

# NI 43-101 Technical Report on the Prospect Mountain Property, Eureka County, Nevada, USA



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# 1 Summary

## 1.1 Introduction

North Peak Resources Ltd. (the “Company” or “NPR”) is a junior exploration company, incorporated in Alberta, Canada, and trades on the TSX Venture Exchange with the ticker symbol TSXV: NPR.

The Company has entered into an agreement with Gullsil LLC and Solarljós LLC, the current owners of the Prospect Mountain Property (defined below) and related permits and assets, pursuant to which the parties propose to enter into a venture, where the Company initially holds an 80% interest in the venture (and by extension in the Prospect Mountain Property) and has the right to acquire the remaining 20% interest (the “Transaction”). As part of the Transaction, it is proposed that the Company will issue common shares (in tranches), have obligations related to exploration expenditures over a three year period, make cash payments over a three year period, and issued warrants, amongst other obligations and covenants. The Company will also have the ability to return its interest in the venture (and therefore the Prospect Mountain Property) and the common shares issued by the Company to such date will be returned to the Company.

The purpose of this Technical Report (the “Technical Report”) is for filing with the TSX Venture Exchange by the Company in connection with the Company’s application for approval for the Transaction. In addition, this Technical Report summarises and reviews the historical and most recent work conducted at the Prospect Mountain Property and provides an independent evaluation of the exploration potential of the Prospect Mountain Property. This Technical Report makes recommendations for further work to explore for possible higher-grade mineralisation at depth as well as locally elsewhere on the Prospect Mountain Property.

## 1.2 Property Description, Access and Location

The Prospect Mountain property (the “Prospect Mountain Property” or the “Property”) is situated approximately 6 km by road southwest of the town of Eureka in Eureka County, Nevada USA. The nearest large town, Elko, is approximately 150 km to the north. The Property lies in the southern portion of the famous Battle Mountain/Eureka trend for Carlin type deposits (Figure 1). The Property consists of approximately 0.898km<sup>2</sup> (221.9 acres) of patented claims and approximately 7.71 km<sup>2</sup> (1,905 acres) of unpatented claims. The present Property is a consolidation of a number of historical mines that opened since ore was first discovered in the early 1870’s, including the Diamond, Excelsior, Silver Connor, Dead Broke and Matamoras mines, many of whose underground workings have been linked up over the years during periods of consolidation.

The Property covers the north trending Prospect Ridge which rises from 7000’ (2130 m) amsl on its flanks to 9500’ (2895 m) amsl on the crest. The vegetation is semi-desert with sparse grass and sage brush in the valleys and dispersed low-growth conifers at higher elevations. Most precipitation falls in the winter and spring months and totals about 12 inches (300 mm), falling as rain and snow. Monthly average temperatures range from just above freezing to an average high of 81°F (27°C), and there is a large daily fluctuation in temperatures. Exploration and development activities can be conducted year-round.

Power and water are both available on the Property. Experienced and general labour is readily available in the local area and from Elko or Ely.

### 1.3 History

Ore was first discovered in the Eureka district in 1864 and in 1869 the Ruby Hill mine was discovered, sparking the main production period. From 1870-1890 oxide ore was direct smelted and lead, gold and silver recovered. It is estimated that ~ 1.5 million tons of ore was produced from the various historical mines working the Ruby Hill orebody. Ore was discovered on the Prospect Mountain Property in the early 1870's and minor production started from the Diamond, Excelsior, Silver Connor, Dead Broke and Matamoras mines. Peak production was from 1890-1900, with most of the production coming from seven major caves; the Gracchi Cave, Andy's Cave, January Cave, Avery Cave, Engine Cave and the Jumbo Cave. After 1900, production slowed throughout the Eureka district, with only small sporadic production occurring on the Property. In 1946 sporadic exploration and development work re-commenced. In 1953 a new ore zone was discovered during drifting on the 320 level; Defense Minerals Exploration Administration (DMEA) funding was applied for on the basis of the new discovery. The funding covered the rehabilitation of Shaft 1, which required a new headframe and timbering to the 320 ft level, rehabilitation of 850 ft (259 m) of the production drift on the 320 level and 453 feet (138 m) of new development work. Production started in August 1954 and mining continued till 1962, after which the Property was leased to various operators and ceased operations in 1970 due to high mining costs. In 1978 selective mining for testing purposes commenced with new owners and ~ 10,000 tons was shipped the test mill at Ely, Nevada. A leaching facility was constructed at Alhambra Hills 20 miles east and > 10,000 tons low grade ore was shipped to that facility along with ore from other mines. From 1980, the Property has been leased to various operators with no significant production.

There are extensive underground workings present on the Property (approximately eleven miles of drifting and development) much of which is still accessible. Workings are accessible mainly through the Diamond Tunnel adit which penetrates westwards into the side of the ridge at 7900' (2,408 m) amsl and forms a 2200' (670 m) crosscut into the ridge, passing Shaft 1 at 1500' (460 m) along the drift. This is known as the 00 or main level. Tunnels extend north and south for a considerable distance and link with various stopes including two other shafts, Shaft 2 and Shaft 3 which service the Wall St and Excelsior/4<sup>th</sup> July areas respectively. Shaft 1, a two-compartment shaft, penetrates to a depth of 500' (150 m) and Shafts 2 and 3, also 2-compartment shafts, go to depths of 270' (82 m) and 770' (235 m) respectively. On the main level the workings continue north and access the west side of the ridge on that level through the Matamoras Tunnel. The most development is to the north of Shaft 1 where extensive development occurs on five levels. The Diamond Mine area is connected to the deeper Prospect Mountain/Silver Connor Tunnel by an inclined winze from the 300-650 level, from there you can again access the west side of the mountain in the NW of the Property at 7200 ft (2,195 m) amsl. The shafts are no longer accessible but much of the main and 650 level are accessible through the Diamond and Silver Connor Tunnels respectively.

Workings are in very good shape for their age, mostly unsupported tunnels and open stopes in the dolomites. Some faults and some of the shales required timber support. The mine is completely dry to the lowest levels of the workings due to still being above the water table.

Tunnel size is typical of the era, roughly 6-7' (1.8 – 2.1 m) high x 6' (1.8 m) wide with some lower spots down to 5.5' (1.7 m) high and is not suitable for mechanised production.

Total production has been modest given the eleven miles of drifting and development, probably less than 150,000 tons. Much of the development is of an exploration nature and performed the same function as drilling does today. The development was paid for by the very high dollar value per ore ton. In today's prices the value of the gold, silver and lead alone would be in the range of \$1500-

2000 USD/t\* with roughly 40% of the value coming from lead and silver and the remainder coming from gold.

*\*Using values of \$1700/oz for gold. \$15/oz for Ag and \$2000/t for Pb. No value is given to the zinc content. This calculation is meant for comparison purposes to put historical figures into perspective and does not in any way indicate any form of future potential or current value to the Property.*

## 1.4 Geology and Mineralisation

The Eureka mining district has been an area of significant geological interest since the 19<sup>th</sup> century. The first geological analysis was published in an 1892 Monograph for the United States Geological Service (USGS), focusing on the geology and stratigraphy of the area. Curtis (1884) did the first detailed study on the lead zinc mineral occurrences in the area in 1881-2.

### 1.4.1 Regional Geology

Rocks in the area record a protracted history from the Early Cambrian to the Quaternary. A thick pile of carbonate sediments formed in a stable continental shelf environment from the Cambrian to the Cretaceous. The onset of subduction to the west in the late Ordovician initiated the Antler orogeny which curtailed sedimentation. Upper plate shortening accommodated by a series of thrust sequences initiated with the Roberts Mountain thrust. Continued eastwards subduction in the Permo-Triassic saw the Golconda allochthon thrust onboard. Calc-Alkaline magmatism commenced in the Jurassic/ Cretaceous as melting of the eastward subducting slab commenced. Some Porphyry copper mineralisation is associated with these intrusions, Yerrington and Ely being examples of economic Jurassic and Cretaceous porphyry and porphyry related mineralisation respectively. Continued shortening was taken up by further thrusting along the Jurassic Luning-Fencemaker thrust belt and in the Cretaceous by the Sevier Thrust belt. The Sevier Thrust belt includes the central Nevada thrust belt and the Eastern Sierra thrust belt, all of which are underthrust by the Sevier fold thrust belt during the Sevier orogeny.

Tertiary magmatism and volcanics swept south-westwards from the Eocene to the Miocene, associated with the stalling and deepening of Farallon ocean plate subduction to the west. Andesitic to Rhyolitic lavas and associated volcanoclastic rocks are widespread in the region, are coeval with Carlin type mineralisation and are associated with Epithermal and Porphyry related mineralisation in the Battle Mountain area. A late extensional event contemporaneous to the volcanics is represented by detachment and normal faulting and minor pull apart basins. During the Miocene further extension occurred, with block faulting forming the current basin and range topography, controlled ultimately by transverse accommodations along the San Andreas fault and are associated with Quaternary andesites and basalt flows in places.

Large parts of the current “basins” in the Basin and Range topography are covered by Quaternary alluvium and sediments obscuring the Palaeozoic rocks in those areas.

### 1.4.2 Local Geology

The Prospect Mountain Property lies in the heart of the Eureka district a structurally complex area between the Central Nevada Thrust Belt and the earlier Robert’s Mountain thrust and allochthon. Exposed rocks are primarily Cambrian to Ordovician dolomites, limestones and shales intruded by Cretaceous intrusives and Tertiary rhyolite dykes. Associated Tertiary volcanics and volcanoclastics overlie Palaeozoic sediments to the east and south of the Property.

The Eureka area has a complicated tectonic history defined in broad strokes by a major shortening event; the Jurassic/Cretaceous Central Nevada Thrust Belt, to the east and a prolonged period of



extension in the Tertiary/Quaternary. The Central Nevada Thrust belt has left the largest trace in the stratigraphy of the area but is heavily disrupted by large throw late extensional faulting.

#### 1.4.3 Mineralisation and Alteration

There are three styles of mineralisation present in the district, carbonate hosted Porphyry Related Skarn lead (Pb), zinc (Zn), gold (Au) mineralisation associated with Cretaceous intrusions, Au, silver (Ag), Pb, Zn Carbonate Replacement mineralisation (CRD) and Au only Carlin style mineralisation. The CRD mineralisation is thought to be distal mineralisation related to the Cretaceous intrusives and the Carlin style mineralisation is assumed to be related to Eocene extension and magmatism and in some places (Mineral Point notably) overprints the skarn mineralisation.

Alteration in the area is related to distal thermal metamorphic effects in the contact aureoles of intrusives and associated skarn development proximal to the intrusives. Sanding of dolomites, dolomitisation, silicification and more subtle effects related to Carlin and CRD deposition occur and have been poorly characterised to date.

CRD mineralisation in the area is heavily oxidised to depths of at least 610m (2000 ft) below the top of the ridge line. No primary mineralisation has thus been observed on the Property to date except for isolated veins and remnant small pods of sulphide. The historical mined ore consists of a reddish poorly consolidated fine-grained mass of material which is often found in open space fissures and caves within the dolomite or as discontinuous pods and chimneys that can extend over a considerable length. The ore in the bottom of these cave systems is most likely to be considerably upgraded during the weathering process with the removal of the gangue material.

Lead minerals present in the ores are mainly plumbogarcite and cerussite, zinc was expected to be mostly removed during weathering but in limited sampling of dump material and stopes, appears to be roughly equal to lead in the Prospect Ridge ores. Zinc is generally in the form of hemimorphite, smithsonite and hydrozincite. Iron from weathering of pyrite and arsenopyrite is largely in the form of haematite and various hydrous iron species and has coloured fracture surfaces around the mineralisation, sometimes over a distance of 10's of metres. Gold appears to be generally associated with the haematite mass and is free leaching. Most of the information on the sulphide ores is from analogy to the sulphide ores from the nearby FAD property and from more recent discoveries at Hilltop near the Archimedes pit to the north. Sulphide ores are made up of pyrite, sphalerite, and galena, with subordinate amounts of hydrothermal dolomite, calcite, arsenopyrite, tennantite, pyrrhotite, quartz, and chalcopyrite. The amount of Sb present in the dump samples suggests stibnite should also be an accessory sulphide component.

#### 1.5 Deposit Type

The salient features of the deposits can be summarised as:

1. Hosted almost exclusively in platform carbonates dolomites and limestones.
2. Strong structural control by normal and thrust faults.
3. A spatial association with Cretaceous and Tertiary intrusions.
4. Sulphide assemblage is pyrite, sphalerite, galena with subsidiary amounts of arsenopyrite tennantite, pyrrhotite, chalcopyrite, stibnite and argentite (usually in solid solution with galena).
5. An elemental association of Au, Ag, Pb, Zn, Cu, As, Sb, Hg, Bi  $\pm$  Mo, Sn.
6. Alteration consists of minor silicification, decalcification and dolomitisation.

They can be classed as non-skarn polymetallic replacement styles of deposit.

## 1.6 Exploration and Drilling

Despite over 150 years of exploration and mining activities on the Property, there has been extremely limited modern exploration. During the periods of active mining, exploration was essentially conducted by driving tunnels in the search for ore, rather than systematic surface sampling and drilling.

### 1.6.1 Surface Geochemistry

The main geochemistry that remains available, is the surface geochemistry data collected whilst the Property was under option to the Homestake Mining Company (2001 – 2003). This data consists of 1184 samples that fall within the Property boundary. Of these 774 samples were rock chips, 298 samples were from waste dumps and 84 were from float (boulder) samples.

An examination of the rock data shows that 20% of all 774 samples have values greater than 0.57 g/t Au, and 5% of the samples have values greater than 5.43 g/t Au. Contrary to expectations, the greatest cluster of high-grade anomalies (>10 g/t Au) occurs on the western flank of Prospect Ridge, to the west of the Wabash area and south from the Silver Connor Tunnel, in an area which appears to have seen little to no exploration or development. The areas above the historic workings show very few expressions of high-grade gold mineralisation, although the main mine areas are identified by mid-grade (2 – 10 g/t Au) surface anomalies. Similar distributions can be seen with silver and antimony, which better identify the old mine areas. Lead and zinc anomalies are almost entirely restricted to the north of the Diamond Tunnel, but again pick out the western flank of Prospect Ridge, as well as the eastern extents of the Silver Connor Tunnel. Copper mineralisation is more subdued relative to the other mentioned elements, but has a strong higher-grade cluster centred on the Wabash area.

A large number of dumps were also sampled. Dumps are a common feature of the landscape at the Prospect Mountain Property, and vary in size from the large Main Dump, down to small dumps from minor excavations. The distribution of dump anomalies supports the distribution of rock chip anomalies. It is worth noting the relatively high average gold (2.63 g/t Au) and silver (123 g/t Ag) grades in the dumps, that supposedly represent waste material.

The surface geochemistry has successfully identified a multi-element surface geochemical anomaly on the western flank of Prospect Ridge (as well as other areas), that has not been followed up and represents a high priority exploration target.

### 1.6.2 Drilling

Despite the more than 150 year history of exploration and mining at the Prospect Mountain Property, the Property contains very limited recorded drilling. Apart from some drilling in the late 1990's and early 2000's by various optionees there has been no systematic modern drilling. There was some isolated surface and underground diamond drilling undertaken by the owners in 2017, although the full extent of this is unclear.

The total amount of drilling in the database is 97 holes for 10,453 m (34,295 ft) of drilling. Over 80% of this (91 holes for 8417 m of drilling) was close spaced reverse circulation (RC) drilling in the Wabash area by European American Resources (EPAR). A number of significant near-surface intersections (true thickness believed to be 50 – 64% of interval length) of relatively high-grade material were made including:

- 15.24 m @ 4.08 g/t Au + 59.9 g/t Ag
- 21.34 m @ 4.52 g/t Au + 35.0 g/t Ag
- 12.19 m @ 2.98 g/t Au + 38.7 g/t Ag
- 13.72 m @ 2.89 g/t Au + 42.3 g/t Ag
- 12.19 m @ 3.09 g/t Au + 8.9 g/t Ag
- 16.76 m @ 4.09 g/t Au + 25.3 g/t Ag
- 13.72 m @ 5.61 g/t Au + 60.8 g/t Ag
- 24.38 m @ 8.24 g/t Au + 22.6 g/t Ag

Due to the lack of supporting documentation, downhole surveys and QA/QC for the assays this data is not suitable for Mineral Resource Estimation, but would be usable for constructing geological wireframes.

In 2001, Homestake Mining drilled two vertical RC holes to the south (Hole HRH1724) and southeast (Hole HRH1725) of the Diamond Tunnel portal, and a third hole just outside the current eastern property boundary. Hole HRH1724 hit an intensely altered zone at a depth 283 – 309 m, with an 18 m section of no sample return (possible cave?). The two immediate samples after the sample loss (base of cave?) returned an intersect (true thickness unknown) of:

- 4.57 m @ 0.54 g/t Au + 3.2 g/t Ag + 2398 ppm Zn

Hole HRH1725 intersected several zones of mineralisation, all within the Hamburg Dolomite, most notably at a depth of 174 – 184 m, an intersect of gossanous Hamburg Dolomite returned:

- 10.67m @ 4.05 g/t Au + 16 g/t Ag

Geologically, these holes are both in the downthrown geology to the east of the Jackson Fault, and indicate that mineralisation does exist at depth to the east of the fault. These intersections warrant follow-up exploration.

Three diamond drillholes drilled by Gullsil in 2017 are contained in the drillhole database: two drilled from the surface (both unsampled) and one drilled underground from the main level at 7900' amsl. These holes have only recently been received and remain to be logged in detail. One of the surface holes (Hole WS02) which was an inclined hole in the Wall St area of the mine intersected approximately 10m of mineralised and oxidised cave breccia that has not been assayed. There is some lost core in the zone.

## 1.7 Metallurgical Testing

A number of metallurgical studies have been conducted over the years including:

- Flotation and leaching testwork in 1979 (limited information available)
- Cyanidation testwork in 2010 for heap leach potential of the Main Dump, which was calculated to contain some 240,000 tons (218,000 tonnes) of material
- Cyanidation testwork with zinc precipitation in 2014 on a composite sample from three dumps

Essentially all the testwork indicated that the material was amenable to cyanide leaching with gold recoveries in excess of 80% over moderate leach times (substantially complete in 24 hours). Recoveries for silver were lower and leach times longer. The testwork showed moderate cyanide

consumption, and that zinc precipitation was effective for recovering the dissolved metals from the pregnant solution.

## 1.8 Mineral Resource Estimates

A number of attempts to quantify Mineral Resources and/or Exploration Targets at the Prospect Mountain Property have been made over the years. However, none of these are to CIM / NI 43-101 (both defined below) requirements, and thus **no Mineral Resources or Exploration Targets currently exist on the Property.**

## 1.9 Conclusions

The following points summarise the current accepted understanding of the exploration model:

1. Faulting and fracturing are critical in controlling mineralisation (Disputes over which faults are important).
2. Deposits need to be spatially association with Cretaceous intrusions.
3. Gold enrichment is a product of Tertiary Carlin overprint.
4. Dolomitic units are the preferred host across a wide section of the stratigraphy.
5. Well defined Au, Ag, Cu, Pb, Zn, Sb, Hg, As, Fe, Cd, Bi, Te association in oxide ores  $\pm$  Sn, W, Mo, that may extend in some areas along faults as a halo.

Several unpublished reports prepared by external consultants have attempted to quantify the exploration potential of the area. In the opinion of the QPs (defined below) these are not suitable nor necessarily relevant to the Property as it is currently understood. The focus for these reports was on the gold potential for Carlin style mineralisation, without considering the additional value-add of the base metal CRD mineralisation.

The only consistent modern exploration drilling was carried out in the Wabash area. While significant values were intersected in relatively close spaced vertical holes, there was no follow-up drilling or interpretation. The best intersection of 80 ft (24.4m) @ 8.24 g/t Au (0.24 oz/t), 23 g/t Ag (0.67 oz/t) below old production stopes is associated with the Silver Connor Fault. If a north dip is assumed by analogy to other historical stopes, this would suggest a possible link between old production stopes. Another interpretation could be sub-vertical zones, in which case the drilling is of very poor orientation to assess the mineralisation. Further work is required to assess the zone.

Two vertical RC holes to the east of the Property intersect mineralisation in a new area to the east of the Jackson Fault. HRH1724 drilled through a folded and faulted sequence of Secret Canyon and Geddes limestones before drilling into a dolomite. This could be Eldorado Dolomite or a thrust slice of Hamburg Dolomite. There was no return over 87' (26.5m) in the dolomite due to intense sanding with only 1' of assay material from this cavity. This is very interesting as it means good potential for the dolomite in this area to carry Carlin type mineralisation similar to that noted at the Windfall deposit. The hole had a best assay of 0.55 g/t Au over 5 ft at the base of the zone without recovery. The Hg values show an uptick in potential halo mineralisation towards the bottom of the hole. HRH1725, intersected 2 main zones of gold mineralisation down the hole and two smaller zones. The upper zone intersected 35' (10.67m) @ 4.05 g/t Au, 16 g/t Ag, 0.25% Zn, 0.06% Pb, 0.1% Cu from 570' (173.74 m) downhole in Hamburg Dolomite. A second zone of 55' (16.76m) @ 1.61 g/t Au, 92 g/t Ag, 0.19% Zn, 0.22% Pb, 0.02% Cu is intersected from 1175' (358.14m) downhole. A third zone of 10' (3.05m) @ 1.62 g/t Au, 140 g/t Ag, 0.78% Zn, 0.29% Pb, 0.19% Cu is intersected from 1310' (399.3m) downhole.

The surface rock chips in some ways best demonstrate the potential of the Property. The combination of modern sampling in conjunction with minor historical shafts and adits show

considerable surface potential in addition to mineralisation developed in the historical workings. The upper plate of the Diamond Thrust, and the Silver Connor Fault, appear to be major components controlling mineralisation. Out of 940 non dump samples, 140 assayed > 1 g/t Au with the highest value being 33.8 g/t Au. The average value of all 940 samples is 0.82 g/t Au, 43 g/t Ag, 0.19% Cu, 0.19% Pb, 0.13% Zn covering an area of 3.41km<sup>2</sup>.

### 1.10 Environmental Studies and Permitting

Permits are required to conduct exploration on Bureau of Land Management (BLM) lands. These are either a Notice of Intent for small areas (<5 acres) or a Plan of Operations (POO) for larger areas. A valid Plan of Operations is in place that covers parts of the Property (totalling 81 acres) that entitles an operator to pursue surface exploration (including RC and diamond drilling), underground mining of up to 365,000 tons per annum, and certain surface infrastructural works.

As part of the Plan of Operations, a detailed Environmental Assessment (the “EA”) has been filed. The EA notes several areas of consideration during exploration and development works, noting procedures in relation to a number of specified species including: bats, Sage Grouse, migratory birds and raptors.

### 1.11 Recommendations

#### 1.11.1 Data

It is recommended that a database system is setup prior to commencing exploration works to make sure that data is compiled and managed in an appropriate fashion.

#### 1.11.2 Procedures

Existing logging procedures were briefly reviewed in the site visit and an appropriate Standard Operating Procedure (SOP) is in place for the handling of drillcore. It is recommended that an onsite SOP for Environmental, Social and Governance (ESG) be established before operations commence.

#### 1.11.3 Exploration

The first two phases of exploration involve developing a robust exploration model and then iteratively testing and refining the model with the aim of discovering economic precious and base metal mineralisation on the Property.

The initial exploration programme should consist of two phases:

Phase 1 focuses on:

- UG channel sampling and mapping
- Completion of 3d structural model
- Geophysics
- Surface soil sampling of whole unpatented claim area
- Dump and waste rock delineation and initial test work
- Further UG rehabilitation on 00 (main) level
- Test UG drill campaign on structural model
- Permitting for phase 2

Phase 2 focuses on:

- Surface drilling of soil and structural anomalies
- Further UG drilling of structural anomalies
- Some testing of extensions to mineralisation in HRH1725 on east of Property

A rough budget of \$1.2 M for phase 1 and \$1.4 M for phase 2 has been proposed.

## 2 Introduction

### 2.1 Issuer and Purpose

The Company is a junior exploration company, incorporated in Alberta, Canada, and trades on the TSX Venture Exchange with the ticker symbol TSXV: NPR. Statutory and historical financial information for the Company is available at [www.sedar.com](http://www.sedar.com). The Company is focused on acquiring low cost producing gold and other metals properties, with near term production potential and 8+ year mine life in the northern hemisphere.

The Company has entered into an agreement with Gullsil LLC (“Gullsil” or “Gullsil LLC”) and Solarljøs LLC (“Solarljøs” or “Solarljøs LLC”), the current owners of the Prospect Mountain Property and related permits and assets, pursuant to which the parties propose to enter into a venture, where the Company initially holds an 80% interest in the venture (and by extension in the Prospect Mountain Property) and has the right to acquire the remaining 20% interest (the “Transaction”). As part of the Transaction, it is proposed that the Company will issue common shares in tranches, with 5 million common shares being issued to acquire the initial 80% interest, and 3 million common shares being issued should the Company decide to acquire the remaining 20% interest. The Company will have up to three years to make the decision to exercise its right to acquire the remaining 20%. Other consideration and obligations of the Company in connection with the Transaction include:

- cash payments of US\$385,000 in total per year, for each of the first three (3) years following completion of the Transaction;
- the issuance of 340,000 common share purchase warrants to those persons designated by Solarljøs, which such warrants to be issued and priced in accordance with the Policies of the TSX Venture Exchange; and
- a 1% NSR royalty on production from the Prospect Mountain Property.

Solarljøs will be entitled to nominate one director to the Board of Directors of the Company at the closing of the Transaction.

It is also proposed that the Company undertake a commitment to use commercially reasonable efforts to complete a minimum three (3) year exploration program at the Prospect Mountain Property where expenditures will total no less than US\$1 million per year (the “**Exploration Programs**”).

In addition, it is proposed that Solarljøs will have a right of reversion in the event the Exploration Programs are not completed within the agreed deadlines, which if exercised would result in the return of the Prospect Mountain Property and related assets to Solarljøs, who would in turn return to the Company the common shares of the Company issued to that time. Likewise, it is proposed that the Company would have the right to return its interest in the Prospect Mountain Property to the current owners, with the common shares of the Company issued to them to that time being returned to the Company in such instance.

The purpose of this Technical Report is for filing with the TSX Venture Exchange by the Company in connection with the Company’s application for approval for the Transaction. In addition, this Technical Report summarises and reviews the historical and most recent work conducted at the Prospect Mountain Property and provides an independent evaluation of the exploration potential of the Prospect Mountain Property. This Technical Report makes recommendations for further work to

explore for possible higher-grade mineralisation at depth as well as locally elsewhere on the Prospect Mountain Property.

This Technical Report was prepared under the supervision of Merlyn Consulting Ltd and LTI Advisory at the request of the Company.

This Technical Report has been prepared in accordance with the Canadian Securities Administration's ("CSA") National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "Best Practices and Reporting Guidelines" for disclosing mineral exploration. The Effective Date of this Technical Report Is April 10<sup>th</sup>, 2023.

## 2.2 Sources of Information

The Technical Report is based upon information (internal reports, data, and maps) provided by the Company and the current owners of the Prospect Mountain Property and related assets, being Solarljós LLC and Gullsil LLC, and data collected, compiled, and validated by the authors. Published literature has also been widely used (and referenced in Section 27) in the preparation of this Technical Report.

## 2.3 Authors and Site Inspection

The principal authors of this Technical Report are Mr David Pym CGeol., and Dr Toby Strauss CGeol., EurGeol.

Mr. David Pym (MSc, BSc, CGeol) of LTI Advisory is a consultant chartered geologist with 30 plus years' experience in mineral exploration and mining worldwide. He has explored for a wide variety of deposit styles including porphyry copper gold, epithermal gold, IOCG, VMS, magmatic nickel sulphide, SEDEX Pb, Zn, carbonate replacement deposits including zinc silicates, sediment hosted copper and orogenic gold. He has been actively involved in mining and resource development projects in magmatic nickel, epithermal gold, orogenic gold, IOCG copper gold and Sediment hosted Copper projects and has worked in Australia, Venezuela, Indonesia, Canada, Finland, UK and Zambia.

Dr Toby Strauss (MSc, PhD) CGeol., EurGeol. is a Chartered Geologist and independent consultant and Director of Merlyn Consulting Ltd. with 29 years' experience in mineral exploration, mining and evaluation of, base and precious metal deposits of various types, including intrusive related hydrothermal Au-Cu deposits, orogenic gold deposits, sediment hosted Cu-Au deposits, kimberlites and magmatic sulphide deposits.

The qualified persons ("Qualified Persons" or "QPs") responsible for this Technical Report are Mr. David Pym CGeol., and Dr. Toby Strauss CGeol., EurGeol. who jointly take responsibility for the preparation and publication of this Technical Report. Both Mr. Pym and Dr. Strauss are fully independent of, and have no beneficial interests in, the Company and are "qualified persons" as defined in NI 43-101. The results of this Technical Report are not dependent on any prior agreements concerning the conclusions to be reached between the Company and the QPs. The QPs are being paid a fee for the work in accordance with reasonable professional consulting practices.

Mr David Pym (QP) visited the Prospect Mountain Property on 21st – 23rd February 2023. The site visit included the following checks and inspections:

- Review of the geological and geographical setting of the Prospect Mountain Property
- Review and inspection of the site geology, mineralisation and hydrothermal alteration
- Review of the drill logs, drill core and storage facilities



- Review of the drilling, logging sampling, analytical and QA/QC procedures
- Confirmation of some drill hole collars

Additional details on the site visit are provided in Section 12.

## 2.4 Units of Measure

Unless otherwise noted, the following measurement units, formats and systems are used throughout this Technical Report.

- **Measurement Units:** Measurements at the Property have historically used the US imperial system of measurements. In this report all references to measurement units use the International System of Units (SI, or metric) for measurement. US imperial measurements are also included (in brackets) for historical comparison. The following units of measure, abbreviations and conversion factors are used throughout this report:
  - 1 metric tonne = 1 tonne = 1000 kilogrammes (kg) = 2,204.6 pounds (lbs)
  - 1 US ton = 1 short ton = 1 ton = 2,000 lbs = 907.185 kg
  - 1 meter (m) = 3.281 feet (ft) or 3.281'
  - 1 foot (ft) = 1' = 12 inches (in) or 12" = 0.3048 m
  - 1 inch = 1" = 25.4 millimetre (mm)
  - 1 yard = 36 inches = 0.9144 m
  - 1 mile = 1,760 yards = 1.609 kilometres (km)
  - 1 kilometre (km) = 1,000 m = 0.621 miles
- **Assay and analytical results** at the Property have historically used the imperial system. In addition, results quoted for precious metals have used "ounces per ton" as standard where "ounces" refers to "troy ounces" and "ton" means "short ton". The following units of measure, abbreviations and conversion factors are used throughout this report:
  - 1 troy ounce = "1 ounce" (1 oz) = 31.1035 grams (g)
  - 1 troy ounce / short ton = 1 opt or 1 oz/ton = 34.2857 grams per metric tonne (g/t)
  - 1 g/t = 1 part per million (ppm) = 0.0291667 opt
  - 1 pound per cubic foot (lb/ft<sup>3</sup>) = 0.0160 grams per cubic centimetre (g/cm<sup>3</sup>)
  - 1 cubic foot per short ton (ft<sup>3</sup>/ton) = 32.03702 g/cm<sup>3</sup>
- **General Orientation:** unless otherwise stated, all references to orientation and coordinates in this Technical Report are projected in the Nevada State Plane Coordinate System (1927), Eastern Zone (feet);
- **Currency** in United States dollars (US\$),
- **Temperature** readings are reported in degrees Fahrenheit (°F) and degrees Celsius (°C).

### 3 Reliance on Other Experts

The Qualified Persons take full responsibility for the contents of this Technical Report, subject to the following caveats.

#### 3.1 Mineral Tenure, Surface Rights, Property Agreements, and Royalties

The Qualified Persons are not qualified to provide an opinion or comment on issues related to mineral tenure, surface rights, property agreements or royalties associated with the Prospect Mountain Property. Accordingly, the authors of this Technical Report disclaim portions of the report in Section 4.1 that relate to these matters and have relied on opinions and information obtained from the Company's own reviews of the Property position compiled during their due diligence proceedings on their proposed acquisition of the Property.

The QPs have fully relied upon, and disclaim responsibility for, information supplied by Gullsill LLC, Solarljøs LLC and the Company for information related to water management and environmental liabilities, permitting and social and community impacts as follows:

1. Prospect Mountain Project Plan of Operations (POA) and Reclamation Permit Application (NVN-092893), submitted by SRK Consulting on behalf of Gullsill LLC, to the BLM, Battle Mountain Division and the Nevada Division of Environmental Protection (NDEP), August 2019 (Revised November 2020). 55p.
2. Environmental Assessment (EA) for Prospect Mountain Project, Eureka County Nevada, Gullsill LLC, July 2019. 45p.
3. Description of surface land holdings, mineral tenure, water rights, royalties and environmental liabilities provided to the QPs by the current owners of the Prospect Mountain Property being Gullsill LLC and Solarljøs LLC, 2023.

This information is used in Section 1, Section 4, and Section 5 of the Technical Report.

## 4 Property Description and Location

The Property lies in Eureka County, Nevada USA. The Property sits approximately 6 km by road southwest of the town of Eureka and lies in the southern portion of the famous Battle Mountain/Eureka Carlin trend (Figure 1).

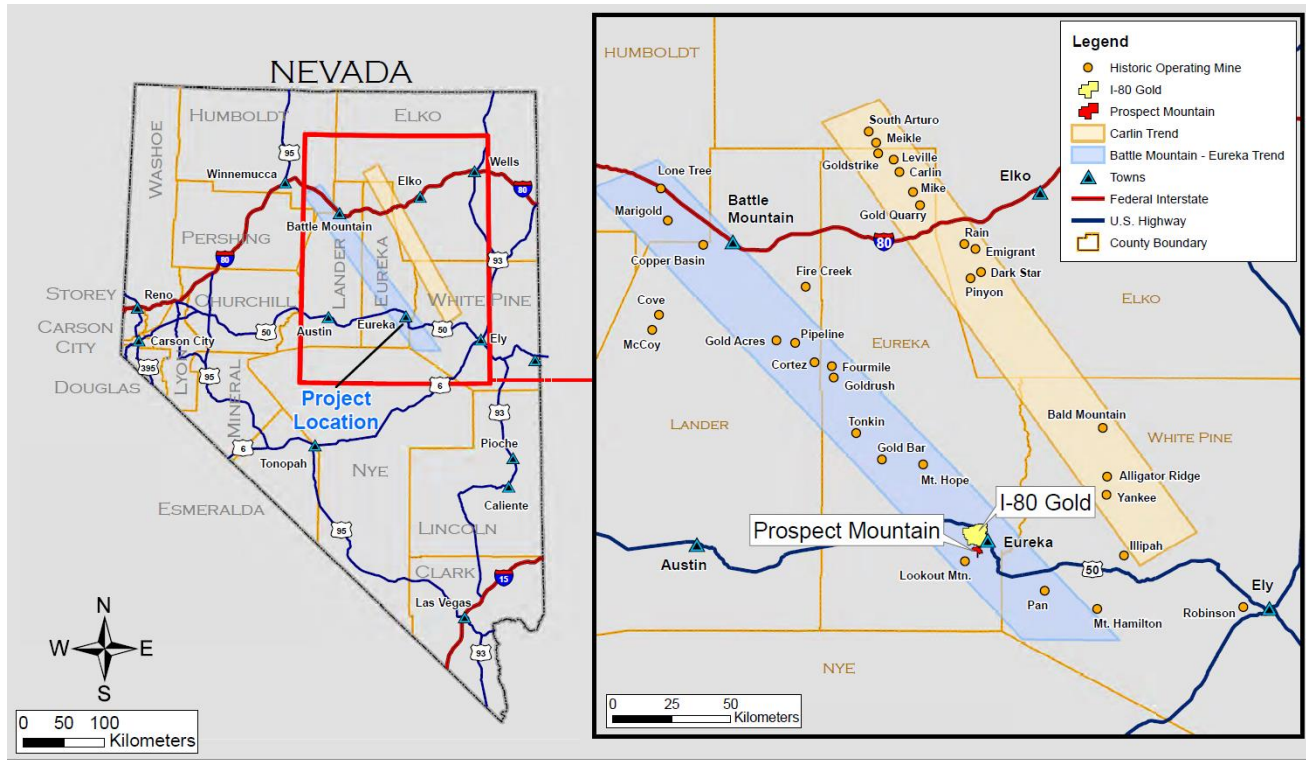
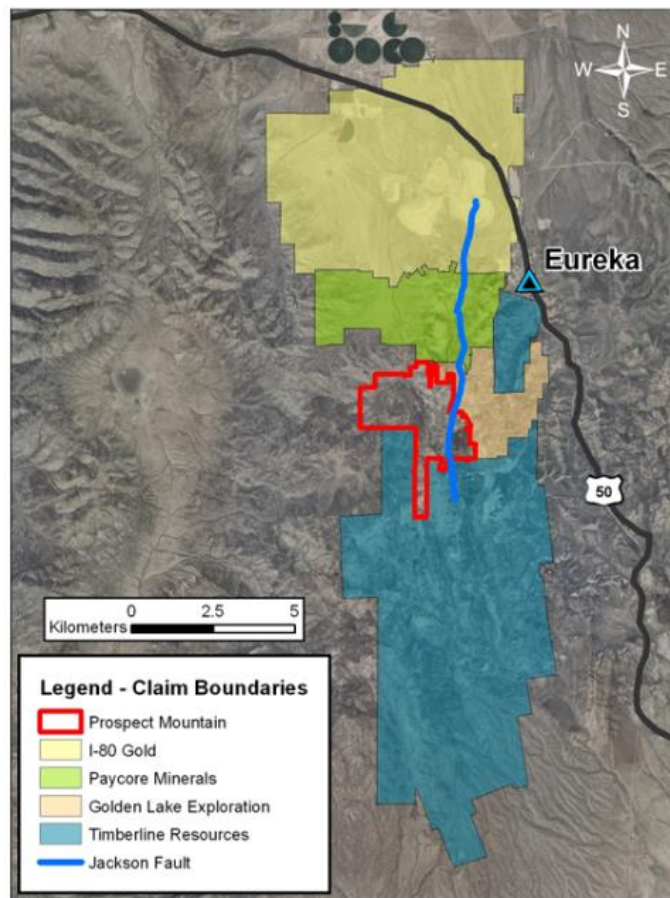


Figure 1 Image of the state of Nevada with inset showing the Property location in relation to the Battle Mountain Eureka mineralised trend and the Carlin Mineralised trend. Prepared for the Company by Elevation Technical Services (2023)

The Property is a mix of public land administered by the Bureau of Land Management, Battle Mountain Division (BLM) (unpatented mining claims granted by the BLM and held by Solarljós LLC) and on private lands (patented claims) owned by Solarljós LLC.

