Mercur
2	ISURUS-02	UT101400780	UMC413345	4/21/2011	West Mercur
3	ISURUS-03	UT101400781	UMC413346	4/21/2011	West Mercur
4	ISURUS-04	UT101400782	UMC413347	4/21/2011	West Mercur
5	ISURUS-05	UT101400783	UMC413348	4/21/2011	West Mercur
6	ISURUS-06	UT101400784	UMC413349	4/21/2011	West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Location Date	Area
7	ISURUS-07	UT101400785	UMC413350	4/21/2011	West Mercur
8	ISURUS-08	UT101400786	UMC413351	4/21/2011	West Mercur
9	ISURUS-09	UT101400787	UMC413352	4/22/2011	West Mercur
10	ISURUS-10	UT101400788	UMC413353	4/22/2011	West Mercur
11	ISURUS-11	UT101400789	UMC413354	4/22/2011	West Mercur
12	ISURUS-12	UT101400790	UMC413355	4/22/2011	West Mercur
13	ISURUS-13	UT101400791	UMC413356	4/22/2011	West Mercur
14	ISURUS-14	UT101400792	UMC413357	4/22/2011	West Mercur
15	ISURUS-15	UT101400793	UMC413358	4/22/2011	West Mercur
16	ISURUS-16	UT101400794	UMC413359	6/22/2011	West Mercur
17	ISURUS-17	UT101400795	UMC413360	6/22/2011	West Mercur
18	ISURUS-18	UT101400796	UMC413361	6/22/2011	West Mercur
19	ISURUS-19	UT101400797	UMC413362	6/22/2011	West Mercur
20	ISURUS-20	UT101358773	UMC422963	2/18/2014	West Mercur
21	ISURUS-21	UT101358774	UMC422964	2/18/2014	West Mercur
22	ISURUS-22	UT101358775	UMC422965	2/18/2014	West Mercur
23	ISURUS-23	UT101358776	UMC422966	2/18/2014	West Mercur

**Party B – Geyser Marion Gold Company Lease – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Black Horse No. 1	3494	West Mercur	16.917	100%
2	Black Horse No. 2	3494	West Mercur	14.235	100%
3	Black Horse No. 3	3494	West Mercur	16.641	100%
4	Black Horse No. 4	3494	West Mercur	16.694	100%
5	Black Horse No. 8	3494	West Mercur	15.151	100%
6	Black Horse No. 23	3494	West Mercur	10.186	100%
7	Martha Washington	3342	West Mercur	14.43	100%
8	Vanderbilt	3342	West Mercur	19.14	100%
9	Bucklin	3342	West Mercur	19.3	100%
10	Singer	3342	West Mercur	13.93	100%
11	Vindicator	3342	West Mercur	14.39	100%
12	Golden Zone No. 1	3390	West Mercur	17.37	100%
13	Alton	3390	West Mercur	20.17	100%
14	Seago Lilly No. 1	3390	West Mercur	19.06	100%
15	Snow Storm No. 1	3877	West Mercur	15.472	100%
16	Snow Storm No. 2	3878	West Mercur	15.343	100%
17	Snow Storm No. 3	3879	West Mercur	14.559	100%
18	Snow Storm No. 4	3880	West Mercur	12.536	100%
19	Snow Storm No. 5	3881	West Mercur	18.459	100%
20	Snow Storm No. 6	3882	West Mercur	20.344	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
21	Snow Storm No. 10	3886	West Mercur	9.468	100%
22	Grannett Mountain No. 3	3681	West Mercur	19.672	100%
23	Grannet Mt. No. 5	3681	West Mercur	20.033	100%
24	Grannet Mountain No. 2	3681	West Mercur	20.371	100%
25	Grannet Mountain	3681	West Mercur	18.761	100%
26	Granite Mt. No. 6	3681	West Mercur	4.679	100%
27	Santa Fee	3681	West Mercur	13.032	100%
28	Grace K.	3681	West Mercur	15.303	100%
29	Ohio Boy	3681	West Mercur	19.905	100%
30	Nellie G.	3681	West Mercur	19.039	100%
31	Quartet No. 1	3935	West Mercur	15.161	100%
32	Kansas Boy	3935	West Mercur	17.639	100%
33	Grannet Mt. No. 4	3935	West Mercur	19.727	100%
34	Kansas Boy Fraction	3935	West Mercur	6.695	100%
35	Kansas Boy No. 4	3935	West Mercur	5.296	100%
36	Kansas Boy No. 3	3935	West Mercur	16.454	100%
37	Syndicate No. 1	3487	West Mercur	17.63	100%
38	Syndicate No. 2	3487	West Mercur	19.41	100%
39	Monopolist No. 1	3487	West Mercur	16.32	100%
40	Monopolist No. 2	3487	West Mercur	12.83	100%
41	Monopolist No. 3	3487	West Mercur	8.17	100%
42	Monopolist No. 4	3487	West Mercur	17.17	100%
43	Monopolist No. 5	3487	West Mercur	2.44	100%
44	Monopolist No. 6	3487	West Mercur	0.67	100%
45	Monopolist No. 7	3487	West Mercur	6.2	100%
46	Monopolist No. 8	3487	West Mercur	6.2	100%
47	West Shore	3164	West Mercur	20.3	100%
48	Selma	3164	West Mercur	18.8	100%
49	Sister Mary	3164	West Mercur	17.4	100%
50	West Selma	3164	West Mercur	7.76	100%
51	Four O'Clock	3164	West Mercur	5.72	100%
52	Esther	3164	West Mercur	18.31	100%
53	Alice	3164	West Mercur	19.24	100%
54	Maggie Kelly	3164	West Mercur	19.26	100%
55	Honest Dick	3164	West Mercur	17.93	100%
56	Lola Barker	3164	West Mercur	18.91	100%
57	Black Sheep	3164	West Mercur	20.59	100%
58	Ivanhoe	4192	West Mercur	11.663	100%
59	Coin	4192	West Mercur	20.145	100%
60	Albion	4192	West Mercur	15.307	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
61	Try Again	4192	West Mercur	16.549	100%

**Party C – Sunset & Sunrise Ranches, LLC Lease 1 – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Edna May	3381	West Mercur	18.522	100%
2	Louis No. 1	3381	West Mercur	15.863	100%
3	Louis No. 2	3381	West Mercur	17.174	100%
4	Louis No. 3	3381	West Mercur	17.174	100%
5	Gold Bug No. 1	3356	West Mercur	16.044	100%
6	Gold Bug No. 2	3356	West Mercur	16.12	100%
7	Gold Bug No. 3	3356	West Mercur	16.32	100%
8	Gold Bug No. 4	3356	West Mercur	6.718	100%
9	Snap	3350	West Mercur	17.314	100%
10	Snap No. 2	3351	West Mercur	7.302	100%
11	Solo	3411	West Mercur	17.448	100%
12	Valley View	3402	West Mercur	19.14	100%
13	Valley View No. 2	3402	West Mercur	18.565	100%
14	Valley View No. 3	3402	West Mercur	18.488	100%
15	Louis No. 10	3402	West Mercur	9.741	100%
16	Louis No. 11	3402	West Mercur	15.277	100%
17	Louis No. 14	3402	West Mercur	13.55	100%
18	La Cigale	3348	West Mercur	19.352	50% <sup>4</sup>
19	La Cigale No. 2	3348	West Mercur	19.71	50% <sup>4</sup>
20	La Cigale No. 3	3348	West Mercur	18.932	50% <sup>4</sup>
21	La Cigale No. 4	3348	West Mercur	20.526	50% <sup>4</sup>
22	La Cigale No. 5	3348	West Mercur	15.246	50% <sup>4</sup>
23	La Cigale No. 6	3348	West Mercur	13.268	50% <sup>4</sup>
24	La Cigale No. 8	3348	West Mercur	3.563	50% <sup>4</sup>
25	La Cigale No. 19	3348	West Mercur	3.941	50% <sup>4</sup>
26	Lillian Russell	3348	West Mercur	20.53	50% <sup>4</sup>

<sup>4</sup>The remaining 50% is leased from Party A.

**Party D – Mountainwest Minerals, L.C. Lease 1 – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Auerbach No. 1	3742	West Mercur	15.351	41.660% <sup>5</sup>
2	Auerbach No. 2	3742	West Mercur	19.371	41.660% <sup>5</sup>
3	Auerbach No. 3	3742	West Mercur	20.441	41.660% <sup>5</sup>
4	Auerbach No. 4	3742	West Mercur	20.441	41.660% <sup>5</sup>
5	Auerbach No.5	3742	West Mercur	16.01	41.660% <sup>5</sup>
6	Auerbach Fraction No. 1	3742	West Mercur	16.451	41.660% <sup>5</sup>

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
7	Auerbach Fragment	3742	West Mercur	16.701	41.660% <sup>5</sup>
8	Hoketika No. 1	3658	West Mercur	15.584	41.660% <sup>5</sup>
9	Hoketika No. 2	3658	West Mercur	16.611	41.660% <sup>5</sup>
10	Hoketika No. 3	3658	West Mercur	16.582	41.660% <sup>5</sup>
11	Hoketika No. 4	3658	West Mercur	17.344	41.660% <sup>5</sup>
12	Hoketika No. 5	3658	West Mercur	20.557	41.660% <sup>5</sup>
13	Hoketika No. 6	3658	West Mercur	18.845	41.660% <sup>5</sup>
14	Hoketika No. 7	3658	West Mercur	18.766	41.660% <sup>5</sup>
15	Hoketika No. 8	3658	West Mercur	1.238	41.660% <sup>5</sup>
16	Hoketika No. 9	3658	West Mercur	6.988	41.660% <sup>5</sup>

<sup>5</sup> Another 5.216% is leased from Party E. The remaining 53.124% is held by ten parties with interests ranging from 1.5670% to 8.3396%. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

