

**NI 43-101 Technical Report**  
**Sandman Gold Property, Nevada, USA**  
**Preliminary Economic Assessment**

**Prepared for:**

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# 1. SUMMARY

## 1.1 Introduction

This technical report (“**Report**”) has been prepared for Borealis Mining Company Limited (“**Borealis**” or the “**Company**”) in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“**NI 43-101**”) and Form 43-101F1. The purpose of this Report is to provide an updated NI 43-101–compliant Technical Report and Preliminary Economic Assessment (“**PEA**”) for the Sandman Gold Project (the “**Project**”), located in Humboldt County, Nevada, United States of America.

The Company acquired the Project from Gold Bull Resources Corp. (“**Gold Bull**”) on March 13, 2025. This Report supports updated technical disclosure by the Company following the acquisition and reflects changes in economic assumptions since the completion of the previous technical study.

The Report is classified as a Preliminary Economic Assessment, as defined by NI 43-101. The economic analysis presented herein is preliminary in nature and is based on Indicated and Inferred Mineral Resources only. Inferred Mineral Resources are considered too speculative geologically to allow the application of economic considerations sufficient to enable their classification as Mineral Reserves. Accordingly, there is no certainty that the results of this PEA will be realized. This Report should not be considered a pre-feasibility or feasibility study.

This Report relies extensively on the independent technical report titled “2023 Preliminary Economic Assessment (Scoping Study) & Mineral Resource Estimate” (the “**2023 Sandman Technical Report**”), which was prepared in 2023 for Gold Bull by Mr. Jerod Eastman, Mr. Steven Olsen, and Mr. Carl Defilippi. The 2023 Sandman Technical Report forms the primary technical basis for the geological interpretation, Mineral Resource Estimate, mine plan, and supporting technical data contained in this Report.

No additional exploration, drilling, metallurgical testing, or engineering work has been completed on the Project since the completion of the 2023 Sandman Technical Report. As a result, the Mineral Resource Estimate and production profile presented herein remain unchanged from the 2023 study. Updated sections of this Report focus on the economic impact of current market conditions, including revised capital and operating cost estimates reflective of recent contractor pricing, labor availability, and regional cost benchmarks in Nevada, together with updated gold and silver price assumptions.

This Report was prepared at the request of the Company by Mr. Jerod Eastman, President of DJ 6E Consulting LLC, who is a Qualified Person as defined by NI 43-101. The effective date of this Report is January 5, 2026.

## 1.2 Property Location and Ownership

The Project is in Townships 36 and 37 North, Ranges 35 and 36 East, Mount Diablo Meridian, Humboldt County, Nevada, USA. The Project is situated south of the Slumbering Hills and west of the Tenmile Hills, circa 24km northwest of the mining town of Winnemucca, Nevada (**Figure 8**). The Project lies 23km south of the Sleeper Mine.

The Project is accessed by driving west from the town of Winnemucca on Jungo Road for 15km, and then an additional 8km to the north on dirt roads that lie largely within the property boundaries (*Figure 4*).

The Project is located within Humboldt County, Nevada, and generally described as 112km<sup>2</sup> of consolidated checker-board lands consisting of Bureau of Land Management (BLM) and private ownership sections. The Project is made up of 761 unpatented lode mining claims (ABLE, NAP, REST, SAM, SAN (445) and SM (316)) and approximately 6km<sup>2</sup> of private land holdings in Humboldt County, Nevada. The underlying title for the mining claims and the private land is held in the name of Sandman Resources Inc, which is 100% owned by the Company.

### 1.3 Property History

The Project has been sporadically explored for gold since 1987, however most of the exploration to date has focussed on the outcropping gold occurrences, which form the known resources. The majority of the historical drilling was drilled to depths less than 100m.

Gold mineralization was first discovered at the Project in 1987 by Kennecott in an outcrop at North Hill. By July of 1987, Kennecott and Santa Fe formed the Sandman Joint Venture ("**SMJV**") to commence the first known exploration program on the Project.

The work conducted within the joint venture through to 1994 led to the discoveries and partial definitions of the Southeast Pediment, Silica Ridge, and North Hill gold deposits, as well as the identification of the Adularia Hill, Basalt Hills, Basalt Fields, and Abel Flat exploration target areas (*Figure 8*).

In 1995, claims covering the mineralization at North Hill were dropped and the SMJV property was offered to interested companies. On May 20, 1996, Western States Mining Corporation ("**WSMCC**") contracted an option-to-purchase agreement on the Project with Kennecott and Santa Fe.

In 1997, Kennecott and Santa Fe ended their joint venture and later conveyed their individual holdings at the Project to WSMCC, subject to royalty interests.

WSMCC and NewWest Gold Corporation ("**NewWest**") subsequently conducted extensive exploration of the property, including rock chip and soil sampling, geophysical surveying, trenching, drilling, and metallurgical testing. WSMCC also excavated a test pit at Southeast Pediment measuring roughly 60m long by 15m wide by 5m deep. A 1,067-ton bulk sample of relatively high-grade mineralization was mined and shipped to the Twin Creeks mine of Newmont for milling and leaching.

In 2005 NewWest acquired the property from WSMCC and employed MDA to prepare a NI 43-101 report.

The work undertaken by MDA culminated in a maiden NI 43-101 compliant Mineral Resource estimate which covers the projects of Abel Knoll, Southeast Pediment, Silica Ridge and North Hill and reported a combined Measured and Indicated Resource of 8,033kt @ 1.17g/t gold for 271.9kcozs of gold plus an additional Inferred Resource of 1,418kt @ 0.93g/t gold for 38kcozs of gold.

In 2007, Fronteer acquired the Project from NewWest and then in 2008, formed a joint venture with Newmont. In 2010, the Bureau of Land Management (BLM) approved the exploration plan of operations to allow for exploration drilling activities over the Project.

In 2011, Newmont acquired Fronteer and initiated Stage 2 studies and reporting, including drilling 364 holes within the Project. In addition, Newmont began Stage 3 initial permitting (comprehensive Plan of Operation), including biological surveys, archeological surveys, waste characterization, hydrogeological water well installation and aquifer testing, and metallurgical studies.

From 2012 to 2020 the exploration activity on the Project was largely restricted to desktop studies and technical reviews which were completed by Newmont staff and contractors.

The Project was purchased from Newmont by Gold Bull on December, 14, 2020. During their ownership, Gold Bull drilled 33 reverse circulation (RC) holes for a total of 5805m in 2021 and drilled 24 RC holes for a total of 4954m in 2022. Due to a change in the gold market sentiment, after completing the two drill programs, Gold Bull switched its focus from adding ounces to investigating the economic viability of extracting the known gold resources via initiating the 2023 PEA.

The Project was subsequently purchase by the Company through a corporate acquisition of its parent company, Gold Bull, on March 13, 2025. The Project has been subject to desktop study and geological field review since acquisition.

## 1.4 Geology and Mineralization

The gold deposits at the Project are interpreted to belong to a series of deposits that are dated to be between 14 and 17 million years old. Many of these deposits have formed on major regional faults or rift zones and are interpreted to have formed as a result of the same geological event: a hot spot that was at the time underlying south-east Oregon and is now underlying the Yellowstone Caldera in Wyoming.

The Project deposits are proximal to a large regional fault known as the central Northern Nevada Rift (“**NNRC**”) and located some 23km south of the significant Sleeper deposit on the same interpreted major structure.

The Southeast Pediment, Silica Ridge, North Hill, and Abel Knoll Au+Ag mineralization at the Project is all classified as low-sulfidation, quartz-adularia, epithermal deposits. The mineralization is hosted by Tertiary volcanic rocks, primarily in tuffaceous units, andesite porphyry, tuffaceous sedimentary units, and basalt. North-western Nevada contains a number of similar middle Miocene Au-Ag deposits that occur in silicic volcanic or subvolcanic rocks, including the Sleeper, Ten Mile, Midas, National, and Hog Ranch deposits (Conrad et al., 1993).

In general, higher-grade gold mineralization at the Project can be either stratigraphically controlled along contacts between basalt flows, interbedded fluvial conglomerates and tuffaceous rocks (e.g., North Hill Deposit), or structurally controlled as lens-shaped pods, with high-continuity, lower-grade disseminated gold in sediments and volcanics (e.g., Silica Ridge and SE Pediments Deposits). Quartz-adularia alteration dominates the mineralized zones, whereas propylitic, argillic, and sericitic alteration are associated with the known resource areas more distally.

Much of the property area is covered by windblown sand and pediment deposits which effectively cover the underlying prospective host rocks which host the gold mineralization. Mapping, exploration drilling, and shallow auger drilling through the sand indicate that they are underlain by the hosts to the gold mineralization of Tertiary tuffaceous rocks and andesite, which in turn overlie Late Triassic to early Jurassic metasedimentary elastic and subordinate carbonate rocks (*Figure 8*).

## 1.5 Exploration Information and Data Verification

The 2022 and 2023 PEA mine costs were compiled based on similar mining operations in the district over the past 2 years (a period of inflated costs due to COVID pandemic related price increases). This 2026 PEA update utilized similar data but was supplemented by recent (late 2025) quotes from contractors for the re-start of the Borealis Mine (Hawthorne, NV, also owned by Borealis Mining). Conservative gold and silver recoveries were applied based on reasonable local recoveries in Nevada and with reference to historical test work.

For further information on Drilling Techniques, Sampling and Sub-sampling Techniques and Sample Analysis Method applied to the 2021 MRE, refer to “Mineral Resource Estimate and NI 43-101 Technical Report” published by Gold Bull on March 31 2021 with effective date January 20 2021.

Since the announcement of the original MRE, Gold Bull drilled an additional 57 reverse circulation drill holes at the Project and the results of these drill holes were incorporated into the 2023 PEA Technical Report. Borealis has not conducted any additional drilling since acquisition in 2025.

## 1.6 Mineral Resource Estimate

Gold Bull published the Mineral Resource Estimate February 2, 2021 and the follow-up NI 43-101 report was published March 31, 2021, with January 20 2021 as the effective date of the report. The MRE was derived from 249 historical surface diamond drill holes and 650 RC drill holes totaling 20,201m of diamond drilling and 75,573.3m of RC drilling. The MRE comprised four deposits North Hill, Silica Ridge, Southeast Pediment and Abel Knoll. The MRE was constrained with an open pit design which was used for the purpose of restricting the MRE to gold mineralization that has “reasonable prospects” for eventual economic extraction. The gold cut-off grade of 0.15g/t oxide rock and 0.30g/t transition/fresh (transition/unoxidized rock) was applied to the MRE based on estimated processing costs and gold recoveries which were commensurate with a gold price of approximately USD1,800/oz.

For further information on the Project MRE, including Estimation Methodology, Classification, Mining and Metallurgical Methods and Parameters, Conclusions and Recommendations refer to “Mineral Resource Estimate and NI 43-101 Technical Report” published by Gold Bull on March 31, 2021, with an effective date of January 20, 2021.

Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
<b>INDICATED</b>				
Oxide	0.15	12991	0.63	265,100
Fresh/Unoxidized	0.30	5559	0.94	167,900
<b>INFERRED</b>				
Oxide	0.15	2377	0.46	35,500
Fresh/Unoxidized	0.30	869	0.91	25,300
<b>Total Indicated</b>		<b>18550</b>	<b>0.73</b>	<b>433,000</b>
<b>Total Inferred</b>		<b>3246</b>	<b>0.58</b>	<b>60,800</b>

**Table 1: Table of summary totals for the Project Inferred and Indicated Mineral Resource estimate.**

*Note: In accordance with NI 43-101 recommendations, gold grades for Indicated and Inferred Resources are rounded to two significant figures and the number of metric tonnes are rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects.*

The PEA economic study in this report (sections 16-18, 21-22) includes the entire Mineral Resources listed above.

The water table was defined by first water intercepted in the drill holes which were recorded in the geological drill logs, this is believed to be a conservative estimate suitable for PEA study. There is not a current hydrogeology study defining the current water table surface area modelled, this work needs to be included in future feasibility studies.

Silver was not included in the 2021 Mineral Resource Estimate because the element was not routinely analyzed in prior explorers' laboratory analysis. For the PEA, a silver grade was applied for those domains which contain silver analysis within the defined gold domains.

Gold Bull drilled an additional 57 reverse circulation drill holes in 2021 and 2022 for 10,759m (35,298 ft) and the results of these drill holes were not included in the prior 2021 MRE. Minor edits to the mineralization domains (no material changes to report) were made and were included in the 2023 PEA study work along with the creation of new constrained open pit designs for the PEA mine scenario. Further stress test constraints were also completed by producing an entire pit model (above and below water table) to compare and ensure integrity of the evaluated in-pit modelled tonnages and grade above the water table. No changes were made to the domains or pit shells for this 2026 PEA.

## 1.7 Conclusions and Recommendations

The geological controls on the gold mineralization for the four deposits, North Hill, Silica Ridge, Southeast Pediment and Abel Knoll at the Project are well understood and drilled. This is largely based on the technical research and multiple high density drilling programs which have been completed by various exploration companies at the Project since the late 1990's. The culmination of this work, and in particular the activities completed over the last decade by Newmont and after the first MRE was internally reported in 2007, resulted in the March 2021 MRE report by Gold Bull, no changes to this MRE have since been made.

In addition, there remains significant potential to further increase the size of the MRE based on testing both extensions to the known structures and new features under post-mineral cover. The ability to locate and define further gold mineralization at the Project could be greatly improved if more reliable detectors of mineralised structures could be defined to discover potential deposits concealed by the sands and pediment covering the large Project area. This remains a work in progress and therefore, there remains further grade and resource extension potential surrounding all four deposits: North Hill, Silica Ridge, SE Pediment and Abel Knoll.

The Project presents strong preliminary financial results and a compelling mine opportunity for a stand-alone open pit gold mine. A two-phase mine plan envisions Phase 1 mining above the water table commencing at the North Hill deposit, followed by the Silica Ridge, Southeast Pediment and Abel Knoll deposits (north to south). Upon completion of Phase 1 mining, and the required permitting and dewatering efforts, Phase 2 mining is expected to commence and follow the same order as Phase 1 starting at North Hill and heading southwards. The two-phase approach conserves initial pre-production capital while enabling rapid mine commissioning to achieve cashflow to then fund the below water table permitting in conjunction with further exploration aimed at increasing the gold resources.

This preliminary economic analysis is based upon contract mining, onsite crushing, and heap leaching as the main processing method. It is planned to load the gold onto activated carbon and then transport the loaded carbon to an off-site stripping and refining plant for final gold doré recovery. A simplified mining schedule is anticipated to produce 35,000-40,000 ounces of gold per annum.

Metric	Outcome (post-tax)	
<b>Economic Analysis</b>		
Internal Rate of Return (IRR)	105%	
NPV @6%	\$203,101,374	USD
Average Annual Cashflow	\$36,272,541	USD
Undiscounted Cumulative Cashflow	\$290,205,365	USD
Pay-Back Period	1.1	years
<b>Gold Price Assumption</b>	<b>\$2,600</b>	<b>per ounce</b>
All-in Sustaining Cost	\$1,823	per ounce
<b>Capital Costs</b>		
Initial Capital	\$36,247,500	USD
Working Capital (included in above)	\$6,300,000	USD
LOM Sustaining Capital	\$20,700,000	USD
Total LOM Capital	\$56,947,500	USD
Contingency (Included in Total)	\$6,370,000	USD
<b>Operating Costs (Average LOM)</b>		
Mining	\$11.11	per mm tonne
Processing & Support	\$8.48	per mm tonne
General & Administration (G&A)	\$2.92	per mm tonne
Other Costs	\$6.59	per mm tonne
Total Operating Cost	\$29.10	per mm tonne
<b>Production Data</b>		
Life of Mine	9	years
Mineralized Material Production Rate	2,157,667	tonnes per annum
Total Tonnes of Mineralized Material Processed	19,419,000	tonnes
Grade Au (Average)	0.73	g/t Au
Contained Gold	455,000	ounces
Metallurgical Recovery Au (Overall)	75%	
Average Annual Gold Production	37,917	ounces per annum
Total Gold Produced	341,250	ounces
LOM Strip Ratio (Waste Tonnes : mm Tonnes)	2.2	: 1

**Table 2. Economic analysis summary**

Further infill drilling is required to define a Measured Mineral Resource category at the Project. There are currently no classified Reserves at the Project.

Further study work is recommended to advance the project. This work should include the following tasks:

1. Further Metallurgical and crushing test work is needed to ensure the Project deposits are fully understood and amenable to conventional processing methods
2. Waste characterization test work
3. Further mineral modelling work necessary to quantify the silver content
4. Pit optimization and pit design studies should be undertaken
5. Geotechnical program to determine the pit slope and leach pad parameters
6. Conduct a trade-off study for on-site stripping/refining facilities vs. shipping concentrate offsite
7. Conduct a trade-off study for contract mining vs owner-operated mining
8. Infrastructure sterilization drilling and MRE close-out study
9. Complete detailed engineering and design studies for location of all infrastructure (roads, yards, offices, shops, processing facilities, waste dumps)

10. Conduct an alternative power solutions study
11. Conduct a pit dewatering study
12. Commence hydrogeological baseline monitoring
13. Review prior baseline studies to establish requirements to advance to mine permitting.

## 2. INTRODUCTION

This Report update has been prepared for the Company to support the Company's Mineral Resource for the Project. Borealis is a publicly traded company with a corporate office in Toronto, Ontario.

The disclosure contained in this report has been prepared in accordance with NI 43-101, Companion Policy 43-101CP, and Form 43-101F1 (collectively, the "**Instruments**").

Borealis contracted Mr. Jerod Eastman (President of DJ 6E Consulting LLC) to prepare this Report on the Project. The author is an Independent Qualified Person, as defined by the Instruments.

This Report is intended to provide a preliminary evaluation of the Project's potential economics and to provide guidance for future studies on the Project.

### 2.1 Sources of Information

#### 2.1.1 Mineral Resource Estimate published 2021

The 2021 Mineral Resource Estimate ("**MRE**") is based on a review of information provided by Gold Bull, derived from the Project, together with public documents and literature sources cited in Section 27. An extensive review of all available information was undertaken by Mr. Steven Olsen, with additional assistance from Gold Bull staff, some of whom had previously worked on the Project during its ownership by Newmont.

Mr. Olsen has exercised professional judgment regarding the general quality and reliability of the underlying data and has conducted a site visit to the Project. Key sources of information included the extraction of all drill hole data from a centralized database, as well as supporting summary technical reports.

#### 2.1.2 Preliminary Economic Assessment (PEA) published in 2023

The PEA results presented in the 2023 report are based on the Project Mineral Resources published in 2021, which were slightly modified (with no material changes) to incorporate an additional fifty-seven (57) drill holes completed by Gold Bull in 2021 and 2022.

The PEA includes Indicated and Inferred Mineral Resources only. No Measured Mineral Resources or Mineral Reserves have been declared for the Project. Mineral Resources included in the pit optimization were those considered to have reasonable prospects for eventual economic extraction, as defined by NI 43-101.

The scope of the current study includes a review of the potential economic mining scenario at the Project. In completing this study, the Consultant reviewed relevant technical reports and data provided by the Company relating to the Project's general setting, geology, project history, exploration activities and results, methodologies, quality assurance and quality control procedures, interpretations, drilling programs, and metallurgy. The Consultants have

relied upon the data and information provided by the Company for the preparation of this report, including data supporting the MRE.

## 2.2 Personal Inspections

Mr. Jerod Eastman visited the Project on June 27, 2022 and inspected each of the Mineral Resource areas, including North Hill, Silica Ridge, Southeast Pediment, and Abel Knoll.

## 2.3 Qualified Person

Mr. Jerod Eastman is a “Qualified Person” as defined under NI 43-101 and is an independent contractor representing DJ 6E Consulting LLC, with no direct association or ownership interest in either Borealis or the Project. Mr. Eastman is a consulting mine engineer and a registered member (No. 00885850) of the Society for Mining, Metallurgy and Exploration, Inc. (SME). He has the relevant experience for the PEA study and has conducted extensive studies in Nevada, including heap leach operations.

# 3. RELIANCE ON OTHER EXPERTS

This Report has been prepared in accordance with the requirements of NI 43-101, Companion Policy NI 43-101CP, and Form 43-101F1. The Report was prepared on behalf of the Company for the purpose of presenting technical data and interpretations and providing recommendations to assist the Company and its current or potential partners in making informed decisions regarding the Project.

The information, interpretations, conclusions, and recommendations contained in this Report are based on a review of digital and hard-copy data and other information supplied by the Company, together with publicly available geological reports and discussions with Company representatives who are familiar with previous NI 43-101 technical reports on the Project. The Qualified Person has assumed that all information and data provided by the Company and by third parties are accurate and complete in all material respects.

The Qualified Person has relied heavily on the NI 43-101–compliant Technical Report on the Project prepared in 2023 by previous Qualified Persons, which summarized historical exploration activities and reported a mineral resource estimate for the Project. Portions of the 2023 Technical Report have been reproduced or referenced in this Technical Report where applicable. The Qualified Person considers the 2023 Technical Report to be relevant, reliable, and suitable for the purposes of this study.

The Qualified Person is not a legal expert and has not independently verified the legal status of mineral claims, surface rights, mineral rights, or property agreements associated with the Project. The Qualified Person did not conduct any independent investigations related to environmental, permitting, or socio-economic matters and is not qualified to provide opinions on these matters.

The Qualified Person has relied upon information and opinions provided by independent legal experts with respect to title, surface rights, and potential environmental liabilities and encumbrances, including the *Legal Due Diligence Report, 2020 Mineral Status Report, Sandman Project, Humboldt County, Nevada*, dated November 15, 2020,

prepared by Erwin Thompson Faillers, Reno, Nevada. Section 4 of this Report is based on information provided by these legal experts. The Qualified Person disclaims responsibility for the legal opinions expressed therein, to the extent permitted under NI 43-101.

The titles, authors, and dates of all reports and documents used as sources of information for this Report are listed in the “References” section. These sources are cited within the text where relevant to indicate the extent of reliance placed upon them.

## **4. PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Property Area and Location**

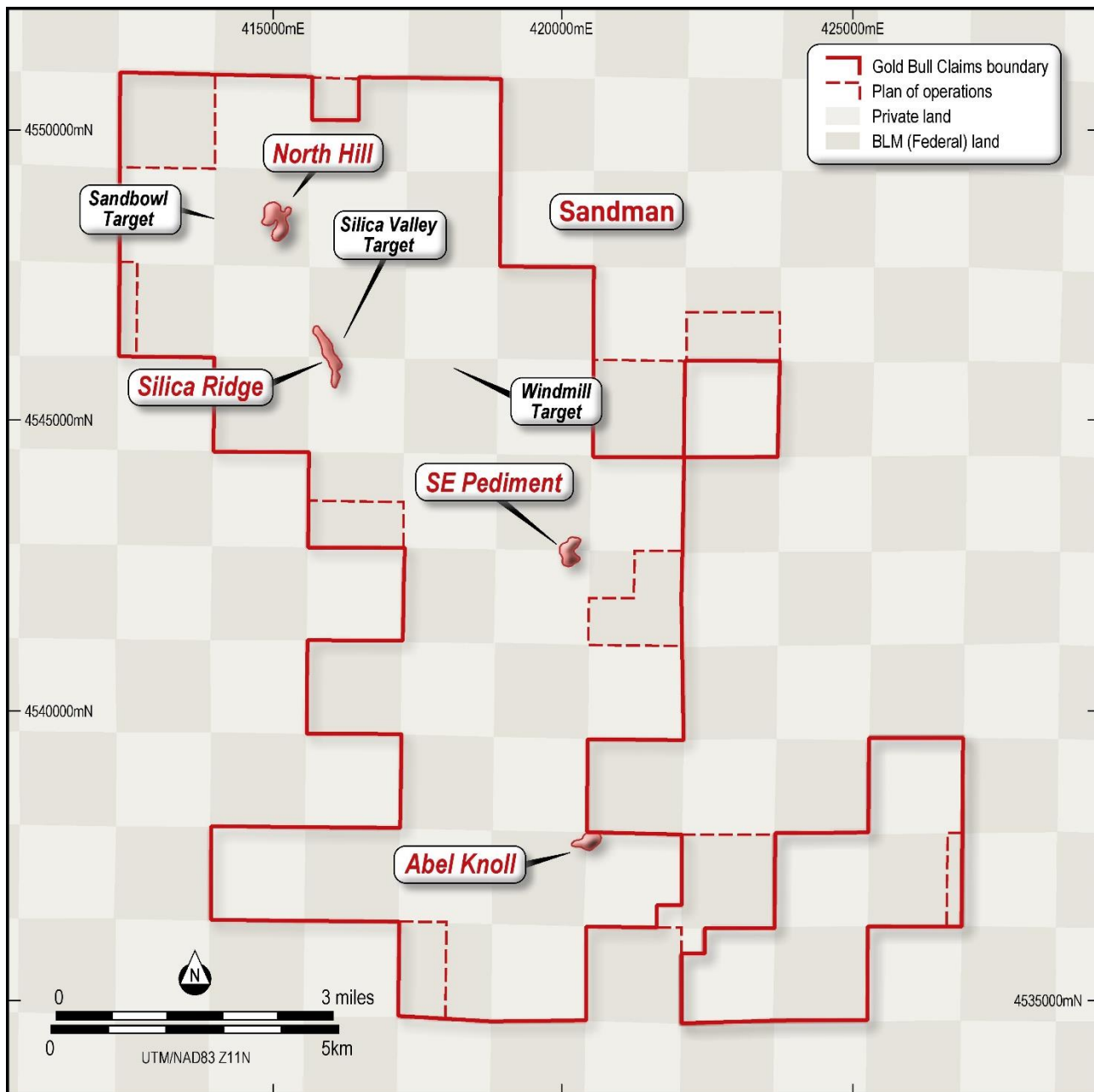
The Project is located in Humboldt County, Nevada, approximately 24 km by road northwest of the mining town of Winnemucca, Nevada, United States of America. The Project can be found using the geographic co-ordinate system at Latitude 41°1.9'N and Longitude 117°57'E and comprises a total of 761 unpatented mining claims for an area 112km<sup>2</sup> with 6km<sup>2</sup> of private land parcels.

The Project is in Townships 36 and 37 North, Ranges 35 and 36 East, Mount Diablo Meridian which is situated south of the Slumbering Hills and approximately 17 air kilometres northwest of Winnemucca, Nevada.

Gold mineralization at the Project has been identified at the North Hill, Silica Ridge, Southeast Pediment and Abel Knoll deposits. These deposit locations have sufficient gold mineralization and drilling for the definition of a MRE which is included in this Report.



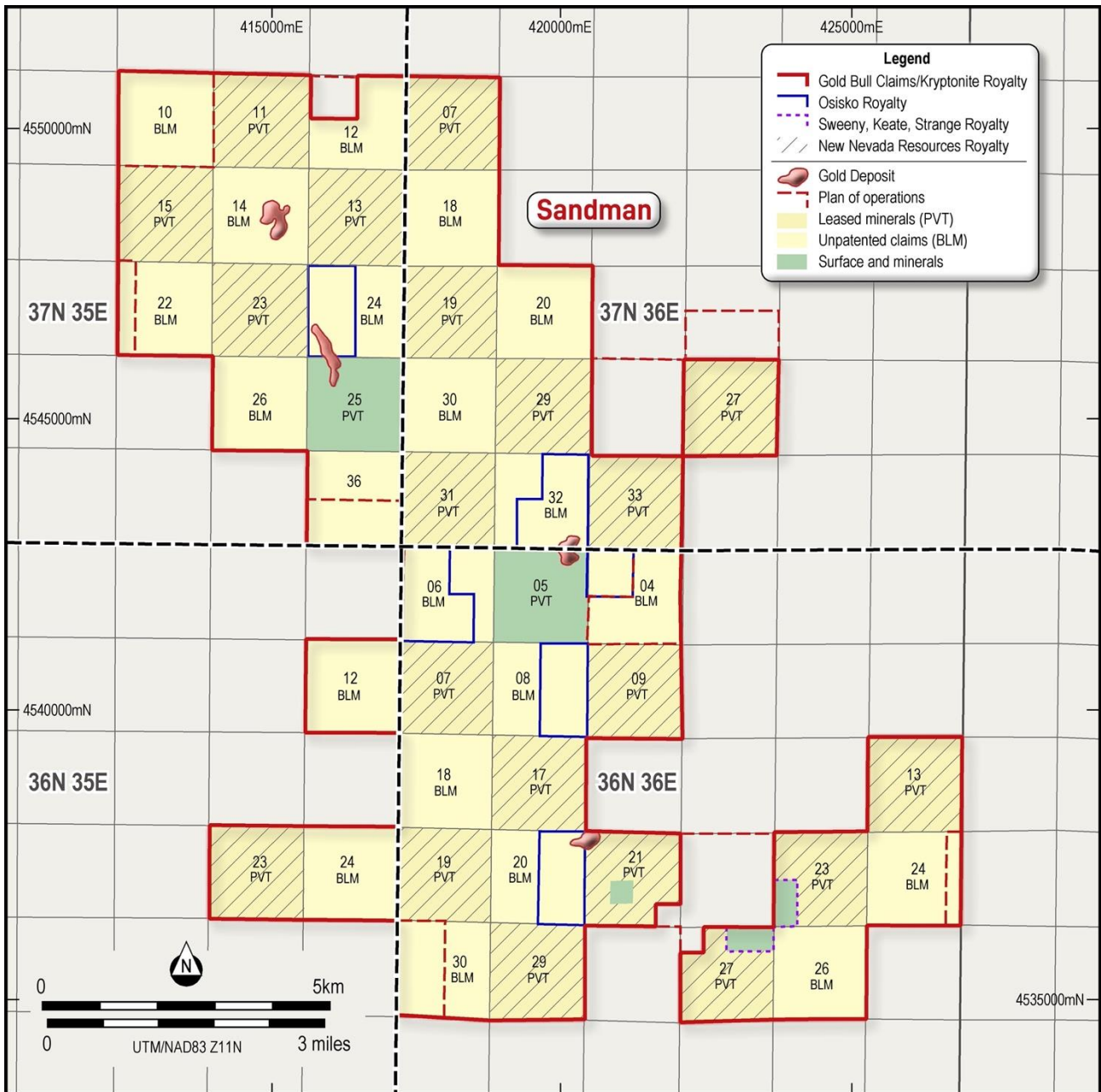
**Figure 1. Regional location map of the Project, Nevada, USA relative to nearby town Winnemucca and other surrounding gold projects both active and historical.**



**Figure 2. The Project Mining Claim boundary (solid red line) and 2010 Plan of Operations (broken red line). Grid reference in UTM NAD83 Z11N.**

## 4.2 Nature of Title and Interest of the Property

The Project is located within Humboldt County, Nevada, and generally described as 112km<sup>2</sup> of consolidated checker-board lands consisting of Bureau of Land Management (BLM) and private ownership sections. The Project is made up of 761 unpatented lode mining claims including approximately 6km<sup>2</sup> of private land holdings in Humboldt County, Nevada (**Figure 3**). The underlying title for the mining claims and two sections of the private land is held in the name of Sandman Resources Inc., which is a 100% owned subsidiary of the Company.



**Figure 3. The Project comprised of checker-board lands consisting of BLM and private ownership sections. Sections with royalty agreements also shown, as well as the Exploration Permit Boundary (red solid line) and active Plan of Operations (broken red line)**

### 4.3 Surface rights

The Project includes a variety of interests described as follows:

1. Fee land surface rights owned by Sandman Resources Inc. described below (the “**Owned Fee Land**”).
  - (a) T37N, R35E, Section 25 APN 005-281-030, title vested in Sandman Resources Inc.
  - (b) T36N, R36E, Section 5, APN 005-361-02, title vested in Sandman Resources Inc.

(c) T36N, R36E, Section 21 (Lot10) APN 005-627-10, title vested in Sandman Resources Inc.

(d) T36N, R36E, Section 23 (W2SW4) APN 005-366-15, title vested in Sandman Resources Inc.

(e) T36N, R36E, Section 27 (N2NE4) APN 005-361-33, title vested in Sandman Resources Inc.

2. Mineral rights in fee lands leased or owned by Sandman Resources Inc. described below (collectively the “**Mineral Rights**”).

Owned Fee Land Mineral Rights

(a) T36N, R36E, Section 23 (W2SW4), title vested in Sandman Resources Inc.

(b) T36N, R36E, Section 27 (N2NE4), title vested in Sandman Resources Inc.

Leased Fee Land Mineral Rights

(a) T37N, R35E, Sections 11, 13, 15, 23 and 25, New Nevada Resources, LLC, Lessor.

(b) T37N, R36E, Sections 7, 19, 27, 29, 31 and 33, New Nevada Resources, LLC, Lessor.

(c) T36N, R35E, Section 23, New Nevada Resources, LLC, Lessor.

(d) T36N, R36E, Sections 5, 7, 9, 13, 17, 19, 21 (except SESE), 23 (except W2SW), 27 (except NWNW and N2NE) and 29, New Nevada Resources, LLC, Lessor.

3. Unpatented mining claims owned by Sandman Resources Inc. described in previous Technical Reports. (collectively the “**Claims**”).

Operations on and the maintenance of the surface rights for the unpatented mining claims at the Project are subject to regulation which is administered by the Bureau of Land Management (BLM).

Comprehensive land tenure due diligence investigations were conducted at the time Gold Bull acquired the Project from Newmont by Erwin Thompson Faillers (2020) who identified that the Project was in good standing with all relevant laws and regulations at the time of sale. Gold Bull maintained the Project in good standing since the acquisition.

The privately owned parcels have surface rights to the Minerals which have their title vested in the name of Sandman Resources Inc (Erwin Thompson Faillers, 2020). This are in section 25 (37N 35E), section 5 (36N, 36E) and section 21, 23 and 27 (36N 36E).

Some sections of both the private and public lands are subject to royalties as described in section 4.4.

## 4.4 Royalties and Property Titles

Certain portions of the Project are subject to contractual obligations and royalties which are described in **Table 3**.

Description	Parties (Sandman Resources Inc. is the successor of Newmont USA Limited)	Document Date	Recording Information
Royalty Reserved in Deed On fee land located in T36N R36E Section 23 and 27, in Humboldt County. \$20,000 annual advance royalty, 3% NSR, to total of \$750,000, then 1% thereafter. \$450,000 paid to date.	Sandman Resources Inc., a Nevada corporation payable to Sweeney Mining Rock & Sand, LLC	12/6/2000	Humboldt County Document 2000 5500, recorded 12/27/2000
Royalty Reserved in Deed On fee land located in T36N R36E Section 23 and 27, in Humboldt County. 2.5% NSR to total of \$1,000,000, then 1.25% NSR. Expires in 2094.	Sandman Resources Inc., a Nevada corporation payable to Keate, et, al.	11/1/1995	Humboldt County Document 1996 2452, recorded 4/10/1996
Royalty Reserved in Deed On fee land located in T36N R36E Section 23 and 27, in Humboldt County. 2.5% NSR to total of \$1,000,000, then 1.25% NSR. Expires in 2094.	Sandman Resources Inc., a Nevada corporation payable to Strange et, al	2/20/1997	Humboldt County Document 1997 3180, recorded 3/3/1997
Royalty Agreement On the Able, Nap and Sand unpatented claims (114 claims). .4362% NSR up to 200,000 oz of gold produced.	Sandman Resources Inc., a Nevada corporation payable to Osisko Mining (USA) Inc.	9/19/1997	Humboldt County Document 1997 9890, recorded 11/17/1997
Royalty Agreement On the Able, Nap and Sand unpatented claims (114 claims). 5% NSR after 300,000 oz of gold produced.	Sandman Resources Inc., a Nevada corporation payable to Osisko Mining (USA) Inc.	9/19/1997	Humboldt County Document 1997 9890, recorded 11/17/1997
Mining Lease Fee Lands T37N R35E Sections 23, 25; T36N R36E Sections 5, 17, 21 (partial). Royalty payable to the lessor is 1.5% NSR	New Nevada Resources LLC; lease to Sandman Resources Inc. a Nevada corporation	12/3/2014	Humboldt County Document 2014-04448, recorded 12/10/2014
Mining Lease Fee Lands Partial Assignment of leased interest located in T36N R35E Section 23; T36N R36E Sections 7, 9, 13, 19, 23 partial, 27 (partial), 29; T37N R36E Sections 7, 19, 27, 29, 31, 33; T37N R35E Sections 11, 13, 15. Royalty payable to the lessor is 2.125% NSR	New Nevada Resources LLC, lease to Sandman Resources Inc. a Nevada corporation	12/3/2014	Humboldt County Document 2014-04449, recorded 12/10/2014

Description	Parties (Sandman Resources Inc. is the successor of Newmont USA Limited)	Document Date	Recording Information
Mining Sublease Agreement Fee Lands from Sandman Resources Inc to Sweeney Mining Rock & Sand, LLC and Steven M. Gorin T36N R36E, Section 9, in Humboldt County. Royalty payable to the sublessor is 5% NSR inclusive of royalty of 2.125% NSR payable to New Nevada Resources LLC, the lessor.	Sandman Resources Inc., a Nevada corporation, sublessor; Gorin, Steven M. (50%); Sweeney Mining Rock & Sand, LLC (50%), sublessees	8/15/2016	Humboldt County Document 2016-02561, recorded 8/01/2016
Road Easement T36N R36E, Section 5 in Humboldt County.	Linda and Dean Ames; Sandman Resources Inc.	9/26/2011	Humboldt County Document 2011 5657, recorded 11/02/2011
Royalty Agreement Entire Project; 0.5% NSR	Sandman Resources Inc. a Nevada corporation; payable to Kryptonite LLC	12/14/2020	Humboldt County Document 2021-02618, recorded 11 March 2021

**Table 3. Summary table of leases and royalty agreements for the Project (Erwin Thompson Failers, 2020).**

## 4.5 Environmental Liabilities and Encumbrances

The current bond is at \$967,804 of which the Company has provided 80% financial assurance through a surety bond and Sandman Resources Inc. has provided the other 20% financials assurance in cash.

On September 11, 2025 the annual reclamation bond update was sent in to NDEP and BLM in which we anticipate an increase to \$974,306; however, neither agency has provided comments or a record of decision as of January 22, 2026.

Representatives from Nevada Division of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR) Carson City office visited the Project 16 August 2022 to inspect the Land Reclamation. Mr. Daniel Baldwin of the BLM Winnemucca office also attended the site visit. A letter confirming visitation with no issues communicated was provided to Gold Bull by Mr. Todd Suessmith after the visit on August 22, 2022.

The Humboldt active business licence was renewed and is due for renewal on April 1, 2026

## 4.6 Permits Required for Conducting Exploration

The Humboldt River Field Office, Nevada office of United States Department of Interior, Bureau of Land Management (BLM), and the Nevada Division of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR) are responsible for managing the surface and subsurface mineral rights for the Project area. The Project currently has in place a Plan of Operations/Permit for Reclamation Record Number N-086324/Reclamation Permit

No. 0303, finalized March 2010. The permit covers exploration activities including a) drilling reverse circulation and Core holes; b) geologic and geophysical mapping; c) construction of exploration roads, drill sites, and sediment traps; d) the use of overland travel for access to Project activities; e) the construction of trenches for the collection of bulk samples; f) the installation and operation of ground water monitoring wells; and g) the maintenance of the pre-1981 roads within the Project Area and the Project Access roads. These activities have been permitted under the Plan of Operations with proposed surface disturbance of roughly 500 acres (~2 km<sup>2</sup>).

Sandman Resources Inc. has agreed to provide documentation on the areas of planned exploration prior to commencing exploration in a given year, at least one month in advance with specific locations of rocks and drill sites. The BMRR will review the reclamation cost estimate annually, rather than every three years, for this Project. The annual report must be submitted by April 15th of each year which documents surface disturbance locations, types of surface disturbance, and any completed concurrent reclamation.

The Plan of Operations covers the Project area that includes approximately 54km<sup>2</sup> of private lands and approximately 57km<sup>2</sup> of public (BLM) lands (**Figure 2 and 3**).

As of the effective date of this report, there are no identified impediments to obtaining the required approvals for the planned exploration activities at the Project. There are no known impediments for mining activities however Borealis has not yet conducted detailed assessments for mining activities. Updated and detailed hydrogeological, biological and archaeological studies will be required prior to any proposed mining activities. Further evaluation of other permits is also required.

## **4.7 Permits Required for Conducting Mining**

There are no known impediments for mining activities however detailed assessments for mining activities at the Project have yet to be conducted, this is planned the next phase of work as part of the Pre-Feasibility Study or Feasibility Study. Standard baseline hydrogeological studies will be required to more accurately report the water table and for permitting. There are three basins dissecting the Project and further investigative work is required for water sourcing.

The environmental studies performed in the past did not identify any issues of significant concern that could materially impact the ability to secure the permits needed to develop the Project deposit. However, these studies will need to be updated to support the permitting efforts for mining at the Project. Based on the currently available baseline data, the Project does not include habitat for any officially listed threatened or endangered species. Further evaluation of other permits is also required as part of any future Pre-feasibility or Feasibility Study.

## **4.8 Significant Factors and Risks**

The 2021/2023 MRE was calculated using Gold Bull's drill hole database which was compiled and reviewed by Gold Bull using Newmont's parent compilation files, no issues were identified with drill hole locations or assay information. The fact Newmont had >2,000 screen fire assays taken from their Core and reverse circulation samples was beneficial to the confidence in the published MRE. However, there remains some level of risk associated with the older RC drilling results and the inherit nuggety nature (coarser gold) associated with the gold mineralization at the

Project. Steps have been taken associated with the interpolation and estimation parameters used for the MRE to mitigate to some level these potential risks.

Given the nature of the drill hole database, and the level of geological understanding of the gold mineralization at the Project, the 2021/2023 author Steve Olsen considers that there is a high level of confidence in the overall MRE, particularly for the Indicated sections of the MRE. However, there is no guarantee that further exploration will result in a larger and/or higher classification of Mineral Resource.

The PEA results were calculated with Phase 1 mining all oxide mineralised material within the pit shell above the water table and then Phase 2 the oxide mineralised material within the pit shell below the water table. The reason this approach was taken was to facilitate cost effective and rapid mine commissioning to establish project cashflow, to enable flexibility for below water table permitting and to grow the project organically by using mine revenue to fund Phase 2.

The PEA defined a stand-alone low-cost start-up heap leach gold opportunity with reasonable capital and gold recovery at a gold price \$2,600 or above. The study revealed the project is more sensitive towards gold price and operating costs than it is towards the initial capital. This is reflected in the high rate of internal return.

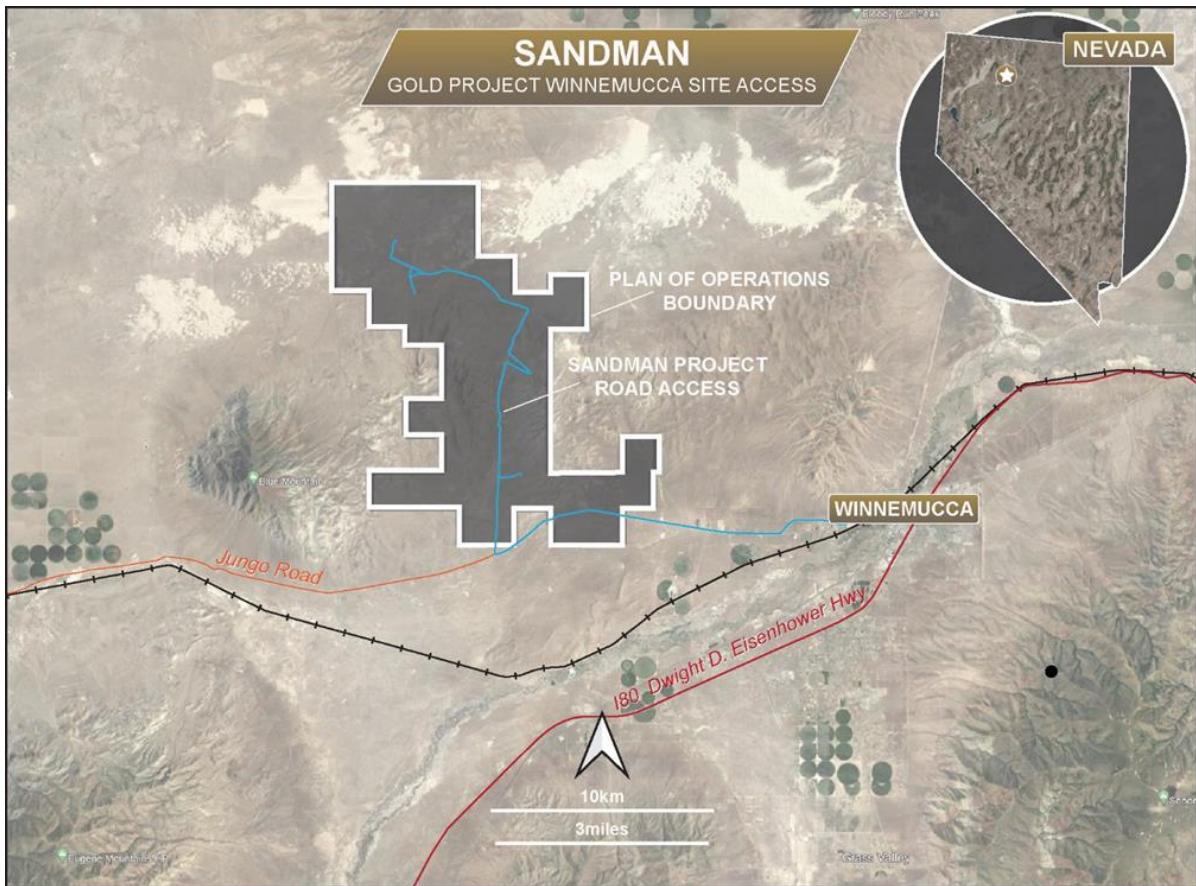
There are potential modifying factors which are summarised below, these risks must be reduced to confirm the economic viability of the Project:

- There is no Mineral Reserve at the Project
- Engineering and costing were done on a pit-constrained mineral resource; however, it was an optimized pit not a pit design complete with access
- Further metallurgical test work and grind size work is required to verify processing method(s) and recoveries
- Silver content needs to be included in modelling, incomplete assays in historical analysis
- Further hydrogeological studies are required to confirm the exact location of the water table, the first water intercepted in exploration drill holes were used for the PEA which is believed realistic
- Re-evaluation of biology and/or cultural surveys needs to be completed for the proposed disturbance areas
- There is no guarantee that funding will be obtained to develop the project
- Water sourcing for the project: further work is required to determine mine water supply.

## **5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Access**

The Project can be accessed by driving west from Winnemucca on Jungo Road for 15 km and a further 9 km to the north on dirt roads that lie largely within the property boundaries (*Figure 4*). These unimproved dirt roads would have to be maintained for regular access during mining.



**Figure 4: Map highlighting typical travel route from the Project along Jungo road from the closest township of Winnemucca, highway I80 is shown as well as a nearby active rail way. The current Plan of Operations boundary is shown.**

## 5.2 Physiography

The Project area sits in a zone of moderate relief located between the Ten Mile Hills to the east and the Blue Mountain to the west. The closed Sleeper gold mine is located 25km north of the Project's northern claim boundary. The terrain ranges from flat valleys to rolling hills with an elevation range of 3,500ft to 5,000ft (915m to 1,524m). Common landscape features comprise basalt-capped hills, angle-of-repose talus slopes, valley filled pediment and sand dunes which are most active in the northern property area surrounding the Silica Ridge and North Hill deposits.



**Figure 5: Typical view of the Project area with sparse vegetation typical of the Nevada high desert country. O’Keefe Drilling company in 2022 at Midway target.**

### **5.3 Climate**

The climate at the Project is classified as cold semi-arid. It has long 4–6-month winters, with approximately 2ft of annual snow, and relatively short summers. Local area precipitation is six to ten inches annually with most occurring as winter snows and, to a lesser extent, summer thunder showers.

The maximum daytime summer temperatures are generally below 100° F (37.8°C) and the night-time temperatures usually exceed 40° F (4.4°C). Winter temperatures are generally from the high 50° F (10°C) to less than 0° F (-17.8°C) Fahrenheit.

There are no reported perennial water sources in the area, the Sleeper pit has water contained within it and is located 25km north of the Project northern claim boundary border.

Monthly climate information from the nearby township of Winnemucca is shown in **Figure 6** and **Figure 7** which is located just 14km away from the Project and at a similar elevation, and is considered to closely match the weather information of the Project. In general, the climatic conditions permit exploration and development work to be carried out at all times of the year.

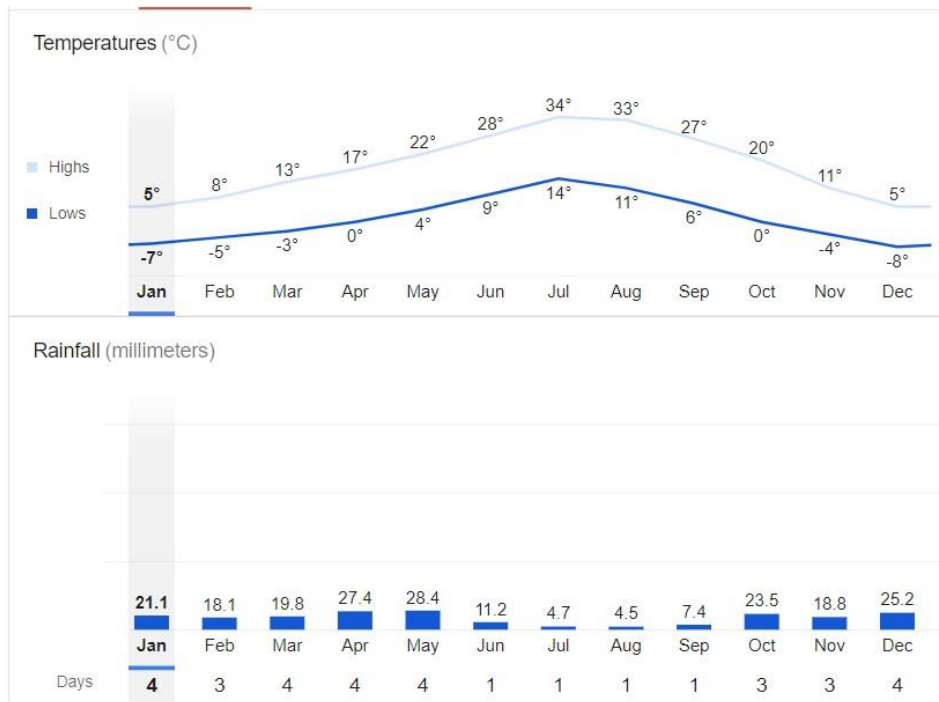


Figure 6: Winnemucca monthly temperature and climate data sourced from [www.usclimatedata.com](http://www.usclimatedata.com).

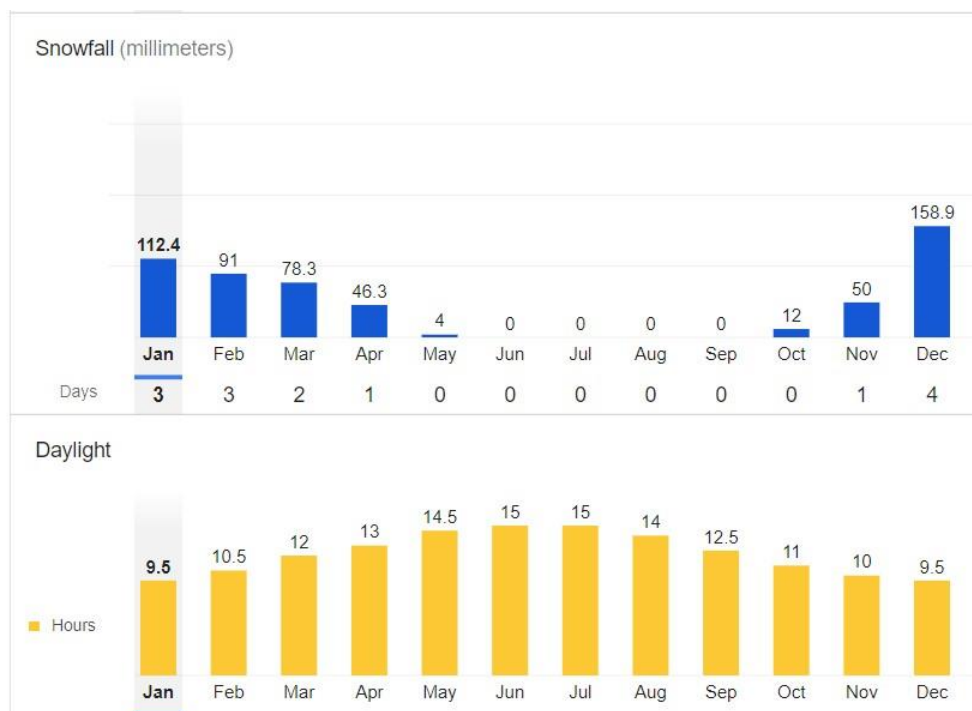


Figure 7: Winnemucca monthly snowfall and daylight hours sourced from [www.usclimatedata.com](http://www.usclimatedata.com).