It lies in Section 34 of Township (T) 19 North (N), Range (R) 53 East (E) and Section 3 of T18N, R53E.

The Property consists of approximately 0.898km<sup>2</sup> (221.9 acres) of patented claims and 7.71 km<sup>2</sup> (1,905 acres) of unpatented claims. The Property covers the north trending Prospect Ridge which rises from 7000' (2,130 m) amsl on its flanks to 9500' (2,895 m) amsl on the crest. The present Property is a consolidation of a number of historical mines, many of whose underground workings have been linked up over the years during periods of consolidation.



*Figure 2 Shows the relationship of the Prospect Mountain Property to the surrounding mining properties, highway 50 and the town of Eureka. Prepared for the Company by Elevation Technical Services (2023)*

There are extensive underground workings present on the Property much of which is still accessible. Workings are accessible mainly through the Diamond Tunnel adit which penetrates westwards into the side of the ridge at 7900' (2,408 m) amsl and forms a 2200' (670 m) crosscut into the ridge, passing Shaft 1 at 1500' (460 m) along the drift. This is known as the 00 or main level. Tunnels extend north and south for a considerable distance and link with various stopes including two other shafts, Shaft 2 and Shaft 3 which service the Wall St and Excelsior/4<sup>th</sup> July areas respectively. Shaft 1, a two-compartment shaft, penetrates to a depth of 500' (150 m) and Shafts 2 and 3, also 2-compartment shafts, go to depths of 270' (82 m) and 770' (235 m) respectively. On the main level the workings continue north and access the west side of the ridge on that level through the Matamoras Tunnel. The most development is to the north of Shaft 1 where extensive development occurs on five levels. The Diamond Mine area is connected to the deeper Prospect Mountain/Silver Connor Tunnel by an inclined winze from the 300-650 level. From there you can again access the west side of the mountain in the NW of the Property at 7200 ft (2,195 m) amsl. The shafts are no longer accessible but much of the main and 650 level are accessible through the Diamond and Silver Connor Tunnels respectively.



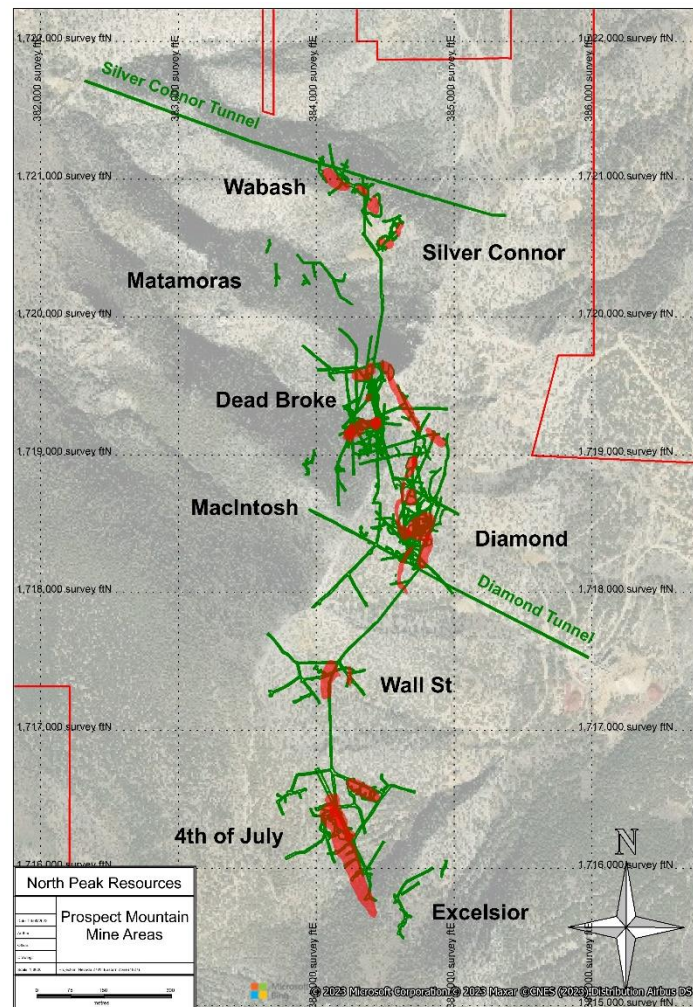


Figure 3 Map showing extent of underground workings (green) and stopes (red) projected to surface with names of main mine areas (NPR, 2023)

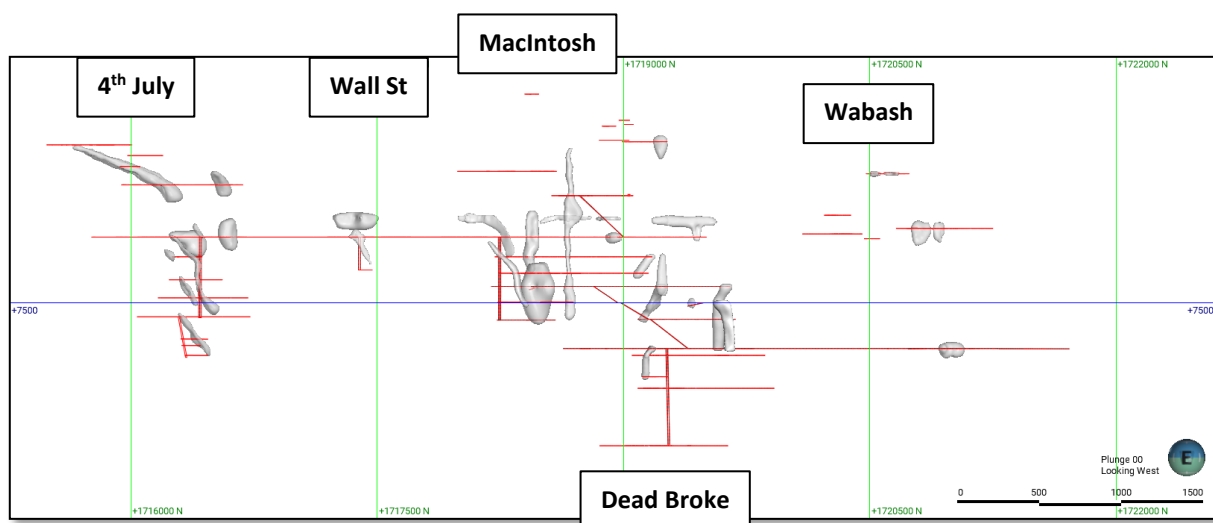


Figure 4 North/South Long section looking west showing workings in red and mined stopes in grey. (NPR, 2023)

Workings are in very good shape for their age, consisting of mostly unsupported tunnels and open stopes in the dolomites. Some faults and some of the shales required timber support. The mine is completely dry to the lowest levels of the workings due to still being above the water table.

Tunnel size is roughly 6-7' (1.8 – 2.1 m) high x 6' (1.8 m) wide with some lower spots down to 5.5' (1.7 m) high. A roughly 1' (0.3 m) gauge light rail is laid throughout the main tunnel areas, for ore bins pulled by an electric tram in recent times and donkeys in the 1890-1910 era. Noticeable air flow continues through the mine as tunnels are still open to the west side of the ridge.

Small Mine Development did underground support work as an aid to drilling and ran an airline (for compressed air – not ventilation), a water line and power down the Diamond Tunnel to the Shaft 1 area and north to the Banner stope area in 2015. Underground support was required to reopen the Diamond Tunnel entrance as it had been closed and the timber supports holding up the shale at the entrance had rotted due to lack of airflow. The first 15 m (50 ft) required caving out, meshing, split set bolting and shotcrete. The remainder of rehabilitation is occasional mesh work and bolting, signage, restricting access to side tunnels, stopes etc.

Three phase power (480 V) is run to a shed at the Diamond Tunnel entrance. Dimensions of the underground workings are typical of the era of largely man and donkey powered mining and are not suitable for mechanised production.

A production water well has been drilled below the Diamond Tunnel entrance. Water was intersected at 6504' (1982 m) amsl and is a 17.5" (440 mm) bore drilled to 1916' (584 m) below surface. The well is cased for the top 972' (296 m), and in two other deeper sections using steel 12¾" (324 mm) pipe and gravel packed. The top 60' (18 m) has 24" (610 mm) casing. The well was test pumped at 40 gallon per minute (gpm) for 16 hours and at 110 gpm for 6 hours. The maximum potential discharge capacity is calculated at 712 gpm.





*Figure 5 Supported portal area (left) and more typical unsupported underground tunnel with rails, air, power and water lines fixed to the backs (right).*



*Figure 6 Shaft 1 headframe, with man cage in place (left). The shaft was used into the 1980's. An ore cart at the side of the tunnel showing tilting mechanism (right).*





Figure 7 Original steam powered winch (left) and the 1950's replacement electric winch for Shaft 1.

#### 4.1 Mineral Properties, Fees and Royalties

The mining claims that constitute the Property are held by Solarljios LLC and the permits that have been issued in respect of the Property are held by Gullsil LLC. The Company proposes to acquire an initial 80% interest in the Property and related permits and assets, with the right to acquire the entirety of the Property and related assets pursuant to the Transaction. The Property is located on the Battle Mountain/Eureka gold trend in Eureka County, Nevada USA. The Property sits approximately 6 km by road southwest of the town of Eureka. The QPs are not experts on Nevada tenure and have outlined the boundaries of the Property as relayed to them by the current owners of the Property and the Company. An effort has been made to identify claims or interest held by third parties within the Property claim block and these are highlighted Figure 8, but it should be noted that many of the patented claims date from the 19<sup>th</sup> century and actual locations may vary from what is presented. A detailed due diligence is beyond the scope of this Technical Report. Zones of overlap may be present particularly in the north of the Property where the Property position is more complex.

##### 4.1.1 Mineral Tenure in Nevada

Excerpts from Mining Claim Procedures Nevada for Prospectors and Miners (Papke et al., 2019)

*"Roughly 85% of the land in Nevada is controlled by the Federal Government; most of this land is administered by the Bureau of Land Management, the Forest Service, the Department of Energy, or the Department of Defense. Much of the land controlled by the Bureau of Land Management and Forest Service is open to prospecting and claim location."*

*"No permits are required for "weekend" or "amateur" prospecting and rock collecting including using hand tools, pans, and metal detectors on land open to prospecting."*

##### Unpatented Claims

*"Mineral deposits are located either by lode or placer claims. A lode claim is void if used to acquire a placer deposit, and a placer claim is void if used for a lode deposit. The 1872 Federal law requires a lode claim for "veins, lodes, ledges or other rock in place", and a placer claim for all "forms of deposit, excepting veins of quartz or other rock in place". More generally, any vein, lode, zone, or belt of mineralised rock lying between boundaries that separate it from the neighbouring rock, even if these boundaries are gradational, should be located as a lode claim."*

*“Any citizen of the U.S. or any person who has declared his intention to become a citizen of the U.S. can locate a mining claim. A corporation organized in any state, a partnership, or two or more qualified persons can also locate a claim.”*

*“Even though the Federal Government holds the title, unpatented mining claims are real property and therefore can be bought, sold, transferred, willed, inherited, and liened as any other real estate. In Nevada, the transfer of interest of unpatented mining claims is done the same way as for any other real estate transactions.”*

*“The maximum size of a lode claim is 1,500 feet (457 m) in length and 600 feet (183 m) in width. As far as possible, the long axis of the claim should be along and parallel to the vein or lode and the claim should extend 300 feet (91 m) on both sides of the centreline of the vein or lode). The location monument can be at any place along the centreline of the claim. For convenience it is often placed near one end of the claim. The end lines (the 600-foot-long (183 m) lines) must be parallel to obtain extralateral (apex) rights.”*

*“A lode location gives the rights to any lodes, veins, or other minerals whose apex (or top) lies within the area of the claim. If the end lines of the claim are parallel, the locator also obtains extralateral (apex) rights. These allow the locator to follow any vein or lode that has its top within the claim downward beyond the side line of the claim.”*

Interestingly in the lawsuit between the Richmond and Eureka Mining companies, 1877, the body of limestone between the quartzite and the shale (Eldorado Dolomite) was ruled a lode and extralateral rights could be applied, so long as the ore within could be traced continuously from surface. Even though they ruled in favour of extralateral rights a pre-existing agreement of vertical lines at claim boundaries between the two companies overrode the extralateral rights.

Unpatented claims remain valid, so long as the fees detailed in section 4.1.3 are applied.

## **Patented Claims**

Exert from BLM web page

*“A patented mining claim is one for which the Federal Government has passed its title to the claimant, giving him or her exclusive title to the locatable minerals and, in most cases, the surface and all resources. Effective October 1, 1994, Congress imposed a moratorium on spending appropriated funds for the acceptance or processing of mineral patent applications that had not yet reached a defined point in the patent review process before a certain cut-off date. Until the moratorium is lifted or otherwise expires, the BLM will not accept any new patent applications.”*

Patented claims are private land and are not subject to any fees or oversight by the BLM and exist in perpetuity.

### **4.1.2 Property Tenure**

Solarljós holds 103 unpatented claims (see Figure 8 and Table 1) with a total area of approximately 7.71 km<sup>2</sup> (1,905 acres) forming the claim block. In addition it holds 56 Patented claims (Table 2) largely within the unpatented claim block totalling approximately 0.898km<sup>2</sup> (221.9 acres).

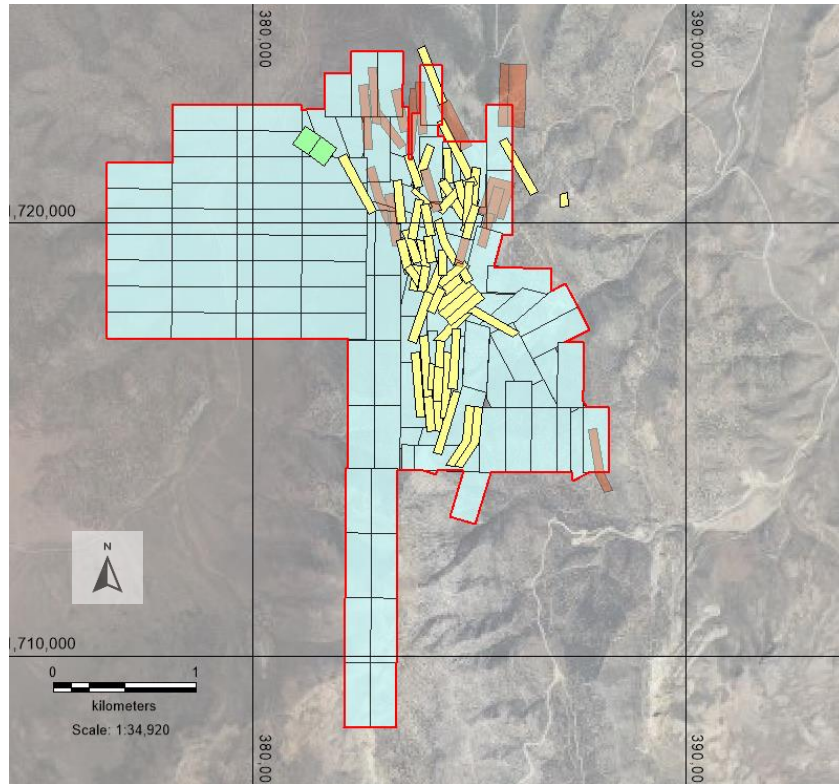


Figure 8 Claim position showing Unpatented Claims (Cyan), Patented Claims (Yellow), Mill Claims (green) and Third Party patented claims (Orange) (NPR, 2023)

Unpatented Claim Name	BLM Serial Number	Case Disposition	Ownership
OMEGA 2	NV101301374	ACTIVE	Solarljios LLC
WABASH 4	NV101301494	ACTIVE	Solarljios LLC
WABASH 8	NV101302250	ACTIVE	Solarljios LLC
OMEGA 4	NV101303364	ACTIVE	Solarljios LLC
EX 1	NV101343653	ACTIVE	Solarljios LLC
EX 2	NV101343654	ACTIVE	Solarljios LLC
EX 3	NV101343655	ACTIVE	Solarljios LLC
EX 4	NV101343656	ACTIVE	Solarljios LLC
EX 5	NV101343657	ACTIVE	Solarljios LLC
EX 7	NV101343658	ACTIVE	Solarljios LLC
EX 8	NV101343659	ACTIVE	Solarljios LLC
EX 9	NV101343660	ACTIVE	Solarljios LLC
EX 10	NV101343661	ACTIVE	Solarljios LLC
EX 11	NV101343662	ACTIVE	Solarljios LLC
EX 12	NV101343663	ACTIVE	Solarljios LLC
EX 13	NV101343664	ACTIVE	Solarljios LLC
EX 14	NV101343665	ACTIVE	Solarljios LLC
EX 15	NV101343666	ACTIVE	Solarljios LLC
EX 16	NV101343667	ACTIVE	Solarljios LLC
EX 17	NV101343668	ACTIVE	Solarljios LLC
EX 18	NV101344891	ACTIVE	Solarljios LLC
EX 19	NV101344892	ACTIVE	Solarljios LLC
EX 20	NV101344893	ACTIVE	Solarljios LLC
EX 21	NV101344894	ACTIVE	Solarljios LLC
EX 22	NV101344895	ACTIVE	Solarljios LLC
EX 23	NV101344896	ACTIVE	Solarljios LLC
EX 24	NV101344897	ACTIVE	Solarljios LLC
EX 25	NV101344898	ACTIVE	Solarljios LLC
EX 26	NV101344899	ACTIVE	Solarljios LLC
EX 27	NV101344900	ACTIVE	Solarljios LLC
EX 28	NV101344901	ACTIVE	Solarljios LLC
EX 29	NV101344902	ACTIVE	Solarljios LLC
EX 30	NV101344903	ACTIVE	Solarljios LLC
EX 31	NV101344904	ACTIVE	Solarljios LLC
EX 32	NV101344905	ACTIVE	Solarljios LLC
EX 33	NV101344906	ACTIVE	Solarljios LLC
EX 35	NV101344907	ACTIVE	Solarljios LLC

Unpatented Claim Name	BLM Serial Number	Case Disposition	Ownership
EX 36	NV101344908	ACTIVE	Solarljios LLC
EX 37	NV101344909	ACTIVE	Solarljios LLC
EX 38	NV101344910	ACTIVE	Solarljios LLC
EX 41	NV101344911	ACTIVE	Solarljios LLC
EX 42	NV101346112	ACTIVE	Solarljios LLC
EX 43	NV101346113	ACTIVE	Solarljios LLC
EX 44	NV101346114	ACTIVE	Solarljios LLC
AUGUST 1	NV101348186	ACTIVE	Solarljios LLC
HUCKLEBERRY	NV101401834	ACTIVE	Solarljios LLC
HILLSIDE 6	NV101451434	ACTIVE	Solarljios LLC
WABASH 3	NV101451729	ACTIVE	Solarljios LLC
WABASH 5	NV101452917	ACTIVE	Solarljios LLC
WABASH	NV101454223	ACTIVE	Solarljios LLC
BALTIC	NV101455163	ACTIVE	Solarljios LLC
OPHIR 4	NV101455370	ACTIVE	Solarljios LLC
PARNELL	NV101455474	ACTIVE	Solarljios LLC
NEVADA	NV101456082	ACTIVE	Solarljios LLC
HILLSIDE 3	NV101458397	ACTIVE	Solarljios LLC
GROVER CLEVELAND	NV101458861	ACTIVE	Solarljios LLC
OMEGA 8	NV101459678	ACTIVE	Solarljios LLC
AUGUST	NV101478451	ACTIVE	Solarljios LLC
OMEGA 1	NV101479296	ACTIVE	Solarljios LLC
FOURTH OF JULY FRAC	NV101480194	ACTIVE	Solarljios LLC
NORTHERN LIGHT	NV101491254	ACTIVE	Solarljios LLC
AUGUST 9	NV101492037	ACTIVE	Solarljios LLC
OPHIR 1	NV101492102	ACTIVE	Solarljios LLC
OMEGA 6	NV101494464	ACTIVE	Solarljios LLC
HILLSIDE 4	NV101504544	ACTIVE	Solarljios LLC
LEVIATHAN	NV101522074	ACTIVE	Solarljios LLC
UTAH	NV101525020	ACTIVE	Solarljios LLC
HILLSIDE	NV101525681	ACTIVE	Solarljios LLC
WABASH 1	NV101540858	ACTIVE	Solarljios LLC
WABASH FRACTION	NV101544890	ACTIVE	Solarljios LLC
PMJV 3	NV101578368	ACTIVE	Solarljios LLC
PMJV 4	NV101578369	ACTIVE	Solarljios LLC
PMJV 5	NV101578370	ACTIVE	Solarljios LLC
PMJV 6	NV101578371	ACTIVE	Solarljios LLC
PMJV 10	NV101578372	ACTIVE	Solarljios LLC
PMJV 14	NV101578373	ACTIVE	Solarljios LLC
PMJV 16	NV101578374	ACTIVE	Solarljios LLC
WABASH 2	NV101600574	ACTIVE	Solarljios LLC
OMEGA 3	NV101600931	ACTIVE	Solarljios LLC
WABASH 6	NV101601972	ACTIVE	Solarljios LLC
EX 50	NV101746670	ACTIVE	Solarljios LLC
GAP 7	NV101746671	ACTIVE	Solarljios LLC
GAP 9	NV101746672	ACTIVE	Solarljios LLC
GAP 10	NV101746673	ACTIVE	Solarljios LLC
GAP 11	NV101746674	ACTIVE	Solarljios LLC
GAP 12	NV101746675	ACTIVE	Solarljios LLC
GAP 13	NV101746676	ACTIVE	Solarljios LLC
GAP 16	NV101746677	ACTIVE	Solarljios LLC
PMJV1	NV101746678	ACTIVE	Solarljios LLC
PMJV2	NV101746679	ACTIVE	Solarljios LLC
PMJV7	NV101746680	ACTIVE	Solarljios LLC
PMJV8	NV101746681	ACTIVE	Solarljios LLC
PMJV9	NV101746682	ACTIVE	Solarljios LLC
PMJV13	NV101746683	ACTIVE	Solarljios LLC
PMJV15	NV101747106	ACTIVE	Solarljios LLC
PMJV17	NV101747107	ACTIVE	Solarljios LLC
SSV 198	NV101747108	ACTIVE	Solarljios LLC
SSV 199	NV101747109	ACTIVE	Solarljios LLC
SSV 200	NV101747110	ACTIVE	Solarljios LLC
SSV 201	NV101747111	ACTIVE	Solarljios LLC
OMEGA 7	NV101752890	ACTIVE	Solarljios LLC
OMEGA 5	NV101755468	ACTIVE	Solarljios LLC
OPHIR 3	NV101757806	ACTIVE	Solarljios LLC

Table 1 Prospect Mountain Unpatented Claims

Patented Claim Name / ID	Survey Number (MS SRV NO)	Current Claim Owner	Ownership Percentage (%) / Fraction
ANTELOPE	215	Solarljcs LLC	100%
APACHE	178	Solarljcs LLC	100%
AVON	243	Solarljcs LLC	85%
BANNER	156	Solarljcs LLC	100%
CLOUD	194	Solarljcs LLC	100%
CLYDE	129	Solarljcs LLC	100%
COMPASS	302	Solarljcs LLC	9/16
DAYLESFORD	264A	Solarljcs LLC	100%
DAYLESFORD MILL SITE	264B	Solarljcs LLC	100%
DEAD BROKE	191	Solarljcs LLC	100%
DELAWARE	157	Solarljcs LLC	100%
DIAMOND	221	Solarljcs LLC	100%
EAST OAKLAND	186	Solarljcs LLC	100%
ELDORADO NO.2	140	Solarljcs LLC	1/8
EXCELSIOR	181	Solarljcs LLC	100%
EXCELSIOR & CASLO ZENO	142	Solarljcs LLC	100%
FANNY & FRANKIE SCOTT	198	Solarljcs LLC	100%
FOURTH OF JULY	82	Solarljcs LLC	100%
GAS LIGHT	145	Solarljcs LLC	100%
GENERAL WASHINGTON	128A	Solarljcs LLC	100%
GORE	162	Solarljcs LLC	100%
HAWKEYE	223	Solarljcs LLC	100%
HIBERNIA	311	Solarljcs LLC	100%
HUGENOT	115	Solarljcs LLC	100%
IDA	199	Solarljcs LLC	100%
KIT CARSON	163	Solarljcs LLC	100%
KRAO	319	Solarljcs LLC	100%
LANTERN	183	Solarljcs LLC	100%
LARAL	188	Solarljcs LLC	50%
LENA	303	Solarljcs LLC	9/16
LIZZIE L	224	Solarljcs LLC	100%
MADRID	166	Solarljcs LLC	100%
MANHATTEN	179	Solarljcs LLC	62 1/2
MAY DAY QUEEN	144	Solarljcs LLC	100%
MCNAUGHTON	171	Solarljcs LLC	100%
METAMORAS	127A	Solarljcs LLC	100%
METAMORAS MILL SITE	127B	Solarljcs LLC	100%
MILAND	132&135	Solarljcs LLC	100%
MORRIS	169A	Solarljcs LLC	100%
NAPA	320	Solarljcs LLC	100%
NEW YEARS	193	Solarljcs LLC	100%
OLD PUT	245A	Solarljcs LLC	100%
OVERSIGHT	282	Solarljcs LLC	100%
OZARK	158	Solarljcs LLC	100%
PIONEER	177	Solarljcs LLC	75%
REPUBLIC	296	Solarljcs LLC	100%
SAGE BRUSH	185	Solarljcs LLC	100%
SAN JOSE	182	Solarljcs LLC	100%
SILVER CONNER 50%	187	Solarljcs LLC	50%
STAR OF EUREKA	312	Solarljcs LLC	100%
SUNSET	205	Solarljcs LLC	1/8
WELCH KING	184	Solarljcs LLC	100%
WHIP POOR WILL	168	Solarljcs LLC	100%
WILLIAMS	170	Solarljcs LLC	100%
YOUNG MABLE	263	Solarljcs LLC	100%

*Table 2 Prospect Mountain Patented Claims.*

#### 4.1.3 Fees and Royalties

Current Federal law requires an annual claim maintenance fee of \$100 per Unpatented Claim to be paid at the State Office of the Bureau of Land Management on or before September 1 annually. Failure to pay the claim maintenance fee will void the claim. The claim maintenance fee is required to be adjusted every 5 years after the date of enactment to reflect the Consumer Price Index.



Federal mining law requires that labour or improvement worth at least \$100 be done annually for each unpatented lode or placer claim.

There are no fees associated with Patented claims.

There are no royalties attached to any of the patented or unpatented claims that represent the property as far as the QPs are aware.

## 4.2 Permitting

The Property is currently permitted for a Plan of Operations allowing for surface explorations and a 1000 tons (907 tonnes) per day underground mining operation. The area permitted for surface disturbances is 82.1 acres shown in Figure 9. Further details are given in Section 5.

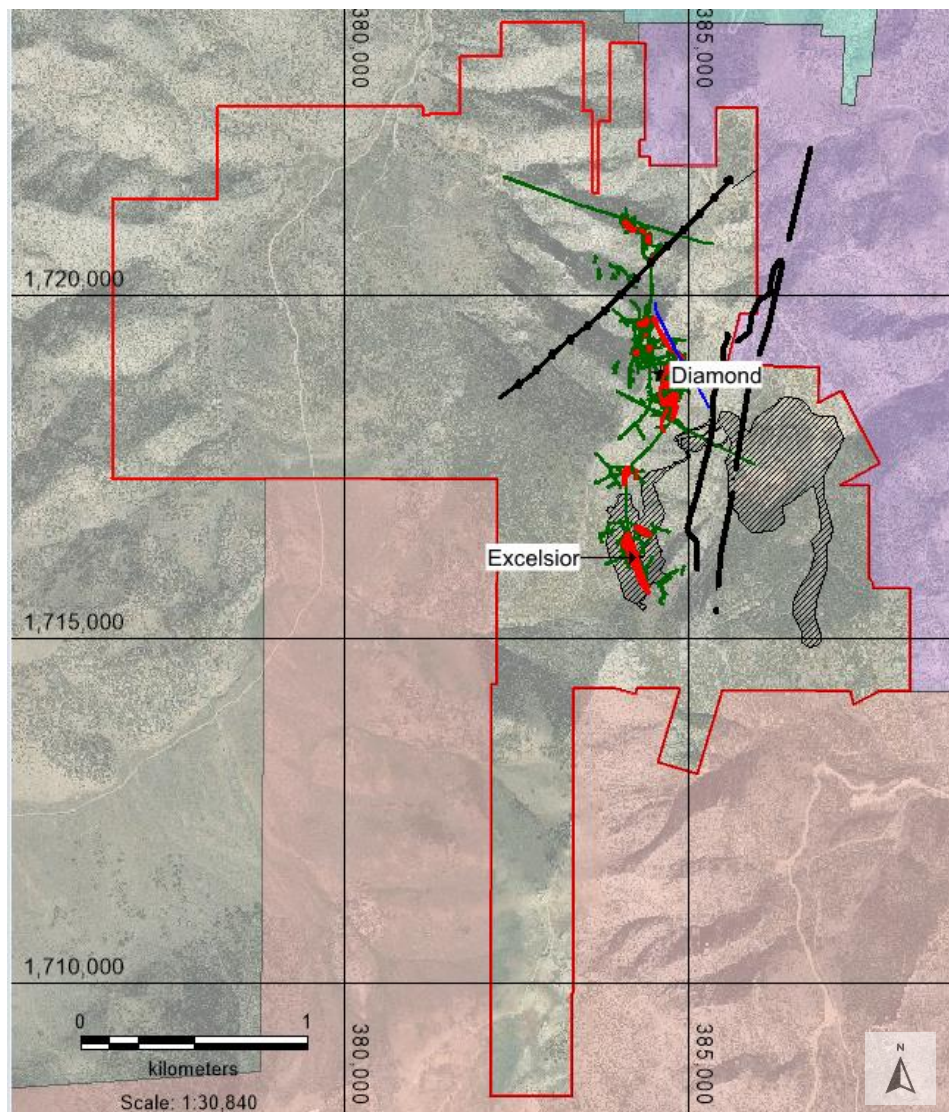


Figure 9 Property area showing the Plan of Operations hatched area (NPR, 2023)

## 4.3 Environment and Heritage Liabilities

### 4.3.1 Environmental Assessment

As part of the Plan of Operations an EA was submitted and appropriate studies completed, including:

- Air Quality

- Cultural Resources
- Noxious Weeds
- Native American Cultural Concerns
- Vegetation including special status Plant species
- Wildlife including special status Animal and Birds
- Waste and Materials
- Water Quality
- Land Use Access and Public Safety
- Geology and Minerals
- Palaeontological Resources
- Recreation
- Social and Economic Value
- Wild Horses
- Soils
- Consultation with Duckwater Shoshone Tribe

Results are discussed in Section 5.

#### 4.3.2 Environmental Liability

A reclamation bond of \$750,294 has been lodged with the BLM as of May 2021 against the proposed disturbances under the Plan of Operations.



## 5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Prospect Mountain Property is located about 3.5 miles southwest of the town of Eureka in Eureka County, Nevada. Access is by State Highways 55 and 278 to Eureka, and then by all-weather paved and gravel road about 5 miles (8 km) to the Diamond Mine Tunnel portal.

The nearest town is Eureka, which has a population of 411 (2020 census). The town of Elko is the nearest large town with a population of 53,702 (2020 census). Elko is located approximately 150 km north of the Property. The Company has its core shed and offices in the town of Ely, White Pine County, Nevada located approximately 100 km east south east of the Property. Ely has a population of 4,002 (2021 census). The nearest cities to Prospect Mountain are Reno, Nevada (330 km west of the Property) and Salt Lake City, Utah (370 km east north east of the Property).

Eureka County has a long history of mining activity, which continues to this day, with a number of large mining operations. The Ruby Hill mine operated by i-80 Gold Corp., is located approximately 8 km north of the Diamond Tunnel portal. Experienced and general labour is readily available in the local area and from Elko.

The Property is located within the Basin and Range Physiographic Province. The region is characterised by broad valleys separated by mountain ranges that generally trend north and south. Elevations range from about 6,800 ft (2,072 m) above mean sea level (amsl) on the valley floor to approximately 8,900 ft (2,713 m) amsl on Prospect Peak. The vegetation is semi-desert with sparse grass and sage brush in the valleys and dispersed low-growth conifers at higher elevations.

The Property area is in a high desert environment characterised by arid to semi-arid conditions with low annual precipitation. Most precipitation is received from December to May, with average annual precipitation of about 12 inches (300 mm) falling as rain and snow. Monthly average temperatures range from a low of 37 – 41°F (3 – 5°C) to an average high of 81°F (27°C). There is a large daily fluctuation in temperatures (Table 3). Exploration and development activities can be conducted year-round.

	Average Max T		Average Min T		Average Precipitation Eureka		Estimated Precipitation for Site	
	°F	°C	°F	°C	Inches	mm	Inches	mm
January	38.3	3.5	17.1	-8.3	1.07	27	2.07	53
February	41.2	5.1	19.2	-7.1	1.05	27	2.28	58
March	48.3	9.1	23.9	-4.5	1.34	34	2.66	68
April	57.0	13.9	28.9	-1.7	1.34	34	2.99	76
May	66.0	18.9	36.4	2.4	1.41	36	2.29	58
June	77.2	25.1	44.1	6.7	0.83	21	0.81	21
July	86.4	30.2	53.0	11.7	0.68	17	0.75	19
August	84.3	29.1	52.0	11.1	0.78	20	0.84	21
September	74.9	23.8	43.8	6.6	0.78	20	1.12	28
October	63.3	17.4	34.6	1.4	0.89	23	1.68	43
November	48.8	9.3	24.5	-4.2	0.78	20	1.91	49
December	39.7	4.3	18.3	-7.6	0.89	23	2.12	54
<b>Annual</b>	<b>60.4</b>	<b>15.8</b>	<b>33.0</b>	<b>0.6</b>	<b>11.83</b>	<b>300</b>	<b>21.54</b>	<b>547</b>

*Table 3 Monthly rainfall and temperatures (SRK Consultants, 2020a)*

Power and water are both available on the Property. Three phase power (480 volt) runs to a shed at the Diamond Tunnel entrance. Water is available from a production water well, drilled below the Diamond Tunnel entrance, and is tested to provide 110 gpm, but has been calculated to be able to provide a maximum potential discharge capacity of 712 gallons per minute.

