TECHNICAL REPORT AND PRELIMINARY ECONOMIC ASSESSMENT FOR UNDERGROUND MILLING AND CONCENTRATION OF LEAD, SILVER AND ZINC AT THE BUNKER HILL MINE

COEUR D'ALENE MINING DISTRICT

SHOSHONE COUNTY, IDAHO, USA

AMENDED AND RESTATED FEBRUARY 22, 2022

EFFECTIVE DATE: JANUARY 7, 2022

PREPARED FOR:

BUNKER HILL MINING CORP.

BY

QUALIFIED PERSONS:

Scott Wilson, C.P.G.
Resource Development Associates, Inc.
10262 Willowbridge Way
Highlands Ranch, CO 80126
303-717-3672

Robert "Chip" Todd, P.E.
Minetech, USA, LLC
129 Denali Ln
Butte, MT 59701
775-397-4862

Deepak Malhotra, SME
Pro Solv LLC
11475 West I-70 Frontage Road North
Wheat Ridge, CO 80033
303-422-1176

DATE AND SIGNATURE PAGE

Bunker Hill Mining Corp.: Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA.

Technical Report Effective Date: January 7, 2022

February 22, 2022

(signed/sealed) *Scott E. Wilson*
Scott E. Wilson, SME-RM, CPG
Geologist

(signed/sealed) *Robert "Chip" Todd*
Robert Todd, P.E.
Mining Engineer

(signed/sealed) *Deepak Malhotra*
Deepak Malhotra, SME-RM
Consulting Metallurgist

AUTHOR CERTIFICATE

Scott E. Wilson

I, Scott E. Wilson, CPG, SME-RM, of Highlands Ranch, Colorado, as the author of the technical report entitled "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA" (the "Technical Report") amended and restated February 22, 2022 with an effective date of January 7, 2022 prepared for Bunker Hill Mining Corp. (the "Issuer"), do hereby certify:

1. I am currently employed as President by Resource Development Associates, Inc., 10262 Willowbridge Way, Highlands Ranch, Colorado USA 80126.
2. I graduated with a Bachelor of Arts degree in Geology from the California State University, Sacramento in 1989.
3. I am a Certified Professional Geologist and member of the American Institute of Professional Geologists (CPG #10965) and a Registered Member (#4025107) of the Society for Mining, Metallurgy and Exploration, Inc.
4. I have been employed as both a geologist and a mining engineer continuously for a total of 32 years. My experience included resource estimation, mine planning, geological modeling, geostatistical evaluations, project development, and authorship of numerous technical reports and preliminary economic assessments of various projects throughout North America, South America and Europe. I have employed and mentored mining engineers and geologists continuously since 2003.
5. 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.
6. I have made several personal inspections of the Bunker Hill Project with the most recent visit September 22, 2021.
7. I am responsible for Sections 1 through 12, 14 through 15, 19 through 20 and 22 through 27 of the Technical Report.
8. I am independent of the Issuer as independence is described in Section 1.5 of NI 43-101.
9. The Issuer retained my services in April 2019 to be the independent qualified person for the project. I have either authored or co-authored four technical reports prior to this technical report.
10. I have read NI 43-101 and Form 43-101F1, and this Technical Report was prepared in compliance with NI 43-101.
11. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Dated: February 22, 2022

(signed/sealed) *Scott Wilson*

Scott E. Wilson, CPG, SME-RM

AUTHOR CERTIFICATE

Robert H. Todd

I, Robert H. Todd, P.E., of Butte, Montana, as the author of the technical report entitled "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA" (the "Technical Report") amended and restated February 22, 2022 with an effective date of January 7, 2022 prepared for Bunker Hill Mining Corp. (the "Issuer"), do hereby certify:

1. I am currently a principal and co-owner of Minetech USA, LLC, located in Butte and Helena Montana.
2. I graduated with a Bachelor of Science degree in Mining Engineering from the University of Idaho, School of Mines, Idaho.
3. I am a Registered Professional Engineer in the States of Idaho (5327), Nevada (7779) and Montana (10095).
4. I have worked in mining operations, consulting engineering and engineering construction contracting for over 41 years. Prior to forming Minetech my consulting career included serving as General Manager of Engineering for Cementation USA in Sandy Utah, Vice President and Area Manager for Knight-Piesold in Elko, Nevada, and managing numerous independent engineering and construction projects. Mine operations and technical experience include: Technical Services Manager and then General Manager of the Jerritt Canyon Operations in Elko, Nevada, Supervising Engineer for Newmont Mining Corporation in Elko, Nevada, Project Engineer and Project Administrator for Noranda Minerals in Libby, Missoula and Cooke City Montana and Production Supervisor, Chief Engineer and Mine Manager for Echo Bay Minerals at Round Mountain and Hawthorne Nevada. I worked for Sunshine Mining in Kellogg Idaho as I was attending the University of Idaho and then after graduation as a mine and project engineer until they closed in 1986.
5. 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.
6. I have made several personal inspections of the Bunker Hill Project with the most recent visit December 2021.
7. I am responsible for the preparation of relevant portions of Sections 16, 18, and 21 of the Technical Report.
8. I am independent of the Issuer as independence is described in Section 1.5 of NI 43-101.
9. Prior to being retained by the Issuer, I have not had prior involvement with the property that is the subject of the Technical Report.
10. I have read NI 43-101 and Form 43-101F1, and this Technical Report was prepared in compliance with NI 43-101.
11. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Dated: February 22, 2022

(signed/sealed) *Robert H. Todd*
Robert H. Todd, P.E.

AUTHOR CERTIFICATE

Deepak Malhotra, Ph.D.

I, Deepak Malhotra, Ph.D.., of Lakewood, Colorado, as the author of the technical report entitled “Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d’Alene Mining District, Shoshone County, Idaho, USA” (the “Technical Report”) amended and restated February 22, 2022 with an effective date of January 7, 2022 prepared for Bunker Hill Mining Corp. (the “Issuer”), do hereby certify:

1. I am currently employed as President of Pro Solv, LLC with an office at 15450 W. Asbury Avenue, Lakewood, Colorado 80228.
2. I am a graduate of Colorado School of Mines in Colorado, USA (Master of Metallurgical Engineering in 1973 and Ph. D. in Mineral Economics in 1978).
3. I am a Registered Member (RM #2006420) of the Society for Mining, Metallurgy and Exploration, Inc. and a member of the Canadian Institute of Mining and Metallurgy.
4. I have 48 years of experience in the area of metallurgy and mineral economics. I have managed projects in research, process development for new properties, plan troubleshooting, plant audits, detailed plant engineering, due diligence for acquisitions and overall business management. I have authored over 80 technical papers and several books. I also participated in dozens of technical reports prepared in accordance with NI 43-101 (as defined herein).
5. 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.
6. I have not visited the Bunker Hill Mine due to health reasons. A site visit was not required for my role in this report.
7. I am responsible for the preparation of Sections 13 and 17.
8. I am independent of the Issuer as independence is described in Section 1.5 of NI 43-101.
9. Prior to being retained by the Issuer, I have not had prior involvement with the property that is the subject of the Technical Report.
10. I have read NI 43-101 and Form 43-101F1, and this Technical Report was prepared in compliance with NI 43-101.
11. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Dated: February 22, 2022

(signed/sealed) *Deepak Malhotra, Ph.D.*
Deepak Malhotra, Ph.D.

TABLE OF CONTENTS

Tables

Figures

1 SUMMARY

This report entitled "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA" (the "Technical Report"), describes the mining and processing operations at the Bunker Hill Mine ("Bunker" or "Bunker Hill" or "the Project" or "the Property") located near the town of Kellogg Idaho. for Bunker Hill Mining Corp. ("BHMC" or the "Company").

This Technical Report considers a processing approach at Bunker where Pb, Ag and Zn mineralization is mined and processed entirely underground. Mineralized material would be conventionally milled and then concentrated by flotation of PbAg followed by flotation of ZnAg. Metal rich concentrates could then be sold to smelters in North America or overseas. Mill tailings will be deposited underground in the historic mining voids located throughout the Project. The only envisioned surface facilities would be offices, warehouses and loading docks.