## 5.4 Flora and Fauna

The aridity of the site makes the property scarce in vegetation, resulting in unstable surface soils composed of very sandy and loose materials.

Sagebrush and bunchgrasses are the most common plants. Cheat grass is very common in areas that have been burned in the past.

No rare or endangered species have been identified on the project. An experienced biologist Michael Robison visited the site regularly during drilling activities when bird surveys were required between March and July in 2021 and 2022. All the necessary pre disturbance activities have been completed at the Project during the 2021 and 2022 drilling activities.

## 5.5 Local Resources and Infrastructure

The town of Winnemucca is located 24 km in a south easterly direction from the Project and is the most proximal regional centre for the servicing of mining activities. Winnemucca has a population of approximately 10,000 inhabitants and is located on Interstate Highway 80. Winnemucca services mining operations at the Nevada Gold Mine's Turquoise Ridge, SSR's Marigold Mine and Lithium America's Thacker Pass project – amongst many others.

A power line traverses the Project area but is reportedly not sufficient voltage for mining activity. A natural gas line passes south of the property limits source from a nearby geothermal plant owned by Geothermal Resources at nearby Blue Hills. A Union Pacific interstate rail line operates from Winnemucca westward into California to Roseville.

The topography within the property area includes abundant flat-lying areas that are believed favourable for mining facilities. There are no permanent or perennial streams on the Project. The water table for the PEA was modelled where water was first intercepted in exploration drill holes and there are sufficient materials to mine above the water table.

In terms of water sourcing for the project, there are three basins which dissect the four deposits, North Hill and Silica Ridge are in the Desert Valley Basin, Southeast pediment in the Silver State Basin and Abel Knoll in the Winnemucca Basin segment. Although each of these basins is believed to be already committed in terms of water rights, the basins are also underutilized, further work is required to investigate water supply permits and source for this Sandman Project should mining proceed. Temporary water right permits may also be available.

## 6. HISTORY

### 6.1 Past Exploration

Gold mineralization was first discovered at the Project in 1987 by Kennecott in an outcrop at North Hill. By July of 1987, Kennecott and Santa Fe formed the SMJV to commence the first known exploration program on the Project, which comprised of, detailed mapping, sampling, and three gradient-array induced polarization (“**IP**”)-resistivity, aeromagnetic, and gravity geophysical surveys through to 1994.

The joint venture drilled 275 reverse-circulation (“**RC**”) holes and three diamond-drill core (“**Core**”) holes in this period, as well as 4,000 shallow auger holes to sample bedrock beneath the extensive sand cover. IP-resistivity surveys were also conducted as part of the joint venture at Abel Knoll, Southeast Pediment, and North Hill areas, operated by Great Basin Geophysical, Inc. and Practical Geophysics.

A series of trenching was also completed during this time period for a reported combined length of 7,200ft (2,195m). This information obtained from the trenching aided the interpretation associated with the North Hill, Silica Ridge and Southeast Pediment deposits, along with the identification of new targets at Adularia Hill and Abel Knoll (MDA, 2007).

Further exploration completed at Southeast Pediment (a deposit covered by post-mineral pediment) included float mapping, sampling, geophysics, and drilling programs.

In 1989, Kennecott added claims purchased from U.S. Borax to the project, which drilled 37 RC holes of the RR series with a total of 12,570 ft on these claims in 1988.

In 1990, exploration in the project was extended by Santa Fe, and by year 1994, 64 RC holes were drilled in DSA-series for a total of 35,880 ft. This drilling concentrated on the Southeast Pediment deposit, the Abel Knoll target area, and an area referred to by the SMJV as Basalt Fields.

The work was conducted within the joint venture to 1994 and led to the discoveries and partial definitions of the Southeast Pediment, Silica Ridge, and North Hill gold deposits, as well as the identification of the Adularia Hill, Basalt Hills, Basalt Fields, and Abel Flat exploration target areas.

In 1995, claims covering the mineralization at North Hill were dropped and the SMJV property was offered to interested companies. On May 20, 1996, WSMCC contracted an option-to-purchase agreement on the Project with Kennecott and Santa Fe.

In 1997, Kennecott and Santa Fe ended their joint venture and later conveyed their individual holdings at the Project to WSMCC subject to royalty interests.

WSMCC and NewWest subsequently conducted extensive exploration of the property, including rock chip and soil sampling, geophysical surveying, trenching, drilling, and metallurgical testing. WSMCC also excavated a test pit at Southeast Pediment measuring roughly 60m long by 15m wide by 5m deep. A 1,067-ton bulk sample of relatively high-grade mineralization was mined and shipped to the Twin Creeks mine of Newmont for milling and leaching.

In 2005, NewWest acquired the property from WSMCC and employed Mine Development Associates to prepare a NI 43-101 report.

In 2007, Fronteer acquired Project from NewWest and then in 2008, formed a joint venture with Newmont. In 2010, the Bureau of Land Management (BLM) approved the exploration plan of operations to allow for exploration drilling activities over the Project.

In 2011, Newmont acquired Fronteer and initiated Stage 2 studies and reporting, including drilling 364 holes within the Project. In addition, Newmont began Stage 3 initial permitting, including waste characterization, aquifer testing, water rights acquisition, and metallurgical studies.

From 2012 to 2020, the exploration activity on the Project was largely restricted to desktop studies and technical reviews which were completed by Newmont staff and contractors.

The Project was purchased from Newmont by Gold Bull, who acquired a 100% interest in the Project on 14 December 2020. Gold Bull drilled 57 exploration RC drill holes in 2021 and 2022 for 10,759m (35,298 ft) and reported its MRE for the Project in 2021.

The Project was acquired by the Company through the corporate acquisition of Gold Bull on March 13, 2025. Borealis has not completed any significant works since acquisition.

## **6.2 Historical Resources and Reserves Estimates**

In the early 1990's to 2002, several internal companies completed the internal-use-only resource estimations for Southeast Pediment, Silica Ridge, and North Hill deposits. These estimates were not reported in accordance with NI 43-101 standards and have not been reviewed in any detail by the author.

In 2005, NewWest engaged MDA to complete an NI 43-101 compliant Mineral Resource estimate, which was reported on 31 May 2007. The Mineral Resource estimate completed by MDA in 2007 (Table 4) is the first estimate to be reported in compliance with NI 43-101 standards.

**Table 4: Reported Mineral Resource estimate from the May 2007 Technical Report completed by MDA.**

Deposit	MEASURED				INDICATED				MEASURED & INDICATED			
	Tons	Grade (oz Au/ton)	Grade (g/t)	Au Ounces	Tons	Grade (oz)	Grade (g/t)	Au Ounces	Tons	Grade (oz Au/ton)	Grade (g/t)	Au Ounces
Southeast Pediment	644,000	0.07	2.40	45,300	1,300,000	0.034	1.17	44,500	1,944,000	0.046	1.58	89,800
North Hill	387,000	0.037	1.27	14,400	2,684,000	0.029	0.99	78,400	3,071,000	0.03	1.03	92,800
Silica Ridge	511,000	0.032	1.10	16,200	1,382,000	0.028	0.96	39,000	1,893,000	0.029	0.99	55,200
Able Knoll	168,000	0.037	1.27	6,200	957,000	0.029	0.99	27,900	1,125,000	0.03	1.03	34,100
<b>Totals</b>	<b>1,710,000</b>	<b>0.048</b>	<b>1.65</b>	<b>82,100</b>	<b>6,323,000</b>	<b>0.03</b>	<b>1.03</b>	<b>189,800</b>	<b>8,033,000</b>	<b>0.034</b>	<b>1.17</b>	<b>271,900</b>

Deposit	INFERRED			
	Tons	Grade (oz Au/ton)	Grade (g/t)	Au Ounces
Southeast Pediment	109,000	0.026	0.89	2,800
North Hill	294,000	0.021	0.72	6,200
Silica Ridge	518,000	0.014	0.48	7,400
Able Knoll	497,000	0.043	1.47	21,600
<b>Totals</b>	<b>1,418,000</b>	<b>0.027</b>	<b>0.93</b>	<b>38,000</b>

Subsequent work undertaken by Newmont since 2007 did include updated resource estimates and additional studies and reports for the purpose of developing a proposed mine plan for the Project. However, the work completed for Newmont was developed for internal purposes only and not updated in compliance with NI 43-101 standards.

Some of the technical work completed by Newmont has been referenced in this Report where applicable to support the updated MRE defined in this report.

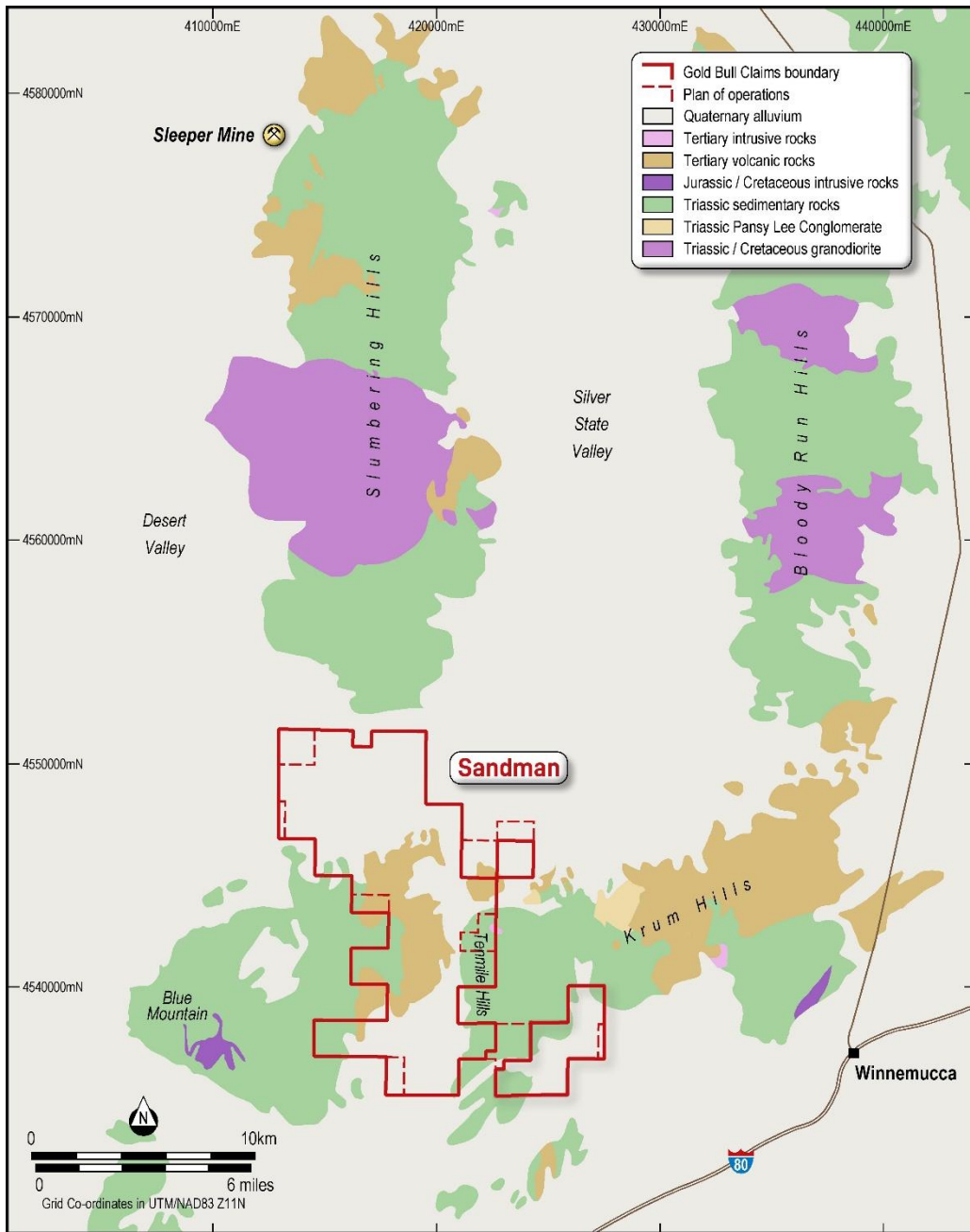
Since the previous Mineral Resource estimate completed by MDA in 2007, there has been a number of significant changes to the information available from the Deposits which make up the MRE, including the addition of some 106 RC drill holes and 216 diamond drill holes, a more detailed review of the gold variability within each deposit, further metallurgical test work, and detailed geological technical reviews and updated interpretations.

The combined factors led to the most significant changes to the Mineral Resource estimate since 2007 which was reported in Gold Bull's first NI 43-101 report titled "Mineral Resource Estimate and NI 43-101 Technical Report" published March 31, 2021, with effective date on the report January 20, 2021.

## **7. GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional Geology**

The Project is located within the northern Nevada Basin and Range setting with the surrounding north trending ranges hosting outcrops of Tertiary aged sedimentary and volcanic rocks in addition to some outcropping sections of Triassic and Jurassic aged basement rocks. The surrounding valleys (which occupy a larger surface area) are covered by Quaternary alluvium (*Figure 8*).

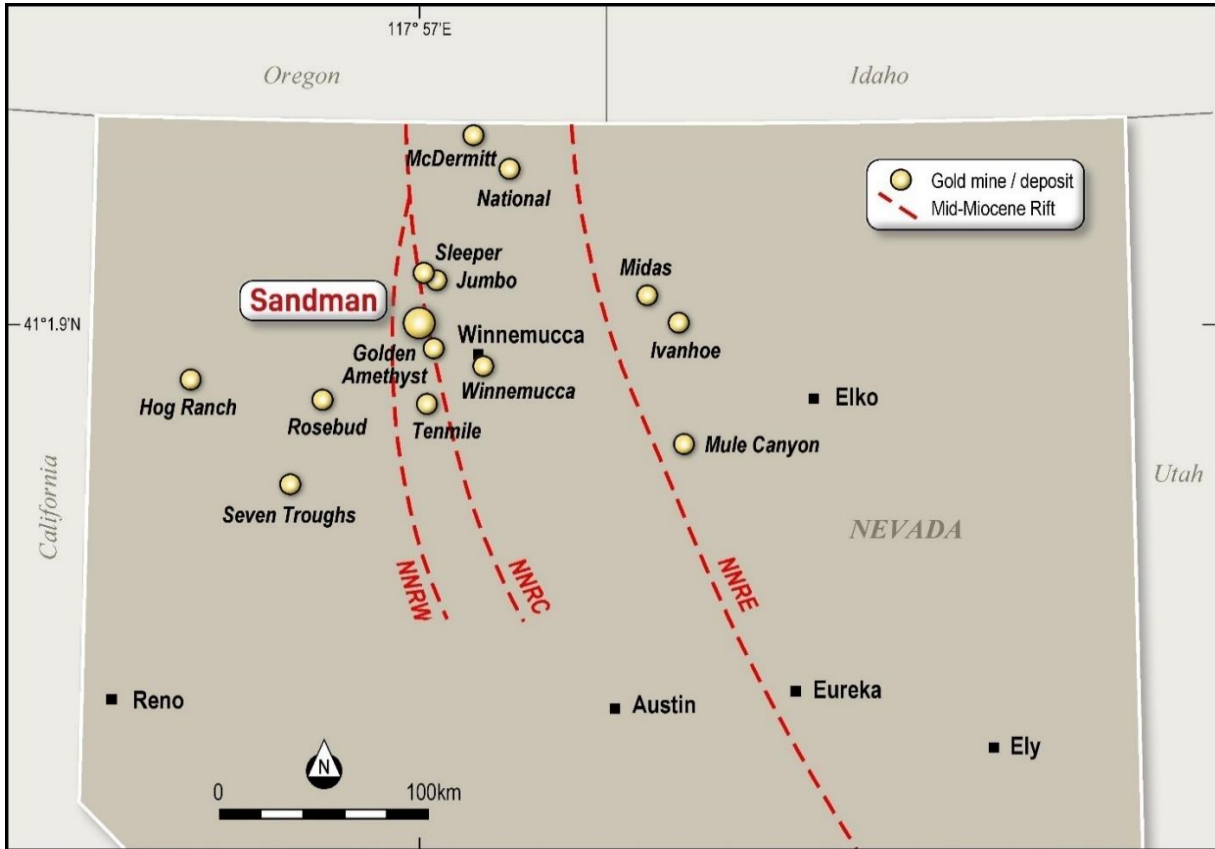


**Figure 8: Regional geological setting of the Project highlighting the north-south trending basement and Tertiary aged rocks within the northerly striking mountain ranges surrounded by Quaternary alluvium rocks in the valley floors.**

The dominant host rocks at the Project and the immediately surrounding region are mid-Tertiary volcanoclastic sediments, rhyolitic tuffs, conglomerates, and andesite/basalt flows associated with bimodal volcanism.

The Project deposits belong to the basalt-rhyolite assemblage that are interpreted to have formed in a rift environment. The regional structural framework and gold mineralization at the Project is interpreted to be associated with the central NNRC.

Dating of the alteration associated with the gold mineralization at the nearby Tenmile deposit and other surrounding deposits yields ages between 14 and 17Ma. The spatial location of these deposits along with reported timing has provided the basis for its association with the Yellowstone Hotspot (Saunders, 2015). There are a series of epithermal gold deposits that are also attributed to the Yellowstone Hot spot that exist along strike of the Project within the interpreted NNRC. These include the significant Sleeper gold deposit which lies approximately 23km due north of the Project (**Figure 9**).



**Figure 9: The location of the Project area relative to surrounding epithermal gold deposits of a similar age and interpreted genetic association (after Saunders, 2015)**

### 7.1.2 Stratigraphy

The stratigraphic rock sequence is predominantly composed of underlying basement rock sequences of metamorphosed sedimentary rocks, which are unconformably overlain by a thick sequence of Tertiary rhyolitic lithic and tuffaceous rocks (dominant host rocks to the Abel Knoll (“**Abel Knoll**” or “**AK**”), Southeast Pediment (“**Southeast Pediment**” or “**SEP**”), Silica Ridge (“**Silica Ridge**” or “**SR**”) and North Hill (“**North Hill**” or “**NH**”) deposits. The Tertiary volcanic rocks were subsequently intruded by andesite porphyry dikes, sills and intrusive breccias. The youngest host rocks to the gold mineralization are a series of discrete basalt flows.

Post gold mineralization, a significant portion of the Project area is unconformably overlain by young (Holocene age) alluvium, colluvium and eolian sand deposits.

Anomalous gold is located along the contact with the basement Triassic rocks with overlying Tertiary rocks, where these occur on the Project.

### Basement Rocks (Triassic)

#### **Triassic O'Neill Formation**

The oldest formation recognised at the Project is the O'Neill Formation, which is defined as a thick sequence of monotonous interlayered olive-tan argillite and phyllite, and discontinuous beds of feldspathic and locally muscovite-bearing quartzite. This sequence grades into the overlying Raspberry Formation with the upper contact of the O'Neil formation typically defined at the top of the last prominent quartzite bed.

#### **Raspberry Formation**

The Raspberry Formation is lithologically similar to the O'Neill Formation but is differentiated by the local presence of calcareous units, including limestone. This formation conformably overlies the O'Neill formation and is unconformably overlain by Tertiary volcanic rocks in the property area. This formation consists of approximately 85 to 90% muscovite phyllite and siltstone.

### Tertiary Volcanic Rocks

#### **Tertiary Volcanic Rocks**

This unit consists of felsic tuffaceous rocks, early Miocene andesite intrusions, and early Miocene basalt flows. These volcanic rocks play a major role as hosts of gold mineralization at the Project.

The poorly exposed tuffaceous unit is lithic-rich and includes lithic fragments of presumably Tertiary rhyolite, Late Triassic phyllite, siltstone and quartzite, and chert of unknown derivation supported in a rhyolitic (quartz-bearing) tuffaceous matrix. The tuffaceous unit is the main host of gold mineralization at the Southeast Pediment and SR deposits.

The early Miocene basalt flows were deposited on an erosion surface developed on the tuffaceous section and represents the youngest known host rocks at the Project. Locally the basalt is hydrothermally altered, and the base of the basalt section is commonly a good host for gold mineralization.

Although precious-metal mineralization is equivalent in age and style to mid-Miocene NNRC, volcanic rocks of this age are not recognized at the Project.

#### **Intrusive Rocks**

Small granitic stocks and numerous related apophyses, dikes, and sills have been mapped at or near the Project, referred to as Mesozoic intrusions. The Basalt Hills pluton is the only mapped stock-sized granitic intrusion that lies within the property.

Andesite porphyry is the classification given to a group of mafic intrusive rocks that are similar in appearance to a sill at the Southeast Pediment with prismatic hornblende phenocrysts, some of which appear diamond-shaped in cross section. Andesite intrusions, both sills and dikes, are important hosts of mineralization at North Hill, Southeast Pediment, Abel Knoll, and Silica Ridge.

A large basaltic dike with associated small apophyses occurs on the western side of Little Tabletop Mountain. Because of its proximity to the younger mafic flows on Little Tabletop Mountain, it is considered related and approximately the same age as the flows.

### **Quaternary Sedimentary Rocks**

Vast unconsolidated Quaternary deposits exist at the Project. Steeper slopes consist of alluvial pediment gravels and colluvial deposits.

Two active fields of sand dunes cross the property area with an east-northeast alignment (the prevailing winds originate from the west-southwest).

Significant alluvial deposits are associated with the Humboldt River located just south of Little Tabletop Mountain.

### **7.1.3 Structure**

There are a series of major structural trends which appear to have an important influence on the location of the gold mineralization at the Project. Some fault orientations are also identified to have been active post mineralization and have resulted in an offset in both the stratigraphy and bedding parallel to gold mineralization.

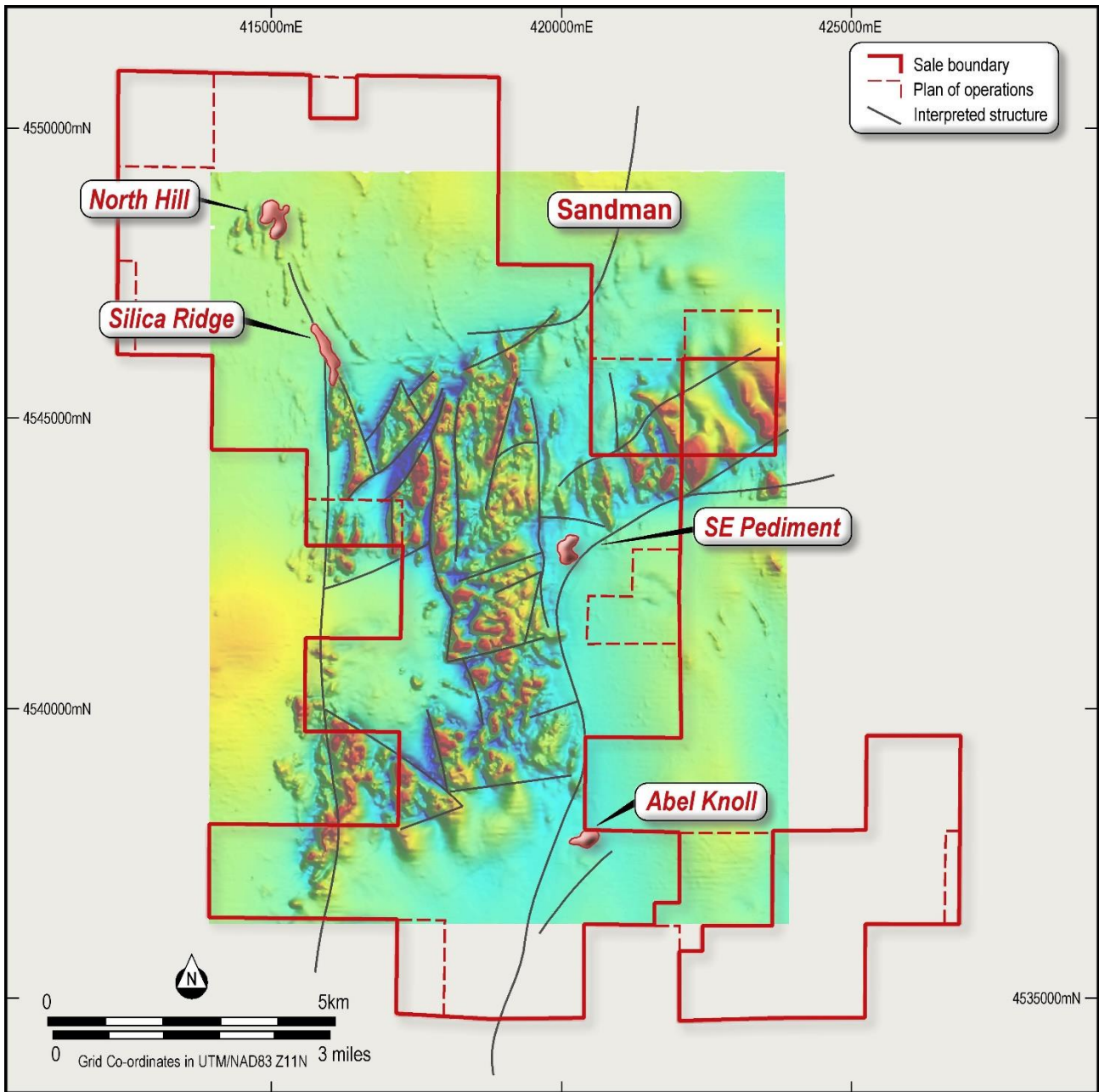
The regional magnetic image of the Project area shows the dominant structural trends that exist throughout the Project area most of which are supported by the geological information identified from the drilling results and interpretations (*Figure 10*).

The most dominant trend appears to be a series of north-striking faults which are considered to be parallel to the major regional features of the NNRC. These faults are predominantly steeply dipping normal faults which have formed as a result of extension and contribute to the pattern of horsts and grabens dominating the Basin and Range topography. The Southeast Pediment deposit is dominated by a large north striking and steeply west dipping normal fault which extends throughout this deposit location and continues beyond the deposit area both to the north and south.

There are also a series of large linking faults which typically strike north-east or north-north west, and including the most significant fault hosting gold mineralization in the Silica Ridge deposit. The magnetic imagery identifies the location of this north-north-west striking fault which appears to extend well beyond the current known limits based on the drilling information to date.

There also appears to be an important influence on the gold mineralization of east to east-north-east striking faults. Gold mineralization appears to exist along this orientation at Abel Knoll where it intersects north striking structures. In addition, the well mineralised and near vertical andesite dyke at Silica Ridge is striking almost due east and presumably localized within an east-dipping dyke filled fault from which it has intruded.

Trench mapping at the Southeast Pediment deposit has also defined a near-vertical, east- to east-northeast striking joint set within tuffaceous rocks.



**Figure 10: Total Magnetic Intensity (TMI) image with deposits and interpreted major structures throughout the Project area.**

Gold Bull identified the importance of intersecting structures and gold mineralised deposits at the Project, each of the deposits are located at the intersections of structures consistent with Northern Nevada epithermal deposits.

At North Hill, the deposit is formed at the intersection of northwest, northeast and east-west faults, these structures were tested below the deposit in 2022.

At Silica Ridge, the northwest and east-west structures are the important structures whose intersection enable the space for gold mineralisation to pierce the surface and be deposited within porous rock types particularly the basalt at surface in close proximity to the intersection of structures.

At Southeast Pediment, on the eastern half graben, the structures of importance are the north-south and north western basin margin structures which enable the mineralisation deposition.

At Abel Knoll, the diatreme breccia is located westward of the stratigraphic mineralisation of Tertiary and Triassic age however structures which intersect and enabled the loci for gold mineralisation include northwest striking, northeast striking (nearby valley) and east-west striking faults. The diatreme breccia is believed to be deposited prior to the gold mineralisation event and is consistently haematitic altered which makes it unique at the Project, mineralised veins appear to overprint the diatreme breccia and are not consistent with the hematite alteration.

## **7.2 Local Geology**

### **7.2.1 Lithology**

#### **North Hill**

Surface outcrop and subcrop at North Hill are composed of a series of basalt flows with minor interbedded tuffs and fluvial conglomerates. This location has a limited surface exposure due to wind-blown sand and extensive reclamation of historic trenches, drill sites, and roads. The basalt flow is between 20 to 50 feet thick on top of East Hill, whereas it is thicker, between 70 to 200 feet, on the West Hill. The basement quartzites of the Triassic O'Neill Formation are between 550 to 600 feet below the western part of the North Hill deposit.

#### **Silica Ridge**

The Silica Ridge deposit forms a prominent ridge of silicified outcrops in the north-western corner of the Project, approximately three miles NW of Southeast Pediment. This silicified outcrop is superimposed also by an andesite sill. A sub-vertical east-west trending andesite or basaltic-andesite dike occupies the central part of the deposit and may be a local feeder to this basalt unit.

The basement rocks of the O'Neill and Raspberry Formations are approximately 550 feet below the surface at Silica Ridge and have only been encountered in two deeper drill holes.

#### **Southeast Pediment**

The topographic expression of the Southeast Pediment mineralized body is subdued and there is no prominent silicified outcrop like at North Hill and Silica Ridge. Primary host rocks of the oxidized higher-grade mineralization are a series of epiclastic and pyroclastic tuffs.

The principal host rocks at Southeast Pediment are from youngest to oldest:

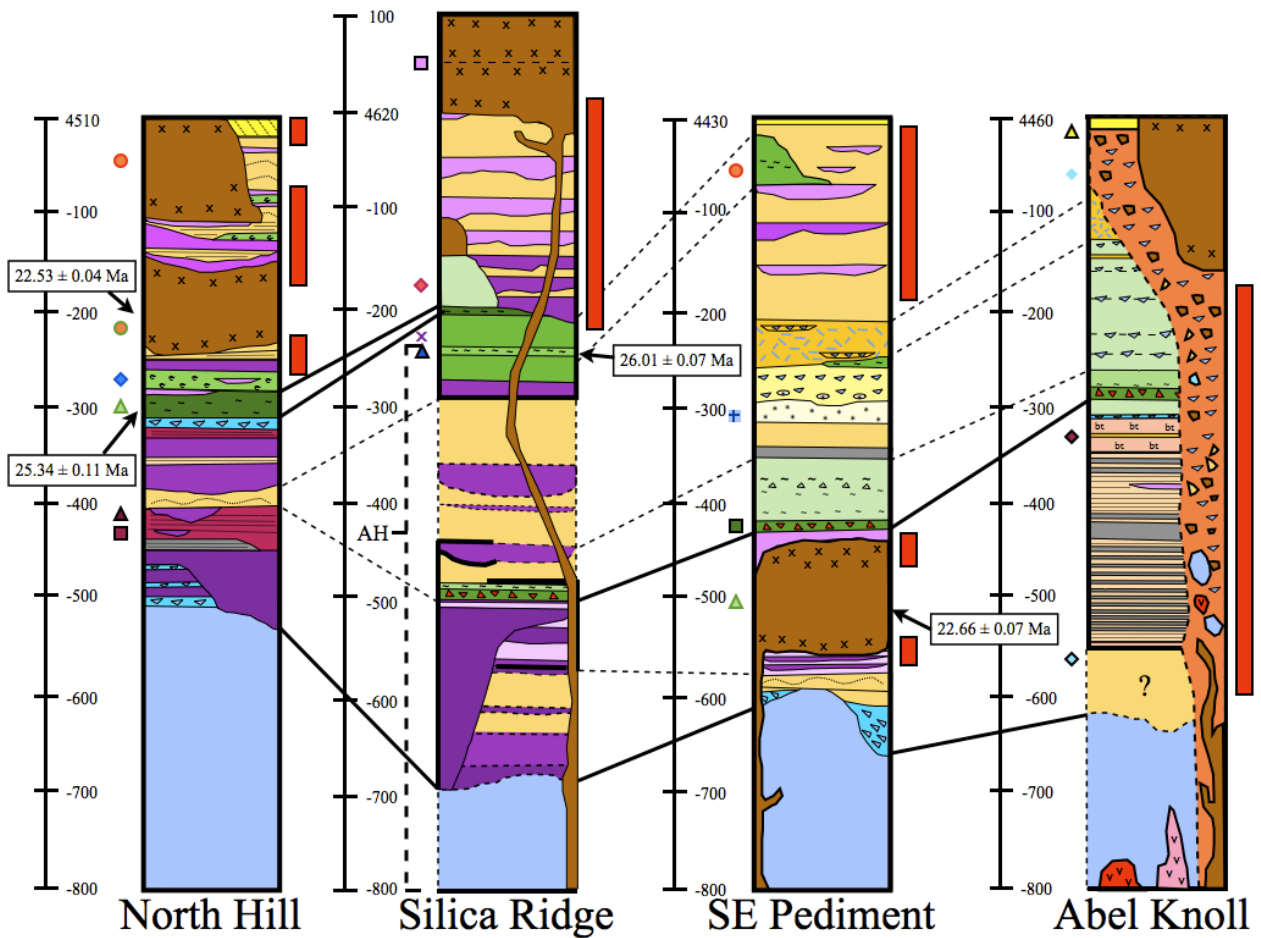
- a) epiclastic tuffaceous mudstone, sandstone, and conglomerate;
- b) vitric, vitric lithic and welded tuffs;
- c) basalt to basaltic andesite sill, and

d) contact with the Triassic Raspberry Formation. The tuff is commonly epiclastically reworked and appears to be distal airfall derived, deposited in a lacustrine environment on the hanging wall or west side of the main NS-striking Southeast Pediment fault.

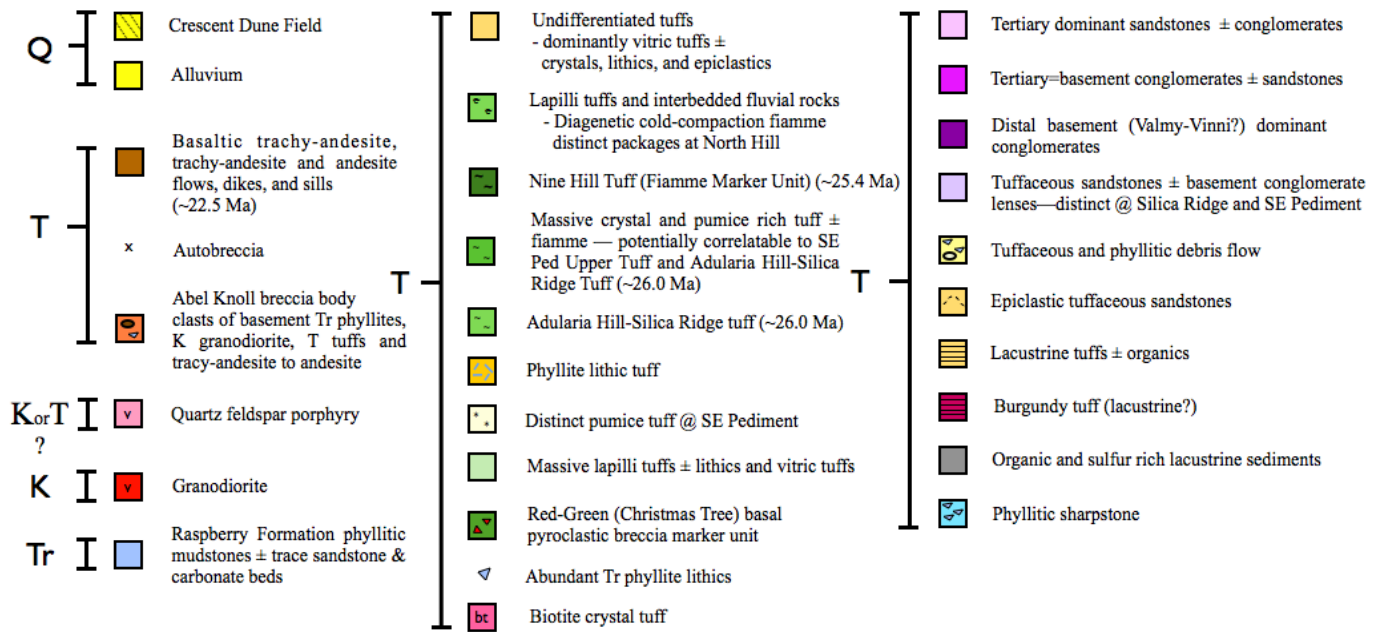
**Abel Knoll**

Field mapping at Abel Knoll has identified that this deposit is entirely covered with post mineral Quaternary alluvium. This deposit is comprised of a poly lithic diatreme breccia body composed of vesicular to aphanitic andesite, basement phyllites and quartzites, tuffaceous wall rocks, and trace Mesozoic granodiorite clasts within an ash and crystal fragment matrix.

Figures 11 and 12 show representative stratigraphic columns for the 4 major deposits at the Project (as defined by Anderson, 2013).



**Figure 11: Stratigraphic columns for each project area at the Project (after Anderson, 2013)**



**Figure 12: Legend for stratigraphic columns (after Anderson, 2013).**

## 7.2.2 Structure

### North Hill

The most prominent structural feature at North Hill is a northeast structural trend between West Hill and East Hill which appears to have been a late-stage fault, resulting in an offset in both the stratigraphy and the gold mineralization.

There is also an interpreted broad south-plunging N-S to NNE oriented anticline under the West Hill area. An anticline also correlated with East Hill where both the basalts and the underlying unit of tuff and conglomerate appears to be folded. These two anticlines appear to have an influence on the gold mineralization with higher gold grades identified close to the hinges of the anticlines.

### Silica Ridge

The gold mineralization at Silica Ridge is mostly influenced by a large north-northwest striking fault dipping to the west associated with antithetic steep easterly dipping faults in the hanging wall of the Silica Ridge fault.

The major mineralised zone was displaced by at least two NE- to EW-striking normal faults, resulting in progressive down stepping to the south. The main population of outcropping quartz-adularia veins parallels this dominant north-north-west striking fault. Regionally the stratigraphy dips approximately 15 degrees towards the east-south-east.

Another important influence on the gold mineralization is a series of near vertical east-striking faults or fractures which cut through the main Silica Ridge deposit and associated structures. An intrusive andesite dyke has formed along this trend and is well mineralised. Some other sections of gold mineralization are interpreted to have formed

parallel to this trend and the higher-grade sections on the Silica Ridge fault are interpreted to have formed close to where the east-striking faults intersect the north-north-west striking faults.

### **Southeast Pediment**

Main structural trends that play a major role in mineralization are north-south- and northeast- striking faults. However, the primary mineralizing structure is the north-south-striking Southeast Pediment fault, which dips to the west at 45-60 degrees. This fault appears to be a growth fault on the east edge of the north-south-oriented Comforter Basin graben. The term Comforter Basin defines a stratigraphic sequence of Tertiary rocks deposited in a north-south graben in association with Southeast Pediment and Silica Ridge.

The quartz-adularia alteration and gold mineralization are structurally controlled and more predominant in the hanging wall than in the footwall of the fault system. The higher-grade mineralization is commonly associated with intensely fractured and brecciated zones related to post-alteration reactivation of the main fault zone.

### **Abel Knoll**

The intersection of north and northwest-striking and east-northeast striking structures at Abel Knoll played a significant role in focusing mid-Miocene mineralizing fluids. These structural intersections also appear to have controlled the emplacement of the Abel Knoll breccia body prior to the gold mineralisation event.

## **7.2.3 Alteration**

### **North Hill**

North Hill rocks are generally altered through oxidation processes post mineralisation. Also, good mineralization was observed along the zones of weak to strong quartz-adularia alteration in the flat lying basalts, and the unit of tuffs and conglomerates underneath the basalt flows. There is a halo of weaker quartz-adularia alteration with lower grade gold around the higher-grade zones, which transitions into bleached and clay altered basalt and tuff.

Based on logging of Core and reverse circulation cuttings, gold is associated with oxidized andesite of an undefined alteration type that grades into an unoxidized, propylitic altered andesite without significant mineralization.

### **Silica Ridge**

Quartz-adularia alteration is predominant in this deposit, with weak advanced argillic and sericitic alteration. The basalt-andesite dike central to the deposit is consistently quartz-adularia altered within fault zones and contains weak to moderate argillic alteration elsewhere.

An adularia sample collected one mile west of Silica Ridge has been radiometrically dated at 16.2 Ma using  $Ar^{40}/Ar^{39}$  (Saunders, 2008) and is coeval with epithermal deposits in the nearby NNRC.

### **Southeast Pediment**

Alteration types at Southeast Pediment include quartz-adularia replacement and cementation, argillization, propylitization, and sericitization. Gold forming mechanism is generally associated with fault-controlled quartz–

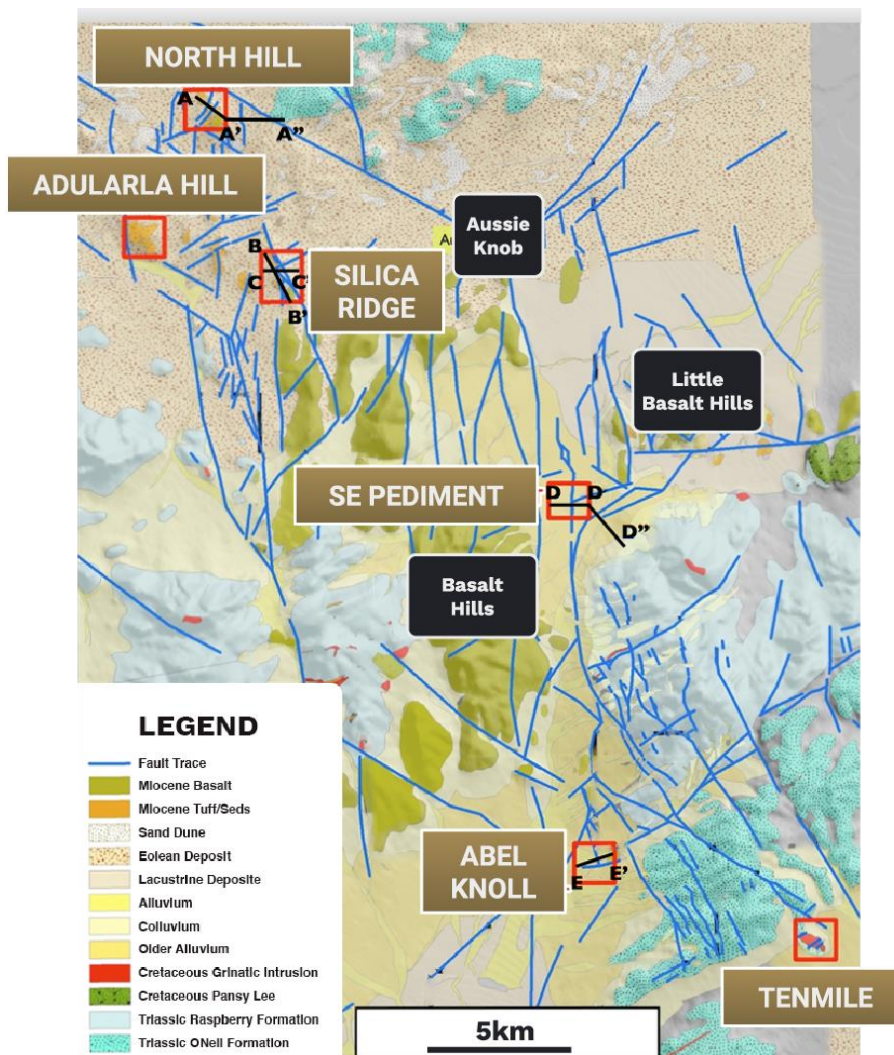
adularia flooding. Adularia is a hydrothermal potassium feldspar ( $\text{KAISi}_3\text{O}_8$ ). It commonly forms colourless, glassy, prismatic, twinned crystals in low-temperature veins of felsic plutonic rocks and in cavities in crystalline schists.

The main quartz-adularia zones are enveloped by zones of weak to moderate argillic alteration where all lithologies are altered to clay with abundant iron oxide staining. SEM analysis of surface samples from Southeast Pediment and Silica Ridge indicate that quartz and adularia generally comprise over 75% of these samples.

Locally abundant manganese oxide is closely associated with late-stage fractures and breccias which crosscut the quartz-adularia alteration on the Southeast Pediment fault. There also appears to be a spatial association of higher-grade gold values with increased manganese oxide, although the manganese oxide is a post-mineral event associated with late-stage bleaching and removal of the quartz-adularia near fracture surfaces.

**Abel Knoll**

Moderate to intense argillic alteration, overprinted by weak to intense quartz-adularia alteration, affects most of the Abel Knoll breccia body. Crystal fragments of the host rocks are dominantly sanidine with lesser quartz and trace biotite.



**Figure 13: Local geological map of the Project relative to the major deposits (red boxes) and surrounding historical prospects. Cross section locations are referenced in this plan (after Anderson, 2013). The Ten Mile area is not part of the current Mineral Resource estimation and the Project area.**

## **7.2.4 Gold Mineralization**

### **North Hill**

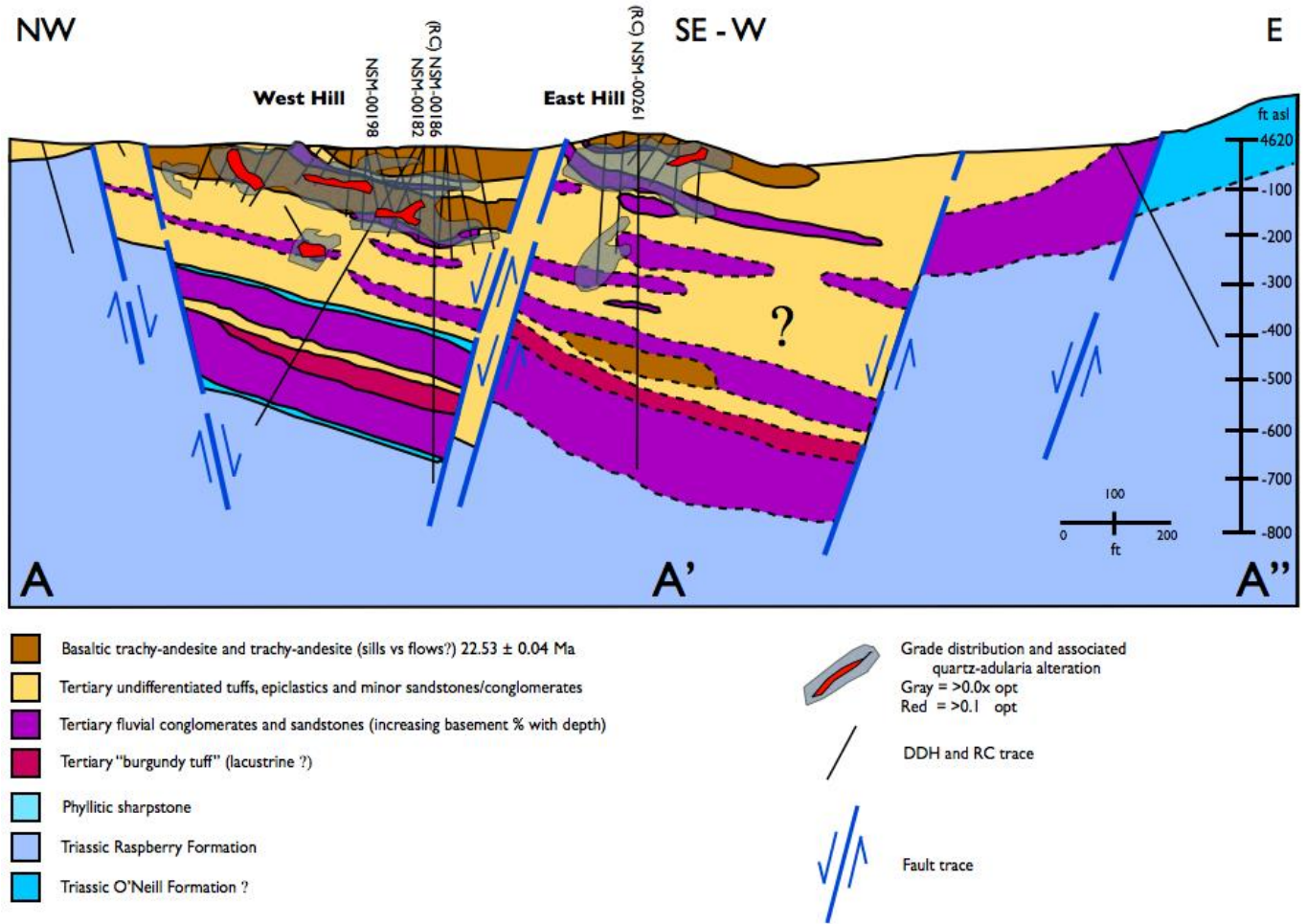
Gold mineralization is associated with both high-angle faults and the generally low-angle contacts between the various basalt flows and the interbedded fluvial conglomerates and tuffaceous rocks. Prior to the 2006 drilling program, East and West Hill mineral deposits were identified (see *figure 14*).

The West Hill area was a focus of drilling in 2006. This drilling expanded both gold deposits leaving a 200-foot gap between the two mineralized areas associated with the NE structural trend. The deepest significant gold mineralization at North Hill occurs at a vertical depth of 300 feet.

### **Silica Ridge**

Narrow anastomosing structural zones of gold mineralization are unique to the SR deposit. The primary host units at SR are fluvial siltstone, sandstone, conglomerate, and epiclastic tuff of the Comforter Basin. Mineralization is primarily focused along the main NNE and NW fault sets over a known strike length of 850 meters.

High gold values are usually located in fault breccias, especially where coincident with conglomerate beds. Strong quartz-adularia flooding of conglomerate and sandstone matrix in mineralised samples shows fine grained subhedral and anhedral pyrite.



**Figure 14: Representative geological cross section (A-A'-A'') of the North Hill deposit (after Anderson, 2013).**

**Southeast Pediment**

The higher-grade gold mineralization at Southeast Pediment is structurally controlled within highly fractured and brecciated zones, which exhibits pre- and post-mineralization movement. Supergene enrichment may also in part be responsible for this mineralization. The assessment of the degree of supergene influence is complicated by the primary mineralized fault also influencing the redox boundary.

Approximate dimensions of Southeast Pediment are 305 meters in length by 30 to 60 meters in width. Mineralization occurs as finely disseminated gold or electrum in fine-grained quartz–adularia, and as rare coarse-grained visible gold grains up to 1.0 mm. Coarse gold is observed on fractures, in very narrow clear quartz veinlets, in late-stage breccia matrix, and in rare, very localized quartz banding.

**Abel Knoll**

There are two sources of gold mineralization in this deposit: (a) western area is hosted in and around a small diatreme breccia body, possibly related to mafic magmatism; and (b) an area to the east-northeast of the diatreme where mineralization appears to be related to altered andesite, and generally extends parallel to the strike of Tertiary rocks.