## 5.1 Environment Application

As part of the Plan of Operations, a detailed EA was prepared and published. The EA noted several areas for consideration during exploration and development works.

### **Special status species.**

Bats are noted to night-roost in the first 100 ft of the Diamond Tunnel. After mining is completed, tunnels should be closed using bat gates to allow them to be used as habitats.

Greater Sage Grouse are present in the area and require special considerations. The eastern part of the mine area in keeping with a large portion of the district falls within a Priority Habitat Management Area and totals 321 acres. The General Habitat Management area totals 1010 acres and the Other Habitat Management Area totals 145 acres. Certain procedures must be observed within the Property areas and an operator must apply the plan amendment management decisions as specified in the permit.

Migratory Bird treatment act requires special consideration during nesting season from April 1<sup>st</sup> through to July 31<sup>st</sup>. Areas must be examined prior to disturbance during this period and a 300ft buffer around nesting sites applied.

Raptors. A small portion of the Property area would be visible from two Golden Eagle nesting sites, seasonal monitoring is required.

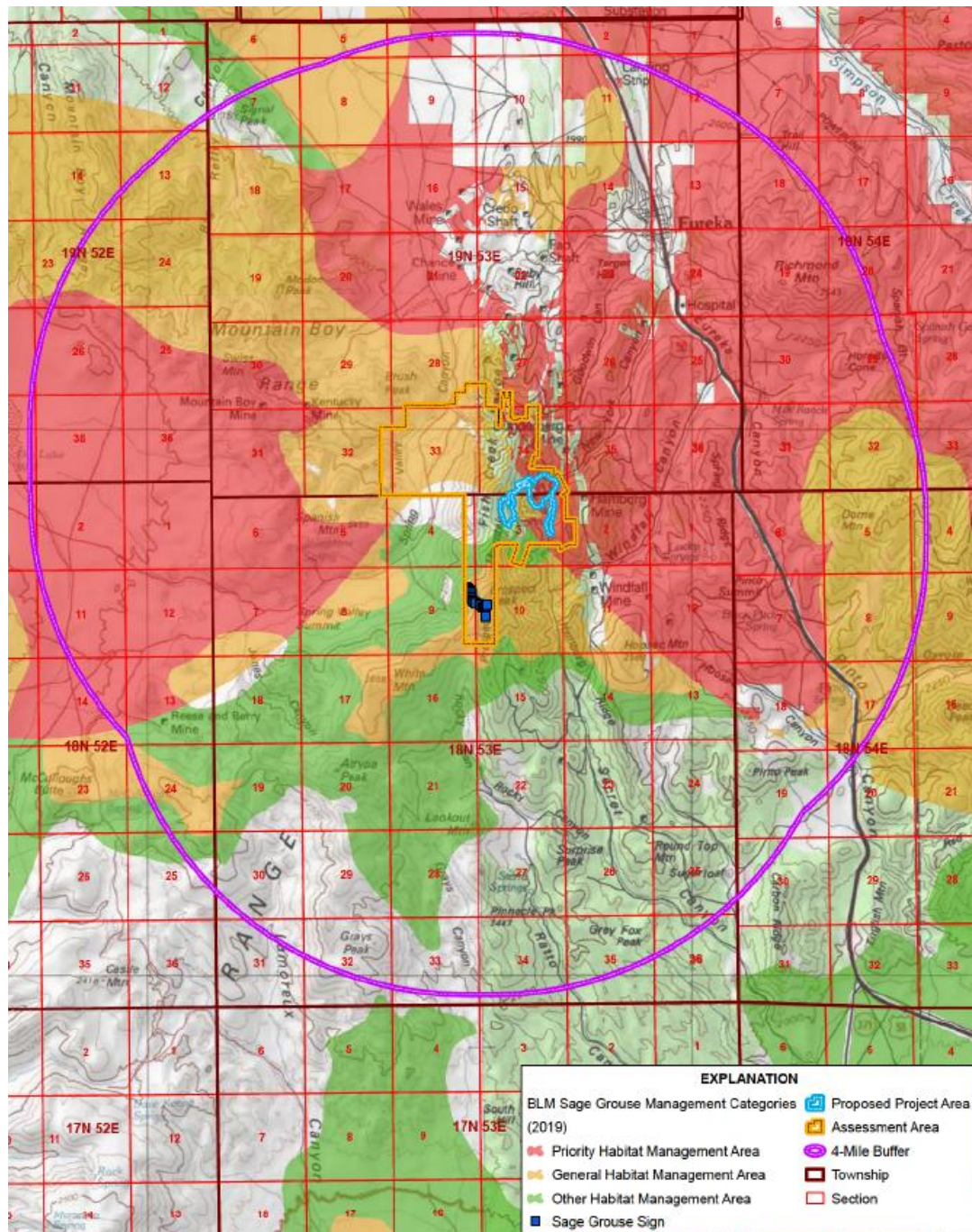


Figure 10 Sage Grouse management area(SRK Consultants, 2020a)

## 5.2 Permits

Permits are required to conduct exploration drilling on BLM lands. They either require a Notice of Intent or a Plan of Operations. If planned surface activities are <5.0 acres of surface disturbance, a Notice of Intent is appropriate and usually can be obtained within 30-60 days.

If >5.0 acres of new surface disturbance are planned during the exploration program, a Plan of Operations is required. Approvals for a Plan of Operations can take several months, depending on the nature of the intended work. Gullsil LLC has a valid Plan of Operations in place for a portion of the Property.

The current Plan of Operations entitles an operator to pursue surface exploration and underground mining of up to 365,000 tons per annum (331,000 tonnes per annum). The operator is also permitted to pursue activities in the Plan of Operations area (see Figure 11) including:

- Construction of surface exploration roads, drill sites and sumps;
- Reverse circulation (RC) and core drilling using truck and track mounted equipment with support vehicles;
- Reopening and upgrade the Diamond, Berryman and underground workings to modern standards.
- A cemented rock fill (CRF) plant with a crusher and screening plant and a cement silo;
- Drilling geotechnical boreholes for siting assessment for future potential mine facilities;
- Collecting drill hole and ore samples for metallurgical testing and geochemical characterisation;
- Construction of a contained ore transfer stockpile pad;
- Construction of two waste rock disposal areas;
- Construction of ancillary support facilities (e.g. Vehicle parking areas, office space, assay laboratory etc.);
- Construction of infrastructure (e.g. Developing aquifer wells as needed, developing Einar spring, water storages, hydrocarbon storage, septic system, connection to grid power, monitoring wells, fencing, communications and security);
- Construction of growth media stockpiles;
- Upgrading existing access/haul roads and constructing new roads;
- Installing a solar array as secondary power source;
- Establishing stormwater controls;
- Incorporating acknowledged Notice-level disturbance of approximately 3 acres on public land

The Plan of Operations is expected to disturb up to 82.1 acres during exploration and mining activities. Dewatering of underground workings is not required.

### **Water Permit**

As part of the Plan of Operations, a permit to extract water from Well 2, and to build water containment facilities at Einar spring, has been obtained.



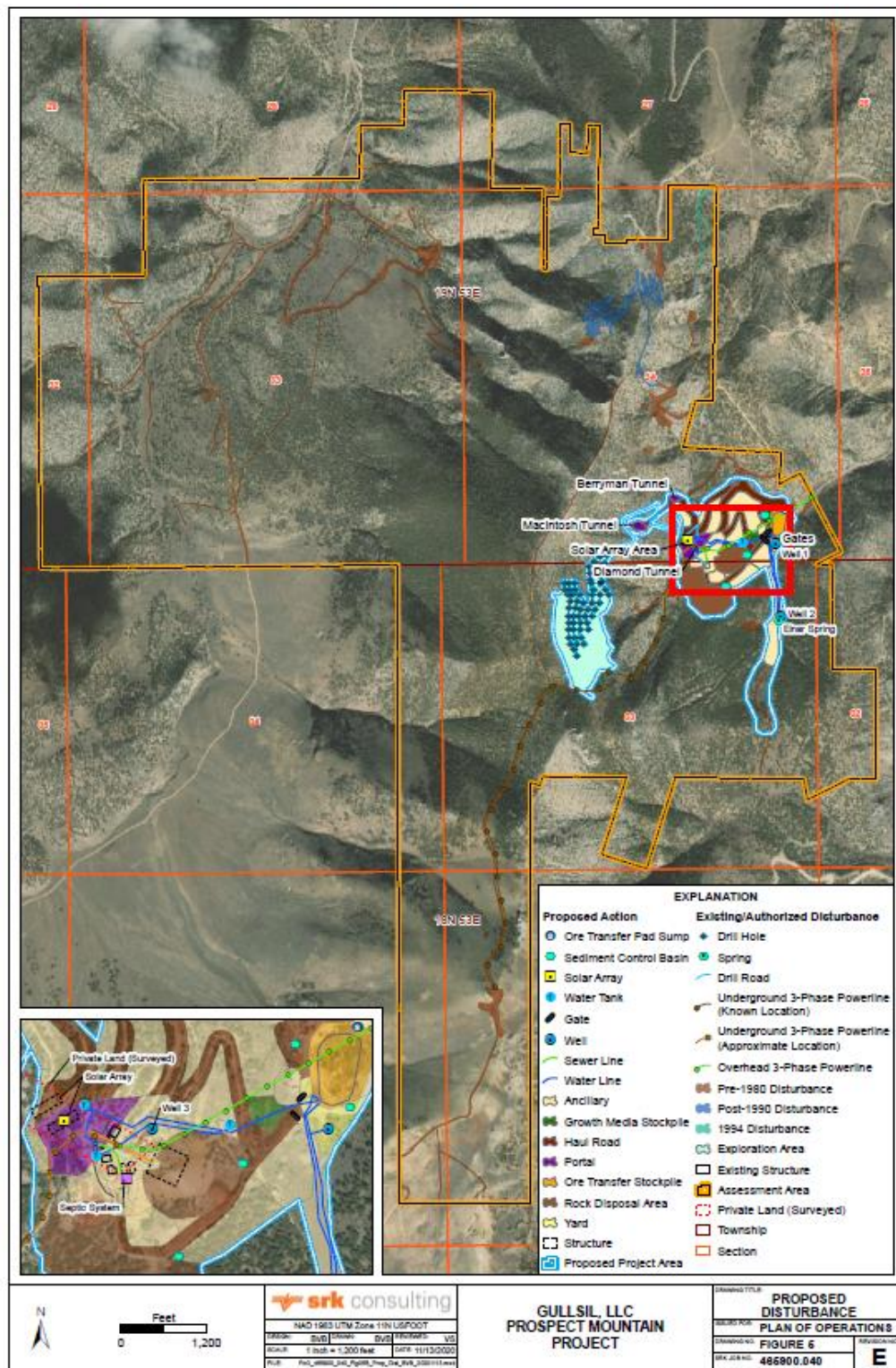


Figure 11 Area of Plan of Operations with proposed development areas (SRK Consultants, 2020a)

## 6 History

### 6.1 Early Discovery and Development



*Figure 12 Prospect Mountain township near the entrance to the Diamond Tunnel adit. Undated photograph, probably from early 1900's*

The early history of the Property is largely summarised from Tuck, (1970), and Nolan (1962). Ore was first discovered in the district to the northeast of the Property at the head of New York Canyon in 1864. In 1869 Ruby Hill mine was discovered, sparking the main production period. From 1870-1890 oxide ore was direct smelted and lead, gold and silver recovered. It is estimated that ~ 1.5 million tons of ore was produced from the various historical mines working the Ruby Hill orebody. Ore was discovered on Prospect Mountain in the early 1870's and minor production started from the Diamond, Excelsior, Silver Connor, Dead Broke and Matamoras mines. In 1882, the Prospect Mountain or Silver Connor Tunnel was driven from the base of the west side of the mountain in an attempt to intercept the depth extents of the very rich Silver Connor ore. The Diamond Tunnel commenced construction in 1888 and from 1897 the Diamond and Excelsior mines were joined underground and worked as a unit, coincident with completion of the Diamond Tunnel workings. Peak production was from 1890-1900. Most of the production came from seven major caves, the Gracchi Cave, Andy's Cave, January Cave, Avery Cave, Engine Cave and the Jumbo Cave. Individual caves are commonly made up of several gently north dipping zones joined by smaller steeper dipping segments in a step-like arrangement.

After 1900, production slowed throughout the Eureka district, with only small sporadic production occurring. An extensive exploration campaign was undertaken by the McIntosh Mines Company in 1923 on the Property.

In 1934 the Diamond and Excelsior Mining companies were consolidated formally into the Diamond-Excelsior Mining Company. James Hogle and associates operated the Eureka Tunnel area just to the east of the Property and constructed a cyanidation plant near the Diamond adit portal, which operated from 1935-1937. Small shipments of ore continued to local smelters until 1939.

In 1946 the Diamond-Excelsior mining company was renamed the Consolidated Eureka Mining Company with James Hogle as President. Money was raised and sporadic exploration and development work commenced. In 1953 a new ore zone was discovered during drifting on the 320



level, Defense Minerals Exploration Administration (DMEA) funding was applied for on the basis of the new discovery.

## 6.2 DMEA Period

The DMEA grant paid 50% of the agreed costs of \$57,050 in exchange for a royalty on any production occurring within 10 years of the grant date until the loan amount was repaid. The DMEA grant was focused on lead production and was terminated in 1954 after \$49,912 was spent. The costs were to cover the rehabilitation of Shaft 1, which required a new headframe and timbering to the 320 ft level, rehabilitation of 850 ft (259 m) of the production drift on the 320 level and 453 feet (138 m) of new development work at a cost of \$43/ ft.

During this time at least 14 underground diamond drillholes were completed from the main and 320 levels with largely unknown results. Production started in August 1954 and by December \$186,348 (1954 prices) in gross ore shipments were made from 1194 tons of ore grading 0.69 oz/t Au, 50.5 oz/t Ag, 29.4% Pb. The loan was fully repaid by January 1<sup>st</sup>, 1955.

At the owners own expense, an inclined winze was sunk from the 320 to the 650 level and Shaft 4 was sunk from the 650 level to the 1300 level. Connections to the Matamoras mine workings on the west side of the ridge were made on the main Diamond Tunnel level and on the 650 level with the old Prospect Mountain/Silver Connor Tunnel. Mining continued till 1962 after which the Property was leased to various operators and ceased operations in 1970 due to high mining costs.

Total production for this period from (Tuck, 1970) is estimated as follows (Table 4):

Year	Tons	Tonnes	Gold		Silver				
	(short)	(metric)	opt	g/t	opt	g/t	Pb %	Zn %	Cu %
1873-96	18,158	16,473							
1890-96	25,652	23,271	0.51	17.49	24.6	843	20.2		
1895-98	7,207	6,538	1.57	53.83	39.4	1351	7.1		
1923	386	350	0.19	6.51	14	480	10.6		
1938-37	11,996	10,883	0.23	7.89	5.4	185			
1938	1,374	1,246	0.26	8.91	9.5	326	3.2		0.05
1949	12	11	1.5	51.43	22.3	765			
1950	115	104	0.27	9.26	31.9	1094	12.5	1.3	0.14
1951	30	27	0.25	8.57	22.1	758	10.7		
1954-57	11,256	10,211	0.76	26.06	35.4	1214	27.3		
1958-62	5,192	4,710	0.83	28.46	10	343	8.4		
1969-70	1,215	1,102	0.61	20.91	20.6	706	17.1	1.9	0.16
<b>Total</b>	<b>82,593</b>	<b>74,927</b>	<b>0.64</b>	<b>21.95</b>	<b>22.94</b>	<b>787</b>	<b>18.00</b>		

*Table 4: Estimated historical production from Prospect Mountain (Tuck, 1970). Note that these figures are for reference purposes only and are compiled by other authors from smelter and tax records and are sourced from documents > 100 years old. The do not constitute any sort of resource estimation or comment on current or future value of the Property*

Nolan (1962) records a slightly larger figure estimated at 103,000 tons, although he includes figures from Eureka Tunnel and some other smaller operations in his calculations.

### 6.3 Recent History (Edited from internal memo, Erickson (2014))

Silver Viking Corp. (owned by Dr. Einar Erickson; current ownership of the Property are heirs of Dr. Einar Erickson) acquired the Property from Exxcel Energy Corp. (formerly known as Consolidated Eureka Mining Company ("CEM")), in a lease with option to purchase agreement in 1978. The option was exercised, and final deeds were put into the Silver Viking Corporation. Erickson reopened the mine in 1978 and for the next two years did selective mining for testing purposes. During this period ~ 10,000 tons newly mined ore was hauled 80 miles east to the test mill at Ely, Nevada where it was leached. Most of the ore came from the 100 to the 650 levels near Shaft 1 and the Banner Fault on the main level. According to E. Erickson they achieved an 89% recovery of silver and 92% recovery of gold, he believed longer retention time could recover up to 94% of the silver. A leaching facility was constructed at Alhambra Hills 20 miles east and > 10,000 tons low grade ore was shipped to that facility along with ore from other mines.

In 1980 the Property was leased to SH&K, Inc., unknown quantities were mined and processed in the facilities at Ely, Nevada. In May 1982 SH&K, Inc., made a shipment of 150,000 ounces of silver to Johnson Matthey in Toronto, Canada. That month, the price of silver dropped to \$2.85 per ounce, resulting in the closure of all of their mines and relinquishment of their leases. Dr. E. Erickson continued mapping and studying the old mines determining that there is now eleven miles of underground workings reaching a depth of 2100 feet (640 m) from the surface. Bellini Construction leased the Property for several years up to 1987. They failed to perform on the lease, and as the mill at Ely was being dismantled the lease reverted to Silver Viking Corp. In 1987-8 Merlin Mining Company took a lease on the Property. An exploration model for an open pit to a depth of 700 feet (213 m), from the top of the ridge at 9000 ft amsl to the level of the Diamond Portal at 8000 ft amsl was developed. An application for drilling was approved in 1988. Merlin Mining Company chose to drill in several places on the mountain ridge and west side but failed to find mineralisation of interest. No data exists on these holes. In 1992 Merlin Mining Company changed their name to European American Resources, Inc. ("EPAR") and the new operator undertook drilling under a renewed permit. They started in the WABASH area to confirm that historical mining had not taken all the high grade. A total of 94 RC holes were drilled in 1998, in due course, EPAR failed to comply with its obligations and the Property reverted back to Silver Viking Corp. In 2000. Homestake Mining Company, operating the nearby Archimedes pit, became interested and after their merger with Barrick Gold Corp. in 2001, formed a joint venture, and drilled several deep holes on the eastern side of the Property. The entirety of the Property reverted back to Silver Viking Corp. in 2003. Under a 2010 agreement with R. Brinton, a large report was prepared with 21 more underground reports and maps. In 2011 the Property was transferred to Prospect Mountain Gold and in 2015, Solarljós LLC (owned and controlled by heirs of Dr. E. Erickson) acquired the Property. Gullsil LLC holds the permits for the Property.

Total production from the Property, given the eleven miles of drifting and development, has been modest, probably less than 150,000 tons. Much of the development is of an exploration nature and performed the same function as drilling does today. The development was paid for by the very high dollar value per ore ton. In today's prices the value of the gold, silver and lead alone would be in the range of \$1500-2000 USD/t\* with roughly 40% of the value coming from lead and silver and the remainder coming from gold.

*\*Using values of \$1700/oz for gold. \$15/oz for Ag and \$2000/t for Pb. No value is given to the zinc content. This calculation is meant for comparison purposes to put historical figures into perspective and does not in any way indicate any form of future potential or current value to the Property.*



## 6.4 Historical Non-Compliant Estimates of Mineralisation

There are no current Mineral Resource Estimates for the Prospect Mountain Property that are compliant with NI 43-101 or any other International Standard. Since production finally ceased in the 1980's there have been a number of studies/documents produced that have made various "estimates" of the potential mineralisation on the Property. These "estimates" are discussed below. The purpose of this is to show the historical areas of interest on the Property, as well as discussing their data sources, methodologies, assumptions and ultimately their shortcomings.

**For purposes of clarity, neither the Company nor the Qualified Persons consider these historical estimates to be valid or reliable quantifications of mineralised material on the Property.**

### 6.4.1 1998: Dr Colin Godwin Memo (Godwin, 1998)

In 1997 Dr Colin Godwin, a Registered Engineer and Geologist, visited the Property on behalf of a Canadian mining company. Following his visit he drafted a table of target areas, that included very crude assumptions of volumes for each, to which he applied a fixed density and grade (Au only), and then applied a factor (5%) to account for discontinuity, caves, old stopes, dilution etc. This table was subsequently included in a short two-page memo titled "Estimate of gold potential. Prospect Mountain Project, Eureka, Nevada". It is not entirely clear who actually prepared the memo.

The actual results will not be reproduced here as they are not really calculated estimates, but rather rough "back-of-envelope" estimates used to show where there was potential. More importantly, was that Dr Godwin was outlining areas of potential mineralisation that were "*amenable to open pit mining and leaching*".

Dr Godwin identified six target areas:

- Wabash – Williams Zones
- Matamoras Zone
- Dead Broke – Banner – Silver Conner Zones
- Orange Basin Zone
- Wall Street Zone
- 4<sup>th</sup> of July – Excelsior – Dominic – Diamond Zones

### 6.4.2 2008: Independent Evaluation of Works (Bright and Schwarz, 2008)

In 2008, James Bright (Professional Engineer) and Frederick Schwarz (Professional Geologist) were requested to independently evaluate the exploration/development proposals for the Prospect Mountain Property put forward by Dr Einar Erickson. The subsequent report (Bright and Schwarz, 2008) contains in Appendix 1 an estimate of potential mineralisation by Dr Erickson.

Dr Erickson's proposals entailed a three-phase approach to explore and develop gold-silver-base metal mineralisation on the Property. These phases were to be largely sequential, but partly concurrent, and progressed from open pit (and dumps), to underground and then to peripheral areas. In support of these phases reference is made to the resources in the Appendix by Dr Erickson.

The first phase was to target an "envelope" of open-pittable mineralisation with a continuous open pit extending 2 km (6,800 feet) from the 4<sup>th</sup> of July zone in the south to the Wabash Zone in the north. The pit was to have an average width of nearly 120 m (400 feet) and contain some 127 million tonnes (140 million tons) of material. Dr Erickson did provide an estimate of gold and silver grades (not reproduced here).

The determination of the “envelope” appears to be based on the upward extension of known and possible underground mineralisation and workings along a “continuous zone”. The method for determination of grades is unclear from available documentation.

Resources were also mentioned for the dumps and stockpiles on the east side of the mountain, including the dumps for the Diamond Mine, MacIntosh, Berryman and Orange Mine. Dr Erickson stated there being up to 250,000 tons of material in these dumps (grades not reproduced here) This tonnage was later corroborated by the 2010 Beatty study (Section 2010: Main Dump Estimation (Beatty, 2010) 6.4.3).

The independent authors outline the requirements for a Mineral Resource to be stated under the CIM / NI 43-101 guidelines, clearly identifying that insufficient data currently exists to define such a resource and identifying required drilling.

It is the clear opinion of the Qualified Persons that the “resources” mentioned in the 2008 evaluation report and its appendices, meet none of the requirements of either Mineral Resources or of Exploration Targets as defined by CIM / NI 43-101. Interesting take-aways from this report include the initial focus on open-pit mine material that includes gold, silver and base metal mineralisation. The identification of the dumps and stockpiles as potential resources is also significant.

#### 6.4.3 2010: Main Dump Estimation (Beatty, 2010)

In November 2010, Dr Rick L. Beatty was commissioned to conduct metallurgical cyanidation test work for heap leach evaluation on samples from the Main Dump at the Prospect Mountain Property (Section 13.2). As part of the scope, he was to measure and estimate the mass of the dump located at the mine portal, and to calculate the recoverable amount of precious metals.

Measurements were undertaken using GPS surveying. An initial survey point was measured, at the SE corner of the NAPA Claim, to an elevation of 7,891 feet. After the initial measurement, the upper and lower circumference areas of the dumps were traversed and measured (Section 13.2). The upper edge of the dump measured 0.7 acres (2,833 m<sup>2</sup>), and the bottom edge measured a total area of 3.5 acres (14,164 m<sup>2</sup>). The angle of repose for the dump was measured to be approximately 36°.

To obtain an estimate of bulk density, the composite samples taken for testwork, were dried, combined, composited and passed through a 1” mesh. The minus 1” material was used to obtain a bulk density value of 100 pounds per cubic foot (1.6 g/cm<sup>3</sup>).

Combining all of the above data, enabled Dr Beatty to estimate that the Main Dump contains an estimated 240,628 short tons of material (218,294 tonnes).



Figure 13 Measurements of the Main Dump at Prospect Mountain Property (from Beatty, 2010)

Four composite samples were taken from the Main Dump as discussed in Section 13.2.1. The composite samples were then assayed by fire assay with 1 Assay Ton (29.166 gram) aliquots, with a gravimetric finish.

The results of the head analyses are presented in Table 5.

Sample #	Gold		Silver	
	opt	g/t	opt	g/t
1	0.018	0.62	1.52	52.11
2	0.005	0.17	0.66	22.63
3	0.010	0.34	0.71	24.34
4	0.340	11.66	1.13	38.74
Average	0.093	3.19	1.005	34.46

Table 5 Head Analysis of Composite Samples

It is clear from these results, and recognised by Dr Beatty, that in terms of gold, the northernmost composite (sample #4) is of a much higher grade than the other samples. This is perhaps to be expected, when one considers the evolution and build-up of the waste piles over time. The earliest material (likely to be higher grade) is dumped closest to the portal. As mining progresses over time, and recoveries improve and/or lower grade material is mined, the average grade of the waste material may be expected to decrease. Consequently, as new material of progressively lower grades is added to the dump, which grows upwards and away (i.e. southwards) from the portal, a rough grade profile with lower grade material to the south can be expected.

Dr Beatty compares the results of the four composites he assayed with historical sample data from the dump. There are two separate sets of historical data, without any description, referred to as EPAR and ERICK. It can perhaps be assumed that the EPAR samples are taken from the EPAR era data, whereas the ERICK samples are perhaps samples collected by Dr Einar Erickson? Data is provided as descriptive statistics for each of the two datasets, with no individual sample data provided. Furthermore, no details about the source location or assay methods of these other samples are provided in the report. A summary of these comparisons are provided in Table 6.

	EPAR			ERICK		
	No of Samples	opt	g/t	No of Samples	opt	g/t
<b>Gold</b>	23	0.02226	0.76	7	0.0529	1.81
<b>Silver</b>	22	0.802	27.5	7	1.231	42.21

*Table 6 Comparative historical sample grades of the Main Dump*

The EPAR samples (23 with gold assays) have an average grade of 0.76 g/t Au (0.022 opt), whereas the ERICK samples (7 with gold assays) have an average grade of 27.5 g/t Au (0.802 opt). So again, these sample sets are showing the very significant grade variability in the dump, which presents significant challenges when trying to estimate the precious metal contents of the dump.

Notwithstanding these challenges, Dr Beatty presented an estimate for the gold and silver contents of the dump based on his calculated average values (Table 5) to arrive at an estimate of 22,378 oz Au and 241,831 oz Ag.

The Qualified Persons caution these estimates are not classified to any defined category for a mineral resource as defined by CIM / NI 43-101, and that a qualified person has not done sufficient work to classify the historical estimate as current mineral resources or reserves. The company is not treating the above estimate as a current mineral resource or reserve. These values may likely be either significantly over- or under-estimated and should not be construed as a Mineral Resource Estimate for the Main Dump, and that further detailed sampling of the dump, including multiple vertical profiles through the dump by drilling / augering (to account for vertical variation in grade) is necessary to generate a reliable resource estimate.

#### 6.4.4 2015: SRK Modelling and Exploration Target Report (SRK Consultants, 2015)

In 2015, SRK Consulting (US) Inc ("SRK") were engaged to generate a 3D geological model of the project area, including the underground workings, and to calculate an Exploration Target for the project. SRK state in their report that the "mineral potential defined in this work scope is for internal

Gulls use only". For this reason, the Exploration Target defined by SRK cannot be fully reproduced in this report, and the range of grades will be excluded.

The most significant aspect of the 2015 SRK work, was the compilation and digitisation of a vast amount of historical data and the construction of a 3D model in Leapfrog® Geo software, of the mine infrastructure and geological data.

The dataset used by SRK to construct the underground drift, shaft and stope network included more than 200 surface and underground maps (compiled and supplied by Dr Einar Erickson). Most of the maps were in local mine grid coordinates that were then converted into Nevada East State Plane coordinates (feet) using a NAD 27 datum. SRK modelled the caves and stopes as volumes of mineralised rock with no voids or dilution. A total of 25 cave/stopes items were modelled, some containing multiple pods. Most of the stopes were digitised from stacked level plans and modelled with vertical geometry, except in the 4<sup>th</sup> of July area in the south, where nearly all of the stopes were modelled at 45-50° angle dipping to the northwest. SRK notes that *"there is a high likelihood that more stopes are present in the model area than have been depicted on historic maps."*

Geological and structural data was largely compiled from geological maps and cross sections from a detailed report on the Eureka geology prepared by the US Geological Survey (Nolan, 1962), as well as the geological mapping report on the Diamond Mine by Qidwai (1979). This was supplemented by drilling data from the 1998 EPAR drill holes (94 holes) in the Wabash area and the 2001 drillholes by Homestake (3 holes). Topography was generated from public domain GIS digital elevation models.

Having constructed the 3D geological model, SRK then progressed to populate the model with gold and silver assay grades, which in the absence of drill data, were taken from the various historic plans and sections. Cave/stope volumes were assigned metal grades based on averages of adjacent ore-car assays identified in the plans and sections, which were seen as proxies for production grades during historic mining. SRK has estimated range between 0.03 – 0.39 opt Au (1.03 – 13.37 g/t Au) and 1.51 – 31.71 opt Ag (51.7 – 1087 g/t Ag) with average grades of 0.19 opt Au (6.51 g/t Au) and 10.6 opt Ag (363.4 g/t Ag). SRK has cautioned that these metal grades are not substantiated by modern drilling or sampling and may represent unrealistic or unachievable values once new exploration is undertaken.

The QPs consider that this is a problematic approach for calculating an estimate of grade of the historic mined stopes. Problems include treating the stopes as solid without voids, when it is known that these stopes contained open caves prior to mining activities. Furthermore, the use of the ore-car assay data to populate an average grade is likely to be flawed, as the ore-car assays very likely carry a number of biases, and thus don't truly represent the original in-situ ore grades. Many of the ore-cars will be carrying oxidised ore from the floor of the caves and have been concentrated naturally through oxidation. Also, it is not known what proportion of total production for a stope the available ore-car data represents (e.g. has waste / low-grade material been fully included?). Consequently, any estimate of stope grade should be treated with utmost caution and assumed to be an overestimate. Likewise, it is not clear from the SRK report, how, and to what extent, the authors have accounted for "remaining ore" versus "mined out ore", and consequently the volumes should also be treated with caution.

In order to evaluate the open-pit potential, SRK expanded the grade modelling to include a lower grade halo around the mapped caves/stopes. SRK state that *"Historic maps suggest that grades on the order of 0.01 opt (0.34 g/t) Au and 1.0 opt (34 g/t) Ag persist away from high grade shoots and pods"* and have used this to justify constructing generalised envelopes around the stopes that are



typically two to three times the high-grade stope radius (based on the implicit modelling of the 0.01 opt Au grade shell from the EPAR drilling at Wabash). The envelope is then assigned a grade of 0.01 opt Au and 1.0 opt Ag.

The QPs consider this approach is extremely problematic, in that these envelopes are constructs that are not supported by any actual assay data, and simply represent volumes of material surrounding a known stope. Furthermore, historic descriptions of the mine and distribution of the ore are not supportive of a model of low-grade haloes. For example, Tuck (1970) states that *“Workings and drilling may go within a few feet of one [orebody] without any indication of it.”*

SRK proceeded to evaluate three different production scenarios in MineSight 3d to determine three “Exploration Targets” for the Prospect Mountain Property. The three scenarios included:

- Open Pit Mining and Heap Leaching
- Underground Mining and Milling
- Open Pit Mining and Milling.

The actual results of these studies will not be reproduced here due to the issues discussed above. However, interestingly, both the open pit scenario and underground scenario (which largely excludes the low-grade halo) have identified the 4<sup>th</sup> of July area as the most significant area for exploration and potential resources.

#### 6.4.5 2020: SRK Technical Memo for Wabash Deposit (SRK Consulting, 2020b)

In July 2020, SRK completed a Technical Memorandum for Gullsil focussed on the mineralisation in the Wabash area of the Property. SRK specifically state that the results are not intended for public disclosure and that the work does not meet the requirements for disclosing Mineral Resource Estimates under CIM / NI 43-101. For these reasons, the actual results of this study will not be reproduced here. Notwithstanding this, it is useful to discuss what work was undertaken, the approaches taken, and the various limitations of the data.

The study on the Wabash area is based on the 1998 EPAR vertical reverse circulation (RC) drilling (Section 10.1.1). In total, 94 holes were drilled, with an average horizontal spacing of 42 – 48 feet (12.8 – 14.6 m), and an average total depth of 294 feet (89.6 m). For three of the holes the data is missing. SRK comment that the collar coordinates generally match available mapping and aerial photograph, but the reported elevations did not. Most drillhole collars were about forty feet (12.2 m) above the topographic surface. SRK adjusted elevations vertically to coincide with topography. Furthermore, no downhole surveys were completed. Sample intervals are five feet long (1.52 m), and samples were assayed for gold and silver and reported in ounces per ton. No Quality Assurance/Quality Control (QA/QC) data exists for the assays. There is no downhole geology available for the drillholes.

For the 91 holes for which data exists, the total drilled length is 27,615 ft (8,417.05 m). Of this, 23,260 ft (7,089.65 m) have associated gold and silver assay data (84%) in 4,652 sample intervals.

SRK undertook a variogram analysis of the data (composite length = sample interval = 5 ft (1.52 m)) but were unable to produce reasonable results. However, SRK stated that “a loose analysis of the variograms demonstrated that maximum variability was reached by 50 feet [15.24 m], roughly the horizontal drillhole spacing”.

For completing the “resource estimate”, SRK created a 10’ x 10’ x 5’ block model and estimated grades (gold and silver) by a two-pass inverse distance weighted (IDW) interpolation inside four

separate domains, with search ellipses that followed grade domain orientations. Density was assigned at 12.8 cubic feet per ton (2.50 g/cm<sup>3</sup>), as done previously in the 2015 report.

For a number of reasons, SRK did not consider their estimate to be a Mineral Resource Estimate. These include uncertainty in drillhole collar location, lack of downhole surveys, lack of drillhole geology data, and lack of QA/QC data. As a result, they did not constrain the data to a pit for reporting, and so could not meet the criteria of “reasonable potential for eventual economic extraction”. However, SRK did investigate the sensitivities of their model that has important implications for possible future work.

The steep topography at the Wabash area means that the resources and eventual economics is especially sensitive to pit slope angles, and that maximising pit slope angles would be critical in maximising future pit depth and in-pit resources and minimising stripping ratios. To this end, it would be necessary to undertake geotechnical studies, which would require core drilling as opposed to RC drilling (although RC drilling could be used for infill purposes). Another shortcoming SRK identified was the lack of information about mineralogy or ore types, and recommended metallurgical studies and the use of core drilling to provide coarse material for geochemical characterisation.