Highlights of the Technical report, including the preliminary economic assessment ("PEA"), are listed in Table 1-2 and Table 1-3. Table 1-1 lists the Mineral Resource estimate for the Bunker. Mineral Resources are reported according to the CIM Definition Standards of May 10, 2014 ("CIM"). The guidance and definitions of CIM are incorporated by reference in National Instrument 43-101 -*Standards of Disclosure for Mineral Projects within Canada* of the Canadian Securities Administrators ("NI 43-101") Mineral Resources are geologically constrained and defined at economic cutoff grades that demonstrate reasonable prospects of eventual economic extraction. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted into Mineral Reserves.

1.1 RESOURCE ESTIMATES

Geostatistics and estimates of mineralization were prepared by Mr. Scott Wilson, C.P.G., SME. Industry accepted grade estimation techniques were used to develop global mineralization block models for the Newgard, Quill and UTZ zones. Table 1-1 summarizes the Bunker Hill Mineral Resource Estimate, classified according to CIM definitions for the Project. Reasonable prospects of eventual economic extraction assume underground mining, mill processing and flotation of Pb and Zn concentrates. Mineral resource estimates are reported at an NSR cutoff of $70 per ton. Metallurgical recoveries are described in Section 13 and section 17 of this report.

Net smelter return (NSR) is defined as the return from sales of concentrates, expressed in US$/t, i.e.: NSR = (Contained metal) * (Metallurgical recoveries) * (Metal Payability %) * (Metal prices) – (Treatment, refining, transport and other selling costs). NSR values are estimated using updated using metallurgical recoveries of 92%, 82% and 88% for Zn, Ag and Pb respectively, and concentrate grades of 54.7% Zn in zinc concentrate, and 59.7% Pb and 14.18 oz/ton Ag in lead concentrate.

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves

Table 1-1 Bunker Hill Mine Mineral Resource Estimate – NSR $70/ton cut off – Ag selling price of $20/oz (troy), Lead selling price of $0.90/lb, Zn selling price of $1.15/lb. Effective date of January 7, 2022)

Classification	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
Measured (M)	2,229	$ 117.25	1.04	2,309	2.51	111,975	5.52	246,046
Indicated (I)	4,385	$ 117.55	1.02	4,484	2.42	212,519	5.63	493,902
Total M & I	**6,614**	**$ 117.45**	**1.03**	**6,793**	**2.45**	**324,495**	**5.59**	**739,948**
Inferred	6,749	$ 125.22	1.54	10,410	2.91	392,757	5.01	669,358

1.2 PRELIMINARY ECONOMIC ASSESSMENT

The summary of the current projected financial performance of the Bunker is listed in Table 1-2. Sensitivities are summarized in Table 1-3.

Table 1-2 Estimated Bunker Hill production for Life of Mine

	Life of Mine (LOM) Total
Metal Prices	
Zinc ($/lb)	**1.15**
Lead ($/lb)	**0.90**
Silver ($/oz (troy))	**20.00**
Mine Plan	
Total mineralized material mined (kt)	**6,377**
*Average annual mineralized material mined (kt)(1)	**580**
Average zinc grade (%)	**5.0%**
Average lead grade (%)	**2.8%**
Average silver grade (oz/t)	**1.5**
Metal Production(2)	
Zinc produced (klbs)	**591,140**
Lead produced (klbs)	**323,116**
Silver produced (koz)	**8,418**
Key Cost Metrics	
Opex - total ($/t)	**62**
Sustaining capex ($/t)	**10**
Cash costs: by-product ($/lb Zn payable)	**0.33**
AISC: by-product ($/lb Zn payable)	**0.47**
Cash costs: co-product ($/lb Zn payable)	**0.69**
AISC: co-product ($/lb Zn payable)	**0.77**
EBITDA	**383,378**
Pre-tax free cash flow(3)	**284,999**
Free cash flow(3)	**233,310**
After-tax NPV (5%) ($000)	**143,471**
After-tax NPV (8%) ($000)	**107,790**
After-tax IRR (%)	**35.2%**
Payback (years)	**2.6**

Annualize averages excluded the first and last years of mine life.

Includes zinc produced from zinc concentrate, lead and silver produced from lead concentrate

Life of mine (“LOM”) includes initial capital expenditure

Table 1-3 Economic Sensitivity to Zinc Price, Opex and Capex

NPV (5%) ($M) — Metal Prices

Lead Price ($/lb)	Zinc Price ($/lb) 0.85	1.00	1.15	1.30	1.45
0.70	19	66	110	154	198
0.80	37	83	127	171	215
0.90	55	99	**143**	187	232
1.00	72	116	160	204	249
1.10	89	133	177	221	266

NPV (5%) ($M) — Operating & Capital Costs

Total Capital Costs (+/- %)	Operating Costs (+/- %) -20%	-10%	0%	10%	20%
-20%	210	185	159	133	107
-10%	203	177	151	125	100
0%	195	169	**143**	118	92
10%	187	162	136	110	84
20%	180	154	128	102	77

IRR (%) — Metal Prices

Lead Price ($/lb)	Zinc Price ($/lb) 0.85	1.00	1.15	1.30	1.45
0.70	8%	18%	28%	40%	53%
0.80	11%	21%	32%	44%	57%
0.90	14%	24%	**35%**	47%	61%
1.00	18%	27%	39%	51%	65%
1.10	21%	31%	42%	55%	70%

IRR (%) — Operating & Capital Costs

Total Capital Costs (+/- %)	Operating Costs (+/- %) -20%	-10%	0%	10%	20%
-20%	63%	53%	43%	35%	28%
-10%	56%	47%	39%	32%	25%
0%	51%	43%	**35%**	29%	23%
10%	46%	39%	32%	26%	20%
20%	42%	35%	29%	23%	18%

The preliminary economic assessment is preliminary in nature, and there is no certainty that the reported results will be realized. The Mineral Resource estimate used for the PEA includes Inferred Mineral Resources which are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the projected economic performance will be realized. The purpose of the PEA is to demonstrate the economic viability of the Bunker Hill Mine, and the results are only intended as an initial, first-pass review of the Project economics based on preliminary information. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

As of January 25, 2022, BHMC has signed a memorandum of understanding (MOU) with Teck Resources Limited (Teck) for the purchase of the Pend Oreille process plant. The MOU is non-binding and offers the purchase option of either $2.75M cash or $3.0M as a combination of both cash and BHMC shares. Definitive documentation, including demolition and safety plans are to be executed by March 1, 2022, otherwise Teck has the option to pursue alternatives or negotiations with third parties. When concluded, the deal is expected to have a material impact on project economics including capital expenditures.

1.3 PROPERTY DESCRIPTIONS AND OWNERSHIP

1.4 GEOLOGY AND MINERALIZATION

The Northern Idaho Panhandle Region in which the Bunker Hill Property is located is underlain by the Middle Proterozoic-aged Belt-Purcell Supergroup of fine-grained, dominantly siliciclastic sedimentary rocks which extends from western Montana (locally named the Belt Supergroup) to southern British Columbia (Locally named the Purcell Supergroup) and is collectively over 23,000 feet in total stratigraphic thickness.

Mineralization at the Bunker Hill Mine is hosted almost exclusively in the Upper Revett formation of the Ravalli Group, a part of the Belt Supergroup of Middle Proterozoic-aged, fine-grained sediments. Geologic mapping and interpretation progressed by leaps and bounds following the recognition of a predictable stratigraphic section at the Bunker Hill Mine and enabled the measurement of specific offsets across major faults, discussed in the following section. From an exploration and mining perspective, there were two critical conclusions from this research: all significant mineralized shoots are hosted in quartzite units where they are cut by vein structures, and the location of the quartzite units can be projected up and down section, and across fault offsets, to target extensions and offsets of known mineralized shoots and veins.

Mineralization at Bunker Hill falls in four categories, described below from oldest to youngest events:

> **Bluebird Veins (BB):** W--NW striking, SW-dipping (Fig. 7-11), variable ratio of sphalerite-pyrite-siderite mineralization. Thick, tabular cores with gradational margins bleeding out along bedding and fractures. Detailed description in Section 7.2.2.

Stringer/Disseminated Zones: Disseminated, fracture controlled and bedding controlled blebs and stringer mineralization associated with Bluebird Structures, commonly as halos to vein-like bodies or as isolated areas where brecciated quartzite beds are intersected by the W-NW structure and fold fabrics.