#### Party E – Ash-ley Woods LLC Lease 2 – Patented Claims

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Auerbach No. 1	3742	West Mercur	15.351	5.216% <sup>6</sup>
2	Auerbach No. 2	3742	West Mercur	19.371	5.216% <sup>6</sup>
3	Auerbach No. 3	3742	West Mercur	20.441	5.216% <sup>6</sup>
4	Auerbach No. 4	3742	West Mercur	20.441	5.216% <sup>6</sup>
5	Auerbach No.5	3742	West Mercur	16.010	5.216% <sup>6</sup>
6	Auerbach Fraction No. 1	3742	West Mercur	16.451	5.216% <sup>6</sup>
7	Auerbach Fragment	3742	West Mercur	16.701	5.216% <sup>6</sup>
8	Hoketika No. 1	3658	West Mercur	15.584	5.216% <sup>6</sup>
9	Hoketika No. 2	3658	West Mercur	16.611	5.216% <sup>6</sup>
10	Hoketika No. 3	3658	West Mercur	16.582	5.216% <sup>6</sup>
11	Hoketika No. 4	3658	West Mercur	17.344	5.216% <sup>6</sup>
12	Hoketika No. 5	3658	West Mercur	20.557	5.216% <sup>6</sup>
13	Hoketika No. 6	3658	West Mercur	18.845	5.216% <sup>6</sup>
14	Hoketika No. 7	3658	West Mercur	18.766	5.216% <sup>6</sup>
15	Hoketika No. 8	3658	West Mercur	1.238	5.216% <sup>6</sup>
16	Hoketika No. 9	3658	West Mercur	6.988	5.216% <sup>6</sup>
17	Lucky Boy	3425	South Mercur	5.060	5.216% <sup>7</sup>
18	Victorious	3425	South Mercur	12.48	5.216% <sup>7</sup>

<sup>6</sup> Another 41.660% is leased from Party D. The remaining 53.124% is held by ten parties with interests ranging from 1.5670% to 8.3396%. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

<sup>7</sup> Another 41.660% is leased from Party J (Part 6D). The remaining 53.124% is held by ten parties with interests ranging from 1.5670% to 8.3396%. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

**Party F – WD & SR Webb Lease – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Rush Valley	3145	West Mercur	20.34	50% <sup>8</sup>
2	Snow Storm No. 7	3883	West Mercur	20.522	50% <sup>8</sup>
3	Snow Storm No. 8	3884	West Mercur	18.41	50% <sup>8</sup>
4	Snow Storm No. 9	3885	West Mercur	14.47	50% <sup>8</sup>

<sup>8</sup> The remaining 50% is leased from Party A.

**Party G – Marvil Investments LLC Lease – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Snow Storm No. 13	3889	West Mercur	9.925	100%
2	Snow Storm No. 14	3890	West Mercur	14.622	100%
3	Snow Storm No. 17	3973	West Mercur	5.018	100%
4	Cedar Hill	3349	West Mercur	20.64	100%
5	Senator Stewart	3349	West Mercur	20.653	100%
6	Dollie Faunce	3349	West Mercur	20.628	100%

**Party H – Sunset & Sunrise Ranches, LLC Lease 2 – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Monarch	39	North Mercur	5.05	100%
2	Chloride Point	47	North Mercur	4.36	100%
3	Empire	129	North Mercur	20.402	100%
4	Monarch No. 2	130	North Mercur	6.88	100%
5	Monarch No. 3	131	North Mercur	6.88	100%
6	Northern Light	156	North Mercur	15.909	100%
7	Winter Quarters	168	North Mercur	4.408	100%
8	Wachusett	175	North Mercur	17.65	100%
9	Chance	3398	North Mercur	8.46	100%
10	Fair Day	3398	North Mercur	3.201	100%
11	Monarch Fraction	3398	North Mercur	0.309	100%
12	Columbus	3406	North Mercur	17.574	100%

**Part 2 – Properties owned by Ensign Gold (US) Corp.**

**Part 2A – Acquired by Ensign Gold (US) Corp. via merger with Priority Minerals Limited**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Excess	3072	South Mercur	3.88	100%
2	Gold Point	3072	South Mercur	19.84	100%
3	Lost Link	3072	South Mercur	18.84	100%
4	Shriner	3072	South Mercur	2.48	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
5	Sunshine	3072	South Mercur	19.86	100%
6	Sunshine No. 2	3072	South Mercur	16.84	100%
7	Andrew	3239	South Mercur	19.54	95.83% <sup>9</sup>
8	Armstrong	3239	South Mercur	7.29	95.83% <sup>9</sup>
9	Bethel	3239	South Mercur	16.18	95.83% <sup>9</sup>
10	David S.	3239	South Mercur	3.56	95.83% <sup>9</sup>
11	Fairchild	3239	South Mercur	12.9	95.83% <sup>9</sup>
12	Fairchild No. 2	3239	South Mercur	13.19	95.83% <sup>9</sup>
13	Mary K.	3239	South Mercur	18.76	95.83% <sup>9</sup>
14	Mary K. No. 2	3239	South Mercur	9.93	95.83% <sup>9</sup>
15	Phra	3239	South Mercur	17.53	95.83% <sup>9</sup>
16	Phra No. 2	3239	South Mercur	17.88	95.83% <sup>9</sup>
17	Red Jacket	3239	South Mercur	12.08	95.83% <sup>9</sup>
18	Silver Hill	3239	South Mercur	12.42	95.83% <sup>9</sup>
19	Sun Down Mine	3239	South Mercur	20.55	95.83% <sup>9</sup>
20	Tamar	3239	South Mercur	11.61	95.83% <sup>9</sup>
21	Wall	3239	South Mercur	3	95.83% <sup>9</sup>
22	Annie Laura	3047	South Mercur	20.3	75% <sup>10</sup>
23	Annie Laura No. 1	3047	South Mercur	19.74	75% <sup>10</sup>
24	Annie Laura No. 2	3047	South Mercur	20.41	75% <sup>10</sup>
25	Annie Laura No. 3	3047	South Mercur	13.52	75% <sup>10</sup>
26	Gold Blossom No. 1	3047	South Mercur	9.89	75% <sup>10</sup>
27	Gold Blossom No. 2	3047	South Mercur	11.73	75% <sup>10</sup>
28	Gold Blossom No. 3	3047	South Mercur	17.79	75% <sup>10</sup>
29	Gold Blossom No. 4	3047	South Mercur	6.9	75% <sup>10</sup>
30	Tribune No. 2	3088	South Mercur	17.86	75% <sup>10</sup>
31	Red Cloud	3133	South Mercur	20.66	75% <sup>11</sup>
32	Campus	3433	South Mercur	18.336	75% <sup>10</sup>
33	Fellowship	3433	South Mercur	15.146	75% <sup>10</sup>
34	Free Coinage	3433	South Mercur	19.449	75% <sup>10</sup>
35	Lehi	3433	South Mercur	15.831	75% <sup>10</sup>
36	Little Gem	3433	South Mercur	17.504	75% <sup>10</sup>
37	Lower Reef	3433	South Mercur	18.185	75% <sup>10</sup>
38	Malvern	3433	South Mercur	14.725	75% <sup>10</sup>
39	Malvern No. 2	3433	South Mercur	19.05	75% <sup>10</sup>
40	Old Horseshoe	3433	South Mercur	18.288	75% <sup>10</sup>
41	OT	3433	South Mercur	16.182	75% <sup>10</sup>
42	Apex	3707	South Mercur	13.376	75% <sup>10</sup>
43	Home Stake	3707	South Mercur	10.199	75% <sup>10</sup>

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
44	Old Fred	3707	South Mercur	19.562	75% <sup>11</sup>
45	Old Fred No. 2	3707	South Mercur	14.124	75% <sup>10</sup>
46	Ouida	3707	South Mercur	17.596	75% <sup>10</sup>
47	Fairfield	3925	South Mercur	19.492	75% <sup>10</sup>
48	Golden Era	3925	South Mercur	19.283	75% <sup>10</sup>
49	Golden Wedge	3925	South Mercur	18.122	75% <sup>10</sup>
50	Mollie Gibson	3925	South Mercur	14.771	75% <sup>10</sup>
51	Three Points	3925	South Mercur	3.722	75% <sup>10</sup>
52	Keystone No. 4	4495	South Mercur	16.168	75% <sup>10</sup>
53	Keystone No. 5	4495	South Mercur	16.846	75% <sup>10</sup>

<sup>9</sup> The remaining 4.17% is owned by Ensign via purchase from the J.C. Proctor Estate.

<sup>10</sup> Another 25% is leased from Party L (Part 6B). An additional 25% of these claims was purchased since the acquisition on May 30. There are no mineralized drill holes on these claims and there is no impact on the ability to do the work program.

<sup>11</sup> Another 25% is leased from Party L (Part 6B). An additional 25% of these claims was purchased since the acquisition on May 30. Less than 1% of the inferred resource is situated on these claims as discussed in Section 14.13. There is no impact on the ability to do the work program.

#### **Part 2B – Purchased by Ensign Gold (US) Corp. from the J.C. Proctor Estate**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Andrew	3239	South Mercur	19.54	4.17% <sup>12</sup>
2	Armstrong	3239	South Mercur	7.29	4.17% <sup>12</sup>
3	Bethel	3239	South Mercur	16.18	4.17% <sup>12</sup>
4	David S.	3239	South Mercur	3.56	4.17% <sup>12</sup>
5	Fairchild	3239	South Mercur	12.9	4.17% <sup>12</sup>
6	Fairchild No. 2	3239	South Mercur	13.19	4.17% <sup>12</sup>
7	Mary K.	3239	South Mercur	18.76	4.17% <sup>12</sup>
8	Mary K. No. 2	3239	South Mercur	9.93	4.17% <sup>12</sup>
9	Phra	3239	South Mercur	17.53	4.17% <sup>12</sup>
10	Phra No. 2	3239	South Mercur	17.88	4.17% <sup>12</sup>
11	Red Jacket	3239	South Mercur	12.08	4.17% <sup>12</sup>
12	Silver Hill	3239	South Mercur	12.42	4.17% <sup>12</sup>
13	Sun Down Mine	3239	South Mercur	20.55	4.17% <sup>12</sup>
14	Tamar	3239	South Mercur	11.61	4.17% <sup>12</sup>
15	Wall	3239	South Mercur	3	4.17% <sup>12</sup>

<sup>12</sup> The remaining 95.83% is owned by Ensign via the merger with Priority Minerals.