## 7 Geological Setting and Mineralisation

The Eureka mining district has been an area of significant geological interest since the 19<sup>th</sup> century. Hague did the first geological analysis in 1880 culminating in his 1892 Monograph for the USGS, focusing on the geology and stratigraphy of the area. Curtis (1884) did the first detailed study on the lead zinc mineral occurrences in the area in 1881-2. Nolan et al., 1956 and Nolan (1962) updated Hague's work and produced the definitive guide to the geology, stratigraphy and structure of the area. Other important work on the structural timing was completed by Long et al., 2014, Fiori et al., 2015 and Hoge et al., 2015. There is a large body of literature around magmatism in northern Nevada, but it is primarily focused on Eocene events, with Jurassic and Cretaceous magmatism under-represented in the literature. Du Bray, (2007) provides a useful comparison of the various magmatic events.

The Eureka district was initially famous for its gold, silver, lead, zinc Carbonate Replacement Deposits from the late 1800's through to the early 1900's, and since the 1980's there has been an emphasis on Carlin style gold in the area. An enormous body of literature exists around Carlin style mineralisation summarised in Cline et al. (2005), with new understandings updated in Cline (2018). Many other significant styles of mineralisation are present in northern Nevada: Porphyry and porphyry related, Epithermal, SEDEX, Lead Zinc Carbonate Replacement and Sediment Hosted Gold; spanning periods from the Silurian to the Miocene. Despite their potential importance in the overall gold endowment of the district (Emsbo et al., 2006), the literature is under-represented in these styles of deposit. The Eureka district harbours Porphyry related, Carlin and Carbonate Replacement Deposits (CRD), the latter having received little attention from explorers or researchers since the 1950's. Vikre, (1998) and Hastings, (2008) being some of the few modern studies of non-Carlin type mineralisation in the district, but are concerned mostly with the Porphyry related mineralisation.

### 7.1 Regional Geology

Rocks in the area are located in the Great Basin of the western USA, a watershed with no outlets to the ocean, extending from Oregon through Nevada to Mexico and east to Utah. A complex interplay of tectonic events, controlled sedimentation and preservation of the sedimentary sequence from the middle Palaeozoic to the Tertiary.

The oldest exposed rocks in the Eureka district comprise a thick sequence of shallow platform carbonate and siliciclastic sediments laid down in the Palaeozoic from the Cambrian through to the Devonian.

Little is known of the Pre-Cambrian basement underlying the Palaeozoic shelf sequences due to lack of exposure. Palaeo-Proterozoic rocks of the Mojave sub-province are inferred to have accreted onto the Archean Wyoming Province continental nucleus whose boundary stretches roughly east west under northern Nevada and formed the western flank of the Laurentia palaeo-continent (Dickinson, 2006).

The Palaeozoic sediments formed in a continental shelf environment in a passive margin setting at the then continental margin of the Western United States, which extended from the Yukon through to southern California. A series of dolomites, limestones calcareous shales, and occasional arenaceous sediments formed in a relatively stable environment over a period of > 150 Ma; total thickness of sediments formed is estimated to have been > 5km (3.1m) (Cook and Corboy, 2004). To the west of the shelf sequences, anoxic clastic carbonaceous sediments were deposited in marginal basins formed in a period of protracted extension during the Silurian to mid-Devonian and were associated with periodic bouts of alkalic mafic volcanism.



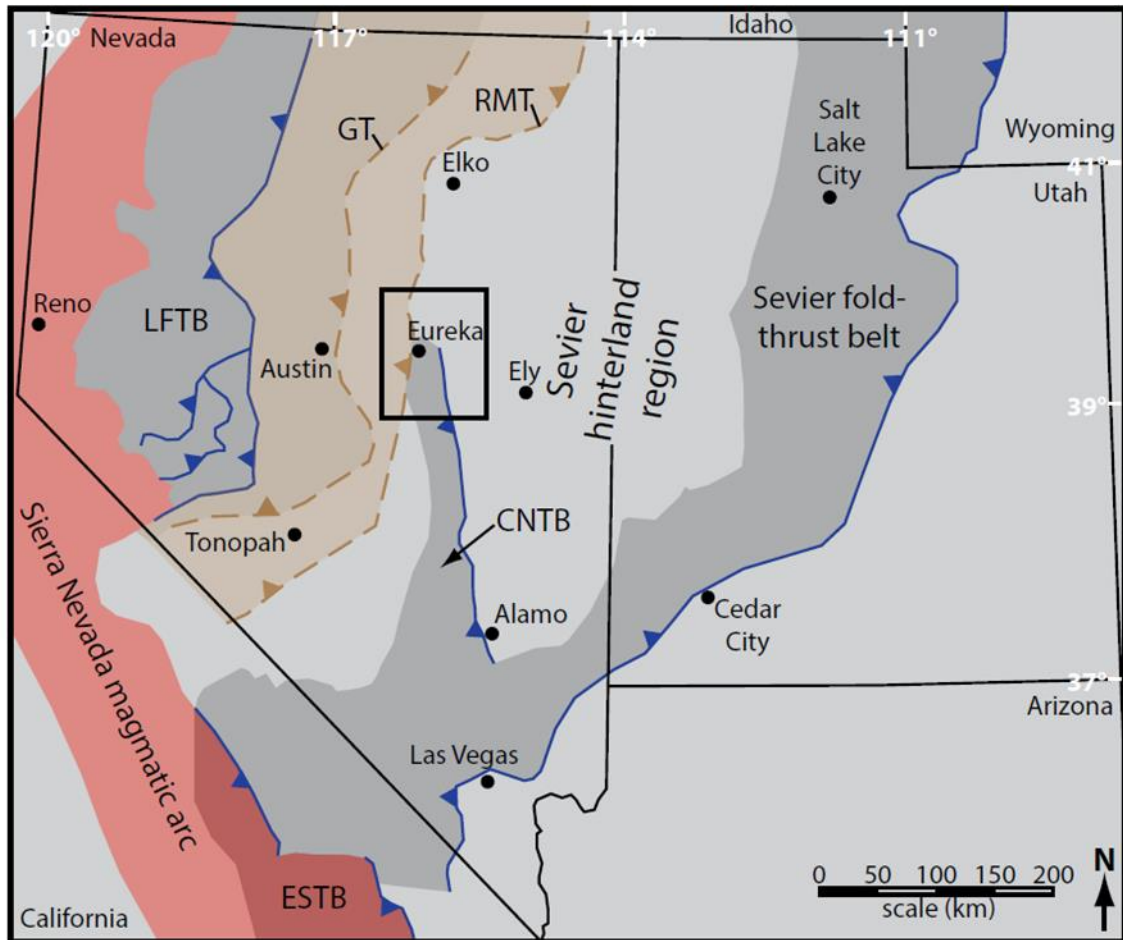


Figure 14 Tectonic map of the Nevada thrust belts (modified from Long et al., 2014), showing the location of Figure 18. Abbreviations: GT = Golconda Thrust; RMT = Roberts Mountain Thrust; LFTB = Luning-Fencemaker Thrust Belt; CNTB = Central Nevada Thrust Belt; ESTB = Eastern Sierra Thrust Belt

First recorded mineralisation occurred in this period with large barite and smaller Ag, Pb, Zn, Au deposits of SEDEX type forming in-situ in these basins (Emsbo et al., 1999) in the middle to late Devonian. The largely static sedimentation processes were interrupted in the late Devonian-Mississippian with the onset of the Antler orogeny and associated thrusting in a back-arc compressional environment. The famous Roberts Mountain Thrust, which has a strong spatial association with Carlin type mineralisation, emplaced these deeper water basin sediments some 150km eastwards (Roberts Mountain Allochthon) over the shallower water shelf sequences during this time, and is exposed just to the west of the Eureka district. Renewed siliciclastic and shallow water carbonate sedimentation continued into the Permian.

Crustal shortening (see Figure 14 and Figure 15) was accommodated in the late Permian to Triassic via the Golconda allochthon which emplaced material over the prior Roberts Mountain allochthon in response to the Sonoma orogeny occurring to the west (Dickinson, 2006).

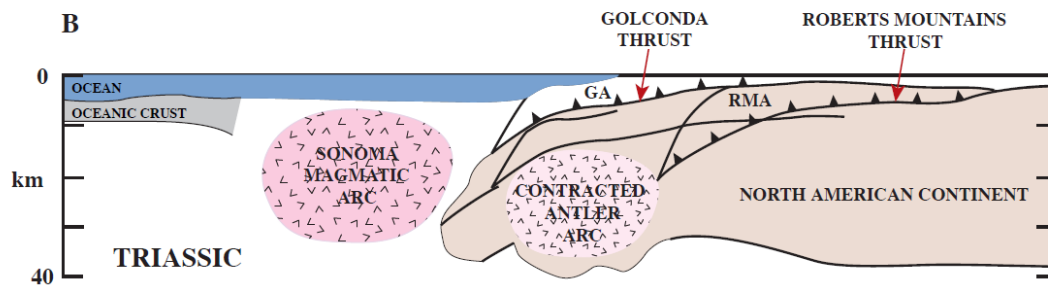


Figure 15 Schematic section of the continental margin during the Triassic (From Cook and Corboy, 2004)

Mesozoic sediments are largely absent from the stratigraphy as the era is dominated by compression and uplift. Cretaceous conglomerate sequences to the east of the Property are the exception and are thought to have formed in a foreland basin setting in response to the Jurassic-Cretaceous Cordilleran orogenic event to the west.

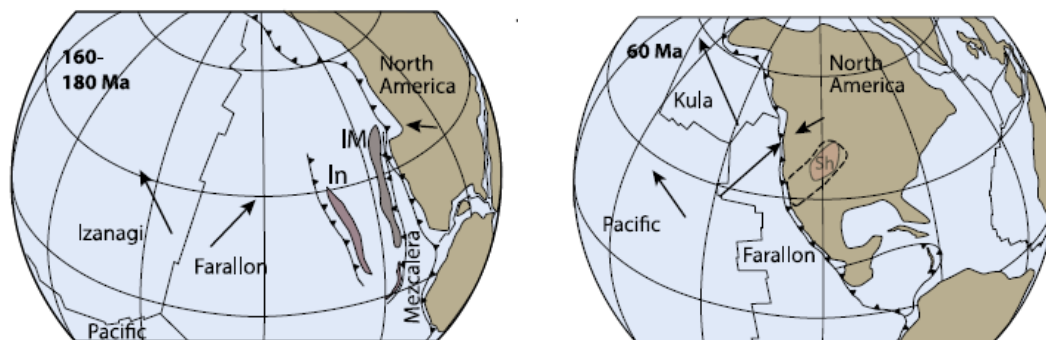


Figure 16 Jurassic and end Cretaceous snapshots of oceanic plate subduction beneath the western North American Continent from Yonkee and Weil, (2015). IM=Intermontane and IN = Insular terrane groups)

Jurassic and Cretaceous calc-alkaline magmatism associated with continued eastwards subduction in the Cordilleran orogeny (Figure 16) to the west were responsible for porphyry related mineralisation throughout the area. Yerrington and Ely being examples of economic Jurassic and Cretaceous porphyry and porphyry related mineralisation respectively. Magmatism throughout northern Nevada occurred well inboard of the Jurassic and Cretaceous continental margin magmatic arcs. Mechanisms such as slab breakoff of the Mezcalera ocean micro-plate and associated asthenospheric upwelling was likely responsible for inboard Jurassic magmatism, while Cretaceous plutons were related to rapid and shallow subduction of the Farallon oceanic plate and consequent inward migration of magmatism (Yonkee and Weil, 2015) and (Dickinson, 2006), (Du Bray, 2007).

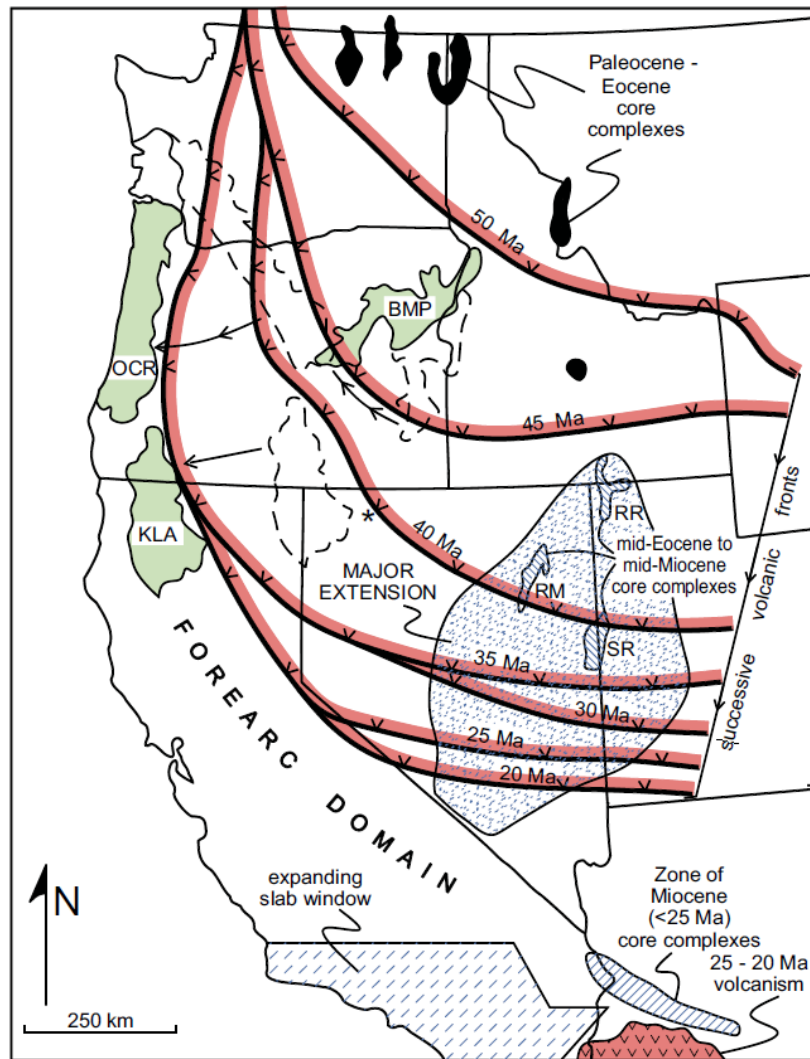


Figure 17 Tertiary arc magmatism SW migration following slab rollback (from Dickinson, 2006)

Continued shortening was taken up by further thrusting during this time along the Jurassic Luning-Fencemaker thrust belt and the Cretaceous central Nevada thrust belt. The central Nevada thrust and the Eastern Sierra thrust belt are thought to be underthrust by the Sevier fold thrust belt during the Sevier orogeny (see Figure 14).



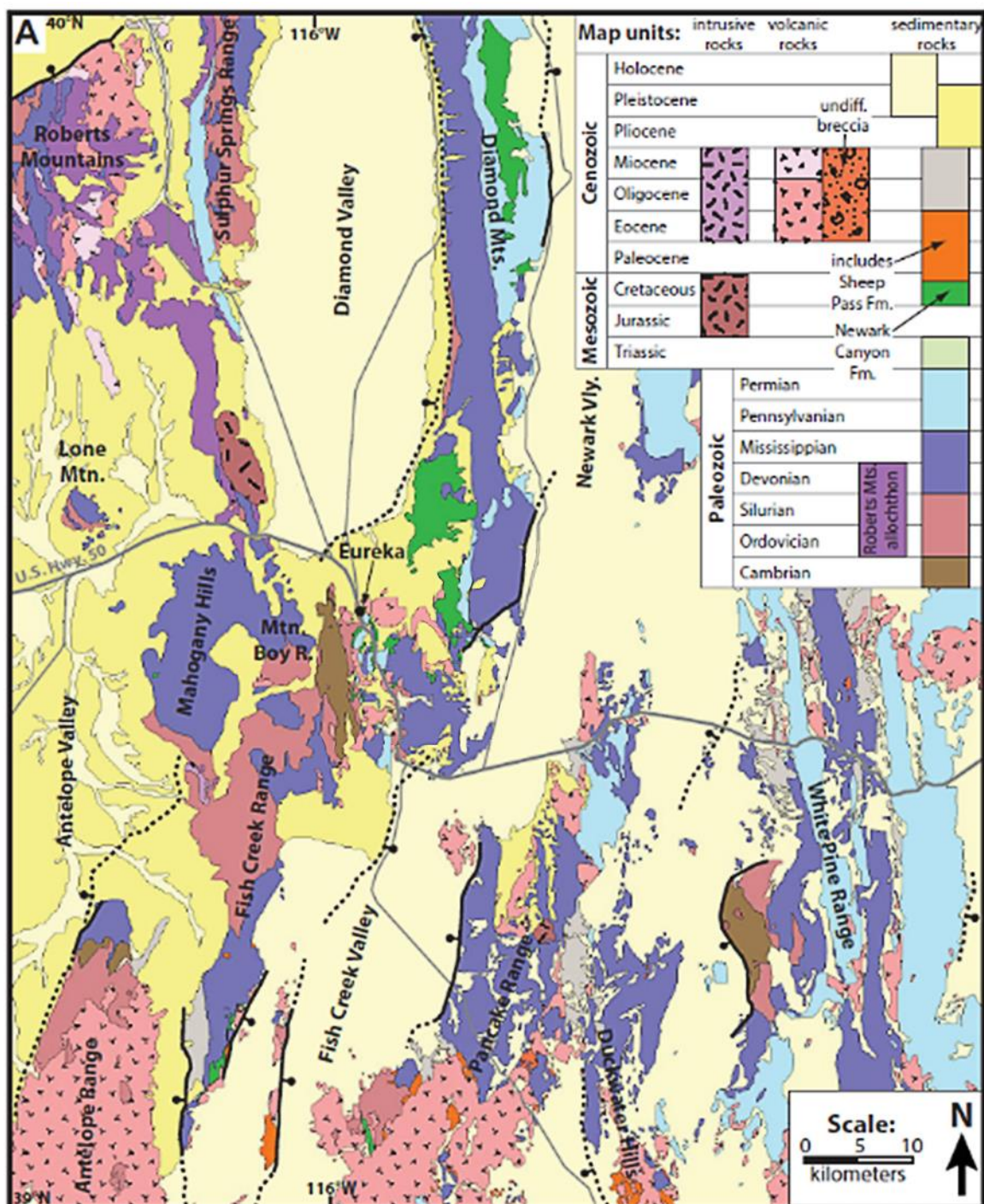


Figure 18 Regional geology (modified from Long et al., 2014) showing simplified geology of the Eureka area

Tertiary magmatism and volcanics swept south-westwards from the Eocene to the Miocene (Dickinson, 2006), (Du Bray, 2007) across the region, associated with the stalling and deepening of Farallon subduction (see Figure 16 and Figure 17). Andesitic to Rhyolitic lavas and associated volcanoclastic rocks are widespread in the region but associated intrusions outside of rhyolite and dacite dykes are largely absent, suggesting shallow levels of preservation (Long et al., 2014). The volcanism is coeval with Carlin type mineralisation and is directly associated with Epithermal and Porphyry related mineralisation in the Battle Mountain area.

A late extension event contemporaneous to the volcanics is probably related to the same slab rollback mechanisms driving the volcanics and is represented by detachment and normal faulting and minor pull apart basins. During the Miocene further extension occurred, with block faulting forming the current basin and range topography, controlled ultimately by transverse accommodations along the San Andreas Fault (Dickinson, 2006) and are associated with Quaternary andesites and basalt in some areas.

Large parts of the current “basins” in the Basin and Range topography are covered by Quaternary alluvium and sediments obscuring the Palaeozoic rocks in those areas.

## 7.2 Property Geology

The Prospect Mountain Property lies in the heart of the Eureka district a structurally complex area between the Central Nevada Thrust Belt and the earlier Robert’s Mountain Thrust and allochthon. Exposed rocks are primarily Cambrian to Ordovician dolomites, limestones and shales intruded by Cretaceous intrusives and Tertiary rhyolite dykes. Associated Tertiary volcanics and volcaniclastics overly Palaeozoic sediments to the east and south of the Property.

### 7.2.1 Stratigraphy

The stratigraphy of the area was first developed by (Hague, 1892). Walcott (1888 in Hague 1892) characterised many of the fossil assemblages that assisted in the dating of the respective

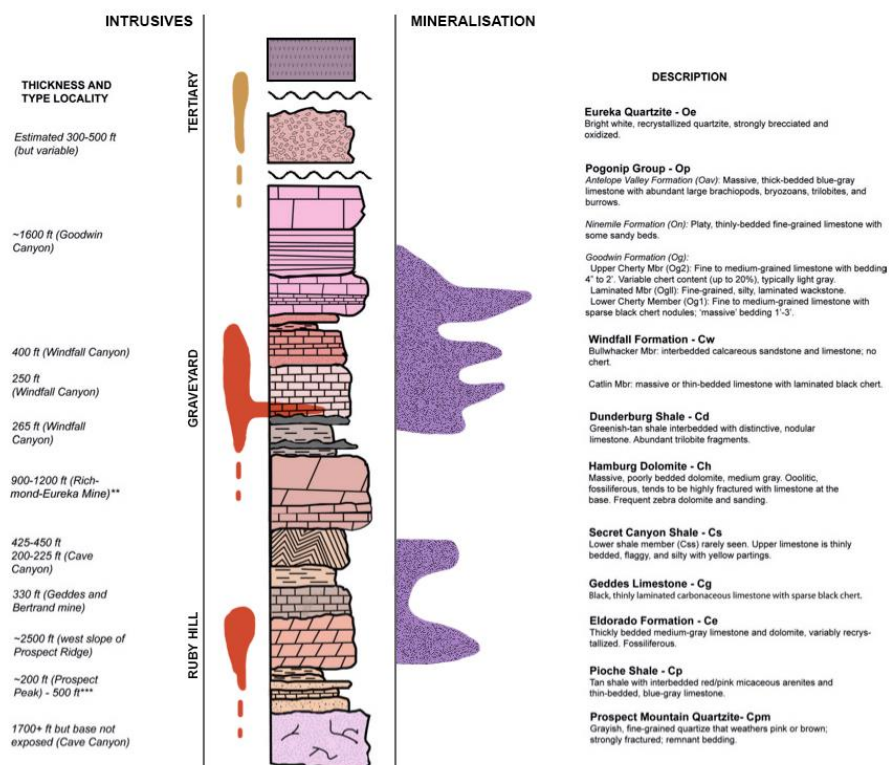


Figure 19 Stratigraphic column of Cambrian-Ordovician rocks in the Eureka District (modified from Hoge et al., 2015)

formations. Wheeler and Lemon (1939), mapped the area and commented on Hague and Walcotts stratigraphy and it was definitively updated by Nolan et al., (1956). The following descriptions have been summarised from Nolan et al., (1956). All contacts are conformable unless otherwise stated.



**Prospect Mountain Quartzite** Outcrops along the west side of Prospect Ridge. The unit is thrust faulted, and the base is not exposed. It has an estimated thickness of +519 m (+1700 ft) and consists of a grey medium grained quartzite that weathers pink to brown, with occasional thin interbeds of conglomerate and micaceous shale. It is not fossiliferous and has been dated as lower Cambrian from its location conformably beneath the Pioche Shale. There is one known mineral occurrence within this unit, but it is of unknown affinity.

**Pioche Shale** Outcrops on Prospect Ridge. A greenish sandy micaceous shale with fossiliferous calcareous and limestone interbeds. True thickness is unknown as the unit is frequently sheared, but estimates range from 18.3-152.4m (60-500 ft). Fossil fauna suggests a lower Cambrian age.

**Eldorado Dolomite** Outcrops on Prospect Ridge, a thick massively bedded unit of dolomite and limestones. The unit is heavily faulted and sheared being shattered and recrystallised to dolomite, calcite and marble. The dolomite is believed to be sedimentary for the most part but in places hydrothermal dolomitisation also occurs. Estimated thickness is 609.6 – 762 m (2000-2500 ft), but thinning or stacking by thrusting makes true estimations difficult. It is not fossiliferous but has been dated at early-middle Cambrian by assemblages above and below. It is an important host to CRD mineralisation with the historic Ruby Hill mine being hosted in it.

**Geddes Limestone** Outcrops from Secret Canyon to the Diamond Tunnel. Dark blue-black well bedded carbonaceous limestone separated by thin shaley partings with occasional chert nodules. Several outcrops appear to interfinger with the underlying Eldorado Dolomite, but contacts are generally sharp. The unit is often tightly folded and folded and is estimated to be 100.6m (330 ft) thick, though it does appear to be variable in width. It is fossiliferous with trilobite fauna giving a middle Cambrian age.

#### **Secret Canyon Shale**

**Lower Shale Member** Outcrops in Cave Canyon on the west side of Prospect Ridge. Dark green to grey massive siltstone when fresh, weathers to a brown or yellow crumbly shale. It interfingers with the Clark Springs member above but the lower contact is sharp. It is estimated to be 61-68.6m (200-225ft) thick.

**Clark Springs Member** Outcrops in Clark Springs. Thin bedded limestone with prominent yellow or red argillaceous partings. Limestone beds are < 5.1cm (2 ") thick and are a silty blue-grey in colour. Lower and upper contacts are gradational. Overall thickness is estimated to be 121.9-129.5m (400-425 ft) The unit is fossiliferous and contains trilobites of middle Cambrian age.

**Hamburg Dolomite** Outcrops in Goodwin, New York and Windfall Canyons. Massive light-medium grey bedded limestones and dolomites very similar to the Eldorado Dolomite. Intensively fractured faulted and altered. Red-brown iron stained and siliceous particularly at the upper contact with dolomitic sanding common at the lower contact. Thickness of the unit has been estimated to be approximately 304.8 m (1000 ft). The unit is fossiliferous with fauna from the middle to upper Cambrian. An important host unit for mineralisation of both Carlin and CRD types, particularly on the upper contact with the Dunderberg Shale. Low grade Carlin type mineralisation at 180's Mineral Point and Timberline's Lookout Mountain, respectively to the north and south of the Property, are found within the top of the Hamburg Dolomite.

**Dunderberg Shale** Outcrops parallel to the Hamburg from the Shadow to Secret Canyons. Shale is dark grey and compact when fresh, but weathers to fine brown flakes. It is interbedded with thin

(<6") beds of distinctive nodular limestone very rich in trilobite fragments. The contact with the Hamburg Dolomite is sharp but generally sheared. The upper contact with the Windfall Formation is sharp and unfaulted. Thickness is estimated at approximately 304.8m (1000ft). The limestone beds are highly fossiliferous and are assigned to late Cambrian in age. This unit is mineralised on Timberline's Lookout Mountain property to the south in deep drilling beneath Tertiary volcanics in the form of a silicified breccia.

### **Windfall Formation**

**Catlin Member** Outcrops near the Catlin shaft, Croesus mine. More massive limestone beds, interbedded with thin sandy or silty limestone beds. Chert is abundant in the lower part of the unit and may form a stratigraphic marker. Thickness is estimated at 76.2m (250ft).

**Bullwhacker Member** Outcrops near the Bullwhacker mine. Thin bedded tan coloured sandy or shaley limestone with occasional more massive limestone beds. Platy limestone beds are <1" usually. It appears conformable at both contacts and is approximately 121.9m (400 ft) thick. It is fossiliferous and marks the Cambrian Ordovician boundary. An important host for Carlin type mineralisation in I80's Ruby Deeps zone and CRD mineralisation at East Hilltop.

### **Pogonip Group**

**Goodwin Limestone** Uncertain formation with the lithological boundary not coinciding with the faunal boundary, as Ordovician fauna are continuous into Bullwhacker type rocks. Some workers have divided it into three members, but here we will stick to Hague's original classification. The type area is in the Antelope Valley area, in the Property area it outcrops from the Bullwhacker mine through to the Secret Canyon area. It is a well bedded fairly massive limestone unit, light grey-blue grey in colour with occasional platy limestone beds. The lower part is more cherty though cherty beds are noted throughout the unit. Thickness is estimated to be 335.3-502.9m (1100-1650 ft) depending on which boundary you take (faunal or lithological). The Fauna of brachiopods and trilobites is early to middle Ordovician. The limestone is hydrothermally dolomitised in areas and is an important host to mineralisation in the Upper Hilltop CRD discovery, Archimedes East and West at I80.

**Ninemile Formation** Type area is in Antelope Valley and at Eureka it outcrops from Goodwin to Windfall Canyons. The unit consists of a platy to thinly bedded fine grained medium grey limestone with an olive-green colouring on fresh fractures, with occasional arenaceous limestone interbeds. The contacts are gradational above and below and the thickness varies between 61-164.6m (200-540 ft). There are abundant fossils which date to middle Ordovician age.

**Antelope Valley Limestone** Named after its type area the unit outcrops in the same areas as the remainder of the Pogonip group. Thick bedded to massive fine grained bluish grey limestone which can be more thinly bedded at the base, gradational with the Ninemile formation below. Thickness is variable which is due to the upper contact being an erosional unconformity and varies between absent to 350.52m (1150 ft). The unit is fossiliferous with numerous often silicified shell fauna including gastropods, brachiopods, ostracods and bryozoa. Hague notes some jasperoid development and hydrothermal dolomitisation though no significant deposits in the area are yet associated.

**Eureka Quartzite** Outcrops near Eureka, but type section is now near Lone Mountain. White fine-grained quartzite with rounded grains and a quartz cement. Some cross-bedding in the base of the

unit but mostly massive. Thickness is 91.4 – 152.4 m (300-500 ft) and both contacts are unconformities.

In the immediate Property area, the Eureka Quartzite is the youngest exposed sedimentary rock, though to the east and south younger rocks of Carboniferous and Permian age are exposed east of the Hoosac fault. The Early Cretaceous Newark Canyon formation outcrops to the east of the property on the margins of the Hoosac fault and ends sedimentation in the district apart from largely unconsolidated Quaternary debris flows and alluvium which fills the valley floors.

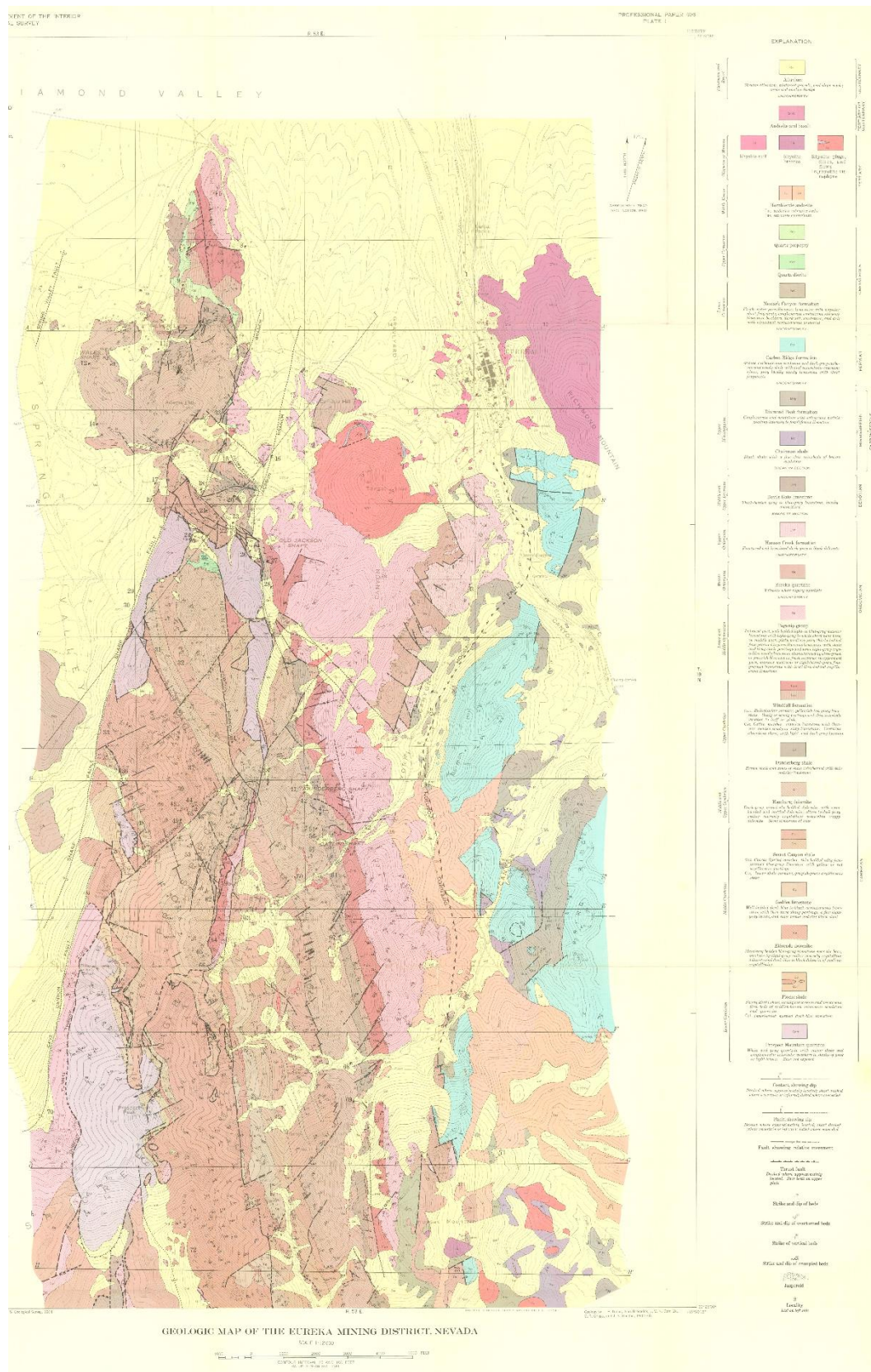
## **Igneous Rocks**

While there are no known intrusives within the Property boundary, earliest igneous activity in the area is largely calc-alkaline plutonic activity of Jurassic and Cretaceous age. The nearest Jurassic aged intrusive is 12km to the north. The closest known intrusives have been dated to mid Cretaceous age at around 106 Ma, with several intrusive bodies occurring just to the north of the Property. The Mineral Hill stock is a quartz diorite to granodiorite body west of the Archimedes pit. Contact metasomatic effects extend for up to 800m away from the intrusive (Nolan et al., 1956) and magnetite diopside skarn mineralisation is developed in close proximity to the intrusive but is not mineralised. In the Archimedes pit, the Graveyard flat stock sits marginal to and below the Carlin type Archimedes mineralisation (Hoge et al., 2015) and is called a porphyritic andesite by Hastings, (2008). Immediately adjacent to the stock the Blackjack porphyry related zinc lead gold silver skarn mineralisation occurs. A quartz porphyry of the same age, known as the Bullwhacker sill, is assumed to merge with the Graveyard intrusive at depth. Hastings (2008) notes that its composition in less altered samples is more andesitic. It is intensely internally altered and is associated with Carlin type mineralisation and is itself mineralised in the Ruby Deeps/426 zone of I80's Ruby Hills project. Some hornfelsed rock has been noted in underground workings in the Wabash area of the Property suggesting proximity to an intrusive. Vikre (1998) also noted skarn type rocks in dumps from the Wabash Tunnel, Silver Connor/Prospect Mountain Tunnel, Ruby Hill Tunnel, Eureka Tunnel and from the Diamond Tunnel indicate the intrusives are likely to continue southward beneath the northern part of the Property.

A later series of Cretaceous granite dykes and associated hornfelsing has been intersected in drilling at Lookout Mountain to the south with an age of 86.1 Ma (Long et al., 2014) probably belonging to the 2 mica granites that roughly follow the roots of the Antler Orogeny. These intrusions tend to form fluorine rich skarns and greisen type mineralisation and often have minor lead and zinc veins and replacements associated when intruding into carbonate rocks (Barton and Trim, 1991).

Tertiary rhyolite dykes often occupy faults of similar age within the eastern boundary of the Property and are assumed to be feeder zones to the Eocene volcanics noted in the area. The volcanics which don't outcrop on the Property include rhyolite flow domes, rhyodacites and andesites have been dated from 33-37 Ma by various authors (Hoge et al., 2015), with more modern dates being 36-37 Ma. This is firmly within the main Eocene volcanic event found throughout the area as the volcanic activity swept SW through Nevada during slab rollback (See Figure 17). Nolan (1962) notes an earlier age for some of the andesites than rhyolites based on field relationships with the andesitic intrusive being exposed and weathered before being covered by rhyolites. The extensive tertiary volcanism seems to use the Hoosac fault to the east of the Property as an eruptive conduit, suggesting it was active and quite deep seated at the time of eruption. The latest volcanics in the area lie just to the east of the town of Eureka and consist of basalts and andesites that intrude into and overly the Eocene rhyolite tuff sequences and are likely Miocene to Pleistocene in age.