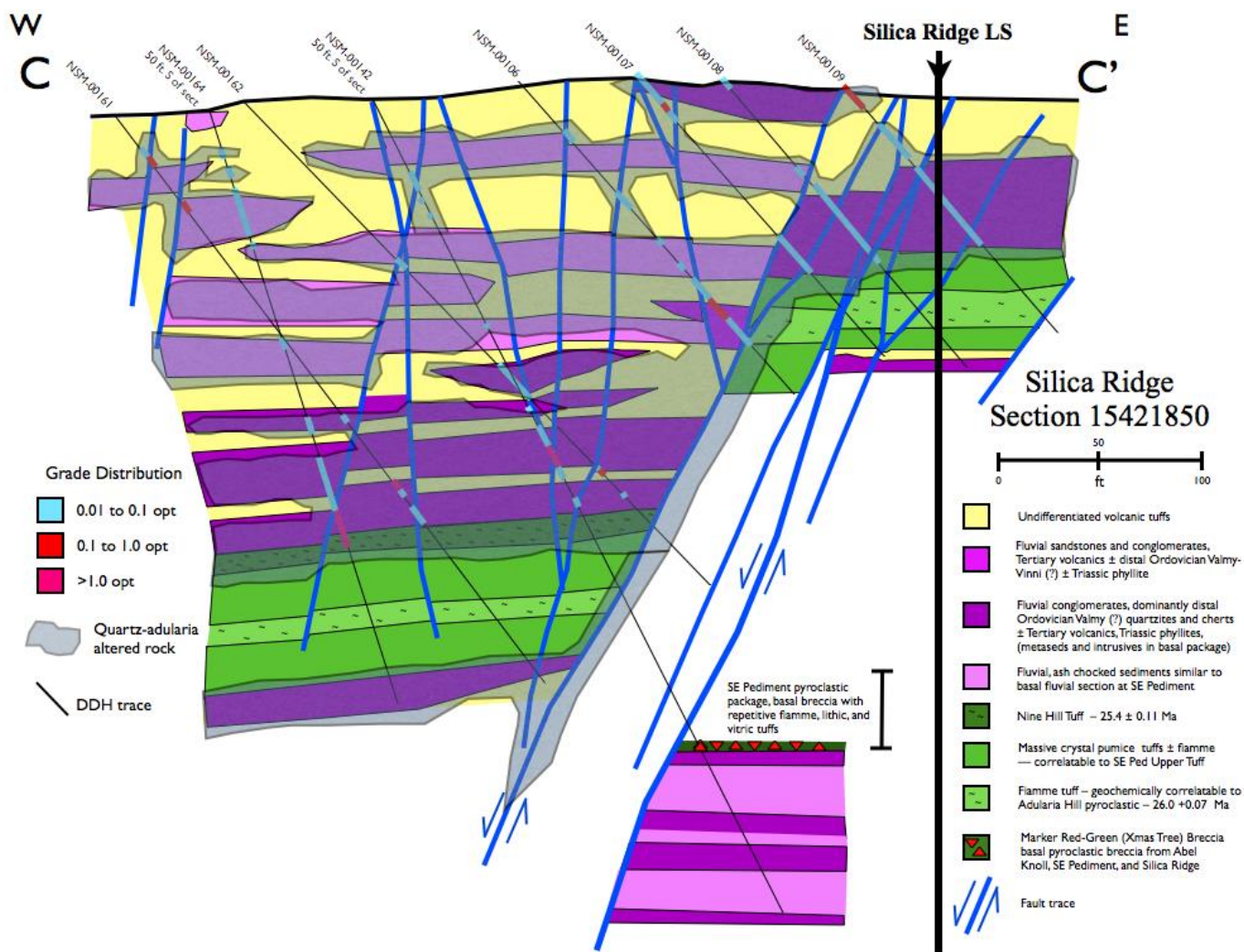
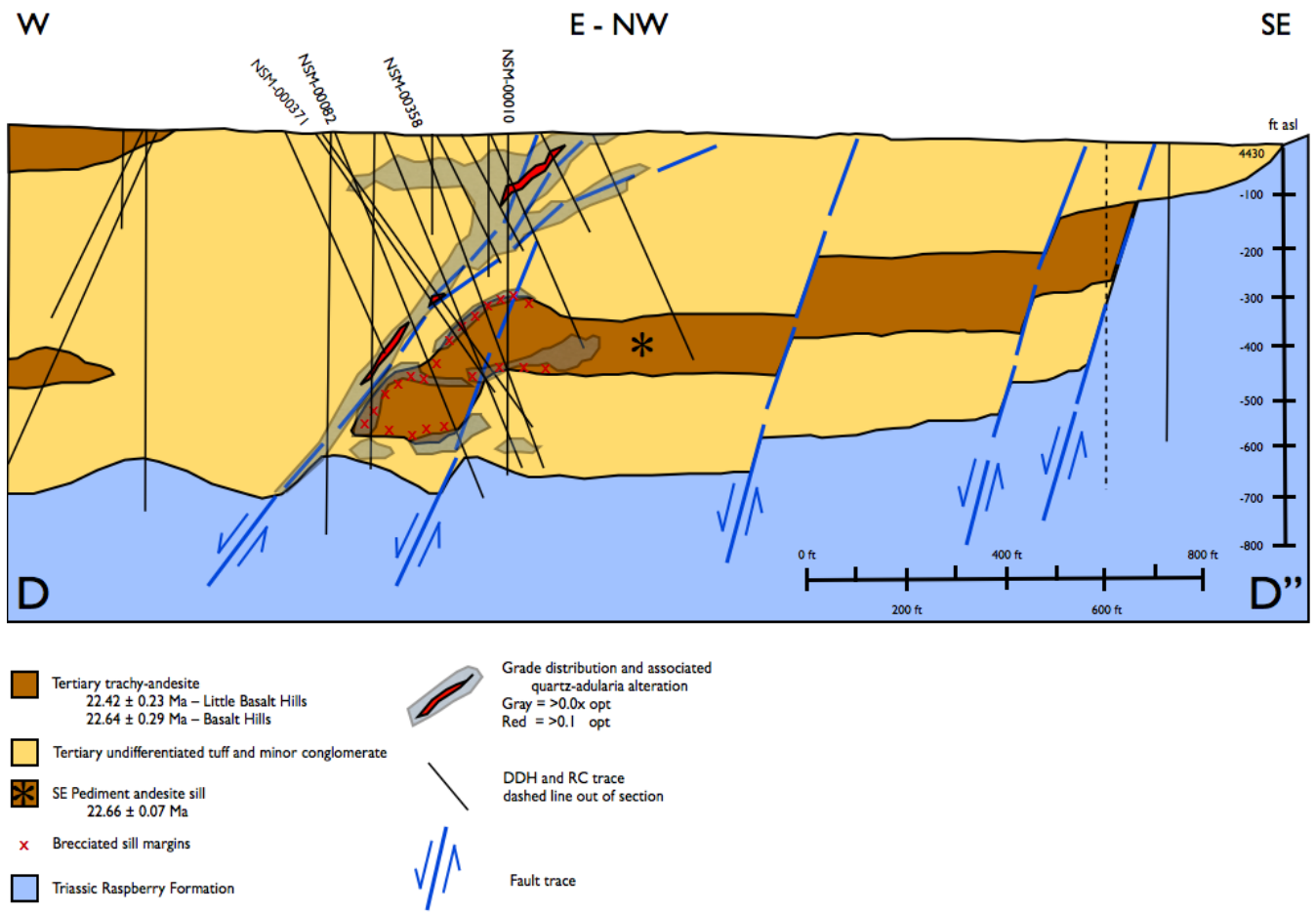


Figure 15: Representative geological cross section (C-C') of the Silica Ridge deposit (after Anderson, 2013).



**Figure 16: Representative geological cross section (D-D'') of the Southeast Pediment deposit (after Anderson, 2013).**

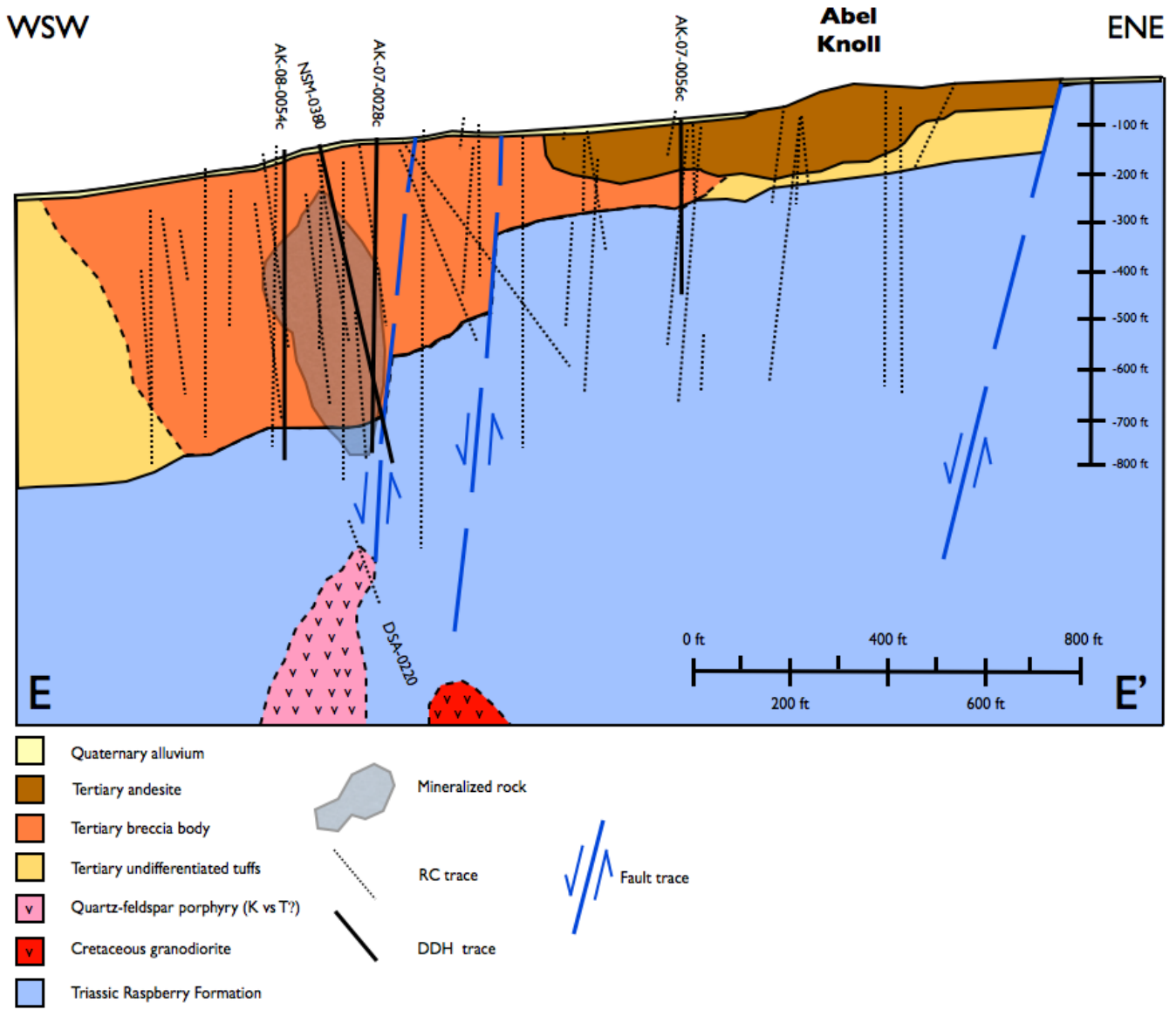
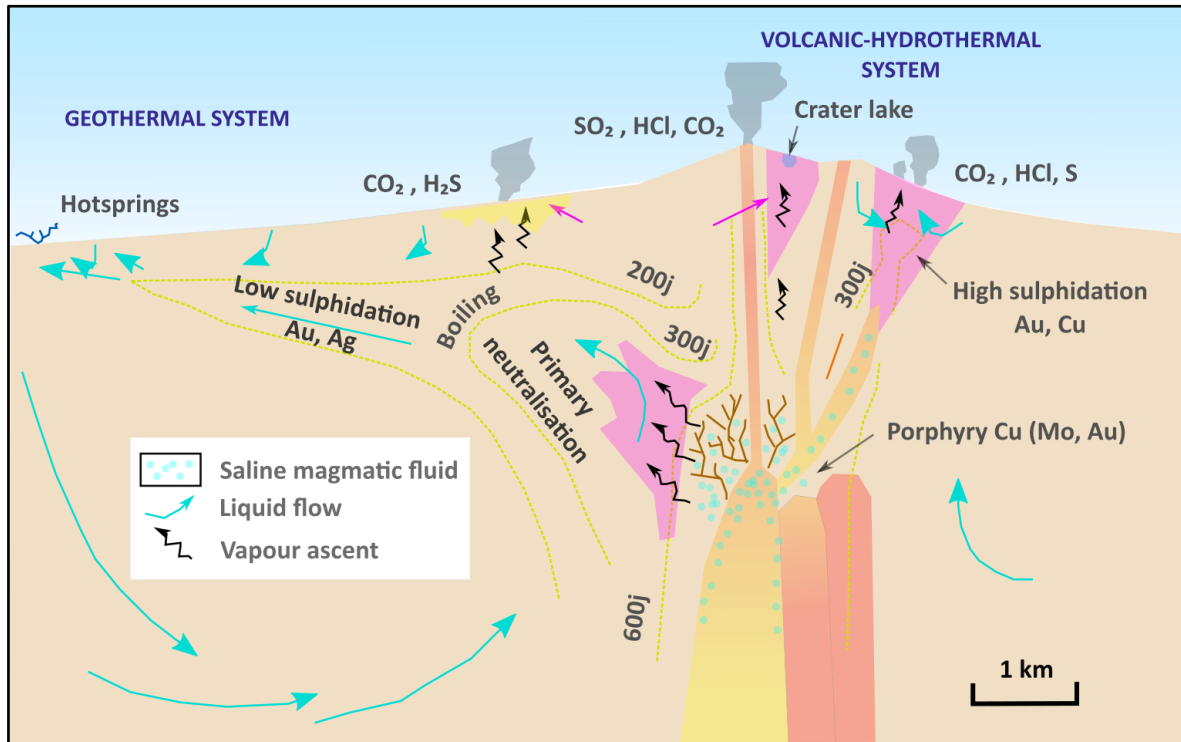


Figure 17: Representative geological cross section (E-E') of the Abel Knoll deposit (after Anderson, 2013).

## 8. DEPOSIT TYPES

The geological setting, alteration and characteristics of the gold mineralization defined at the Project all provide strong evidence that the Project is a low-sulfidation epithermal style of deposit that formed close to the surface.



**Figure 18: Schematic representation of the geological environment for the formation of low-sulfidation epithermal deposits. (modified from Hedenquist, et al., 2000)**

The Project is located in north-central Nevada, which contains a number of vein-type deposits of middle Miocene age which have similar geology consistent with low sulfidation, epithermal gold-silver deposits. The epithermal deposits in north-central Nevada formed at shallow depth, and some are associated with sinter deposits which reflect hot-spring activity at the paleosurface.

This model of emplacement and formation for shallow epithermal gold mineralization is similar to many epithermal deposits worldwide as documented by many authors (eg: White and Hedenquist, 1995; Hedenquist, et al., 2000; Sillitoe; R. H., 1993, Corbett, 2002) (**Figure 19**).

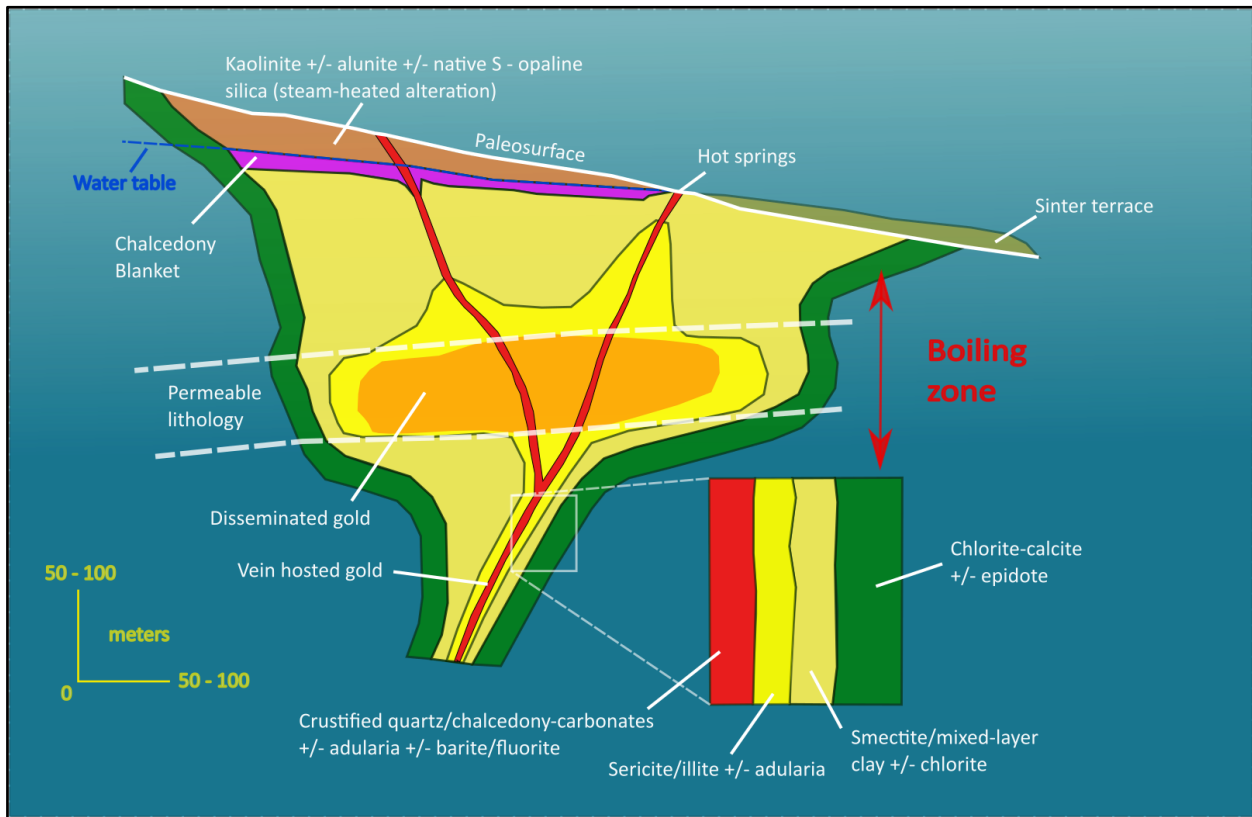
Key features at the Project that support this interpretation include:

- The presence of quartz adularia veins which are in common association with the higher-grade gold mineralization.
- Zones of advanced argillic alteration (opaline silica-quartz-kaolinite-alunite) mainly above the quartz-adularia zone, which extend along some favourable stratigraphic horizons or contacts away from the large structures. These are likely pre mineral phase.

Although the genetic model for the Project deposits and surrounding gold-silver deposits may be similar there are often significant variations within each deposit type due to variations in the structural framework and host rock porosity compositions.

The presence of gold-silver hosted within a pipe-like hydrothermal breccia, structurally controlled gold mineralization associated with quartz-adularia veining and dispersed lower grade gold mineralization along stratigraphic horizons

which are more favourable for fluid flow (typically horizontal orientation), all exist at least in part within the Project gold deposits.



**Figure 19: Schematic representation of the boiling zones within a low-sulfidation epithermal deposit of the type interpreted to be similar to how the gold-silver mineralization formed at the mid-Miocene deposits. (modified after Hedenquist et al., 2000)**

The dominant target types which exist at the Project for future exploration are largely one of three main deposit types:

1. Extensive shallow and low-grade gold mineralization, typically forming within 100m of the paleo water-table, which more favourable to the more porous host rocks such as basalt, conglomerate and altered diatreme breccia. This deposit type has most prominently been identified at the North Hill deposit to date.
2. Higher grade Au-Ag mineralisation in quartz-adularia small cm side veinlets hosted within feeder structures underneath the broader shallow stratigraphically controlled and lower-grade gold mineralization. This style is evidenced in the Silica Ridge and Southeast Pediment deposits, where potentially larger more continuous zones may exist at greater depths and laterally along the currently defined major structures.
3. Higher-grade dyke-hosted gold mineralization and/or hydrothermal breccia's, both of which appear to have a strong influence from cross-cutting structures which trend due east. This style of gold mineralization is observed at both Abel Knoll and Silica Ridge.

## 9. EXPLORATION

Current exploration targets include the 11.5km long Northwest and basin boundary margin targets, and the 10km long North-South Trend which are largely underexplored and not drill tested. Prior explorers focussed on drilling the existing/known deposits. Due to this focus on the known resources, there remains very good potential to discover additional ounces-deposits outside the known deposits due to the lack of exploration that has taken place. One reason to advance the project into production is to generate sufficient cashflow to self-fund steady and consistent mine corridor exploration and reserve definition drilling in parallel to the proposed mining. The style of epithermal mineralisation lends towards organic growth of drilling in advance of the mining process by reserve infill drilling and exploration scout drilling aimed at adding gold ounces to the mine schedule in parallel with mining the project.

Gold Bull field activities included 57 RC holes, 373 lag samples (coarse sieved sample fraction at surface), 10 rock chip samples from the North Hill historical trench, a 3D Induced Polarisation (IP) survey over North Hill, 16 lines totalling 25.35 line kms of CSAMT line surveys taken at three locations including a) east of Silica Ridge extending to Windmill, b) at North Hill and c) at Abel Knoll and 24 bottle roll leach test work samples from Abel Knoll. The drilling information is included in the drilling sections of this report. **Figure 20** to **Figure 26** summarise work and results.

Like previous explorers, Gold Bull's exploration predominantly focussed on the four known gold deposits, however significant exploration upside extends beyond the four known deposits, within the Project.

The lag geochemical sampling was conducted from Silica Ridge to Windmill and over the Sandbowl target west of North Hill. The lag geochemical sampling defined an anomaly with up to 1.58 ppm gold which was referred to as Silica Valley (announced 28 February 2022). Lag sampling is a technique pioneered by Western Mining Corporation in Australia which comprises collecting a screening of coarse surficial material rather than the finer fraction as done for soil sampling. It is used to detect mineralisation in an approximate location in a grid by taking coarse rock fragments which are transported within the regolith-pediment-sand profile. Refer to **figure 21** and **22** for the identified Silica Valley Target. This target has not been drill tested at the date of this report and there are also further drill targets on the east-west dyke extending from Silica Ridge to Windmill (CSAMT defined the structure) as well as targets southwest of North Hill.

Another area of high prospectivity that has been largely unexplored exists adjacent to Abel Knoll. Here the target is additional diatreme breccias because the Abel Knoll breccia lithology hosts some of the highest grade broad gold intersections on the project (such as Gold Bull drill hole SA0001 which intersected 144.8m at 1.67g/t Au from 65.5m which included 97.5m at 2.23 g/t Au from 96m and 6.1m at 10.96 g/t Au from 143.3m within the Abel Knoll breccia). Some new breccia outcrops have been mapped in this vicinity by Gold Bull. There has been no exploration step out exploration drilling in this region. A ground gravity survey and evaluation of VLF over this area is recommended to explore for additional breccia's below relatively shallow pediment cover.

A further area of prospectivity is the northwest trend from Abel Knoll to Silica Ridge beneath the mapped basalt, this trend is part of the Northern Nevada Central Rift zone which extends in a northwest orientation and can be seen using regional magnetics over the Project, this trend is also identifiable on regional gravity. The North Hill graben bounding basin, which is a relatively confined search space, also needs further evaluation of existing 3D IP, CSAMT,

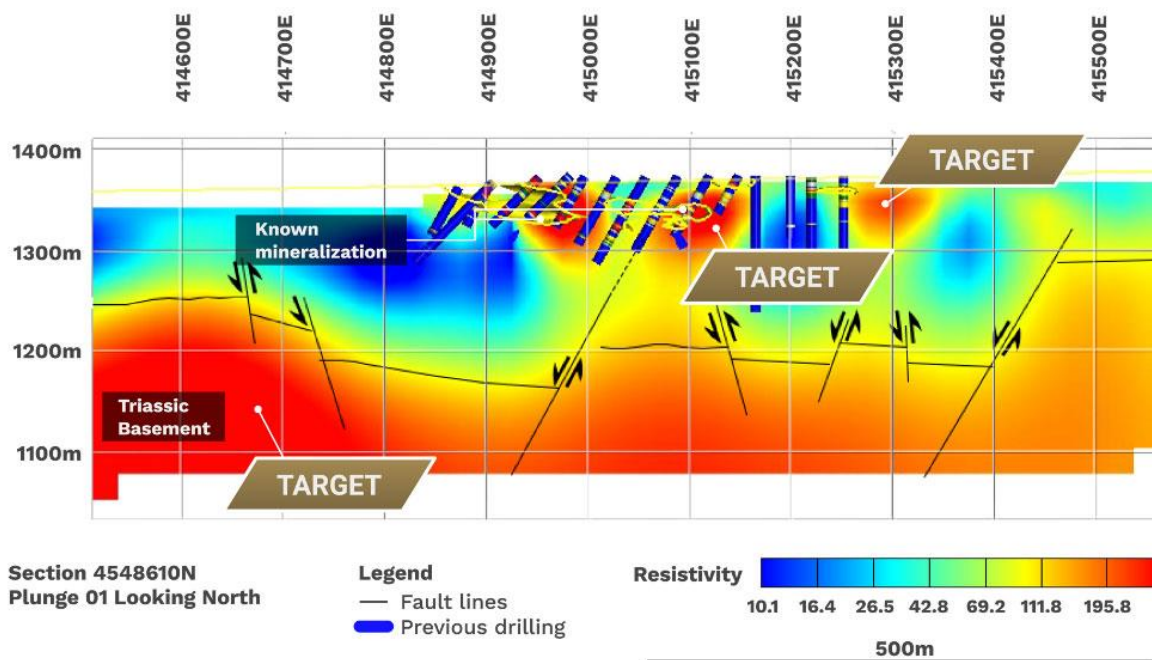
TMI and extensions of lag soil sampling. The Project has been geologically mapped for the hilltop outcrops by past geologists, however no detailed field mapping has been completed of rock float in the pediment areas on the Project, this work should be completed to help identify areas of alteration where lag sampling (coarse sample fraction) could then be used to target areas of potential mineralisation especially in the Abel Knoll to Southeast Pediment corridor, northwest lineament between Silica Ridge and Abel Knoll and further follow-up required for the North Hill southwest area. Rock float is observed within the shallow pediment where Quaternary cover is shallow (<20m). The results of the Gold Bull lag sampling render this task opportunistic particularly where demonstrated successful at the untested Silica Valley target. The lag sampling results are best used in parallel with ground geophysical surveys to optimize RC drill targets. Ground Geophysics is recommended at Silica Valley to confirm if the target is shed from the Silica Valley deposit or if it is another separate parallel gold structure to the Silica Ridge deposit.

A section of Gold Bull's 3D IP survey at North Hill (announced on 28 November 2020) is provided in **Figure 20**. This survey appears to show an association between some smaller high resistivity features and the known gold mineralization in yellow. Follow-up CSAMT surveys were taken in 2021 and used for drill target testing in 2022.

Independent Geologists, Mr. John Wood (Nevada veteran geologist who discovered Sleeper deposit) and Mr. Simon Meldrum (international epithermal gold expert) have conducted separate site visits and periodic reviews of the Gold Bull exploration programs conducted at the Project and their deliverables have verified that additional exploration potential exists at the Project. John Wood's geological models are included in **Figure 27** and **Figure 28** and resulted in the deeper driller holes at the Project in search of gold feeder structures.

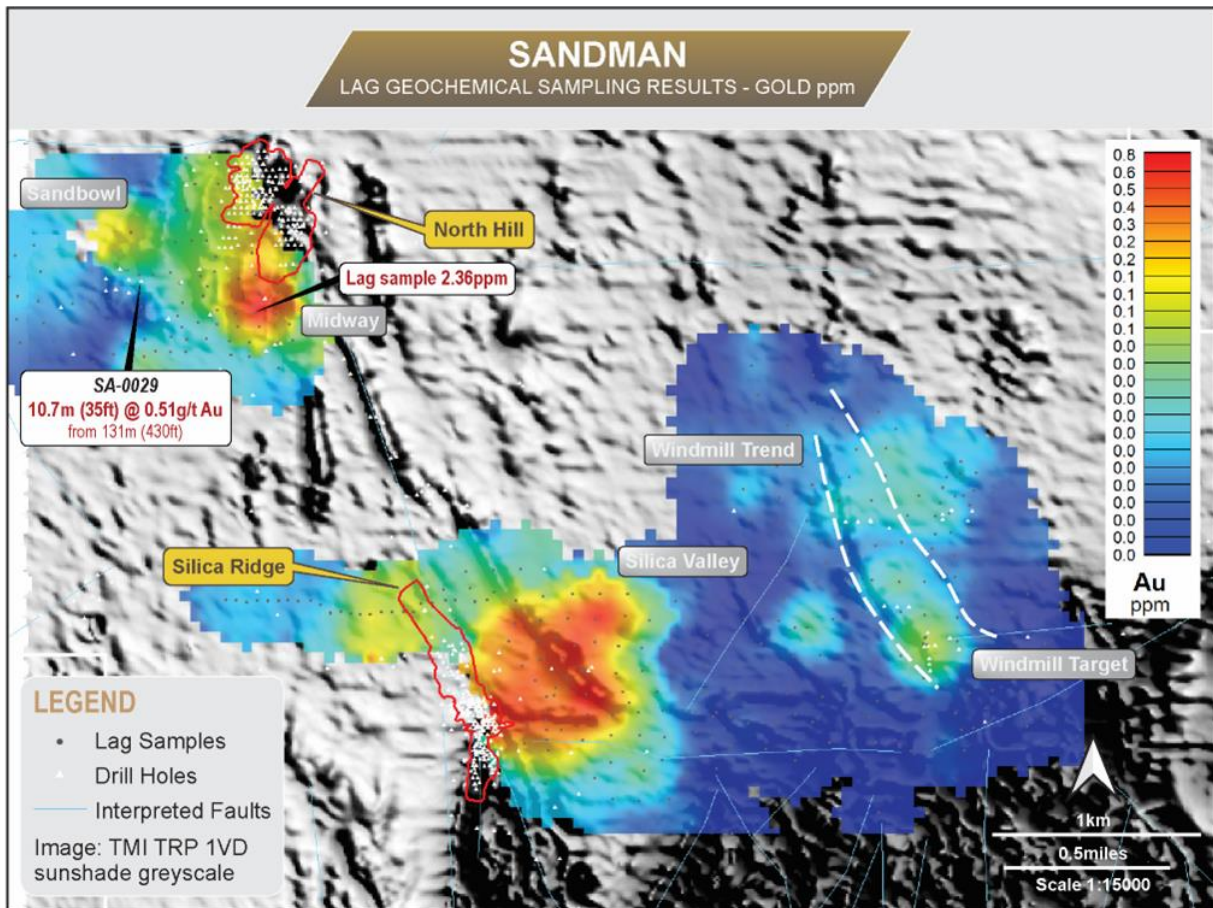
Mr. Simon Meldrum has recommended exploring for new discoveries away from existing deposits to organically grow the Project Mineral Resource using fundamental exploration approach and tools. Simon has recommended to re-evaluate the historical geochemical data which is fragmented and inconsistently applied across the project area including ultra-low detection of soil (and potentially lag sampling) over areas of favourable structures including NNW and NE structures. Mr. Simon Meldrum has recommended improving the structural interpretation with the geology mapping as there are quality magnetic, gravity and TEM surveys which need to better correlate with the Project geology map, various interpretations exist but further work required to bring the datasets into a single interpretation map. Consideration should be taken of seismic survey to define the pull-apart basin/half graben particularly in the central project area which is under explored and within the central graben area. Alteration mapping has also been recommended to include further evaluation of hyperspectral data and field verification with particular emphasis on

acid sulphate alteration mapping to discover new deposits.



**Figure 20: 3D IP resistivity section on Section line 4548610N from the North Hill deposit (Grid reference in UTM/NAD83 Z11N).**

Gold Bull conducted an orientation survey trailing use of a field spectrometer and soil gas surveys. The Company has validated that the field spectrometer has identified buddingtonite at the Project in association with known gold mineralization. This confirms the suitability of using a field spectrometer to assist in detecting alteration minerals that may have a close proximity to gold mineralization. Buddingtonite detected at Abel Knoll, Silica Ridge, and North Hill deposits in association with gold mineralization confirming similar mineralogical association of buddingtonite with gold at the Project to the along strike Sleeper deposit. Moving forward spectral analysis will be an excellent tool for testing nearology to potential gold mineralization. A soil gas orientation is currently being planned.



**Figure 21: Gold results of lag surface sampling taken east of Silica Ridge to Windmill Target area as well as west of North Hill. Total magnetic intensity black and white in background. These targets have not all been drill tested.**

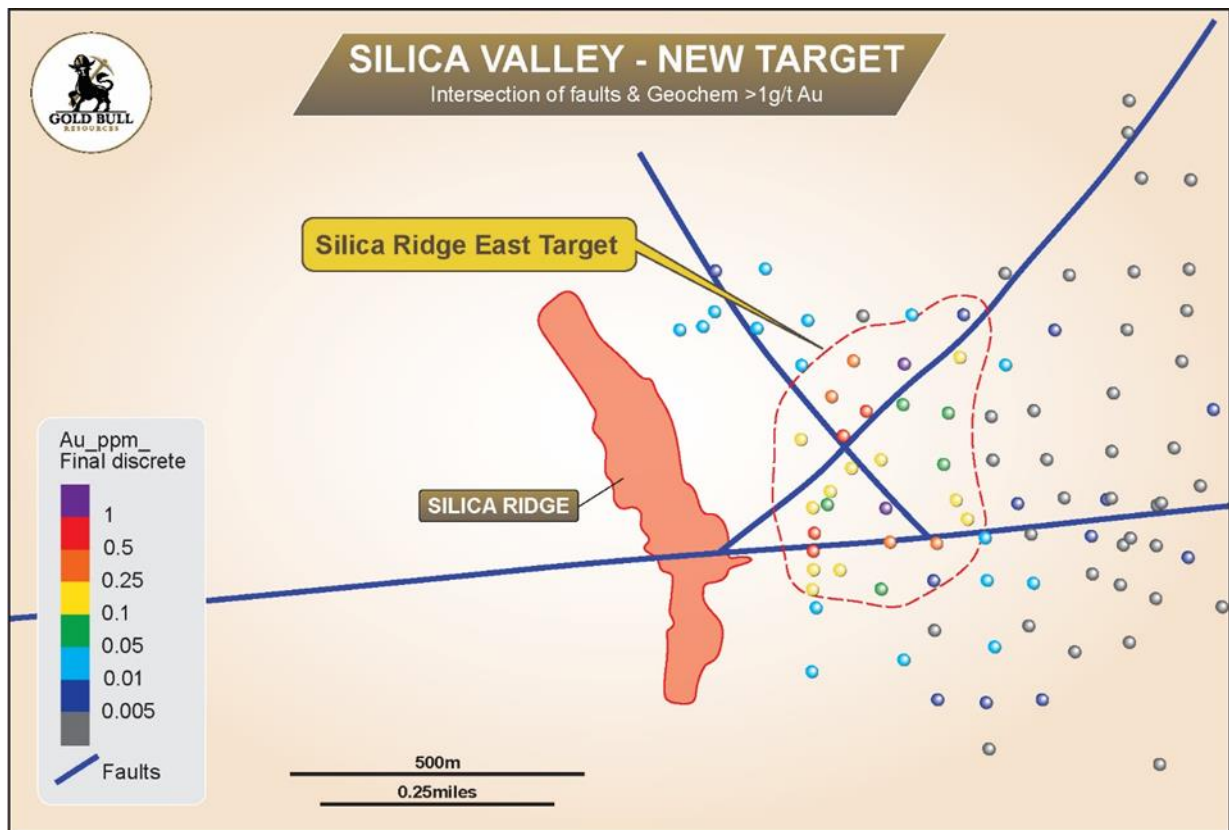


Figure 22: Results of lag surface sampling defining the Silica Valley target east of Silica Ridge deposit.

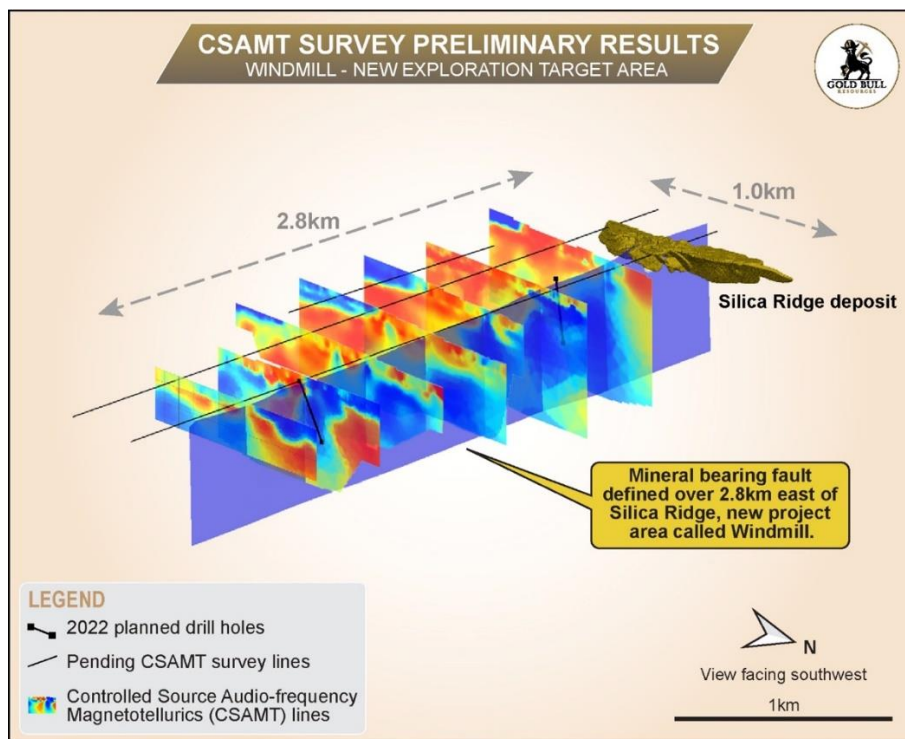
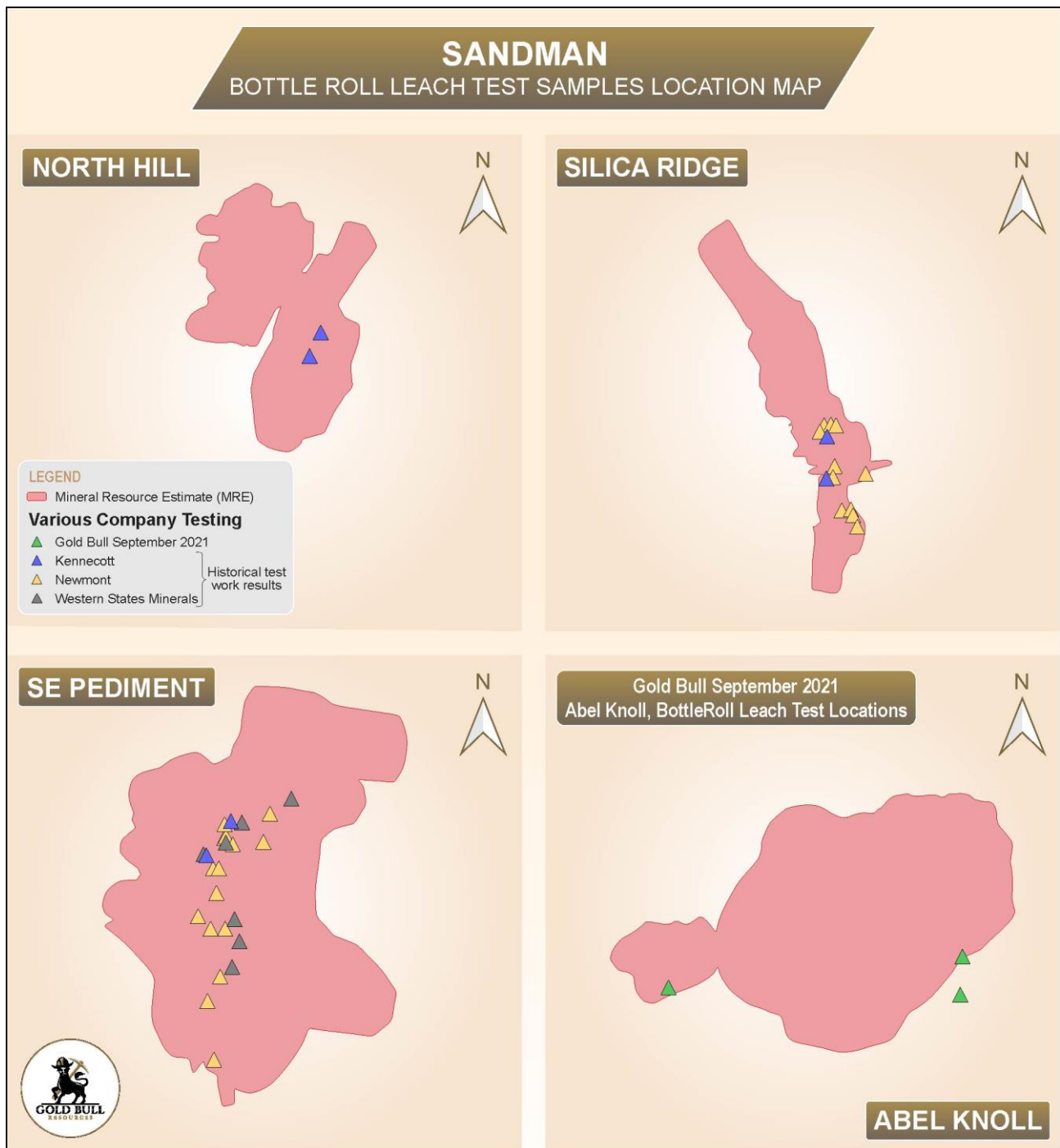
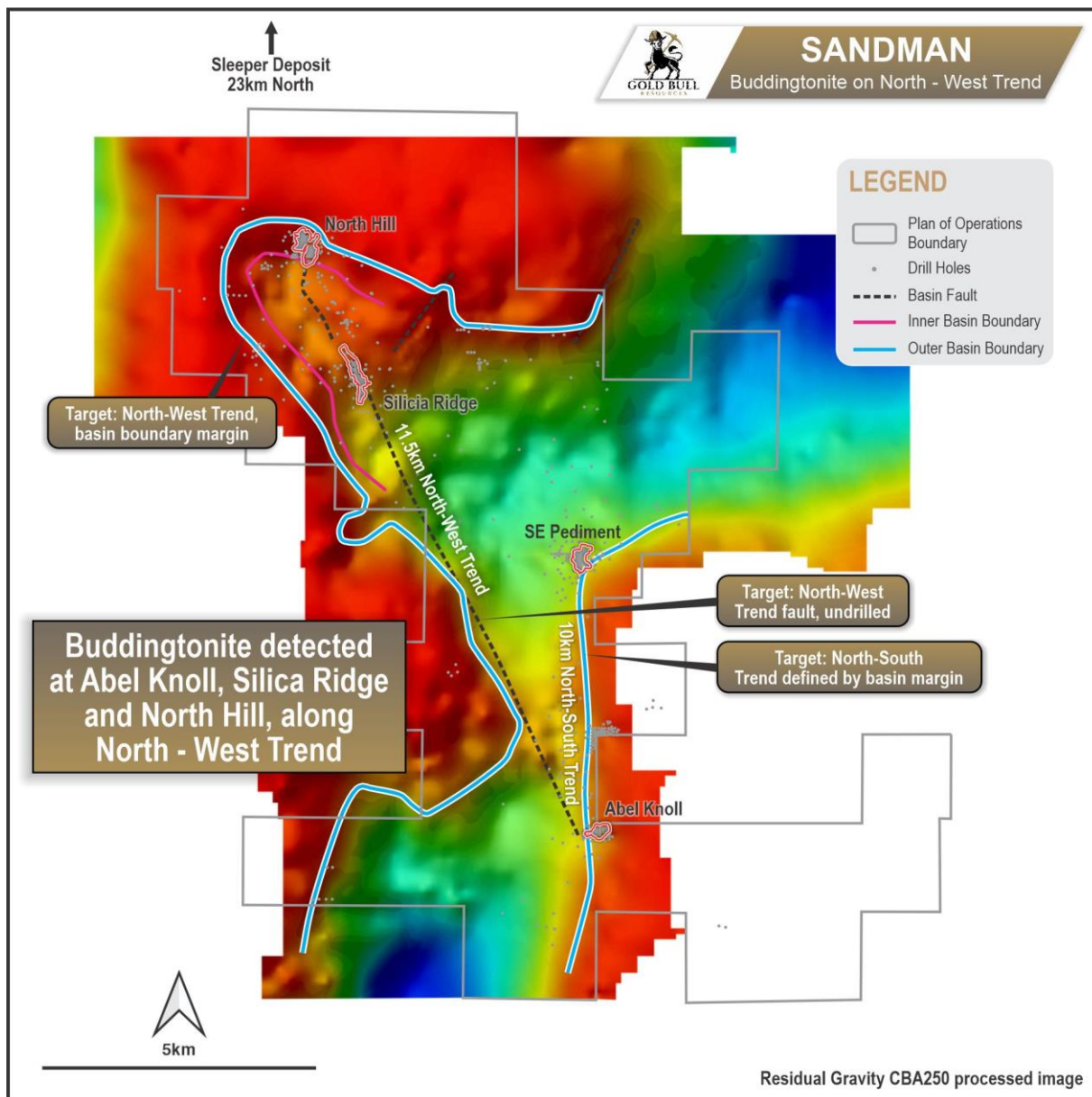


Figure 23: Results of CSAMT survey from Silica Ridge extending eastward to Windmill.



**Figure 24: Results of Bottle Roll leach test work taken by Gold Bull at Abel Knoll only. Historical explorers testing locations at North Hill, Silica Ridge and Southeast Pediment are shown for comparison. Announced by Gold Bull 14 October 2021, authored by Gold Bull Regina Molloy October 2022.**



**Figure 25. Residual gravity processed image depicting basin thickness. Exploration target trends include the 11.5km Northwest Trend and 10km North-South Trend. Buddingtonite was recently discovered at North Hill, Silica Ridge and Abel Knoll.**

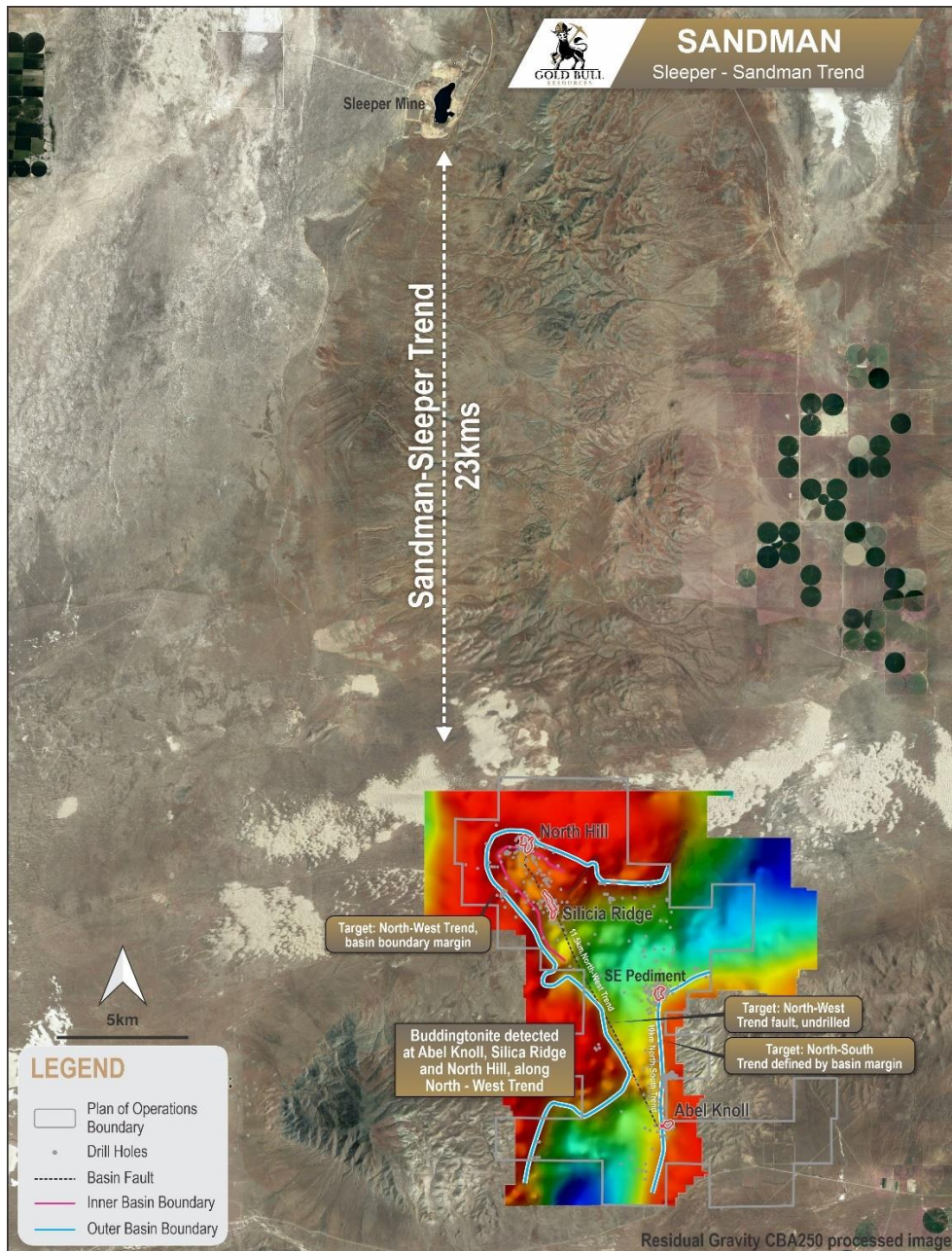


Figure 26. Sleeper pit located 23kms north of the Project, the range front highlights the Sandman-Sleeper trend.

## 10. DRILLING

The Project drill hole database consists of records collected between 1987 and 2022 by numerous companies including Kennecott Exploration Company (“**Kennecott**”), U.S. Borax & Chemical Company (“**USBC**”), Santa Fe Pacific Mining Inc. (“**Santa Fe**”), WSMCC, NewWest, Fronteer Development Group (“**Fronteer**”), Newmont Mining Corporation (“**Newmont**”) and Gold Bull. The drill hole database used for the MRE consists of 1,121 RC holes, 261 diamond drill Core holes, 4 Newmont RC pre-collars with Core tails, 2,702 auger exploration holes and 12 USBC blast rig holes.

Table 5 below is a summary of all drill holes which were consolidated for the purpose of creating the 2021 MRE at the Project.

In 2021 Gold Bull drilled 33 RC holes and in 2022 drilled 24 RC holes. The results of these holes are not included in the MRE but were included in the 2023 and this 2026 PEA grade model for mineralisation defined above the water table.

Refer to previous Technical Reports for maps showing drill collar locations drilled by Gold Bull and prior exploration companies.

Company	Year From	Year To	RC Drill Holes	Diamond Drill Holes	RC Pre-collar with Dimond	Other drill types
<b>Kennecott Exploration Company.</b>	1987	1989	200	3	0	0
<b>U.S. Borax &amp; Chemical Company</b>	1987	1989	109	5	0	12
<b>Santa Fe Pacific Mining Inc.</b>	1990	1994	64	0	0	0
<b>Western States Mining Corporation</b>	1996	2005	328	5	0	0
<b>NewWest Gold Corp.</b>	2006	2007	191	19	0	0
<b>Fronteer Development Group</b>	2006	2008	26	4	0	0
<b>Newmont Mining Corp.</b>	2008	2015	146	225	4	0
<b>Totals</b>	1987	2015	1064	261	4	12

**Table 5: Summary drill hole information broken down by Company in sequential order for the Project included in the MRE.**

## 10.2 Drilling Techniques

### 10.2.1 RC Drilling Methods

The 2020 Project database consists predominantly of RC holes totalling 1,121 holes. Of these 581 drill holes were drilled vertical with the remainder having an average inclination of -55 degrees, ranging between -40 and -85 degrees. RC drill hole total depth (“TD”) average 114m (376 ft.), ranging between 12.5 and 414.5m (40 to 1,360 ft.). Additionally, Newmont drilled 4 RC pre-collars at SE Pediment in 2011. Core tail TD’s range between 91 and 146m (300 to 480 ft.) and include two vertical and two with inclinations of approximately -70 degrees.