Galena-Quartz Veins (GQ): E to NE striking, S to SE dipping (Fig. 7-11), quartz-argentiferous galena +/- siderite-sphalerite-chalcopyrite-tetrahedrite veins, sinuous-planar with sharp margins, cross-cut Bluebird Veins. Detailed description in Section 7.2.2.

Hybrid Zones: Formed at intersections where GQ veins cut BB veins (Fig. 7-11), with open space deposition of sulfides and quartz in the vein refraction in quartzite beds, and replacement of siderite in the BB vein structure by argentiferous galena from the GQ Vein.

1.5 ENVIRONMENTAL STUDIES AND PERMITTING

Because the mine is on patented mining claims (privately-owned land), only a limited number of potential permits are required for mining and milling operations. These relate to: (1) air quality and emissions from crushing, milling and processing, (2) any refurbishment of surface buildings that may require construction permits and (3) deposition of waste and/or tailings on surface, if such a deposition were to occur.

The Bunker Hill Mine is located within the Bunker Hill Superfund site (EPA National Priorities Listing IDD048340921). Cleanup activities have been completed in Operable Unit 2 of the Bunker Hill Superfund Site where the mine is located though water treatment continues at the Central Treatment Plant (CTP) located near Bunker Hill Mine. The CTP is owned by US EPA and is operated by its contractors.

BHMC entered into a Settlement Agreement and Order on Consent with the US Environmental Protection Agency (“US EPA”) and the US Department of Justice (“DOJ”) on May 14, 2018. Section 9, Paragraph 33 of that agreement stipulates that BHMC must obtain a National Pollutant Discharge Elimination System (“NPDES”) permit for effluent discharged by Bunker Hill Mine by May 14, 2023. This obligation exists independent of BHMC’s activities related to the PEA but the deadline will occur at a point in time where restart activities are planned to occur as well.

BHMC will initiate a voluntary Environmental, Social and Health Impact Assessment (“ESHIA”) for the activities described in this PEA and for its business model as a whole in 2022. This study is projected for completion in 2023. It will conform to ISO, IFC and GRI standards.

1.6 METALLURGICAL TESTING

RDi initiated metallurgical test work on three samples designated Newgard, Quill and Utz with the primary objective of determining the process flowsheet and the metal recoveries and concentrate grades. The test work is on-going, and the highlights of the results so far indicate the following:

- Head grade assay of 49.7 g/mt Ag, 4.1% Pb, 6.42% Zn
- Bond’s ball mill work index of 13.47 kWh/st indicating the rock to be relatively hard
- Grind size of 270 mesh for Zn flotation stream and 400 mesh for Pb flotation stream
- Concentrate grades of 54.7% Zn for the zinc concentrate and 59.7% Pb with 486 g/mt Ag for the lead concentrate

1.7 MINING METHOD

Long-hole stoping with fill (LHOS), cut-and-fill and possibly room-and-pillar mining with fill are the only methods viable for sustained operations today. LHOS is the preferred mining method with limited cut-and-fill mining at Bunker Hill. Room-and-pillar mining is not in the current plan. Timbered ground support has been replaced with newer ground support technology of rock bolts, mesh, shotcrete and steel sets as required. Ground conditions are generally good to excellent at Bunker Hill and the rest of the mines in the Silver Valley. Bunker Hill does not have a history of rock burst events that are frequent in the deeper mines to the east.

1.8 RECOVERY METHODS

Historical and on-going current test work at RDi indicates that sequential flotation process can produce marketable-grade Pb/Ag and Zn concentrates. A conceptual process flowsheet was developed based on limited test work, historical plant flowsheet and plants processing similar polymetallic mineralized material. Process flowsheets consist of two-stage crushing to produce a feed of P_{80} of 0.5 inch for the milling circuit. Material will be ground in a ball mill to P_{80} of 270 mesh with sodium cyanide and zinc sulfate. Resulting ground slurry will be subjected to rougher flotation of lead and silver minerals using xanthate and MIBC. Concentrates could be reground and cleaned up to three times to produce a lead/silver concentrate.

Lead rougher- and first-cleaner tailings will be combined and conditioned with copper sulfate and then pH adjusted, and zinc minerals floated with xanthate and MIBC. Zinc rougher concentrates could be reground and cleaned up to three times to produce marketable zinc concentrate.

1.9 CURRENT EXPLORATION AND DEVELOPMENT

BHMC has a rare exploration opportunity available at the Mine and has embarked on a new path to fully maximize the potential. A treasure trove of geologic and production data has been organized and preserved in good condition in the mine office since the shutdown of major mine operations in the early 1980s. This data represents 70+ years of proper scientific data and sample collection, with high standards of accuracy and precision that were generally at or above industry standards at the time.

The Company saw the wealth of information that was available but not readily usable and embarked on a scanning and digitizing program. From this they were able to build a 3D digital model of the mine workings and 3D surfaces and solids of important geologic features. To add to this, all of the historic drill core lithology logs and assay data (>2900 holes) was entered into a database and imported with the other data into Maptek Vulcan 3D software.

Exploration activities at the Mine are focused on core drilling to confirm presence of siler-rich mineralization and wide bluebird style mineralization, as well as finding un-mined offset segments of known mineralized structures.

1.10 CONCLUSIONS

BHMC continues investment in the advancement of the Project through drilling, tunnel refurbishment and technical evaluations both internally and with the assistance of reputable consulting firms. RDA is of the opinion that the current Mineral Resources at Bunker Hill are sufficient to warrant continued planning and effort to explore, permit and develop the Project, and that it supports the conclusions herein.

RDA is of the opinion that with a historic silver production of over 160 million ounces, silver mineralization should be investigated with vigorous exploration programs. While base metals are a very important component of the Project and drilling resources are recommended to be allocated to the further delineation and addition of base metal dominant resource, the recent selling price of silver demands attention. The confirmation drilling program identified intercepts of 10 to 20 ounces per ton of silver. The J vein and Francis stopes hosted high grade silver mineralization and the near-surface historic Caledonia and Sierra Nevada Mines were bonanza grade silver producers in the past. These and other known occurrences of silver must be followed up on to determine that economic silver occurrences exist on the Bunker Hill Property land package.

1.11 RECOMMENDATIONS

Exploration programs should focus on the definition of silver resources. Silver resources that demonstrate the reasonable prospects of eventual economic extraction have been identified within the current mineral resource estimate. Significant silver mineralization encountered through exploration and past production suggests that these zones should be given as much weight as past Pb and Zn exploration and resource definition programs.

Metallurgical test work should be completed and the results thoroughly analyzed in order to further refine metallurgical recovery and concentrate grade assumptions, and optimize flowsheet characteristics.

Digitization of nearly 100 years of paper maps is nearing completion. In addition to unlocking the understanding of the geometry of the mineral deposit much of the information describes the mined-out portion of the Project. This will be critical for future mineral resource estimates as mined out voids need to be accurately defined.

Results from the PEA indicate that the Project may support a Preliminary Feasibility Study. Plant and backfill engineering and metallurgical testing are recommended. Used equipment estimates should also be procured.

The Newgard, Quill and UTZ block model portion of the mine was initially scheduled based on a 5.0% zinc cutoff grade (not zinc equivalent) for the June 2021 PEA in the upper majority zinc mineralization. The lower majority lead and silver mineralization used a 5.0% zinc equivalent. This lower section is not included in the block model and represents Bunker Hill records at the time of closure. It is classified as inferred resource. The Newgard, Quill and UTZ block model has been updated with NSR values to better represent actual zinc, lead and silver revenues. The block model NSR valuation change and the majority use of longhole stoping methods are the subject of this report.

Additional drilling and mine block modeling should continue to increase the conversion of Inferred to Indicated Resources.

Based on the aforementioned, the authors are not recommending successive phases of the work for the advancement of the project

Table 1-4 Proposed Budget for Project Advancement

Activity	Amount
Exploration Drilling (includes labor and assaying)	$0.50M
Metallurgical definition characteristics	$0.50M
Surface Geophysics	$0.40M
Ongoing Digital compilation of historical information	$0.25M
Environmental Studies as part of care and maintenance	$0.80M
Rehabilitation and Infrastructure Improvements	$1.30M
Plant Engineering	$0.50M
Hydraulic Backfill and Tailing Placement Engineering	$0.25M
Mine Rehabilitation, Care and Maintenance	$0.75M
Total Recommended Budget	**$5.25M**

2 INTRODUCTION

2.1 TERMS OF REFERENCE

BHMC retained RDA to complete an independent NI 43-101 Technical Report for Bunker Hill Property located in the Coeur D'Alene Mining District, Shoshone County, Idaho.