### **Part 3 – Properties held by Ensign Gold (US) Corp.** **via Barrick Lease and Option Agreement**

#### **Part 3A – Barrick patented claims optioned by Ensign Gold (US) Corp.**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	GENTILE BELLE	46	Main Mercur	4.59	100%
2	GOLD DUST	2941	Main Mercur	16.59	100%
3	GOLD DUST No. 2	2941	Main Mercur	16.44	100%
4	GULCH	2941	Main Mercur	2.270	100%
5	SUNFLOWER	2941	Main Mercur	16.540	100%
6	TEN FORTY	2941	Main Mercur	13.680	100%
7	JONES BONANZA	2957	Main Mercur	20.660	100%
8	SHERMAN	2957	Main Mercur	12.280	100%
9	CANNON	3033	Main Mercur	19.13	100%
10	DELTA	3033	Main Mercur	0.62	100%
11	GOLDEN DREAM	3033	Main Mercur	19.36	100%
12	GOLDEN SPRAY	3033	Main Mercur	13.97	100%
13	INDEX	3033	Main Mercur	8.75	100%
14	INGOT	3033	Main Mercur	16.11	100%
15	INTERMEDIATE	3033	Main Mercur	1.32	100%
16	MEGG	3033	Main Mercur	4.10	100%
17	ROVER	3089	Main Mercur	20.22	100%
18	ROVER MINE No. 2	3089	Main Mercur	18.57	100%
19	ROVER MINE No. 3	3089	Main Mercur	14.60	100%
20	ROVER MINE No. 5	3089	Main Mercur	14.78	100%
21	LITTLE RUTH	3092	Main Mercur	20.33	100%
22	MORMON GIRL	3092	Main Mercur	20.30	100%
23	SONG BIRD	3101	Main Mercur	17.83	100%
24	SONG BIRD No. 1	3101	Main Mercur	6.85	100%
25	SONG BIRD No. 2	3101	Main Mercur	14.83	100%
26	ROVER No. 6	3152	Main Mercur	3.46	100%
27	ROVER No. 7	3152	Main Mercur	7.57	100%
28	ROVER No. 8	3152	Main Mercur	0.89	100%
29	ELIZA	3156	Main Mercur	6.90	100%
30	ISABELLA	3156	Main Mercur	7.17	100%
31	DEXTER	3163	Main Mercur	12.35	100%
32	GENEROUS	3163	Main Mercur	10.360	100%
33	BALTIC No. 2	3166	Main Mercur	19.536	100%
34	CALEDONIA	3166	Main Mercur	13.434	100%
35	CONSTITUTION	3166	Main Mercur	15.940	100%
36	FREE TRADE	3166	Main Mercur	7.385	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
37	IDAHO	3166	Main Mercur	17.707	100%
38	IDAHO No. 2	3166	Main Mercur	19.795	100%
39	SEVEN THIRTY	3166	Main Mercur	17.301	100%
40	TILLIE	3166	Main Mercur	9.170	100%
41	WEDGE	3168	Main Mercur	0.389	100%
42	BORDER No. 1	3176	Main Mercur	8.33	100%
43	BORDER No. 2	3176	Main Mercur	18.12	100%
44	BORDER No. 3	3176	Main Mercur	2.38	100%
45	BORDER No. 4	3176	Main Mercur	0.55	100%
46	AJAX	3193	Main Mercur	15.61	100%
47	GRAND VIEW	3193	Main Mercur	8.23	100%
48	JOMBO	3193	Main Mercur	13.70	100%
49	CACTUS	3190	West Mercur	19.23	100%
50	DAYTON	3190	West Mercur	19.47	100%
51	DOUGLAS	3190	West Mercur	17.00	100%
52	INDIANA	3190	West Mercur	14.81	100%
53	OHIO	3190	West Mercur	17.92	100%
54	OMAHA	3190	West Mercur	15.94	100%
55	DAISEY No. 1	3386	West Mercur	19.30	100%
56	DAISEY No. 2	3386	West Mercur	20.49	100%
57	DAISEY No. 3	3386	West Mercur	20.13	100%
58	DAISEY No. 4	3386	West Mercur	20.25	100%
59	DAISEY No. 5	3386	West Mercur	20.23	100%
60	DAISEY No. 6	3386	West Mercur	20.51	100%
61	McENTIRE No. 2	3386	West Mercur	20.27	100%
62	McENTIRE No. 3	3386	West Mercur	20.27	100%
63	MERCUR	57	Main Mercur	6.36	100%
64	RESOLUTE No. 2	62	Main Mercur	10.470	100%
65	NIMROD	63	Main Mercur	18.110	100%
66	SOUTHSIDE No. 2	65	Main Mercur	13.630	100%
67	APEX	66	Main Mercur	12.560	100%
68	RUBY	67	Main Mercur	17.940	100%
69	APEX No. 2	68	Main Mercur	0.97	100%
70	RALPH	69	Main Mercur	18.850	100%
71	FREMONT	70	Main Mercur	18.130	100%
72	LULU	71	Main Mercur	19.90	100%
73	ARAB	72	Main Mercur	12.090	100%
74	BRICKYARD	72	Main Mercur	20.03	100%
75	JUSTICE	72	Main Mercur	12.780	100%
76	POTOSI	72	Main Mercur	7.422	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
77	LADY MAY	74	Main Mercur	11.503	100%
78	SULLIVAN	74	Main Mercur	9.560	100%
79	VULTURE	74	Main Mercur	16.487	100%
80	GRASSHOPPER	2948	Main Mercur	15.223	100%
81	MABEL	2948	Main Mercur	15.360	100%
82	NOONDAY	2948	Main Mercur	2.640	100%
83	B.B.	2977	Main Mercur	19.66	100%
84	MAGPIE	2977	Main Mercur	0.490	100%
85	SURPRISE	2977	Main Mercur	18.180	100%
86	EXCHEQUER	2979	Main Mercur	16.424	100%
87	ROB ROY	2979	Main Mercur	2.217	100%
88	PLUTARCH	2982	Main Mercur	0.783	100%
89	NAVIGATOR	2984	Main Mercur	9.167	100%
90	WEDGE OF GOLD	2984	Main Mercur	2.638	100%
91	FUNDAMENTAL	3078	Main Mercur	2.20	100%
92	DEFIANCE	3087	Main Mercur	1.70	100%
93	INDEPENDENCE	3087	Main Mercur	1.18	100%
94	MATTIE No. 4	3110	Main Mercur	3.50	100%
95	MATTIE No. 5	3111	Main Mercur	17.89	100%
96	KEYSTONE	3112	Main Mercur	0.40	100%
97	FOURTH OF SEPTEMBER	3136	Main Mercur	4.41	100%
98	HARD TIMES	3136	Main Mercur	13.06	100%
99	HARD TIMES No. 2	3136	Main Mercur	8.50	100%
100	HARD TIMES No. 3	3136	Main Mercur	8.40	100%
101	SNOWFLAKE	3246	Main Mercur	0.913	100%
102	MERRETT	3290	Main Mercur	20.644	100%
103	MERRETT No. 1	3290	Main Mercur	20.644	100%
104	MERRETT No. 2	3290	Main Mercur	18.380	100%
105	ORTEGA	3291	Main Mercur	0.750	100%
106	TEMPEST	3321	Main Mercur	0.134	100%
107	HARD TIMES No. 4	3328	Main Mercur	1.678	100%
108	GENEVIEVE	3511	Main Mercur	3.479	100%
109	OLD GUARD	3511	Main Mercur	15.549	100%
110	GOLD FLAT	3284	Main Mercur	18.757	100%
111	LITTLE VEE	3284	Main Mercur	4.331	100%
112	ROVER MINE No. 4	3284	Main Mercur	15.953	100%
113	LEHI	3320	Main Mercur	1.70	100%
114	CUSTER No. 2	3403	West Mercur	6.606	100%
115	DOLLY VARDEN	3403	West Mercur	19.080	100%
116	DOLLY VARDEN FRACTION	3403	West Mercur	2.206	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
117	JOHN ADAM	3403	West Mercur	2.484	100%
118	MILLER	3403	West Mercur	20.449	100%
119	YANKEE GIRL	3403	West Mercur	19.819	100%
120	YANKEE GIRL No. 2	3403	West Mercur	2.031	100%
121	YANKEE GIRL No. 3	3403	West Mercur	1.663	100%
122	YANKEE GIRL FRACTION	3403	West Mercur	3.051	100%
123	DUMP NO. 1	3120	Main Mercur	17.276	100%
124	DUMP NO. 2	3120	Main Mercur	13.666	100%
125	LITTLE JOINT	3120	Main Mercur	5.13	100%
126	SILVER BELL	3120	Main Mercur	13.10	100%
127	TRAMWAY	3120	Main Mercur	20.372	100%
128	GENERAL SHERMAN	3526	Main Mercur	4.413	100%
129	CRESCENT	3755	Main Mercur	3.067	100%
130	STAR OF THE WEST	44	Main Mercur	5.42	100%
131	ANTIQUE	3649	Main Mercur	11.010	100%
132	WHITE OAK	3649	Main Mercur	11.922	100%
133	WHITE OAK No. 2	3649	Main Mercur	11.807	100%
134	ANTIQUE No. 2	3653	Main Mercur	9.540	100%
135	MERCUR GOLD BAR No. 1	7204	Main Mercur	20.661	100%
136	MERCUR GOLD BAR No. 3	7204	Main Mercur	20.661	100%
137	BUNKER HILL	2989	Main Mercur	19.410	100%
138	CARTHAGE	2989	Main Mercur	5.88	100%
139	CARTHAGENIA	2989	Main Mercur	0.34	100%
140	CYCLONE	2989	Main Mercur	20.22	100%
141	FALCON	2989	Main Mercur	19.420	100%
142	GUNSITE	2989	Main Mercur	14.14	100%
143	HILLSIDE	2989	Main Mercur	17.380	100%
144	HILLSIDE No. 2	2989	Main Mercur	3.710	100%
145	HILLSIDE No. 3	2989	Main Mercur	14.870	100%
146	COLORADO	3128	Main Mercur	14.59	100%
147	GOLD CHANNEL	3179	Main Mercur	20.32	100%
148	GOLD CHANNEL No. 1	3179	Main Mercur	19.03	100%
149	GOLD CHANNEL No. 2	3179	Main Mercur	11.71	100%
150	RELIANCE	3179	Main Mercur	16.92	100%
151	RELIEF	3179	Main Mercur	12.93	100%
152	THURSDAY	3179	Main Mercur	9.88	100%
153	TIP TOP	3179	Main Mercur	18.08	100%
154	CHRISTMAS GIFT	3679	Main Mercur	5.494	100%
155	GOLD CHAIN	3679	Main Mercur	4.355	100%
156	TRADE MARK	4568	Main Mercur	0.065	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
157	DIDSBURY	3479	Main Mercur	16.648	50% <sup>13</sup>
158	GLADSTONE No. 1	3479	Main Mercur	15.654	50% <sup>13</sup>
159	GLADSTONE No. 2	3479	Main Mercur	15.956	50% <sup>13</sup>
160	LEADVILLE No. 3	3479	Main Mercur	11.218	50% <sup>13</sup>
161	MARK CORY	3479	Main Mercur	14.497	50% <sup>13</sup>
162	HAZLE	2994	Main Mercur	11.662	16.67% <sup>14</sup>
163	BONANZA FRACTION	2957	Main Mercur	6.855	Surf only <sup>15</sup>
164	BONANZA No. 2	2957	Main Mercur	7.747	Surf only <sup>15</sup>
165	UTAH No. 3	2957	Main Mercur	0.560	Surf only <sup>15</sup>
166	ABE LINCOLN	3086	Main Mercur	20.01	Surf only <sup>15</sup>
167	45TH STAR	3667	Main Mercur	6.115	Surf only <sup>15</sup>
168	GOLD RING	3086	Main Mercur	20.66	Surf only <sup>15</sup>
169	MARY E.	3073	Main Mercur	10.52	Surf only <sup>16</sup>
170	MARY E. No. 2	3073	Main Mercur	3.68	Surf only <sup>16</sup>
171	NORTH SIDE	3073	Main Mercur	16.220	Surf only <sup>16</sup>
172	OLD GROVER	3073	Main Mercur	19.47	Surf only <sup>16</sup>
173	WONDER	3073	Main Mercur	12.30	Surf only <sup>17</sup>
174	HECLA	3079	Main Mercur	11.21	Surf only <sup>17</sup>
175	HECLA No. 1	3079	Main Mercur	2.61	Surf only <sup>17</sup>
176	HECLA No. 2	3079	Main Mercur	17.15	Surf only <sup>17</sup>
177	HECLA No. 3	3079	Main Mercur	17.62	Surf only <sup>17</sup>
178	HECLA No. 4	3079	Main Mercur	18.52	Surf only <sup>17</sup>
179	SEAL	3180	Main Mercur	4.13	Surf only <sup>17</sup>
180	SEAL No. 2	3180	Main Mercur	2.50	Surf only <sup>17</sup>
181	SEAL No. 3	3180	Main Mercur	2.33	Surf only <sup>17</sup>
182	STRONG FRACTION NO.1	3200	Main Mercur	2.30	Surf only <sup>17</sup>
183	ELMA	3260	Main Mercur	20.63	Surf only <sup>17</sup>
184	McKAY	3260	Main Mercur	20.45	Surf only <sup>17</sup>
185	SCRIBNER	3260	Main Mercur	19.74	Surf only <sup>17</sup>
186	SCRIBNER No. 2	3271	Main Mercur	6.02	Surf only <sup>17</sup>
187	SCRIBNER No. 3	3271	Main Mercur	4.17	Surf only <sup>17</sup>
188	GRAY BOLL No. 1	3102	Main Mercur	9.370	Surf only <sup>18</sup>
189	GRAY BOLL No. 2	3102	Main Mercur	13.610	Surf only <sup>18</sup>