The following summary provides for details of the RC drilling companies, the drilling equipment and any other relevant details for the historical drilling programs.

#### **Kennecott RC:**

Kennecott contracted Eklund Drilling Company of Carlin, Nevada (“**Eklund**”) and Harris Exploration Drilling and Associates Inc. of Escondido, California (“**Harris**”) for their 1987 drilling. Drilling Services, Harris, Lang Exploratory Drilling Company of Salt Lake City, Utah, and Layne Christensen Company (“**Layne**”) (one drill hole) were Kennecott’s drilling contractors in 1988. Drilling Services and Harris were used in 1989. A single 1988 Harris drill hole is noted as having been drilled with a track rig; the type of rig used in all of the other Kennecott drilling is not known.

#### **Santa Fe RC:**

Santa Fe contracted Eklund for their 1990, 1992, and 1994 drilling programs and Becker Drilling Inc. for their 1991 drilling. Eklund used an MPD 1500 rig for the 1994 drilling. DSA-0200 through DSA-0213 were drilled with a 5 ½-in. bit, while holes DSA-0214 and DSA-0215 were drilled with a 5 3/8-in. bit.

#### **USBC RC:**

The only details for USBC drill holes is that RR-00003 was drilled by Boyles Brothers Drilling Company of Sparks, Nevada (“**Boyles Brothers**”) in 1988 using a Schram 685 rig with a 5 ¼-in. tricone rotary (“**tricone**”) bit.

#### **WSMCC RC:**

WSMCC used DeLong Construction and Drilling (“**DeLong**”) and Johnson Drilling (“**Johnson**”) in 1996. DeLong used an MPD 1500 rig for at least the first nine SR-series drill holes. A centre-return hammer was used by DeLong on drill holes SEP96-0001, SEP96-0009 through SEP96-0013, and SEP96-0015; and an unspecified hammer bit was used on other drill holes completed in 1996. Johnson drilled with a track-mounted rig.

The 1997 WSMC programs were drilled by Dateline Drilling Inc. (“**Dateline**”) and Johnson with unknown rig types. A centre-return hammer with a 4 5/8-in. bit was used on drill holes NH97-0023 through NH-0036 except for drillhole NH97-0030, which was drilled using a conventional hammer with a 4 5/8- in. bit. Based on available information, conventional hammers with bits varying in size from 4 ¾-in. to 4 ¾- in. were used in most of the remaining 1997 drill holes.

WSMC contracted Dateline for the four-hole 2000 drill program. Drill hole SEP00-0065 was drilled to 140m (340 ft.) with a 5-in. centre-return hammer, to 155.5m (510 ft.) ft with a 4 ¾-in. conventional hammer, and the hole was completed to a depth of 195m (640 ft.) using a 4 ¾-in. tricone. Drill holes SEP00-0066 through -0068 were drilled to depths around 152m (500 ft.) using 5-in. conventional hammers and completed with 4 ¾-in. tricone bits.

#### **WSMCC and WSMCC—NewWest JV RC:**

WSMCC and NewWest contracted DeLong for their 2002 through first quarter 2007 drilling campaigns. DeLong used a Foremost Drill Systems MPD 1500 track drill with 900 CFM, 300 PSI, and maximum depth capability of 457m (1,500 ft.). The programs were drilled using 5 1/8-in. conventional hammer and tricone bits. Hammer bits were used until significant ground-water flows or broken ground conditions were encountered, after which the drilling was switched to a tricone bit. Drill holes were collared dry with no water injection; water injection was initiated immediately after the holes were successfully collared in order to conform to air-quality regulations. Gel and/or bentonite were added to the water injection when high ground-water flows were encountered near the bottom of some drill holes, as well as to mitigate some highly broken-ground conditions.

#### **Fronteer RC:**

Fronteer retained DeLong for the completion of their 26 RC holes drilled in 2007 and 2008. Drill logs indicate that DeLong completed these holes with the previously utilized Foremost Drill Systems MPD 1500 using 5 ½ in conventional hammer bits.

#### **Newmont RC:**

Newmont contracted Boart Longyear to complete all RC drilling between 2008 and 2015. Boart Longyear used a Foremost Explorer 1500 all-terrain buggy rig for Newmont RC holes, capable of 1500ft.

A range of rock bit sizes were reported to be utilized as part of the Newmont RC drilling programs, including, 5 ½, 5 ¾, 5 7/8 and 6”.

#### **Gold Bull RC:**

None of the Gold Bull drill holes are included in the current MRE estimate as they were drilled post the MRE effective date.

In 2021 and 2022, Gold Bull drilled 57 drill holes for 10,759m (35,298ft) using New Frontier drilling in 2021 and then O’Keefe Drilling in 2022.

In 2021, Gold Bull drilled 33 RC drill holes for 5,804m (19,045ft) with New Frontier (LLC) using a Foremost Explorer 1500 buggy rig which had a depth capability of 450m. In 2022 Gold Bull drilled 24 drill holes for 10,759m (35,298ft) with O’Keefe Drilling using a Foremost W-750 drill rig.

The RC holes were drilled using variable hammer bit sizes including 4 ¾", 5", 5 ¼", and 5 1/8". A tricone bit was only used by O'Keefe Drilling when penetration rates were slow or drill conditions difficult. Drill holes were collared dry with water injection initiated immediately after the holes were successfully collared to conform to air-quality regulations. Gel and/or bentonite were added to water injection when high ground-water flows were encountered as well as to mitigate variable broken-ground conditions. Upon completion of drilling activities, drillholes were surveyed by IDS downhole surveying contractor, after surveying was completed the driller sealed the hole with freshly mixed cement and a 20' cement plug emplaced at the surface as per Nevada state regulations.

### **10.2.2 Diamond Drilling Methods**

The Project database consists of 261 Core holes and 4 Core tails. The majority of these (225 drill holes) were completed by Newmont between 2008 and 2015 and significantly advanced the geologic understanding of the Project deposits. Of these, 45 Core holes were drilled vertical, with the remaining having an average inclination of -56 degrees (ranging between -41 and -85 degrees). Excluding Core tails, the TDs for the drill holes range between 12 and 274m (40 to 900.3 ft.) with an average depth of 81.5m (268 ft.). 2011 SEP Core tail intervals range between 67 and 22m (220 to 400 ft.) with TDs between 166 and 213m (545 to 700 ft.) and an average depth of 197.5m (648 ft.).

The following summary documents Diamond Drilling contractors and equipment used during each company's drill programs.

#### **Kennecott Core**

Kennecott contracted McFeron & Marcus for the three Core holes drilled in 1989 and 1990.

#### **WSMCC Core**

The five WSMCC Core holes were drilled by Boyles Brothers in 1996. The rig types used and Core diameters recovered are not known.

#### **NewWest Core**

In 2006, NewWest contracted Kettle Drilling, Inc. for the Phase 1 Core drilling program. Kettle used an Atlas Copco Diamec® U-6 Core rig with a maximum depth capability of 1280m (1,280 ft.) for HQ diameter Core. NewWest's Phase 2 Core-drilling program began in early 2007 and was completed by K & R Drilling using an Acker MP5C Core drill. HQ Core was recovered from the entirety of both drilling programs, with the exception of Phase 1 drillhole SEP06-98c, in which Core size was reduced to NQ diameter to attain targeted depth.

#### **Fronteer Core**

A four-hole Core program was completed at Abel Knoll in 2008 by Major Drilling. Schedule C of the drilling contract within the files states that either a LF90 or LF230 Core drill rig with 30 ft. pull mast be utilized for the project. Casing was set at 6m (20 ft.) for 3 holes and 9m (30 ft.) for another. All drilled Core was HQ in diameter. Newmont took over operations for the project during the completion of the third drillhole of this program.

#### **Newmont Core:**

The majority of Core holes drilled on the Project have been completed by Newmont. This includes 223 Core holes completed between 2008 and 2012 and an additional 3 Core holes completed at Southeast Pediment in 2015. Layne was contracted for the 2008 through 2010 drill programs. Timberline Drilling was contracted for the 2011 and 2012 drill programs and also for the 3-hole program in 2015. PQ diameter Core was recovered for the majority of these drill programs, with a few holes collared or reduced to HQ diameter due to drilling conditions. Only Abel Knoll hole NSM-00380 was reduced to NQ diameter to reach targeted depth due to poor drilling conditions. The 2011 Southeast Pediment Core tails were completed using HQ diameter tooling.

## **10.3 Surveying**

Of the 1377 drill holes that make up the current database, 1314 drill holes have collar coordinate data while all drill holes have defined inclination and azimuth information.

Downhole survey data is reported in the Project database as one of four main categories, excluding 2 holes which have data of an unknown origin. The down hole survey categories are as follows:

- “Planned” (866 drill holes) where the down hole survey information is based on the planned data,
- “IDS Gyroscope” (398 drill holes) where the drill hole was surveyed by a Gyroscope at typically every 50ft down hole,
- “Reflex EZ-Shot” (12 drill holes) based on a Reflex EX-shot down hole survey data,
- “Calculated” (99) which are artificially modified down hole survey calculations based on typical dip and azimuth changes.

It was noted during the creation of the geological and mineralized domain block models, that some drill holes which only had planned down hole survey co-ordinates appear to out of position by 15ft (5m) or more relative to the surrounding drill hole information. This is interpreted to be due to the actual position of the drill hole being slightly offset from its modelled position due to a lack of down hole survey information.

If the drill hole data was considered validated, apart from the lack of down hole survey information, the drill holes were accommodated as best as possible and utilised as part of the interpretation and grade interpolation for each mineralized domain. The author considers that this situation was only occasional and has not materially impacted on the overall MRE.

The author cautions that in some sections of the block model where there are angled drill holes without adequate survey information, that there is a possibility that the specific location of the defined mineralized domains could be up to 10m away from its currently defined position.

The following summary provides more detail about the down hole survey information which exists in the drill hole database and is grouped by exploration Company name.

### **Kennecott**

All drill holes completed by Kennecott lack DH surveys. Vertical holes comprise 143 of these, 82 are inclined approximately -60 degrees to the east or west, while 14 are inclined -45 to the east or west.

### **Santa Fe**

All Santa Fe drill holes lack DH surveys. Of the 64 DSA series drill holes, 25 are categorized as Calculated while the remaining are Planned. Twenty holes were drilled vertical, 37 holes were inclined to the east, 3 holes were inclined to the west, 3 holes were inclined to the northeast, and one hole was inclined to the northwest.

### **WSMCC**

Of the 333 WSMCC drill holes in the database, only two (SEP02-0085 and SEP05-009) had DH surveys completed. IDS survey certificates are available within the files for both. The remaining DH surveys consist of 305 categorized as Plan, 25 categorized as Calculated and one hole having uncertainty as to whether azimuth/inclination was surveyed or calculated (SEP02-0069). 166 holes were drilled vertical, 98 were inclined easterly, 67 were inclined westerly and 3 were inclined to the north.

### **NewWest**

Of the 210 NewWest drill holes in the database, 48 holes had DH surveys completed. 36 surveys were completed by IDS while 12 holes were surveyed by drill contractors using Reflex EZ-Shot instrumentation. Survey certificates and documentation are available for all within the files. For the remaining 162 un-surveyed drill holes, 156 are categorized as Plan DH surveys, 5 are categorized as Calculated.

## **Fronteer**

DH surveys were completed on 9 holes drilled by Fronteer. IDS survey certificates are available within the files for these holes. The remaining DH surveys are categorized as Plan. Fronteer drilled 20 vertical holes, one hole inclined to the east, two holes inclined to the south and the remaining 7 holes inclined to the west.

## **Newmont**

DH surveys were completed on 351 of the 375 Newmont drill holes. The original IDS survey certificates are available for all excluding 2015 SE Pediment Core holes NSM-00385, NSM-00386 and NSM-00387 along with 2013 RC hole NSM-00317. The original DH survey data for the Newmont drill holes have been checked and validated when compared against the drill hole database.

## **Gold Bull**

All holes SA-0001 to SA-0057 drilled by Gold Bull were down hole surveyed excluding hole SA-0053. The in-rod downhole surveying was conducted by IDS using an NSG tool. Hole SA-0053 had to be redrilled SA-0054 due to hole failure and was not surveyed.

# **10.4 Drill Sample Recovery**

## **10.4.1 RC Drilling Recovery**

Available scanned paper logs from historical drilling at the Project generally state intervals with no sample recovery; however, mention of intervals with poor recovery is sporadic and not well documented within the files. A review of sample weights from assay certificates was completed for the selected validation drill holes and others within the files to ascertain RC sample recovery.

There is no record of sample weights in assay certificates prior to 2006. A selected data set of 1,198 individual sample weights from RC drill holes within each of the 4 modelled deposits was reviewed to understand the general sample recovery issues at the Project. Typical industry standards indicate 5 ft. RC samples be >2kg. Within the selected dataset, approximately 8.5% are less than 2kg. Only 2.3% are less than 1kg, averaging 0.7kg.

A review of other Newmont RC drill holes from 2008 through 2015 indicate similar sample size distribution. The bulk of Newmont RC drill holes were utilized over a broad area at the Project.

Although there are potentially some portions of the drilling information which have not had adequate sample size weights taken, the author considers that this is a low percentage of the overall dataset being under weight and not likely to have had a material impact on the MRE.

Sample weights from Gold Bull's 2021 and 2022 RC program returned average of 3.5kg, the minimum was a no sample return and maximum weight 19kg and mode 2.1kg. Sample weights were constantly monitored by the supervisory geologist. Duplicate samples were taken routinely and within mineralised samples, these have not been analysed and remain in the Gold Bull laydown yard in Winnemucca in yellow steel drums.

## **10.4.2 Diamond Drilling Recovery**

Scanned drill logs from Kennecott's 1989 3-hole Core program, which includes, Silica Ridge hole SMC-0001 and SE Pediment holes SMC-0002 and SMC-0003 indicate Core recoveries >90% excluding alluvium at collar and a single run in SMC-0001 from 202.3 to 207.3 ft at 84% measured recovery. Core recovery is also recorded on original logs for WSMC's 1996 5-hole Core program at Southeast Pediment and Silica Ridge. Rotary drill methods were used to set casing and no samples were recovered. At Southeast Pediment, recorded Core recovery is typically >90% excluding a zone of no to poor recovery from 145 to 155 ft. For Silica Ridge Core holes, recovery is recorded as 100% for the entirety of SR96-0001C; however, drill conditions appeared difficult in SR96-0002C, with numerous intervals of no recovery or poor recovery and the drill hole was abandoned at 21m (63 ft.).

NewWest completed 19 Core holes between 2006 and 2007. This includes one hole at Abel Knoll (AK07-0028C), four holes at North Hill (NH06-0106C through NH06-0109C), ten holes at SE Pediment (SEP06-0096C through SEP06-0105C) and four holes at Silica Ridge (SR06-0130C through SR06-0132C and SR07-0150C). MDA states

in the 2007 Updated Technical Report that “average Core recovery for the 2006 and 2007 Core drilling programs was 87.0%, including intervals within unconsolidated alluvium that experienced essentially no recovery. Core recovery within mineralized zones (> 0.010 oz Au/ton) averages 80.5% at Southeast Pediment, 82.3% at Silica Ridge, 94% at North Hill, and 95.8% at Abel Knoll.

A substantially larger dataset was available from Newmont’s NSM-series Core holes. These 229 holes account for 86% of total Core holes drilled on the project and an extensive digital database is available of these measurements.

On average, the Newmont Diamond Drilling results reported Core recoveries of over 90% for 75% of the total length combined. An additional 16% recorded recoveries of between 76% and 90% with a further 3.7% reporting recoveries of between 51 to 75%. Only 1% of the diamond drill Core reported recoveries of less than 1%.

## 10.5 Logging

The logging and coding schemes at the Project have evolved and been modified through the life of the project. Each generation of RC drilling recorded downhole observations for lithology, alteration and mineralization, while Core holes also recorded detailed structural measurements. A significant advancement in understanding of the stratigraphic section came from Newmont’s extensive Core drilling programs 2008-2012. However, general aspects of the sequence have been understood and well documented throughout each operator’s drill programs in detailed drill logs. Observations for alteration (including silica-adularia, argillic +/- propylitic), mineralization, veining, iron oxides and sulphides have been recorded in all the logging schemes. These coding schemes consist of both verbal (trace, weak, moderate, strong, etc.) and numerically coded intensity scales (0-3 and 0-5), mineral percentages, are also included in variously detailed descriptive comments.

For a consistent view of the logging information, numerous relogging programs have occurred throughout the life of the project as part of both JV activities and also as the project changed ownership over the years. Santa Fe relogged 130 of 200 Kennecott 1987-1989 RC holes during their JV and Newmont relogged 5 Santa Fe 1991 RC holes as part of project assessment work in 2000. From 2004 through 2005, NewWest relogged and/or recoded 155 of 333 1996-2004 WSMCC drill holes—153 RC holes and 2 Core holes. This recoding effort was done under the guidance of George Lanier, previously with WSMCC, and retained for all NewWest and Fronteer drill programs. This coded database was provided to Newmont in 2008 upon taking over the project.

From 2009-2010, Newmont relogged 176 historic drill holes, made up of 82 Kennecott holes, 32 Santa Fe holes, 21 WSMCC holes and 20 NewWest drill holes. Lithologic coding for the remaining Newmont Sandman database was completed predominantly by individual historic log review rather than a mass database recode as evident from observed variations in recent systematic drill log reviews. Lithologic coding was available for 95% of the drill holes within the current database of the Project.

Gold Bull adopted Newmont’s already compiled drill hole database into its own database and log coding system. Industry standard geological logging was conducted by Gold Bull and is compiled in Geosequel database.

# 11. SAMPLE PREPARATION, ANALYSIS AND SECURITY

The following description for the sample preparation, analysis and security is taken largely from the 2007 MDA Technical Report plus additional investigations and reviews of the subsequent drilling programs post 2007.

## 11.1 Sampling Techniques and Sample Preparation

### 11.1.1 RC Drilling

RC samples from all drill programs at the Project were collected on five-foot (1.52m) intervals on a majority of drill holes within the project. Exceptions include five Kennecott drill holes—SM-0172, SM-0173, SM-0194, SM-0195, SM-0196 and WSMC’s drillhole K105-0003. Each of these holes were drilled outside of the four modelled deposit areas. WSMC drilled 6 RC drill holes at Southeast Pediment, SEP02-0084 through to SEP02-0089, in which the top portion of the hole was sampled on 10-foot intervals where no significant mineralization was thought to occur.

Information on RC sampling methods prior to 2000 is limited to WSMC’s 1996 and 1997 drill programs. A total of 275 RC holes were completed in this time period: 51 holes at North Hill, 64 holes at Southeast Pediment, 76 holes

at Silica Ridge, 12 holes at Central Zone just north of Silica Ridge, 3 holes at Adularia hill and 2 holes at Grit Hill just east of Silica Ridge. Drill cuttings were collected over five-foot intervals by the drillers. Two 5lb to 10lb sample splits were collected at the drill rig; one sample submitted for assay and the other retained by WSMC as a reject sample. A rotary splitter was used for wet drilling intervals. Each assay interval was logged by a geologist, who recorded Information such as rock type, alteration, and degree of sulfide oxidation.

WSMC's and NewWest's 2000 through 2007 drill programs used essentially the same drilling and sampling procedures. Drill holes were started by drilling dry with water injection initiated immediately after the hole was successfully collared to conform with air quality regulations. Most of the drill samples were therefore derived from wet drilling and were split using a rotary splitter. The wet-sample splitting was designed to fill 20 x 24 in. cloth bags without overflow. A backup (rig-duplicate) split was collected in 10 x 17 in. olefin bags through 2005; all later rig splits were collected in 20 x 24 in. cloth bags. The few dry samples collected were split using a Jones splitter to fill two 10 x 17-in. bags. Gel and/or bentonite were added to the water injection when high-water flows were encountered near the bottom of some holes as well as in broken ground to stabilize some holes.

Sample recovery was reported by WSMC to be generally good except for a relatively few intervals where "very-poor" or "poor recovery" was recorded in the logs. NewWest used the dry weight of the entire sample submitted to the laboratory to track sample recovery.

Newmont took over management of the project from Fronteer mid-2008 prior to fully acquiring the project in 2011. From 2008 through 2015, a total of 146 RC drill holes were completed by Newmont. Drill holes were started dry with water injection initiated immediately after the hole was collared. Typical collar casing depth was 10 ft. with 20 ft. casing utilized where necessary. Newmont Standard Operating Procedures ("SOP") state that all rod additions and bit changes were to be documented on drill dailies.

Newmont SOPs require the bit to be raised off the bottom of the hole and blown clean prior to drilling each interval; however, within good ground this occurred more typically at the end of every 20 foot. Drilled interval. All holes were drilled wet with samples derived from the rotary splitter. The sample splitter was cleaned with high pressure water between samples, with particular attention given if drill discharge consisted of clay slurry. The splitter was thoroughly cleaned following the completion of each drill hole.

Samples for lab analysis were collected in fine cloth micropore bags specially designed for wet sample collection, allowing water to slowly seep while retaining sample solids. Rotation speed was adjusted to avoid ejection of particles from the sample. Effort was made to prevent overflow of sample bags to maintain representative sampling. In the event overflow occurred, it was to be documented on drill log sheets. Additionally, water flow rate and estimated sample recovery should have been documented along with sample number and interval footage. A minimum sample size of 2.5lbs (~1kg) was required for each sample interval as per the Newmont SOP. Each sample bag was clearly labelled with drill hole number, footage and sample ID. Newmont employed a bar code system with stickers firmly stapled to the sample bag tag.

Gold Bull also collected 5 foot sample intervals with two samples per drill rod taken. Samples were drilling wet to avoid dust and were caught in a micropore sample bag within a bucket. A sieve was placed on top of the bucket to catch drill chips over the sample interval for logging purpose with a small portion placed into the chip tray and the remainder of sample returned to the sample bag. Nominal duplicate samples were taken routinely and where possible duplicate samples were taken in mineralised intervals when the interval was promptly identified by the supervising rig geologist. The duplicate samples have been retained but not yet analysed.

### 11.1.2 Diamond Drilling

There is no documentation within the files stating Core sampling procedures prior to 2006. Three Core holes drilled by Kennecott in 1989—SMC-001 at Silica Ridge and SMC-002 and SMC-003 at SE Pediment—have average sample intervals of 5.1 ft.

Five holes were completed by WSMC in 1996, SEP96-0001C, SEP96-0002C and SEP96-0003C at SE Pediment and SR96-0001C and SR96-0002C at Silica Ridge. Sample intervals for these holes average 2.1 ft.

NewWest completed 19 Core holes between 2006 and 2007. This includes one hole at Abel Knoll (AK07-0028C), four holes at North Hill (NH06-0106C through NH06-0109C), ten holes at Southeast Pediment (SEP06-0096C through SEP06-0105C) and four holes drilled at Silica Ridge (SR06-0130C through SR06-0132C and SR07-0150C).

Excluding the non-sampled 20 ft. at collar for AK07-0028C, average sample length for Core holes from Abel Knoll, North Hill and Silica Ridge is 4.8 ft.

MDA states in the 2007 Updated Technical Report that NewWest Core was placed in waterproof Core boxes by the driller, with wood blocks marking the depths at the end of each Core run. Boxes were taped shut to secure the sample during transport. Core was geologically logged and photographed at a Core logging facility in Reno. Once logged, assay intervals which ranged from 2 ft. to 6 ft. outside of zones sampled on 10 ft. intervals had sample numbers marked on the box and Core using a marker and metal tags for each interval. Where appropriate, a line was made on the Core for orientation during the Core cutting and assaying, both of which were performed by American Assay Laboratories (“**American Assay**”).

Fronteer completed 4 holes at Abel Knoll in 2008—AK08-0054C through AK08-0057C—with Newmont taking over the project towards the end of the program. The first 3 holes were logged by Fronteer personnel—formerly with both WSMC and NewWest—with logging completed by Newmont personnel on the last two holes of the program. No samples were collected the first 20 to 30 ft. through alluvium in these holes. Average sample length for these holes was 4.8 ft.

Beginning in 2008, Newmont completed a total of 262 Core holes—including 4 Southeast Pediment Core tails—through 2012 and an additional 3 Core holes in 2015. Core was placed in waterproof wax-impregnated boxes from top to bottom, left to right. Wood blocks marking the footage depths at the end of each run—in addition to run length and measured recovery by driller—was also marked on the blocks. Core was typically gently washed to remove bentonite, excluding highly fractured or clay rich intervals. Project geologists checked the rig daily to oversee progress and follow-up on drill-related issues. Once drilled, Core was stacked typically 40 boxes to a pallet, secured with double-looped rope and transported to a Core logging facility in Winnemucca.

Following detailed geologic +/- geotechnical logging, aluminium survey tags were inserted into Core boxes at sample footage breaks—stapled if Core was to be split—prior to photographing Core. Sample breaks were based on lithologic, structural, alteration, mineralization and oxidation boundaries—with typical sample intervals not to exceed 5 to 6 ft. Geochemical composite intervals were based off these same breaks not to exceed 25 ft. To account for previously documented “nugget-effects” present at the Project, the majority of Newmont Core was PQ in diameter and whole sampled at the Core shed, very limited mineralised Core remains. Samples were placed in large cloth bags labelled with Hole and Sample ID. Sample barcodes were stapled to tags on the outside of sample bags. Selective Core pucks, typically 0.4 ft in length, were collected approximately every 20 to 50 ft. to represent lithologies, alteration, mineralization and oxidation characteristics. These samples served as reference material as well as were utilized for specific gravity (“**SG**”) measurements.

For cut drill holes, saw lines were typically marked with either permanent marker or wax lumber crayons by the logging geologist. Core was then transported to Newmont’s Maggie Creek, Battle Mountain or more typically Twin Creeks Core facility for splitting. Strict procedures were adhered to regarding cleaning of Core saws and sample preparation areas to avoid sample cross contamination between holes and projects. Core saws were thoroughly cleaned at the end of each shift, between holes, and between exceptionally clay-rich sample intervals. Cut holes were sawn in half, excluding 19 metallurgical holes which were ¼ split for assay. Remaining material from these holes was composited by grade and geologically logged characteristics for metallurgical analysis. Checks were made throughout sampling to ensure correct intervals were placed in corresponding cloth bags labelled with hole ID and footage. Bar code sample IDs were stapled to outside tag.

Gold Bull did not complete any Core drilling in 2021 and 2022.

## 11.2 Analytical Procedures

For the Kennecott drill programs, drill logs indicate Bondar Clegg Inc. (“**Bondar Clegg**”) analyzed gold by fire assaying (“**FA**”) 30-gram charges with atomic absorption spectrometry (“**AA**”) finish for a majority of RC and Core samples. Bondar Clegg is now part of ALS Chemex (“**Chemex**”), which holds ISO 9002 laboratory accreditation and ISO:9001:2000 for North America. Chemex completed gold check assays on SM-0061 while Barringer Laboratories, Inc. of Sparks, Nevada (“**Barringer**”) completed check assays on SM-0064. Barringer also analyzed silver, arsenic and mercury. Certificates for this drillhole states silver and arsenic were analyzed via AA while mercury was analyzed by “**HYG**”. Barringer also completed primary analysis for holes SM-0077, SM-0078 and SM-0079. Analysis for SM-0077 included 30-gram FA with AA along with silver, thallium, tellurium and antimony by AA, while SM-0077 and SM-0079 had gold analyzed by 30-gram FA with AA finish, silver and arsenic analyzed via AA and mercury analyzed by “**HYG**”.

Chemex analyzed samples from the Santa Fe drilling program also by traditional 30-gram FA with AA finish. Two samples triggered by over-limit were re-analyzed by 30-gram FA with gravimetric finish to determine gold values. Assay certificates indicate samples were ring crushed to approximately 150 mesh.

USBC drill samples were analyzed by 30-gram FA with AA finish. Silver was also analyzed by AA. Check assays for both gold and silver were completed by American Assay by an unknown method for holes RR-00051 through RR-00058 and RR-00060. Check assays ran on RR-00084 for the entire hole was also completed by Barringer. Analysis included gold FA and silver, arsenic and zinc analyzed by AA. For USBC Core holes, only a single assay certificate has been located for RC-00003 indicating gold analysis by screen fire methods. Gold was analyzed by FA with AA finish separately for screens at +30, -30 to +60, -60 to +80, -8 to +100, -100 to +140 and -140 mesh with a calculated gold assay reported. Gold was also analyzed by FA with AA finish from a separate split from each sample. No additional data has been observed for sample preparation or analysis for these holes.

All 1996 WSMC RC samples and two Core holes, SR96-001C and SR96-003C, were analyzed by Barringer. Gold was assayed by 30-gram FA with AA finish. Four samples grading between 0.15 and 1.9 opt were re-analyzed by 30-gram FA with gravimetric finish. Samples submitted prior to August 12, 1996 were pulverized by a ring-and-puck pulverizer. Later samples were pulverized with a rotating-disc pulverizer as per the recommendations of Cone following a study commissioned by WSMCC. Cone analyzed 13 RC samples from SEP96-0051 by 30-gram FA with AA finish as part of this study. Cyanide soluble assays were completed by Barringer on 1996 drill samples that returned fire assay values greater than 340ppb (0.01 opt oz.). The technique involved agitating 30-gram splits for 1¼ hours in a hot cyanide solution.

Samples from the three remaining 1996 WSMC Core holes, SEP96-001C, SEP96-002C and SEP96-003C, were analyzed by Legend Laboratories of Reno, Nevada (“**Legend**”). Legend completed 30-gram FA with both gold and silver determined by gravimetric finish. SEP96-001C sample 82 to 84 ft. recorded the highest gold assay value within the Project database at 112.39 opt (3,853 ppm). Cold cyanide assays were also completed. Additional data on sample preparation and analysis has not been observed in the files.

American Assay became the primary analytical laboratory for WSMC in 1997 and has remained so throughout the Project to date excluding three holes drilled in 2000 and a single NSM-series drill hole completed in 2010. American Assay obtained ISO 9002 registration in 2000. All 1997 drill samples were analyzed by 30-gram FA with AA finish. Assay samples that returned values >340ppb (0.01opt) were subsequently submitted to American Assay for AuCN, AgCN and silver analysis (D210 method) in which 0.5-gram sample was digested by aqua regia to 10ml and analyzed via AA. Additional analysis completed by American Assay included a 69-element ultra-trace geochemical suite—two acid digestion and analyzed by inductively coupled plasma (ICP) analysis and mercury analyzed by Cold Vapor AA, completed for RC drill holes NH97-0021 and NH97-0022. This geochemical analysis was for 10 ft. composited intervals.

WSMC drilled four RC holes in 2000 at SE Pediment. Samples for these drill holes were analyzed by Rocky Mountain Geochemical (Inspectorate) located in Sparks, NV. For these samples, gold was analyzed by 30-gram FA with AA finish and silver was analyzed by aqua regia digestion and AA for each sample interval. Three samples—two from SEP00-0065 and one from SEP00-0067—were later analyzed for gold by 30-gram FA with gravimetric finish. Two samples from SEP00-0065 were sent to American Assay for check assays of gold by 30-gram FA with AA finish and silver by AA D210 method.

Holes completed by the WSMC-NewWest Joint Venture (“**JV**”) in 2002, 2004 and 2005 used American Assay as the primary laboratory. RC samples were analyzed for gold by 30-gram FA with AA finish. Pulps returning high values—triggered at 10ppm (0.3 opt) threshold—were re-analyzed by 30-gram FA with gravimetric finish. Samples that returned values >340ppb (0.01opt) were submitted for analysis for AuCN, AgCn and silver—methods included D210 AA previously described and D2A in which a 0.5-gram sample was dissolved in two acid solution to 15ml and analyzed by ICP. AuCN and AgCN assay was completed using two-hour cyanide shake test. Additionally, 7 RC holes—SEP02-0069, SEO2-0070, SEP02-0071, SEP02-0073, SEP02-0075, SEP02-0076 and SEP02-0081 were analyzed by screen fire for samples identified as having visible gold.

In 2006, WSMC relinquished control of the Project to NewWest. American Assay was retained as the primary lab and analytical procedures remained identical to previous procedures in place—with gold analyzed by 30-gram FA with AA finish and samples greater than 10 ppm (0.3 opt) triggering re-analysis by 30-gram FA with gravimetric finish. Samples that returned values >340ppb (0.01opt) were submitted for AuCN, AgCN and D2A silver.

A number of 2006 and 2007 RC and Core were analyzed by screen fire assay, for selected intervals instead of 30-gram FA with AA finish of in their entirety. Holes with spot screen fire in place of 30-gram FA include RC holes AK07-0031, AK07-0038, AK07-040 and Core hole AK07-0028C at Abel Knoll. Four confirmation Core holes at North Hill—NH06-0106C through NH06-0109C—have selected intervals analyzed by screen-fire assay not analyzed for by 30-gram FA. A ten-hole confirmation Core program was also completed at SE Pediment in 2006. These holes consist of SEP06-0096C through SEP06-0105C. Note many of the holes from this program have large intervals assayed by FA sampled on 10 ft. intervals. Core holes SEP06-0096C through SEP06-0098C, SEP06-0100C, and SEP06-0101C were sampled entirely by 30-gram FA with AA finish. SEP06-0099C was sampled predominantly by FA method with select intervals analyzed by screen-fire assay rather than FA while SEP06-0102C through SEP-0105C were sampled in their entirety by screen-fire methods. A three-hole confirmation Core program was also completed at Silica Ridge in 2006. SR06-0130C, SR06-0131C and SR06-0132C were assayed in their entirety by screen-fire methods. A 2007 follow-up Core hole, SR07-0105C was selectively sampled from collar to 34 ft. by screen-fire while the remainder of the hole was analyzed by 30-gram FA.

Fronteer acquired the Project mid-2007, maintaining American Assay as the primary lab for programs in the second half of 2007 and 2008. All RC samples—along with Core samples from AK08-0054C and AK-0055C—were analyzed by 30-gram FA with AA finish. Select AuCN, AgCN and silver were not analyzed for these holes. Core holes AK08-0056C and AK08-0057C, logged by Newmont personnel, were analyzed using screen-fire methods along with AuCN and silver using the D4A method, essentially the same analysis as the D2A method, only utilizing a four-acid digestion, analyzed by ICP. A 72-element, ultra-trace geochemical analytical suite digested by four acid and with ICP analysis was completed on AK08-00546C composited intervals of approximately 20 ft. Geochemical data is not available for the other Fronteer drill holes.

Newmont took over the project mid-2008, retaining American Assay as the primary lab with checks completed by Chemex. The majority of NSM-series Core samples were assayed for gold using screen-fire methods along with AuCN and silver using the D4A method described earlier. For the Newmont Screen FA process, the entire sample was crushed to 8-10 mesh, then a 1 Kg split was pulverized to 150 mesh. The 1 kg was then screened to get (+) and (-) 150 fractions. The (+) fraction was assayed in as many 30-gram or 15-gram assays as necessary to consume the entire fraction. Then two 30-gram assays were ran from the (-) fraction. Values reported on original certificates include (+) weight, (+) gold assay, (-) weight, (-) gold assay #1, (-) gold assay 32, and calculated Gold value. For reporting, the calculated gold formula is:

$$((+fraction * +weight)+((-value + -value)/2) * total -weight)) / total pulp weight (+weight + -weight)$$

Of the 229 Cored intervals within the NSM-series, 218 holes used this Core screen-fire suite of analysis. NSM-00121 was mistakenly submitted for the RC suite of analysis and only has traditional 30-gram FA with AA finish. NSM-00175 was analyzed by Chemex using screen fire-methods; however, AuCN and Ag analysis for this drillhole were not completed. Gold analysis for 2015 Core holes NSM-00385, NSM-00386 and NSM-00387 was by 30-gram FA with an ICP finish. Gravimetric finish for samples returning values >10ppm were completed for these three holes.

A majority of the 146 NSM-series RC holes were only analyzed for Au using 30-gram FA with AA finish.

In 2021, Gold Bull moved to a similar approach to Newmont where 1kg pulp was pulverised and analysed for gold and multi-element geochemistry and where gold values exceeded 10ppm these samples were assessed for coarse gold with gravimetric finish. The flow charts below provide details on the Gold Bull analysis conducted at American Assay Laboratory in Reno, Nevada. At the start of drilling in 2021 30g fire assay samples were completed from 250g pulverized sample with ICP-5A035 analysis and periodic selective Se analysis, this was later changed to 1kg pulverized pulp and 50g fire assay after coarse gold was identified. Gold Bull then implemented the same past procedure as Newmont with screen fire analysis completed for holes >10ppm and a larger primary pulverized sample of 1kg. In 2022 for holes drilled within the resource areas at North Hill, Silica Ridge and Abel Knoll, the multi element ICP-OES analysis was not completed as it was not deemed useful within the defined resource areas and saved the company money. Prior geochemical trace element studies using IOGas did not yield that useful at the Project as drilling is concentrated in the resource areas, however pathfinders of As, Sb, Si, K, Ag were useful during the drilling process when the pXRF was utilized on the drill chips at the drill rig ongoing with drilling.

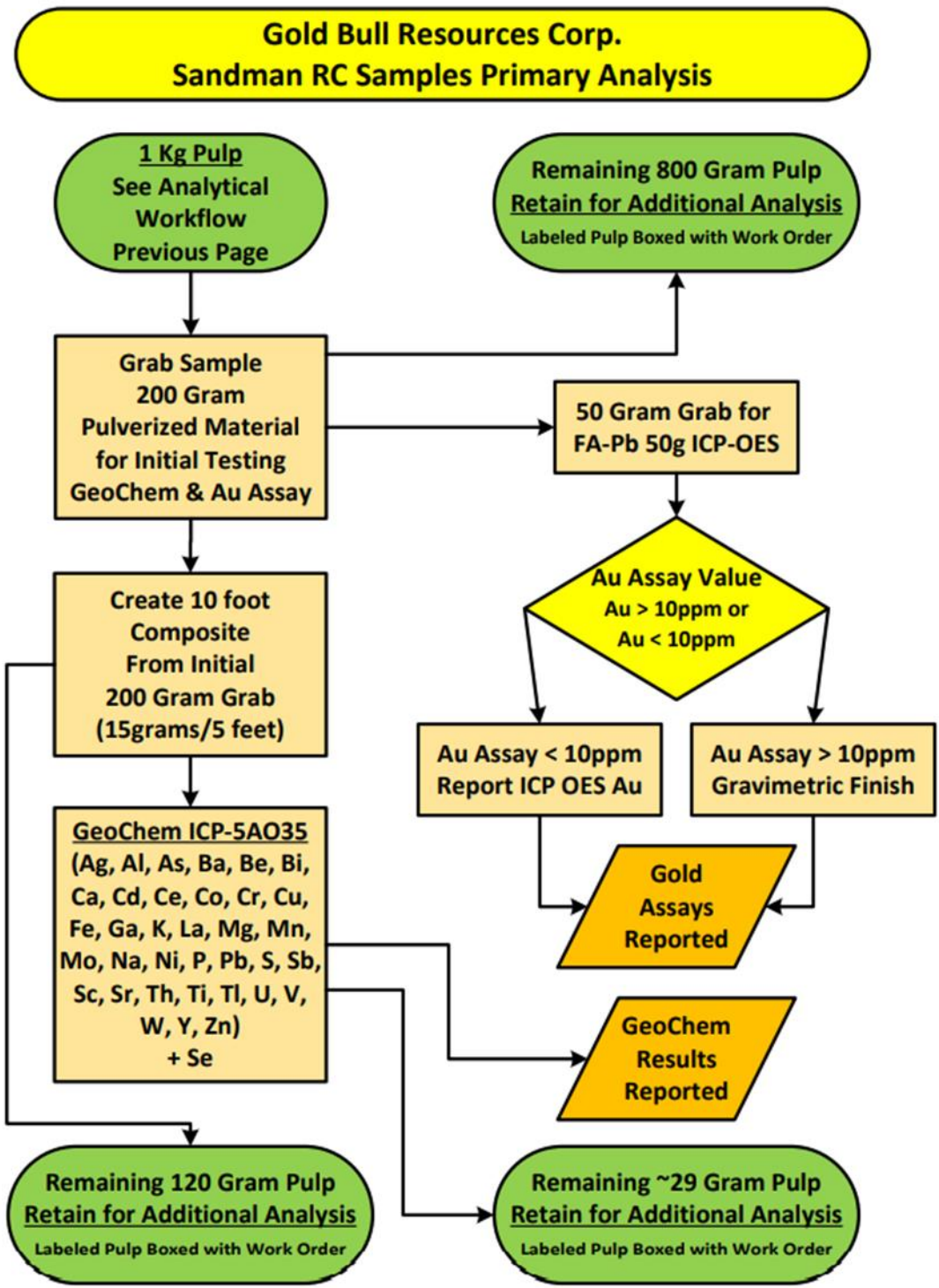


Figure 27: Gold Bull Sandman RC sample preparation and primary analysis flow

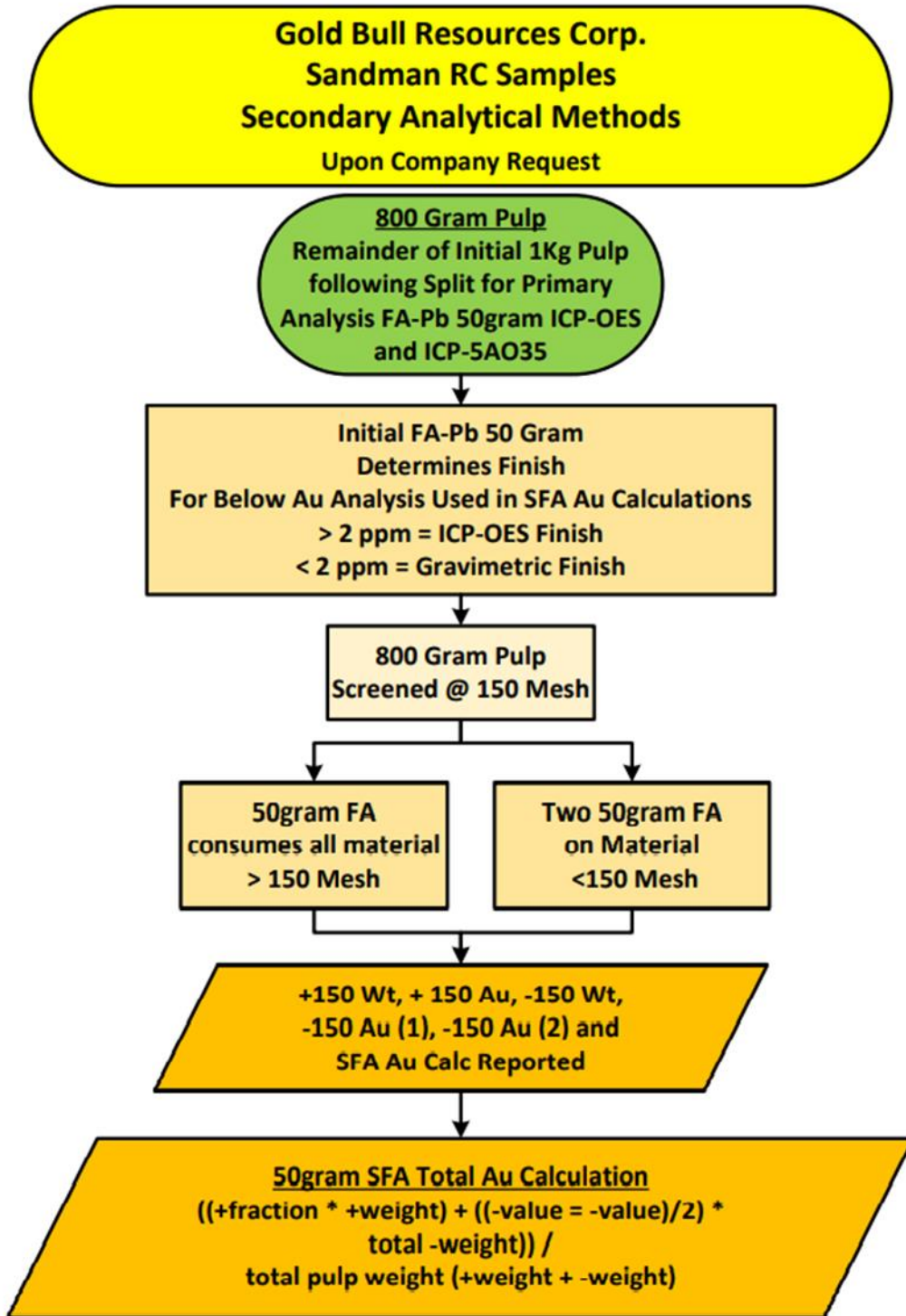


Figure 28: Gold Bull Sandman RC sample secondary analysis flow for screen fire assay

### 11.3 Sample Security

The 2007 Technical Report by MDA states that there is no knowledge of sample handling and security procedures used in any of the drilling programs prior to 2000. Below descriptions of WSMC and NewWest sample security and chain of custody protocols are largely taken directly from MDA’s report while summary of Newmont sample security and chain of custody are from Newmont internal SOP’s.

### **11.3.1 Kennecott Drill Holes**

No information is available for sample security and chain of custody during Kennecott's tenure (1987-1989).

### **11.3.2 USBC Drill Holes**

No information is available for sample security and chain of custody during USBC tenure (1987-1989).

### **11.3.3 Santa Fe Drill Holes**

No information is available for sample security and chain of custody during Santa Fe tenure (1990-1994).

### **11.3.4 WSMCC Drill Holes**

No information is available for sample security and chain of custody during WSMC 1996 and 1997 programs.

During the 2000-2005 drill programs, RC drill samples were stored at the drill sites until they were picked up and transported to the analytical laboratory by personnel of either the analytical laboratory or WSMC. For the majority of the samples, however, the laboratory picked up the samples at the drill site, and the change in custody was documented by signature. Although the samples stored at the drill sites were not secured, drill contractor employees and/or WSMC personnel were present at the property during most daylight hours. There were no indications of any security problems during the drilling programs (Lanier, pers. Comm., 2006).

### **11.3.5 NewWest Drill Holes**

RC drill samples were stored at the drill sites until they were picked up and transported to the analytical laboratory by personnel of either the analytical laboratory or WSMC. For the majority of the samples, however, the laboratory picked up the samples at the drill site, and the change in custody was documented by signature. Although the samples stored at the drill sites were not secured, drill contractor employees and/or WSMC personnel were present at the property during most daylight hours. There were no indications of any security problems during the drilling programs (Lanier, pers. Comm., 2006).

Core drilled by Kettle Drilling, Inc in 2006 was transported off site by Kettle to their office in Winnemucca. The Core was then transported in pickup by NewWest staff to a logging facility in Reno. Once logged and photographed, Core boxes were transported to the laboratory for cutting and assaying by NewWest staff. Core drilled by K & R Drilling in 2007 was stored on-site before being transported by pickup to the logging facility in Reno by NewWest staff.

### **11.3.6 Fronteer Drill Holes**

Sample security and Chain of Custody protocols are believed to have remained consistent with that of the previously described WSMC and NewWest programs. This assumption is supported in that logs indicate the personnel working on the project during Fronteer's tenure (2007-2008) is nearly identical to the previous NewWest team.

### **11.3.7 Newmont Drill Holes**

RC samples were stored at site in metal bins until drillhole completion and then typically picked up by American Assay personnel for transport to lab in Reno. Less commonly, samples were transported to a Newmont logging facility in Winnemucca by Newmont personnel and later picked up by American Assay. RC drill contractors and Newmont personnel were onsite during most daylight hours while Core drill contractors worked overlapping double shifts. There were no concerns regarding security at the site.

For Core holes, boxes were brought to Winnemucca logging facility at end of shift by drill contractors or picked up daily by Newmont personnel during frequent rig checks and inspections. The majority of drill Core was whole-Core sampled, with samples transported directly from Winnemucca to Reno by American Assay. For split Core, stacked Core was securely bound on pallets and transported to one of three Newmont Core facilities—typically Twin Creeks—for sample processing. Samples were then picked up at respective Core facility and transported by American Assay. Signed sample submittals are available for the majority of Newmont drill holes.

**11.3.8 Gold Bull Drill Holes**

Gold Bull laid the RC samples flat on the ground next to the drill rig in rows to allow the samples to dry. When dry, they were centralised at the Southeast Pediment deposit where American Assay Laboratory sent a truck from Reno to pick up and transport the samples to the Reno laboratory. Duplicate samples >10ppm (<10ppm were disposed) were transported to the Gold Bull laydown yard in Winnemucca (behind the potato factory) and left to dry, once dry the samples were then placed into steel drums for future use.

Reject samples returned from American Assay were also put into drums, there was no sorting of mineralised and non-mineralised samples. Return pulp samples were stored at the Winnemucca diamond storage facility by Gold Bull, these 2x garage facilities are locked and the facility is gated.

**11.4 Quality of Assay Data and Laboratory Tests**

As documented by MDA in the 2007 Updated Technical Report, consistently implemented data checks and validation procedures appear to have been lacking in the various exploration programs at the Project prior to 2004. Most drilling programs post 2004 had established QAQC procedures at least approximating current industry standards. The following information is a summary of the QAQC information that is available for the respective drilling campaigns from the Project.

**11.4.1 Kennecott Drill Holes**

Consistent QAQC data validation procedures were absent for the majority of Kennecott’s drill programs (1987-1989). Limited check assay data against primary laboratory Bondar Clegg has been documented in the recent 2020 file review. These include check analysis on coarse reject by Chemex on SM-0061 and by Barringer on SM-0064. As part of the 2007 Sandman Updated Technical report, MDA reviewed check assays against original results for three drill holes completed by Kennecott in 1988. MDA concluded that umpire assays compared well with the original values.

**Table 6: Check analysis results and comparisons from drilling completed by Kennecott in 1988.**

Type	Assay Lab	Mean	Median	Std Dev	CV	Min	Max	No
Original	Bondar Clegg	0.110	0.008	0.586	5.327	0.000	3.766	41
Check	Chemex/Barringer	0.012	0.011	0.588	5.250	0.000	3.780	41

### 11.4.2 USBC Drill Holes

QAQC data validation procedures were limited during USBC's drill programs (1987-1989). Check assays from 10 RC drill holes were submitted to American Assay in 1988. The drill holes checked from the USBC Drill Holes are not from within any of the Deposit locations which are the subject of the MRE in this Report.

### 11.4.3 Santa Fe Drill Holes

Aside from internal check assays ran in 1992, consistent QAQC data validation procedures were absent from Santa Fe's drill programs (1990-1994). As part of the 2007 Sandman Updated Technical report, MDA compared original assays and internal check assays performed on new pulps derived from coarse rejects. Chemex original and checks compared well in all cases.

**Table 7: Check analysis results and comparisons of drill hole information completed by Santa Fe in 1992.**

Type	Assay Lab	Mean	Median	Std Dev	CV	Min	Max	No
Original	Chemex	0.023	0.008	0.005	2.391	0.000	0.433	160
Check	Chemex	0.022	0.007	0.059	2.682	0.000	0.580	160

### 11.4.4 WSMCC Drill Holes

External QAQC data validation procedures were absent from early drill programs completed by WSMC. As part of the 2007 Sandman Updated Technical report, MDA compared original assays and internal checks for both Barringer and American Assay. Check analysis was performed on new pulps derived from coarse rejects in 1966, 1997 and 2002. Reviewed checks from 2004 were completed on duplicate splits from the drill rig. Original and internal checks compared well for both labs.