### 7.2.2 Structure

The Eureka area has a complicated tectonic history defined in broad strokes by a major shortening event; the Jurassic/Cretaceous Central Nevada Thrust Belt, to the east and a prolonged period of extension in the Tertiary/Quaternary. The Central Nevada Thrust belt has left the largest trace in the stratigraphy of the area, but is heavily disrupted by large throw late extensional faulting.

Hague, (1892) made the first structural interpretation, dividing the district up into structural blocks largely based on structurally bounded anticlines, with the Prospect Mountain Property being interpreted as one of these blocks. Nolan's (1962) detailed mapping work forms the basis of our current understanding on the geology and structure of the Eureka region. He reinterpreted the structure of the area after completing detailed stratigraphic work (Nolan et al., 1956). His model of the Property area, rather than being a simple fault bounded anticline, is a series of thrust sequences, dismembering a remnant (possibly contemporaneous) fold system. The thrust sequences are themselves folded and are disrupted by major vertical normal faults, the Hoosac fault to the east and the Cave Canyon/Sharp normal faults to the west. (Long et al., 2014) and (Hoge et al., 2015) did detailed mapping to the south and north of the Property area respectively, providing detailed information of the relative timings of the structures in relation to mineralisation (Hoge et al., 2015) and updating the fold/thrust model to structural fold culmination in a Nappe type setting (Long et al., 2014). The Eureka culmination of Long et al. (2014) is equivalent to Nolan's (1962) Prospect Mountain Fault Block and is a north trending anticlinal crest/nappe that extends for more than 100km on which the Prospect Mountain Property is centred. It formed a pre-extensional regional structural high with an amplitude of 4.3-5km (2.67-3.1 m). Approximately 7-8 km of extension is interpreted to have occurred subsequently (Long et al., 2014).

#### 7.2.2.1 *Contractional Deformation*

Long et al., (2014) redefined the contractional deformation into two main east verging thrust zones with three north trending folds, one axis to the west of the Dugout Tunnel Fault and two to the east of the Hoosac Fault system.

There is some debate in the literature about the age of thrusting, but most authors agree it occurred between the Pennsylvanian and the Late Cretaceous (Nolan, 1962), (Long et al., 2014) and is part of the Central Nevada Thrust Belt (CNTB), that along with the Western Utah Thrust Belt, are regarded as contemporary interior components of the Sevier thrust system which moved upper plate basic rocks some ~220 km east during the Cretaceous Sevier orogeny (Long, 2015). The influence of the earlier Roberts Mountain Thrust, which terminates a few kilometres to the west is considered minor.

The Prospect Mountain Thrust Zone consists of three thrusts mapped by Nolan (1962). The lowest in the stratigraphy is the Diamond Tunnel Thrust which consists of up to three minor thrusts which transgress and thin Cambrian and Ordovician stratigraphy and dips to the west at moderate to steep angles and probably join at depth. Strong local folding is associated with thrust development when viewed in the Diamond Tunnel. It appears to be an important control on mineralisation on the Property, with the lower limits of the Jumbo cave mineralisation terminating against the thrust plane.

The Ruby Hill or Champion Thrust (not to be confused with Ruby Hill normal fault) is a shallow dipping to flat thrust zone which brings oldest Prospect Mountain quartzite over younger Hamburg Dolomite. It is moderately dipping to the west on the western side of the Property, eroded away for much of the central portion and reappears on the downthrown side of the Jackson Lawton normal fault gently dipping to the east. At Ruby Hill mine to the north, it splits into two thrust surfaces, the lower emplaces Prospect Mountain Quartzite over Hamburg Dolomite and the upper emplacing





range of late cretaceous to early Eocene. The age to the northern sharp component is somewhat controversial as Hoge et al., (2015) put it at the youngest age range probably postdating Eocene volcanics.

To the north several important northwest striking, down to the northeast, normal faults in the Ruby Hill mine area (Ruby Hill Normal Fault, Martin Fault) offset Cretaceous intrusions and thus have an earliest date of 106 Ma, possibly also offset CRD mineralisation. The throw is estimated to be 610 m (2000 ft) down to the Northeast. The FAD deposit is interpreted to be an offset of the Ruby Hill Mine which lies in the downthrown block to the northeast. An alternative explanation is that the fault was a conduit to fluids and the FAD deposit formed at a suitable horizon at depth offset from the fault.

These faults are similar to the steeply NE dipping NW trending Banner, Diamond and Excelsior faults at Prospect Mountain which are occupied in some cases by oxidised CRD mineralisation but postdate thrusting, suggesting more than one CRD or extensional faulting event. West-northwest trending, northeast dipping normal faults (Blanchard and Molly Faults) are suspected to control Carlin style mineralisation at Mineral Point in the Archimedes deposit where they are known to cut the graveyard flats intrusion. A similar trending newly identified trending fault to the south of the Archimedes pit (the Hilltop fault) controls the recently discovered Hilltop CRD mineralisation. These faults occur between branches of the Jackson Fault system. This set of north dipping relatively minor faults, with the exception of the Ruby Hill normal fault, tend to have minor displacements appear to be very important to mineralisation.

The Jackson Lawton Bowman normal fault system trends north south on the east side of Prospect ridge and dips steeply to the east with throws varying from 122-914 m (400-3000 ft) and is spatially associated with CRD mineralisation. It abruptly drops Ordovician rocks to the level of the Cambrian Hamburg Dolomite. To the north of the Property its relationship to mineralisation, along with the Ruby Hill normal fault has seen considerable debate. Historical authors (Nolan, 1962; Curtis, 1884) believe it was critical to mineralisation but more modern interpretations (Hoge et al., 2015) have it clearly post-dating mineralisation. Nolan (1962) notes parts of the Bowman section of the fault system have quartz porphyry intruded along them in the Helen Shaft thus pre-dating presumably Cretaceous intrusions; splits of the fault system are also mined for CRD mineralisation in the Bowman mine. This directly contradicts the detailed mapping of alteration and mineralisation north of the prospect area by Hoge et al., (2015) suggesting that the Jackson Lawton system is post CRD and even post Carlin mineralisation with little alteration associated. This could be due to misidentification of the fault underground, or the fault is a longer lived network with several movements, or the Bowman is not a branch of the Jackson Lawton fault system.

### 7.3 Mineralisation and Alteration

There are three styles of mineralisation present in the district, carbonate hosted porphyry related skarn Pb, Zn, Au mineralisation associated with Cretaceous intrusions, Au, Ag, Pb, Zn carbonate replacement mineralisation (CRD) and Au only Carlin style mineralisation. The CRD mineralisation is thought to be distal mineralisation related to the Cretaceous intrusives and the Carlin style mineralisation is assumed to be related to Eocene extension and magmatism and in some places (Mineral Point notably) overprints the skarn mineralisation.

#### 7.3.1 Alteration

Alteration in the area is related to distal thermal metamorphic effects in the contact aureoles of intrusives and associated skarn development proximal to the intrusives. Sanding of dolomites, dolomitisation, silicification and more subtle effects related to Carlin and CRD deposition which have been poorly characterised to date.

#### 7.3.1.1 Skarn alteration

Within the Property boundary skarn alteration is noted in the Wabash Tunnel underground and in dumps at the mouths of the Silver Connor (Prospect Mountain), Diamond and Colorado Tunnels, which all access the Wabash area. Vikre (1998) noted that skarn mineralogy gathered from the dumps consisted of clinoenstatite, magnetite, serpentine, pyrrhotite, quartz, pyrite, and minor amounts of chalcopyrite in Hamburg Dolomite. At Ruby Hill proximal skarn development consists of a garnet (grossular, andradite), pyroxene (diopside, clinoenstatite, augite) magnetite skarn variably sulphidised with pyrrhotite and pyrite rich pods. Distally, skarnification fades into contact metamorphic marble development in dolomites which grades into unaltered limestones and dolomites. Hydrous skarn (quartz, amphibole, chlorite, pyrrhotite, pyrite, serpentine, molybdenite and muscovite) overprint the garnet pyroxene skarn and marble in veins and replacement bodies. This is a similar relationship to that noted by Hastings (2008) further north in the Archimedes pit proximal to the graveyard flat pluton.

#### 7.3.1.2 CRD/Carlin alteration

CRD and Carlin alteration are very similar in nature and according to Hoge et al. (2015) can be divided into four main types in the Eureka area, though the actual relation to ore is not straightforward.

**Silicification** – Usually in the form of jasperoid development, it can be haematitic rich or poor and various in form from full replacement, to vein style in dolomites and limestones. Brecciation is associated with the haematitic rich zones. This is more common to the north of the Property but is noted in drill core.

**Decalcification** (Sanding) – mostly associated with more Carlin type targets at Windfall, Paroni and Rustler pits along the Dunderberg Shale Hamburg Dolomite contact and is also noted in the Archimedes deposit.

**Carbonate alteration** – Associated with hydrothermal dolomitisation and breccia infill, is associated with faults and the replacement deposits.

**Bleaching** – noted in proximity to faults, the grey colour of the dolomites and limestones are bleached white – not necessarily related to fluid flow.

Generally speaking contact with ore is abrupt in carbonate replacement deposits and the types of alteration mentioned above don't halo deposits but are more likely to represent areas of fluid flow in faults, which may help to vector to productive parts of the system.

Inspection of underground workings and limited drill core from the Diamond Tunnel area on the Property shows the development of haematitic coatings along fractures and narrow veinlets was the most common indication in the lead up to open stope areas. In other cases fractured dolomites abruptly gave way to oxide mineralisation with no indications in the surrounding rock (See Figure 22).

#### 7.3.2 Mineralisation

Known mineralisation on the Property is confined so far to CRD type deposits. Porphyry related skarns and Carlin type mineralisation occur in near proximity but won't be discussed in detail here.

The CRD deposits on the Property belong to historically the second largest production centre in the district after the historic Ruby Hill Mine the historic Diamond Excelsior Mine.

Mineralisation was historically produced from underground development covering a large portion of Prospect Ridge.

The CRD deposits in Eureka are anomalous in several ways, including: depth of oxidation, high gold tenor and As, Sb, Hg signature.

### **Oxide Mineralisation**

The depth of oxidation extends at Prospect Ridge to at least 610m below the top of the ridge line (2000 ft) to the bottom of shaft 4, the deepest workings on the Property, which equates to an elevation of ~2012 m (6600') amsl. The water table has not yet been reached. A water bore near the Diamond Tunnel entrance encountered groundwater at 1982m (6504') amsl. Oxidation in most cases corresponds to the water table but there are several instances in the district where this is not the case.

No primary mineralisation has thus been observed on the Property to date except for isolated veins and remnant small pods of sulphide. The historical mined ore consists of a reddish, poorly consolidated, fine-grained mass of material, which is found often in open space fissures and caves within the dolomite or as discontinuous pods and chimneys that can extend over a considerable length. The caves and fissures are believed to have formed post ore formation as part of the weathering process. Sulphidic material in contact with circulating meteoric waters oxidised and produced acid which contributed to cave formation. Ore in larger caves was often found beneath a collapse breccia and unconsolidated cross bedded fines. The ore in the bottom of these cave systems is thus most likely to be considerably upgraded during the weathering process with the removal of the gangue material.

Lead minerals present in the ores are mainly plumbojarosite and cerussite, zinc was expected to be mostly removed during weathering but in limited sampling of dump material and stopes, appears to be roughly equal to lead in the Prospect Mountain ores. This is interesting as at Ruby Hill, the zinc is largely removed from the oxide ore zones. Zinc is generally in the form of hemimorphite, smithsonite and hydrozincite. Iron from weathering of pyrite and arsenopyrite is largely in the form of haematite and various hydrous iron species and has coloured fracture surfaces around the mineralisation, sometimes over a distance of 10's of metres. Gold appears to be generally associated with the haematite mass and is free leaching. Unusual sulphates of antimony and arsenic have also been noted such as bindheimite and beudantite according to Nolan (1962).

Historical production records from the district indicates a variety of grades of oxide ore between mines and does not include zinc. An average of 41 shipments from the Silver Connor Mine on the Property to the Richmond smelter from 1876-1883 yielded grades of 2.95 oz/t Au, 20.04 oz/t Ag and 0.12% Pb, while a single shipment from the 4<sup>th</sup> of July mine on the southern end of the workings in the same period yielded 0.45 oz/t Au, 21.6 oz/t Ag and 8% Pb. More recent production from the DMEA stope in the Dead Broke area of the Diamond Mine from 1954-56 averaged 0.751 oz/t Au, 39.7 oz/t Ag and 28% Pb (Nolan, 1962).

A total of 108 samples taken from several rounds on the surface of the Diamond waste dump at the mouth of the Diamond Tunnel average to 0.88 g/t Au, 46 g/t Ag, 854 ppm As, 830 ppm Sb, 0.039%



Cu, 0.47% Pb, 0.47% Zn. This waste ore is mostly from underground development and gives a better indication of the makeup of the oxide ores.



*Figure 22 Oxide ore in drill core to the west of Shaft 2 in hole WG02. Core blocks are in feet. The drillhole passes through dolomite with iron oxides on fracture surfaces peripheral to the oxide ore (yellow ore in the old mining terminology). A cemented breccia consisting of clasts of ferruginous and silicified material is intersected in the hanging wall and may be a collapse or fault breccia, dense powdery oxide ore, an unmineralized section of marble and continues through to collapse breccia.*

### **Sulphide Mineralisation**

Vikre (1998), has done some work on the sulphide ores searched out from dumps on the Property (see Figure 23), though samples are necessarily sparse. Most of the information on the sulphide ores is from analogy to the sulphide ores from the FAD property and from more recent discoveries at Hilltop near the Archimedes pit. He notes “Sulphide ores are made up of subequal amounts of pyrite, sphalerite, and galena, with subordinate amounts of hydrothermal dolomite, calcite, arsenopyrite, tennantite, pyrrhotite, quartz, and chalcopyrite”. The amount of Sb present in the dump samples suggests stibnite should also be an accessory sulphide component. Vikre (1998) notes stibnite in vein type deposits but not in replacement deposits in the area. Sulphides are generally coarse grained, particularly in close relation to the intrusions.



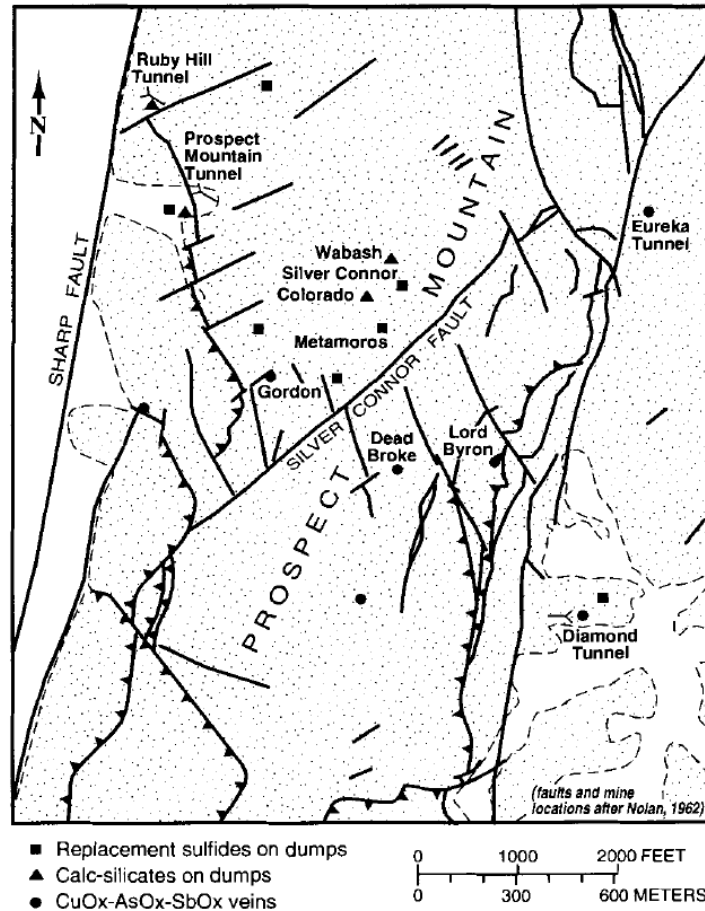


Figure 23 Location of samples taken from the Prospect Mountain Property area by Vikre (1998)

Vikre (1998) also takes a stab at sulphide paragenesis and notes that pyrite with arsenopyrite intergrowths is likely formed first and is replaced and intergrown with sphalerite and enclosed by galena. Pyrite contains inclusions of sphalerite, chalcopyrite and pyrrhotite and sphalerite crystals contain inclusions of chalcopyrite, pyrite and tennantite. Tennantite also occurs in fractures in sulphide grains. This concurs with a description from a Hecla 1966 internal report on the FAD deposit which states... *“All pyrite is of the same age. Wall rock pyrite frequently appears in the form of lath-like aggregates. Pyrite in mineralised shoots also frequently appears in the form of laths identical to those in wall rock. Sphalerite formed by replacing dolomite, thereby filling in spaces between pyrite crystal, masses and laths. Sphalerite also replaces pyrite and in process incorporated a considerable amount of iron into the sphalerite lattice. Evidence indicates that at least some chalcopyrite was introduced by hydrothermal solution. This occurred approximately contemporaneous to arsenopyrite mineralisation. Galena was introduced somewhat later. Silver is contained in solid solution with galena, but silver continued to be added as argentite veinlets after galena deposition had ceased...”* (Samari and Breckenridge, 2022).

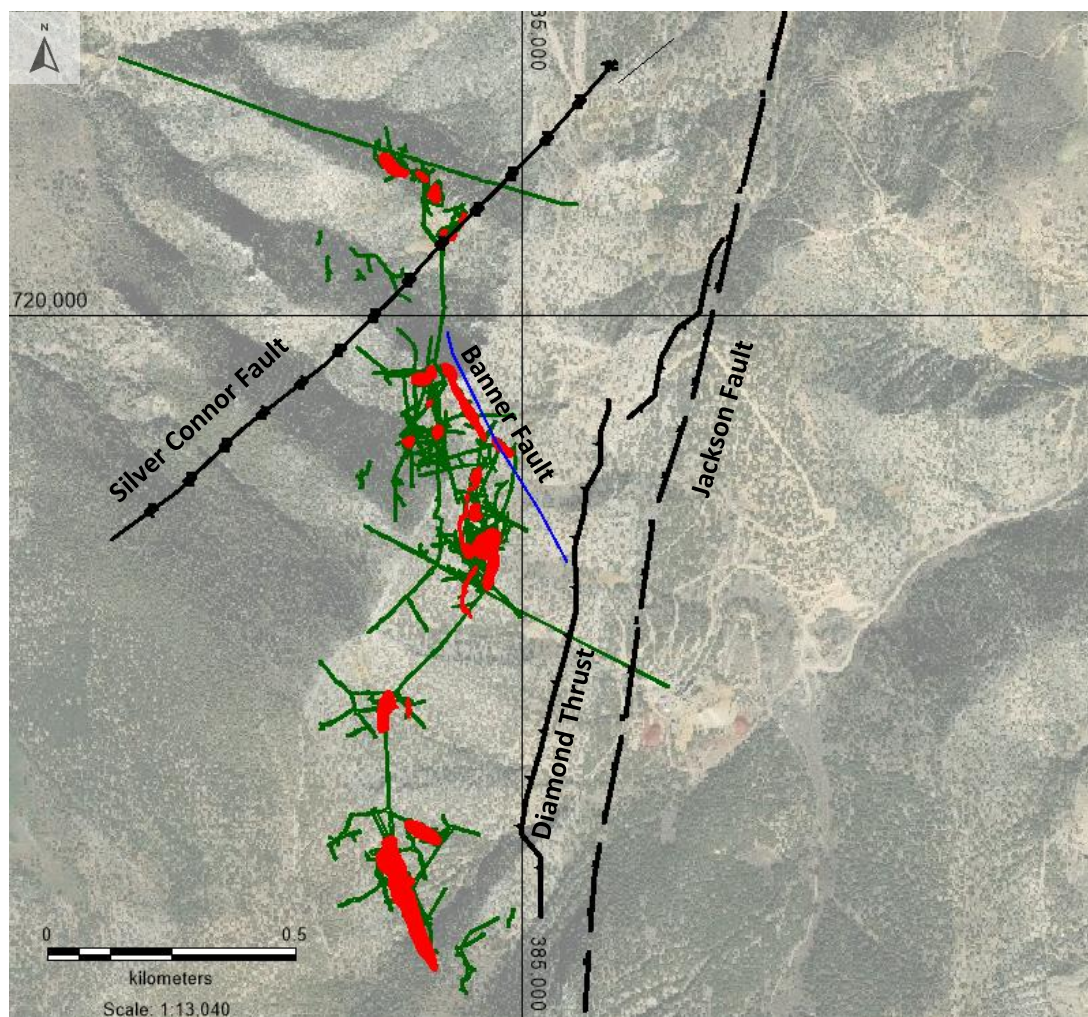


Figure 24 Map of historical workings (green) and old stopes (red) projected to surface showing critical faults. (NPR, 2023)

#### 7.3.2.1 Gold and silver deportment

Little work has been done in this area. (Hastings, 2008; Vikre, 1998) have noted that pyrite and arsenopyrite seem to be the main source of gold and (Curtis, 1884) notes the high silver content of lead ores. Vikre (1998) did an analysis of various optically homogenous sulphide grains from samples gathered throughout the area and noted that gold and silver occurred in all sulphide grains but was highest in pyrite in this small number of samples. Gold silver and base metal values in pyrite from replacement deposits was an order of magnitude greater than pyrites from skarn and disseminated style gold deposits.

#### 7.3.2.2 Controls on Mineralisation

The controls on mineralisation are somewhat enigmatic but there is a strong structural control with faults being integral to the localising of Carlin and CRD deposits in the area (Nolan, 1962), both through ground preparation (fracturing and porosity development through decalcification) and through providing deep rooted channels for fluid flow. There is some debate about which faults are important in the district with early authors considering the Jackson Lawton normal fault which traversed the east side of the Property as being crucial to mineralisation, even though it postdates

the Cretaceous intrusives. More detailed recent work (Long et al., 2014; Hoge et al., 2015) has classed the fault as younger than thought and possibly postdating tertiary volcanics. This contravenes some of the field evidence observed by earlier workers in the Ruby Hill area, where branches of the fault are mineralised (Nolan, 1962). Part of this confusion may be that the faults are very long lived, or that branches of the system, such as the Bowman fault, may in fact be a different age and are not part of the same system and have been re-activated during movement on the Jackson Fault. Its widely varying throw might support this idea. Relatively minor WNW-NW trending faults that dip generally northwards, are thought to be very important to mineralisation. These faults are represented on the Property by the Banner, Diamond and Excelsior faults. The Silver Connor Fault appears locally important and may influence the NW structures, particularly if its sense of movement was strike/slip rather than normal (see Figure 20).

#### *7.3.2.3 Age of Mineralisation*

There is no definitive dating of the Eureka CRD mineralisation. Based on spatial relationships it has been placed as contemporaneous with the Ruby Hill and Graveyard intrusives and proposed as distal mineralisation to the intrusives (Hastings, 2008; Vikre, 1998; Nolan, 1962). However there is some evidence that mineralised faults cut the intrusion at Ruby Hill, (Nolan, 1962) in a similar fashion to faults of similar orientation at Archimedes, suggesting that the situation may be more complicated, with either longer lived post intrusive mineral systems or more than one generation of mineralisation. Certainly, the relationship with the more Carlin like systems at Windfall and Archimedes is uncertain. Overprinting relationships with the Blackjack skarn mineralisation has been noted at Archimedes by (Hastings, 2008) but the idea that the anomalously high gold in the CRD systems is the result of an overprint by Carlin systems does not sit well with the pyrite data in Vikre (1998). CRD pyrite contains an order of magnitude more gold than either skarn or Carlin type pyrite.

## 8 Deposit Types

The base metal deposits of the Eureka area are poorly studied with little discussion in the literature. The salient features of the deposits can be summarised as:

1. Hosted almost exclusively in platform carbonates dolomites and limestones
2. Strong structural control by normal and thrust faults
3. A spatial association with Cretaceous and Tertiary intrusions
4. Sulphide assemblage is pyrite, sphalerite, galena with subsidiary amounts of arsenopyrite tennantite, pyrrhotite, chalcopyrite, stibnite and argentite (usually in solid solution with galena)
5. An elemental association of Au, Ag, Pb, Zn, Cu, As, Sb, Hg, Bi  $\pm$  Mo, Sn
6. Alteration consists of minor silicification, decalcification, dolomitisation

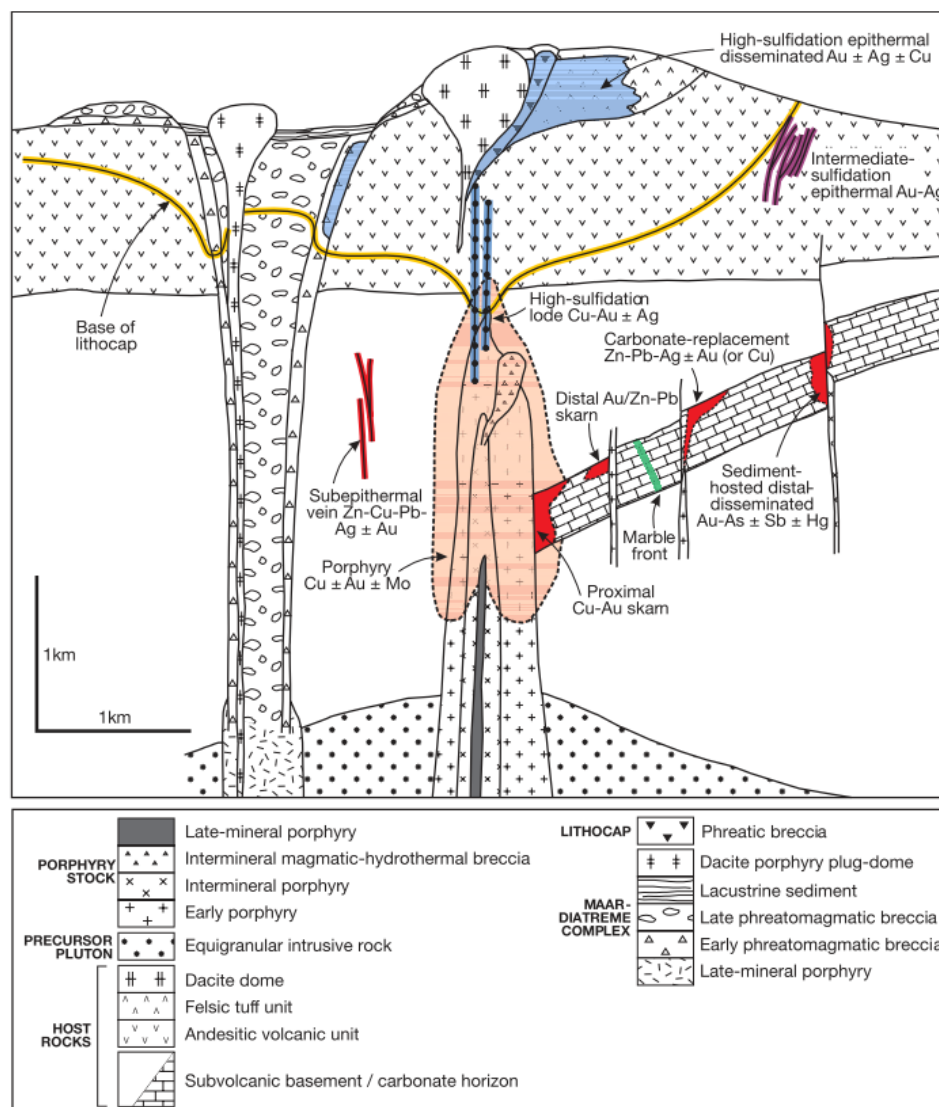


Figure 25 Schematic model of porphyry and porphyry related mineralisation (Sillitoe, 2010)



While the environment of deposition fits the broad Carbonate Hosted Model, in turn a subset of the Sediment Hosted spectrum of deposits; the presence of Hg, Sn, Sb in the ores of the Eureka area suggests a magmatic input to the ore forming fluids, putting the deposit style firmly in the polymetallic replacement style of deposit (Cox and Singer, 1987). In fact they list Eureka as one of the type areas for this type of deposit. The generalised term carbonate replacement deposit is used here, though this category can also include skarn deposits and a better term is Non-Skarn Intrusive Related Carbonate Replacement Deposit. According to (Sillitoe, 2010) the polymetallic replacement style of deposit forms distally to porphyry systems outside of the marble front developed by the contact metamorphic aureole and inboard of sediment hosted gold environments (see Figure 25). The type area for this zoning is the giant Bingham Canyon deposit in neighbouring Utah.

Similar deposits are noted in the East Tintic area of Utah, the Manto deposits of Mexico (Sillitoe, 2010) (Cox and Singer, 1987), and the polymetallic vein and replacement deposits of the Serbo-Macedonian metallogenic deposits in Europe (Siron et al., 2019).

These deposits are characteristically zoned from a more Cu and silica rich core proximal to the magmatic fluids, Pb/Zn ratios and Ag/Au ratios decrease radially and in the more distal zones revert to Mn Zn zones in the margin. While some zoning is evident in the district (Nolan, 1962; Vikre, 1998) the picture is not clear; Prospect Mountain being the main known area of Cu anomalism but is also furthest away from the surface expressions of the intrusion.

The nearest Carlin style mineralisation occurs 800 m east of the Property boundary and while there is potential for this style of mineralisation on the Property, none has been noted to date and this and skarn style deposit types will not be summarised here.

The QPs are of the opinion that the local structural setting, host rocks and mineralisation style of the known occurrences on the Property are of the CRD type and that the understanding of the deposit model concepts, and geological features of the Prospect Mountain Property are sufficiently advanced to support exploration activities.



The Company has entered into an agreement with the current owners of the Prospect Mountain Property, and has not conducted any exploration work on the Property.

## 9.1 Surface Geochemistry – Homestake Mining

The main body of surface geochemical data that is available comes from the period that the Property was under option to Homestake Mining Company (2001 – 2003). The data exists in a spreadsheet format, with coordinates, and only a very basic description of the source material (e.g. Rock chip, Float, Dump etc), and assay values for Au, Ag, As, Sb, Hg, Cu, Pb, and Zn. For the purpose of this report, this database has been cut to only those samples (n = 1184) that fall within the Property polygon as shown in Figure 26 and tabulated in Table 7.

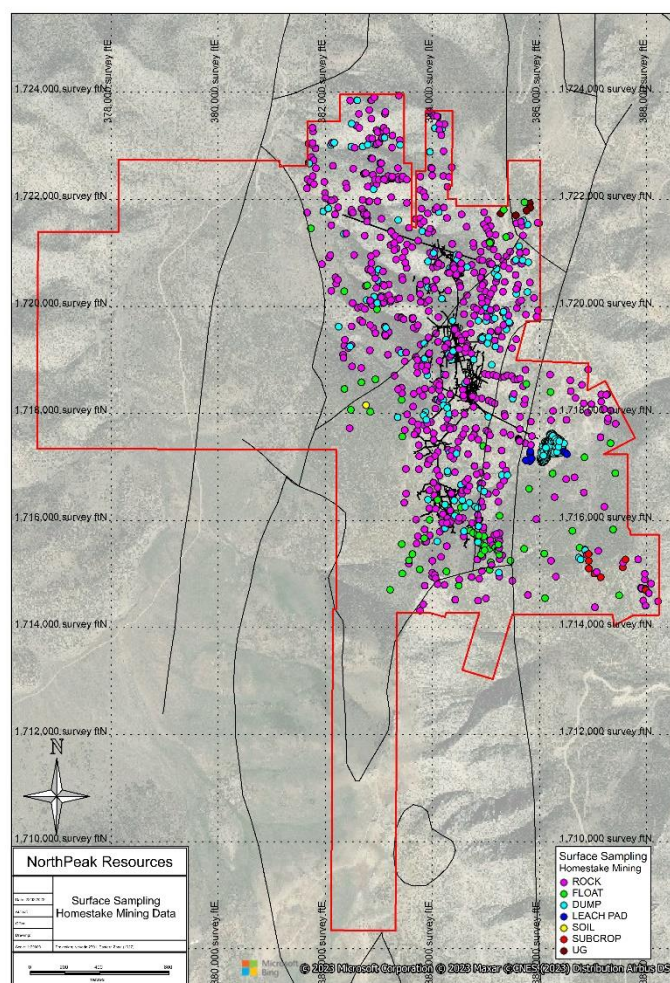


Figure 26 Distribution and type of surface samples from the Homestake Mining data (NPR, 2023)

SAMPLE TYPE	ROCK	FLOAT	DUMP	LEACH PAD	SOIL	SUBCROP	UG
Number of Samples	774	84	298	10	2	8	8

*Table 7 Homestake Mining surface samples*

No original (i.e. hardcopy) source data is available to verify the accuracy of the data in the spreadsheet. No information is available on the methodologies employed for sample collection, sample preparation, assay methods or whether there were any QA/QC procedures.

#### 9.1.1 Rock Samples

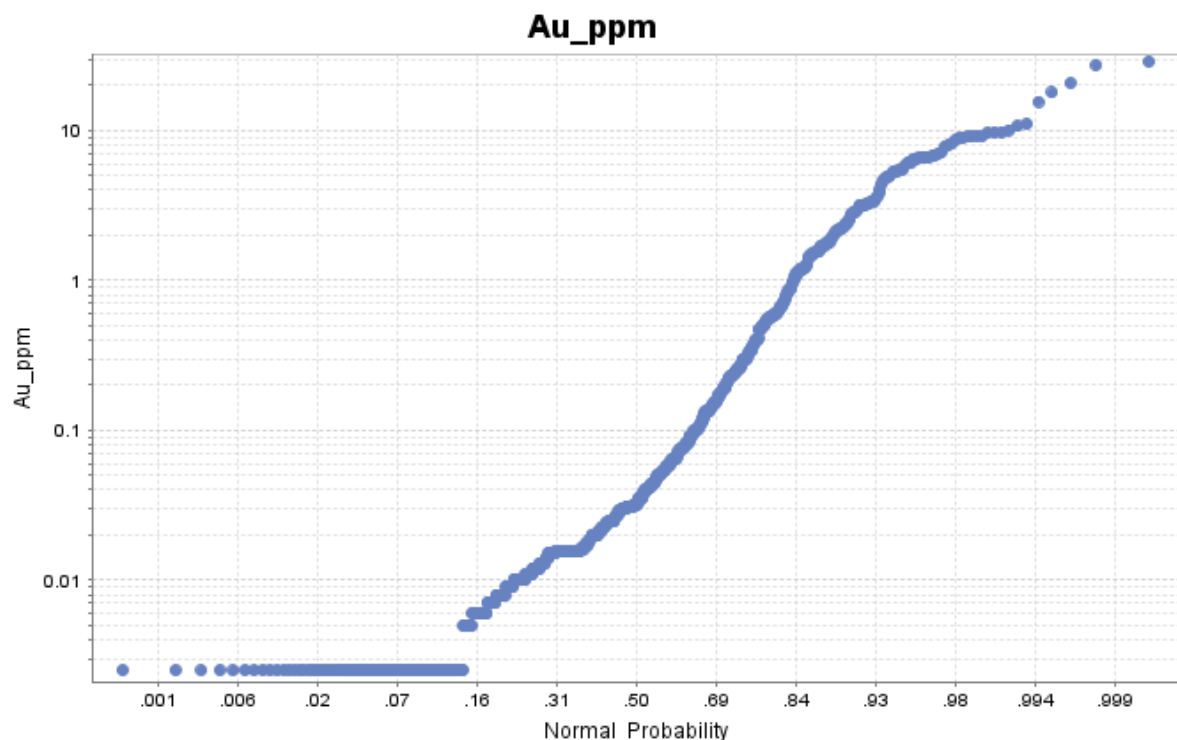
The 774 rock samples are taken from in situ locations and are fairly well distributed across the Property. Table 8 shows the basic summary statistics for the analysed elements. It is apparent that a considerable proportion of the dataset contain some high metal values for the “economic” elements like Au, Ag, Pb and Zn.