BHMC retained the services of Scott Wilson of Resource Development Associates Inc. ("RDA"), Deepak Malhotra of Pro Solv, LLC and Minetech USA, LLC ("Minetech"), Robert Todd, P.E., principal to perform engineering and design services to allow the Company to publicly disclose a Preliminary Economic Assessment (PEA) for the Bunker Hill mine (the "Bunker Hill Mine" or "Mine"). BHMC has reported Indicated and Inferred Mineral Resource estimates for the Project since September 29, 2020

BHMC has acquired rights to title and purchased the Property from its current previous owners, PMC. The Bunker Hill Mine is a well-developed underground mining operation that ceased production in 1991. At cessation of mining, the Project contained mineralization that had been developed but not exploited. BHMC is implementing a plan to bring the brownfields Project back into production as a competitive mining operation in the Coeur d'Alene Mining District. Limited modern (post 1991) exploration has taken place on the Property.

The Project is located adjacent and directly south of the town of Kellogg Idaho. Mineralization at the Project is related to a large deposit of anomalous lead, zinc and silver mineralization. Silver, lead and zinc were discovered at the Project in 1885. Production records kept annually from 1887 through 1991 show that the mine produced 35.78 million tons of mineralized material with head grades averaging 4.52 opt Ag, 8.76% Pb and 3.67% Zn, containing 161.72 million ounces of Ag, 3.13 million tons of Pb and 1.31 million tons of Zn.

The Authors have worked closely with the Company to follow the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, November 29, 2019 and the CIM Mineral Exploration Best Practice Guidelines, November 23, 2018 with respect to the implementation and execution of the collection of scientific data for the Property.

This Technical Report was prepared by the Authors, at the request of Mr. Sam Ash, President and CEO of BHMC, a public company trading on the Canadian Securities Exchange (CSE: BNKR) with its corporate office at 82 Richmond Street East, Toronto, Ontario M5C 1P1.

Mr. Scott E. Wilson, (CPG #10965, SME 4025107RM), an independent qualified person under the terms of NI 43-101, has conducted several site visits of the Property with the most recent visit on September 22, 2021. The most recent site visit was to review the progress on the RDA recommended drilling and channel sampling program. These drilling and sampling campaigns were required by RDA in order to estimate Mineral Resources for the Project.

Mr. Robert Todd, a Registered Professional Engineer in the States of Idaho (5327), Nevada (7779) and Montana (10095), an independent qualified person under the terms of NI 43-101, has conducted several site visits of the Property with the most recent visit September 13-15, 2021. This visit was to review equipment and construction estimates for the renovation of the shafts, operating levels and review other aspects of the mine plan with the project team.

Dr. Deepak Malhotra, Ph.D. (SME # 2006420RM) as an independent qualified person, was responsible for the preparation of Sections 13 and 17. Mr. Malhotra has not visited Bunker Hill due to health and travel related to COVID 19. Dr. Malhotra is independent of BHMC applying all of the tests in Section 1.5 of NI 43-101

All dollar amounts in this document are United States dollars unless otherwise noted.

2.2 SOURCES OF INFORMATION

This Technical Report is based, in part, on internal company technical reports, and maps, published government reports, company letters, memoranda, public disclosure and public information as listed in the References at the conclusion of this Technical Report. This Technical Report is supplemented by published and available reports provided by the United States Geological Survey ("USGS"), the Idaho Geological Survey, United States Bureau of Land Management and the United States Public Land Survey. Budgetary capital equipment quotes were solicited from a number of suppliers for major equipment. Supplies and material costs primarily are from other similar projects and estimates which Minetech has been recently associated. Labor costs are those currently charged the operations for work in support of mine maintenance and drilling contractor support. Labor costs were then benchmarked with other known underground contracting rates by Minetech.

Table 2-1 Abbreviations found throughout the report

Term	Description
Ag	Silver
AGP	Acid Generating Potential
AIPG	American Institute of Professional Geologists
AISC	All-in Sustaining Costs
Au	Gold
BHMC	Bunker Hill Mining Corp.
BLP	Bunker Hill Limited Partnership
CAPEX	Capital Expenditure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act or United States Superfund
CIA	Central Impoundment Area
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CPG	Certified Professional Geologist
CTP	Central Treatment Plant
Cu	Copper
CWA	Clean Water Act
DOJ	US Department of Justice
EBIDTA	Earnings before Income Tax, Depreciation and Amortization
EHC	Environmental Health Code
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESHIA	Environmental, Social and Health Impact Assessment
GRI	Global Reporting Initiative
ICOLD	International Commission on Large Dams
ICP	Inductively Coupled Plasma
IDEQ	Idaho Department of Environmental Quality
IDL	Idaho Department of Lands
IDWR	Idaho Department of Water Resources
IPDES	Idaho Pollutant Discharge Elimination System
Kt	Kilo tons
LOHS	Long-hole Open Stoping
LOM	Life of Mine
MIBC	Methyl Isobutyl Carbinol
NEPA	National Environmental Policy Act

Term	Description
NPDES	National Pollutant Discharge Elimination System
NSR	Net Smelter Return
OPEX	Operating Expenditure
Pb	Lead
PEA	Preliminary Economic Assessment
PMC	Placer Mining Corporation
Property	Bunker Hill Mine
QA/QC	Quality Assurance/Quality Control
QP(s)	Qualified Person(s)
RC or RVC	Reverse Circulation
RDA	Resource Development Associates
Rdi	Resource Development Inc
ROD	Record of Decision
RQD	Rock Quality Designation
SME	Society for Mining, Metallurgy and Exploration
SVMC	Silver Valley Mining Corporation
tpd	Tonnes per day
UAO	Unilateral Administrative Order
USGS	United States Geological Survey
Zn	Zinc

3 RELIANCE ON OTHER EXPERTS

With respect to land issues, leases and information, the Author of this Technical Report has relied upon the Title Opinion of Lyons O'Dowd Law Firm dated August 12, 2020 as well as written and verbal communication with BHMC in the preparation of Section 4.

Tax assumptions for the economic model underpinning the PEA, finalized shortly before the Company's news release regarding the PEA of September 20, 2021, were developed by Scott Farmer of Mining Tax Plan LLC. These tax assumptions were used for the economic analysis of the Project.

No other experts were relied upon in the preparation of this Technical Report.

4 PROPERTY DESCRIPTION AND LOCATION

The Bunker Hill Mine is located in Shoshone County, Idaho with portions of the mine located within the cities of Kellogg and Wardner, Idaho in northwestern USA. The Kellogg Tunnel, which is the main access to the mine, is located at 47.53611°N latitude, 116.1381W longitude. The approximate elevation for the above cited coordinates is 2366 ft. The patented mining claims depicted in Figure 4-1, below, cover an area of 5,802 acres.

As of December 15, 2021 BHMC signed a Purchase and Sale Agreement (PSA) with Placer Mining Corporation and both William and Shirley Pangburn to acquire full ownership of the subsequently listed mineral titles in addition to other Surface Rights and Real Property associated with land and structures of the Bunker Hill Mine. BHMC became the owner of Bunker Hill Mine on January 7, 2022.