**Table 8: 1996 through 2004 WSMCC internal laboratory assay comparisons. Internal checks from 1996, 1997 and 2002 were from new pulps derived from coarse rejects. 2004 internal checks are from duplicate splits collected at the drill rig.**

Type	Assay Lab	Mean	Median	Std Dev	CV	Min	Max	No
1996 Original	Barringer	8.444	0.106	18.736	2.219	0.010	55.772	10
1996 Check	Barringer	8.784	0.093	19.319	2.199	0.011	55.553	10
1997 Original	American Assay	0.021	0.003	0.082	3.905	0.000	0.729	133
1997 Check	American Assay	0.018	0.003	0.063	3.500	0.000	0.462	133
2002 Original	American Assay	0.045	0.004	0.132	2.933	0.000	0.837	53
2002 Check	American Assay	0.047	0.005	0.133	2.830	0.000	0.729	53
2004 Original	American Assay	0.002	0.000	0.004	2.000	0.000	0.016	32
2004 Check	American Assay	0.002	0.000	0.003	1.500	0.000	0.011	32

In 2000, WSMC performed check assays on second splits collected at the drill rig for two RC holes. MDA concluded there was insufficient data—5 checks—to derive conclusions from these results. Drillhole ID's were not mentioned in the report.

**Table 9: 2000 WSMCC drill holes coarse reject check assay comparisons.**

Type	Assay Lab	Mean	Median	Std Dev	CV	Min	Max	No
Original	Rocky Mountain	0.157	0.092	0.204	1.299	0.009	0.515	5
Check	American Assay	0.077	0.096	0.050	0.649	0.012	0.134	5

MDA states that WSMC sent 80 coarse rejects (representing 5.1% of drill samples) from the 2004 RC drilling program to Chemex for gold and silver check-assaying. Sample intervals sent for checks were selected to cover the range of grades encountered in the drill holes. Two to five sample rejects were sent for check assays from each of the 25 drill holes. MDA stated check analyses compared quite well with the original American Assay results.

**Table 10: 2004 WSMCC reject check assays.**

Specifics	Au (oz/ton)		Ag (ppm)	
	Chemex	American Assay	Chemex	American Assay
Mean	0.016	0.016	1.2	1.1
Median	0.004	0.005	0.5	0.6
Std Dev	0.032	0.032	1.5	1.4
CV	2.089	2.028	1.3	1.3
Min	0.000	0.000	0.0	0.0
Max	0.184	0.168	6.3	7.9
Count	80	80	80	80
Correlation Coefficient	0.96		0.89	

Additional data reviewed as part of this Validation Report consisted of internal reruns from 5 select WSMC drill holes. Sample interval spread and grade distribution observed suggests a somewhat systematic approach to WSMC's rerun analysis. Reruns were inserted roughly one every 10 sample—in addition to being triggered by initial assays greater than 1000ppb—in some holes; however, in others, rerun samples occur approximately every 20 samples and were not triggered by threshold. For the 21 samples compared, the majority show good agreement with minimal variation.

#### 11.4.5 NewWest Drill Holes

Lustig (2007) completed a comprehensive review of NewWest QAQC data from the 2006 through 2007 drill program. NewWest's expanded data validation efforts included the insertion of assay standards, blanks and rig field duplicates into the sample stream. A number of American Assay pulps were also sent to Chemex for check assay in 2006. The below summary is taken directly from MDA's 2007 Sandman Updated Technical Report.

**NewWest Standards:** Certified analytical standards provide a measure of the accuracy of the American Assay analytical results. Lustig found that 18% of the assays of the analytical standards submitted to American Assay with the drill samples exceeded the three standard-deviation threshold from the certified (or 'expected') results, with most of these 'failures' being higher-grade than the certified results. These findings led NewWest to request that American Assay re-assay all samples from jobs that included standards that "failed."

As part of check assaying of American Assay pulps by Chemex, discussed below, Chemex also assayed two NewWest standards two times each, for a total of four analyses. All four of the Chemex analyses of these standards returned values higher than the certified results (Lustig, 2007). These results, in combination with the Chemex check assays of original American Assay pulps, discussed below, suggest that the high failure rate of the NewWest standards is likely related to a problem with the standards, not with the original American Assay analyses.

**Internal Standards:** American Assay inserted analytical standards into the NewWest assay jobs and provided the results to NewWest. In contrast to the NewWest standard results, the American Assay standards showed no bias and a low "failure" rate.

**Blanks:** Lustig found that one blank analysis exceeded his 'failure' limit of five times American Assay's analytical detection limit for gold of 3 ppb (5 x 3 ppb = 15 ppb). This 'failure' returned 22 ppb Au, and Lustig concluded that the samples are generally free from laboratory contamination.

**Rig Duplicates:** The NewWest rig-duplicate samples consisted of second splits from the RC rig or the remaining half Core following the removal of the primary assay sample in the case of Core holes. Lustig reviewed the results of 376 primary/rig-duplicate sample pairs analyzed by American Assay and concluded that the data suggest that a 'nugget effect' has lowered the precision of the NewWest 2006-2007 analytical results. Lustig noted that increasing the sample size could result in increased precision in future programs. He also suggested that screen-FA should be considered.

**Pulp Duplicates – Primary Laboratory:** Lustig examined the results of 738 original pulp/duplicate-pulp pairs analyzed by American Assay. These pairs represent original duplicate analyses of the same pulp by the same laboratory, and therefore are a measure of analytical precision. As with the 2006-2007 rig duplicate samples discussed above, Lustig concluded that the data indicate that a nugget effect is present at the Project.

**Pulp Duplicates – Check Laboratory:** A total of 294 check assays by Chemex on original American Assay pulps were reviewed by Lustig. The original/check pairs relate to the accuracy of the American Assay analytical results. Lustig found that the mean and median of the Chemex check assays are about 3% lower and 11% higher than the original American Assay results, respectively. With outliers removed, the Chemex mean and median are about 4% higher and 8% higher, respectively. Lustig concluded that there is no significant relative bias between the American Assay primary analyses and the Chemex check assays.

#### 11.4.6 Newmont Drill Holes

QAQC data validation procedures for Newmont drill programs (2008 through 2015) consisted of standard and blank insertion into the sample stream at American Assay in addition Split duplicates for Core intervals. Additionally, coarse rejects and/mineralised pulp duplicates were submitted to ALS as checks against primary laboratory American Assay. Insertion rates appear adequate, with systematic checks in place to evaluate all data in real time; however, first pass analysis of Newmont standards suggests issues associated with creation of these internal standards and sample QAQC sample labelling and/or handling issues.

Newmont internal QAQC SOP states that for RC drilling, standards were to be inserted at 100 ft. and every 200 ft. afterwards—ensuring insertion rates of 2-5% with at least one standard inserted in every lab batch of analyses. A similar insertion rate was stated for blanks, beginning at 50' and inserted every 200 ft. thereafter. All blanks utilized on the project were coarse river gravels delivered in large bins to each site. Field duplicates were to be taken for 1-5% of RC footage sampled. Similar insertion rates for standards, blanks, and Core split duplicates—rather than rig field duplicates—were recommended for all Core drilling programs.

Newmont's Internal Stage 3A final Report (2012) states the following regarding the evaluation of QAQC sample results. "For standards and blanks, as the electronic assay results are received from American Assay results are evaluated to determine if they are within compliance limits. Any standard lab value that fails to be within the two standard deviation limits is noted and the American Assay lab notified that they need to re-run the sample batch associated with the failed standard. Other issues concerning failed standards, such as switched or mislabelled standards, are evaluated with an explanation of the problem and corrective action taken recorded in the spreadsheet. Blanks are checked for significant gold values which would indicate possible contamination. If a blank indicates a contamination problem, the American Assay lab is contacted, and the lab batch associated with the contaminated blank is re-assayed."

It has been observed that many of the failed standards were evaluated and determined reruns were not warranted. Failed standard pulps were often re-assayed and determined acceptable and there are comments for rejects being rerun or needing to be re-assayed. Records for Newmont QAQC maintenance and review are limited for 2011 and

2012 drill programs, while QAQC documentation of performance and review are extensive for the limited drilling that occurred in 2013, 2014 and 2015.

Although there is some risk associated with the reduced level of QAQC samples undertaken in part of the Newmont drilling programs, the author deems this risk to be low and unlikely to have had a material effect on the MRE.

#### **11.4.7 Gold Bull Drill Holes QAQC**

Gold Bull drill hole information is currently being compiled and will be reported in the future. None of these drill holes are included in the MRE so there is no material impact in this report. Industry norm blanks, standards and duplicate samples were taken during the RC drilling program and each set of data was checked prior to loading into the Gold Bull drill hole database. None of the duplicate samples have been submitted to an umpire laboratory and remain stored in Winnemucca.

### **11.5 Verification of Sampling and Assaying**

As part of the validation process for the drill hole database received from Newmont, many original assay sheets were checked against the assay data in the database. This was originally completed for some selected drill holes (see section 12) and went further to check up to 20% of all drill holes that are in the Project drill hole database.

The author has not identified any material issues with either the quality control check assays or from a review of the original laboratory data sheets which appear to be all correctly entered into the drill hole database.

Gold Bull's database was managed by a third-party service in Reno called Sandford Information Systems. Gold Bull reviewed each batch of assay results for quality assurance issues with routine graphs developed for each drill hole. No major issues were identified in terms of the laboratory performance for standard and blanks. Some batches were re-analysed when inconsistencies were noted but there are no material issues to report.

## **12. DATA VERIFICATION**

The Project database used for the MRE originated from a series of data extractions that were provided to Gold Bull from Newmont. Several detailed reviews of this extracted data were undertaken by Gold Bull and under the guidance of the author to validate the accuracy of the data to be used for the MRE.

A detailed review of 38 selected drill holes were initially completed to ensure that there were no systematic errors associated with each generation and/company of drilling in addition to checking data from each Deposit location. The drill holes selected were also chosen on the basis that they contained assay results that were likely to have a significant impact on the MRE.

The selected drill holes were reviewed in detail for the following:

- Review of the drill hole collar locations, including potential issues associated with grid conversion, or systematic hole location issues.
- Review of all original logging data and laboratory assay sheets to ensure that the drill hole database has correctly recorded all this information.
- Review of the QAQC procedures and results from the QAQC data.
- Review of the final preferred gold value for Mineral Estimate against the original assay data sheets.

These holes were the subject of the site visit by Mr. Michael Ressel and Gold Bull Staff, who were able to identify verify evidence for approximate collar locations for 36 of the 38 drill holes about their reported location. In some

cases, earlier rehabilitation of the drill pad prevented the confirmation of the exact location of the drill hole collar. Based on this site visit there is no evidence to suggest that the drill hole collars are incorrectly located in the drill hole database.

A further investigation of satellite imagery both current and old (prior to rehabilitation) indicated that the bulk of the WSMCC drill holes are correctly located and there is no discernible bias due to a grid conversion or other systematic error to suggest that they are wrongly located.

For a more comprehensive check of the drill collar locations, the bulk of the drill holes in the drill hole database have been reviewed against satellite imagery to see if there is any evidence of site disturbance to confirm that a drill hole exists where it is reported.

It is the view of the author that based on the drill holes investigated both on the ground and via satellite imagery, that the drill holes are correctly located.

To further investigate any potential issues with the assay data in the database, a up to 20% of the original assay laboratory certificates were checked against the entire database of the Project with no material issues identified. QA/QC data for these holes were also investigated, again with no material errors or issues identified.

For the various generations of drilling and subtle variations in logging codes, some rock units are classified differently. However, these variations are generally minor and do not appear to have materially impacted on the geological interpretations which are important for the definition of the defined mineralized domains at each Deposit location.

In summary, the review of selected drill holes has not identified any major issues or discrepancy between the original data and what is recorded in the drill hole database. On the basis of this review and including the further independent reviews that have been undertaken earlier by Lustig (2007) and AMEC (2011), the author is comfortable that the drill hole database is largely accurate and representative of all the drill hole data which has been used for the MRE reported in this Report.

## **13. MINERAL PROCESSING AND METALLURGICAL TESTING**

### **13.1 Summary**

Historical metallurgical test work has been completed over several stages, predominantly from the Silica Ridge, North Hill and Southeast Pediment deposits, mostly by Newmont and Kappes, Cassidy and Associates (KCA) in Reno, Nevada. Recent testwork on samples from Abel Knoll were completed by KCA for Gold Bull.

Test work completed prior to 2010 was summarised within a technical report by Olson (2010) and further summarised within internal Newmont documentation as part of their proposed development plans for the Project (Newmont 3A Report, 2012).

Historically, relatively extensive bottle roll leach programs were conducted while only limited column leach tests were completed for three of the four deposits. Further test work is required to adequately determine the optimal processing circuit and resulting gold recoveries for the gold mineralization at the Project. At this stage it is considered likely that a conventional three-stage crush followed by heap leach processing could achieve gold recoveries of 75%. Additional work is required to confirm the crush size and gold recoveries from heap leaching.

The results from recently completed bottle roll tests by Gold Bull and the historical column leach test results are presented. A summary of the historical bottle roll leach test programs is also presented but details on these programs can be found in the Olson and Newmont reports and are not included in this Report.

## 13.2 Gold Bull Test work (Abel Knoll)

Gold Bull conducted 24 bottle roll leach tests on RC reject samples from Abel Knoll taken from oxide, transition and sulphide materials. Refer to **Figure 24** for a location map of the Gold Bull bottle roll leach testwork from the Abel Knoll deposit (and other deposits). The cyanide bottle roll leach test results are indicative only.

The bottle roll leach tests returned on average 88% extracted (recovered) gold from oxide material with a maximum of 97% extracted gold. Extraction from the samples identified as transition, oxide/transition or transition/sulphide averaged 65% while the sulphide samples averaged 64%. The results indicate a trend of decreasing gold extraction by depth as the material transitions from oxide to deeper sulphide mineralisation. However, the bottle roll results indicate that the Abel Knoll material will be amenable to heap leaching.

The results are generally consistent with prior historical tests completed by Newmont at Silica Ridge and Southeast Pediment and Kennecott's test work at North Hill, Silica Ridge and Southeast Pediment. The bottle roll leach testwork was conducted by the metallurgical laboratory of Kappes, Cassidy and Associates of Reno, Nevada in September 2021. The tests were taken to provide preliminary results on gold recovery as no prior test work had been conducted at Abel Knoll by historical explorers. The 24 samples comprised composite RC sample sourced from a range of deposit depths, lithology and oxidation states. A wide range of mineralised samples were submitted to test the variation of the deposit results in oxide, transitional and sulphide mineralised horizons of varying depths. The sample material was utilized exclusively for bottle roll leach test work. The analysis including preparation, assaying and metallurgical studies utilized accepted standard industry procedures and a specialist experienced metallurgical laboratory.

Gold Bull's bottle roll leach test work is summarized in **Table 11** and **Table 12**.

Sandman Project  
As-received material, 1-2 millimeter  
Summary of Cyanide Bottle Roll Leach Tests

Gold											
KCA Sample No.	KCA Test No.	Composite Sample ID (Drill hole & depth ft)	Material	Material Size	Calculated Head, gms Au/MT	Extracted, gms Au/MT	Avg. Tails, gms Au/MT	Au Extracted, %	Leach Time, hours	Consumption NaCN, kg/MT	Addition Ca(OH) <sub>2</sub> , kg/MT
91991 A	92721 A	SA-0001 CR 220-240	Oxide	-10# (-2mm)	0.418	0.405	0.013	97%	24	0.47	3.000
91991 B	92721 B	SA-0001 CR 260-280	Oxide	-10# (-2mm)	0.494	0.480	0.014	97%	24	0.62	3.000
91991 C	92721 C	SA-0001 CR 300-320	Oxide/Trans	-10# (-2mm)	0.704	0.510	0.194	72%	24	0.27	3.000
91991 D	92721 D	SA-0001 CR 340-360	Trans/Sulf	-10# (-2mm)	1.638	1.350	0.288	82%	24	0.27	3.000
91991 E	92721 E	SA-0001 CR 380-400	Transition	-10# (-2mm)	0.726	0.510	0.216	70%	24	0.35	3.000
91991 F	92721 F	SA-0001 CR 465-470 and 475-480	Oxide	-10# (-2mm)	4.958	4.110	0.848	83%	24	0.21	3.000
91991 G	92721 G	SA-0001 CR 500-520	Oxide/Trans	-10# (-2mm)	3.215	1.830	1.385	57%	24	0.27	3.000
91991 H	92721 H	SA-0001 CR 540-560	Oxide	-10# (-2mm)	1.188	0.945	0.243	80%	24	0.27	3.000
91991 I	92721 I	SA-0001 CR 580-600	Oxide	-10# (-2mm)	1.841	1.320	0.521	72%	24	0.32	3.000
91991 J	92721 J	SA-0001 CR 620-640	Trans/Sulf	-10# (-2mm)	0.644	0.450	0.194	70%	24	0.29	3.000
91991 K	92721 K	SA-0001 CR 660-680	Trans/Sulf	-10# (-2mm)	1.159	0.765	0.394	66%	24	0.27	3.000
91991 L	92721 L	SA-0031 CR 245-265	Oxide	-10# (-2mm)	0.925	0.870	0.055	94%	24	0.38	3.000
91991 M	92721 M	SA-0031 CR 280-300	Trans/Sulf	-10# (-2mm)	0.228	0.060	0.168	26%	24	0.42	3.000
91991 N	92722 A	SA-0031 CR 320-325, 330-335, 335-340	Sulfide	-10# (-2mm)	0.328	0.210	0.118	64%	24	0.35	3.000
91991 O	92722 B	SA-0031 CR 360-380	Sulfide	-10# (-2mm)	0.244	0.165	0.079	68%	24	0.30	3.000
91991 P	92722 C	SA-0031 CR 400-420	Sulfide	-10# (-2mm)	0.482	0.180	0.302	37%	24	0.33	3.000
91991 Q	92722 D	SA-0031 CR 440-460	Sulfide	-10# (-2mm)	1.805	1.635	0.170	91%	24	0.33	3.000
91991 R	92722 E	SA-0031 CR 480-500	Sulfide	-10# (-2mm)	2.075	1.725	0.350	83%	24	0.32	3.000
91991 S	92722 F	SA-0031 CR 520-540	Sulfide	-10# (-2mm)	0.508	0.210	0.298	41%	24	0.33	3.000
91991 T	92722 G	SA-0033 CR 60-80	Oxide	-10# (-2mm)	0.462	0.405	0.057	88%	24	0.44	3.000
91991 U	92722 H	SA-0033 CR 200-220	Oxide	-10# (-2mm)	0.426	0.390	0.036	92%	24	0.77	3.000
91991 V	92722 I	SA-0033 CR 250-270	Oxide	-10# (-2mm)	0.306	0.270	0.036	88%	24	0.38	3.000
91991 W	92722 J	SA-0033 CR 310-330	Trans/Sulf	-10# (-2mm)	0.597	0.480	0.117	80%	24	0.36	3.000
91991 X	92722 K	SA-0033 CR 360-380	Trans/Sulf	-10# (-2mm)	0.813	0.510	0.303	63%	24	0.30	3.000
Average								73%			

**Table 11: Summary of cyanide bottle roll leach test work for gold extracted from material 1-2mm (coarse RC sample primary crushed)**

The Abel Knoll deposit has low levels of silver and the leach test work returned an average of 24% extracted silver with maximum 63%. Those samples with higher silver extractions were sourced from the higher grade non oxide materials.

Silver												
KCA Sample No.	KCA Test No.	Composite Sample ID (Drill hole & depth ft)	Material	Material Size	Calculated Head, gms Ag/MT	Extracted, gms Ag/MT	Avg. Tails, gms Ag/MT	Ag Extracted, %	Leach Time, hours	Consumption NaCN, kg/MT	Addition Ca(OH) <sub>2</sub> , kg/MT	
91991 A	92721 A	SA-0001 CR 220-240	Oxide	-10# (-2mm)	3.46	0.21	3.25	6%	24	0.47	3.00	
91991 B	92721 B	SA-0001 CR 260-280	Oxide	-10# (-2mm)	5.33	0.51	4.82	10%	24	0.62	3.00	
91991 C	92721 C	SA-0001 CR 300-320	Oxide/Trans	-10# (-2mm)	10.51	0.81	9.70	8%	24	0.27	3.00	
91991 D	92721 D	SA-0001 CR 340-360	Trans/Sulf	-10# (-2mm)	23.80	11.10	12.70	47%	24	0.27	3.00	
91991 E	92721 E	SA-0001 CR 380-400	Transition	-10# (-2mm)	24.70	13.20	11.50	53%	24	0.35	3.00	
91991 F	92721 F	SA-0001 CR 465-470 and 475-480	Oxide	-10# (-2mm)	27.54	2.84	24.70	10%	24	0.21	3.00	
91991 G	92721 G	SA-0001 CR 500-520	Oxide/Trans	-10# (-2mm)	16.76	1.70	15.07	10%	24	0.27	3.00	
91991 H	92721 H	SA-0001 CR 540-560	Oxide	-10# (-2mm)	12.90	0.80	12.10	6%	24	0.27	3.00	
91991 I	92721 I	SA-0001 CR 580-600	Oxide	-10# (-2mm)	16.26	1.26	15.00	8%	24	0.32	3.00	
91991 J	92721 J	SA-0001 CR 620-640	Trans/Sulf	-10# (-2mm)	6.35	1.04	5.31	16%	24	0.29	3.00	
91991 K	92721 K	SA-0001 CR 660-680	Trans/Sulf	-10# (-2mm)	5.67	0.77	4.90	13%	24	0.27	3.00	
91991 L	92721 L	SA-0031 CR 245-265	Oxide	-10# (-2mm)	4.72	0.51	4.21	11%	24	0.38	3.00	
91991 M	92721 M	SA-0031 CR 280-300	Trans/Sulf	-10# (-2mm)	0.41	0.15	0.26	37%	24	0.42	3.00	
91991 N	92722 A	SA-0031 CR 320-325, 335-340	Sulfide	-10# (-2mm)	2.46	0.66	1.80	27%	24	0.35	3.00	
91991 O	92722 B	SA-0031 CR 360-380	Sulfide	-10# (-2mm)	4.15	0.95	3.21	23%	24	0.30	3.00	
91991 P	92722 C	SA-0031 CR 400-420	Sulfide	-10# (-2mm)	5.32	1.62	3.70	30%	24	0.33	3.00	
91991 Q	92722 D	SA-0031 CR 440-460	Sulfide	-10# (-2mm)	2.33	0.51	1.82	22%	24	0.33	3.00	
91991 R	92722 E	SA-0031 CR 480-500	Sulfide	-10# (-2mm)	3.20	1.70	1.51	53%	24	0.32	3.00	
91991 S	92722 F	SA-0031 CR 520-540	Sulfide	-10# (-2mm)	1.86	0.77	1.10	41%	24	0.33	3.00	
91991 T	92722 G	SA-0033 CR 60-80	Oxide	-10# (-2mm)	2.08	0.18	1.90	9%	24	0.44	3.00	
91991 U	92722 H	SA-0033 CR 200-220	Oxide	-10# (-2mm)	1.50	0.20	1.30	13%	24	0.77	3.00	
91991 V	92722 I	SA-0033 CR 250-270	Oxide	-10# (-2mm)	13.62	1.62	12.00	12%	24	0.38	3.00	
91991 W	92722 J	SA-0033 CR 310-330	Trans/Sulf	-10# (-2mm)	3.98	2.49	1.49	63%	24	0.36	3.00	
91991 X	92722 K	SA-0033 CR 360-380	Trans/Sulf	-10# (-2mm)	4.68	2.48	2.20	53%	24	0.30	3.00	
Average								24%				

**Table 12: Summary of cyanide bottle roll leach test work for silver extracted from material 1-2mm (coarse RC sample primary crushed)**

## 13.3 Historical Test work

### 13.3.1 Bottle Roll Test Work Summary

The report by Olson (2010) was a summary compilation of earlier test work completed by external parties in addition to some more recent test work completed internally by Newmont.

Both the pre-Newmont and Newmont bottle roll test work showed the potential for average recoveries in a milling scenario of over 80%, and in some cases over 90%, for samples taken from Silica Ridge and Southeast Pediment. In addition, silver recoveries (from the Newmont test work only) identified average recoveries of over 70% based on a fine grind size bottle roll test.

This indicates that the bulk of the gold mineralisation throughout the Project is free milling and potentially amenable to both heap leach processing and conventional crush/grind/CIL processing. In addition, Newmont tested for preg-robbing carbon and found no indication that this would be an issue.

The Newmont and pre-Newmont bottle roll tests on ground/pulverized samples generally show high recoveries, but the data also indicate a relationship with decreasing gold recovery with increasing crush size and increasing recovery with increasing leach time. There also appears to be a relationship with lower recovery at lower head grades and vice versa.

The presence of coarse gold could also be affecting the results. There were several indications of poor reproducibility in head and tailings assays. Coarse gold could also be a possible cause for the long leach time required in some of the samples. Gravity tests were conducted on a limited number of samples and the results were not conclusive. Additional work is required in this area to determine its effect on heap leach processing of the Project mineralisation.

### 13.3.2 Column Leach Test Work Summary

Column leach tests were undertaken by KCA in 1997 on surface trench samples from both Silica Ridge and Southeast Pediment at crush sizes from 1 inch (25 mm) down to 0.25 inches (6.35 mm). All yielded results of over 75% and over 85% recovery at the 0.25-inch (6.35-mm) crush size.

Column leach test work subsequently was undertaken by Newmont on Core samples from Silica Ridge, Southeast Pediment and North Hills at crush sizes of 1.5 inches (38 mm), 0.75 inches (19 mm) and 0.375 inches (9.5 mm). Newmont's gold recoveries varied from a low of 15% on a sulphide Core composite crushed to 1.5 inches (38 mm) from Southeast Pediment to a high of 84% on an oxide Core composite crushed to 1.5 inches (38 mm) from North Hills.

The column leach test conducted on a Southeast Pediment sample crushed to 0.375 inches (9.5 mm) by Newmont used cement for agglomeration to maintain permeability during the test. This is the only test where cement agglomeration was discussed. Newmont indicated that a couple of their composites contained high clay. Additional evaluations on agglomeration are required.

The column leach tests by KCA (surface only) and Newmont (Core only) are summarized in **Table 13** and **Figure 29** presents gold recoveries by crush size. Additional details on the KCA column leach test results are presented in **Table 20**. More details on Newmont's column leach test results are presented in **Table 15**, **Table 16** and **Table 17**. The gold recoveries from the column leach test programs by deposit are graphed in **Figure 30**.

Sample Location	Sample Type	Crush Size, mm	Calc Head, g/T Au	% Au Recovery	NaCN, kg/T	Lime, kg/T
SE Pediment	Core	38	0.48	15.0%	1.91	3.25
SE Pediment	Core	38	1.06	35.0%	2.30	4.53
SE Pediment	Core	38	1.95	38.9%	1.61	3.60
SE Pediment	Core	38	0.51	40.4%	2.75	4.39
SE Pediment	Core	9.5	0.55	60.2%	1.16	0.21
SE Pediment	Surface	6.35	5.47	92.5%	1.72	1.21
SE Pediment	Surface	12.5	5.44	89.9%	2.00	1.14
SE Pediment	Surface	25	5.61	87.8%	1.71	1.21
Silica Ridge	Core	38	2.26	32.1%	0.64	0.55
Silica Ridge	Core	38	0.86	39.2%	0.57	0.52
Silica Ridge	Core	38	0.82	38.1%	0.66	0.84
Silica Ridge	Core	38	0.51	43.7%	0.60	0.80
Silica Ridge	Core	38	0.44	55.3%	0.55	0.53
Silica Ridge	Surface	6.35	2.46	86.1%	0.89	1.14
Silica Ridge	Surface	12.5	2.22	78.5%	0.88	1.14
Silica Ridge	Surface	25	2.53	77.0%	0.86	1.14
North Hill	Core	38	0.84	66.1%	0.26	5.06
North Hill	Core	19	0.72	80.5%	0.31	5.24
North Hill	Core	38	0.36	59.3%	0.27	2.63
North Hill	Core	38	0.47	56.6%	0.41	2.66
North Hill	Core	19	0.34	75.8%	0.33	2.74
North Hill	Core	38	0.44	52.8%	0.29	2.71
North Hill	Core	19	0.40	67.0%	0.29	2.63
North Hill	Core	38	0.39	61.5%	0.23	2.90
North Hill	Core	19	0.38	71.1%	0.33	3.25
North Hill	Core	38	1.24	75.2%	0.21	5.99
North Hill	Core	19	1.25	79.0%	0.29	6.13
North Hill	Core	38	0.76	74.4%	0.21	4.54
North Hill	Core	38	0.82	78.8%	0.32	4.49
North Hill	Core	19	0.93	81.1%	0.23	4.59
North Hill	Core	38	0.69	84.0%	0.22	5.63
North Hill	Core	38	0.80	76.8%	0.45	5.65
North Hill	Core	19	0.74	80.1%	0.33	5.63

Table 13. Summary of the Project Column Leach Test Results

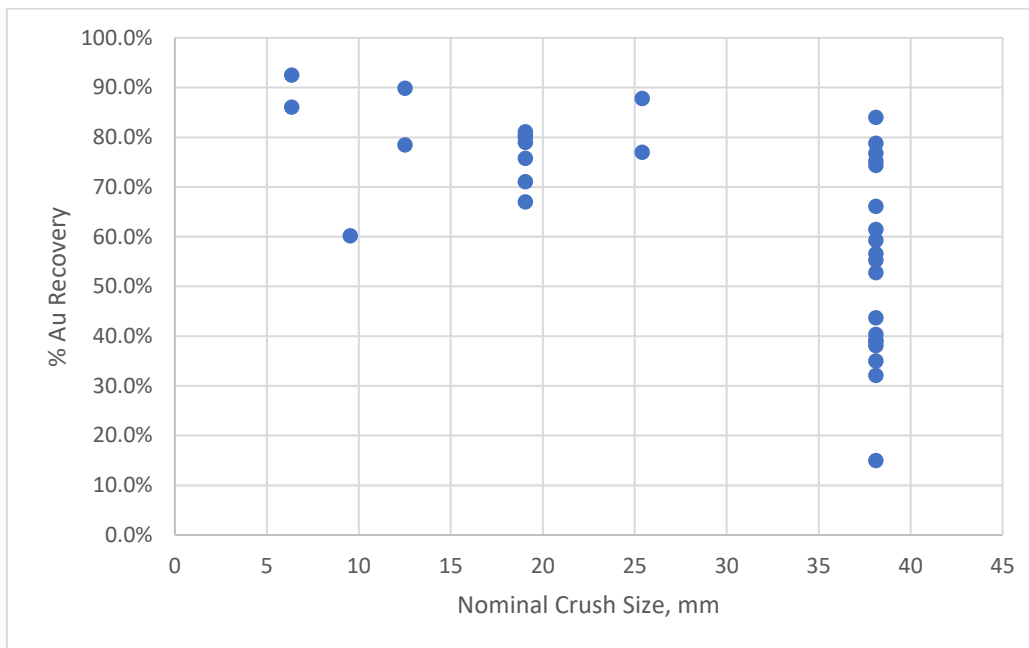


Figure 29. Gold Recovery and Crush Size, Newmont and KCA Column Leach Test Results

Sample ID	Calc Hd, opt Au	Crush Size, Inches	Leach Time, Days	% Au Recovery	NaCN, lb/t	Lime, lb/t
<b>SE Pediment</b>						
Trench Bulk Composite	0.16	0.25	111	92.5%	3.45	2.42
Trench Bulk Composite	0.159	0.5	111	89.9%	4.00	2.28
Trench Bulk Composite	0.164	1	111	87.8%	3.42	2.42
<b>Silica Ridge</b>						
T-8 Met 1&2 Trench	0.072	0.25	85	86.1%	1.79	2.28
T-8 Met 1&2 Trench	0.065	0.5	85	78.5%	1.76	2.28
T-8 Met 1&2 Trench	0.074	1	85	77.0%	1.73	2.28

Table 14. KCA Column Leach Test Results

Test	Head Calculated, opt Au	% Au Recovery	Head Calculated, opt Ag	% Ag Recovery	Crush Size, Inches	Reagent Consumption		24-hr BRT, 200 mesh % Au
						NaCN, lb/t	Ca(OH) <sub>2</sub> , lb/t*	
Column 1	0.014	15.0%	0.26	30.8%	1.5	3.82	6.51	72.0%
Column 2	0.031	35.0%	0.14	28.6%	1.5	4.60	9.08	94.4%
Column 3	0.057	38.9%	0.2	80.0%	1.5	3.23	7.20	96.9%
Column 4	0.015	40.4%	0.2	85.0%	1.5	5.51	8.79	76.8%
Column 2-4	0.016	60.2%	0.17	52.9%	0.375	2.32	0.42	86.8%

\*Caustic soda used in testing, value is lime equivalent

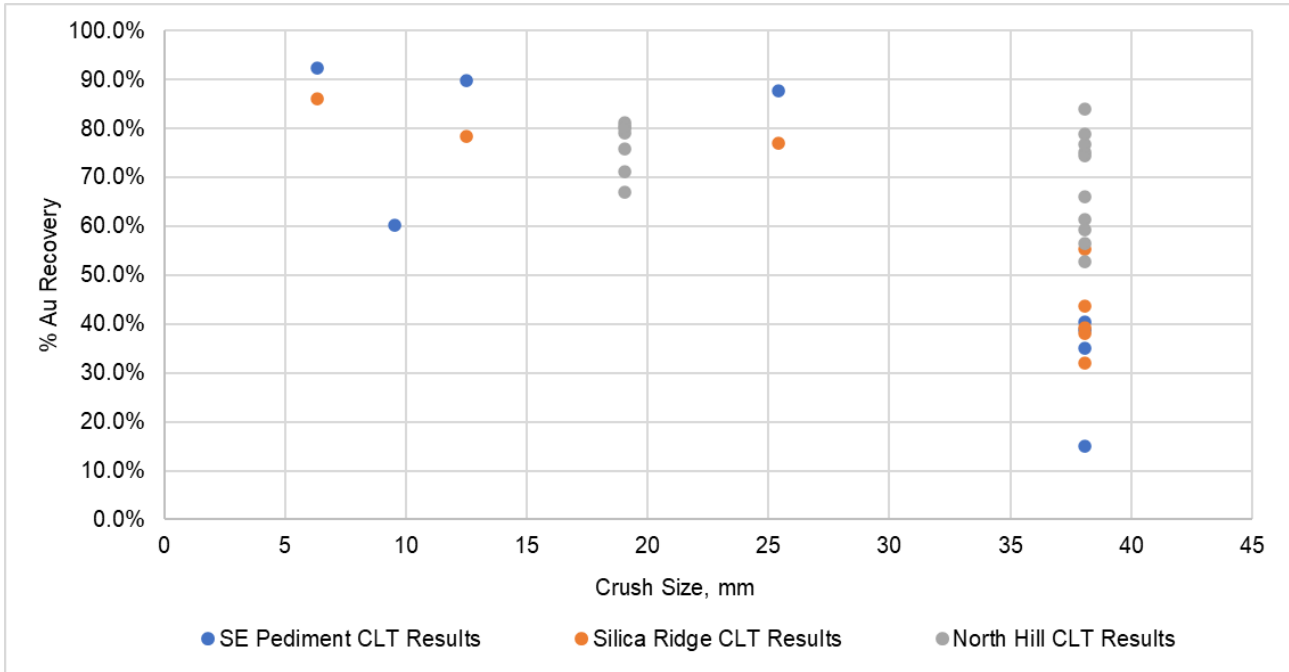
Table 15. Newmont Column Leach Test Results, Southeast Pediment

Test	Head Calculated, opt Au	% Au Recovery	Head Calculated, opt Ag	% Ag Recovery	Crush Size, Inches	Reagent Consumption		24-hr BRT, 200 mesh % Au
						NaCN, lb/t	Ca(OH) <sub>2</sub> , lb/t	
Column 5	0.066	32.1%	0.31	35.5%	1.5	0.64	0.55	95.0%
Column 6	0.025	39.2%	0.2	0.0%	1.5	0.57	0.52	95.7%
Column 7	0.024	38.1%	0.18	16.7%	1.5	0.66	0.84	89.1%
Column 8	0.015	43.7%	0.14	0.0%	1.5	0.60	0.80	85.2%
Column 9	0.013	55.3%	0.06	33.3%	1.5	0.55	0.53	98.0%

**Table 16. Newmont Column Leach Test Results, Silica Ridge**

Composite ID	Drill Hole and Interval, ft	Crush Size	Leach Solution Flow, gpm/ft <sup>2</sup>	Calculated Head, Au, ppm		Gold Extraction, %		Reagent Consumption	
				Solution Based	Carbon Based	Solution Based	Carbon Based	NaCN, kg/t	Ca(OH) <sub>2</sub> , kg/t
Comp A	NSM-177, 10.6-73.6	-1.5"	10.3	0.87	0.84	67.2	66.1	0.26	5.06
		-0.75"	9.1	0.76	0.72	81.4	80.5	0.31	5.24
		-10 Mesh		0.69		74.7		0.09	3.50
Comp B	NSM-177, 100.6-179	-1.5"	10.0	0.37	0.36	60.2	59.3	0.27	2.63
		-1.5"	20.4	0.49	0.47	58.2	56.6	0.41	2.66
		-0.75"	9.3	0.36	0.34	77.0	75.8	0.33	2.74
		-10 Mesh		0.34		55.8		0.10	1.75
Comp C	NSM-177, 210.5-231 NSM-179, 137.4-152 NSM-176, 37.6-58.8	-1.5"	10.1	0.45	0.44	54.5	52.8	0.29	2.71
		-0.75"	9.4	0.44	0.40	69.8	67.0	0.29	2.63
		-10 Mesh		0.30		55.9		0.13	2.02
Comp D	NSM-178, 138.3-151.4 NSM-180, 317.3-341 NSM-182, 308-340	-1.5"	10.1	0.40	0.39	63.0	61.5	0.23	2.90
		-0.75"	9.4	0.47	0.38	76.5	71.1	0.33	3.25
		-10 Mesh		0.35		63.3		0.09	2.11
Comp E	NSM-182, 240.1-284.3 NSM-182, 201-220	-1.5"	10.0	1.31	1.24	76.6	75.2	0.21	5.99
		-0.75"	9.6	1.25	1.25	79.0	79.0	0.29	6.13
		-10 Mesh		1.11		80.1		0.16	4.60
Comp F2	NSM-182, 105.2-135.2 NSM-183, 120-150 NSM-185, 61.7-103.8	-1.5"	10.0	0.79	0.76	75.2	74.4	0.21	4.54
		-1.5"	20.4	0.82	0.82	78.6	78.8	0.32	4.49
		-0.75"	9.1	0.95	0.93	81.5	81.1	0.23	4.59
		-10 Mesh		0.44		54.9		0.08	3.79
Comp I	NSM-176, 110.2-138.3 NSM-179, 26-65	-1.5"	9.4	0.73	0.69	84.7	84.0	0.22	5.63
		-1.5"	20.6	0.80	0.80	76.8	76.8	0.45	5.65
		-0.75"	8.8	0.77	0.74	80.9	80.1	0.33	5.63
		-10 Mesh		0.76		70.4		0.10	5.77

**Table 17. Newmont Column Leach Tests and 10 mesh Bottle Roll Test Results, North Hill**



**Figure 30. Column Leach Test Results by Deposit**

As shown in the tables and figures, there is quite a bit of variation in the results. Column leach recoveries on composites from Southeast Pediment and Silica Ridge show similar results while the tests from North Hill show generally higher recoveries. Due to the limited number of column leach test results on each deposit, and due to the lack of column leach test results on Abel Knoll, it was decided to estimate a project-wide gold recovery for the Project instead of a recovery by deposit. Further test work has yet to be undertaken to fully understand the relationship between crush size and gold recovery for each deposit. However, as shown in the figures, there is a distinct recovery increase with decreasing crush size. The best estimate at this stage of the project is that a multi-stage crushing circuit to obtain a minus 0.5-inch (12.5 mm) product will result in an overall average project field gold recovery of 75%.

### 13.4 Field Projections

KCA normally deducts three percentage points from the results of a column leach testing program to account for the inefficiencies encountered in the field as compared to “perfect” conditions in the laboratory. The overall project gold recovery of 75% at a 12.5mm crush size was based on a curve fit of the data presented in **Table 18** and **Figure 30**, then three percentage points deducted from this calculated recovery.

Average column test cyanide consumption by crush size was estimated to be 1.03 kg/t. Overall project estimated sodium field cyanide consumption was calculated to be 0.3 kg/t, or approximately 30% of the column test results. A 30% factor from lab results to field results is fairly typical for clean, non-reactive samples (e.g. no copper or other high cyanide consumers).

Average column test lime addition was estimated to be 2 kg/t. Laboratory and field lime requirements are generally similar and an average 2 kg/t lime addition rate seems reasonable.

Leach times varied considerably throughout the different laboratory testing programs, from as low as 30 days to over 110 days. Laboratory to field leach times are generally based on a combination of tonnes of solution applied per tonne of material tested and column leach test times. A thorough analyses of leach time requirements were not conducted for this PEA but a field leach time of over 150 days will probably be required.

Crush Size, mm	Calc Head, g/T Au	% Au Recovery	NaCN, kg/T	Lime, kg/T
38	0.79	51.2%	0.72	3.06
25	4.07	82.4%	1.29	1.17
19	0.83	77.8%	0.30	4.90
12.5	3.83	84.2%	1.44	1.14
9.5	0.55	60.2%	1.16	0.21
6.35	3.97	89.3%	1.31	1.17
Averages	2.34	74.2%	1.03	1.94

Table 18. Column Leach Test Summary by Crush Size, All Deposits

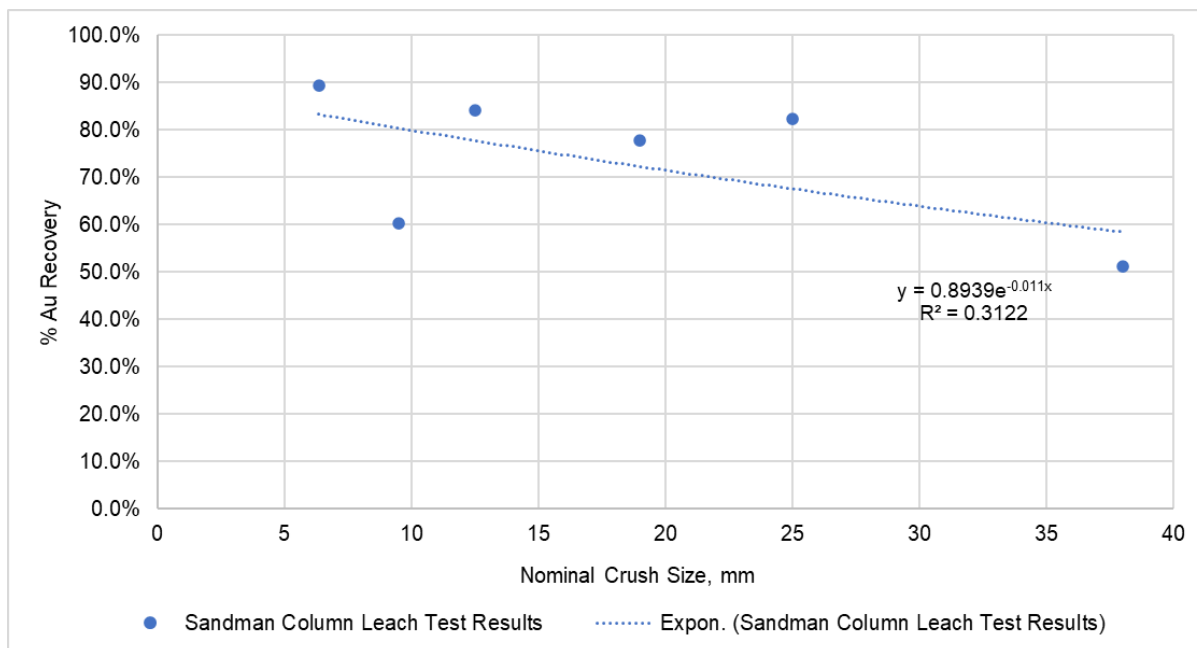


Figure 31. Column Leach Test Summary by Crush Size, All Deposits

### 13.5 Recommendations and Conclusions

The limited testwork completed to-date indicates that gold mineralization at the Project is amenable to heap leach processing at a fine crushed size with low reagent requirements. Additional work to better define the crush size, reagent requirements and leach times for each deposit are recommended. Tests on composites crushed with a high-

pressure-grinding-roll crusher (HPGR) are also recommended as an HPGR will generate more fines than a conventional crusher and could lead to higher gold recoveries.

The following testing program is recommended for pre-feasibility study purposes:

- Series of small column leach tests (approximately 3 kg each) at minus 6.3mm crush size on pre-determined drilling intervals (Core) from each deposit to test the variability of the deposit and to help identify any possible problem or coarse gold zones.
- Series of column leach tests on oxide Core composites from each deposit conventionally crushed to 19mm and 6.3mm; consideration to high, medium and low grade composites should be included.
- Series of column leach tests on transition and sulphide Core composites from each deposit conventionally crushed to 19mm and 6.3mm.
- Series of column leach tests on oxide composites from each deposit crushed with an HPGR to a nominal minus 6.3mm.
- Agglomeration/compacted permeability tests on 6.3mm crushed composites at varying simulated heap heights to determine if cement agglomeration is required.
- Acid base accounting tests to estimate acid neutralization potential of oxides and acid generation potential of any transition or sulphide material processed on the heap.
- Crusher work indices and abrasion indices on select composites of oxide, transition and sulphide mineralized material.
- HPGR abrasion tests (ATWAL) to determine tire wear.

The estimated cost of the metallurgical testing program, not including drilling, boxing, splitting, assaying and shipping of the drill intervals to a US laboratory, is approximately US\$900,000.

For future studies, it is recommended that sufficient testing be completed to allow gold recoveries and reagent consumptions to be assigned to each deposit by oxidation type (oxide, transition, sulphide).

## **14. MINERAL RESOURCE ESTIMATES**

The Mineral Resources Estimates have not changed since the initial release in 2021.

The current level of geological understanding of the gold mineralization at all four projects on the Project is relatively well understood, based on a high concentration of drilling, including diamond drilling and shallow open pit exposures and follow up technical Research. The information available at the Project has provided a high level of confidence regarding the main geological features which have influenced the location and extensions to the gold mineralization. The following descriptions provide for specific reference regarding the geological features that have influenced the Project block model which was created for the purpose of defining the MRE in this report.

## 14.1 Geological Domains

### 14.1.1 Geology 3D Model

An updated geology model was created to define the major geological units that were previously identified to have an important influence on the location and distribution of the gold mineralization. Details for these stratigraphic units have been described in section 7.2. The relationship to the geological units and the various mineralized domains are described in section 14.2 below.

The geology model was created using Leapfrog and based on a combination of the original rock codes as defined in the drill hole database and previous 3D wireframes which had been exported from a Vulcan model that was created by a Newmont geologist in 2012. The details associated with the geological model and relationship to the gold mineralization was also documented by Newmont in an internal report, extracts of which are also included in section 14.2 of this Report.

### 14.1.2 Oxidized-to-Unoxidized/Fresh Rock Model

As part of the work undertaken by Newmont in 2012, an oxidized to unoxidized (fresh rock) boundary was created in their Vulcan model for the purpose of separating the weathered material (amenable to heap leach processing) from the fresh rock material, which is considered more likely to require finer grinding and conventional cyanide leaching.

As a general observation for the Project region, the northern deposits of Silica Ridge and North Hills have deeper weathering profiles with minimal to no sulphide material observed over the depths considered for the MRE at these deposits. Therefore, the main consideration and relevance of defining a boundary between oxidized rock and fresh rock relates to the Abel Knoll and Southeast Pediment deposits.

The defined oxide to fresh rock boundaries were compared against the drill hole logging and assay information. The information in the database which pertains to the oxide to fresh rock boundary are as follows:

Logging information contains visually estimated records for oxidized, transition and fresh rock zones. There are many companies and geologists who have logged both the RC drilling and diamond drilling information from the Project with minimal reference as to the basis for what criteria was used to classify each section. Therefore, the boundaries that are defined according to these visual estimates are considered to be approximate only and a guide for where the changes from oxide to fresh rock exists.

Visual estimates of sulphides were also made in the database information. This is also considered to be a guide and some locations of strong weathering appears to exist where minor sulphides have been reported.

Newmont completed a more detailed analysis in some drill holes for the sulphur content. This data is considered to provide for a more accurate representation of where the oxide to fresh rock boundary exists at both Abel Knoll and Southeast Pediment. A review of this data set against the interpreted Vulcan wireframe from Newmont shows a good correlation against the drilling data for the sulphur content, and therefore the detailed weathering to fresh rock boundary created by Newmont was adopted as part of the weathering model for the updated Mineral Resource estimate.

## 14.2 Mineralized Domains

The mineralized domains were created based on a combination of features that were commonly observed and documented by geologist who have reported on the key geological features of each deposit and their relationship to the gold mineralization (MDA 2007, Anderson 2013 and Newmont 3A Report, 2012).

### 14.2.1 Abel Knoll Deposit

One of the more prominent features at the Abel Knoll Deposit is the presence of significant gold mineralization associated with a diatreme breccia on the western side of the Deposit area. Immediately to the east of the diatreme breccia body there are a number of relatively flat lying trends of gold mineralization which extend in all directions broadly parallel to the relatively horizontal contact between the basement rocks and overlying Tertiary Volcanic rocks (see *Figure 32*).

Mineralized domains were created to capture the gold mineralization which followed this interpretation, resulting in 5 overall domains, one diatreme breccia mineralized domain, two bedding parallel domains and 2 relatively isolated and bedding parallel domains with limited strike continuity.

### 14.2.2 Southeast Pediment Deposit

Gold mineralization at SEP is largely hosted in a due north striking and west dipping fault. Towards the surface, the fault appears to break up along some sections into a separate hanging wall zone and footwall zone. Where the structures are close together the mineralized domain for the main structure was interpreted as one larger domain as it can be difficult and impractical to separate out the smaller sections of faulting towards the footwall or hanging wall.

In addition, there is some dispersion of gold mineralization parallel to stratigraphy to the east and west of this major fault zone close to the surface which have been defined as separate mineralized domains. At deeper levels there is an important controlling influence of the gold mineralization along the upper and lower contacts of a basalt unit which exists just above the contact with the basement rocks and on the eastern side of the main SE Pediment fault (see *Figure 33*).

### 14.2.3 Silica Ridge Deposit

The gold mineralization at SR has some similarities to SEP with a major west dipping fault having a major influence as both a significant host to the gold mineralization and with significant dispersion on second order faults or along stratigraphic horizons away from this major fault.

The additional key feature of the gold mineralization at SR is the influence of a basalt dyke, which is significantly mineralized. This dyke is relatively narrow with a true width ranging from 10m to 30m and striking due east with a near vertical orientation. Further apparent intrusions or steep east striking gold mineralization also appear to exist subparallel to this dyke to the north, although this mineralized domain is generally poorly defined.

To the north of the dyke, the dominant west dipping SR is well defined, striking in a north-westerly direction (supported by observations in the magnetic imagery), and with associated linking smaller east dipping faults (see *Figure 34* and *Figure 35*).

To the south of the dyke the dominant fault has not been defined by drilling, with the gold mineralization found to be associated with east dipping faults. The current interpretation is that these east dipping faults are in the hanging wall to a major west dipping fault that has yet to be tested. The magnetic images also suggest a continuation of this north-west striking fault continuing, with a possible offset towards the east (or downthrown) on the southern side of the basalt dyke.