	Au_ppm	Ag_ppm	As_ppm	Sb_ppm	Hg_ppm	Cu_ppm	Pb_ppm	Zn_ppm
Count Numeric	774	774	774	774	774	774	774	774
Count Zero	0	0	0	0	0	7	0	0
Minimum	0.0025	0.05	0.5	1	0.002	0	1	0.005
Maximum	28.82	4461.1	90900	443900	343.6	113700	102000	115000
Mean	0.828596	49.39141	1376.132	3753.606	6.469351	1433.511	2050.047	1398.449
Median	0.032	3.55	38	184.5	0.5515	91.5	74.5	0.6565
Range	28.8175	4461.05	90899.5	443899	343.598	113700	101999	115000
Standard Deviation	2.486431	207.8322	6467.732	18913.61	23.78558	5496.659	7369.915	8434.722
25 percentile	0.011	1.4	6	28	0.1	12	9	0.097
80 percentile	0.571	41.8	1102	2600	5.851	1511	1280	13.02
90 percentile	2.211	110.2	2985.5	7286.5	14.55	3434	3800	374
95 percentile	5.425	199.6	5076.75	16300	24.275	6475.75	10600	7312.5
98 percentile	8.990665	490.1	9938	36500	61.2	12800	24150	17050

*Table 8 Summary statistics for surface rock samples*

Examining the distribution of gold for example (Table 8 & Figure 27), shows that 20% of all 774 samples have values greater than 0.57 g/t Au, and 5% of the samples have values greater than 5.43 g/t Au. It may be expected that these higher-grade surface samples would be located above or

proximal to the historic workings. However, the distribution of gold shows (Figure 28) the greatest cluster of high-grade anomalies (>10 g/t Au) occurs on the western flank of Prospect Ridge, and in particular, to the west of the Wabash area and south from the Silver Connor Tunnel, in an area which appears to have seen little to no exploration or development. In fact, there are very few surface expressions of high-grade gold mineralisation above the historical mine development, although mid-grade anomalies are observable along the north-south axis of the mine development, and successfully highlight the Wabash, Dead Broke-MacIntosh, Wall St and 4<sup>th</sup> of July areas of the mine. These high-grade clusters are obvious high priority exploration targets.



*Figure 27 Log-Probability plot of gold from surface rock samples*

Somewhat similar distributions can be seen with the silver (Figure 28) and antimony (Figure 29) data, which highlight the main historic mine areas, but again have significant higher-grade clusters on the western flank of Prospect Ridge.



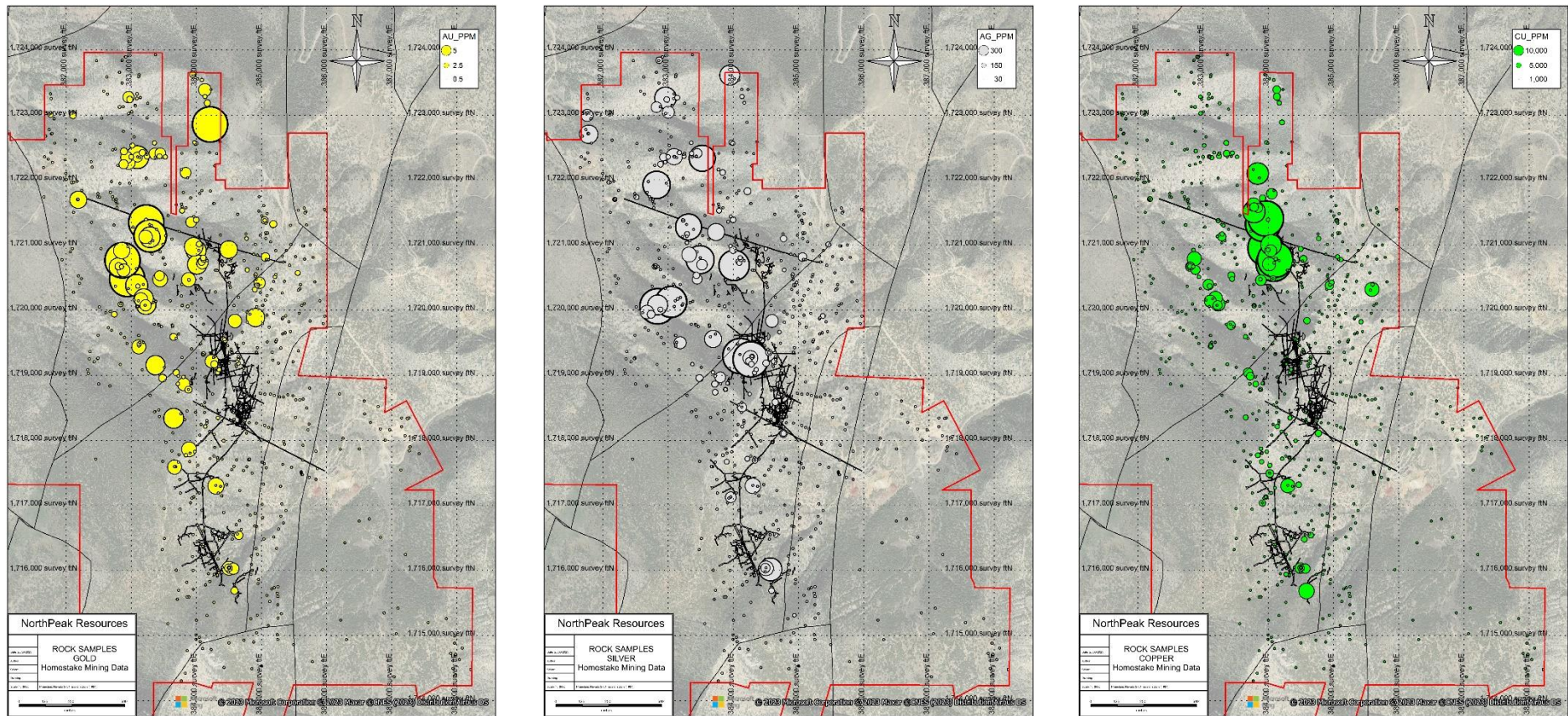


Figure 28 Surface rock samples at Prospect Mountain Property: gold, silver, copper (NPR, 2023)



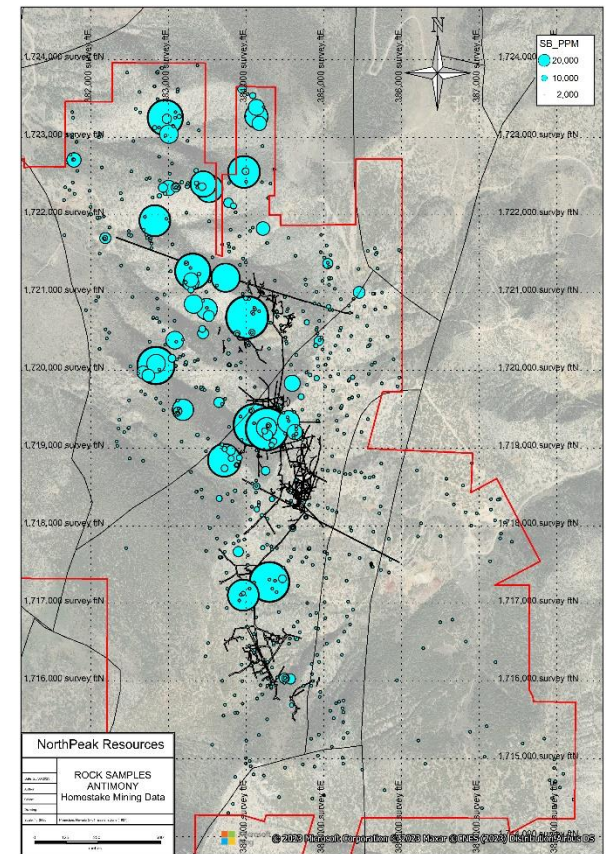
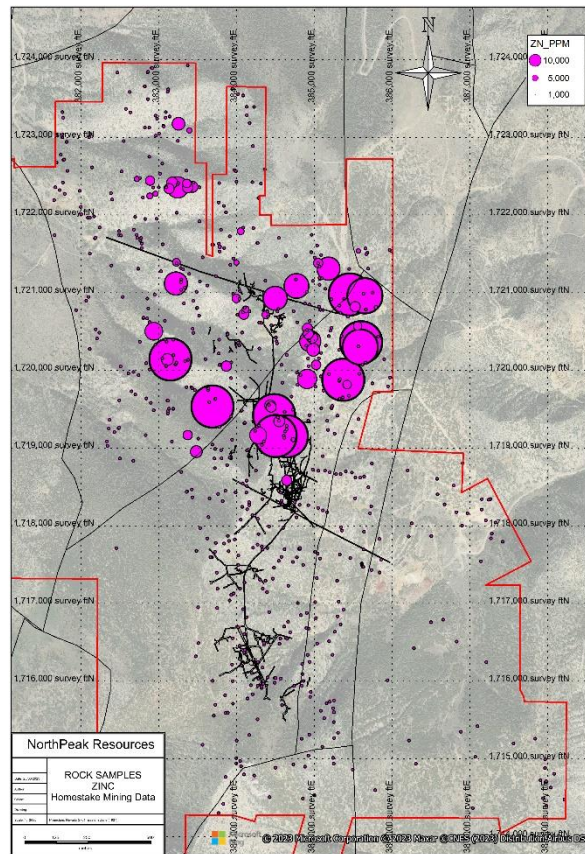
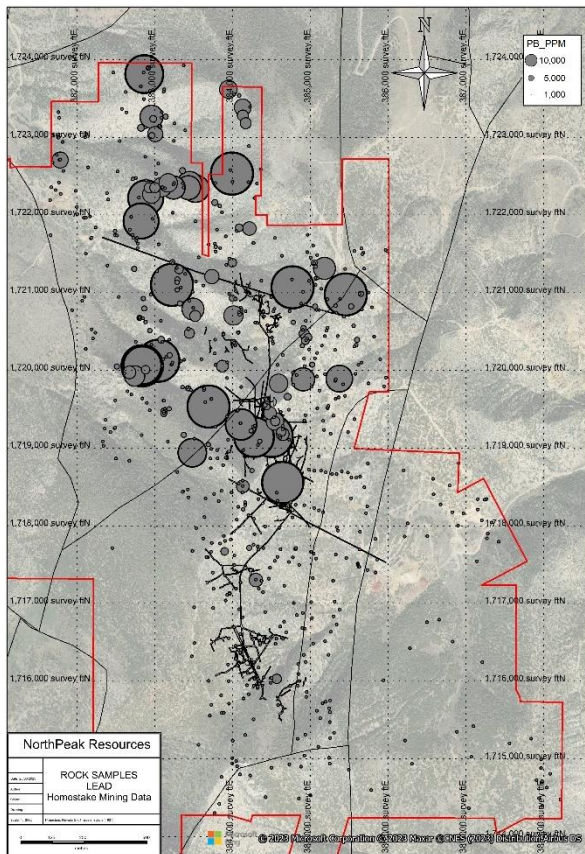


Figure 29 Surface rock samples at Prospect Mountain Property: lead, zinc, antimony (NPR, 2023)



The distribution of lead and zinc (Figure 29) show very similar patterns to each other, and a very marked concentration in the northern part of the Property, with no significant anomalies south of the Diamond Tunnel. This supports historical records of the northern areas being more Pb and Zn rich (e.g. Nolan, 1962). Surface Pb-Zn anomalies again successfully highlight the main Dead Broke-MacIntosh areas of the mine. In terms of the main higher-grade anomalies, like with the earlier mentioned elements, the western flank of Prospect Ridge is again highly anomalous. However, in addition to this western area, higher-grade Pb-Zn anomalies are also present at the eastern extent of the Silver Connor Tunnel and to the south. These eastern anomalies are also coincident with weaker gold anomalies.

As discussed in Section 0, copper anomalism is a recognised feature at Prospect Mountain. However, copper mineralisation is more subdued relative to lead and zinc mineralisation. In terms of the distribution of copper in surface rock samples (Figure 28) the more subdued expression is clear. The main cluster of anomalies is centred on the Wabash area, an area already noted for skarn alteration and contact metamorphic effects (Vikre, 1998), although weaker anomalies are again visible on the western flank, as well as in the southern areas around Wall St and 4<sup>th</sup> of July.

### 9.1.2 Dump Samples

A large number of dumps were sampled. Dumps are a common feature of the landscape at the Prospect Mountain Property, and vary in size from the Main Dump at the Diamond Tunnel portal, down to small dumps from minor adits and excavations into the mountain. The widespread distribution and mineralised nature of the sampled dumps (Table 9 and

Figure 30) supports the distribution of anomalies shown by the rock chip data.

	Au_ppm	Ag_ppm	As_ppm	Sb_ppm	Hg_ppm	Cu_ppm	Pb_ppm	Zn_ppm
Count Numeric	298	298	298	298	298	298	298	298
Count Zero	0	0	0	0	0	0	0	0
Minimum	0.0025	0.1	0.5	3	0.029	5	2.5	0.025
Maximum	77.98	298288	185000	136700	243.1	14700	132000	257000
Mean	2.632773	123*	3762.329	6025.299	9.879577	1797.779	5984.312	6675.962
Median	0.7	32.75	813	945.5	3.3175	635.5	1624.5	1510
Range	77.9775	298287.9	184999.5	136697	243.071	14695	131997.5	257000
Standard Deviation	7.707299	31584.98	16739.12	16764.08	25.25822	2508.642	14046.81	23726.02

\*There were 5 dump samples in the database with Ag values > 100,000 ppm, which heavily skew the statistics. It seems unlikely that these are real values though very high silver is known on the property. Without these values the Mean Ag value of the dump samples is 123 ppm.

*Table 9 Summary statistics for surface dump samples*

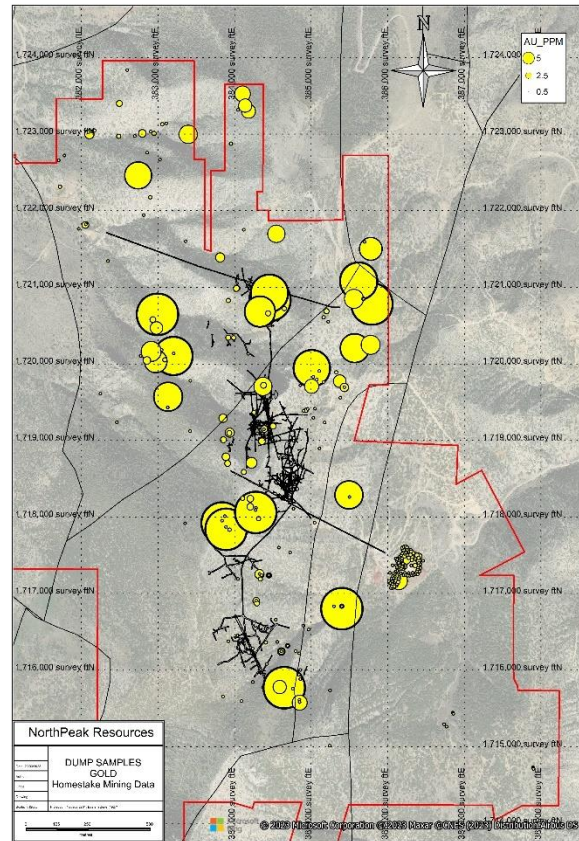


Figure 30 Gold values from grab samples at surface dumps at Prospect Mountain Property (NPR, 2023)

## 10 Drilling

The Company has not undertaken any drilling on the Property.

### 10.1 Historical Drilling

Despite the more than 150 year history of exploration and mining at Prospect Mountain Property, the project contains very limited recorded drilling. Apart from some drilling in the late 1990's and early 2000's by various optionees there has been no systematic modern drilling. There was some isolated surface and underground diamond drilling undertaken by the owners in 2017, although the full extent of this is unclear. Table 10 and Figure 31 show the list of all drillholes within the database that have remaining core and/or associated data.

Company	Year	Location	Type	No of Holes	Depth (ft)	Depth (m)	Comments
EPAR	1989	Surface	RC	91	27,615	8,417.05	Wabash
Homestake	2001	Surface	RC	3	4,705	1,434.08	HRH17**
Gullsil	2017	Surface	Diamond	2	1,475	449.58	Hole WSO2 only
Gullsil	2017	UG	Diamond	1	500	152.40	Hole BH14
<b>Total</b>				<b>97</b>	<b>34,295</b>	<b>10,453.12</b>	

Table 10 Summary of drillholes in the drillhole database at Prospect Mountain Property

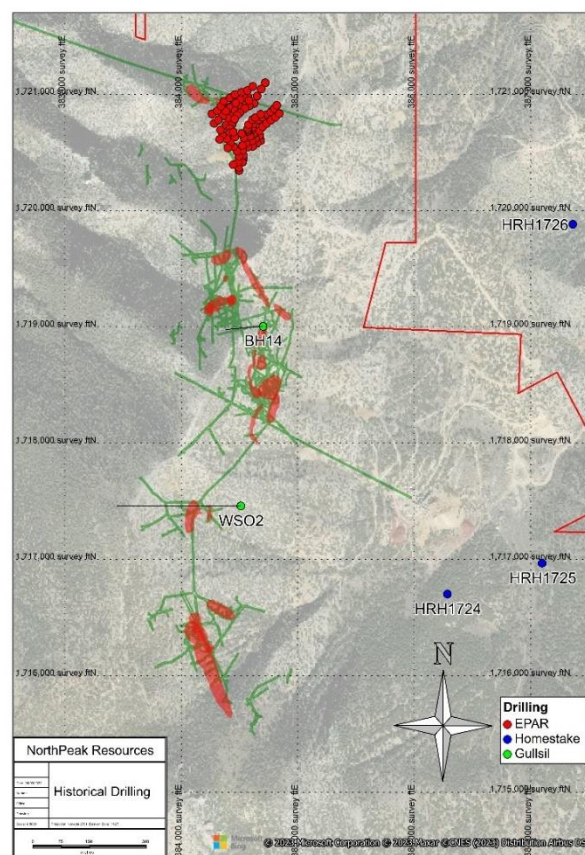


Figure 31 Distribution of drillholes in database (NPR, 2023)

It is apparent that with a total 10,453 metres of drilling, of which 80% was focussed on the Wabash area (Figure 31), the Property has been chronically under drilled.

#### 10.1.1 1998 EPAR Drilling

The Wabash area was drilled by EPAR in 2001 with 94 drillholes, although only 91 drillholes are in the database. Drilling was undertaken using a reverse circulation drill rig. All holes were vertical, although no downhole surveys were completed. Significant discrepancies were observed by SRK (SRK, 2020b) in the recorded elevations, which varied from topographic surface by approximately 40 feet. These have been corrected. The details of the drilling are provided in Figure 32 and Table 11.

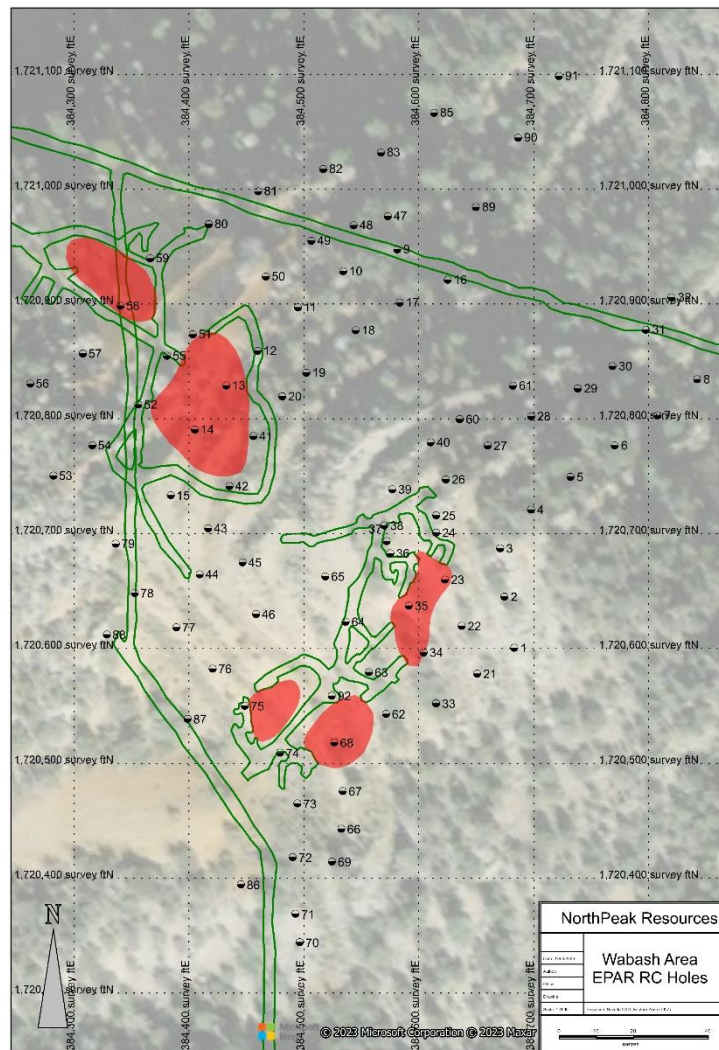


Figure 32 Location of EPAR vertical RC holes in the Wabash area (NPR, 2023)

Sampling was conducted on 5 foot (1.52 m) intervals. A number of intervals are missing from the database, and it is not known if this is due to lost data or if they actually represent no samples. The samples were assayed for gold and silver, and the results returned in ounces per ton (opt), which have now been converted to grams/tonne (g/t). In total there are 4,652 recorded samples. No supporting documentation, (e.g. laboratory assay sheets, drillhole/geologist logs or reports) is available, and no lithological logging is available. Consequently, methodologies for sampling, sample preparation or assay methods all remain unknown, although it is believed (but not confirmed) that assays were conducted by fire assay on a 30 gram nominal sample size.



HoleID	Easting	Northing	Elevation (corr)	Length (ft)	Company	Azimuth	Dip
PM-W-1	384683	1720601	8357	260	EPAR	0	90
PM-W-2	384675	1720645	8346	300	EPAR	0	90
PM-W-3	384671	1720688	8338	340	EPAR	0	90
PM-W-4	384698	1720721	8346	260	EPAR	0	90
PM-W-5	384732	1720750	8358	340	EPAR	0	90
PM-W-6	384770	1720777	8372	300	EPAR	0	90
PM-W-7	384808	1720803	8386	300	EPAR	0	90
PM-W-8	384842	1720835	8397	500	EPAR	0	90
PM-W-9	384581	1720948	8262	300	EPAR	0	90
PM-W-10	384534	1720929	8245	300	EPAR	0	90
PM-W-11	384495	1720897	8232	300	EPAR	0	90
PM-W-12	384460	1720859	8222	360	EPAR	0	90
PM-W-13	384432	1720829	8214	300	EPAR	0	90
PM-W-14	384405	1720791	8207	300	EPAR	0	90
PM-W-15	384384	1720734	8204	300	EPAR	0	90
PM-W-16	384625	1720921	8283	300	EPAR	0	90
PM-W-17	384583	1720901	8268	300	EPAR	0	90
PM-W-18	384545	1720877	8255	400	EPAR	0	90
PM-W-19	384502	1720840	8241	340	EPAR	0	90
PM-W-20	384481	1720820	8235	285	EPAR	0	90
PM-W-21	384651	1720578	8345	300	EPAR	0	90
PM-W-22	384637	1720620	8333	300	EPAR	0	90
PM-W-23	384623	1720660	8320	300	EPAR	0	90
PM-W-24	384615	1720701	8310	180	EPAR	0	90
PM-W-25	384615	1720716	8308	350	EPAR	0	90
PM-W-26	384623	1720747	8307	305	EPAR	0	90
PM-W-27	384660	1720777	8320	300	EPAR	0	90
PM-W-28	384698	1720802	8334	300	EPAR	0	90
PM-W-29	384738	1720827	8350	300	EPAR	0	90
PM-W-30	384769	1720846	8361	240	EPAR	0	90
PM-W-31	384797	1720878	8370	300	EPAR	0	90
PM-W-32	384820	1720906	8376	220	EPAR	0	90
PM-W-33	384615	1720553	8332	300	EPAR	0	90
PM-W-34	384604	1720597	8321	300	EPAR	0	90
PM-W-35	384591	1720638	8309	280	EPAR	0	90
PM-W-36	384575	1720683	8294	180	EPAR	0	90
PM-W-37	384572	1720694	8291	160	EPAR	0	90
PM-W-38	384570	1720707	8288	300	EPAR	0	90
PM-W-39	384577	1720739	8287	300	EPAR	0	90
PM-W-40	384610	1720780	8296	440	EPAR	0	90
PM-W-41	384456	1720785	8228	320	EPAR	0	90
PM-W-42	384435	1720742	8224	300	EPAR	0	90
PM-W-43	384417	1720705	8221	320	EPAR	0	90
PM-W-44	384409	1720665	8222	300	EPAR	0	90
PM-W-45	384447	1720675	8236	300	EPAR	0	90
PM-W-46	384458	1720630	8247	300	EPAR	0	90
PM-W-47	384573	1720977	8256	300	EPAR	0	90
PM-W-48	384543	1720969	8245	300	EPAR	0	90
PM-W-49	384507	1720955	8231	320	EPAR	0	90
PM-W-50	384467	1720924	8218	260	EPAR	0	90
PM-W-51	384403	1720874	8197	135	EPAR	0	90
PM-W-52	384356	1720813	8184	480	EPAR	0	90
PM-W-53	384282	1720751	8160	300	EPAR	0	90
PM-W-54	384316	1720777	8172	300	EPAR	0	90
PM-W-55	384381	1720855	8190	360	EPAR	0	90
PM-W-56	384262	1720831	8144	300	EPAR	0	90
PM-W-57	384308	1720857	8160	480	EPAR	0	90
PM-W-58	384340	1720899	8169	300	EPAR	0	90



HoleID	Easting	Northing	Elevation (corr)	Length (ft)	Company	Azimuth	Dip
PM-W-59	384366	1720940	8175	320	EPAR	0	90
PM-W-60	384636	1720800	8305	300	EPAR	0	90
PM-W-61	384682	1720829	8323	300	EPAR	0	90
PM-W-62	384571	1720543	8313	340	EPAR	0	90
PM-W-63	384556	1720580	8301	300	EPAR	0	90
PM-W-64	384536	1720624	8285	240	EPAR	0	90
PM-W-65	384519	1720663	8271	300	EPAR	0	90
PM-W-66	384532	1720443	8310	300	EPAR	0	90
PM-W-67	384534	1720476	8305	260	EPAR	0	90
PM-W-68	384526	1720519	8296	260	EPAR	0	90
PM-W-69	384524	1720415	8310	300	EPAR	0	90
PM-W-70	384496	1720345	8307	300	EPAR	0	90
PM-W-71	384493	1720369	8302	300	EPAR	0	90
PM-W-72	384490	1720419	8294	300	EPAR	0	90
PM-W-73	384494	1720465	8288	300	EPAR	0	90
PM-W-74	384479	1720509	8275	300	EPAR	0	90
PM-W-75	384449	1720550	8254	300	EPAR	0	90
PM-W-76	384421	1720583	8237	300	EPAR	0	90
PM-W-77	384389	1720619	8218	300	EPAR	0	90
PM-W-78	384353	1720649	8200	300	EPAR	0	90
PM-W-79	384336	1720692	8189	360	EPAR	0	90
PM-W-80	384417	1720970	8193	300	EPAR	0	90
PM-W-81	384460	1720998	8208	300	EPAR	0	90
PM-W-82	384517	1721018	8229	400	EPAR	0	90
PM-W-83	384567	1721032	8248	400	EPAR	0	90
PM-W-85	384613	1721067	8263	300	EPAR	0	90
PM-W-86	384445	1720395	8276	100	EPAR	0	90
PM-W-87	384399	1720539	8233	300	EPAR	0	90
PM-W-88	384328	1720612	8194	300	EPAR	0	90
PM-W-89	384650	1720985	8287	320	EPAR	0	90
PM-W-90	384686	1721045	8295	300	EPAR	0	90
PM-W-91	384722	1721099	8304	300	EPAR	0	90
PM-W-92	384524	1720559	8289	300	EPAR	0	90

*Table 11 Details of EPAR reverse circulation drilling in Wabash area of the Property*

The data has been composited by grade and is presented in Table 12 for intersect thicknesses. In the Wabash area the mineralisation is believed to plunge 50° – 60° to the northwest, in which case true thickness is likely to be around 50% – 64% of the interval thickness.

HOLE_ID	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t	Ag g/t
PM-W-1	15	25	10	3.05	0.79	7.05
PM-W-1	40	45	5	1.52	0.75	8.20
PM-W-9	115	125	10	3.05	1.37	17.00
PM-W-9	280	285	5	1.52	0.65	10.30
PM-W-11	0	50	50	15.24	4.08	59.92
PM-W-12	0	70	70	21.34	4.52	34.98
PM-W-12	155	190	35	10.67	0.85	17.64
PM-W-13	0	40	40	12.19	2.98	38.74
PM-W-13	50	75	25	7.62	1.60	21.68
PM-W-13	180	195	15	4.57	0.80	9.17
PM-W-13	285	290	5	1.52	0.79	2.40

HOLE_ID	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t	Ag g/t
PM-W-14	160	175	15	4.57	2.79	38.17
PM-W-15	155	165	10	3.05	0.67	1.35
PM-W-17	130	135	5	1.52	0.51	4.50
PM-W-18	85	90	5	1.52	0.89	5.10
PM-W-20	45	50	5	1.52	1.13	2.10
PM-W-20	270	285	15	4.57	2.83	47.90
PM-W-23	40	45	5	1.52	0.55	9.30
PM-W-23	70	90	20	6.10	0.73	10.98
PM-W-24	35	40	5	1.52	0.69	9.90
PM-W-24	45	50	5	1.52	0.55	8.60
PM-W-24	120	135	15	4.57	1.09	13.60
PM-W-25	125	145	20	6.10	0.54	14.48
PM-W-25	195	200	5	1.52	0.96	16.50
PM-W-25	285	300	15	4.57	1.86	56.33
PM-W-26	205	215	10	3.05	0.72	3.45
PM-W-26	300	305	5	1.52	1.20	6.90
PM-W-29	25	30	5	1.52	0.65	8.90
PM-W-36	120	145	25	7.62	2.04	13.16
PM-W-37	105	110	5	1.52	2.19	24.00
PM-W-37	115	160	45	13.72	1.16	20.30
PM-W-38	5	15	10	3.05	0.58	11.15
PM-W-38	190	200	10	3.05	0.87	28.45
PM-W-38	215	220	5	1.52	0.99	25.40
PM-W-38	245	285	40	12.19	0.66	24.30
PM-W-39	160	165	5	1.52	0.79	4.50
PM-W-39	225	230	5	1.52	4.08	29.10
PM-W-41	10	15	5	1.52	0.99	14.40
PM-W-42	0	25	25	7.62	1.33	34.16
PM-W-44	65	70	5	1.52	0.51	5.80
PM-W-44	210	215	5	1.52	0.58	6.20
PM-W-47	0	5	5	1.52	0.69	6.50
PM-W-49	290	295	5	1.52	0.82	2.70
PM-W-50	0	45	45	13.72	2.89	42.33
PM-W-50	55	60	5	1.52	8.40	108.00
PM-W-50	65	75	10	3.05	3.65	55.20
PM-W-50	180	210	30	9.14	0.58	6.15
PM-W-50	235	240	5	1.52	0.75	13.40
PM-W-51	0	10	10	3.05	0.81	8.25
PM-W-51	80	95	15	4.57	0.50	4.80
PM-W-51	115	135	20	6.10	1.93	64.80
PM-W-52	330	370	40	12.19	3.09	8.86
PM-W-53	135	145	10	3.05	1.18	21.05
PM-W-55	0	5	5	1.52	0.79	12.00
PM-W-55	250	265	15	4.57	6.93	189.93
PM-W-55	305	360	55	16.76	4.09	25.29
PM-W-58	0	5	5	1.52	1.51	41.10
PM-W-58	130	135	5	1.52	3.02	1.40
PM-W-58	290	295	5	1.52	0.69	9.60
PM-W-59	250	275	25	7.62	0.58	16.80
PM-W-61	225	235	10	3.05	0.75	19.05
PM-W-62	180	190	10	3.05	1.29	25.75
PM-W-62	300	325	25	7.62	1.45	19.82
PM-W-63	40	45	5	1.52	0.58	13.00
PM-W-63	120	130	10	3.05	0.94	7.90
PM-W-64	0	20	20	6.10	0.78	17.30
PM-W-64	230	235	5	1.52	0.69	17.50
PM-W-65	5	10	5	1.52	0.62	16.80
PM-W-65	205	215	10	3.05	0.60	8.25

HOLE_ID	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t	Ag g/t
PM-W-66	80	85	5	1.52	0.55	3.40
PM-W-68	105	110	5	1.52	0.89	8.60
PM-W-68	135	145	10	3.05	1.35	24.85
PM-W-73	10	65	55	16.76	0.94	16.23
PM-W-74	20	65	45	13.72	5.61	60.77
PM-W-75	0	5	5	1.52	1.23	20.20
PM-W-76	150	155	5	1.52	0.75	14.40
PM-W-77	155	195	40	12.19	0.57	2.23
PM-W-77	225	230	5	1.52	0.62	9.90
PM-W-78	155	225	70	21.34	3.02	12.32
PM-W-79	260	295	35	10.67	3.78	6.33
PM-W-80	135	180	45	13.72	1.31	25.33
PM-W-80	215	220	5	1.52	0.55	3.80
PM-W-81	25	45	20	6.10	1.48	42.70
PM-W-86	0	10	10	3.05	1.51	12.00
PM-W-86	65	80	15	4.57	1.23	83.07
PM-W-87	55	60	5	1.52	1.17	38.70
PM-W-88	150	155	5	1.52	0.93	21.30
PM-W-89	310	315	5	1.52	0.51	1.00
PM-W-92	145	225	80	24.38	8.24	22.61

*Table 12 EPAR drillhole assay results from Wabash area of the Property, using a 0.5 g/t Au minimum composite grade, and up to 25 feet internal dilution @ 0.01 g/t Au. True thickness is likely to be 50 – 64% of the interval thickness in the Wabash area.*

Due to the lack of supporting documentation, downhole surveys and QA/QC for the assays, the drillhole data for Wabash is not considered suitable for use in Mineral Resource Estimation calculations but would be usable for constructing geological wireframes.

#### 10.1.2 2001 Homestake Drilling

In 2001, Homestake Mining drilled three vertical reverse circulation drillholes to the east of the historical mine areas. The location and details of these holes is shown in Figure 31 and Table 13. The drilling logs for these holes are provided in Appendix A of the Prospect Mountain Mine Hydrology Impacts Analysis Report by Piteau Associates (2019). These logs indicated that a downhole survey was completed on hole HRH1725 but that no survey was completed on hole HRH1724. It is not clear whether a survey was completed on hole HRH1726.

HoleID	Easting	Northing	Elevation (corr)	Length (ft)	Company	Azimuth	Dip
HRH1724	386284	1716702	7899	1100	Homestake	0	90
HRH1725	387098	1716968	7819	2100	Homestake	0	90
HRH1726	387361	1719882	7960	1505	Homestake	0	90

*Table 13 Details of Homestake Mining reverse circulation drilling*

Samples were taken on 5 foot (1.52 m) intervals and assayed for a multi-element suite. Gold results were returned as parts per billion (ppb), remaining elements were returned as ppm or %. The data has been composited by grade and is presented in Table 14 for intersect thicknesses. As the drilling is represented by isolated drill holes, it is not possible to estimate the orientation of the mineralised intersections, and thus true thickness of the intersections is unknown.