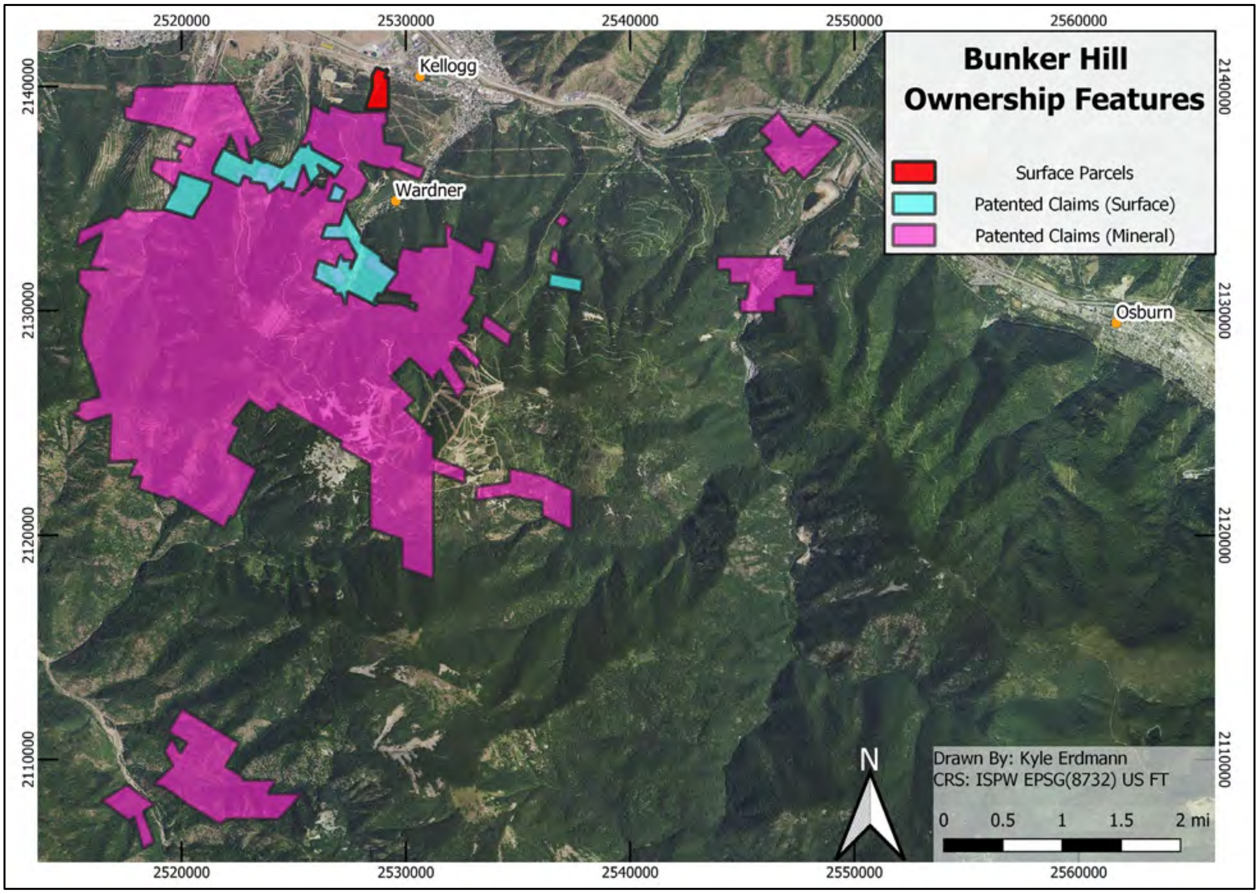


Figure 4-1 Property Map of Bunker Hill Mine Land Ownership

From its early days in the 1890s and through two World Wars, the Bunker Hill Company ("BMC") operated as an independent and well-known mining and smelting company. BMC was listed on the New York Stock Exchange. On June 1, 1968, Bunker Hill became a wholly owned subsidiary of Gulf Resources & Chemical Corp.

Growing public concern with the environment in the 1970s compelled Bunker Hill to spend large sums on plant improvements in order to comply with newly enacted federal air and water pollution laws. The Company also made major efforts to reclaim surrounding hillsides which had been impacted by the effects of decades of airborne smelter effluents and timbering for mining purposes.

Ultimately the combination of high costs of environmental compliance and declines in metal prices in the early 1980s led to the decision by Gulf Resources in August 1981 to cease operations at Bunker Hill and to sell the mine. In 1982, the company was sold to the Bunker Limited Partnership ("BLP"). The principal owners of BLP were Harry Magnuson, Duane Hagadone, Jack Kendrick and Simplot Development Corporation. Simplot Development Corporation sold its share of the partnership in 1987.

The mine was reopened from 1988 to 1990 by BLP during which time exploration, resource definition, mine development and small-scale production occurred. A decline in metals prices in the early 1990s led BLP to close the mine in January of 1991. Shortly thereafter BLP filed for bankruptcy.

On May 1, 1992, the Bunker Hill Mine was sold to PMC. The sale related to Bunker Hill Mine only. Pintlar, Inc., a subsidiary of Gulf Resources & Chemical Corporation, remained responsible for the environmental cleanup of the portion of the Bunker Hill Superfund Site related to the smelter site. Title to all patented mining claims included in the transaction was transferred from Bunker Hill Mining Corp. (U.S.) Inc. by Warranty Deed in 1992. The sale of the property was properly approved of by the U.S. Trustee and U.S. Bankruptcy Court.

BHMC's land package purchased from PMC, includes a mix of patented mining claims and ownership of surface parcels. The transaction also includes certain parcels of fee property which includes mineral and surface rights but are not patented mining claims. Mining claims and fee properties are located in Townships 47, 48 North, Range 2 East, Townships 47, 48 North, Range 3 East, Boise Meridian, Shoshone County, Idaho. The patented mining claims described by Figure 4-1, above, cover an area of 5,802.132 acres. BHMC now owns all claims that lie within the tax parcels and fee parcels listed in Table 1-1.

4.1.1 BUNKER HILL MINE MINERAL TENURE

On January 7, 2022, BHMC, through its wholly owned subsidiary Silver Valley Metals Corp. ("SVMC"), purchased the Bunker Hill Mine from PMC and other private landowners. The property consists of a combination of patented mining claims with surface rights and mineral rights ("Surface Parcels"), patented mining claims without surface ownership rights ("Mineral Parcels" as more particularly described below), and additional land not patented as mining claims under the General Mining Act of 1872 ("Platted Parcels"). The Platted Parcels and Surface Parcels are more particularly described below.

At the time of SVMC's purchase of the Bunker Hill Mine, SVMC obtained an Owner's Policy of Title Insurance ("Owner's Policy") and a Mineral Guarantee ("Mineral Guarantee") from First American Title Company in Kellogg, Idaho (the "Title Company") through Old Republic National Title Insurance Company.

The Owner's Policy insures title to the Surface Parcels and Platted Parcels is vested with SVMC, subject to the exclusions, exceptions, and conditions to coverage listed therein, with an amount of insurance of up to $7,700,000. Subject to these limitations, the Owner's Policy insures against loss or damage sustained by SVMC by reason of "Covered Risks," which include (among other things) any defect in, lien or encumbrance on the title to the Surface Parcels or Platted Parcels which is disclosed in a Public Record (as defined therein) as of the date of the policy and not otherwise excluded/excepted from coverage.

The Mineral Guarantee insures title to the surface of the Mineral Parcels, which is vested in owners other than SVMC, subject to the exceptions to coverage listed therein, in an amount of up to $4,000. The Mineral Guarantee provides information on the severance of the mineral estate from the surface rights and insures, subject to the liability exclusions, limitations, conditions, and stipulations set forth therein, against actual loss, not exceeding the liability amount, which SVMC shall sustain by reason of any incorrectness in the title to the surface of the Mineral Parcels. Research and records obtained through the Mineral Guarantee were used to determine the title owner of the Mineral Parcels.

SVMC obtained a title opinion from the law firm of Lyons O'Dowd, PLLC (the "Firm"). The Firm reviewed and relied upon the commitment for title insurance (the "Title Commitment") provided by the Title Company pertaining to the Surface Parcels and Platted Parcels and concluded that, as of the date of the opinion, PMC and the other private sellers had good and merchantable title to the Surface Parcels and Platted Parcels, subject to the qualifications, exceptions, reservations, assumptions, limitations and disclaimers identified in the Firm's opinion, the Title Commitment, and the Mineral Guarantee.

With respect to the Mineral Parcels, the Firm reviewed and relied upon the information included in the Mineral Guarantee and, as of the date of the opinion, provided a limited opinion that PMC had good and merchantable title to the Mineral Parcels, subject to the qualifications, exceptions, reservations, assumptions, limitations and disclaimers contained in the Firm's opinion, the Title Commitment, and the Mineral Guarantee.