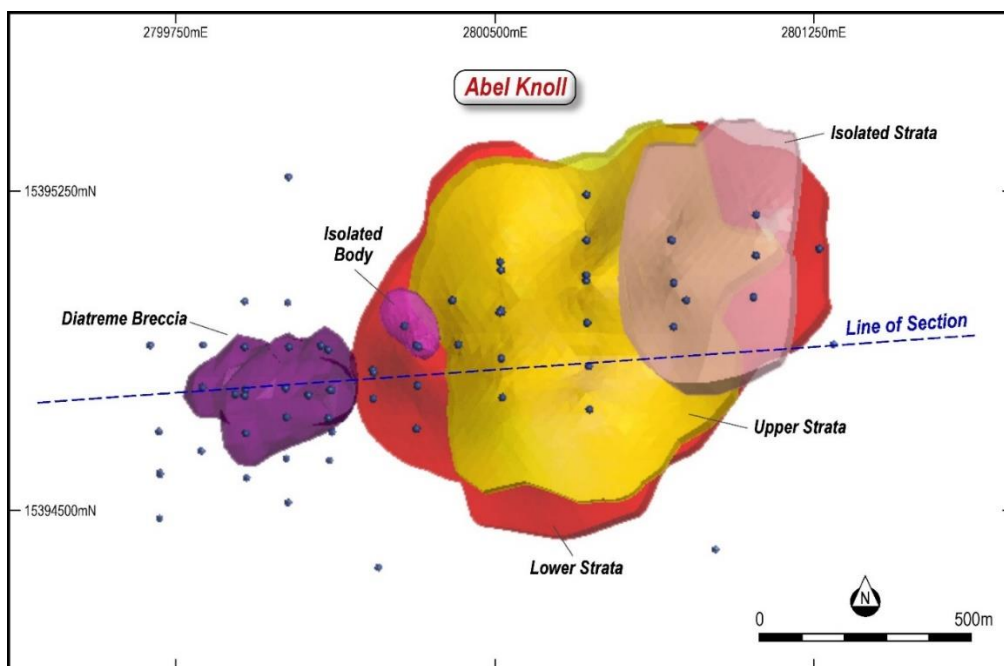
### 14.2.4 North Hill Deposit

North Hill is dominated by shallow bedding parallel gold mineralization. The higher concentrations and more extensively defined mineralized domains are associated with either the upper or lower contact position of a basalt unit, within the broader Tertiary felsic volcanic rocks. A late staged fault striking to the north-east and dipping steeply to the north-west is interpreted to be a post mineralization fault, causing an offset to the bedding parallel gold mineralization.

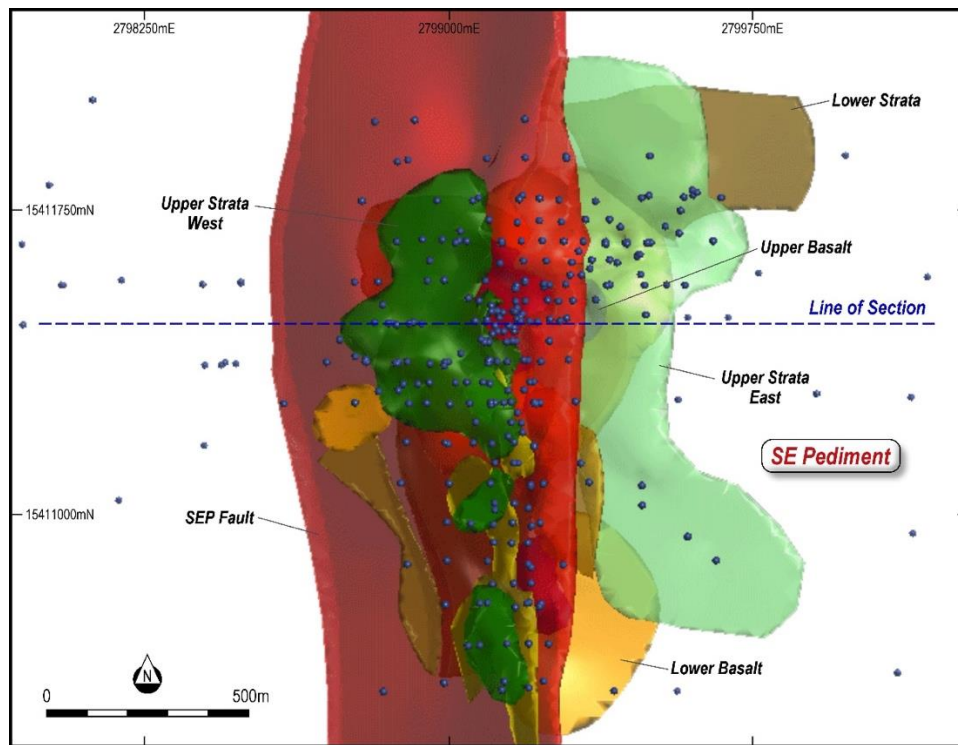
At the position where the gold zones are close to the surface there is also some evidence of supergene enrichment with some flat lying gold mineralization at very high gold grades. This has been defined as a separate mineralized domain where the supergene gold mineralization is interpreted to exist.

### 14.3 Data Spacing and Distribution

The currently defined higher-grade sections of the Mineral Resource have a higher density of drill hole data, with broader drill spacing occurring away from these higher-grade centres and typically into lower grade sections of each mineralized domain. The high-grade structures at both SR and SEP have very tight drill spacing, down to 15m or in some sections. Further away for the bulk of the smaller structures and away from the higher grade sections the average drill spacing ranges from 30m to 60m for all of deposits. The outer extents are typically lower grade and often below the reported cut-off grade for the MRE in this Report. In general, the drill data spacing for the bulk of the MRE provides good support for the majority of the Resource being classified in the Indicated Category. Although the tight drill spacing in some sections could also support the Measured Resource category, the natural variability of the gold mineralization prohibits any part of the MRE from being classified as Measured at this stage.



**Figure 32: Plan view of the drill hole collar locations relative to the defined mineralized domains at the Abel Knoll deposit. Author Steven Olsen, 2021.**



**Figure 33: Plan view of the drill hole collar locations relative to the defined mineralized domains at the Southeast Pediment deposit. Author Steven Olsen, 2021.**

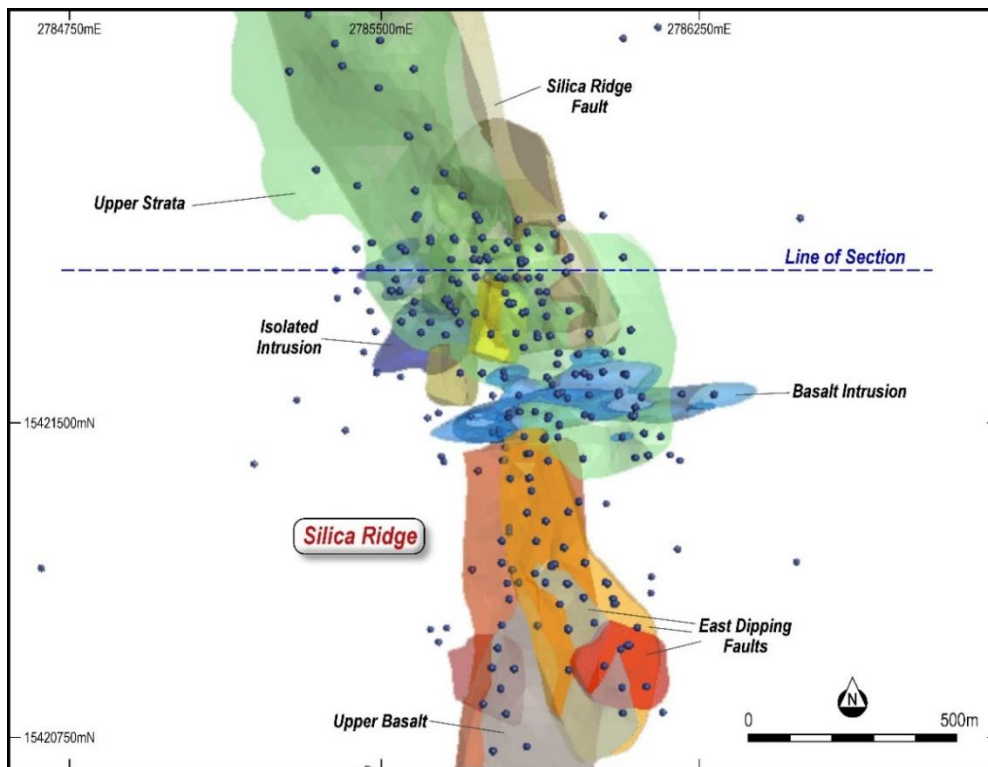


Figure 34: Plan view of the drill hole collar locations relative to the defined mineralized domains at the Silica Ridge deposit. Author Steven Olsen, 2021.

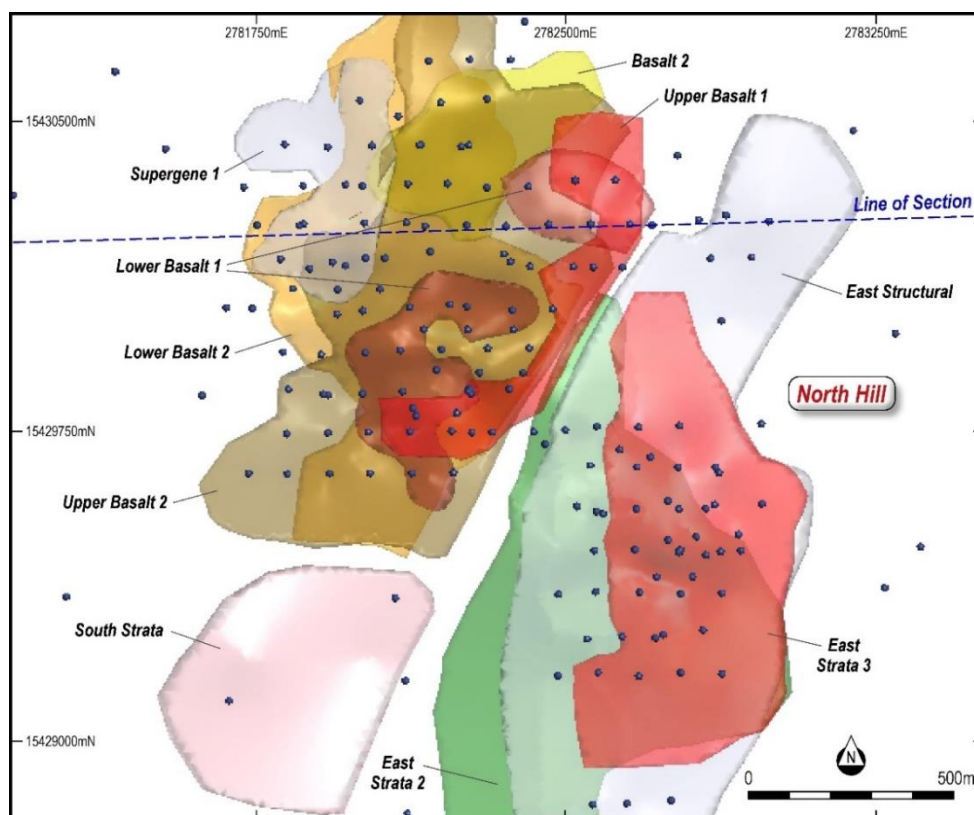


Figure 35: Plan view of the drill hole collar locations relative to the defined mineralized domains at the North Hill deposit. Author Steven Olsen, 2021.

## 14.4 Orientation of Data Relative to Gold Mineralization

There are a wide range of mineralized domain orientations throughout the Project, from steep east and west dipping faults to relatively flat lying bedding parallel sections in addition to steep east dipping dykes and also the vertically plunging diatreme breccia at Abel Knoll. Despite this wide variety of orientations for the gold mineralization, in most cases these orientations have been understood for some time and the bulk of the drilling information, particularly from the later drilling programs by Newmont, are at an angle which is predominantly perpendicular to the defined gold mineralization. Therefore, in most cases the drilling angle is favourable for capturing representative samples across each mineralized domain. There are very few cases observed where the sampling orientation has compromised the integrity of the MRE.

## 14.5 Database Integrity

The database for the Project was originally extracted from the Newmont internal database system via a series of queries which was designed to extract of the information pertaining to the Project. Gold Bull has gone through an internal validation of this database broken down by each generation of drilling, and by project location.

The details of the validation process undertaken with regard to the drill data that was ultimately used for the updated MRE is largely documented in sections 10, 11 and 12.

In summary, a large number of drill hole locations were checked against satellite imagery to confirm disturbance that is commensurate with the position of an historical drill hole. In addition, a number of selected drill holes from each generation of drilling and also for each project location were chosen for a more extensive check (including on the ground field check) for their collar location, down hole survey records, original assay results and any other relevant logging information to ensure that the original data records could be confirmed from the extracted Newmont data.

Apart from a small number of drill holes where some information was either lost or appear to be misrepresented in the database, over 98% of the drill holes were ultimately considered validated and included as part of the MRE (see *Table 19*).

Location	Diamond Drill Holes		RC Drill Holes	
	Holes	Validated	Holes	Validated
<b>Abel Knoll</b>	6	6	60	60
<b>SE Pediment</b>	127	124	233	231
<b>Silica Ridge</b>	87	86	207	204
<b>North Hill</b>	37	33	160	155
<b>Totals</b>	<b>257</b>	<b>249</b>	<b>660</b>	<b>650</b>

**Table 19. Summary of validated drill holes used within the block model for each Deposit at the Project**

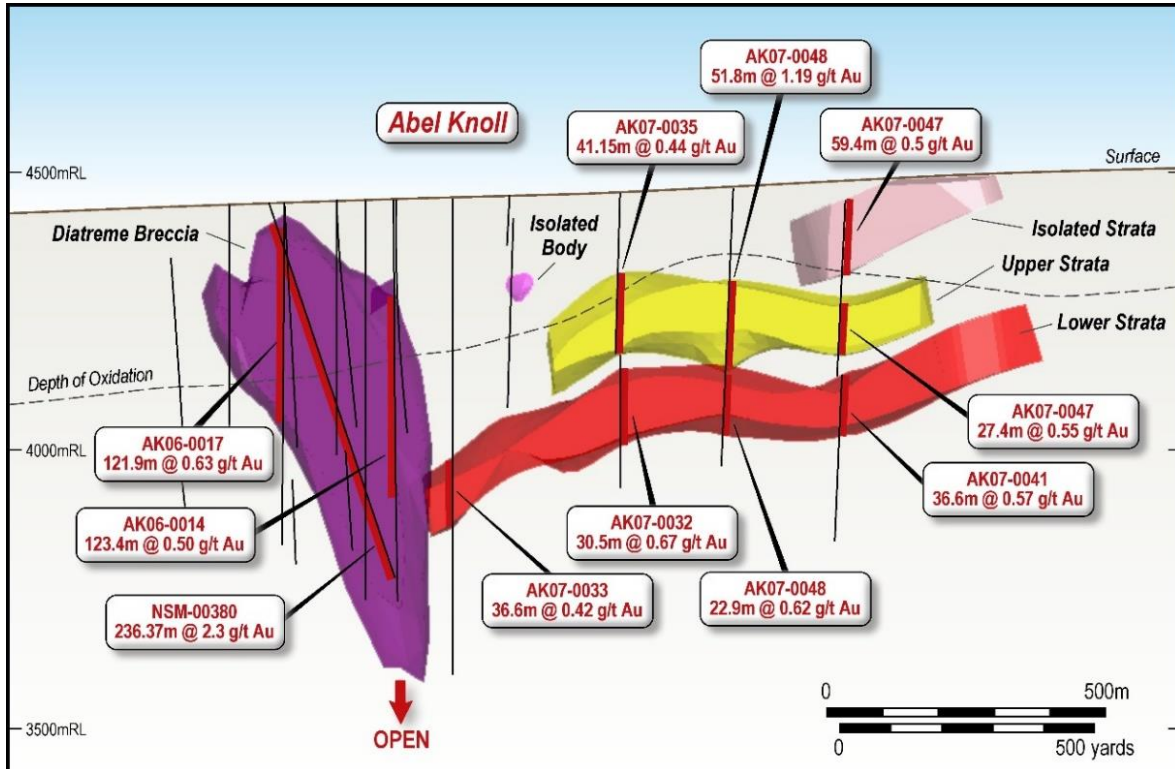
## 14.6 Dimensions

Each deposit at the Project has varying geometry and dimensions due to their different geology. The dimensions for the mineralized domains and the gold mineralization within each mineralized domain is summarised below.

### 14.6.1 Abel Knoll Deposit

The mineralized domains at Abel Knoll are of two dominant types (see *Figure 36*). The diatreme breccia is a relatively narrow vertical plume feature, with horizontal geometries to a maximum of 90m x 60m and a currently defined over 200m vertical extent (open at depth).

The stratigraphic parallel gold mineralization is often up to 30m thick and can extend up to 300m x 200m in plan view. **Figure 36** is a representative image of the mineralized domains that were created as part of the MRE for the Abel Knoll deposit which has constrained the gold mineralization along trends that are consistent with the geological interpretation for the gold mineralization at this deposit.

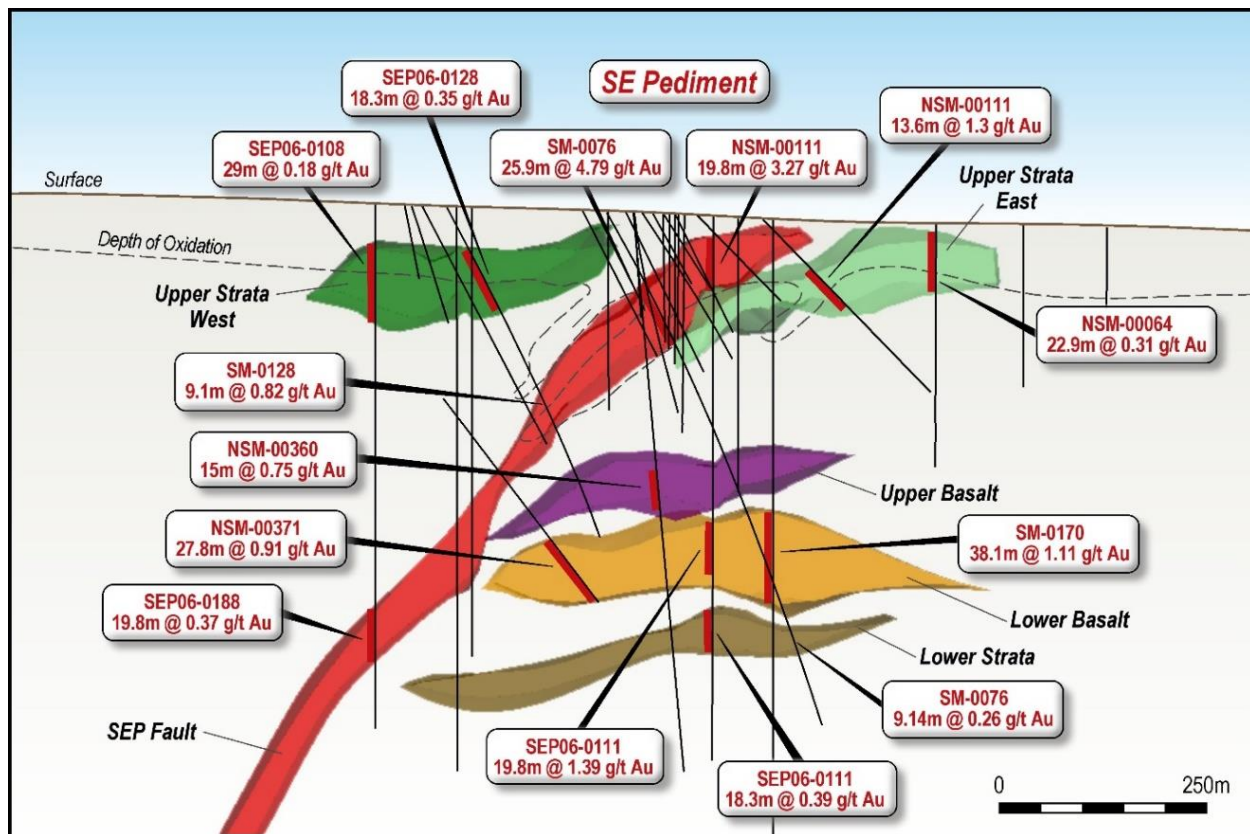


**Figure 36: Representative cross section of the defined mineralized domains from the Abel Knoll deposit (see Figure 32 for the relative location of this cross section). Author Steven Olsen, 2021.**

### 14.6.2 Southeast Pediment Deposit

Gold mineralization at SEP (see **Figure 37**) is dominated by a large north striking and west dipping fault which appears to break up into a number of splays at shallow levels, broadening the overall size of the gold mineralization. Gold mineralization associated with the west dipping faults can balloon out to over 30m in true width in some places and typically become poorly mineralized and narrower at depth, down to 5m or less in true width. The main SE Pediment structure has been defined to over 250m depth and remains open.

The stratigraphically controlled mineralized domains at SEP can also expand out to a true width of over 30m, but are more commonly between 10m and 20m in true width. The more continuous stratigraphically controlled domains can extend for over 300m horizontally. **Figure 37** is a representative cross section of the mineralized domains at SEP which were created to constrain the gold mineralization to specific geological features that are interpreted to control the gold mineralization.



**Figure 37: Representative cross section of the defined mineralized domains from the Southeast Pediment deposit (see Figure 33 for the relative location of this cross section). Author Steven Olsen, 2021.**

Due to the high density of drilling data only some selected drill intersections are represented on this cross section, which typically relates to the higher-grade gold mineralization or to show assay results along the interpreted extensions to the gold mineralization.

### 14.6.3 Silica Ridge Deposit

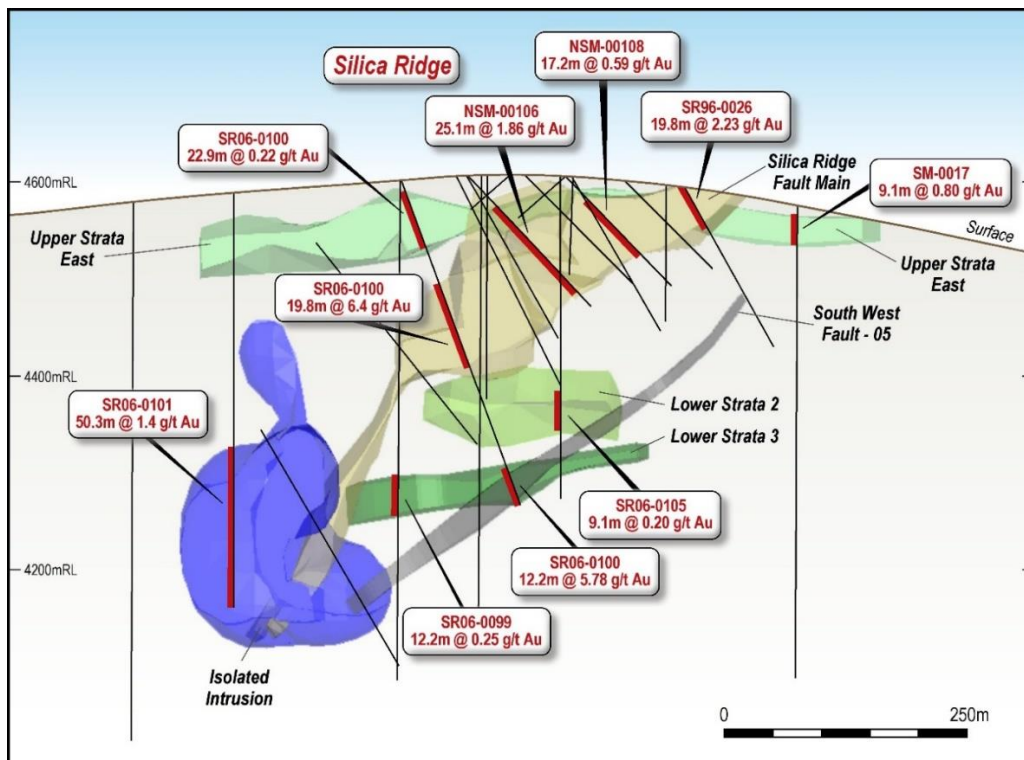
The gold mineralization at SR is contained within a number of controlling geological features. The dominant controlling feature is a north-north-west striking fault which dips at approximately 45 degrees to the west. Gold mineralization also occurs parallel to the stratigraphy as bedding parallel zones of gold mineralization and also within opposing east dipping faults which extend into the hanging wall of this larger fault (see [Figure 34](#)). The main Silica Ridge fault is more significantly mineralised and over a broader thickness close to the surface, with true widths up to 25m in places, but with an average closer to 10m. At depth and further along strike the gold mineralization along this structure narrows down to less than 3m.

The current extents of the main gold mineralization along the Silica Ridge fault and associated bedding parallel gold mineralization extends to date for a strike length of approximately 500m. The shallow gold mineralization which follows the stratigraphy away from the main fault, extends for up to 100m away from the fault. This gold mineralization can be broad, but typically lower in gold grade, with thicknesses of up to 40m and an average thickness of close to 15m.

Another prominent feature and significant host to the gold mineralization is an east striking and near-to-vertical andesite dyke. This dyke appears to have intruded along a fault zone with an apparent offset and differing geological exposure to the north of this dyke when compared to the south. Most of the drill intercepts which intersect the gold mineralization within this dyke are at a very poor angle to define the extents of the gold mineralization. However, the generally high concentration of drill holes has enabled a reasonable interpretation which infers an average true width of close to 30m and extending for at least 200m along strike. At depth, the dyke appears to become narrower, but both the dyke and associated gold mineralization are still open at depth.

To the south of the dyke, there is no large west-dipping fault identified yet, which is possibly offset (downthrown) on the southern side of the dyke which would place this fault further to the east of the existing drilling information. The mineralised faults which are south of the andesite dyke are a series of east dipping faults which are possibly in the hanging wall to the continuation of the Silica Ridge fault. The true widths of these east dipping faults can extend up to 20m, with averages typically 10m or less. The gold mineralization to date is defined on either one or more of these east dipping faults for up to 200m due south of the dyke and extending for up to 100m in an east-west direction or to the limits of the current drilling information.

**Figure 38** is a representative cross section of highlighting the location of the main Silica Ridge fault mineralized domain and associated bedding parallel gold mineralization which surrounds this main fault to the north of the andesite dyke.



**Figure 38: Representative cross section of the defined mineralized domains from the Silica Ridge deposit (see Figure 34 for the relative location of this cross section). Author Steven Olsen, 2021.**

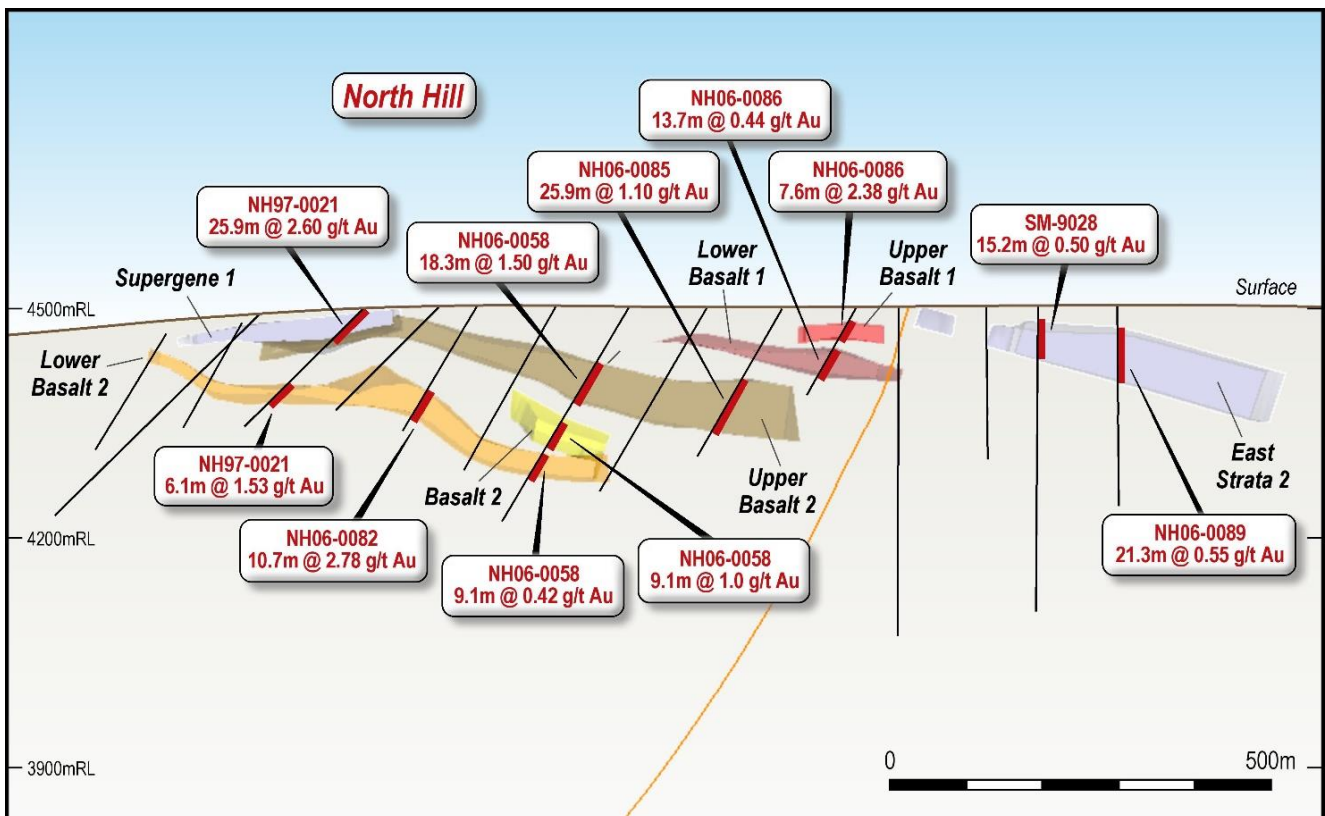
Due to the high density of drilling data only some selected drill intersections are represented on this cross section, which typically relates to the higher-grade gold mineralization or to show assay results along the interpreted extensions to the gold mineralization.

### 14.6.4 North Hill Deposit

The gold mineralization is dominantly controlled by bedding parallel features, particularly along the lower or upper contacts with the basaltic rocks (see **Figure 39**). The bedding and associated gold mineralization is predominantly dipping 30 degrees to the east. True widths of the bedding parallel mineralization can extend up to 25m, but averages more typically between 8m and 12m. The largest and most continuous zone of bedding parallel gold mineralization exists at the base of a basaltic unit, extending for 400m in a northerly direction and up to 200m in an easterly direction.

Another prominent feature is a large steep fault which cuts the gold mineralization and has a north-easterly direction. At this stage this fault is interpreted to be active mostly post the gold mineralising event and has caused an offset in the gold mineralization, with little to no gold mineralization currently interpreted to exist along this fault. However, the author notes that this fault position has not yet been adequately tested for its potential to host some further gold mineralization at North Hill.

**Figure 39** is a representative cross section of the defined mineralized domains which were created to constrain the interpreted gold mineralization which extent along a particular stratigraphic horizon.



**Figure 39: Representative cross section of the defined mineralized domains from the North Hill deposit (see Figure 35 for the relative location of this cross section). Author Steven Olsen, 2021.**

Due to the high density of drilling data only some selected drill intersections are represented on this cross section, which typically relates to the higher-grade gold mineralization or to show assay results along the interpreted extensions to the gold mineralization.

## 14.7 Mineral Continuity and Statistical Analysis

After applying the constraints on the mineralized domains for each deposit, each individual mineralized domain was reviewed in terms of their basic statistics and also a review of their potential continuity based on their variograms where the data was sufficient to make this assessment.

### 14.7.1 Statistics, Top Cut and Outlier Restriction.

The following tables is a summary of the statistical information based on drill hole gold assay data which was composited to the average sample length of 5ft. These composite files were produced for all drilling information within each mineralized domain (excluding data outside of the mineralized domain) and ultimately used for the grade interpolation. A review of each population of data associated with each mineralized domain was conducted including an analysis of the histograms and log probability plots. This review was completed to understand the general distribution of gold mineralization within each mineralized domain and also to determine the appropriate level to apply an upper cut to the composited data as part of the interpolation for the block model. In addition, the general distribution of higher-grade composites within each mineralized domain were viewed in 3D space to understand the possible extends of the higher-grade population of data to determine an appropriate limitation on high grade assay results to ensure that they did not influence the lower grade sections of each mineralized domain. Outlier restrictions were applied to deposits where the mineralized domains were very large and extended into positions where only lower grade gold mineralization appears to exist along its outer extents.

The following tables provide for a summary of the statistics and determined upper cuts and high-grade outlier grades that were used for each mineralized domain for the MRE.

**Table 20: Table of statistical information for mineralized domains at Abel Knoll.**

mineralized domain	Diatreme Breccia	Isolated Zone	Lower Strata	Upper Strata
<b>Count</b>	837.00	56.00	208.00	132.00
<b>Length (m)</b>	4185.45	280.28	1041.20	661.00
<b>Mean (g/t gold)</b>	7.20	0.35	3.74	3.35
<b>Standard Deviation</b>	10.52	0.93	6.28	4.04
<b>Co Variance</b>	1.46	2.61	1.68	1.20
<b>Variance</b>	110.64	0.86	39.48	16.29
<b>Minimum (g/t gold)</b>	0.05	0.05	0.05	0.05
<b>1<sup>st</sup> quartile (g/t gold)</b>	0.51	0.05	0.05	0.05
<b>2<sup>nd</sup> quartile (g/t gold)</b>	3.70	0.10	2.19	2.51
<b>3<sup>rd</sup> quartile (g/t gold)</b>	11.01	0.12	4.79	4.70
<b>Maximum (g/t gold)</b>	148.70	4.70	41.01	32.57
<b>Upper Cut (g/t gold)</b>	40.00	none	22.00	15.00
<b>Upper Cut Percentile</b>	99.20%	NA	98.00%	99.20%

**Table 21: Table of statistical information for mineralized domains at Southeast Pediment.**

mineralized domain	Fault FW	Fault FW2	Fault HW	Upper T_West
Count	2986.00	133.00	191.00	681.00
Length (m)	15509.84	698.25	1003.81	3487.94
Mean (g/t gold)	3.28	0.31	0.34	0.33
Standard Deviation	44.56	0.61	0.66	0.50
Co Variance	13.58	1.95	1.94	1.52
Variance	1985.93	0.37	0.44	0.25
Minimum (g/t gold)	0.00	0.00	0.02	0.00
1st quartile (g/t gold)	0.21	0.13	0.12	0.12
2nd quartile (g/t gold)	0.40	0.22	0.20	0.22
3rd quartile (g/t gold)	0.81	0.36	0.30	0.36
Maximum (g/t gold)	1621.29	7.10	6.00	5.75
Upper Cut (g/t gold)	25.00	1.50	5.00	4.00
Upper Cut Percentile	99.00	99.30	99.50	99.50
Outlier Restriction (g/t gold)	5.500	none	none	none
Percentile	96.000	NA	NA	NA

**Table 22: Table of statistical information for mineralized domains at Southeast Pediment - continued**

mineralized domain	Upper T_East	Upper Basalt	Lower Basalt	Lower T
Count	838.00	187.00	414.00	288.00
Length (m)	4327.43	952.98	2103.50	1473.07
Mean (g/t gold)	0.92	0.33	1.26	0.68
Standard Deviation	4.07	0.43	2.65	1.31
Co Variance	4.43	1.28	2.11	1.94
Variance	16.58	0.18	7.04	1.73
Minimum (g/t gold)	0.00	0.00	0.01	0.01
1st quartile (g/t gold)	0.11	0.11	0.21	0.14
2nd quartile (g/t gold)	0.20	0.19	0.53	0.27
3rd quartile (g/t gold)	0.39	0.36	1.47	0.63
Maximum (g/t gold)	70.76	3.25	37.58	13.33
Upper Cut (g/t gold)	25.00	2.50	20.00	10.00
Upper Cut Percentile	99.50	99.50	99.80	99.70
Outlier Restriction (g/t gold)	5	none	5.50	4.00
Percentile	96.5	NA	97.00	98.00

**Table 23: Table of statistical information for mineralized domains at Silica Ridge.**

mineralized domain	Basalt Dyke	Intrusion 2	South East F1	South F1	South F2
Count	1358.00	330.00	80.00	377.00	427.00
Length (m)	6842.48	1656.10	408.65	1949.23	2190.69
Mean (g/t gold)	0.81	0.83	1.05	0.96	1.23
Standard Deviation	2.92	2.29	3.89	2.68	8.44
Co Variance	3.62	2.75	3.70	2.80	6.84
Variance	8.54	5.24	15.11	7.16	71.23
Minimum (g/t gold)	0.00	0.01	0.02	0.00	0.00
1st quartile (g/t gold)	0.16	0.21	0.16	0.03	0.07
2nd quartile (g/t gold)	0.31	0.31	0.27	0.20	0.22
3rd quartile (g/t gold)	0.67	0.69	0.59	0.83	0.65
Maximum (g/t gold)	66.68	33.94	33.63	32.91	167.20
Upper Cut (g/t gold)	25.00	6.30	8.00	10.00	15.80
Upper Cut Percentile	99.80	99.40	98.80	99.10	98.80
Outlier Restriction (g/t gold)	6.00	5.00	2.00	5.00	5.00
Percentile	98.50	98.50	93.50	96.00	98.00

**Table 24: Table of statistical information for mineralized domains at Silica Ridge - continued**

mineralized domain	South West F3	South West F4	Upper Basalt Flow	Upper T Strata
Count	138.00	1118.00	257.00	1171.00
Length (m)	716.85	5699.13	1269.72	6008.28
Mean (g/t gold)	1.76	1.17	0.12	0.27
Standard Deviation	10.02	6.68	0.30	0.45
Co Variance	5.70	5.70	2.57	1.67
Variance	100.30	44.59	0.09	0.21
Minimum (g/t gold)	0.03	0.00	0.00	0.00
1st quartile (g/t gold)	0.10	0.12	0.02	0.07
2nd quartile (g/t gold)	0.17	0.25	0.02	0.17
3rd quartile (g/t gold)	0.29	0.52	0.08	0.30
Maximum (g/t gold)	111.22	141.85	2.88	8.13
Upper Cut (g/t gold)	30.00	45.00	2.00	4.00
Upper Cut Percentile	99.30	99.60	99.50	99.80
Outlier Restriction (g/t gold)	2.00	8.00	none	none
Percentile	95.00	98.00	NA	NA

**Table 25: Table of statistical information for mineralized domains at North Hill.**

mineralized domain	E1	E2	E3	Basalt S
<b>Count</b>	438.000	316.000	239.000	92.000
<b>Length (m)</b>	2159.781	1618.056	1209.216	466.852
<b>Mean (g/t gold)</b>	0.496	0.755	0.305	4.186
<b>Standard Deviation</b>	1.283	1.713	0.295	15.270
<b>Co Variance</b>	2.583	2.268	0.964	3.648
<b>Variance</b>	1.645	2.934	0.087	233.174
<b>Minimum (g/t gold)</b>	0.000	0.000	0.000	0.000
<b>1st quartile (g/t gold)</b>	0.160	0.192	0.140	0.176
<b>2nd quartile (g/t gold)</b>	0.280	0.340	0.220	0.390
<b>3rd quartile (g/t gold)</b>	0.490	0.742	0.356	1.130
<b>Maximum (g/t gold)</b>	19.940	24.980	1.690	96.839
<b>Upper Cut (g/t gold)</b>	4.000	6.300	1.700	25.100
<b>Upper Cut Percentile</b>	99.400	99.700	100.000	97.100
<b>Outlier Restriction (g/t gold)</b>	3.00	5.50	1.00	6.00
<b>Percentile</b>	99.20	98.00	96.00	92.00

**Table 26: Table of statistical information for mineralized domains at North Hill - continued**

mineralized domain	Basalt 1U	Basalt 1L	Basalt 2U	Basalt 2	Basalt 2L
<b>Count</b>	114.000	156.000	440.000	87.000	487.000
<b>Length (m)</b>	580.708	803.889	2170.300	444.067	2511.843
<b>Mean (g/t gold)</b>	0.539	0.556	0.496	0.916	1.230
<b>Standard Deviation</b>	1.056	0.768	1.279	1.840	12.015
<b>Co Variance</b>	1.960	1.381	2.582	2.009	9.765
<b>Variance</b>	1.114	0.590	1.637	3.384	144.359
<b>Minimum (g/t gold)</b>	0.000	0.000	0.000	0.000	0.000
<b>1st quartile (g/t gold)</b>	0.060	0.190	0.160	0.110	0.064
<b>2nd quartile (g/t gold)</b>	0.200	0.320	0.280	0.340	0.200
<b>3rd quartile (g/t gold)</b>	0.520	0.580	0.490	0.750	0.572
<b>Maximum (g/t gold)</b>	6.130	5.590	19.940	14.500	266.072
<b>Upper Cut (g/t gold)</b>	2.500	3.200	10.000	5.000	31.600
<b>Upper Cut Percentile</b>	96.400	98.800	99.000	98.900	99.800
<b>Outlier Restriction (g/t gold)</b>	1.20	2.10	5.00	3.20	8.50
<b>Percentile</b>	88.00	95.00	97.00	95.00	99.00

#### 14.7.2 Variogram Analysis.

A variogram analysis was conducted for each mineralized domain with the direction for the variograms placed within the plane of gold mineralization. In almost every case the data associated with the individual mineralized domains could not establish reliable variograms which could result in a reasonable interpolation using Ordinary Kriging.

This assessment corresponds with earlier summary reports with regard to resampling and quality control data from the Project which have concluded that there is a significant nugget effect that exists within the Project gold deposits (Lustig, 2007).

Where possible some generally poor variograms could be established with the sill reached on its major direction between 100 and 120 feet (~30 to 40m). This visually corresponds with the common observation in the drilling data which shows that the higher-grade sections often do not extent much greater than 40m along strike.

## **14.8 Estimation and Modelling Techniques**

### **14.8.1 Block Size**

Given the generally narrow nature of the mineralised structures, there was a need to allow for a relatively small block size in order to maintain the integrity of the geological contacts and mineralized domains. This requirement for a small block size was balanced with a more statistically valid larger block size so as not to over represent the possible level of accuracy that can be applied to the smaller blocks. To manage these two competing issues, a parent block size of 30x30x30ft (~9.1x9.1x9.1m) was chosen with sub-celling down to a third in each direction, allowing for sub-celling down to 10x10x10ft (~3x3x3m).

### **14.8.2 Interpolation Method**

Due to the inability to create reliable variograms and the generally nuggety nature of the gold mineralization at the Project, the ID<sup>2</sup> interpolation method was chosen for all of the defined mineralized domains.

### **14.8.3 Estimation Parameters**

As part of the variogram analysis for each mineralized domain, the dominant trend and plane of the gold mineralization was determined from the composited gold information that was restricted to within each mineralized domain respectively.

Based on the understanding of the distribution of the gold mineralization, a review of the statistics and the general geometry of each mineralized domain, the following estimation parameters were applied for the interpolation and allocation of a gold grade for the Project block model.

**Table 27: Estimation parameters for the Abel Knoll deposit.**

mineralized domain	Search Ellipse			Search Distance			Number of Samples	
	Dip	Azi	Pitch	Maximum	Intermediate	Minimum	Min	Max
<b>Diatreme Breccia</b>								
Pass 1 (Indicated)	77	172	72	120	60	30	4	20
Pass 2 (Inferred)	77	172	72	360	180	90	2	15
<b>Isolated Zone</b>								
Pass 1 (Indicated)	8	0	150	120	120	30	4	20
Pass 2 (Inferred)	8	0	150	360	360	60	2	15
<b>Lower Strata</b>								
Pass 1 (Indicated)	15	270	115	120	120	30	4	20
Pass 2 (Inferred)	15	270	115	360	360	90	2	15
<b>Upper Strata</b>								
Pass 1 (Indicated)	8	270	20	120	120	30	4	20
Pass 2 (Inferred)	8	270	20	240	240	60	2	15

**Table 28: Estimation parameters for the Southeast Pediment deposit.**

mineralized domain	Search Ellipse			Search Distance			Number of Samples	
	Dip	Azi	Pitch	Maximum	Intermediate	Minimum	Min	Max
<b>Fault Main</b>								
Pass 1 (Indicated)	53	270	48	120	120	30	4	20
Pass 2 (Inferred)	53	270	48	360	360	60	2	15
<b>Fault FW2</b>								
Pass 1 (Indicated)	51	270	126	120	120	30	4	20
Pass 2 (Inferred)	51	270	126	360	360	60	2	15
<b>Fault HW</b>								
Pass 1 (Indicated)	68	265	34	120	120	30	4	20
Pass 2 (Inferred)	68	265	34	240	240	60	2	15
<b>Upper Tertiary_West</b>								
Pass 1 (Indicated)	13	264	65	120	120	30	4	20
Pass 2 (Inferred)	13	264	65	240	240	60	2	15
<b>Upper Tertiary_East</b>								
Pass 1 (Indicated)	6	250	17	120	120	30	4	20
Pass 2 (Inferred)	6	250	17	240	240	60	2	15
<b>Upper Basalt</b>								
Pass 1 (Indicated)	15	272	149	120	120	30	4	20
Pass 2 (Inferred)	15	272	149	360	360	60	2	15
<b>Lower Basalt</b>								
Pass 1 (Indicated)	7	330	24	120	120	30	4	20
Pass 2 (Inferred)	7	330	24	360	360	90	2	15
<b>Lower Tertiary</b>								
Pass 1 (Indicated)	10	280	133	120	120	30	4	20
Pass 2 (Inferred)	10	280	133	240	240	60	2	15

**Table 29: Estimation parameters for the Silica Ridge deposit.**

mineralized domain	Search Ellipse			Search Distance			Number of Samples	
	Dip	Azi	Pitch	Maximum	Intermediate	Minimum	Min	Max
<b>Basalt Dyke</b>								
Pass 1 (Indicated)	82	180	81	120	120	30	4	20
Pass 2 (Inferred)	82	180	81	360	360	60	2	15
<b>South F1 (East Dip)</b>								
Pass 1 (Indicated)	52	80	152	120	120	30	4	20
Pass 2 (Inferred)	52	80	152	360	360	60	2	15
<b>South F2 (East Dip)</b>								
Pass 1 (Indicated)	56	86	137	120	120	30	4	20
Pass 2 (Inferred)	56	86	137	360	360	60	2	15
<b>SR Main</b>								
Pass 1 (Indicated)	41	248	22	120	120	30	4	20
Pass 2 (Inferred)	41	248	22	360	360	60	2	15
<b>Upper Basalt Flow</b>								
Pass 1 (Indicated)	0	0	67	120	120	30	4	20
Pass 2 (Inferred)	0	0	67	360	360	60	2	15
<b>Upper T Strata</b>								
Pass 1 (Indicated)	0	0	71	120	120	30	4	20
Pass 2 (Inferred)	0	0	71	360	360	60	2	15
<b>Generic West Dipping</b>								
Pass 1 (Indicated)	45	260	140	120	120	30	4	20
Pass 2 (Inferred)	45	260	140	360	360	60	2	15
<b>Generic East Dipping</b>								
Pass 1 (Indicated)	50	80	140	120	120	30	4	20
Pass 2 (Inferred)	50	80	140	360	360	60	2	15

**Table 30: Estimation parameters for the North Hill deposit.**

mineralized domain	Search Ellipse			Search Distance			Number of Samples	
	Dip	Azi	Pitch	Maximum	Intermediate	Minimum	Min	Max
<b>Isolated 1</b>								
Pass 1 (Indicated)	17	136	109	120	120	30	4	20
Pass 2 (Inferred)	17	136	109	360	360	60	2	15
<b>Isolated 2</b>								
Pass 1 (Indicated)	17	136	109	120	120	30	4	20
Pass 2 (Inferred)	17	136	109	360	360	60	2	15
<b>Basalt S</b>								
Pass 1 (Indicated)	0	0	111	120	120	30	4	20
Pass 2 (Inferred)	0	0	111	240	240	60	2	15
<b>Basalt 1U</b>								
Pass 1 (Indicated)	0	0	44	120	120	30	4	20
Pass 2 (Inferred)	0	0	44	240	240	60	2	15
<b>Basalt 1L</b>								
Pass 1 (Indicated)	6	180	67	120	120	30	4	20
Pass 2 (Inferred)	6	180	67	240	240	60	2	15
<b>Basalt 2U</b>								
Pass 1 (Indicated)	17	136	109	120	120	30	4	20
Pass 2 (Inferred)	17	136	109	360	360	60	2	15
<b>Basalt 2</b>								
Pass 1 (Indicated)	22	114	51	120	120	30	4	20
Pass 2 (Inferred)	22	114	51	360	360	90	2	15
<b>Basalt 2L</b>								
Pass 1 (Indicated)	9	169	153	120	120	30	4	20
Pass 2 (Inferred)	9	169	153	240	240	60	2	15
<b>Basalt E1</b>								
Pass 1 (Indicated)	16	111	121	120	120	30	4	20
Pass 2 (Inferred)	16	111	121	240	240	60	2	15
<b>Basalt E2</b>								
Pass 1 (Indicated)	8	100	160	120	120	30	4	20
Pass 2 (Inferred)	8	100	160	240	240	60	2	15
<b>Basalt E3</b>								
Pass 1 (Indicated)	20	90	65	120	120	30	4	20
Pass 2 (Inferred)	20	90	65	240	240	60	2	15

## 14.9 Moisture

The tonnes estimated for the Project block models were calculated on a dry basis.

## 14.10 Cut-off Parameters

The cut-off grade applied to the MRE is based on estimated processing costs and gold recoveries which are commensurate with a gold price of approximately US\$1,800 per ounce (US\$1,690 for fresh and US\$1,814 for oxide).

Metallurgical information completed to date from the Project indicates that different processing methods and operating costs will be required for the oxidized rock compared with the fresh rock. A cut-off grade of 0.15g/t gold has been applied to the oxidized rock which compares with a cut-off grade for fresh/unoxidized rock of 0.3g/t gold.

### 14.11 Bulk Density

The database contains very limited SG measurements prior to 2008 after which Newmont took ownership of the Project. Newmont completed extensive testing for SG based on routine samples being collected from mostly PQ diamond drill Core and using the water immersion method, after coating the sample with silicone, to of determining the SG.

The samples taken for SG were largely focussed at the Silica Ridge and Southeast Pediment deposits, with some samples also taken North Hill and no samples taken at Abel Knoll.

The SG data was assessed for each rock type and also reviewed for general trends or changes for each rock type including the depth from surface and comparisons between oxidized and unoxidized rock.

Although it is considered likely that the weathering profile would have a material impact on the SG, this was not observed from a review of the data. In addition, the SG for each rock type did not appear to change significantly with increasing depth.

The most significant variations identified for the SG measurements were based on the major rock types. Therefore, the SG for each major rock unit was defined separately to ensure that SG values from one rock type did not get extrapolated into another rock type.

Given the very patchy spatial distribution of the SG measurements that exist in the drill hole database, it was considered more appropriate to use an average SG for each rock type.

Three major categories were defined for the determination of SG in the block model, which were for Basalt/Andesite, Tertiary aged felsic volcanics/volcanic sediments and the Triassic metasedimentary rocks.

The following table show the basic statistical information for the SG of each major rock type derived from the Project drill hole database.

**Table 31: Statistics of the SG and allocated SG values for each rock type used in the Project block models.**

Rock Type	Samples	Mean	Std D	Min	Max	Median	Value in Block Model
Quaternary	1	2.16					2.15
Tertiary felsic volcanics	1378	2.13	0.27	1.49	2.61	2.09	2.10
Tertiary basalt/andesite	192	2.33	0.19	1.84	2.71	2.36	2.32
Triassic metasediments	31	2.23	0.32	1.68	2.66	2.35	2.20

## 14.12 Mining Factors or Assumptions

An open pit optimisation was completed for the Project block model to determine which portion of the block model has “reasonable prospects” for eventual economic extraction. Several possible open pit designs were considered at varying gold prices, ranging from US\$1,500 up to US\$2,500 ounce which identified a natural limit to portions of the MRE which were unlikely to be considered as part of a future open pit mining options and therefore were excluded from the MRE.

The open pit optimisation pit shells were based on processing gold recoveries of 70%, processing costs of US\$8 per tonne (based on crushing and heap leach processing), pit wall angles of 50 degrees, mining cost of US\$2.50 per tonne and an additional General and Administrative (G&A) charge of US\$1 per tonne.

## 14.13 Environmental Factors or Assumptions

A full review of the environmental factors that may impact on the potential viability of a new mining operation at the Project is beyond the scope of this report. The current information available and reviewed by the author indicates that there are no known environmental impediments or liabilities with regard to a potential mining operation as of the effective date of this report. Therefore, no additional environmental factors or assumptions were made in addition to the overall mining cost assumptions that were applied to the evaluation of the MRE which is the subject of this Report.