<sup>13</sup> The remaining 50% is owned by third parties. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

<sup>14</sup> The remaining 83.33% of the Hazle claim is optioned by Ensign from Sacramento Gold Mining Company (82.33%) and Geyser Marion Gold Mining Company (1%).

<sup>15</sup> The mineral interests are held by third parties. These claims include the Barrick office, a heap leach facility and other infrastructure. No mineralization is known to occur on the claims and there is no impact on the ability to do the work program.

<sup>16</sup> The mineral interests are held by a third party. These claims include access roads and other infrastructure. Deep drill holes have encountered subeconomic mineralization on the claims. Barrick holds a right of first refusal to acquire the mineral interests. There is no impact on the ability to do the work program.

<sup>17</sup> Ensign holds the mineral interests via the option agreement with Geyser Marion Gold Company.

<sup>18</sup> The mineral interests are held by third parties. These claims include a portion of the tailings facility and other infrastructure. No mineralization is known to occur on the claims and there is no impact on the ability to do the work program.

**Part 3B – Barrick fee lots optioned by Ensign Gold (US) Corp.**

Count	Surveyed Fee Lots	Township Range Section	Area	Acres	Undivided Interest
1	LOTS 11, 13, 16 THRU 26	T5S R3W Sec 31	Main Mercur	26.58	100%
2	LOT 6	T5S R3W Sec 33	Main Mercur	30.52	100%
3	LOT 4	T6S R3W Sec 4	Main Mercur	0.66	100%
4	LOT 9	T6S R3W Sec 4	Main Mercur	17.89	100%
5	LOTS 1, 5, 7, 10, 13, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38	T6S R3W Sec 5	Main Mercur	85.21	100%
6	LOTS 1, 4, 5, 17, 18, 21 THRU 37	T6S R3W Sec 6	Main Mercur	81.26	100%
7	LOTS 8, 11 THRU 16, 19, 20, 21, 23, 24, 27 THRU 31	T6S R3W Sec 7	Main Mercur	70.34	100%
8	LOT 22	T6S R3W Sec 7	Main Mercur	0.20	100%
9	LOTS 29 and 30	T6S R3W Sec 8	Main Mercur	0.33	100%
10	LOTS 7, 10, 12, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32, 33, 34	T6S R3W Sec 8	Main Mercur	13.71	100%
11	LOT 4	T6S R3W Sec 9	Main Mercur	0.84	100%
12	LOT 7	T6S R4W Sec 1	Main Mercur	15.60	100%
13	LOTS 9, 10, 11, W 4 FT OF LOT 6 & E 20 FT OF LOT 7, BLK 1, MERCUR SURVEY.	T6S R3W Sec 5	Main Mercur	0.64	Surf only <sup>19</sup>
14	LOT 23, BLK 2, PLAT A, MERCUR SUR.	T6S R3W Sec 7	Main Mercur	0.04	Surf only <sup>19</sup>
15	LOT 6, BLK 2, MERCUR SUR.	T6S R3W Sec 8	Main Mercur	0.05	Surf only <sup>19</sup>
16	LOTS 2 & 12, BLK 2 PLAT A MERCUR SURVEY.	T6S R3W Sec 7, 8	Main Mercur	0.1	Surf only <sup>19</sup>
17	LOT 18, BLOCK 3, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.05	Surf only <sup>19</sup>
18	LOT 19, BLK 3, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.05	Surf only <sup>19</sup>
19	LOT 7, BLK 3, PLAT A, MERCUR SUR.	T6S R3W Sec 7	Main Mercur	0.06	Surf only <sup>19</sup>
20	LOTS 10 & 11, BLK 3, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.1	Surf only <sup>19</sup>
21	LOTS 4, 5, 6, 13, 14, BLK 4, PLAT A, MERCUR SUR	T6S R3W Sec 6, 7	Main Mercur	0.80	Surf only <sup>19</sup>

Count	Surveyed Fee Lots	Township Range Section	Area	Acres	Undivided Interest
22	LOT 2, BLK 6, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.04	Surf only <sup>19</sup>
23	LOT 23, BLK 9, PLAT A, MERCUR SUR.	T6S R3W Sec 7	Main Mercur	0.06	Surf only <sup>19</sup>
24	LOTS 34 & 35 BLK 9 PLAT A MERCUR.	T6S R3W Sec 7	Main Mercur	0.09	Surf only <sup>19</sup>
25	LOT 25, BLK 10, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.05	Surf only <sup>19</sup>
26	LOT 6, BLK 10, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.04	Surf only <sup>19</sup>
27	LOT 14, BLK 11, PLAT A, MERCUR SUR.	T6S R3W Sec 7	Main Mercur	0.04	Surf only <sup>19</sup>
28	LOT 15, BLK 11, PLAT A, MERCUR SUR.	T6S R3W Sec 7	Main Mercur	0.04	Surf only <sup>19</sup>
29	LOT 17 THRU & 21, BLK 11, PLAT A, MERCUR SURVEY.	T6S R3W Sec 7	Main Mercur	0.32	Surf only <sup>19</sup>
30	LOT 2, BLK 12, PLAT A, MERCUR SUR	T6S R3W Sec 7	Main Mercur	0.06	Surf only <sup>19</sup>
31	LOT 2 AND 6 TO 10 INCL. BLOCK 1, PLAT A SOUTH SIDE NO. 2. MERCUR	T6S R3W Sec 8	Main Mercur	0.36	Surf only <sup>19</sup>
32	LOT 2 BLK 2 SOUTH SIDE #2	T6S R3W Sec 8	Main Mercur	0.04	Surf only <sup>19</sup>
33	LOTS 1, 3, 4, 5, AND 11, BLK1, SOUTHSIDE NO. 2 SUBDV.	T6S R3W Sec 8	Main Mercur	0.30	Surf only <sup>19</sup>
34	LOTS 1, 3-10, BLK 2 SOUTHSIDE NO. 2 SUBDV.	T6S R3W Sec 8	Main Mercur	0.36	Surf only <sup>19</sup>
35	LOTS 1-6, BLK 3 SOUTHSIDE NO. 2 SUBDV.	T6S R3W Sec 8	Main Mercur	0.21	Surf only <sup>19</sup>
36	LOTS 6, 10, 13, 14, 15, 16, 17, 18 (SITLA minerals)	T5S R3W Sec 32	Main Mercur	131.07	Surf only <sup>20</sup>

<sup>19</sup> Ensign also holds the mineral interests via the option agreement with Geyser Marion Gold Company (Junebug and Baby Elephant claims) and the option agreement with Barrick (Southside No. 2 claim).