Patented mining claims in the USA are described with respect to the Section, Township, and Range system employed throughout the country. The Surface Parcels, Mineral Parcels and Platted Parcels that comprise the Bunker Hill Mine land position are located in Townships 47, 48 North, Range 2 East, Townships 47, 48 North, Range 3 East, Boise Meridian, Shoshone County, Idaho. All the Surface Parcels, Mineral Parcels and Platted Parcels are patented (either through the General Mining Act or another fee-based patent act) and owned by SVMC as outlined herein; therefore, other than annual property taxes assessed by Shoshone County, there are no ongoing maintenance fees that would be paid for maintenance of unpatented mining claims through the Bureau of Land Management.

DESCRIPTION OF SURFACE PARCELS AND PLATTED PARCELS

PARCEL 1:
Being a tract of land situated in the Northeast ¼ of the Southeast ¼ of Section 1,
Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho more particularly
described as follows:
Beginning at the East ¼ corner of said Section 1, Township 48 North, Range 2 East, B.M.,
Shoshone County, State of Idaho marked by a concrete monument and also the point of
beginning, thence
South 87°28'34" West 165.92 feet; thence
South 30°34'59" West, 220.96 feet; thence
Along a curve right, radius = 40 feet, the long chord bears South 66°18'09" West, 75.71 feet;
thence
North 78°22'26" West, 36.16 feet; thence
South 10°52'21" West, 204.04 feet; thence
North 75°18'39" West, 252.91 feet; thence
South 17°22'44" West, 1124.08 feet; thence
North 87°41'35" East, 1007.62 feet; thence
North 00°12'22" West, 1389.14 feet to the point of beginning.

PARCEL 2:
Being a tract of land lying in the Northeast ¼ and the Southeast ¼ of Section 1,
Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho and more
particularly described as follows:
Beginning at a point from whence the East ¼ corner of Section 1, Township 48 North,
Range 2 East, B.M., Shoshone County, State of Idaho bears South 10°03'11" East, 409.83
feet distant; thence
South 21°46'03" West, 150.17 feet; thence
North 65°43'21" West, 407.49 feet; thence
South 01°10'02" West, 94.54 feet; thence
South 27°17'34" West, 90.00 feet; thence
South 39°32'35" East, 342.19 feet; thence
South 17°00'49" West, 108.69 feet; thence
South 09°45'56" East, 92.08 feet; thence
Along a curve right, radius = 40 feet, the long chord bears North 68°36'01" East, 43.86 feet;
Thence
North 30°34'41" East, 331.46 feet; thence
Along a curve right, radius = 100 feet, the long chord bears North 48°38'04" East, 62.13
feet; thence
Along a curve left, radius = 161 feet, the long chord bears North 16°29'47" East, 198.94 feet; thence
North 31°27'01" West, 84.16 feet to the point of beginning and sometimes referred to as Lot
2, Mine Short Plat No. 1 as shown on the official recorded plat thereof recorded as
Instrument No. 350327, records of Shoshone County, State of Idaho.

PARCEL 3:
Being a tract of land situated in the Northeast ¼ of the Southeast ¼ of Section 1, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho more particularly described as follows:
Beginning at a point whence the East ¼ corner of Section 1, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho bears North 59°22'09" East, 395.37 feet distant; thence
Along a curve left, radius = 40 feet, the long chord bears South 15°24'18" West, 27.50 feet; thence
North 78°22'26" West, 36.16 feet; thence
South 10°52'21" West, 204.04 feet; thence
North 75°18'39" West, 252.91 feet; thence
North 02°48'24" West, 383.22 feet; thence
North 31°43'07" East, 271.88 feet; thence
South 39°32'35" East, 342.19 feet; thence
South 17°00'49" West, 108.69 feet; thence
South 09°45'56" East, 92.08 feet to the point of beginning and sometimes referred to as Lot 3 Mine Plant Short Plat No. 1.

PARCEL 4:
Saxon, M.S. 2067 Patented Mining Claim situated in Yreka Mining District in Section 11 & 12,
Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 553, records of Shoshone County, State of Idaho.

PARCEL 5:
Link, M.S. 2123 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 601, records of Shoshone County, State of Idaho.

PARCEL 6:
Spur, M.S. 2124 Patented Mining Claim situated in Yreka Mining District in Sections 11 and 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 48, Deeds, at page 479, records of Shoshone County, State of Idaho.

PARCEL 7:
Spear, M.S. 2496 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 43, Deeds, at page 49, records of Shoshone County, State of Idaho.

PARCEL 8:
Marion, M.S. 2583 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 47, Deeds, at page 196, records of Shoshone County, State of Idaho.

PARCEL 9:
Ben Herr, Kruger and Philippine, M.S. 2599 Patented Mining Claims situated in Yreka Mining District in Sections 12 and 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 47, Deeds, at page 27, records of Shoshone County, State of Idaho.

PARCEL 10:
Hough, M.S. 2611 Patented Mining Claim situated in Yreka Mining District in Sections 12 and 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 99, records of Shoshone County, State of Idaho.

PARCEL 11:

California, M.S. 2627 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 45, Deeds, at page 503, records of Shoshone County, State of Idaho.

PARCEL 12:
Check, M.S. 2840 Patented Mining Claim situated in Yreka Mining District in Sections 1 and 12, Township 48, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 54, Deeds, at page 465, records of Shoshone County, State of Idaho.

PARCEL 13:
That portion of Florence, M.S. 2862 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho and more particularly described in those certain deeds recorded November 30, 1966 as Instrument Nos. 208505 and 208506, records of Shoshone County, State of Idaho. Patent recorded in Book 55, Deeds, at page 585, records of Shoshone County, State of Idaho.

PARCEL 14:
Billy, M.S. 3111 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 96, Deeds, at page 398, records of Shoshone County, State of Idaho.

PARCEL 15:
Lucky, M.S. 3470 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., and in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 91, Deeds, at page 283, records of Shoshone County, State of Idaho.

PARCEL 16:
Moat, M.S. 3503 Patented Mining Claim situated in Yreka Mining District in Sections 17, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 96, Deeds, at page 356, records of Shoshone County, State of Idaho.

PARCEL 17:
Bunker Hill, M.S. 579 Patented Mining Claim situated in Yreka Mining District in Sections 12 & 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 101, records of Shoshone County, State of Idaho.

PARCEL 18:
Sullivan, M.S. 580 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 190, records of Shoshone County, State of Idaho.

PARCEL 19:
Important Fraction, M.S. 581 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 285, records of Shoshone County, State of Idaho.

PARCEL 20:
Phil Sheridan, M.S. 604 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 281, records of Shoshone County, State of Idaho.

PARCEL 21:
Reed Fraction, M.S. 607 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 246, records of Shoshone County, State of Idaho.

PARCEL 22:
Bunker Hill Millsite, M.S. 608 Patented Millsite Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 4, Deeds, at page 181, records of Shoshone County, State of Idaho.

PARCEL 23:
Small Hopes, M.S. 609, Amended Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 325, records of Shoshone County, State of Idaho.

PARCEL 24:
Bottom Dollar Fraction, M.S. 629 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 252, records of Shoshone County, State of Idaho.

PARCEL 25:
Chestnut Fraction, M.S. 632 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 339, records of Shoshone County, State of Idaho.

PARCEL 26:
Emma & Last Chance Millsite, M.S. 703 Patented Millsite claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 4, Deeds, at page 179, records of Shoshone County, State of Idaho.

PARCEL 27:
Ontario, M.S. 755 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 382, records of Shoshone County, State of Idaho.

PARCEL 28:
Carbonate, M.S. 764 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 325, records of Shoshone County, State of Idaho.

PARCEL 29:
Silver Casket, M.S. 790 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 15, Deeds, at page 25, records of Shoshone County, State of Idaho.

PARCEL 30:
Turkey Buzzard, M.S. 836 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in book 6, Deeds, at page 243, records of Shoshone County, State of Idaho.

PARCEL 31:
Snowslide Fraction, M.S. 837 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 249, records of Shoshone County, State of Idaho.

PARCEL 32:
Silver, M.S. 1085 Patented Mining Claim situated in Yreka Mining District in Sections 12 and 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 479, records of Shoshone County, State of Idaho.

PARCEL 33:
Johnnesburg, M.S. 1192 Patented Mining Claim situated in Yreka Mining District in Sections 12 & 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 232, records of Shoshone County, State of Idaho.