## 14.14 Classification

Although the drill spacing is less than 20m in some sections, the high variability and generally nuggety nature of the gold mineralization at the Project has at this stage resulted in only an Inferred and Indicated classification. The 2007 MRE for the Project previously reported just over 82koz of gold (26% of the total 2007 MRE) in the Measured category. However, since 2007 subsequent studies and additional diamond drilling by Newmont have resulted in the current understanding that the gold mineralization has a high level of variability making it unsuitable to be classified as Measured at this point in time.

Therefore, the bulk of the current MRE is classified as an Indicated Resource, with further extensions within the defined mineralized domains classified as an Inferred Resource, as defined in more detail below.

### 14.14.1 Indicated Mineral Resource Classification

The determination of the Indicated category was based on all of the available information of the gold distribution within each mineralized domain for which some level of gold grade continuity could be applied. Whilst the gold mineralization at the Project is nuggety in nature, the average grade over a distance of up to 40m in the plane of each defined mineralized domain, for both structurally controlled and stratigraphically controlled mineralized domains could be reasonably determined based on using an average of the surrounding drill hole information allowing for the natural local variations of higher grade and lower grade assay results.

Given the parent block size of 9.1m x 9.1 x 9.1m and the requirement for a minimum of 4 samples for each estimated parent cell, the average grade for the Indicated portion of the MRE is considered to be estimated to a high level of confidence. Suitable factors have been applied to each mineralized domain with respect to their individual

populations of gold assay information for an upper cut and also the use of a high grade outlier to ensure that the interpolation did not unreasonably extrapolated isolated high grade assay data into blocks that were more than 20m from the individual high grade assay result. This approach is considered appropriate given the observable nature and distribution of the high grade assay information identified throughout all of the mineralized domains at the Project.

Details for the estimation parameters for the Indicated Mineral Resource are based on pass one as defined in previous sections.

#### **14.14.2 Inferred Mineral Resource Classification**

The majority of the mineralized domains defined were constrained up to their currently defined limits of the drill hole information, some of which were either closed out by drilling or contained lower grade assay results on the margins of the defined mineralized domain. The exception to this constraint was for the larger and more continuous structures such as at Southeast Pediment or Silica Ridge whereby the interpolation of each structure was extended to a larger distance due to the interpretation that these structures are much larger and more continuous.

For the mineralized domains that were interpreted to have a potentially larger defined extent than the current drilling has defined, a second pass was completed which extended the search ellipse out to ~120m (360ft). The Mineralized Blocks which were not filled as part of pass one but were filled as pass two were classified as an Inferred Resource.

Details for the estimation parameters for the Inferred Mineral Resource are based on pass two as defined in previous sections.

#### **14.15 Discussion of Relative Accuracy/Confidence**

The geological understanding of the gold mineralization at all of the Project Deposits is generally well understood. The early exploration efforts up until the date of the previous Mineral Resource estimate by MDA in 2007, had already established the key geological controls on the gold mineralization. After the acquisition of the Project by Newmont, technical work and drilling has refined the geological understanding, which has allowed for the interpretation of the various mineralized domains at each deposit. There is a high level of confidence in the gold distribution which is constrained within these defined mineralized domains.

In addition, a significant portion of the gold mineralization on the dominant structures at each Deposit is drilled down to a relatively tight drill spacing in places which in most instances would allow for the definition of a Resource in the Measured category. The key issue at this point in time which is preventing a reasonable portion of the MRE to be reach the Measured category is a significant nugget effect and natural variability of the gold mineralization.

This variability was identified initially in a report by Lustig, 2007, and further confirmed from the drilling information completed by Newmont.

Despite this natural variability that can occur over a short space in most of the mineralized domains, there is a high level of confidence considered for the global Indicated Mineral Resource. This view is based on the large number of samples and generally tight drill hole spacing, which on average, is considered to have a statistically large enough

population of gold assay results to have smoothed out the nugget effects (taking into account the application of an upper cut) and delivered a good approximation of the average gold grade and total gold content.

With regard to the Inferred Mineral Resource at the Project, the general limits defined for many of the smaller mineralized domains have restricted the possible size of the Inferred Mineral Resource, largely due to the observation that the smaller structures and bedding parallel gold mineralization showing little evidence of extending beyond a strike length of 50m, or much further than the defined limits of the Indicated portions of the Mineral Resource.

The larger and more continuous structures are interpreted to extend for significant distances, with their associated gold mineralization in places considered likely to extend further or develop into additional locations with further higher grade gold mineralization along strike or at depth. These larger structures are typically drilled on a broad drill spacing where the assay results are lower in gold grade. However, it is considered likely that further drill testing of the major gold structures will lead to the definition of further gold mineralization, particularly as the geometry and favourable sections for gold mineralization become better defined.

## 14.16 Table of Results

The following tables represent the reported tonnes and grade for the Project MRE in addition to further information with regard to the impact of various cut-off grades on the Block Model at each deposit.

*Note: In accordance with NI 43-101 recommendations, gold grades for Indicated and Inferred Resources are rounded to two significant figures and the number of metric tonnes are rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects.*

**Table 32: Summary totals for the Project Inferred and Indicated Mineral Resource estimate.**

Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
<b>INDICATED</b>				
Oxide	0.15	12,991	0.63	265,100
Fresh/Unoxidized	0.30	5,559	0.94	167,900
<b>INFERRED</b>				
Oxide	0.15	2,377	0.46	35,500
Fresh/Unoxidized	0.30	869	0.91	25,300
<b>Total Indicated</b>		<b>18,550</b>	<b>0.73</b>	<b>433,000</b>
<b>Total Inferred</b>		<b>3,246</b>	<b>0.58</b>	<b>60,800</b>

**Table 33: Summary totals for the Project MRE broken down by deposit.**

INDICATED - OXIDE				
Deposit	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
Abel Knoll	0.15	1,598	0.60	30,700
SE Pediment	0.15	1,798	0.75	43,400
Silica Ridge	0.15	4,983	0.55	88,800
North Hill	0.15	46,13	0.69	102,200
<b>Totals</b>		<b>12,991</b>	<b>0.63</b>	<b>265,100</b>

INFERRED - OXIDE				
Deposit	Cutoff Grade (g/t)	Tons	Grade (g/t)	Gold (ozs)
Abel Knoll	0.15	387	0.51	6,300
SE Pediment	0.15	81	0.29	800
Silica Ridge	0.15	633	0.34	6,900
North Hill	0.15	1,277	0.52	21,500
<b>Totals</b>		<b>2,377</b>	<b>0.46</b>	<b>35,500</b>

INDICATED - UNOXIDIZED/FRESH				
Deposit	Cutoff Grade (g/t)	Tons	Grade (g/t)	Gold (ozs)
Abel Knoll	0.30	3,320	0.95	101,700
SE Pediment	0.30	2,238	0.92	66,300
<b>Totals</b>		<b>5,559</b>	<b>0.94</b>	<b>167,900</b>

INFERRED - UNOXIDIZED/FRESH				
Deposit	Cutoff Grade (g/t)	Tons	Grade (g/t)	Gold (ozs)
Abel Knoll	0.30	623	0.97	19,400
SE Pediment	0.30	247	0.75	6,000
<b>Totals</b>		<b>869</b>	<b>0.91</b>	<b>25,300</b>

As part of a further analysis of the Project Block model, the impact of the cut-off grade on the estimated tonnes and grade for each category was reviewed and is shown in **Table 34** below.

**Table 34: Summary totals for the Project block model using different cut-off grades.**

INDICATED				
Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
Oxide	0.10	13,863	0.60	268,600
Oxide	0.15	12,991	0.63	265,100
Oxide	0.20	11,736	0.68	257,900
Oxide	0.25	10,029	0.76	245,600
Oxide	0.30	8,622	0.84	233,200
Oxide	0.40	6,365	1.02	208,000

INFERRED				
Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
Oxide	0.10	2,467	0.45	35,900
Oxide	0.15	2,377	0.46	35,500
Oxide	0.20	2,184	0.49	34,400
Oxide	0.25	1,811	0.54	31,700
Oxide	0.30	1,556	0.59	29,400
Oxide	0.40	1,182	0.66	25,200

INDICATED				
Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
Fresh/Unoxidized	0.25	6,090	0.88	172,600
Fresh/Unoxidized	0.30	5,559	0.94	167,900
Fresh/Unoxidized	0.35	5,014	1.01	162,300
Fresh/Unoxidized	0.40	4,519	1.08	156,300
Fresh/Unoxidized	0.50	3,640	1.23	143,600

INFERRED				
Category	Cutoff Grade (g/t)	Tons (kt)	Grade (g/t)	Gold (ozs)
Fresh/Unoxidized	0.25	946	0.85	26,000
Fresh/Unoxidized	0.30	869	0.91	25,300
Fresh/Unoxidized	0.35	795	0.96	24,500
Fresh/Unoxidized	0.40	687	1.05	23,200
Fresh/Unoxidized	0.50	530	1.23	21,000

## 14.17 Audits or Reviews

The 2021 Technical Report and Mineral Resource estimate for the Project has been independently peer reviewed by Michael Ressel of MDA. The review was conducted via several conference calls and screen sharing sessions to

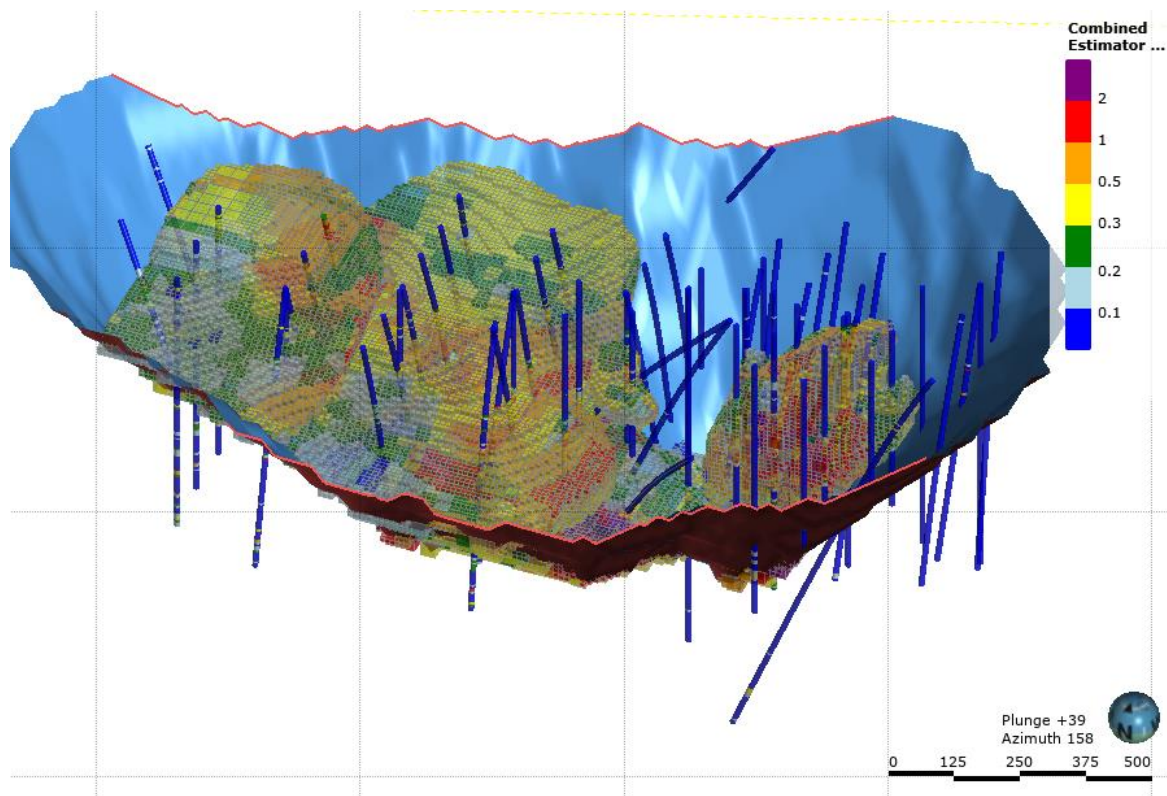
assess the estimation inputs, processes, and block model, as well as the overall information in this public report. On the basis of this review, in MDA's opinion, the Mineral Resource estimate for the Project has been prepared in accordance with NI 43-101, Standards of Disclosure for Mineral Projects.

## 14.18 Diagrams

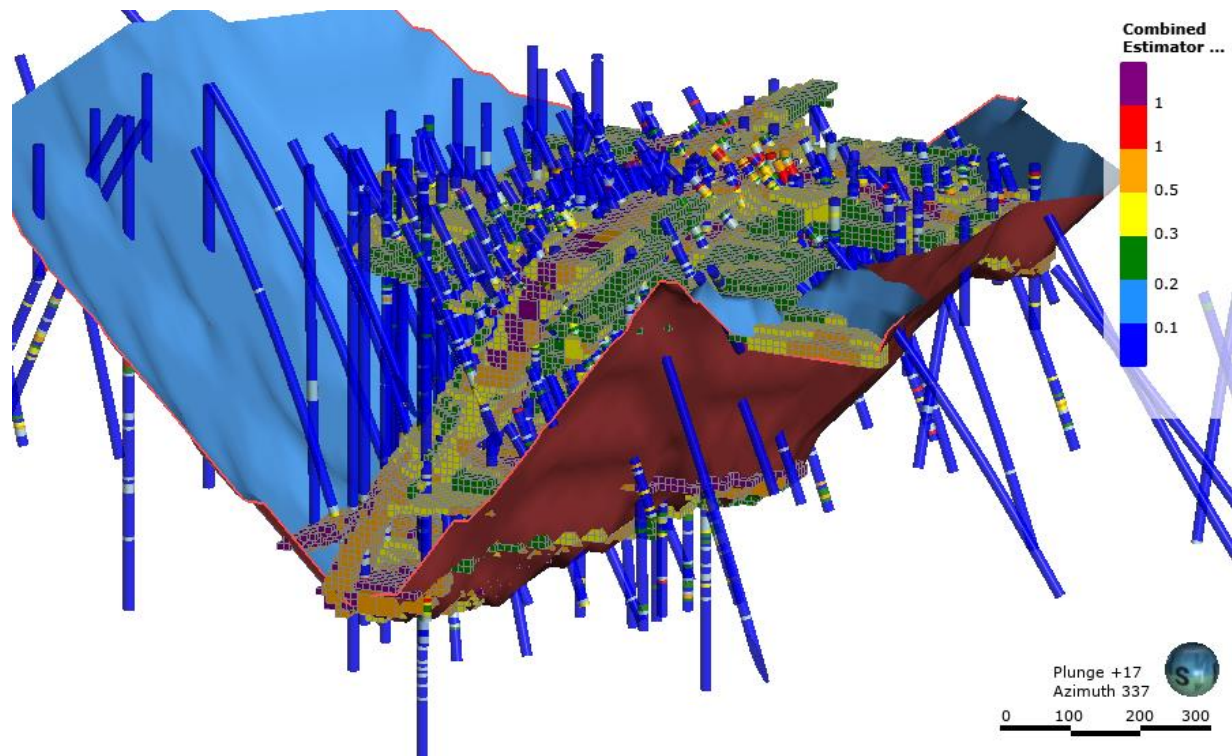
The following

**Figure 40 to Figure 51** represent a series of oblique, plan view and cross section view diagrams to show some level of detail with regard to the spatial distribution of the gold mineralization associated with block model relative to the drill-hole assay information from each of the deposits at the Project.

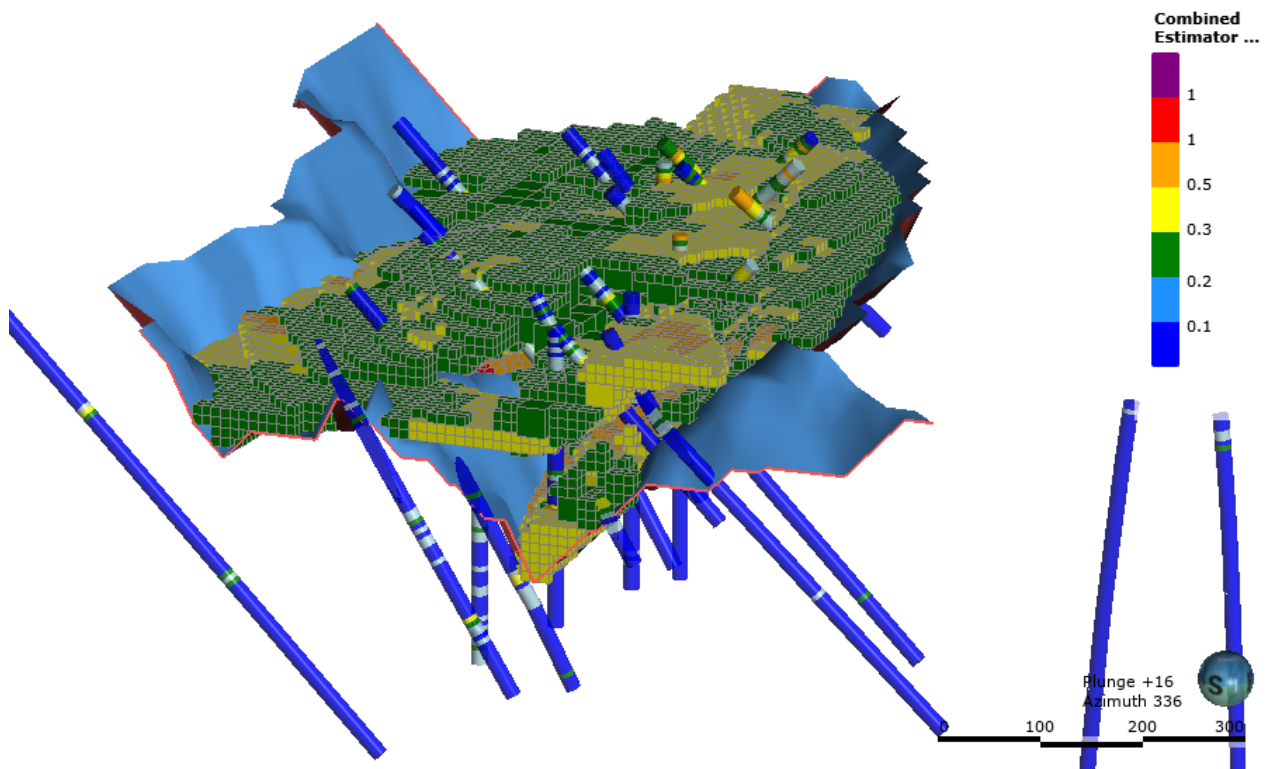
The cross sections have been created at an angle which is roughly perpendicular to the dominant trend of the geological rock units and interpreted gold mineralization.



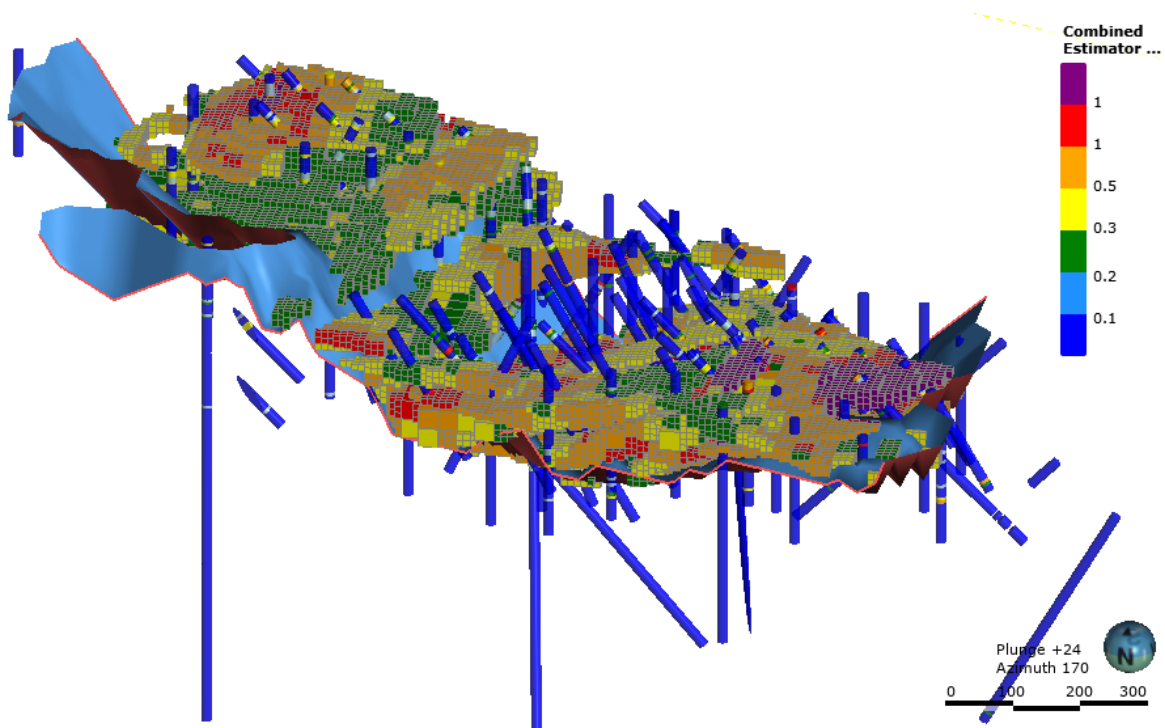
**Figure 40: Oblique view of the Abel Knoll block model looking down 39 degrees towards the southeast. The mineralized blocks are filtered to show only blocks that have been classified as Inferred and Indicated in addition to being constrained by the open pit shell. Author Steven Olsen, 2021.**



*Figure 41: Oblique view of the Southeast Pediment block model looking down 17 degrees towards the northwest. The mineralized blocks are filtered to show only blocks that have been classified as Inferred and Indicated in addition to being constrained by the open pit shell. Author Steven Olsen, 2021.*



*Figure 42: Oblique view of the Silica Ridge block model looking down 16 degrees towards the northwest. The mineralized blocks are filtered to show only blocks that have been classified as Inferred and Indicated in addition to being constrained by the open pit shell. Author Steven Olsen, 2021.*



*Figure 43: Oblique view of the North Hill block model looking down 24 degrees towards the south. The mineralized blocks are filtered to show only blocks that have been classified as Inferred and Indicated in addition to being constrained by the open pit shell. Author Steven Olsen, 2021.*

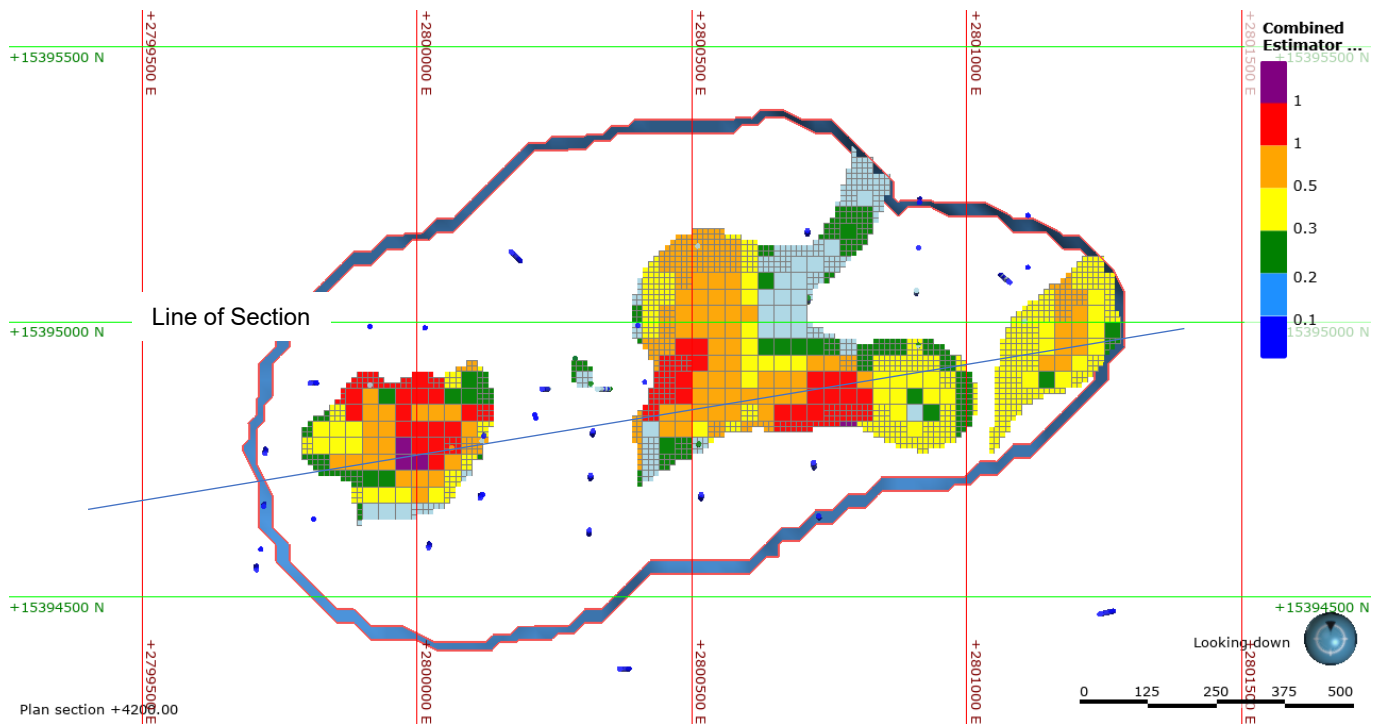


Figure 44: Plan view of the Abel Knoll block model at the 4200ft (1280m) level. Author Steven Olsen, 2021

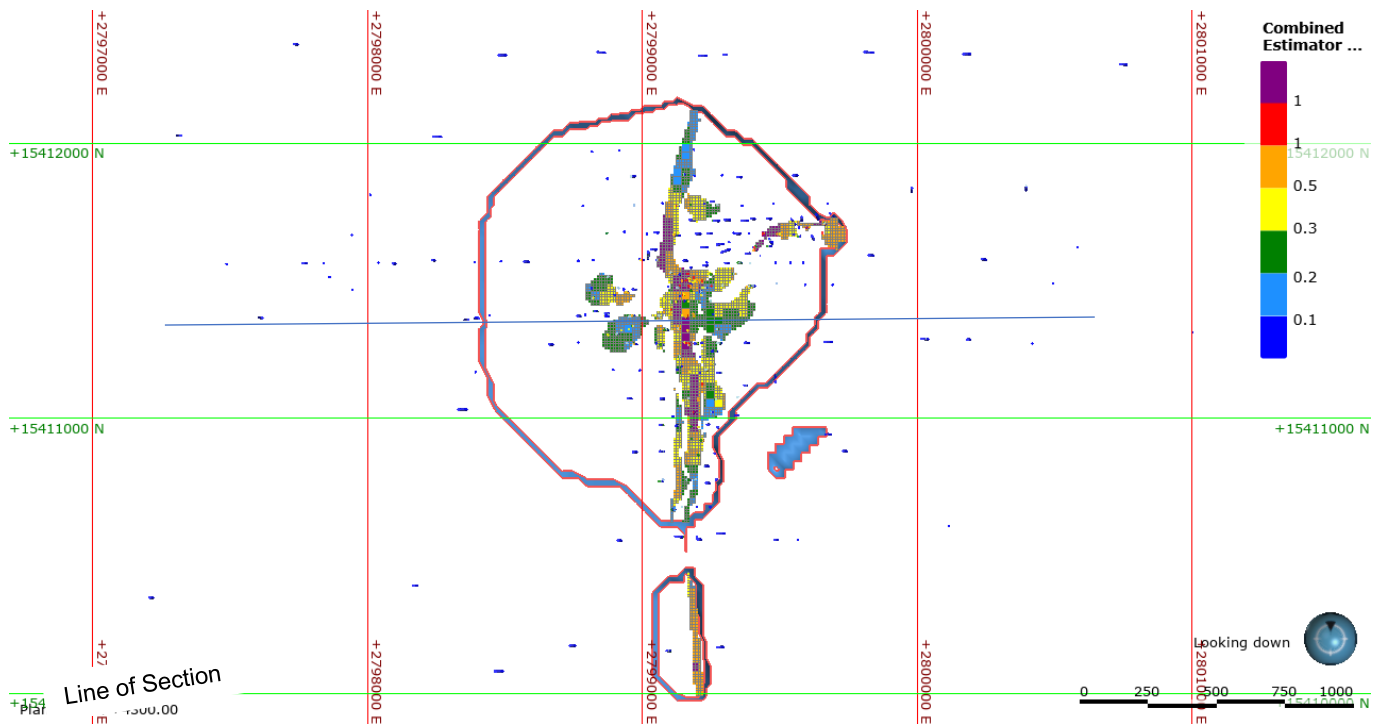


Figure 45: Plan view of the Southeast Pediment block model at the 4300ft (1310m) level. Author Steven Olsen, 2021.

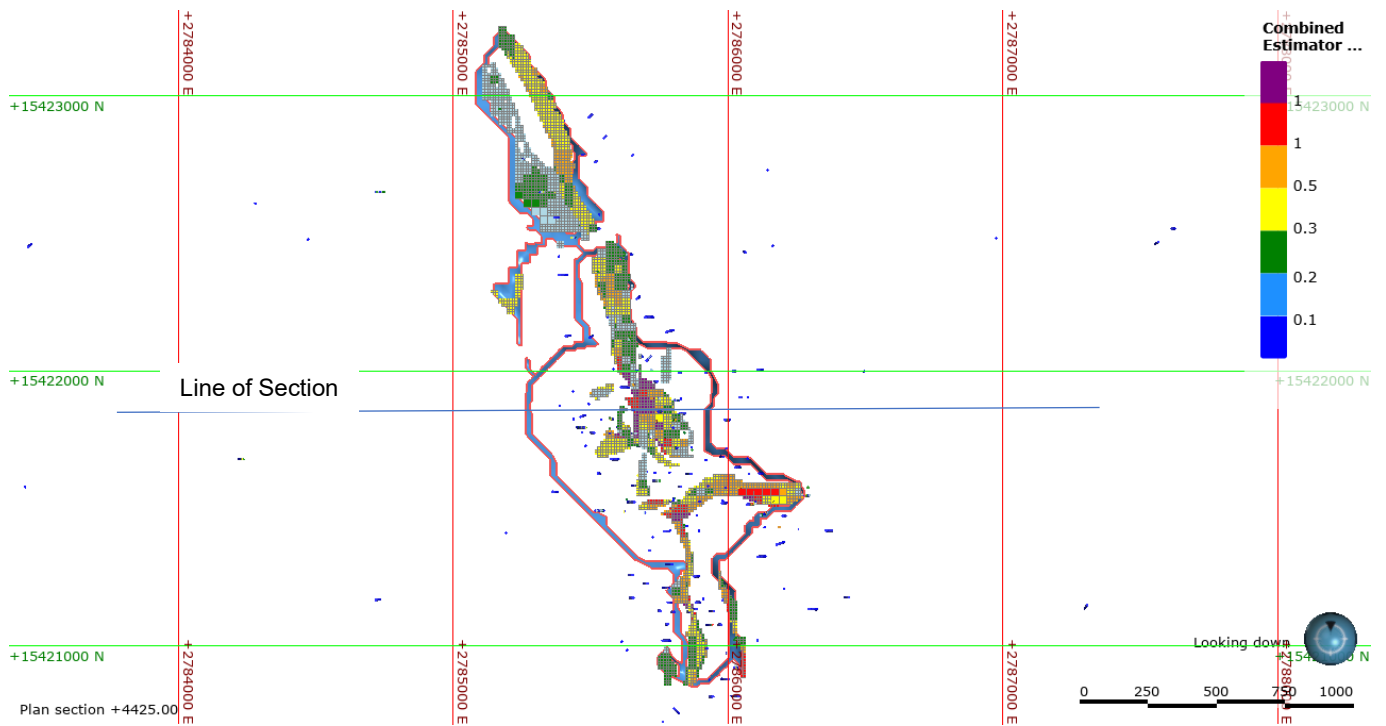


Figure 46: Plan view of the Silica Ridge block model at the 4425ft (1350m) level. Author Steven Olsen, 2021

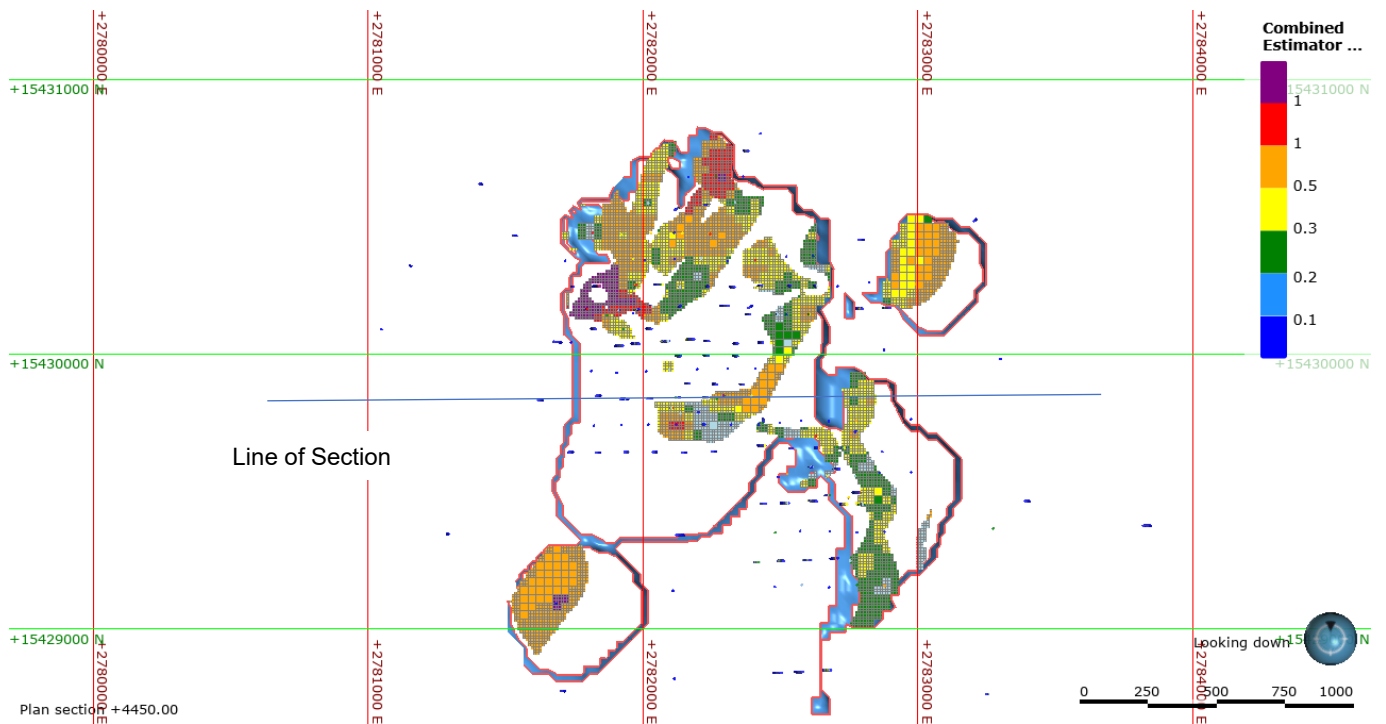
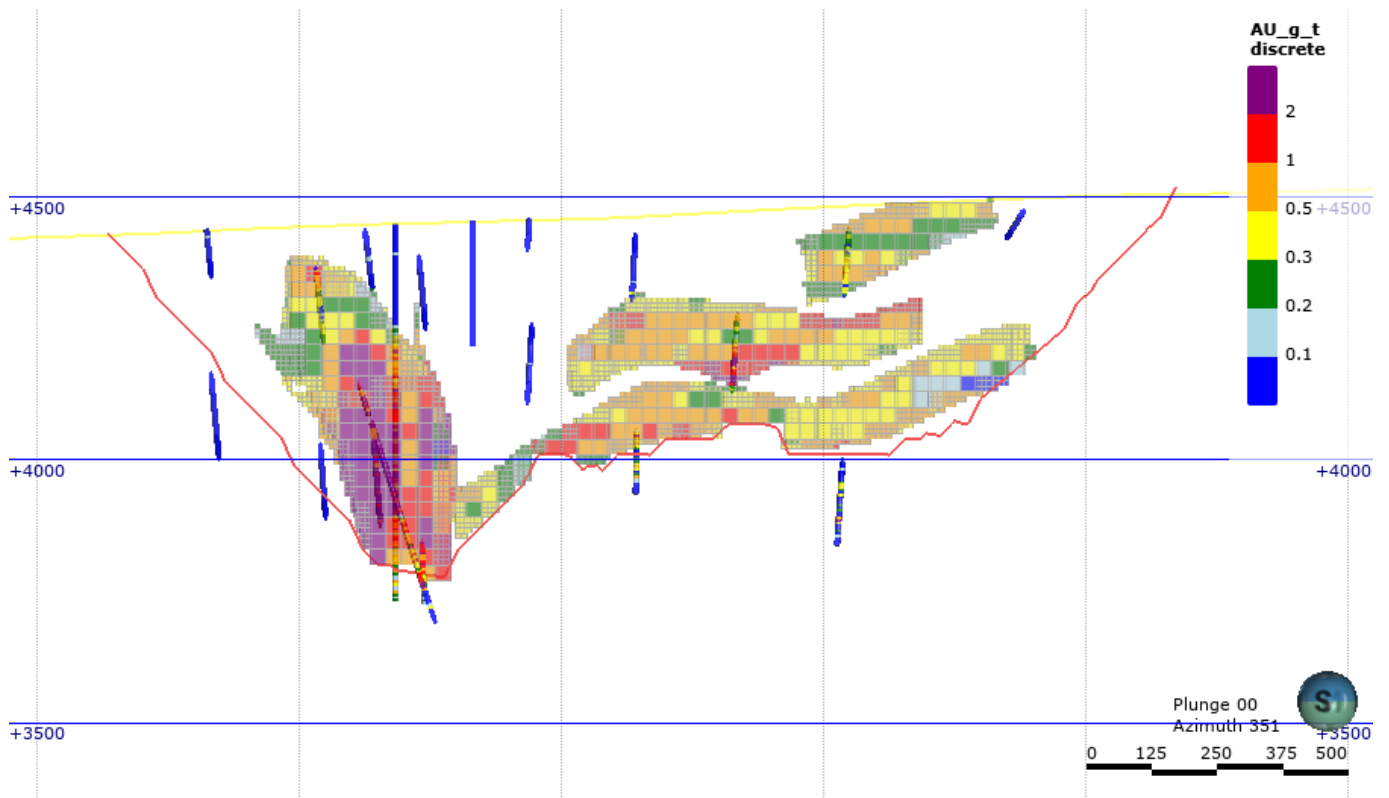
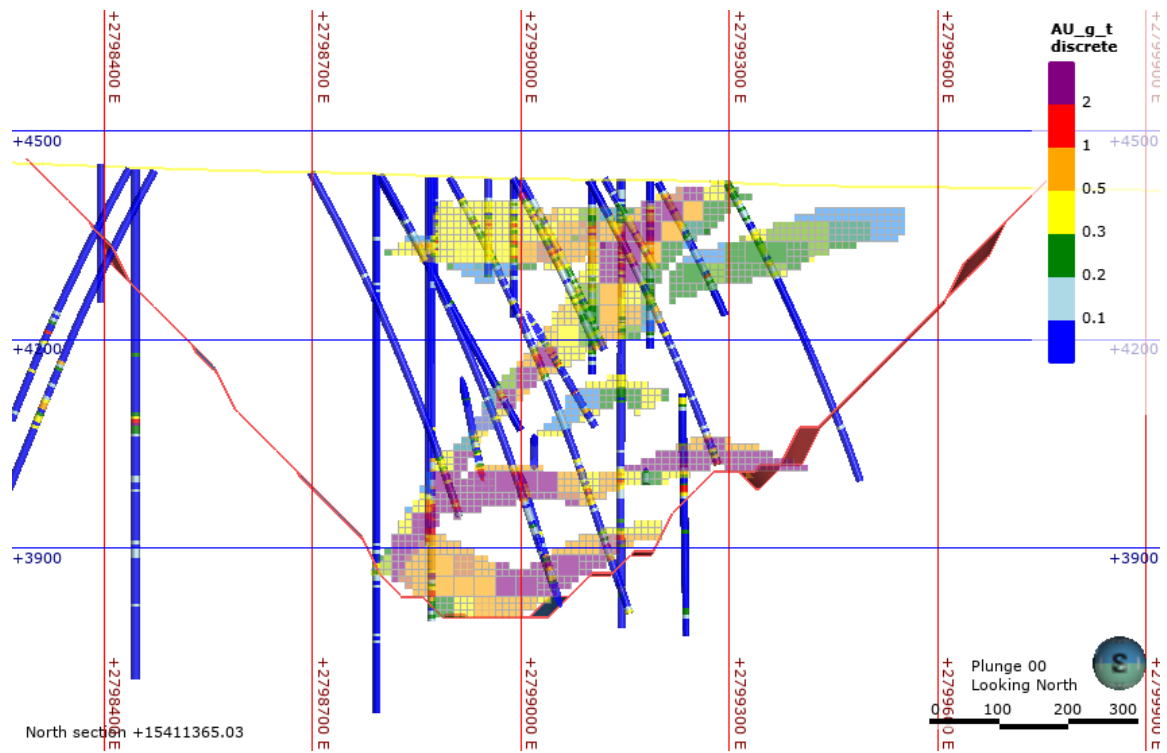


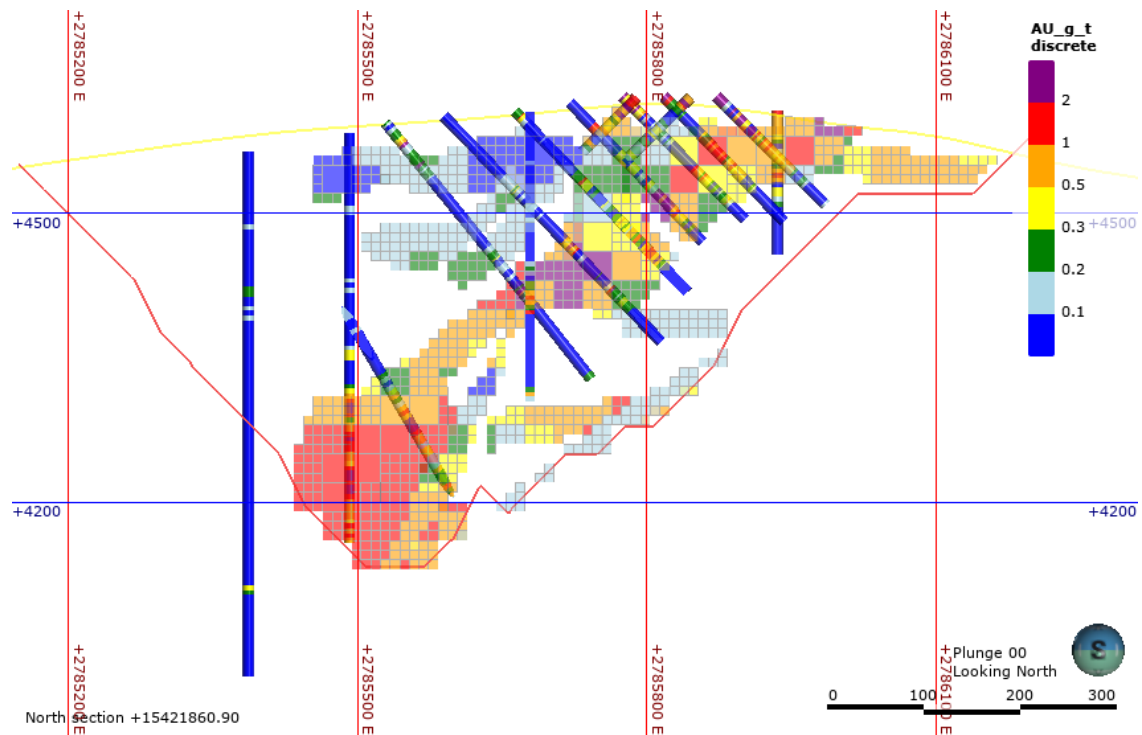
Figure 47: Plan view of the North Hill block model at the 4450ft (1356m) level. Author Steven Olsen, 2021.



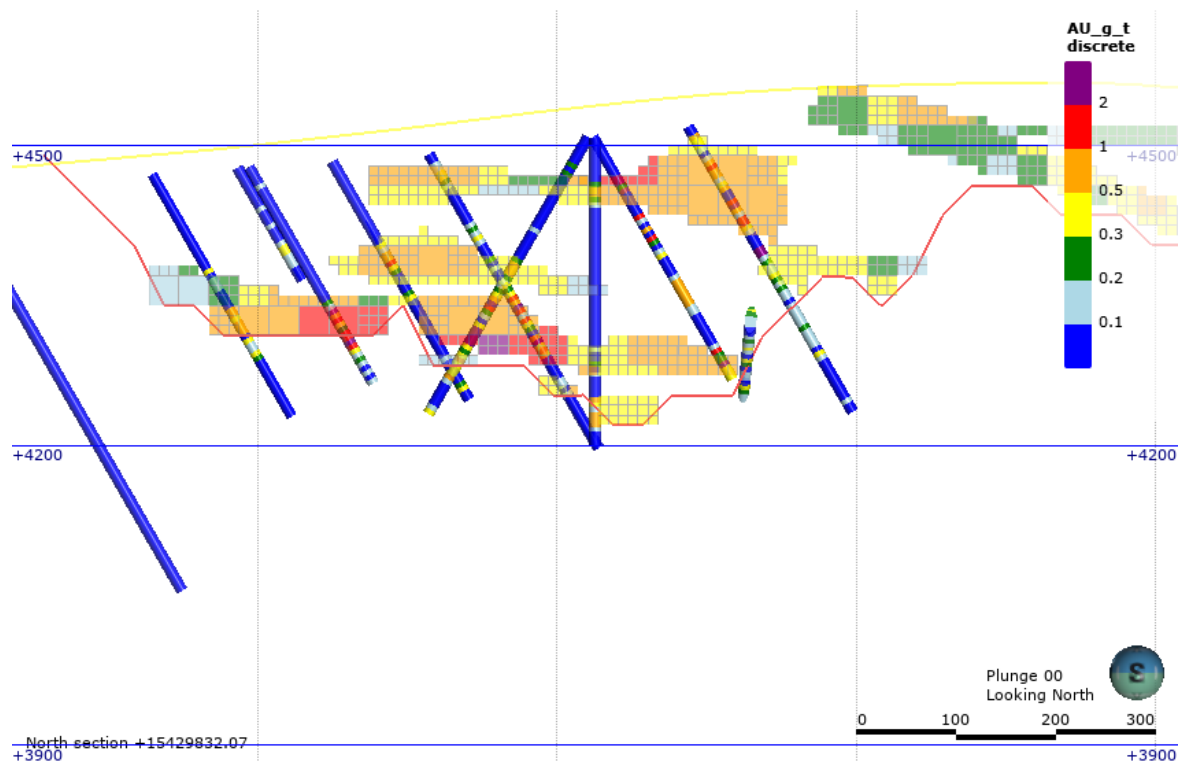
**Figure 48: Cross Section (see Figure 44 for referenced location) of the Abel Knoll block model highlighting all blocks reported as Indicated and Inferred and within the defined open pit constraint. Author Steven Olsen, 2021.**



**Figure 49: Cross Section (see Figure 45 for referenced location) of the Southeast Pediment block model highlighting all blocks reported as Indicated and Inferred and within the defined open pit constraint. Author Steven Olsen, 2021**



**Figure 50: Cross Section (see Figure 46 for referenced location) of the Silica Ridge block model highlighting all blocks reported as Indicated and Inferred and within the defined open pit constraint. Author Steven Olsen, 2021.**



**Figure 51: Cross Section (see Figure 47 for referenced location) of the North Hill block model highlighting all blocks reported as Indicated and Inferred and within the defined open pit constraint. Author Steven Olsen, 2021.**

## 15. MINERAL RESERVE ESTIMATES

There are no current Mineral Reserve Estimates at the Project.

## 16. MINING METHODS

This study assumes mining will be conducted by conventional open-pit methods.

### 16.1 Pit Optimization

Pit Optimizations were completed using the parameters outlined in **Table 35** and the resulting material tonnages and grades are summarized in **Table 36**.

**Table 35: Pit Optimization Parameters**

Category	Value	Units
Gold Price	\$1,800	US\$/oz
Gold Recovery	70	%
Silver Price	\$20	US\$/oz
Silver Recovery	35	%
Transport, Marketing, Treatment and Refining Cost	\$10.00	US\$/ounce
Royalties	1.2	%
<b>Mining Cost</b>		
Waste Mining Cost	\$2.64	US\$/tonne
Mineralized Material Mining Cost	\$2.40	US\$/tonne
Processing Cost	\$8.00	US\$/tonne
G&A	\$1.52	US\$/tonne

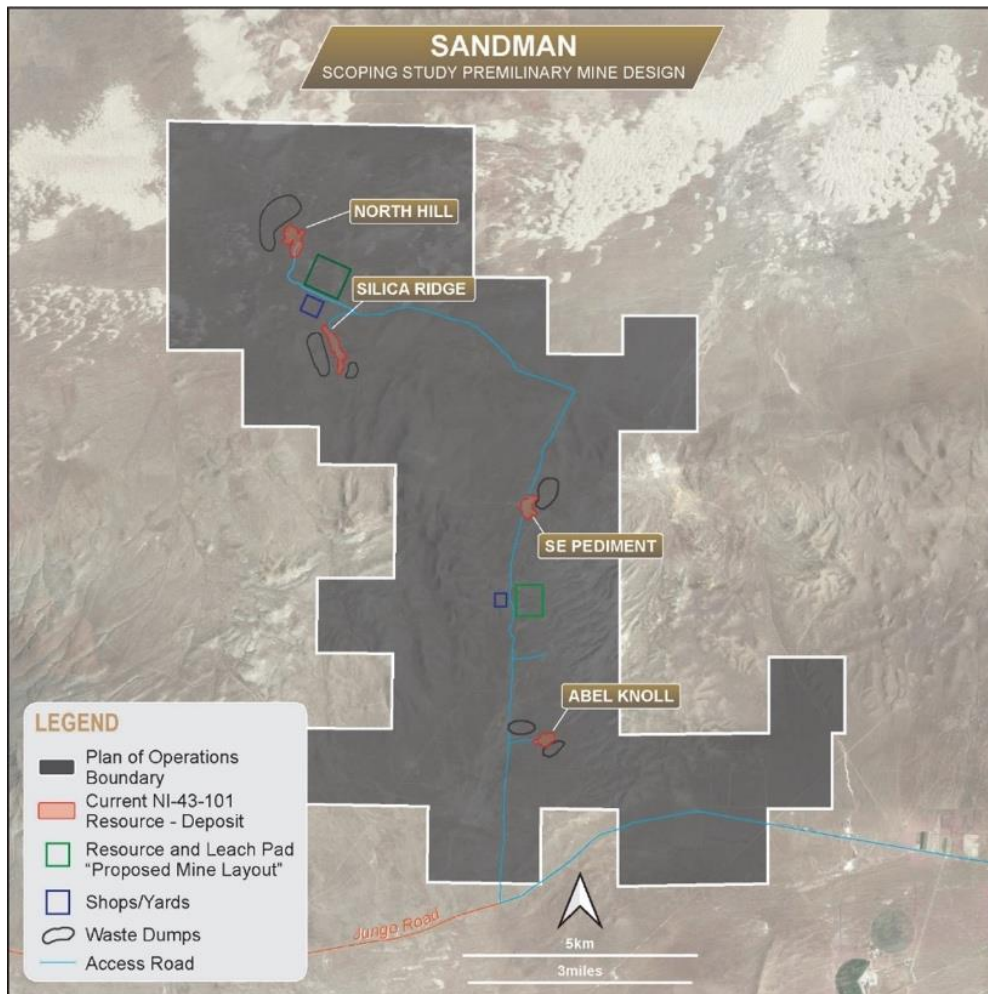
**Table 36: Pit Optimization Tonnage and Grade within the pit shell (above and below water table) in order of mine sequence North Hill, Silica Ridge, SE Pediment and Abel Knoll.**

Pit	Mineralized Material Tonnes (t)	Gold Grade (g/t gold)	Contained Gold (ozs)	Silver Grade (g/t silver)	Contained Silver (ozs)	Waste Tonnes (t)	Total Tonnes (t)	Strip Ratio
North Hill	4,385,000	0.72	101,000	1.62	228,000	7,215,000	11,600,000	1.6
Silica Ridge	4,853,000	0.56	88,000	3.28	511,000	4,147,000	9,000,000	0.9
SE Pediment	4,069,000	0.78	102,000	6.07	793,000	11,531,000	15,600,000	2.8
Abel Knoll	6,112,000	0.84	164,000	4.33	850,000	19,188,000	25,300,000	3.1
<b>Total</b>	<b>19,419,000</b>	<b>0.73</b>	<b>455,000</b>	<b>3.82</b>	<b>2,382,000</b>	<b>42,081,000</b>	<b>61,500,000</b>	<b>2.2</b>

The pit optimisation study utilizes Indicated and Inferred Mineral Resources. The estimation of silver content is not currently classified as a Mineral Resource as there is insufficient analysis in the historical database and for the purpose of the PEA, a silver grade was applied only for those domains which do contain silver analysis within the defined gold domains.