<sup>20</sup> Ensign also holds the mineral interests via Barrick's lease agreement with Utah SITLA.

### Part 3C – Barrick's Utah SITLA Lease under option to Ensign Gold (US) Corp.

Lease #	Date	Legal Description (Salt Lake B&M)	Acres	Area	Interests
ML 42967	7/1/1986	T5S, R3W, Section 32, Lots 1 – 18 (Barrick owns fee surface of the Lots in entry #36 above)	174.6	Main Mercur	Minerals and some surface

**Part 3D – Barrick’s Unpatented Lode Claims under option to Ensign Gold (US) Corp.**

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Area
1	JULIE # 12	UT101300985	UMC230542	9/17/1980	Main Mercur
2	JULIE # 17	UT101401660	UMC230547	9/15/1980	Main Mercur
3	JULIE # 13	UT101424836	UMC230543	9/17/1980	Main Mercur
4	JULIE # 16	UT101759271	UMC230546	9/15/1980	Main Mercur
5	ELMA FRAC	UT101425627	UMC291640	6/16/1986	Main Mercur
6	DT	UT101366163	UMC369247	11/23/2002	Main Mercur

**Part 3E – Barrick’s Unpatented Mill Site Claims under option to Ensign Gold (US) Corp.**

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Area
1	TNT # 1	UT101403746	UMC227370	12/9/1980	West Mercur
2	TNT # 2	UT101502186	UMC227371	12/9/1980	West Mercur
3	WW 7	UT101401991	UMC317018	10/28/1988	West Mercur

**Part 4 – Properties held by Ensign Gold (US) Corp. via  
Geyser Marion Option and Assignment Agreement**

**Part 4A – Geyser Marion patented claims optioned to Ensign Gold (US) Corp.**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	MARION MINE	37	Main Mercur	7.34	100%
2	SPARROW-HAWK MINE	38	Main Mercur	2.75	100%
3	LAST CHANCE MINE	39	Main Mercur	3.67	100%
4	GEYSER	58	Main Mercur	6.359	100%
5	FRONT NO. 3	73	Main Mercur	9.118	100%
6	PROTECTIVE TARIFF	74	Main Mercur	16.42	100%
7	FLORENCE NO. 3	75	Main Mercur	8.289	100%
8	WEST GEYSER	75	Main Mercur	16.602	100%
9	BABY ELEPHANT	2983	Main Mercur	13.368	100%
10	JUNEBUG	2983	Main Mercur	14.106	100%
11	SOUTH GEYSER	3015	Main Mercur	10.014	100%
12	DUMP	3124	Main Mercur	6.321	100%
13	DUMP NO. 2	3127	Main Mercur	0.69	100%
14	VICTOR	3144	Main Mercur	18.24	100%
15	MAINE	3180	Main Mercur	11.76	100%
16	MAINE NO. 2	3180	Main Mercur	9.92	100%
17	ANNAPOLIS	3184	Main Mercur	8.56	100%
18	ANNAPOLIS NO. 3	3184	Main Mercur	9.17	100%
19	GOLD BUTTON	3231	Main Mercur	9.355	100%

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
20	MADONNA	3287	Main Mercur	4.479	100%
21	FIRST CHANCE	4057	Main Mercur	0.57277	100%
22	BLACK SHALE	3029	Main Mercur	19.115	100%
23	FRIDAY	3103	Main Mercur	18.03	100%
24	BALTIC	3104	Main Mercur	18.37	100%
25	SNYDER	3141	Main Mercur	1.7	100%
26	DOUGLAS MINING CLAIM NO. 1	3142	Main Mercur	11.996	100%
27	DOUGLAS MINING NO. 2	3142	Main Mercur	14.16	100%
28	DON	3167	Main Mercur	15.213	100%
29	FLO	3167	Main Mercur	10.437	100%
30	HAL	3167	Main Mercur	8.158	100%
31	SAMBO	3181	Main Mercur	9.18	100%
32	BAY HORSE NO. 1	3182	Main Mercur	11.73	100%
33	BAY HORSE NO. 2	3182	Main Mercur	14.82	100%
34	BAY HORSE NO. 3	3182	Main Mercur	15.38	100%
35	MAY FLOWER	3182	Main Mercur	8.9	100%
36	MAY FLOWER NO. 1	3182	Main Mercur	15.28	100%
37	BUENA VISTA	3231	Main Mercur	9.77	100%
38	MARY JEAN NO. 1	3231	Main Mercur	18.221	100%
39	MARY JEAN NO. 2	3231	Main Mercur	18.079	100%
40	MARY JEAN FRACTION	3231	Main Mercur	2.302	100%
41	GOLDEN SLIPPER	3279	Main Mercur	5.661	100%
42	SUNDAY	3279	Main Mercur	7.756	100%
43	BLACK BARE GROUP NO. 1	4944	Main Mercur	12.385	100%
44	BLACK BARE NO. 3	4944	Main Mercur	19.766	100%
45	BLACK BARE NO. 4	4944	Main Mercur	17.543	100%
46	BLACK BARE EXTENSION NO. 2	4944	Main Mercur	10.154	100%
47	BLACK BARE FRACTION	4944	Main Mercur	4.433	100%
48	BLACK BARE FRACTION NO.2	4944	Main Mercur	4.433	100%
49	ERA MINE NO. 1	4944	Main Mercur	16.489	100%
50	ERA MINE NO. 2	4944	Main Mercur	17.063	100%
51	HECLA	3079	Main Mercur	11.21	100% min only <sup>21</sup>
52	HECLA NO. 1	3079	Main Mercur	2.61	100% min only <sup>21</sup>
53	HECLA NO. 2	3079	Main Mercur	17.15	100% min only <sup>21</sup>
54	HECLA NO. 3	3079	Main Mercur	17.68	100% min only <sup>21</sup>
55	HECLA NO. 4	3079	Main Mercur	17.62	100% min only <sup>21</sup>
56	SEAL	3180	Main Mercur	4.13	100% min only <sup>21</sup>
57	SEAL NO. 2	3180	Main Mercur	2.50	100% min only <sup>21</sup>
58	SEAL NO. 3	3180	Main Mercur	2.33	100% min only <sup>21</sup>

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
59	STRONG FRACTION NO.1	3200	Main Mercur	2.30	100% min only <sup>21</sup>
60	ELMA	3260	Main Mercur	20.63	100% min only <sup>21</sup>
61	McKAY	3260	Main Mercur	20.45	100% min only <sup>21</sup>
62	SCRIBNER	3260	Main Mercur	19.74	100% min only <sup>21</sup>
63	SCRIBNER NO. 2	3271	Main Mercur	6.02	100% min only <sup>21</sup>
64	SCRIBNER NO. 3	3271	Main Mercur	4.17	100% min only <sup>21</sup>
65	CONS'D CAMP DOUGLAS MINE	40	Main Mercur	9.182	50% <sup>22</sup>
66	AMERICAN FLAG	47	Main Mercur	5.26	50% <sup>22</sup>
67	BLACK HAWK	47	Main Mercur	5.26	50% <sup>22</sup>
68	LYNN	47	Main Mercur	10.68	50% <sup>22</sup>
69	RED EAGLE	47	Main Mercur	10.68	50% <sup>22</sup>
70	LAST CHANCE MINE	3129	Main Mercur	19.158	50% <sup>23</sup>
71	LITTLE PITTSBURG MINE	3129	Main Mercur	20.589	50% <sup>23</sup>
72	CAP ROCK	3090	Main Mercur	6.04	50% surf only <sup>24</sup>
73	SPAR MINE	3129	Main Mercur	18.682	50% surf only <sup>24</sup>
74	SUMMITT	3651	Main Mercur	12.209	50% surf only <sup>24</sup>
75	JUNCTION	3090	Main Mercur	8.74	50% surf only <sup>24</sup>
76	EUREKA	3431	Main Mercur	20.629	50% surf only <sup>24</sup>
77	EAGLE	3431	Main Mercur	16.444	50% surf only <sup>24</sup>
78	LAKE VIEW	3090	Main Mercur	16.28	50% surf only <sup>24</sup>
79	NORA	3090	Main Mercur	20.66	50% surf only <sup>24</sup>
80	NORA NO. 2	3090	Main Mercur	19.79	50% surf only <sup>24</sup>
81	GREY EAGLE MINE	3126	Main Mercur	17.57	50% surf only <sup>24</sup>
82	WILLIAM PENN	3378	Main Mercur	19.302	50% surf only <sup>25</sup>
83	AMERICAN EAGLE MINE	3126	Main Mercur	11.88	50% surf only <sup>25</sup>
84	BALD EAGLE MINE	3126	Main Mercur	20.20	50% surf only <sup>24</sup>
85	EAGLES NEST MINE	3126	Main Mercur	16.53	50% surf only <sup>24</sup>
86	HERSCHEL	3084	Main Mercur	15.51	1% <sup>26</sup>
87	HERSCHEL NO. 2	3084	Main Mercur	12.41	1% <sup>26</sup>
88	HERSCHEL NO. 3	3084	Main Mercur	13.25	1% <sup>26</sup>
89	HERSCHEL NO. 4	3084	Main Mercur	18.01	1% <sup>26</sup>
90	YELLOW JACKET	3084	Main Mercur	16.23	1% <sup>26</sup>
91	YELLOW JACKET NO. 2	3084	Main Mercur	7.03	1% <sup>26</sup>
92	REMNANT (N portion)	3085	Main Mercur	4.76	1% <sup>26</sup>
93	PEGASI (N portion)	3248	Main Mercur	2.32	1% <sup>26</sup>
94	ABBA	3362	Main Mercur	10.841	1% <sup>26</sup>
95	SUNRISE	3380	Main Mercur	14.496	1% <sup>26</sup>
96	HAZLE	2994	Main Mercur	11.662	1% <sup>27</sup>

<sup>21</sup> Ensign holds the surface interests via the Barrick option agreement.