PARCEL 34:
Puritan, M.S. 1328 Amended Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 196, records of Shoshone County, State of Idaho.

PARCEL 35:
No. 5, M.S. 1357 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 18, Deeds, at page 234, records of Shoshone County, State of Idaho.

PARCEL 36:
Omaha, M.S. 1409 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents at page 190, records of Shoshone County, State of Idaho.

PARCEL 37:
Legal Tender, M.S. 1639 Amended Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 304, records of Shoshone County, State of Idaho.

PARCEL 38:
Triangle Fraction, M.S. 2065 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 604, records of Shoshone County, State of Idaho.

PARCEL 39:
A parcel of land situated in the Northwest Quarter of Section 6, Township 48 North, Range 3 East, B.M., Shoshone County, Idaho, and more particularly described as follows:
Using the Bunker Hill Triangulation System Meridian and coordinates and beginning at Corner No. 1, a point identical with the West Quarter Corner of said Section 6 (N9667.57, E687.41), and running thence
North 0°42'20" East, 372.46 feet along the West boundary line of said Section 6 to Corner No. 2; thence
South 20°36' East, 59.71 feet to Corner No. 3, a point identical with Corner No. 4 of the Washington Water Power Company (WWP Co.) tract as described in Document No. 302109, recorded November 2, 1982, records of Shoshone

County, Idaho from The Bunker Hill Company to Bunker Limited Partnership, Parcel 28 of Exhibit "A", pages 12 and 13; thence
South 69°24' West, 12.87 feet to Corner No. 4, identical with Corner No. 3 of said WWP Co. tract; thence
South 14°20' East, 118.05 feet to Corner No. 5, identical with Corner No. 2 of said WWP Co. tract; thence
South 2°23'30" West, 187.00 feet to Corner No. 6, identical with Corner No. 1 of said WWP Co. tract; thence
South 80°00' East, 53.98 feet along the Southerly boundary line of said WWP Co. tract to its point of intersection with the South boundary line of the Northwest Quarter of said Section 6; thence
South 88°55'25" West, 88.05 feet along said boundary line of said Section 6 Northwest Quarter to Corner No. 1 and place of beginning.

DESCRIPTION OF MINERAL PARCELS

PARCEL 1:
Reeves, M.S. 1412 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 8, Deeds, at page 66.

PARCEL 2:
Packard, M.S. 1413 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 193.

PARCEL 3:
Quaker, M.S. 1414 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 388.

PARCEL 4:
Danish, M.S. 1503 Amended Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 north, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded as Instrument No. 209774, records of Shoshone County, State of Idaho.

PARCEL 5:
Alferd (shown of record as Alfred) and Maggie, M.S. 1628 Patented Mining Claims situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 247.

PARCEL 6:
Princess, M.S. 1633 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 301.

PARCEL 7:
Royal Knight and Silver King, M.S. 1639 Amended Patented Mining Claims situated in Yreka Mining District in Sections 2 and 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 304.

PARCEL 8:
Phillippine, M.S. 1663 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 322.

PARCEL 9:
Harrison, M.S. 1664 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 307.

PARCEL 10:
Ninety-Six (96), M.S. 1715 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 349.

PARCEL 11:
Lydia Fraction, Mabel, Manila, O.K., O.K. Western, Sunny and Whippoorwill, M.S. 1723 Patented Mining Claim situated in Yreka Mining District in Sections 2 and 3, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 28, Deeds, at page 446.

PARCEL 12:
William Lambert Fraction, M.S. 1945 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 1, Deeds, at page 580.

PARCEL 13:
Band, M.S. 2507 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 251.

PARCEL 14:
Maine, M.S. 2626 Patented Mining Claim situated in Yreka Mining District in Sections 2 & 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 45, Deeds, at page 180.

PARCEL 15:
Venture, M.S. 3164 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 62, Patents, at page 72.

PARCEL 16:
Goth, L-2, L-3 M. S. 3214 Patented Mining Claims Patent Mining Claim situated in Yreka Mining District in Sections 2 and 9, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 64, Deeds, at page 284.

PARCEL 17:
Castle, M.S. 3503 Patented Mining Claim situated in Yreka Mining District in Section 17, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 96, Deeds, at page 356.

PARCEL 18:
Silver King Millsite, M.S. 3563 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 123, Deeds, at page 166.

PARCEL 19:
Tyler, M.S. 546 Amended Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 34, Deeds, at page 546

PARCEL 20:
Emma, M.S. 550 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded as Instrument No. 209775, records of Shoshone County, State of Idaho.

PARCEL 21:
Last Chance, M. S. 551 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 1, Deeds, at page 433

PARCEL 22:
Sierra Nevada, M.S. 554 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 1, Deeds, at page 358.

PARCEL 23:
Viola, M.S. 562 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 619.

PARCEL 24:
Oakland, M.S. 569 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 235.

PARCEL 25:
Jackass, M.S. 586 Amended Patented Mining Claim situated in Yreka Mining District in Sections 12 & 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Deeds, at page 75.

PARCEL 26:
Lackawana, M.S. 614 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 6, Patents, at page 260.

PARCEL 27:
Skookum, M.S. 615 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book X, Deeds, at page 313

PARCEL 28:
Rolling Stone, M.S. 619 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., and in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 484.

PARCEL 29:
Fairview, M.S. 621 Patented Mining Claim situated in Yreka Mining District in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 301.

PARCEL 30:
San Carlos, M.S. 750 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 535.

PARCEL 31:
Ontario Fraction, M.S. 755 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 382.

PARCEL 32:
Sold Again Fraction, M.S. 933 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 9, Deeds, at page 207.

PARCEL 33:
Republican Fraction, M.S. 959 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 301.

PARCEL 34:
Likely, M.S. 1298 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book B, Patents, at page 25.

PARCEL 35:
Apex, Rambler and Tip Top, M.S. 1041 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 139.

PARCEL 36:
Butte, Cariboo, Good Luck, Jersey Fraction and Lilly May, M.S. 1220 Patented Mining Claim situated in Yreka Mining District in Sections 11 and 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 24, Deeds, at page 23.

PARCEL 37:
Mabundaland, Mashonaland, Matabelaland, Stopping and Zululand, M.S. 1227 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 481.

PARCEL 38:
Alla, Bonanza Fraction, East, Ironhill, Lacrosse, Miners Delight, No Name, Ollie McMillin, Schofield, Sullivan Extension and Summit, M.S. 1228 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., and in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 301.

PARCEL 39:
Allie, Blue Bird, Bought Again, Josie, Maple, Offset, Rookery and Susie, M.S. 1229 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 20, Deeds, at page 580.

PARCEL 40:
Hornet M.S. 1325 Amended Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 607.

PARCEL 41:
King, M.S. 1325 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 295

Parcel 42:
Sampson, M.S. 1328 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 196.

PARCEL 43:
Comstock, Daisy, Dandy, Jessie, Julia, Justice, Ophir and Walla Walla, M.S. 1345 Patented Mining Claim situated in Yreka Mining District in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 20, Deeds, at page 584.

PARCEL 44:
Lucky Chance, M.S. 1349 Patented Mining Claim situated in Yreka Mining District in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 15, Deeds, at page 494.

PARCEL 45:
Excelsior, M.S. 1356 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 157.

PARCEL 46:
No. 1, No. 2, No. 3 and No. 4, M.S. 1357 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 18, Deeds, at page 234.

PARCEL 47:
Carter, Coxey, Deadwood, Debs, Hamilton, Hard Cash and Nevada, M.S. 1466 Patented Mining Claim situated in Yreka Mining District in Sections 11 and 14, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 20, Patents, at page 577.

PARCEL 48:
Arizona, M. S. 1488 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 199.

PARCEL 49:
Wheelbarrow, M.S. 1526 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 442.

PARCEL 50:
New Era, M.S. 1527 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 478.

PARCEL 51:
Hamilton Fraction, M.S. 1619 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 14, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 289.

PARCEL 52:
Berniece, Mountain King, Mountain Queen, Southern Beauty and Waverly, M.S. 1620 Patented Mining Claim situated in Yreka Mining District in Section 14, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 292.

PARCEL 53:
Good Enough, M.S. 1628 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 247.

PARCEL 54:
McLelland, M.S. 1681 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 622.

PARCEL 55:
Stemwinder, M.S. 1830 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 35, Deeds, at page 437.