HOLE_ID	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm
HRH1724	1000	1015	15	4.57	0.54	3.23	238	409	2398
HRH1725	570	605	35	10.67	4.05	16.34	1023	596	2447
HRH1725	925	930	5	1.52	0.50	3.30	7	29	249
HRH1725	1175	1230	55	16.76	1.61	92.46	215	2158	1926
HRH1725	1310	1320	10	3.05	1.62	140.35	1933	2929	7839

*Table 14 Homestake drillhole assay results, using a 0.5 g/t Au minimum composite grade, and up to 25 feet internal dilution @ 0.01 g/t Au. True thickness is unknown for these intersections.*

In the drill log, it can be seen that hole HRH1724, intersected a zone of “*intensely sanded, hydrothermally-altered Hamburg Dolomite*” that could also be Eldorado dolomite at a depth of between 928’ – 1015’ (283 – 309 m). The description states that “*at 928’ all returns abruptly ceased, and circulation was not re-established until 1015’.*” The sample database has samples down to 940’ and then no samples until 1000’ (a sample gap of 60’), at which point sampling resumes with a 5’ sample and a 10’ sample before intervals revert to 5’ lengths. This interval is therefore only represented by two sample assays that were returned at the base of the zone (averaging 15’ (4.57m) @ 0.54 g/t Au), which reportedly consisted of “*dolomite with disseminated tiny cubic limonite pseudomorphs after pyrite*”. This highly altered zone, with no sample return, represents a potential target for follow-up with core drilling.

Hole HRH1725 intersected several zones of mineralisation, all within the Hamburg Dolomite, most notably 35’ (10.67m) @ 4.05 g/t Au + 16 g/t Ag at a depth of 570’ – 605’ (174 – 184 m). This is described in the log as gossanous Hamburg Dolomite.

Holes HRH1724 and HRH1725 were drilled to the south and south-east of the Diamond Tunnel portal, in areas with no other historical data. Geologically, these holes are both into the downthrown geology to the east of the Jackson Fault, intersected Hamburg Dolomite and indicate that mineralisation does exist at depth to the east of the fault. These intersections warrant follow-up exploration.

Hole HRH1726 intersected no significant mineralisation and largely drilled down a rhyolite dyke.

### 10.1.3 Gullsil Drilling

Three diamond drillholes drilled by Gullsil in 2017 are contained in the drillhole database: two drilled from the surface and one drilled underground from the main level at 7900’ amsl (Table 15).

HoleID	Easting	Northing	Elevation (corr)	Length (ft)	Company	Azimuth	Dip	
BH14	384702	1719005	7900	500	Gullsil	272	-30	UG
WS01	384512	1717460	8505	?	Gullsil	0	90	Surface
WS02	384512	1717460	8505	1475	Gullsil	270	45	Surface

*Table 15 Details of Gullsil underground and surface drilling in the database*

Holes WS01 and WS02 were drilled with narrow diameter BQ sized core (36.5 mm diameter). No downhole survey was conducted on the holes, which due to the narrow diameter of the core means there is a risk of considerable deviation of the holes.



Hole WS01 was a vertical drilled hole that was collared at the same drill site as WS02. No logs are currently available for this hole and the core was not sampled. The core has been only recently located at a storage shed on a nearby farm (Figure 33) but has not yet been transported to the company logging shed in Ely for logging. No further information is currently available for WS01.



*Figure 33 Photograph of borehole WS01 in storage*

Hole WS02 was drilled from a newly constructed road on the surface and was targeted into the Wall St area of the mine.

The core was never sampled (in order to preserve the core intact) and remains intact. It is stored in wax impregnated cardboard core trays at the company facilities in Ely. Core recovery for the first 400' (122 m) of core that has been fully re-logged is good with a total average recovery of 98%.

At a depth of 1316' – 1402' (401 – 427 m), hole WS02 intersected a zone of mineralised marble with associated galena (lead) mineralisation.

At a depth of 1445' – 1475' (440 – 450 m) hole WS02 intersected approximately 10 m (30 ft) of mineralised and oxidised cave breccia and limonite clays (Figure 34). Within this interval, a 2 ft

section of core (1 ft from each run) is missing from two consecutive drill runs (1460' – 1465' and 1465' – 1470'). In the 1460' – 1465' run the core ends in limonite clay immediately prior to the missing section. The core resumes again in the 1465' – 1470' run with a bleached dolomite unit. It is unclear why this section of core is missing, in what appears to be the best interval in the drill hole. It does not appear that this was lost as a result of drilling core loss, but rather this section has been deliberately removed for some reason.



*Figure 34 Photograph of drillcore from WS02 1450' – 1475'*

The underground drilling took place in 2017 from a drill bay on the main level (7,900' amsl) in the Diamond Mine area. A number of drillholes were drilled (Figure 35), and a certain amount of core material, survey data and sporadic assays have been identified. However, for most of these holes, sample recovery was poor, and there is currently insufficient confidence in the surveys and/or location of samples and assays that they cannot be added to the drilling database at this time.





*Figure 35 Photograph of 2017 BH\*\* series Gullsil drill casings in drilling bay on the Main Level*

Of these underground holes, only BH14 has sufficient recovered core and confidence in survey data, that allows it to be added to the drilling database. Anecdotal evidence suggests that a number of training / experimental holes were drilled here, as explanation for why much of the drilling was not recorded. None of the core from BH14 has been sampled.

An examination of the BH14 core shows heavily oxidised (very red) sections within the first 110 ft (33 m) along the hole (Figure 36), with oxidation reducing thereafter. Logging has so far only been completed to a depth of 369 ft (112 m), with core showing zebra-striped silica bleaching and sanding recorded in the logs near the end.



*Figure 36 Photograph of oxidised drillcore from BH14*

## 11 Sample Preparation, Analyses and Security

The Company has not conducted any sampling on the Property.

### 11.1 Sample Preparation, Analyses and Security

No recent samples from drilling or surface sampling have been undertaken on the Property, and so no comments can be made about past sampling procedures and analyses. Going forward it is anticipated that sampling, and analytical procedures will follow industry standards, and that suitable procedures relating to security and Quality Assurance / Quality Control (QA/QC) will be implemented as a matter of course.

The Company has suitable and secure facilities in Ely, Nevada for the secure storage of drillcore and other samples, and for the logging and photographing of drillcore (Figure 37).



*Figure 37 Company core shed and storage facilities in Ely, Nevada*

### 11.2 Data Storage and Management

The Property has had a long history of over 150 years, with a complex history of operators and owners. For most of the history, the only method of data storage was by paper records. It is only natural that many of the records may be incomplete or missing entirely. Since the Property reverted back to Solarljós LLC, much of this historical data has been collected and compiled. There have been several attempts to move this data into digital form, with the use of spreadsheets, as well as 2-dimensional Geographic Information Systems (GIS) such as Map Info – Discover and 3-dimensional modelling software such as Leapfrog. However, these systems are not databases, and there are often multiple evolutions of the data in various tables and spreadsheets. This can lead to incomplete and outdated data being used, and valuable work being lost into the digital ether.

The QPs strongly recommend that the Company utilise a purpose-built database system for the storage of all exploration data that can be readily updated and validated.



## 12 Data Verification

### 12.1 QP Site Inspection

A site inspection was completed by David Pym CGeol., on the Property from 21 – 23rd February 2023. The site visit included:

- a field inspection of the Prospect Mountain Property, surface exposures were snow covered so the inspection was of the 00 level underground workings at Diamond Tunnel
- examination of historical storage of RC chips
- a review of the limited drillcore available and, C
- Company protocols at the Company logging facilities in Ely, Nevada.

#### 12.1.1 Confirmation of Drill Sites

Due to snow cover, none of the surface drilling sites could be visited. However, the Wabash drill sites are viewable by satellite and pads correspond with hole collars. The single area of underground drilling was inspected, with collars still in place.



*Figure 38 RC sample storage*

#### 12.1.2 UG workings

The adits are visible on satellite imagery and correspond to the digital locations of the underground workings in the model. The Diamond Tunnel adit, and the majority of the main 00 level were walked. Conditions of the underground were as represented. Air, water and electric lines were present in the backs. Historical survey markers are still visible in most places but were not checked against the level plans.

#### 12.1.3 Drillcore Review

There is no significant core to review. Some limited core drilled within the last 15 years was inspected. The core is not split or cut, but core run markers are clearly visible. Lost core intervals have not been recorded and the core is not marked up. The core is stored in wax impregnated

cardboard boxes, which is not ideal, but apparently quite common in the area. None of the core observed has been sampled.

#### 12.1.4 Drillcore Storage and Security

Some of the historical core is stored in a shipping container and in sheds on a farm owned by the current owners of the Property and the remainder is at the Company's logging facilities in Ely. It is recommended the historical core is moved to the Ely facilities as soon as possible.



*Figure 39 Sample 750729 in void fill near Shaft 2*

#### 12.1.5 RC Chips Storage and Security

The Wabash rock chips are stored near the Diamond Tunnel entrance in a shed with an open doorway (see Figure 38). Approximately 1kg of RC material for every 5' interval is bagged, and larger bags contain 5 samples. Most of the numbers appear to be still readable, but around a third of the bags around the shed entrance are degraded by UV light. Some of the material will be available for further assaying but there will not be a complete record recoverable. It is recommended the samples be catalogued and removed to a safer storage area.

#### 12.2 Data Verification Procedures

Four samples taken from the edge of stopes in the Shaft 1 – Shaft 3 area on the main or 00 level of the Diamond Mine during a site visit, yielded confirmatory values with some surprises. The purpose of the samples was to see if the marginal stope material is mineralised in some of the better stoped

areas. Samples ending 726 and 727 were taken in the Shaft 1 area from the edges of old open stopes in the Machine Cave, the Crystal Cave and sample 728 from iron-stained material at the side of the tunnel. The fourth sample was taken to the south near the shaft 2 area in a large (30cm) vein that was stoped higher up in the tunnel. Zinc is surprisingly high in the samples; historical reports indicate zinc is often subordinate to lead but very little assaying was done. Copper is also higher than expected in these samples. The arsenic, antimony, bismuth signature is expected, though antimony values are quite high. Indium was also noted in the zones at elevated levels. Sampling indicated some mineralised material remains marginal to the stopes. It is actually of very similar grade to the Diamond Tunnel waste dump material, though slightly higher in base metals grades.

	Au g/t	Ag g/t	Pb %	Zn %	Cu ppm	As ppm	Sb ppm	Bi ppm
<b>750726</b>	3	83.4	2.33	2	1748.7	7136	1235.5	133.3
<b>750727</b>	1.9	86.4	2.07	5.51	3203.1	4887	1853.8	61.7
<b>750728</b>	<0.9	23.2	0.75	2.34	2343.1	2383	481.1	57.7
<b>750729</b>	<0.9	14.5	0.72	1.34	922	2512	1183.4	12.1

*Table 16 Check samples sent to Bureau Veritas labs in Reno, Nevada*

#### 12.2.1 Historical Drilling

No reviews could be completed on the historical drilling. Data was presented in an excel spreadsheet. No sampling data, original log sheets or assay certificates are available. No survey data was collected from the vertical RC holes that form the bulk of the dataset.

#### 12.2.2 QA/QC Procedures

There is no active or recent drilling to report on. QA/QC procedures will be put in place for any new drilling programmes.

### 12.3 Qualified Persons' Opinion

It is the opinion of the Qualified Persons responsible for this Technical Report, that the historical data that has been compiled by the Company and the Vendors are sufficiently accurate to enable a reasonable evaluation of the Property. Any inaccuracies that exist in the data, are considered highly unlikely to have any material impact on the overall conclusions and recommendations determined in this Technical Report. Consequently, the Qualified Persons believe the data is adequate for the purpose of evaluating the Property to the level undertaken in this Technical Report.

## 13 Mineral Processing and Metallurgical Testing

### 13.1 1979 Flotation and Leaching Testwork (Jensen, 1980)

A series of reports were prepared by Mead LeRoy Jensen, a consulting geologist and geophysicist, in 1980 on the geology, former production and future economic potential of the Diamond, Wabash and Williams mines. In the appendices of the summary report (Jensen, 1980) are tabulated results from October 1979, of two flotation tests and two leach tests. There is no mention of these metallurgical tests in the body of any of the observed reports, and very limited supporting information on times and reagents used, are provided with the tables. The information on this testwork, and the summary of the results provided below, are only included in this Technical Report for reasons of completeness. The results, in the absence of further supporting documentation being identified, should be treated with the utmost caution.

Flotation testwork was conducted on samples from the “Diamond Barrman Dump” (Test D-23) and “Barrman-Diamond” (Test D-24). It is assumed this refers to the Berryman Dump. Test D-23 was reported to have a head grade of 0.03 oz/ton Au, 2.67 oz/ton Ag, 2.05% Pb, 1.70% Zn and 0.11% Cu. There was a remark of “*poor sulfide float*”. Metallurgical results for the test showed a recovery to the rougher concentrate (3.4% mass pull) of 100% Au, 43.7% Ag and 27% Pb. The calculated heads were 0.03 oz/ton Au, 1.74 oz/ton Ag and 1.41% Pb.

The second flotation test (D-24) also recorded a “*poor float*” remark. No head analyses were provided, and analyses were only covered for Au and Ag. Metallurgical results for the test showed a recovery to the rougher concentrate (6.4% mass pull) of 66.0% Au and 29.6% Ag. The calculated heads were 0.03 oz/ton Au and 2.67 oz/ton Ag.

The similar grades and exact dates (31 Oct, 1979) of the two tests samples suggest that they are likely from the same sample, but subject to different parameters for testwork.

It is possible that further details exist in Gullsil LLC or Solarljös LLC archives.

### 13.2 2010 Cyanidation Testwork (Beatty, 2010)

In November 2010, Dr Rick L. Beatty, a metallurgical consultant from Hurricane, Utah, was commissioned to conduct metallurgical cyanidation test work for heap leach evaluation on samples from the Main Dump at the Prospect Mountain Property. As part of the scope, he was to measure and estimate the mass of the dump located at the mine portal, and to calculate the recoverable amount of precious metals. These aspects are discussed further in Section (6.4.3).

#### 13.2.1 Ore Composite Sample Collection

Four composite samples were taken from the Main Dump, around the mid-height circumference. Samples for each composite were collected on 10 foot (3 m) intervals. Due to observed stratification of the pile, at each sample site, several inches of material were first removed before the sample was taken. The samples were then riffle-split, and splits from multiple samples sites combined to generate the composite samples. Each composite sample thus represents 20 to 25 individual 200 gram (0.44 lb) samples. Samples were collected from South to North, so that Composite Sample #1 represents the southernmost quartile of the dump and Composite Sample #4 represents the northernmost quartile. The composite samples were then assayed by fire assay with 1 Assay Ton (29.166 gram) aliquots, with a gravimetric finish.

The results of the head analyses are discussed in detail in Section (6.4.3) .



### 13.2.2 Metallurgical and Analytical Testing

A sample from the Main Dump was milled to 80% -150 mesh using a 12" ball mill. This milled sample was then subjected to an agitated cyanidation consumption cyanide leach test for 24 hours and then evaluated for total recovery and free cyanide analysis. Many measurements such as dissolved oxygen, viscosity etc were not monitored as the purpose of the testwork was intended to be preliminary and to demonstrate recoverable cyanidation valuations. Although detailed procedural information is not available, it appears that the testwork was done at a high pH and with the addition of dissolved oxygen.

Total CN		Free Cyanide		Gold Tails		Silver Tails		Recovery	
lb/ton	g/L	lb/ton	g/L	opt	g/t	opt	g/t	Au %	Ag %
Feed (0)	0	0	0	0.340	11.66	1.380	47.31	n/a	n/a
0.25	0.125	0	0	0.334	11.45	1.360	46.63	1.8	1.4
0.50	0.25	0	0	0.272	9.33	1.168	40.05	20.0	15.4
1.00	0.50	0	0	0.220	7.54	1.220	41.83	35.3	11.6
2.00	1.00	0.50	0.25	0.190	6.51	0.890	30.51	44.1	35.5
4.00	2.00	2.00	1.00	0.062	2.13	0.700	24.0	81.8	49.3

*Table 17 Free cyanide leach tests (Beatty, 2010)*

Dr Beatty states that the general industry guidelines state that free cyanide levels for silver/gold ores should remain >0.5 g/L for effective leaching. The results of the free cyanide tests show that the last test using 2.00 g/L cyanide, generated 1.00 g/L free cyanide, which would be considered to indicate effective leaching of the ore, if grind and leach parameters were optimised.

Following the successful free cyanide leach tests, an Amenability Test was conducted to determine the gold and silver distribution and recoverability of the gold and silver in the ore. For the test, a 500-gram sample was subjected to a 24-hour agitated cyanide leach test, at 50% solids with 1 lb/ton (0.5 g/L) of free cyanide maintained to the conclusion of the leach. The solids were then filtered and screened, and each sieve fraction was fire assayed (Table 18).

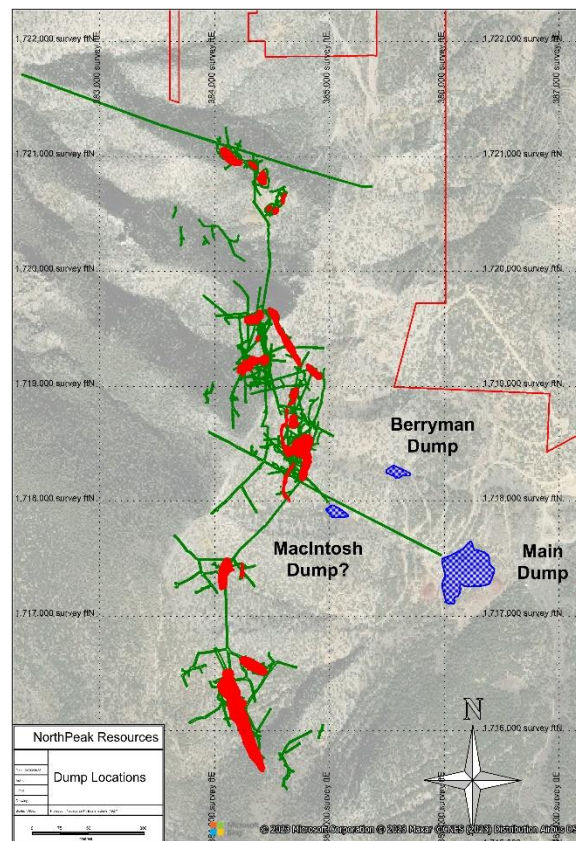
Sieve Screen	Gold		Silver		Au Recovery	Ag Recovery
	opt	g/t	opt	g/t	%	%
+100 mesh	0.024	0.82	0.700	24.00	92.9	32.0
+140 mesh	0.020	0.69	0.620	21.26	94.1	55.1
+200 mesh	0.024	0.82	0.516	17.69	92.9	62.6
+270 mesh	0.024	0.82	0.296	10.15	92.9	78.6
+325 mesh	0.016	0.55	0.184	6.31	95.3	86.7
-325 mesh	0.014	0.48	0.226	7.75	95.9	83.6

*Table 18 Tail screen assay and metal recoverability, cyanide leach residue*

Based on the results of the cyanidation tests, Dr Beatty stated that "Leach testing demonstrated cyanidation kinetics that appear to be amenable to standard cyanidation techniques and possible heap leach applications. Residual levels of silver and gold in the tails sieve distribution analysis demonstrated even and consistent leach characteristics."

### 13.3 2014 McClelland Laboratories Cyanidation Testwork

In July 2014 a sample from the Prospect Mountain Property was sent to McClelland Laboratories Inc., Nevada for milling/cyanidation testwork. The sample consisted of a weighted mixture of material taken from three dumps: Berryman, MacIntosh and the Main Dump (Figure 40). The combined sample weighed 19 kg (42 lb) and was designated as sample “PM-1”. This whole section is taken from the McClelland Laboratories report (McClelland Laboratories Inc, 2014), in which further details on methodologies and results are provided.



*Figure 40 Sample locations for metallurgical testwork (NPR, 2023)*

The average gold and silver head grades of the sample, as explained in Section 13.3.2, were 2.23 g/t Au (0.065 oz/ton) and 72 g/t Ag (2.10 oz/ton). The high silver:gold ratio of the sample informed that the testwork should use the zinc precipitation method (i.e. Merrill Crowe methodology) rather than a carbon adsorption method (i.e. CIP, CIL etc) for recovery of precious metals from the leach solution.

Testwork included:

- Direct Agitated Cyanidation Testwork
- Zinc Precipitation Testwork
- Leaching Product Environmental Analysis

### 13.3.1 Sample Preparation

The sample was first crushed to a nominal 1.7mm (10 mesh) particle size. The crushed material was blended and split using a rotary splitter to obtain three 1 kg (2.2 lb) splits for head analysis and a 6 kg (13 lb) split for the testwork. The 6 kg (13 lb) sample was further crushed to 78% -850µm (20 mesh) grind size, and then blended and split into 1 kg (2.2 lb) lots for milling.

A sample split for head screen analysis was batch ground to 78% -75µm (200 mesh) grind size in a laboratory steel ball mill. The ground sample was then screened to generate multiple size fractions (+150 µm; -150+106 µm; -106+75 µm; and -75 µm) for the head screen analysis.

Three 1 kg (2.2 lb) samples were batch ground in a laboratory steel ball mill, with a target grind size of 75%-75µm (200 mesh). The actual grind size was 78%-75µm (200 mesh). The ground samples were then combined for use in the cyanidation testwork.

### 13.3.2 Head Analysis

The triplicate head analysis splits and the head screen size fractions were each assayed by conventional fire assay fusion methods to determine gold and silver contents (Table 19). An ICP metals analysis was also conducted on one of the head analysis splits.

Method	Au g/t	Ag g/t
Direct Assay, Initial	2.25	73
Direct Assay, Duplicate	2.08	76
Direct Assay, Triplicate	2.19	68
Calculated, Head Screen	2.30	73
Calculated, Agitated Test	2.35	69
Average	2.23	72
Standard Deviation	0.10	3

*Table 19 Gold and silver head assay results and head grade comparisons for test sample PM-1. The “Calculated, Head Screen” value is back-calculated from the four separate size fractions. The “Calculated, Agitated Test” value is back-calculated from the sequential leach extraction assays combined with the tail assays.*

Overall, the comparisons of the various head assay determinations was good, providing an average head grade of 2.23 g/t Au (0.065 oz/ton Au) and 72 g/t Ag (2.1 oz/ton Ag).

The ICP metals analysis showed that sample PM-1 contained elevated amounts of arsenic (2,400 ppm As), lead (>1% Pb) antimony (1,085 ppm Sb), and zinc (9,160 ppm Zn).

### 13.3.3 Direct Agitated Cyanide Testwork

The recombined (3 x 1 kg) ground samples were mixed with water to achieve 50 weight percent solids. The natural pH of the pulp was measured, and sodium hydroxide added to bring the pH of the pulp to 11.0 before adding cyanide. Sodium cyanide, equivalent to 1.0 g NaCN/L, was then added to the alkaline pulp.

Leaching was conducted by mechanically agitating the pulp in a leaching vessel for 72 hours. Agitation was suspended briefly after 2, 6, 24 and 48 hours to allow the pulp to settle so samples of

pregnant solution could be taken for analysis. At each sampling period, the remaining pregnant solution volume was measured and sampled. Water equivalent to that withdrawn or lost to evaporation was added to the pulps, and cyanide concentrations were restored to initial levels. Sodium hydroxide was also added when necessary, to maintain the leaching pH at between 10.8 and 11.0. Agitation was then resumed.

After 72 hours agitation was terminated, and the slurry filtered to separate liquids and solids. Volumes, concentrations (Au, Ag and cyanide) and pH of the pregnant solution were measured, and the remaining solution was saved for zinc precipitation testing. The filter cake volume was calculated, and then rinsed with fresh water (amount = 2 x filter cake volume). The washed filter cake was then dried, weighed and used for a meteoric water mobility procedure (MWMP). Finally, the residue was screened to multiple size fractions, and then assayed to determine residual metal contents and distributions.

Overall metallurgical results from the cyanidation test are shown in Table 20 and leach rate profiles shown in Figure 41. The results show that sample PM-1 was amenable to direct agitated cyanidation treatment, at a 78% -75µm (200 mesh) grind size. Gold and silver recoveries were 80.9 % and 62.3 % respectively in 72 hours of leaching. The gold recovery rate was moderate with extraction substantially complete in 24 hours, and the recovery curve starting to flatten out between 6 and 24 hours. Silver recovery rate was somewhat slower, and still progressing when the testwork was terminated at 72 hours. Longer leach times beyond 72 hours would likely improve silver recovery but not gold.

<u>Metallurgical Results</u>	<u>Sample PM-1</u>	
	<u>Au</u>	<u>Ag</u>
Extraction: % of total		
in 2 hours	64.7	27.7
in 6 hours	72.0	44.3
in 24 hours	78.6	52.6
in 48 hours	80.0	58.1
in 72 hours	80.9	62.3
Extracted, g/mt ore	1.90	43
Tail Assay, g/mt ore <sup>1)</sup>	0.45	26
Calc'd. Head, g/mt ore	2.35	69
Average Head, g/mt ore <sup>2)</sup>	2.23	72
NaCN Consumed, kg/mt ore	0.60	
Lime Added, kg/mt ore	1.3	
Final pH	10.7	
Natural pH (40% solids)	8.4	

1) Average of triplicate tail assays.  
2) Average of all head grade determinations.

*Table 20 Overall metallurgical results, mechanically agitated cyanidation test*

Cyanide consumption was moderate (0.60 kg/tonne ore, 1.2 lb/ton ore). Lime requirement for pH control was low (1.3 kg/tonne ore, 2.6 lb/ton ore).



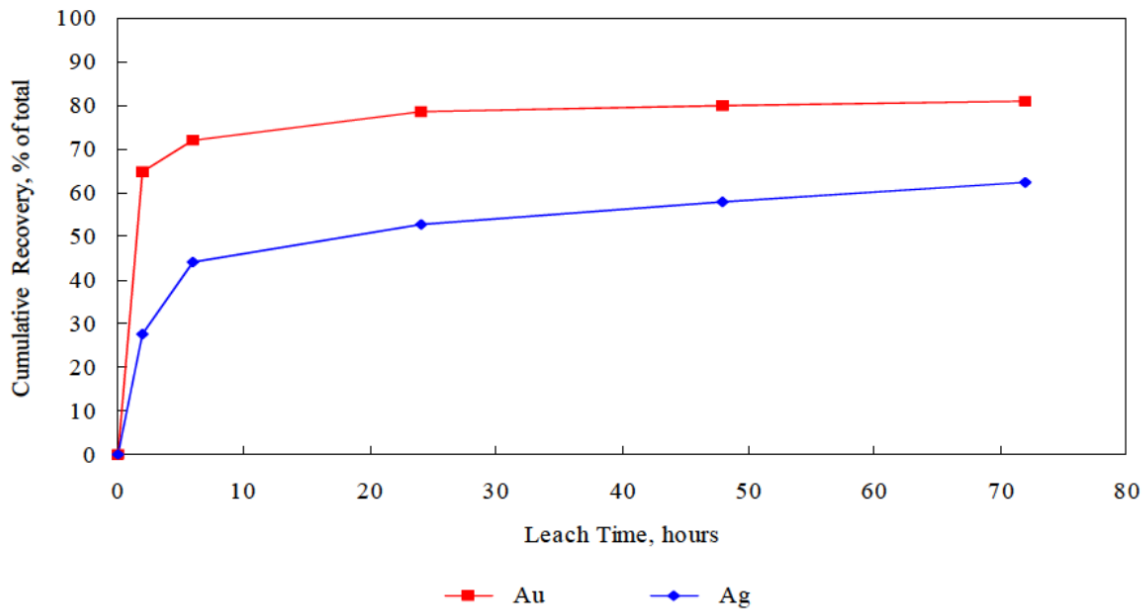


Figure 41 Gold and silver leach rate profiles, mechanically agitated cyanidation test

Analysis of the different size fractions (head and tail screen analysis) showed that both the contained gold and silver values were fairly evenly distributed throughout the various size fractions, with a minor enrichment in the fines (-75µm) fraction (Table 21).

Size Fraction	Weight, %	Cum. Wt., %	Assay, g/mt		Distribution			
					Au		Ag	
			Au	Ag	%	Cum. %	%	Cum. %
HEAD SCREEN ANALYSIS RESULTS								
+150µm	3.7	3.7	1.38	57	2.2	2.2	2.9	2.9
-150+106µm	7.9	11.6	1.42	57	4.9	7.1	6.2	9.1
-106+75µm	10.4	22.0	1.41	60	6.4	13.5	8.5	17.6
-75µm	78.0	100.0	2.55	77	86.5	100.0	82.4	100.0
Composite	100.0		2.30	73	100.0		100.0	
TAIL SCREEN, CYANIDE LEACHED RESIDUE								
+150µm	2.5	2.5	0.69	28	3.9	3.9	2.7	2.7
-150+106µm	8.4	10.9	0.40	24	7.5	11.4	7.7	10.4
-106+75µm	10.3	21.2	0.34	20	7.8	19.2	7.9	18.3
-75µm	78.8	100.0	0.46	27	80.8	100.0	81.7	100.0
Composite	100.0		0.45	26	100.0		100.0	
RECOVERY BY SIZE FRACTION DATA, CYANIDATION TEST								
Size Fraction	Weight, %		Assay, gAu/mt		Au Recovery, %	Ag Recovery, %		
	Head	Tail	Head	Tail				
+150µm	3.7	2.5	1.38	0.69	50.0	50.9		
-150+106µm	7.9	8.4	1.42	0.40	71.8	57.9		
-106+75µm	10.4	10.3	1.41	0.34	75.9	66.7		
-75µm	78.0	78.8	2.55	0.46	82.0	64.9		
Composite	100.0	100.0	2.30	0.45	80.4	64.4		

Table 21 Head and tail screen analysis results, and recovery by size fraction data

Recovery by size fraction, showed that gold recovery was substantially higher in the -75µm (-200 mesh) size fraction with 82% of the gold being recovered, compared to a gold recovery of 50% in the +150µm (+100 mesh) size fraction. Similar, albeit less pronounced, recovery patterns were also

observed for silver. These results suggest that finer grinding could potentially improve gold and silver recoveries.

#### 13.3.4 Zinc Precipitation Testwork

Pregnant solution generated during the mechanical agitation testwork was used for a single zinc precipitation test. After filtration, the pregnant solution was analysed for Au, Ag, Cu, NaCN and pH. The solution was refiltered through a 0.45µm filter to remove all suspended solids. Under vacuum conditions air was removed from the solution container and the dissolved oxygen content of the solution was reduced to 0.5 ppm or less. Zinc (merrillite zinc) was then added at a 5:1 weight to weight (wt to wt) ratio of zinc to dissolved Au, Ag and Cu. Lead nitrate was added to the solution to achieve a Pb:Zn ratio of 1:10 (wt to wt) were added to the solution, and then the solution was agitated for 15 minutes.

After 15 minutes, the solution was filtered to remove suspended metals, and the barren solution was analysed for Au, Ag and Cu to determine recoveries (Table 22). A sample of the solution was submitted for environmental analysis (Section 13.3.5).

Pregnant Solution					Reagents		Barren Solution			Recovery (%)		
NaCN g/L	pH	Au mg/L	Ag mg/L	Cu mg/L	Zn:Metal Ratio	Pb(NO <sub>3</sub> ) <sub>2</sub> Added, g	Au mg/L	Ag mg/L	Cu mg/L	Au	Ag	Cu
0.90	10.7	1.67	38.5	27.5	5.00	0.123	0.03	0.13	27.9	98.2	99.7	<0.1

*Table 22 Overall metallurgical results, zinc precipitation testing. "Metal" includes Au, Ag and Cu.*

Results show that zinc precipitation was effective at recovering dissolved gold and silver from the pregnant solutions with recoveries of 98.2% and 99.7% respectively. The laboratory report identifies the need for further testwork to optimise the reagent additions, that may substantially lower the required quantity of reagents.

#### 13.3.5 Leaching Product Environmental Analysis

Samples of the washed leach tailings (MWMP) and of the barren leach solution were tested for NDEP (Nevada Division of Environmental Protection) Profile II environmental analysis. This entailed analysis at WETLab for the NDEP II constituents and WAD (weak acid dissociable) cyanide.

The analysis results are compared against the NDEP drinking water maximum contamination limits, and a number of analysed constituents identified that exceed the limits, particularly WAD cyanide, antimony and lead (among others). Notably, concentrations in the barren solution were generally much higher than in the MWMP extract.

Further testwork, including cyanide detoxification testing, would be recommended to better determine optimal mitigation processes

#### 13.3.6 Conclusions from testwork

The "first pass" metallurgical testwork on the sample from the Prospect Mountain Property shows that the material is amenable to cyanide leaching, with gold recoveries in excess of 80% over moderate leach times (substantially complete in 24 hours). Recoveries for silver were lower and leach times longer. The testwork showed moderate cyanide consumption, and that zinc precipitation was effective for recovering the dissolved metals from the pregnant solution.

It should be noted that the testwork was conducted on material that has been sitting on dumps exposed to the elements for many years and will not be representative of in-situ underground ores. Notwithstanding this, there is scope for optimisation of the results, in particular in relation to the grinding (as the fines contained a higher proportion of the gold and silver) and the reagent chemistry.

## 14 Mineral Resource Estimates

There are no current Mineral Resource estimates for the Property.

## 15 Mineral Reserve Estimates

This is an early-stage exploration project. There are no Mineral Reserve estimates for the Property.

## 16 Mining Methods

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 17 Recovery Methods

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 18 Project Infrastructure

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 19 Market Studies and Contracts

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 20 Environmental Studies, Permitting and Social or Community Impact

A valid Plan of Operations allowing mining activities is in place for the Property. The plan and associated environmental, social and community impact studies are summarised in Section Permits5.2.

## 21 Capital and Operating Costs

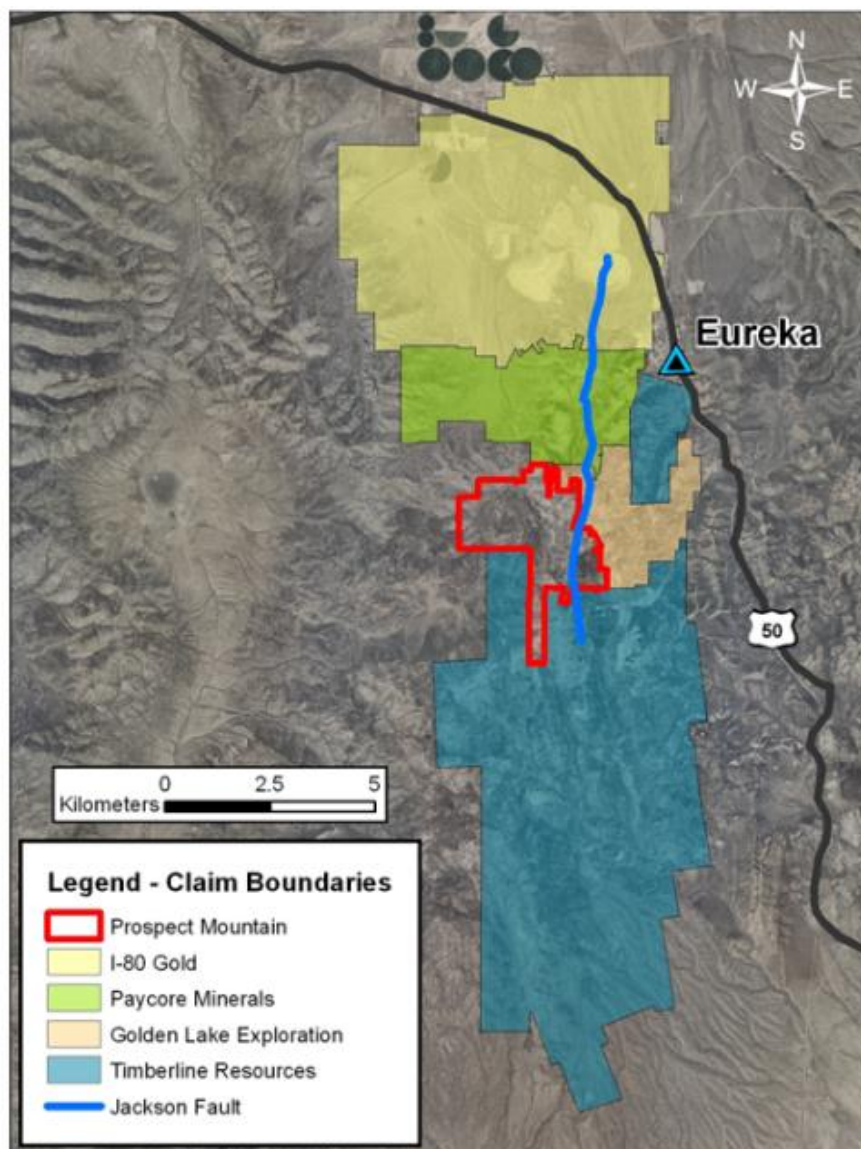
This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 22 Economic Analysis

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 23 Adjacent Properties

The Property is surrounded to the North, East and South by companies that are actively exploring in the district (see Figure 42).