- <sup>22</sup> The remaining 50% is owned by a third party. Less than 1% of the inferred resource is situated on these claims at Main Mercur as discussed in Section 14.13. There is no impact on the ability to do the work program.
- <sup>23</sup> The remaining 50% is owned by third parties. No significant mineralization is known on these claims and there is no impact on the ability to do the work program.
- <sup>24</sup> The remaining 50% of surface and 100% of minerals are owned by third parties. No significant mineralization is known on these claims and there is no impact on the ability to do the work program.
- <sup>25</sup> The remaining 50% of surface and 100% of minerals are owned by third parties. A very small portion of the inferred resource (<1%) at the northern end of Main Mercur extends onto these 2 claims. That mineralization is not included in the inferred resource reported in Section 14.13. There is no impact on the ability to do the work program.
- <sup>26</sup> Ensign holds the remaining 99% via the Sacramento Gold Mining Company option agreement.
- <sup>27</sup> Ensign holds the remaining 99% via the Sacramento Gold Mining Company option agreement (82.33%) and the Barrick Option agreement (16.67%).

**Part 4B – Geyser Marion fee lots optioned to Ensign Gold (US) Corp.**

Count	Surveyed Fee Lots	Township Range Section	Area	Acres	Undivided Interest
1	LOT 20	T6S R3W Sec 6	Main Mercur	6.21	100%
2	LOTS 6, 7 and 18	T6S R3W Sec 7	Main Mercur	2.66	100%
3	LOTS 1,2, 3, 4, 5, PART OF 6, PART OF 7, 8, BLK1, PLAT A, MERCUR SURV.	T6S R3W Sec 5	Main Mercur	0.36	Surf only <sup>28</sup>
4	LOTS 3 and 4, BLK 2, PLAT A, MERCUR SURV.	T6S R3W Sec 8	Main Mercur	0.09	Surf only <sup>28</sup>
5	LOTS 25 AND 26, BLK 2, PLAT A , MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.09	Surf only <sup>28</sup>
6	LOT 17, BLK 3, PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.045	Surf only <sup>28</sup>
7	LOTS 1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 14, 15, 16, 20, 21, 22, 23, 24, AND 25, BLK 3, PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.855	Surf only <sup>28</sup>
8	LOTS 1, 2, 3, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, AND 21 BLK 4, PLAT A, MERCUR SURV	T6S R3W Sec 6, 7	Main Mercur	0.72	Surf only <sup>28</sup>
9	LOTS 1-16, BLK 5 PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.72	Surf only <sup>28</sup>
10	LOTS 1-22, BLK 6, PLAT A, MERCUR SURV,	T6S R3W Sec 7	Main Mercur	0.95	Surf only <sup>28</sup>
11	LOTS 1-4, 6-26, BLK 7, PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	1.2	Surf only <sup>28</sup>
12	ALLOF BLK 8 CONTAINING 32 LOTS EXCEPT LOTS 10 AND 24, PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	1.29	Surf only <sup>28</sup>
13	LOT 15, BLK 9, PLAT A, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.06	Surf only <sup>28</sup>

Count	Surveyed Fee Lots	Township Range Section	Area	Acres	Undivided Interest
14	ALL OF BLOCK 12, PLAT B, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	1.62	Surf only <sup>28</sup>
15	ALL OF BLK 13, EXCEPT LOT 4, PLAT B, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.45	Surf only <sup>28</sup>
16	LOT 4, BLK 13, PLAT B, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.045	Surf only <sup>28</sup>
17	ALL OF BLK 14 EXCEPT LOT 5, PLAT B, MERCUR SURV.	T6S R3W Sec 7	Main Mercur	0.63	Surf only <sup>28</sup>
18	ALL OF BLOCKS 15, 16, 17 AND 18, PLAT B, MERCUR SURVEY.	T6S R3W Sec 7	Main Mercur	2.25	Surf only <sup>28</sup>

<sup>28</sup> Ensign also holds the mineral interests via the option agreement with Geyser Marion Gold Company (Junebug and Baby Elephant claims) and the option agreement with Barrick (Southside No. 2 claim).

### **Part 5 – Properties held by Ensign Gold (US) Corp. via Sacramento Gold Mining Company Option and Assignment Agreement**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	SACRAMENTO	2990	Main Mercur	19.83	100%
2	PAN HANDLE	2992	Main Mercur	8.807	100%
3	JESSIE LAKIN	3000	Main Mercur	11.392	100%
4	EXCELSIOR	3448	Main Mercur	16.870	100%
5	MATTIE NO. 3	4251	Main Mercur	16.049	100%
6	MAY DAY	4251	Main Mercur	6.886	100%
7	SAGE HEN	4251	Main Mercur	14.195	100%
8	SACRAMENTO NO. 1	4252	Main Mercur	4.146	100%
9	REMNANT (S portion)	3085	Main Mercur	0.8	100%
10	PEGASI (S portion)	3248	Main Mercur		100%
11	HERSCHEL	3084	Main Mercur	15.51	99% <sup>29</sup>
12	HERSCHEL NO. 2	3084	Main Mercur	12.41	99% <sup>29</sup>
13	HERSCHEL NO. 3	3084	Main Mercur	13.25	99% <sup>29</sup>
14	HERSCHEL NO. 4	3084	Main Mercur	18.01	99% <sup>29</sup>
15	YELLOW JACKET	3084	Main Mercur	16.23	99% <sup>29</sup>
16	YELLOW JACKET NO. 2	3084	Main Mercur	7.03	99% <sup>29</sup>
17	REMNANT (N portion)	3085	Main Mercur	4.76	99% <sup>29</sup>
18	PEGASI (N portion)	3248	Main Mercur	2.32	99% <sup>29</sup>
19	ABBA	3362	Main Mercur	10.841	99% <sup>29</sup>
20	SUNRISE	3380	Main Mercur	14.496	99% <sup>29</sup>
21	HAZLE	2994	Main Mercur	11.662	82.33% <sup>30</sup>

<sup>29</sup> Ensign holds the remaining 1% via the Geyser Marion Gold Mining Company option agreement.

<sup>30</sup> Ensign holds the remaining 17.67% via the Geyser Marion Gold Mining Company option agreement (1%) and the Barrick option agreement (16.67%).