## 16.2 Operating Plan

The Project is planned to be mined using conventional open pit mining methods on the four (4) separate deposits as shown in **Figure 52**.



**Figure 52: The Project proposed mine design.**

The Project is planned to be mined using conventional open pit mining methods on the four (4) separate deposits in the order below with above water table mining conducted sequentially as part of Phase 1, followed by below water table mining sequentially as part of Phase 2.

1. North Hill
2. Silica Ridge
3. SE Pediment
4. Abel Knoll

The mine plan was based on efficient extraction of all mineralized material and starts at the North Hill deposit (predicted higher-grade and low strip ratio) and then working the deposits in a southerly direction without regard to Indicated and Inferred Mineral Resource categories. Post commissioning, there is a plan to advance life of mine resources to measured category through development drilling ahead of mining referred reserve definition drilling.

The mine plan will extract all the mineralized material above the water table and then will continue to extract the material below the estimated water table as the dewatering program allows. It has been assumed that two years of efficient dewatering in advance of the mining schedule will allow for “dry pits” below the water table.

The mining operation will be a dayshift-only schedule with a roster of two production crews on a 4-days on and 4-days off, 12 hours per day.

Pre-production stripping is minimal as mineralisation outcrops at or near surface where mining is anticipated to begin. The pit areas have small shrubs and grasses that can be easily cleared with planned mining equipment.

Open pit mining is currently envisaged to be by diesel-powered equipment, utilizing a combination of one (1) rotary blasthole rig, one (1) front-end loader (or similar size excavator), and four to six (4-6), 70-tonne capacity trucks to handle all the material to be mined. The mining fleet has enough capacity to move an average of ~6.0Mtpa on a dayshift-only schedule. Support equipment composed of a grader, track dozer(s) and water truck will aid in the mining. Mineralized material will be hauled to the crushing area for stockpiling before being rehandled later for primary crushing. Initially, waste rock will be stored in the waste rock dumps close to the pit to reduce haulage costs. As space and design allows, waste will be backfilled into the pit to reduce haulage costs and surface disturbance.

Haul roads are contemplated to be 9-10m widths for one-way traffic and 18-20m widths for two-way traffic. The final location of the ramps will be optimized to reduce the overall pit slopes and to aid in efficient haulage to stockpile locations.

The mine plan was designed to deliver an average of ~2.2Mtpa of mineralized material to the processing facility.

Total estimated project workforce is 55-60 people comprising 22 GBR staff and 30-35 mining contractors (20 production operators, 8 maintenance techs, 5 supervisory staff).

Period	Mineralized Material tonnes	Gold Grade g/t	Contained Gold ounces	Total Waste tonnes	Total Material tonnes	Strip Ratio w:o
Year 1	1,633,000	0.82	42,857	3,120,000	4,753,000	1.9
Year 2	2,306,000	0.77	57,143	3,833,000	6,139,000	1.7
Year 3	2,685,000	0.66	57,143	2,799,000	5,484,000	1.0
Year 4	2,247,000	0.79	57,143	3,077,000	5,324,000	1.4
Year 5	2,844,000	0.57	51,714	5,371,000	8,215,000	1.9
Year 6	3,195,000	0.56	57,143	7,564,000	10,759,000	2.4
Year 7	2,042,000	0.87	57,143	7,678,000	9,720,000	3.8
Year 8	1,887,000	0.94	57,143	6,608,000	8,495,000	3.5
Year 9	580,000	0.94	17,571	2,031,000	2,611,000	3.5
<b>Totals</b>	<b>19,419,000</b>	<b>0.73</b>	<b>455,000</b>	<b>42,081,000</b>	<b>61,500,000</b>	<b>2.2</b>

**Table 37. Annual Production Schedule Summary for 9 years**

## 17. RECOVERY METHODS

The information for the PEA is derived from mine designs based on the total mineral resource declared in Section 14 and metallurgical test work discussed in **Section 13**.

### 17.1 Process Flow Description

Mineralized material will be delivered from the open pit to a stockpile adjacent to the crushing plant. The mineralized material will be fed to the crushing plant using a front-end loader and will be crushed to a suitable size fraction and then transported to the heap leach pad via haul trucks. The mineralized material will be stacked onto the heap using industry standard end-dumping and dozer pushing to be leached with a weak cyanide solution to extract the precious metal values.

### 17.2 Plant Characteristics

Precious metal recovery in this study is planned to utilize conventional crushing and heap leaching followed by adsorption, desorption, regeneration (ADR) technology for metal extraction from the crushed product using industry standard equipment.

Processing will involve mineralized material passing through a crushing plant to achieve the desired size fraction, and then transported by haulage equipment to the lined heap leach pad where the mineralized material will be end-dumped, and dozer pushed to the required lift height. The mineralized material will then be leached with a weak cyanide solution to extract the precious metal values into a pregnant solution, which will be sent to the ADR plant utilizing a carbon-in-column (CIC) circuit to recover the gold. The gold will then be recovered from the pregnant solution in the carbon columns by adsorbing the dissolved gold onto activated carbon, which will be bagged and transported off-site to an external facility to extract gold from the loaded carbon. The barren solution from CIC circuit will be sent to the barren solution pond to be continuously reused in the cycle. The stripped carbon will be returned from the external treatment facility to site for continuous reuse in the process plant. The doré will be sent to a contract refiner for final refining.

The processing facilities will accommodate a leachable tonnage of approximately 19.4Mt of product at a process rate of 6,000tpd (or 2.2Mtpa). The heap leach pad facilities will be located and designed with expandability for potential LOM production increases.

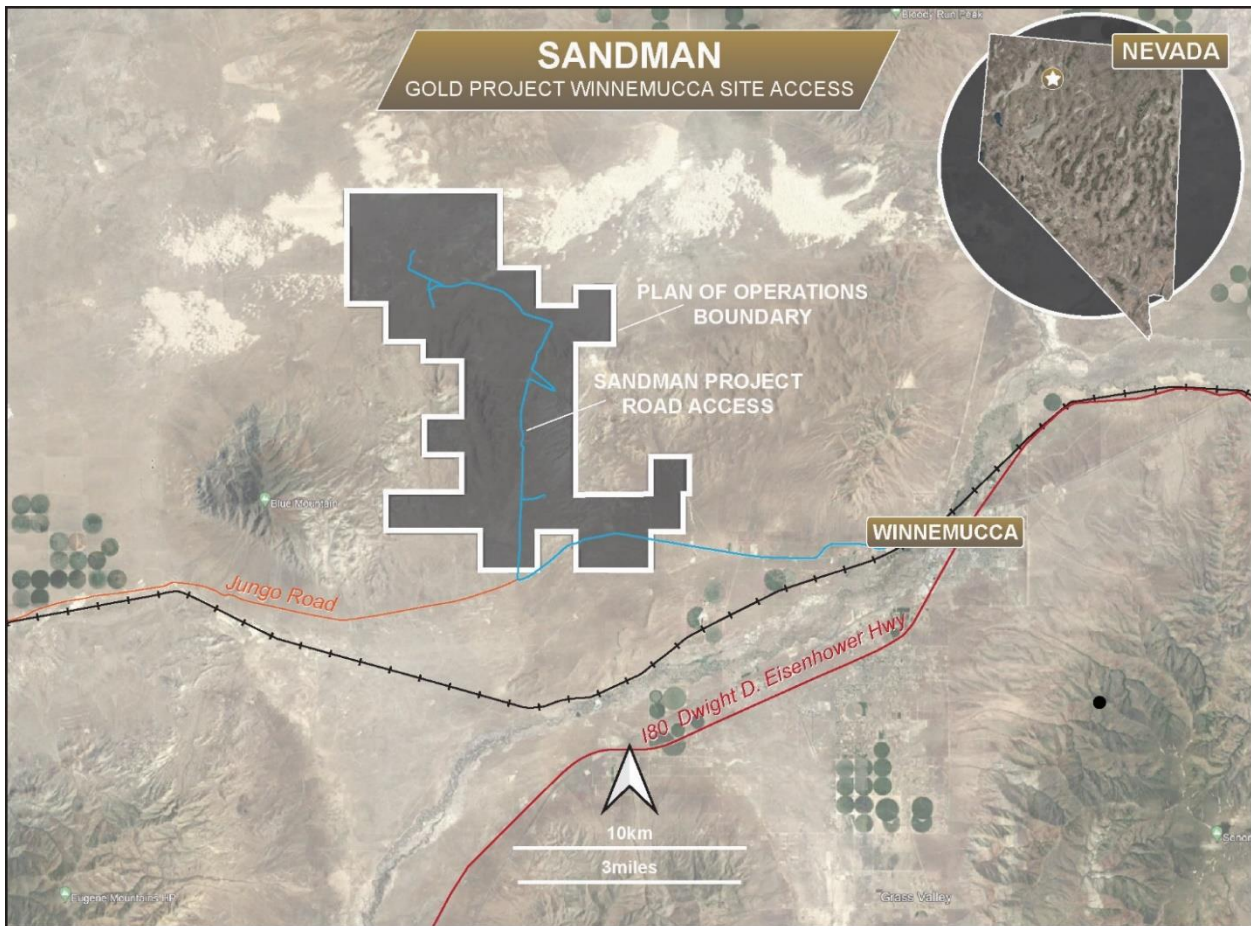
### 17.3 Consumable Consumption

The reagent, water and power consumption are estimated based on similar operations in Nevada.

<b>Category</b>	<b>Value</b>	<b>Units</b>
NaCN	0.5	Kg/tonne
Water	6.0 – 12.0	Liters/sec
Power	2.0 – 3.0	Mw

## 18. PROJECT INFRASTRUCTURE

Heavy and light vehicle traffic will access the Project site from the nearby town of Winnemucca, Nevada (which has a continuous history of mining and mine services) via Jungo Road and turning north on Sierra Pass Road.



**Figure 53: The Project location relative to infrastructure and nearby regional mine servicing town of Winnemucca. The project is located north of Jungo Road ~20 kms West of Winnemucca.**

The conceptual layout (**Figure 53**) includes major facilities locations for the Project including open pit mines, processing facilities, workshop facilities, heap leach pad facilities, power plant, fuel storage facilities, event ponds, water supply bores, mine services and access roads.

Several access roads will be built to access the leach pad(s), the process plant area and other service roads will be built around the process areas for access to the crushing plant, conveyors, and screening areas. All roads will be designed for two-way traffic and will vary in size depending on their usage.

Modular buildings will be utilized for the offices. A sprung structure has been assumed for the laboratory and prefabricated steel buildings for the warehouse and maintenance shops.

A fuel storage area with one diesel tank and one gasoline tank has been included.

The peak make-up water requirement for the Project has been estimated at 324gpm. The water source for the Project is modelled for production wells located on site. Water will be pumped to a storage tank designed for fire water reserve as well as provide water for site and process operations. Lavatory and wash facilities will be located

throughout the Project site. Sanitary waste from the lavatories will flow by gravity to multiple septic systems for treatment and disposal. Each septic tank and drain field will be sized for the building occupancy.

Leach pads will handle 5-8Kt per day with the first constructed between North Hill and Silica Ridge and the second between Southeast Pediment and Abel Knoll deposits in year 3.

## 19. MARKET STUDIES AND CONTRACTS

Gold and silver markets are mature with reputable smelters and refiners located throughout the world. Spot gold price per ounce is reported daily.

The price of gold declined from 2012 to 2015 but has increased from ~\$1,060/oz in 2015 to ~\$4,318/oz to close 2025. The gold price as of the effective date of this report was \$4,456/oz and has since peaked at \$5,414/oz in early 2026.

The ten-year historical spot price of gold is shown in Figure 54. There are no gold contracts negotiated for the Project and no other contracts or commitments have been made or entered into for the Project.

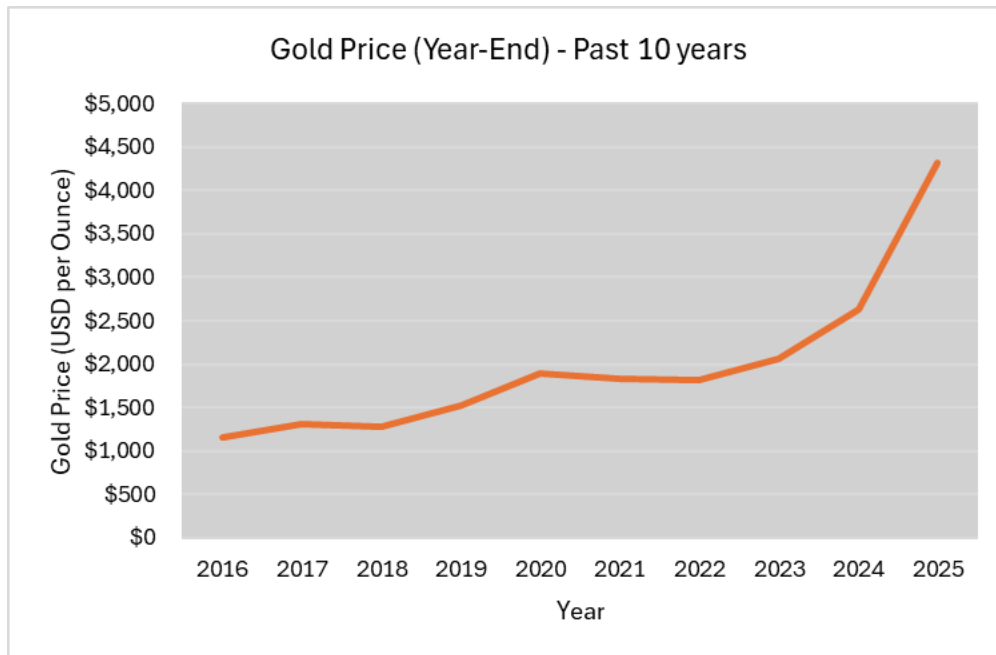


Figure 54. Historical gold price graph for past 10 years

## 20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

The Project has an approved Plan of Operations as shown in *Figure 2* and there is a current reclamation bond of \$967,804 of which the Company has provided 80% financial assurance through a surety bond and Sandman Resources Inc. has provided the other 20% financials assurance in cash.

On September 11, 2025 the annual reclamation bond update was sent in to NDEP and BLM in which we anticipate an increase to \$974,306; however, neither agency has provided comments or a record of decision as of the effective date of this report.

The bond covers Phase 1 of the Plan of Operations which authorizes 316.8 acres of surface disturbance on public and private lands. The Plan of Operations covers the Project area that includes approximately 54km<sup>2</sup> of private lands and approximately 57km<sup>2</sup> of public BLM land. The Plan of Operations covers exploration activities including 2) drilling reverse circulation and Core holes, b) geological and geophysical mapping c) construction of exploration roads, drill sites and sediment traps, d) the use of overland travel for access to project activities e) construction of trenches for the collection of bulk samples f) the installation and operation of ground water monitoring wells and g) the maintenance of pre-1981 roads within the Project Area and Project Access roads. These activities have been permitted under the Plan of Operations with proposed surface disturbance of roughly 500 acres (circa 2km<sup>2</sup>).

Representatives from NDEP Bureau of Mining Regulation and Reclamation (BMRR) Mr. Todd Suessmith Jr. from the Carson City office visited the Project 16 August 2022 to inspect the Land Reclamation. Mr. Daniel Baldwin of the BLM Winnemucca office also attended the site visit. A letter confirming visitation with no issues communicated was provided to Gold Bull by Mr. Todd Suessmith after the visit on August 22, 2022.

As of the effective date of this report, there are no identified impediments to obtaining the required approvals for future exploration activities at the Project. There are no known impediments for mining activities however Gold Bull is yet to conduct detailed assessments for mining activities including further hydrogeological, biological and archaeological studies which will be required as part of a future Pre-Feasibility Study. There are no permitting applications submitted or pending. Refer sections **4.7 Permits Required for Conducting Mining** and section **4.8 Significant Factors and Risks** for further information.

The Project is located close to the mining Community of Winnemucca, in Nevada USA and no known social or community issues have been identified. Local residents living near the property on Sierra Pass Road have been notified during drilling activities and engagements have been positive, a number of residents use their small holdings for vacation homes and do not permanently live on Sierra Pass Road. No detailed social studies or engagements have been completed as these would be part of a future studies.

Detailed estimation of reclamation costs will be considered in subsequent studies; however, a concurrent reclamation cost has been included in the preliminary economic analysis to account for mine site reclamation. This cost for reclamation would include the following categories: roads; exploration roads and drill pads; RIBs; ponds; electrical infrastructure; buildings and equipment; waste rock reclamation; re-vegetation; and contractor management.

## 21. CAPITAL AND OPERATING COSTS

### 21.1 Capital Costs

Capital cost estimates for this study should be considered as preliminary  $\pm 30\%$  as they have been assembled from consultants via their own in-house database and non-disclosable project files for recent projects in Nevada, where contractor and supplier quotes were available for similar works and equipment.

The total pre-production capital cost and sustaining capital costs include the staged progression of the heap leach facility is shown below in **Table 38**.

#### Indirect Field Costs & Other Owner's Costs

Indirect field costs include temporary construction facilities, construction services, supplies, quality control, survey support, construction equipment, safety, and owner's costs include G&A during construction.

#### Contingency

Contingency is a cost that statistically will occur based on historical data. The term was not used to cover changes in scope, errors, or a lack of sufficient information to meet a desired accuracy range. Contingency was used to cover items of cost which fell within the scope of work but are not known or sufficiently detailed at the time that the estimate was developed (e.g. Geotechnical data, volume of water to pump etc).

#### Working Capital

Working capital is money that is used to cover operating costs from start-up until a positive cash flow is achieved. Working capital for the estimate has been based on 60 days of operating cost at the design processing rate.

#### Other CAPEX Categories

- EPCM (Engineering/Procurement/Construction Management)
- Earthworks – Road, Stockpiles and Yard construction
  - Clearing/grubbing of all construction areas, adequate roads, laydown and workspace yards, development of the crushing stockpile area
  - Clearing/grubbing of leach pad area
  - Clearing/grubbing of waste dump area
- Crushing/Stacking Equipment
  - Crushing plant to handle 5,000-8,000 tonnes per day
  - Cost estimate includes installation and commissioning
  - Entire system to be mobile and follow mining from pit to pit
- Leach Pad and Ponds
  - To handle 5,000-8,000 tonnes of mineralized material per day
  - Cost estimate includes installation and commissioning
  - Initial Pad built near North Hill and Silica Ridge (to be expanded when Phase 2 begins)
  - A second pad built near SE Pediment and Abel Knoll in Year 3 (to be expanded when Phase 2 begins)
- Carbon Columns
  - Cost estimate includes installation and commissioning
  - One set of columns for initial leach pad and a second set to be constructed with the second leach pad
- Prep Lab
  - On site crushing and sample splitting to produce the pulp that will be sent to an off-site assay lab

- Infrastructure (portable)
  - Office
  - Warehouse/parts storage
  - Workshop
- Environmental / Permitting
  - To include work on baseline studies for future EIS and Phase 2 mining
- Mining
  - Contractor mobilization – all mobile equipment units, office space, other resources needed
  - Contractor demobilization – at end of project
- Fuel Island
  - Centralized location for diesel, gasoline, lubes, and oils
- Power Generation/Distribution
  - Mobile gensets for crushing, pumping, infrastructure power
  - Includes a backup generator
  - Materials – power poles, transformers, etc. for on-site distribution
- Water Supply/Distribution
  - Water well construction, pumping and piping to supply water for project for the following usage/consumption

Category	Water Usage (gpm)	Make-up Water Consumption (gpm)
Crusher dust control	40	40
Evaporation loss at Crusher		4
Heap Leach - Nominal Flow Rate	3,750	
Heap leach evaporation		131
Road dust control	139	139
Misc. - offices, etc.	10	10
<b>Total</b>	<b>3,939</b>	<b>324</b>

Usage is the amount of water necessary to operate. This volume is stored in tanks and ponds and transferred through pumps and pipes.

Consumption occurs when water is lost into the atmosphere through evaporation or incorporated into the process and is no longer available for reuse.

- Purchase/Lease Water Rights
  - For initial purchase or lease of water rights necessary to operate the project
- Purchase/Lease Land
  - For purchase or lease of land nearby or within project area of influence
- Dewatering
  - Scenario recommends one dewatering well per pit and starts dewatering of those areas prior to mining advancement.
  - Dewatering outflow will be directed into the existing water system. As much water as possible will be used in operations and the rest will be over-flowed to a Rapid Infiltration Basin (RIB). RIBs are proposed with locations to be determined later. A second RIB cell would be needed to provide the capability for maintenance. Therefore, two, 0.5-acre RIB cells are currently estimated for inclusion in the CAPEX and OPEX estimates.
  - Monitoring of the RIB cells is also included.

**Table 38: Capital Cost Summary**

Activity	Preproduction	Sustaining	TOTAL
EPCM	\$1,150,000	\$0	\$1,150,000
Earthworks	\$402,500	\$0	\$402,500
Crushing & Stacking Equipment	\$6,500,000	\$0	\$6,500,000
Leach Pad & Pond Construction	\$5,300,000	\$9,600,000	\$14,900,000
Carbon Columns	\$1,150,000	\$1,150,000	\$2,300,000
Prep Lab	\$287,500	\$0	\$287,500
Infrastructure	\$1,150,000	\$0	\$1,150,000
Environmental & Permitting	\$0	\$1,200,000	\$1,200,000
Mining – Contractor Mobilization	\$2,500,000	\$0	\$2,500,000
Mining – Contractor Demobilization	\$0	\$500,000	\$500,000
Fuel Island	\$287,500	\$0	\$287,500
Power Generation/Distribution	\$1,150,000	\$250,000	\$1,400,000
Water Supply/Distribution	\$1,150,000	\$250,000	\$1,400,000
Purchase/Lease Water Rights	\$250,000	\$0	\$250,000
Purchase/Lease Land	\$0	\$500,000	\$500,000
Indirects/Owners Cost	\$2,300,000	\$0	\$2,300,000
Dewatering	\$0	\$2,800,000	\$2,800,000
<b>Subtotal</b>	<b>\$23,577,500</b>	<b>\$16,250,000</b>	<b>\$39,827,500</b>
Working Capital	\$6,300,000	\$0	\$6,300,000
<b>Contingency</b>	<b>\$6,370,000</b>	<b>\$4,450,000</b>	<b>\$10,820,000</b>
<b>TOTAL</b>	<b>\$36,247,500</b>	<b>\$20,700,000</b>	<b>\$56,947,500</b>

## 21.2 OPERATING COSTS

### Mining Operating Cost Estimate

The Study assumes that the Company will mine the Project using a contract miner. The mining operating cost estimate was largely based on information from a Nevada heavy civil/mining contractor. The Project is planned to be mined using conventional open pit mining methods on a dayshift only schedule with a roster of two production crews on a 4-days on and 4-days off, 12 hours per day.

The mining fleet has been sized with enough capacity to move up to approximately 6.0Mtpa on dayshift. Support equipment composed of a grader, track dozers and water truck will aid in the mining. Mineralized material will be hauled to the crushing area for stockpiling before being rehandled for primary crushing. Initially, waste rock will be stored in the waste rock dumps close to the pit to reduce haulage costs. As space and design allows, waste will be backfilled into the pit to reduce haulage costs and surface disturbance.

Contract Mining is considered for all mining-related activities as follows:

- Drilling
- Blasting
- In-pit Loading
- Waste haulage to near-pit waste rock stockpile
- Mineralized Material haulage to a near-pit stockpile location (for feed to crusher)
- Roads/Dumps/Stockpile maintenance

## Processing Operating Cost Estimate

Processing operating costs for the project were estimated based on cost estimates and from similar facilities in Nevada treating an average of 2.2Mtpa.

This Study assumes that all mineralized material will be stockpiled, fed to an on-site crushing plant and then transported via haul trucks to a heap leach facility as the main processing method. The gold will be recovered from the pregnant solution in the carbon plant by adsorbing the dissolved gold onto activated carbon, which will be bagged and transported off-site to an external facility to extract gold from the loaded carbon. The stripped carbon will be returned from the external treatment facility to site for continuous reuse in the process the plant. The doré will be sent to a contract refiner for final refining.

Processing costs include crushing operations, material transport to heap leach pad, support equipment on pad, leaching operations, carbon stripping and transportation, and final refining.

## General and Administration

General and administration costs include labour and fringe benefits for all onsite Company personnel. Costs were based on a staff of 22. Office supplies, general maintenance supplies, offsite costs, and other costs such as communications, insurance, employee transportation and other administrative expenses are included in this category.

Concurrent reclamation and dewatering costs are also estimated in this category.

## Other Costs

Other costs include a royalty estimate of 1.2% (NSR), property tax estimate, estimated Nevada Net Proceeds and excise taxes and an estimated income tax.

**Table 39: Operating Cost Summary**

Functional Area	Cost (US\$) per Tonne Processed
Mining	\$11.11
Processing	\$8.48
G&A	\$2.92
Other (Royalties, Taxes, etc.)	\$6.59
<b>TOTAL</b>	<b>\$29.10</b>

# 22. ECONOMIC ANALYSIS

## 22.1 Statement and Summary

This evaluation has identified a stand-alone, low-cost, heap leach gold opportunity. The study focused on mining mineralized material within optimized pit shells in two phases: Phase 1 mines all mineralized material consecutively above the water table, and then Phase 2 continues and mines consecutively the mineralized material below the water table after completion of permitting and dewatering efforts.

The Study highlights are shown in Table 40 below.

Metric	Outcome (post-tax)	
<b>Economic Analysis</b>		
Internal Rate of Return (IRR)	105%	
NPV @6%	\$203,101,374	USD
Average Annual Cashflow	\$36,272,541	USD
Undiscounted Cumulative Cashflow	\$290,205,365	USD
Pay-Back Period	1.1	years
<b>Gold Price Assumption</b>	<b>\$2,600</b>	<b>per ounce</b>
All-in Sustaining Cost	\$1,823	per ounce
<b>Capital Costs</b>		
Initial Capital	\$36,247,500	USD
Working Capital (included in above)	\$6,300,000	USD
LOM Sustaining Capital	\$20,700,000	USD
Total LOM Capital	\$56,947,500	USD
Contingency (Included in Total)	\$6,370,000	USD
<b>Operating Costs (Average LOM)</b>		
Mining	\$11.11	per mm tonne
Processing & Support	\$8.48	per mm tonne
General & Administration (G&A)	\$2.92	per mm tonne
Other Costs	\$6.59	per mm tonne
Total Operating Cost	\$29.10	per mm tonne
<b>Production Data</b>		
Life of Mine	9	years
Mineralized Material Production Rate	2,157,667	tonnes per annum
Total Tonnes of Mineralized Material Processed	19,419,000	tonnes
Grade Au (Average)	0.73	g/t Au
Contained Gold	455,000	ounces
Metallurgical Recovery Au (Overall)	75%	
Average Annual Gold Production	37,917	ounces per annum
Total Gold Produced	341,250	ounces
LOM Strip Ratio (Waste Tonnes : mm Tonnes)	2.2	: 1

Table 40. Economic Analysis Summary

## 22.2 Cashflow Analysis

A constant dollar cash flow analysis is presented below. This cashflow considers all the assumptions and cost estimates presented in previous sections of this Report.

Production Model												
Item	Units	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Totals
Mineralized Material	Ktonnes		1,633	2,306	2,685	2,247	2,844	3,195	2,042	1,887	580	19,419
Gold Grade	g/t		0.82	0.77	0.66	0.79	0.57	0.56	0.87	0.94	0.94	729.74
Contained Gold	ounces		42,857	57,143	57,143	57,143	51,714	57,143	57,143	57,143	17,571	455,000
Gold Recovery	%		75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Total Gold Produced	ounces		32,143	42,857	42,857	42,857	38,786	42,857	42,857	42,857	13,179	341,250
Total Silver Produced	ounces		32,625	65,985	136,108	149,906	100,126	119,752	110,266	90,971	27,961	833,700
Total Waste	Ktonnes		3,120	3,833	2,799	3,077	5,371	7,564	7,678	6,608	2,031	42,081
Strip Ratio	w:mm		1.9	1.7	1.0	1.4	1.9	2.4	3.8	3.5	3.5	2.2
Total Material	Ktonnes		4,753	6,139	5,484	5,324	8,215	10,759	9,720	8,495	2,611	61,500

Financial Model												
Net Revenue	K USD		\$84,550	\$113,408	\$115,512	\$115,926	\$103,847	\$115,021	\$114,737	\$114,158	\$35,103	\$912,261
Total Other Costs	K USD		\$3,942	\$5,031	\$5,111	\$5,126	\$4,670	\$5,092	\$5,081	\$5,059	\$2,075	\$41,188
Mining	K USD		\$17,428	\$21,417	\$19,063	\$18,547	\$28,686	\$37,628	\$34,087	\$29,780	\$9,153	\$215,789
Processing	K USD		\$14,551	\$19,556	\$22,524	\$19,094	\$23,626	\$26,517	\$17,489	\$16,275	\$5,003	\$164,634
G&A	K USD		\$5,583	\$6,256	\$6,885	\$6,447	\$7,044	\$7,395	\$6,242	\$6,087	\$4,780	\$56,719
Total Operating Cost	K USD		\$37,562	\$47,229	\$48,472	\$44,088	\$59,356	\$71,540	\$57,818	\$52,142	\$18,936	\$437,142
Net after Operating Costs	K USD		\$43,046	\$61,148	\$61,930	\$66,712	\$39,820	\$38,389	\$51,837	\$56,956	\$14,092	\$433,931
Capital Cost	K USD	\$36,248	\$700	\$7,820	\$3,750	\$1,100	\$4,530	\$720	\$720	\$720	\$640	\$56,948
Net after Operating and Capital	K USD	(\$36,248)	\$42,346	\$53,328	\$58,180	\$65,612	\$35,290	\$37,669	\$51,117	\$56,236	\$13,452	\$376,984
Income Tax (estimated)	K USD		\$8,893	\$11,199	\$12,218	\$13,779	\$7,411	\$7,911	\$10,735	\$11,810	\$2,825	\$86,779
Cash Flow	K USD	(\$36,248)	\$33,454	\$42,129	\$45,962	\$51,833	\$27,879	\$29,759	\$40,383	\$44,427	\$10,627	\$290,205

Table 41. Post-Tax Cash Flow

### 22.3 Sensitivity Analysis

A high-level sensitivity analysis of the Project economics was conducted, indicating the project is most sensitive towards gold price and less sensitive towards operating cost and least sensitive to capital cost.

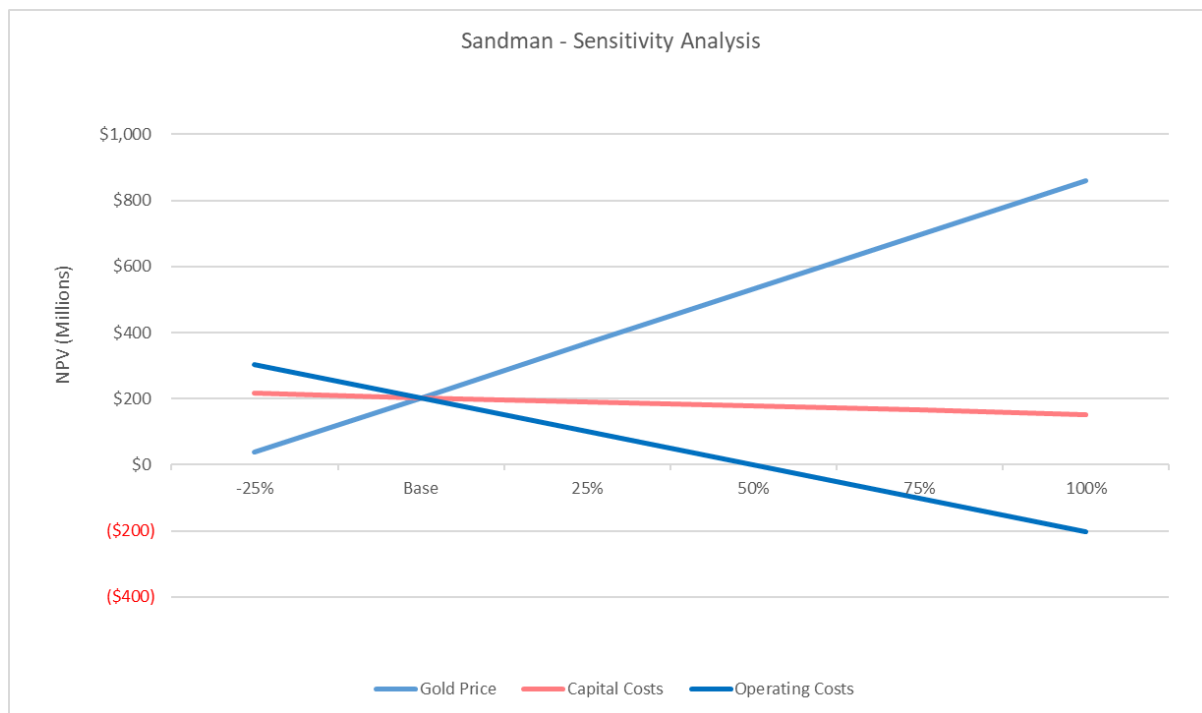


Figure 55: The Project sensitivity analysis evaluating gold price, capital costs and operating costs.

Sensitivity of the Project economics to key parameters including gold price, total capital cost and operating cost was completed to evaluate the relative strength of the Project and are presented as follows:

Variance %	-25%	Base	25%	50%	75%	100%
Gold Price	\$1,950	\$2,600	\$3,250	\$3,900	\$4,550	\$5,200
NPV	\$38,738,039	\$203,101,374	\$367,464,710	\$531,828,045	\$696,191,381	\$860,554,717
IRR	32.2%	104.9%	168.2%	229.3%	289.6%	349.4%
Variance %	-25%	Base	25%	50%	75%	100%
Capital Costs	\$42,710,625	\$56,947,500	\$71,184,375	\$85,421,250	\$99,658,125	\$113,895,000
NPV	\$215,622,499	\$203,101,374	\$190,580,249	\$178,059,125	\$165,538,000	\$153,016,875
IRR	140.5%	104.9%	82.8%	67.6%	56.4%	47.8%
Variance %	-25%	Base	25%	50%	75%	100%
Operating Costs	\$21.83	\$29.10	\$36.38	\$43.65	\$50.93	\$58.20
NPV	\$304,168,242	\$203,101,374	\$102,034,507	\$967,640	(\$100,099,228)	(\$201,166,095)
IRR	142.2%	104.9%	64.9%	7.1%	0.0%	0.0%

Table 41: Sensitivity Analysis

## 23. ADJACENT PROPERTIES

A review of the surrounding Mining Claims indicate that the main active gold exploration project within close proximity (23km) to the Project is located to the north and is referred to as the Sleeper Project. Most of these claims are reported under the name of Paramount Gold Nevada and Sleeper Mining Co. These claims are considered similarly prospective for epithermal gold mineralization.

Surrounding the Project is the Newmont checkerboard project, referred to as Sandman-Sleeper folio. This project is considered highly prospective for epithermal gold mineralization, similar to Sandman and Sleeper mineralization.

To the west of the Project there are some claims which belong to NGP Blue Mountain LLC which is part of the Blue Mountain Geothermal Power Plant.

To the east of the Project, there are several groups of claims referred Ten Mile held by Sweeney Mining Rock & Sand LLC, Rembrandt held by Winter and Van Kampen and the Winnemucca Project held by Nevada Mine Properties Inc and AH Holdings Ltd.

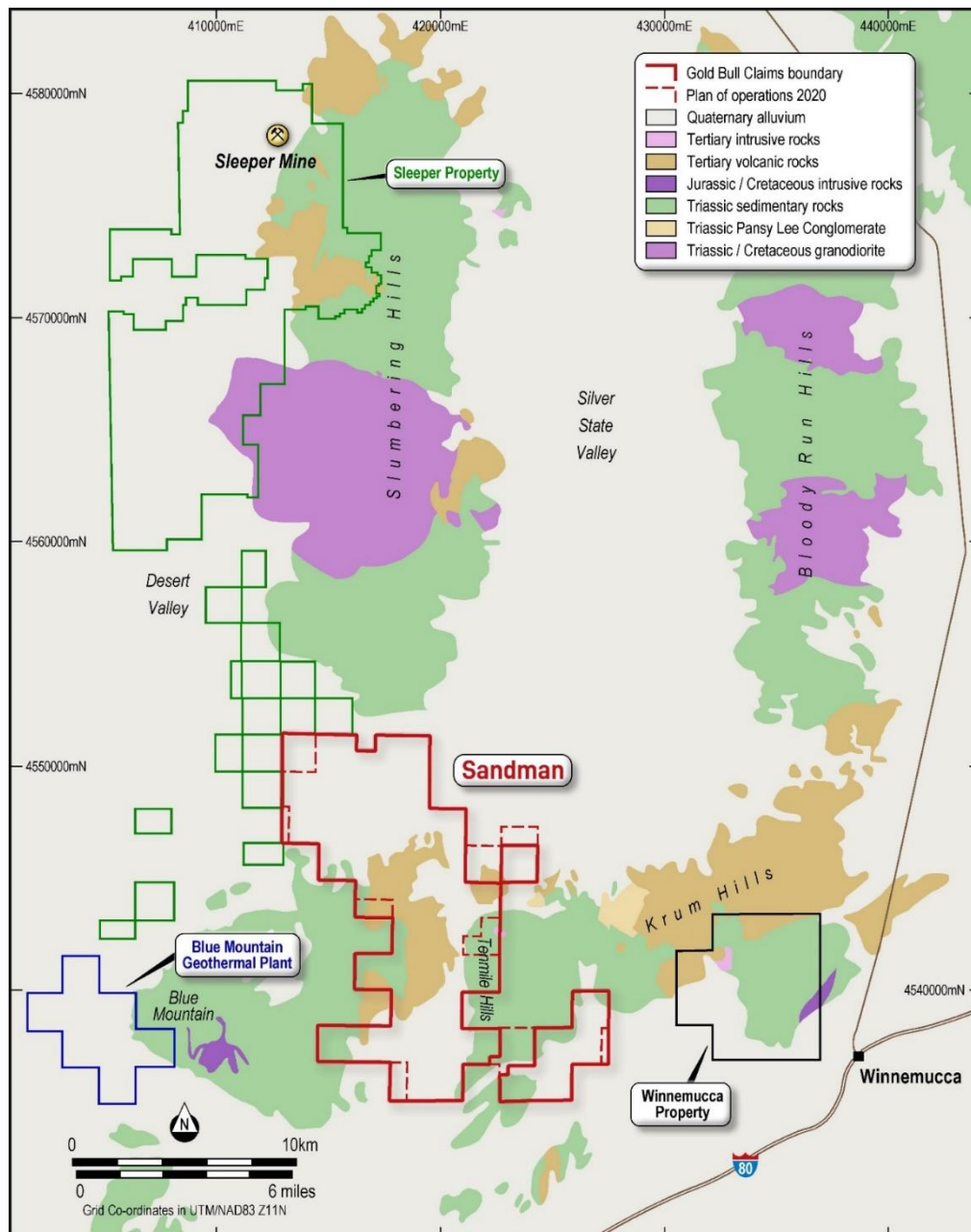


Figure 56. Plan view map of the Project area relative to adjacent gold Properties that have been identified from the Nevada Division of Minerals.

## **24. OTHER RELEVANT DATA AND INFORMATION**

### **24.1 Balanced Reporting MRE and PEA**

The large drill hole database at the Project forms the bulk of the geological information regarding the Mineral Resource estimates.

Reporting of the database has been limited to information which is both relevant to the prospects of the Project or limited to the key highlights that relate to a specific target type or key piece of geological evidence relevant to the Project. This report is considered to be an unbiased and appropriate level of reporting which is summarised for a balanced and informed view with regard to the current level of understanding of the gold mineralization at the Project and associated potential mine scenario.

### **24.2 Other Substantive Exploration Data**

In addition to the information provided in this report, explorers at the Project have at various stages completed auger drilling and some soil sampling and geochemical analysis in addition to a number of geophysical surveys. A detailed description and analysis of the more regional exploration information is beyond the scope and focus of this document.

A combination of the geophysics (magnetics plus other) data and satellite imagery reflect the well-established understanding about the very large alteration system at the Project. In addition, based on the most recent collation of the exploration information completed by Gold Bull geologists, there remain numerous untested targets and anomalies throughout the Project.

## **25. INTERPRETATION AND CONCLUSIONS**

### **25.1 The Project MRE**

The currently defined gold mineralization at the Project is based on an extensive historical drilling database (verified in Leapfrog and from drill logs and surveys), and various technical studies undertaken by previous explorers since gold was first discovered at the Project in 1987.

The technical studies and detailed drilling information at the Project have led to a good understanding of the geological controls on the gold mineralization. In addition, the steps undertaken to validate past drilling information have given confidence to the accuracy of the drilling data accuracy, and that it reasonably represents the geology and associated gold mineralization at the Project which underpins the MRE.

The quantity and the quality of lithological, collar, and downhole survey data collected in the various exploration programs by various operators are sufficient to support the Mineral Resource Estimate. The analytical laboratories used for historical and current assaying are well known in the industry, produce reliable data, are properly accredited, and are widely used within the industry.

The authors are not aware of any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results. In the authors opinion the drilling, Core handling, logging, and sampling procedures meet industry standards, and are adequate for the purpose of Mineral Resource Estimation.

The authors consider the QA/QC protocols in place for the Project to be acceptable and in line with standard industry practice. Based on the data validation and the results of the standard, blank, and duplicate analyses, the authors are of the opinion that the assay and SG databases are of sufficient quality for Mineral Resource estimate as documented in this Report.

Based on the current geological understanding and relatively tight drill spacing at each of the resource areas at the Project, the bulk of the MRE has been classified in the Indicated category. It is largely the high nugget effect which has prevented any portion of the MRE from being classified in the Measured category.

The Project is analogous to a well-established geological model for shallow low-sulfidation epithermal gold mineralization, which has some proximal examples of the same generation in the Sleeper, Rosebud and Midas gold mines. This geological model typically has local variations, which are mostly dependent on the nature of the host rock environment from which the epithermal deposits have formed.

To date the bulk of the drilling and exploration effort at the Project has been focussed on the outcropping or near to surface rock units which host the gold mineralization on the Project. There remain large areas of untested ground where the favourable host rocks and controlling structures extend, beyond the current extents of the currently defined gold mineralization and Mineral Resource estimates.

Beyond the defined extents of the current Mineral Resource, there still remains scope for additional gold discoveries based on the potential for further extensions of the shallow low-grade gold mineralization and also the possibility of further vein hosted high-grade gold mineralization. Both gold mineralization types have a well-established technical basis for their existence at the Project with some direct evidence in the form of numerous isolated but open drill intersections with gold mineralization that require more follow-up work. Some areas of the Mineral Resource are not yet closed off at North Hill, Silica Ridge and Abel Knoll.

The authors are not aware of any significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information as has been applied to the MRE for the Project.

## **25.2 The Project PEA**

The author reviewed pertinent data from the Project, using industry-accepted principles to form the cost structure, and applied those costs to pit-constrained Mineral Resources as a test for the reasonable prospects of eventual economic extraction.

Based on the positive results of this study, the author believes that the Project should continue to be advanced, firstly by satisfactorily completing a Pre-Feasibility Study to further refine the Mineral Resource estimate and to study the range of options that will guide the economics of the project.

The author has not identified any significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the project economic outcomes beyond the level of this PEA. Further studies are required to advance the project to a Pre-Feasibility Study and these are listed in **26.3 PEA**.

## **26. RECOMMENDATIONS**

### **26.1 MRE**

A number of options exist at the Project with regard to increasing the confidence level and/or size of the Mineral Resource. A minimal amount of drilling is potentially required to enhance the quality of the MRE in specific locations, in addition, there is considerable potential to increase the size of the MRE by exploring both the known extensions to the Mineralised structures and/or use a number of proven geophysical techniques to discover new gold mineralization which are currently hidden by the extensive shallow quaternary rocks and sand dunes which cover over 60% of the Project.

### **26.2 Increasing Mineral Resource Confidence**

As part of a review undertaken to understand the potential open pit options at the Project, which is part of the assessment for “reasonable prospects for economic extraction”, there are some additional details which can help to guide the most likely early-stage economic studies. At each Deposit location it was identified that there is a Core of relatively shallow gold mineralization which is most likely to form part of an early-stage open pit mine plan, based on the current understanding of the gold mineralization extents. The gold mineralization at these locations could be the focus of some further drilling and studies leading to future discoveries. In particular, the North Hill and Silica Ridge Deposits have significant shallow and relatively high-grade sections of gold mineralization which would clearly form a key part of any new proposed gold operation. These deposits are deeply weathered, with all currently defined mineralized domains classified as oxide material and although still nuggety in nature, could be better defined to improve the confidence level of the Mineral Resource estimate.

### **26.3 PEA**

This study indicates a potentially viable mine project and further study work should continue to advance the project. This work should include the following:

1. Further Metallurgical and crushing test work is needed to ensure the Project deposits are fully understood and amenable to conventional cyanide heap leach processing
2. Waste characterization test work
3. Further mineral modelling work necessary to quantify the silver content
4. Pit optimization and pit design study should be undertaken
5. Geotechnical program to determine the pit slope and leach pad parameters
6. Conduct a trade-off study for on-site stripping/refining facilities vs. shipping concentrate offsite
7. Conduct a trade-off study for contract mining vs self-perform
8. Infrastructure sterilization drilling and MRE close-out study
9. Complete engineering and design studies for location of all infrastructure (roads, yards, offices, shops, processing facilities, waste dumps)
10. Conduct alternative power solutions study

11. Conduct a pit dewatering study
12. Commence hydrogeological baseline monitoring
13. Review prior baseline studies to establish requirements to advance to mine permitting

## 26.4 Further Exploration Potential

Some of the major structures such as at Silica Ridge, Abel Knoll and at Southeast Pediment, appear to continue beyond the current extents of the drilling information, based on mapping and geophysical data. These structures, particularly where they are intersected by further cross-cutting faults or breaks offsetting mineralised structures, could make for potential sites of gold mineralization and are worthy of further step-out drill testing at some stage in the future. Limited step out drilling has been conducted around the high grade Abel Knoll diatreme breccia.

In addition to the existing geological understanding and interpretation based on the known geology and current magnetic and other geophysical surveys, it appears that there is also a positive correlation between the chargeability and also resistivity features with the known gold mineralization at some Deposit locations. This information has been gathered from both the North Hill, Silica Ridge and Abel Knoll deposits and further evaluation of these deposits is required to determine if additional ounces exist close to the existing resources.

Further resource potential exists southwest of North Hill and northwest of Silica Ridge's MRE where grades drop off away from the main feeder structures and the resource remains open. At Abel Knoll, the resource is open to the east, north and underlying the lower grade stratigraphic eastern mineralisation. A deep hole is warranted to be drilled at some stage below the diatreme breccia to test for underground mine potential. Further review of historical mapping and field walking is required between Abel Knoll and Silica Ridge, which is a 11.5km Northwest Trend; and Abel Knoll and Southeast Pediment, which is a 10km North-South Trend in search of an additional deposit. Float mapping and lag sampling (coarse fraction sample) is required along these two trends to define new drill targets and also around Abel Knoll. Ground gravity and VLF surveys would likely achieve a better result than the prior CSAMT surveys due to the subtle nature of the signatures. The Gold Bull CSAMT survey did not identify the Abel Knoll breccia, a historical gravity postage sized survey over Abel Knoll did identify the stratigraphic vein mineralisation in basement rocks but not the breccia, however there was some mild success with the historical VLF survey initially identifying the Abel Knoll diatreme breccia.

## 26.5 Proposed Study Activities and Costs

Below is a summary of the proposed costs to conduct a Pre-Feasibility Study which totals USD4.327M. This does not include salaries, company overheads and other project fixed costs.

**Table 42: Proposed Activities and Costs**

<b>Task</b>	<b>Cost Estimate</b>
Metallurgical Testwork	\$900,000
Silver Modelling Study	\$50,000
Pit Optimization/Pit Design Study	\$50,000
Geotechnical Evaluation	\$350,000
Trade-off: Stripping and Refining Facilities	\$25,000
Trade-off: Mining	\$25,000
Sterilization Drilling for Infrastructure	\$500,000
Engineering and Design Study for Infrastructure	\$25,000
Alternative Power Study	\$25,000
Pit Dewatering Study	\$350,000
Pre-Feasibility Study	\$1,000,000
Mine permitting studies	\$1,020,000
<b>TOTAL</b>	<b>\$4,320,000</b>

## 27. REFERENCES

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## **28. DATE AND SIGNATURE PAGE**

### **28.1 Report Name**

NI 43-101 Technical Report for the Sandman Gold Property, Nevada, USA. Preliminary Economic Assessment.

### **28.2 Company Name**

Borealis Mining Company Limited.

### **28.3 Name of the Deposit/Property**

Sandman Gold Property.

### **28.4 Effective Date of the Report**

January 5, 2026.

### **28.5 Completion Date of the Report**

February 19, 2026

### **28.6 Signature of Authors**



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Mr. Jerod Eastman

Date Signed: February 19, 2026

**Jerod Eastman, Consulting Mining Engineer**

I, Jerod M. Eastman, of Winnemucca, Nevada, do hereby certify:

1. I am currently employed as President by DJ 6E Consulting LLC, 1639 Lahontan Ave., Winnemucca, Nevada 89445.
2. I am the author of the technical report titled “NI 43-101 Technical Report for the Sandman Gold Property, Nevada, USA. Preliminary Economic Assessment.”, dated February 19, 2026 with an effective date of January 5, 2026 (the “Technical Report”).
3. I am a graduate from the South Dakota School of Mines and Technology, Rapid City, South Dakota (Bachelor of Science in Mining Engineering in 1989).
4. I am a Registered Member (00885850) of the Society for Mining, Metallurgy and Exploration, Inc.
5. I have been continuously employed in the mining industry continuously for a total of 37 years and my relevant experience includes mine engineering, mine planning, costing, technical and operational evaluations, design, construction, and management of numerous projects throughout North America. These projects were predominantly open pit metal mines with conventional crushing and heap leach processing plants.
6. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
7. I conducted a personal inspection of the Sandman Project on June 27, 2022 for one day.
8. I am responsible for the entirety of the Technical Report:
  - a. The Qualified Person has relied heavily on the NI 43-101–compliant Technical Report on the Project prepared in 2023 by previous Qualified Persons, which summarized historical exploration activities and reported a mineral resource estimate for the Project. Portions of the 2023 Technical Report have been reproduced or referenced in this Technical Report where applicable. The Qualified Person considers the 2023 Technical Report to be relevant, reliable, and suitable for the purposes of this study.
9. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
10. I have had no prior involvement with the property that is the subject of the Technical Report.
11. I have read NI 43-101 and Form 43-101F1, and this Technical Report was prepared in compliance with NI 43-101.
12. I am independent of the Company applying all the tests in Section 1.5 of NI 43-101.

Dated February 19, 2026



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Jerod M. Eastman