*Figure 42: Shows the relationship of the Prospect Mountain Property to the surrounding mining properties, highway 50 and the town of Eureka. Prepared for the Company by Elevation Technical Services (2023)*

**FAD Property – Paycore Minerals Inc.** Lying Immediately to the north of the Property, the FAD property covers the northern strike extents of the Prospect Mountain CRD mineralisation and is centred on the Historic Ruby Hill Mine and it's assumed downthrown sulphidic offset, the FAD deposit. There is no extant resource estimate for the deposit, but it contains one of the few CRD sulphide occurrences known in the district. It was discovered in the 1930's through surface diamond drilling. The FAD shaft was sunk and completed in 1945. Exploration works ceased due to water flooding in 1948. In the 1960's, at considerable expense, Hecla sealed the shaft and underground development, to enable the re-commencement of exploration. Paycore has announced an



acquisition approach by i-80 Gold Corp. at the time of writing of this Technical Report. Interested readers are referred to their websites and the applicable technical report for more information.

**Ruby Hill Property – i-80 Gold Corp.** Situated on the Northern side of the FAD property, i-80's Ruby Hill property, which confusingly does not include the Ruby Hill mine, has been the main centre of production in the region. Homestake developed the Archimedes West open pit in 1998 which was extended by Barrick into the Archimedes East pit when Homestake was acquired at the turn of the century. Mining continued until 2013, when a pit failure caused the closure of the mine. Significant new CRD discoveries have been made near-surface and at depth by the current owners which has renewed interest in the area. Interested readers are referred to their website and the applicable technical report for more information.

**Jewel Ridge Property - Golden Lake Exploration Inc.** On the eastern side of the Prospect Mountain Property lies Jewel Ridge, which contains a large number of historical CRD workings around the Eureka Tunnel and the small historic Carlin style Hamburg open pit. There are no current Mineral Resources or technical reports for the property. Interested readers are referred to their website for more information.

**Lookout Mountain Property - Timberline Resources Corporation.** The Lookout Mountain property lies immediately to the south of the Prospect Mountain Property and covers the southern strike extents of the CRD and Carlin mineralisation trends that run through the Property. Some small historical open pit mines of Carlin style occur on the property at Windfall, Lookout Mountain and Ratto Canyon. A Mineral Resource Estimate on the Lookout Mountain deposit is supported by a current technical report. Interested readers are referred to their website and that technical report for more information.

The Qualified Persons have been unable to verify the information on the Adjacent Properties mentioned above. The details of the adjacent properties and the nature of the mineralisation on those properties is not necessarily indicative of the mineralisation on the Prospect Mountain Property.

## 24 Other Relevant Data and Information

This is an early-stage exploration project. This section is not relevant to the Technical Report.

## 25 Interpretation and Conclusions

The QP (Mr David Pym) has visited the Property and reviewed the available data. The QPs believe the Property has exploration merit, particularly in the light of the recent discoveries by i-80 Gold Corp. at Mineral Point of high grade CRD mineralisation both in the current pit wall and at depth.

The CRD mineralisation in the Eureka area is poorly studied, despite CRD deposits worldwide being important sources of lead and zinc. The anomalously high gold grades (at least in the oxide ores) add an extra layer of attractiveness to the deposit type.

### 25.1 Exploration model

The accepted model for the region is that CRD deposits formed in association with the Cretaceous intrusions, and Carlin type mineralisation formed some 70 Ma later in the Tertiary and overprints the CRD mineralisation.

The following points summarise the current understanding of the exploration model and these are discussed in more detail below:

1. Faulting and fracturing are critical in controlling mineralisation (Disputes over which faults are important).
2. Deposits need to be spatially association with Cretaceous intrusions.
3. Gold enrichment is a product of Tertiary Carlin overprint.
4. Dolomitic units are the preferred host across a wide section of the stratigraphy.
5. Well defined Au, Ag, Cu, Pb, Zn, Sb, Hg, As, Fe, Cd, Bi, Te association in oxide ores  $\pm$  Sn, W, Mo, that may extend in some areas along faults as a halo.

**Structure.** The deposits exhibit a strong structural control, with normal faulting being important, particularly at the intersection of earlier thrust sequences. Precursor fault damage or porosity development through dolomitisation is important for controlling location of mineralisation. The Jackson Fault and its branches have historically been thought critical to mineralisation, due to its spatial association with the major deposits. Later workers (Hoge et al., 2015) have dismissed its importance, but certain assumed branches, particularly the Bowman in the Ruby Hill area and possibly the Lawton branch have been stoped and mined historically. Assumed splays of the fault (Holly, East Archimedes, Williamsburg/Bowman) bracket and dissect the Archimedes pit and appear to have some influence on the shape of the Archimedes orebodies and many cut the intrusion. In general, it is the NW – WNW trending north dipping faults with minor displacements that appear to be critical to mineralisation at Archimedes, Ruby Hill and Prospect Mountain. NE trending faults at Windfall and in the Archimedes pits have some control on the Carlin type orebodies.

**Relationship to Intrusions.** The age of the deposits is uncertain, with most workers assuming penecontemporaneous ages for the CRD mineralisation and crystallisation age of the Cretaceous intrusions (~106Ma). While CRD deposits are spatially associated with Cretaceous intrusions at Mineral Point and Ruby Hill, fault relationships suggest at least some of the mineralisation must be post intrusion (or there was more than one mineralising event). There is good isotopic evidence for a magmatic meteoric mixing model for the ore fluids (Vikre, 1998) and thus mineralisation fits the intrusive related carbonate replacement deposit type. According to (Sillitoe, 2010) CRD deposits exist on a continuum from distal Pb-Zn skarn through to sediment hosted gold mineralisation. While there is unequivocal Zn-Pb skarn mineralisation associated with the Graveyard stock at Mineral Point, the discovery of CRD mineralisation at Hilltop immediately adjacent to the skarn, is perhaps a little too close for the appropriate cooling/mixing to occur for CRD deposits. At Ruby Hill the same situation exists with CRD deposits occurring potentially within the thermal aureole of the Ruby Hill

granodiorite, though reports cannot be verified as most of the Ruby Hill workings are inaccessible. Vikre (1998) invokes 100's of metres of post-ore thrusting southwards along the Ruby Hill aka Buckeye Thrust to explain this problematic relationship. So far at Ruby Hill, no Pb-Zn skarn mineralisation is known but barren skarn is well developed at Ruby Hill. Once again, faults that cut the Ruby Hill granodiorite or skarn zones are also mineralised in places.

**Gold Enrichment.** The accepted model for the region is that Cretaceous CRD deposits formed in association with the intrusions and their anomalously high gold is due to overprinting by Carlin style mineralisation in the Eocene. In the QPs view, there are several problems with this model.

Firstly, there is no need to invoke a later source for the gold in the CRD deposits. As noted by Emsbo et al., (1999) Devonian SEDEX type syn-sedimentary deposits in the northern Carlin trend are gold rich. Gold is found as inclusions in syn-sedimentary pyrite, sphalerite, chalcopyrite and galena indicating substantial gold endowment in the region during the Devonian. Emsbo et al., (2006) speculate that the unique gold endowment of the Carlin district is a product of the reworking of gold from multiple mineralising events since that time. The widespread occurrence of the gold as inclusions in all the sulphides noted by Emsbo et al., (1999) is very similar to the distribution noted by Vikre (1998) in the CRD deposits of the Eureka area. There is primary gold in Pb-Zn veins and skarn mineralisation, indicating magmatic fluids contained gold in the Cretaceous and Jurassic porphyry systems in the area (Hastings, 2008; Vikre, 1998).

Secondly, the evidence for overprinting of CRD mineralisation is weak. Most of the evidence is from observations made by Hastings (2008) in the Archimedes pit of arsenian pyrite overgrowths of skarn minerals and these were not probed to see if they contained gold. There are no equivalent observations of overprinting on CRD sulphide ore by the admittedly very limited studies conducted. Vikre (1998) and Samari and Breckenridge, (2022) report pyrite as early stage and only Vikre mentions arsenian pyrite overgrowths but again at an early stage. While pyrite is one of the main carriers of gold, all of the sulphides contain gold as inclusions. This is borne out in elemental correlations from rock chips and limited drill data where correlations of Au with As, Cu, Pb, Zn, Sb are all high.

**Host Units.** Host rocks for the CRD deposits are primarily dolomites of Cambrian age, but also lower Ordovician limestones. The Eldorado and Hamburg Dolomites host much of the known mineralisation, but apart from structural preparation there is often no indicator as to why the mineralisation occurs where it does in the thick rather monotonous dolomite units. At Ruby Hill, the near-surface mineralisation occurs near the base with the contact of the Prospect Mountain Quartzite (thrust contact – so probably not the stratigraphic base of the Eldorado Dolomite) but can occur anywhere, there is generally no bedding or particular horizon that favours mineralisation. Saying that, Carlin style mineralisation occurs often at the Hamburg Dolomite/Dunderberg Shale contact, this is also a favourable site for CRD style mineralisation. It is not only the limestones that are mineralised, the Dunderberg Shale is also mineralised at Ratto Canyon to the south of the Property, as well as the top of the Hamburg Dolomite. On the Hoosac mountain mineralisation from one historic mine occurred in the Prospect Mountain Quartzite.

On the Prospect Mountain Property, the bulk of the known mineralisation is hosted in the Hamburg Dolomite, with only the Wabash workings being in the Eldorado Dolomite. The Eldorado Dolomite is strongly anomalous in surface rock chips on the Property and makes for an underexplored target.

At Mineral Point CRD and Carlin style mineralisation is spread from the upper part of the Hamburg Dolomite to the Ordovician Pogonip Group.

**Deposit Signature and metal haloes.** There is an Au, Ag, Cu, Pb, Zn, Sb, Hg, As, Fe, Cd, Bi, Te, Co association in oxide ores  $\pm$  Sn, W, Mo. Apart from more regional work by Vikre (1998) looking at zoning patterns using Pb:Zn and Ag:Au ratios, there has been no significant attempts to see if the ore deposits exhibit any elemental halos that could be useful in exploration. There are very few full ICP suite multi-element assays on the Property, namely from 3 Homestake/Barrick RC drillholes and from check samples submitted as part of the QP's site visit. Drillhole HRH1725 intersected an almost complete section of the Hamburg Dolomite overthrust on to Upper Cambrian Windfall formation by the Ruby Hill Thrust. The drilling intersected oxide mineralisation to the east of the Diamond Tunnel entrance in several locations down the hole (Table 14). Elemental signatures are quite distinctive for both mineralisation and lithologies. Au, Ag, Cu, Pb, Zn, Sb, Hg, As, Fe, Cd, V and Hg all spike strongly in the mineralised zones. Co and Ba spiked in relation to the Hamburg Dolomite, but absolute levels are less than those in other units. Bi and Te detection limits were poor but showed elevations in the zones. Mg, La, Cr, Ni, Al, Li are all useful lithological discriminators separating out shales and the Windfall limestones from the dolomite. From the data it can be seen that Hg is probably the best halo to mineralisation, being elevated for 10's of meters around the mineralised zones. Zinc also exhibits "shoulders" on either side of the mineralised zones. The remainder of elements are quite restricted to the mineralisation. In the check samples indium (In) is elevated up to 25ppm, presumably in association with sphalerite originally. More detailed work is required to ascertain if metal halos might be consistently developed.

In summary while there may be questions about the timing of the mineralisation and the origin of the gold, the exploration model is sound, and the outstanding questions do not impact future exploration methodology. The exploration models for the Carlin style and CRD are effectively the same, requiring identification of prospective faults, appropriate trap sights and halo geochemistry.

## 25.2 Exploration Results

During historic production, the Property is likely to have produced > 50,000 oz's of gold, > 1.9 M oz's of silver, > 40,000 t of Pb with unknown quantities of zinc and copper (Tuck, 1970; Nolan, 1962). See Table 4 for tonnage and grade figures. Several internal reports prepared by external consultants have attempted to quantify the exploration potential of the area. In the opinion of the QPs these are not suitable, nor necessarily relevant to the Property as it is currently understood, as the focus for these reports is on the gold potential for Carlin style mineralisation, without considering the additional value-add of the base metal CRD mineralisation.

**Wabash Drilling** The only consistent modern exploration drilling was carried out by EPAR in the Wabash area of the Property. While significant values were intersected in relatively close spaced vertical holes, there was no follow-up drilling or interpretation. The best intersection of 80 ft (24.4m) @ 8.24 g/t Au (0.24 oz/t), 23 g/t Ag (0.67 oz/t) below old production stopes is associated with the Silver Connor Fault. While there is no orientation data to go on, as the holes were all RC, a reasonable assumption of north dipping structures is presented in Figure 43 based on analogy to other historical stopes. This would suggest a possible link between old production stopes. Another interpretation could be sub-vertical zones, in which case the drilling is of very poor orientation to assess the mineralisation. Further work is required to assess the zone.



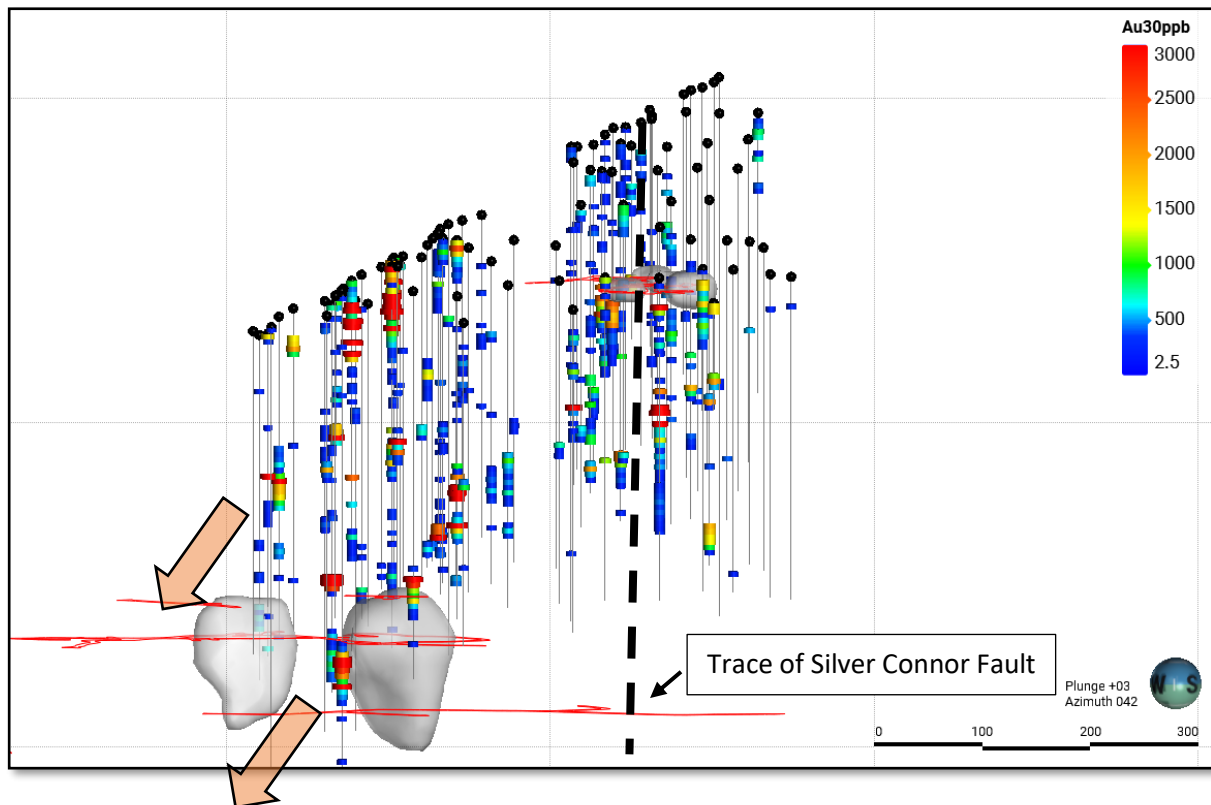


Figure 43 Wabash drilling looking NE, showing relationships to historical stopes and UG development. Arrows show interpreted plunge to the zones. Scale bar is in feet. (NPR, 2023)

**Homestake/Barrick holes.** Data from two holes that occur within the Property boundary is assessed.

HRH1724 drilled through a folded and faulted sequence of Secret Canyon and Geddes limestones before drilling into a dolomite. This could be Eldorado or a thrust slice of Hamburg Dolomite. They got no return over 87' (26.5m) in the dolomite due to intense sanding with only 1' of assay material from this cavity. This is very interesting as it means good potential for the dolomite in this area for Carlin type mineralisation similar to that noted at the Windfall deposit against the fault. The hole had a best assay of 0.55 g/t Au over 5 ft, at the base of the zone without recovery. The Hg values are displayed in Figure 44, showing the uptick in potential halo mineralisation towards the bottom of the hole.

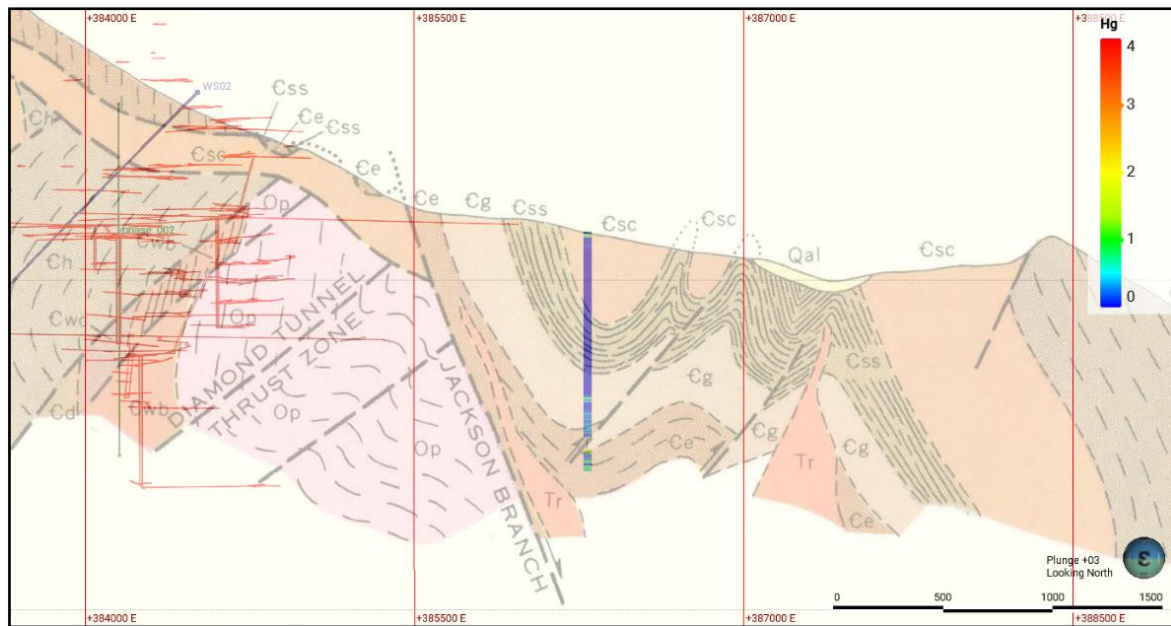


Figure 44 Section from Nolan (1962) showing position of HRH1724 in relation to workings (red) (NPR, 2023)

HRH1725, intersected 2 main zones of gold mineralisation down the hole and two smaller zones. The upper zone intersected 35' (10.67m) @ 4.05 g/t Au, 16 g/t Ag, 0.25% Zn, 0.06% Pb, 0.1% Cu from 570' (173.74 m) downhole in Hamburg Dolomite. A second zone of 55' (16.76m) @ 1.61 g/t Au, 92 g/t Ag, 0.19% Zn, 0.22% Pb, 0.02% Cu is intersected from 1175' (358.14m) downhole. A third zone of 10' (3.05m) @ 1.62 g/t Au, 140 g/t Ag, 0.78% Zn, 0.29% Pb, 0.19% Cu is intersected from 1310' (399.3m) downhole. Lead and silver contents are increasing downhole. Similar to HRH1724 this occurs on the east side of the Jackson Fault in a completely new area and is an important exploration target.

Figure 45 shows the location of the hole in relation to old workings and the Jackson Fault.

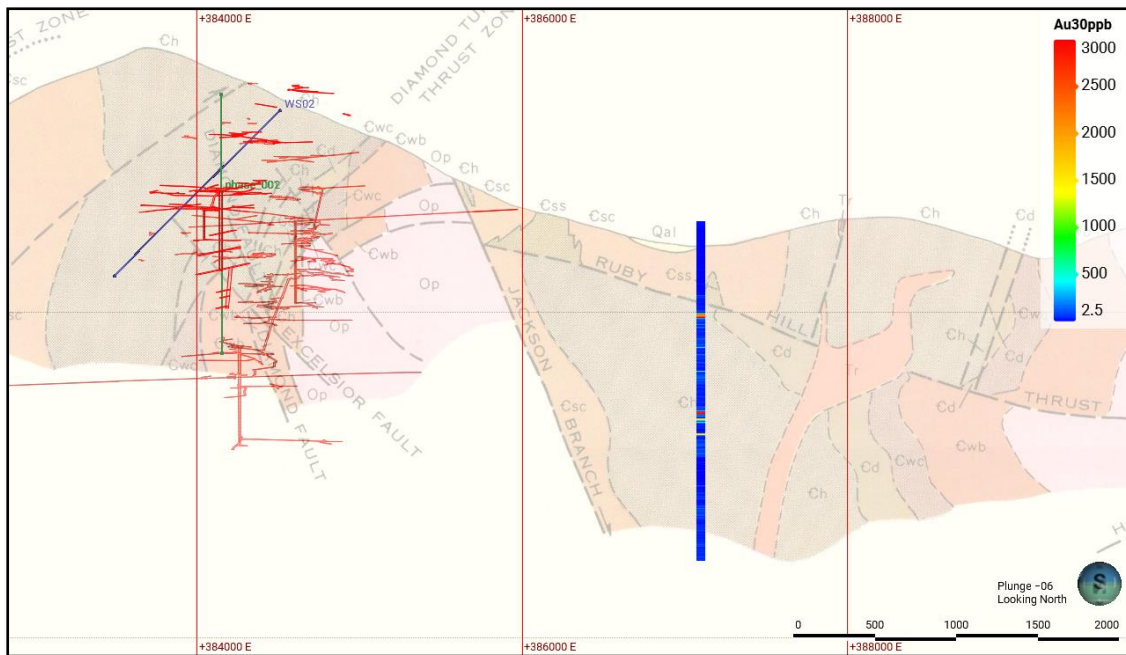


Figure 45 HRH1725 is shown on a section from Nolan (1962). Mineralisation is below the Ruby Hill thrust. The dip of the Hamburg Dolomite must be west rather than east as shown here as Dunderberg Shale and Windfall Formation is intercepted at the bottom of the hole. Note hole is projected off section. (NPR, 2023)

**Surface Rock chip Sampling.** The rock chips taken on the Property during the Homestake/Barrick JV in some ways best demonstrate the potential of the Property. The combination of modern sampling in conjunction with minor historical shafts and adits, show considerable additional surface potential in addition to mineralisation developed in the historical workings. A principal component (PC) analysis shows remarkable covariance between base metals gold and silver. It is plotted in Figure 46 and showed the upper plate of the Diamond Thrust and the Silver Connor Fault as being major components controlling mineralisation. On the NW slope of Prospect Ridge the structural controls are uncertain, but the rocks consist mostly of the upper part of the Eldorado Dolomite on the northern side of the Silver Connor Fault.

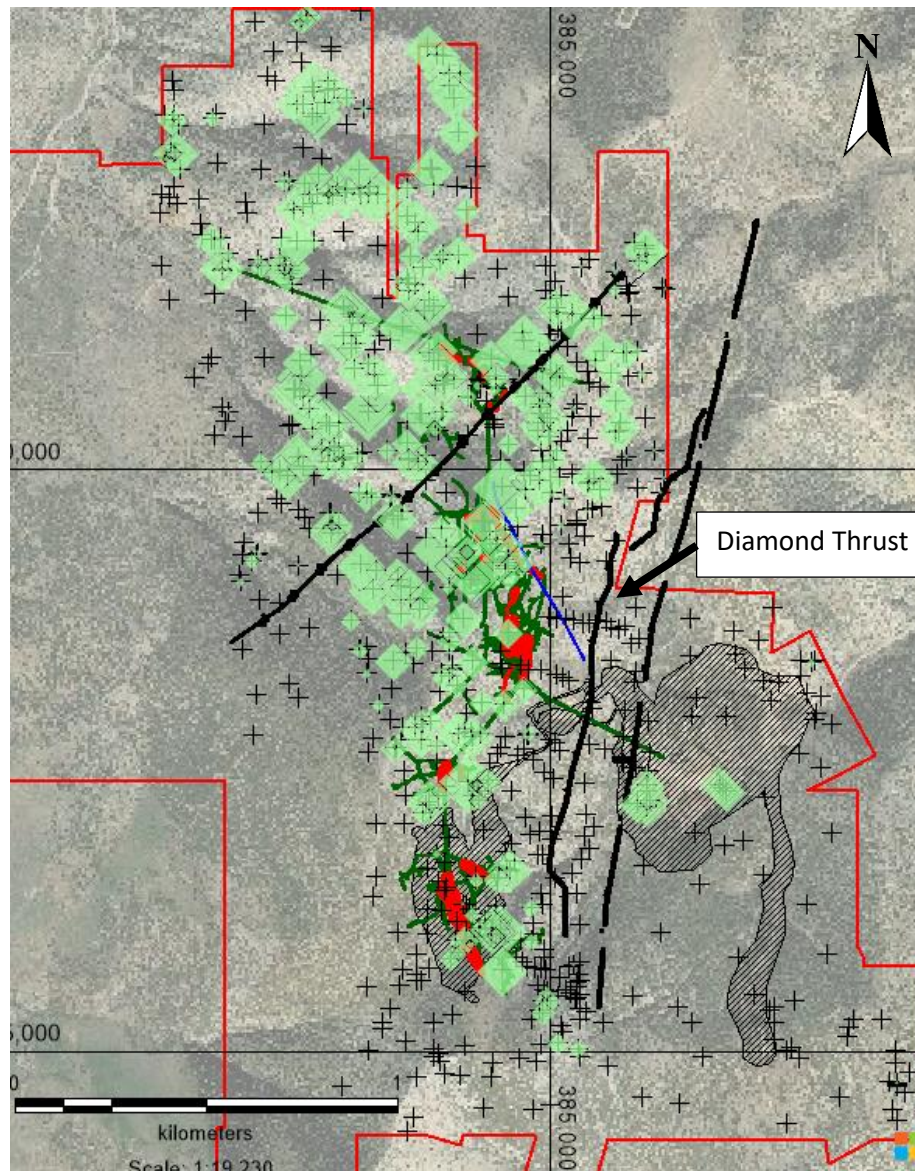


Figure 46: PC1 component of surface rock chip database, highlighting areas of interest. The values are dimensionless and thus a legend is not provided. Note the clustering over existing stopes in red and the wide-open surface potential of the rock chips west and in the overplate of the Diamond thrust front. (NPR, 2023)



## 26 Recommendations

### 26.1 Data Management and Compilation

The Company has done no active work on the Property, excepting data compilation and review. It is recommended that a database system is setup prior to commencing exploration works to make sure that data is compiled and managed in an appropriate fashion.

### 26.2 Company Procedures

Existing logging procedures were briefly reviewed in the site visit and an appropriate Standard Operating Procedure (SOP) is in place for the handling of drillcore. This should be formalised into a working document and training given to any new hires, to make sure there is a consistent and considered approach to handling not just drillcore, but other exploration procedures as well. It is recommended that an onsite SOP for Environmental, Social and Governance (ESG) be established before operations commence.

#### 26.2.1 Core storage and security

There is currently very little core or RC chips associated with the Property. The Company has modern logging facilities in Ely, but core storage will need to be established whence the Company commences drilling.

#### 26.2.2 Future Drilling and QA/QC Procedures

It is recommended that the Company get an appropriate set of standards in place before commencement in drilling and also a handheld XRF for assessment of core prior to assaying.

### 26.3 Exploration

The Property is still at a basic level of exploration. Prior work has focused only on extensions to historical workings, but in the QPs view the potential of the Property is much greater than that. In the surface rock chip sampling programme, out of 940 non-dump samples, 140 assayed > 1 g/t Au with the highest value being 33.8 g/t Au. The average value of all 940 samples is 0.82 g/t Au, 43 g/t Ag, 0.19% Cu, 0.19% Pb, 0.13% Zn covering an area of 3.41km<sup>2</sup>.

The first two phases of exploration involve firstly developing a robust exploration model and then iteratively testing and refining the model with the aim of discovering economic precious and base metal mineralisation on the Property.

The historical underground development, while completely unsuitable for production, provides an excellent piece of infrastructure to cover large amounts of the Property with channel sampling at multiple levels. Channel sampling with handheld saws is a low-cost methodology, which is equivalent to drilling that could potentially yield large exploration dividends. The exploration story of the EMEA stope is a classic example; historical drifting finished in iron-stained dolomite and the geologist of the day was convinced new ore would be found ahead. New drifting subsequently found the high grade EMEA stope. With no systematic assaying of the tunnels completed to date, this represents low hanging exploration fruit and an opportunity to refine the exploration model. At the same time, detailed fault mapping will feedback to the 3d model and aim to predict drilling targets in the near mine area.

An extended programme of surface sampling is proposed in conjunction with geophysics to further refine drill targets. Only then a systematic drill programme is recommended both underground and in surface drilling to try to locate new areas of mineralisation and extensions of existing mineralisation.

The initial exploration programme should consist of two phases:

- Phase 1 focuses on:
  - UG channel sampling and mapping
  - Completion of 3d structural model
  - Geophysics
  - Surface soil sampling of whole unpatented claim area
  - Dump and waste rock delineation and initial test work
  - Further UG rehabilitation on 00 (main) level
  - Test UG drill campaign on structural model
  - Permitting for phase 2
- Phase 2 focuses on:
  - Surface drilling of soil and structural anomalies
  - Further UG drilling of structural anomalies
  - Some testing of extensions to mineralisation in HRH1725, east of Property

Some of the work in Phase 2 is dependent on filing a Notice to allow for surface drilling in areas outside of the Plan of Operations. Phase 1 is mostly data gathering in preparation for more detailed drilling in Phase 2. At the end of Phase 1 the Company will be in a position to plan the details and extents of Phase 2 drilling. At the end of Phase 2, the Company will be in a position to make a decision on what exploratory and development work is required to further advance the property.

### 26.3.1 Budget and Timeline

Budget	Description	Budget Estimate	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
<b>Phase 1</b>	Finish model and Historical data compilation (mostly completed)								
	UG channel sampling for 00 level, at least double if silver connor open	\$ 55,000							
	MT survey plus gravity, UG lidar.	\$ 300,000		??					
	Surface sampling programme - including gold and silver assays	\$ 60,000							
	UG restoration south of shaft 1 on 00 level	\$ 300,000							
	UG model testing with selected drilling - 1000 m	\$ 350,000							
	Dump sampling	\$ 5,000							
	Dump assay and initial testwork	\$ 15,000							
	Dump production testwork	\$ 50,000							
	Interpretation								
	Permitting for surface drilling and other works	\$ 50,000							
<b>Total</b>		<b>\$ 1,185,000</b>							
<b>Phase 2</b>	Further surface and UG drilling based on geophysics and Phase 1 - 2000m	\$ 700,000							
	Surface drilling follow-up to HRH - 1000m	\$ 350,000							
	Interpretation and assays return								
	Further 4000 m of drilling on success in 1 and 2	\$ 1,400,000							
<b>Total</b>		<b>\$ 2,450,000</b>							

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## Appendix A – Certificate of Qualified Persons

TOBY A. L. STRAUSS, Ph.D., CGeol., EurGeol  
MERLYN CONSULTING LTD  
2 Merlyn Road  
Ballsbridge  
Dublin 4, DO4 Y2E2  
Ireland

I, **Toby A. L. Strauss** do hereby certify that:

1. I am a consulting geologist, principal, and Director of Merlyn Consulting Ltd, Dublin, Ireland
2. I graduated with B.A. (Hons) degree from Trinity College, Dublin in 1993, and an M.Sc. Degree in Economic Geology from Rhodes University in South Africa in 1996. I was awarded my Ph.D. in Geology from Rhodes University in South Africa in 2004.
3. I am a Chartered Geologist (CGeol #1001939) through the Geological Society of London since 2012 and a European Geologist (EurGeol #1010) through the European Federation of Geologists since 2012.
4. I have practiced as a geologist continuously for 29 years since my initial graduation from University and have extensive experience in mineral exploration, mining and evaluation of, base and precious metal deposits of various types, including intrusive related hydrothermal Au-Cu deposits, orogenic gold deposits, sediment hosted Cu-Au deposits, kimberlites and magmatic sulphide deposits.
5. 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 a professional association (as defined and recognised in NI 43-101) and past relevant work experience, I fulfil the requirements to be “qualified person” for the purposes of NI 43-101.
6. I am jointly responsible for all sections of this Technical Report titled “NI 43-101 Technical Report on the Prospect Mountain Property, Eureka County, Nevada, USA” and dated April 10, 2023 relating to the Prospect Mountain Property (the “Technical Report”).
7. I have not yet visited the Prospect Mountain Property.
8. I have read the Technical Report, NI 43-101, the Companion Policy 43-101CP (“NI 43-101CP”), and Form 43-101F1, and the Technical Report has been prepared in compliance with the Instrument and supporting documents.
9. At the effective date of this Technical Report. to the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am Independent of North Peak Resources Ltd, the Vendor and the Prospect Mountain Property according to the criteria stated in Section 1.5 of NI 43-101 and NI 43-101CP.
11. I have not had any prior involvement with the Prospect Mountain Property that is the subject of the Technical Report.
12. The effective date of this Technical Report is April 10, 2023.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

(signed) “**Toby Strauss**”

**Toby Strauss, CGeol, EurGeol**

Signing date: April 10, 2023



DAVID E. PYM, M.Sc., CGeol.  
LTI ADVISORY LTD  
Suite 7, Hawkstone House  
Valley Road  
Hebden Bridge  
United Kingdom HX7 7BL

I, **David E. Pym** do hereby certify that:

1. I am a consulting geologist and principal of LTI Advisory, Hebden Bridge, UK
2. I graduated with B.Sc. Geology degree from University of Queensland, Australia in 1990, and an M.Sc. Degree in Ecological Economics from University of Leeds, UK in 2018.
3. I am a Chartered Geologist (CGeol #1022844) through the Geological Society of London since 2014.
4. I have practiced as a geologist continuously for over 30 years since my initial graduation from University and have extensive experience in mineral exploration, mining and evaluation of, base and precious metal deposits of various types, including porphyry copper gold, epithermal gold, IOCG, VMS, magmatic nickel sulphide, SEDEX Pb-Zn, carbonate replacement deposits including zinc silicates, sediment hosted copper and orogenic gold.
5. 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 a professional association (as defined and recognised in NI 43-101) and past relevant work experience, I fulfil the requirements to be “qualified person” for the purposes of NI 43-101.
6. I am jointly responsible for all sections of this Technical Report titled “NI 43-101 Technical Report on the Prospect Mountain Property, Eureka County, Nevada, USA” and dated April 10, 2023 relating to the Prospect Mountain Property (the “Technical Report”).
7. I visited the Prospect Mountain Property on 21 – 23 February, 2023.
8. I have read the Technical Report, NI 43-101, the Companion Policy 43-101CP (“NI 43-101CP”), and Form 43-101F1, and the Technical Report has been prepared in compliance with the Instrument and supporting documents.
9. At the effective date of this Technical Report. to the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am Independent of North Peak Resources Ltd, the Vendor and the Prospect Mountain Property according to the criteria stated in Section 1.5 of NI 43-101 and NI 43-101CP.
11. I have not had any prior involvement with the Prospect Mountain Property that is the subject of the Technical Report.
12. The effective date of this Technical Report is April 10, 2023.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

(signed) “*David Pym*”

David Pym, CGeol

Signing date: April 10, 2023