## **Part 6 – Other Properties Staked or Leased by Ensign Gold (US) Corp.**

### **Part 6A – Unpatented Lode Mining Claims Owned by Ensign Gold (US) Corp.**

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
1	EG 1	UT101578200	UMC447595	9/2/2020		South Mercur
2	EG 2	UT101579375	UMC447596	9/2/2020		South Mercur
3	EG 3	UT101579376	UMC447597	9/2/2020		South Mercur
4	EG 4	UT101579377	UMC447598	9/2/2020		South Mercur
5	EG 5	UT101579378	UMC447599	9/2/2020		South Mercur
6	EG 6	UT101579379	UMC447600	9/2/2020		South Mercur
7	EG 7	UT101579380	UMC447601	9/2/2020		South Mercur
8	EG 8	UT101579398	UMC447602	9/2/2020		South Mercur
9	EG 9	UT101579399	UMC447603	9/2/2020		South Mercur
10	EG 10	UT101579400	UMC447604	9/1/2020	Part 3 <sup>rd</sup> party surface	South Mercur
11	EG 11	UT101579564	UMC447605	9/1/2020	Part 3 <sup>rd</sup> party surface	South Mercur
12	EG 12	UT101579565	UMC447606	9/1/2020	Part 3 <sup>rd</sup> party surface	South Mercur
13	EG 13	UT101579566	UMC447607	9/1/2020		South Mercur
14	EG 14	UT101579567	UMC447608	9/1/2020		South Mercur
15	EG 15	UT101579568	UMC447609	9/1/2020		South Mercur
16	EG 16	UT101579569	UMC447610	9/1/2020		South Mercur
17	EG 17	UT101579570	UMC447611	9/1/2020	Part 3 <sup>rd</sup> party surface	South Mercur
18	EG 18	UT101579571	UMC447612	9/1/2020		South Mercur
19	EG 19	UT101579572	UMC447613	9/1/2020		South Mercur
20	EG 20	UT101579573	UMC447614	9/1/2020		South Mercur
21	EG 21	UT101579574	UMC447615	9/1/2020		South Mercur
22	EG 22	UT101579575	UMC447616	9/1/2020		South Mercur
23	EG 23	UT101579576	UMC447617	9/1/2020		South Mercur
24	EG 24	UT101579577	UMC447618	9/1/2020		South Mercur
25	EG 25	UT101579578	UMC447619	9/1/2020		South Mercur
26	EG 26	UT101579579	UMC447620	9/1/2020		South Mercur
27	EG 27	UT101820585	UMC447621	9/1/2020		South Mercur
28	EG 28	UT101820586	UMC447622	9/1/2020		South Mercur
29	EG 29	UT101820587	UMC447623	9/1/2020		South Mercur
30	EG 30	UT101820588	UMC447624	9/1/2020		South Mercur
31	EG FRAC 1	UT101820589	UMC447625	10/12/2020		South Mercur
32	CC 8	UT101820590	UMC447626	10/12/2020		South Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
33	CC 9	UT101820591	UMC447627	10/12/2020		South Mercur
34	CC 10	UT101820592	UMC447628	10/12/2020		South Mercur
35	CC 11	UT101820593	UMC447629	10/12/2020		South Mercur
36	CC 12	UT101820594	UMC447630	10/12/2020		South Mercur
37	CC 13	UT101820595	UMC447631	10/12/2020		South Mercur
38	CC 14	UT101820596	UMC447632	10/12/2020		South Mercur
39	CC 15	UT101820597	UMC447633	10/12/2020		South Mercur
40	CC 16	UT101820598	UMC447634	10/12/2020		South Mercur
41	SH 17	UT105246387		5/16/2021		North Mercur
42	SH 18	UT105246388		5/16/2021		North Mercur
43	SH 19	UT105246389		5/16/2021		North Mercur
44	SH 20	UT105246390		5/16/2021		North Mercur
45	SH 21	UT105246391		5/16/2021		North Mercur
46	SH 22	UT105246392		5/17/2021		North Mercur
47	SH 23	UT105246393		5/17/2021		North Mercur
48	SH 24	UT105246394		5/17/2021		North Mercur
49	SH 25	UT105246395		5/16/2021		North Mercur
50	RVF-161	UT105274843		10/20/2021		West Mercur
51	RVF-162	UT105274844		10/20/2021		West Mercur
52	RVF-163	UT105274845		10/20/2021		West Mercur
53	RVF-164	UT105274846		10/20/2021		West Mercur
54	RVXX-107	UT105274847		10/20/2021		West Mercur
55	RVXX-108	UT105274848		10/20/2021		West Mercur
56	RVXX-109	UT105274849		10/20/2021		West Mercur
57	RVXX-110	UT105274850		10/20/2021		West Mercur
58	RVXX-111	UT105274851		10/20/2021		West Mercur
59	RVXX-112	UT105274852		10/20/2021		West Mercur
60	RVXX-113	UT105274853		10/20/2021		West Mercur
61	RVXX-114	UT105274854		10/20/2021		West Mercur
62	RVXX-126	UT105274855		10/20/2021		West Mercur
63	RVXX-127	UT105274856		10/20/2021		West Mercur
64	RVXX-128	UT105274857		10/20/2021		West Mercur
65	RVXX-129	UT105274858		10/20/2021		West Mercur
66	RVXX-130	UT105274859		10/20/2021		West Mercur
67	RVXX-131	UT105274860		10/20/2021		West Mercur
68	RVXX-132	UT105274861		10/20/2021		West Mercur
69	RVXX-133	UT105274862		10/20/2021		West Mercur
70	RVXX-134	UT105274863		10/20/2021		West Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
71	RVXX-135	UT105274864		10/20/2021		West Mercur
72	RVXX-136	UT105274865		10/20/2021		West Mercur
73	RVXX-137	UT105274866		10/20/2021		West Mercur
74	RVXX-138	UT105274867		10/20/2021		West Mercur
75	RVXX-139	UT105274868		10/20/2021		West Mercur
76	RVXX-145	UT105274869		10/20/2021		West Mercur
77	RVXX-146	UT105274870		10/20/2021		West Mercur
78	RVXX-147	UT105274871		10/20/2021		West Mercur
79	RVXX-148	UT105274872		10/20/2021		West Mercur
80	RVXX-149	UT105274873		10/20/2021		West Mercur
81	RVXX-150	UT105274874		10/20/2021		West Mercur
82	RVXX-151	UT105274875		10/20/2021		West Mercur
83	RVXX-157	UT105274876		10/22/2021		West Mercur
84	WMX-02	UT105274877		10/21/2021		West Mercur
85	WMX-03	UT105274878		10/21/2021		West Mercur
86	WMX-06	UT105274879		10/21/2021		West Mercur
87	WMX-08	UT105274881		10/21/2021		West Mercur
88	EHTF-02	UT105274892		10/21/2021		Main Mercur
89	EHTF-25	UT105274915		10/21/2021		Main Mercur
90	EHTF-26	UT105274916		10/21/2021		Main Mercur
91	EHTF-27	UT105274917		10/22/2021		Main Mercur
92	EHTF-28	UT105274918		10/22/2021		Main Mercur
93	OW 4	UT105274919		10/22/2021		South Mercur
94	RVXX-47	UT105274920		10/22/2021		West Mercur
95	RVXX-48	UT105274921		10/22/2021		West Mercur
96	RVXX-49	UT105274922		10/22/2021		West Mercur
97	RVXX-50	UT105274923		10/22/2021		West Mercur
98	WMF-1	UT105274924		10/21/2021		West Mercur
99	WMF-2	UT105274925		10/21/2021		West Mercur
100	WMF-5	UT105274928		11/2/2021		West Mercur
101	WMF-6	UT105274929		11/2/2021		West Mercur
102	WMF-7	UT105274930		11/2/2021		West Mercur
103	VR 8	UT105274931		10/22/2021		South Mercur
104	VR 9	UT105274932		10/22/2021		South Mercur
105	VR 10	UT105274933		10/22/2021		South Mercur
106	VR 11	UT105274934		10/22/2021		South Mercur
107	VR 12	UT105274935		10/22/2021		South Mercur
108	VR 13	UT105274936		10/22/2021		South Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
109	VR 14	UT105274937		10/22/2021		South Mercur
110	VR 15	UT105274938		10/22/2021		South Mercur
111	SC 1	UT105274939		11/2/2021		South Mercur
112	SC 2	UT105274940		11/2/2021		South Mercur
113	SC 3	UT105274941		11/2/2021		South Mercur
114	SC 4	UT105274942		11/2/2021		South Mercur
115	SC 5	UT105274943		11/2/2021		South Mercur
116	SC 6	UT105274944		11/2/2021		South Mercur
117	S32X-1	UT105274945		11/2/2021		West Mercur
118	S32X-2	UT105274946		11/2/2021		West Mercur
119	RVXX-38	UT105274947		11/3/2021		West Mercur
120	RVXX-39	UT105274948		11/3/2021		West Mercur
121	RVXX-40	UT105274949		11/3/2021		West Mercur
122	RVXX-41	UT105274950		11/3/2021		West Mercur
123	RVXX-43	UT105274951		11/3/2021		West Mercur
124	RVXX-44	UT105274952		11/3/2021		West Mercur
125	RVXX-64XX	UT105274953		11/2/2021		West Mercur
126	RVXX-65	UT105274954		11/2/2021		West Mercur
127	RVXX-66	UT105274955		11/2/2021		West Mercur
128	RVXX-67	UT105274956		11/2/2021		West Mercur
129	RVXX-68	UT105274957		11/2/2021		West Mercur
130	RVXX-69	UT105274958		11/2/2021		West Mercur
131	RVXX-70	UT105274959		11/2/2021		West Mercur
132	RVXX-71	UT105274960		11/2/2021		West Mercur
133	RVXX-72	UT105274961		11/2/2021		West Mercur
134	RVXX-73	UT105274962		11/2/2021		West Mercur
135	RVXX-74	UT105274963		11/2/2021		West Mercur
136	RVXX-75	UT105274964		11/2/2021		West Mercur
137	RVXX-76	UT105274965		11/2/2021		West Mercur
138	RVXX-77	UT105274966		11/2/2021		West Mercur
139	RVXX-78	UT105274967		11/2/2021		West Mercur
140	RVXX-79	UT105274968		11/2/2021		West Mercur
141	RVXX-80	UT105274969		11/2/2021		West Mercur
142	PHRAC 1	UT105274970		11/2/2021		South Mercur
143	PHRAC 2	UT105274971		11/2/2021		South Mercur
144	CC 17	UT105274972		11/2/2021		South Mercur
145	CC 18	UT105274973		11/3/2021		South Mercur
146	CC19	UT106696951		10/24/2024		South Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
147	CC20	UT106696952		10/24/2024		South Mercur
148	CC21	UT106696953		10/24/2024		South Mercur
149	CC22	UT106696954		10/24/2024		South Mercur
150	EHTF 29	UT106696955		10/24/2024		Main Mercur
151	EHTF 30	UT106696956		10/24/2024		Main Mercur
152	EHTF 31	UT106696957		10/24/2024		Main Mercur
153	EHTF 32	UT106696958		10/24/2024		Main Mercur
154	EHTF 33	UT106696959		10/24/2024		Main Mercur
155	EHTF 34	UT106696960		10/24/2024		Main Mercur
156	EHTF 35	UT106696961		10/24/2024		Main Mercur
157	EHTF 36	UT106696962		10/24/2024		Main Mercur
158	EHTF 37	UT106696963		10/24/2024		Main Mercur
159	EHTF 38	UT106696964		10/24/2024		Main Mercur
160	EHTF 39	UT106696965		10/24/2024		Main Mercur
161	EHTF 40	UT106696966		10/24/2024		Main Mercur
162	EHTF 41	UT106696967		10/24/2024		Main Mercur
163	EHTF 42 Frac	UT106696968		10/24/2024		Main Mercur
164	EHTF 43 Frac	UT106696969		10/24/2024		Main Mercur
165	EHTF 44 Frac	UT106696970		10/24/2024		Main Mercur
166	SH 26	UT106696971		10/24/2024		North Mercur
167	SH 27	UT106696972		10/24/2024		North Mercur
168	SH 28	UT106696973		10/24/2024		North Mercur
169	SH 29	UT106696974		10/24/2024		North Mercur
170	SH 30	UT106696975		10/24/2024		North Mercur
171	SH 31	UT106696976		10/24/2024		North Mercur
172	SH 32	UT106696977		10/24/2024		North Mercur
173	SH 33	UT106696978		10/24/2024		North Mercur
174	SH 34	UT106696979		10/24/2024		North Mercur
175	SH 35	UT106696980		10/24/2024		North Mercur
176	SH 36	UT106696981		10/24/2024		North Mercur
177	SH 37	UT106696982		10/24/2024		North Mercur
178	SH 38	UT106696983		10/24/2024		North Mercur
179	SH 39	UT106696984		10/24/2024		North Mercur
180	SH 40	UT106696985		10/24/2024		North Mercur
181	SH 41	UT106696986		10/24/2024		North Mercur
182	SH 42	UT106696987		10/24/2024		North Mercur
183	SH 43	UT106696988		10/24/2024		North Mercur
184	SH 44	UT106696989		10/24/2024		North Mercur

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Comment	Area
185	SH 45	UT106696990		10/24/2024		North Mercur
186	SH 46	UT106696991		10/24/2024		North Mercur
187	SH 47	UT106696992		10/24/2024		North Mercur
188	SH 48	UT106696993		10/24/2024		North Mercur
189	SH 49	UT106696994		10/24/2024		North Mercur
190	SH 50	UT106696995		10/24/2024		North Mercur
191	SH 51	UT106696996		10/24/2024		North Mercur
192	SH 52	UT106696997		10/24/2024		North Mercur
193	SH 53	UT106696998		10/24/2024		North Mercur
194	WMF 8	UT106696999		10/24/2024		West Mercur
195	WMF 9	UT106697000		10/24/2024		West Mercur
196	WMF 15	UT106697001		10/24/2024		West Mercur
197	WMF 16	UT106697002		10/24/2024		West Mercur
198	WMF 17	UT106697003		10/24/2024		West Mercur
199	WMF 18	UT106697004		10/24/2024		West Mercur
200	WMF 19	UT106697005		10/24/2024		West Mercur

**Part 6B – Private Party Mining Leases held by Ensign Gold (US) Corp.**

Party I - T Sramek Lease – Unpatented Lode Claim

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Area
1	Chloride Point	UT101884475	UMC410369	9/2/2010	North Mercur

Party J - Mountainwest Minerals, L.C. Lease 2 – Unpatented Lode Claims

Count	Claim Name	BLM Serial Number	BLM Legacy Serial Number	Date of Location	Area
1	Victorious 1	UT101558446	UMC435663	9/4/2017	South Mercur
2	Victorious 2	UT101558447	UMC435664	9/4/2017	South Mercur
3	Victorious 3	UT101558448	UMC435665	9/4/2017	South Mercur
4	Victorious 4	UT101558449	UMC435666	9/4/2017	South Mercur
5	Victorious 5	UT101558450	UMC435667	9/4/2017	South Mercur
6	Victorious 6	UT101558451	UMC435668	9/4/2017	South Mercur
7	Victorious 7	UT101558452	UMC435669	9/4/2017	South Mercur

Party J - Mountainwest Minerals, L.C. Lease 2 – Patented Claims

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Lucky Boy	3425	South Mercur	5.060	41.660% <sup>31</sup>
2	Victorious	3425	South Mercur	12.48	41.660% <sup>31</sup>

<sup>31</sup> Another 5.216% is leased from Party E (Part 1C). The remaining 53.124% is held by ten parties with interests ranging from 1.5670% to 8.3396%. There is no known mineralization on these claims and there is no impact on the ability to do the work program.

**Party K – Jose Peña Lease – Patented Claim**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Mountain Gem	3132	Main Mercur	14.16	100%

**Party L – Allan Cannon Lease – Patented Claims**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
1	Annie Laura	3047	South Mercur	20.3	25% <sup>32</sup>
2	Annie Laura No. 1	3047	South Mercur	19.74	25% <sup>32</sup>
3	Annie Laura No. 2	3047	South Mercur	20.41	25% <sup>32</sup>
4	Annie Laura No. 3	3047	South Mercur	13.52	25% <sup>32</sup>
5	Gold Blossom No. 1	3047	South Mercur	9.89	25% <sup>32</sup>
6	Gold Blossom No. 2	3047	South Mercur	11.73	25% <sup>32</sup>
7	Gold Blossom No. 3	3047	South Mercur	17.79	25% <sup>32</sup>
8	Gold Blossom No. 4	3047	South Mercur	6.9	25% <sup>32</sup>
9	Tribune No. 2	3088	South Mercur	17.86	25% <sup>32</sup>
10	Red Cloud	3133	South Mercur	20.66	25% <sup>33</sup>
11	Campus	3433	South Mercur	18.336	25% <sup>32</sup>
12	Fellowship	3433	South Mercur	15.146	25% <sup>32</sup>
13	Free Coinage	3433	South Mercur	19.449	25% <sup>32</sup>
14	Lehi	3433	South Mercur	15.831	25% <sup>32</sup>
15	Little Gem	3433	South Mercur	17.504	25% <sup>32</sup>
16	Lower Reef	3433	South Mercur	18.185	25% <sup>32</sup>
17	Malvern	3433	South Mercur	14.725	25% <sup>32</sup>
18	Malvern No. 2	3433	South Mercur	19.05	25% <sup>32</sup>
19	Old Horseshoe	3433	South Mercur	18.288	25% <sup>32</sup>
20	OT	3433	South Mercur	16.182	25% <sup>32</sup>
21	Apex	3707	South Mercur	13.376	25% <sup>32</sup>
22	Home Stake	3707	South Mercur	10.199	25% <sup>32</sup>
23	Old Fred	3707	South Mercur	19.562	25% <sup>33</sup>
24	Old Fred No. 2	3707	South Mercur	14.124	25% <sup>32</sup>
25	Ouida	3707	South Mercur	17.596	25% <sup>32</sup>
26	Fairfield	3925	South Mercur	19.492	25% <sup>32</sup>
27	Golden Era	3925	South Mercur	19.283	25% <sup>32</sup>
28	Golden Wedge	3925	South Mercur	18.122	25% <sup>32</sup>
29	Mollie Gibson	3925	South Mercur	14.771	25% <sup>32</sup>
30	Three Points	3925	South Mercur	3.722	25% <sup>32</sup>
31	Keystone No. 4	4495	South Mercur	16.168	25% <sup>32</sup>

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
32	Keystone No. 5	4495	South Mercur	16.846	25% <sup>32</sup>
33	Martha H.	3163	Main Mercur - S	19.35	25% <sup>34</sup>
34	Summit Flat	3098	Main Mercur - N	10.97	25% <sup>34</sup>
35	Summit Spring No. 2	3098	Main Mercur - N	4.17	25% <sup>34</sup>
36	Triumph	3098	Main Mercur - N	20.64	25% <sup>34</sup>
37	Aspen No. 3	3485	Main Mercur - N	19.816	25% <sup>34</sup>
38	Brooklyn No. 1	3485	Main Mercur - N	12.188	25% <sup>34</sup>
39	Brooklyn No. 2	3485	Main Mercur - N	18.152	25% <sup>34</sup>
40	Brooklyn No. 3	3485	Main Mercur - N	15.405	25% <sup>34</sup>
41	Gold Wedge	3485	Main Mercur - N	11.888	25% <sup>34</sup>
42	Leadville No. 1	3485	Main Mercur - N	16.887	25% <sup>34</sup>
43	Leadville No.2	3485	Main Mercur – N	16.123	25% <sup>34</sup>

<sup>32</sup> The remaining 75% is owned by Ensign. An additional 25% of these claims was purchased since the acquisition on May 30. There are no mineralized drill holes on these claims and there is no impact on the ability to do the work program.

<sup>33</sup> The remaining 75% is owned by Ensign. An additional 25% of these claims was purchased since the acquisition on May 30. Less than 1% of the inferred resource is situated on these claims as discussed in Section 14.13. There is no impact on the ability to do the work program.

<sup>34</sup> The remaining 50% is owned by two unleased parties. An additional 25% of these claims was purchased since the acquisition on May 30. There are no mineralized drill holes on these claims and there is no impact on the ability to do the work program.

#### **Part 6C – Private Party Mining Leases held by Ensign Gold (US) Corp.**

Count	Patented Claim Name	Mineral Survey #	Area	Acres	Undivided Interest
33	Martha H.	3163	Main Mercur - S	19.35	50% <sup>35</sup>
34	Summit Flat	3098	Main Mercur - N	10.97	50% <sup>35</sup>
35	Summit Spring No. 2	3098	Main Mercur - N	4.17	50% <sup>35</sup>
36	Triumph	3098	Main Mercur - N	20.64	50% <sup>35</sup>
37	Aspen No. 3	3485	Main Mercur - N	19.816	50% <sup>35</sup>
38	Brooklyn No. 1	3485	Main Mercur - N	12.188	50% <sup>35</sup>
39	Brooklyn No. 2	3485	Main Mercur - N	18.152	50% <sup>35</sup>
40	Brooklyn No. 3	3485	Main Mercur - N	15.405	50% <sup>35</sup>
41	Gold Wedge	3485	Main Mercur - N	11.888	50% <sup>35</sup>
42	Leadville No. 1	3485	Main Mercur - N	16.887	50% <sup>35</sup>
43	Leadville No.2	3485	Main Mercur – N	16.123	50% <sup>35</sup>

<sup>35</sup> The remaining 50% is owned by two unleased parties. There are no mineralized drill holes on these claims and there is no impact on the ability to do the work program. An additional 25% of these claims was purchased since the acquisition on May 30.

## **Appendix B**

### **End-of-Year Mine General Arrangement Drawings for Main & South Mercur**