PARCEL 56:
Utah, M.S. 1882 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 415.

PARCEL 57:
Butternut and Homestake, M.S. 1916 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 434.

PARCEL 58:
Overlap, M.S. 2052 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book A, Patents, at page 532.

PARCEL 59:
Bee, Combination, Hawk, Idaho, Iowa, Oregon, Scorpion Fraction and Washington, M.S. 2072 Patented Mining Claim situated in Yreka Mining District in Sections 1 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 33, Deeds, at page 459.

PARCEL 60:
Eighty-Five (85), Iowa No. 2, K-10, K-11, K-12, K-13, K-16, K-17, K-18, K-19, K-20, K-21, K-22, K-23, K-28, K-29, K-30, K-31, K-32, K-39, Minnesota, Missouri No. 2, Ninety-One (91) and Ninety-two (92), M.S. 2077 Patented Mining Claim situated in Yreka Mining District in Sections 14, 15 and 22, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 34, Patents, at page 425.

PARCEL 61:
Chain, M.S. 2078 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 432.

PARCEL 62:
K-1, K-2, K-3, K-4, K-5, K-6, K-7, K-8, K-9, K-14, K-15, K-24, K-25, K-26, K-27, K-33, K-34, K-35, K-36, K-37, K-38, Kansas, Missouri and Texas, M.S. 2080 Patented Mining Claim situated in Yreka Mining District in Sections 14 and 23, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 34, Patents, at page 440.

PARCEL 63:
Bear, Black, Brown, Dewey, Ito, Oyama, S-1, S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-12, S-13, Sampson, Sarnia and Star, M. S. 2081 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., and Sections 18 and 19, Township 48 North, Range 3 East, B.M., , Shoshone County, State of Idaho. Patent recorded in Book 34, Patents, at page 456.

PARCEL 64:
Sims, M.S. 2186 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book B, Patents, at page 23.

PARCEL 65:
Lincoln, M.S. 2187 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 40, Deeds, at page 126.

PARCEL 66:
Brooklyn, New Jersey and Schute Fraction, M.S. 2201 Patented Mining Claim situated in Yreka Mining District in Section 10, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 38, Deeds, at page 52.

PARCEL 67:
Cheyenne, M.S. 2249 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 42, Deeds, at page 505.

PARCEL 68:
Buckeye, M.S. 2250 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho.

PARCEL 69:
Timothy Fraction, M.S. 2274 Patented Mining Claim situated in Yreka Mining District in Section 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 43, Deeds, at page 36.

PARCEL 70:
Confidence and Flagstaff, M.S. 2328 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., and in Section 7, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book B, Patents, at page 27.

PARCEL 71:
Norman, M.S. 2368 Patented Mining Claim situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 410.

PARCEL 72:
Grant, M.S. 2369 Patented Mining Claim situated in Yreka Mining District in Sections 11 & 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 408.

PARCEL 73:
Cypress, M.S. 2429 Patented Mining Claim situated in Yreka Mining District in Sections 12 & 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 255.

PARCEL 74:
Hickory and Spruce Fraction, M.S. 2432 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 253.

PARCEL 75:
Helen Marr and Hemlock, M.S. 2452 Patented Mining Claim situated in Yreka Mining District in Sections 12 and 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 415.

PARCEL 76:
Spokane, M.S. 2509 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 41, Deeds, at page 305.

PARCEL 77:
Heart, Jack, Key, Queen and Teddy, M.S. 2511 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 45, Deeds, at page 21.

PARCEL 78:
Ace, Club, Diamond, Nellie, Roman and Spade, M.S. 2583 Patented Mining Claim situated in Yreka Mining District in Sections 11 and 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 47, Deeds, at page 196.

PARCEL 79:
Brady, M.S. 2584 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 43, Deeds, at page 135.

PARCEL 80:
A, B, C, D, E, F, Drew, Edna, Emily Grace, Foster, K-40, Lilly, Medium, Missing Link, No. 1, No. 2, Peak, Penfield, Sliver, Snowline, Yreka No. 10, Yreka No. 11, Yreka, No. 12, Yreka No. 13, Yreka No. 14, Yreka No. 15, Yreka No. 16, Yreka No. 17, Yreka no. 18, Yreka No. 19, Yreka No. 20, Yreka no. 21, Yreka No. 22, Yreka No. 23, Yreka No. 24, Yreka No.

25 and Yreka No. 26, M.S. 2587 Patented Mining Claim situated in Yreka Mining District in Sections 13, 24 and 25, Township 48 North, Range 2 East, B.M., and in Sections 19 and 30, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 57, Deeds, at page 597 and in Book 57, Deeds, page 85.

PARCEL 81:
Boer and Grant, M.S. 2599 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 45, Deeds, at page 27.

PARCEL 82:
Asset, Childs, Eli, Evans, Gun, Nick, Ox, Ruth, Sherman, Simmons, Taft and Yale, M.S. 2611 Patented Mining Claim situated in Yreka Mining District in Sections 12 and 13, Township 48 North, Range 2 East, B.M., and in Sections 18 & 19, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 99.

PARCEL 83:
African, Gus, Roy and Trump, M.S. 2624 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 43, Deeds, at page 561.

PARCEL 84:
Kirby Fraction, McClellan, Miles and Pitt, M.S. 2654 Patented Mining Claim situated in Yreka Mining District in Section 12, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 47, Deeds, at page 632.

PARCEL 85:
Bonanza King Millsite, M.S. 2868 Patented Mining Claim situated in Yreka Mining District in Section 8, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 61, Deeds, at page 112.

PARCEL 86:
Flagstaff No. 2, Flagstaff No. 3, Flagstaff No. 4, Scelinda No. 1, Scelinda No. 2, Scelinda No. 3, Scelinda No. 4, Scelinda No. 5, Scelinda No. 7 and Scelinda No. 8, M.S. 2921 Patented Mining Claim situated in Yreka Mining District in Sections 1 and 12, Township 48 North, Range 2 East, B.M., and in Section 7, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 59, Deeds, at page 120.

PARCEL 87:
Ethel, Katherine, Manchester, McRooney, Stuart No. 2, Stuard No. 3, Sullivan and Switzerland, M.S. 2966 Patented Mining Claim situated in Yreka Mining District in Sections 10 and 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 482.

PARCEL 88:
Hoover No. 1, Hoover No. 2, Hoover No. 3, Hoover No. 4 and Hoover No. 5, M.S. 2975 Patented Mining Claim situated in Yreka Mining District in Sections 13, 14, 23 & 24, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 490.

PARCEL 89:
Adath, Al-kyris, Anna Laura, Atlas, Atlas No. 1, Fraction, Gay, Panorama, Red Deer and Setzer, M.S. 2976 Patented Mining Claim situated in Yreka Mining District in Sections 22 and 23, Township 48 North, Range 2 East, B.M., and in Section 7, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 493.

PARCEL 90:
Lesley, Lesley No. 2, Lesley No. 3, Little Ore Grande, North Wellington, Ore Grande No. 1, Ore Grande No. 2, Ore Grande No. 3, Ore Grande No. 4, Ore Grande no. 5 and Wellington M.S. 2977 Patented Mining Claim situated in

Yreka Mining District in Sections 23 and 26, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 496.

PARCEL 91:
Marko, V.M. No. 1 and V.M. No. 2, M.S. 3051 Patented Mining Claim situated in Yreka Mining District in Sections 7 and 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 59, Deeds, at page 78.

PARCEL 92:
Army and Navy, M.S. 3096 Patented Mining Claim situated in Yreka Mining District in Section 22, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 60, Deeds, at page 223.

PARCEL 93:
Oracle, Orbit, Oreano, Ore Shoot, Orient, Oriental Orphan and Orpheum, M.S. 3097 Patented Mining Claim situated in Yreka Mining District in Section 23, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 60, Deeds, at page 255.

PARCEL 94:
East Midland, Midland, Midland No. 1, Midland No. 3, Midland No. 4, Midland No. 5, Midland No. 6, Midland No. 7, Midland No. 8 and North Midland, M.S. 3108 Patented Mining Claim situated in Yreka Mining District in Sections 13 & 24, Township 48 North, Range 2 East, B.M., and in Section 19, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 60, Deeds, at page 319.

PARCEL 95:
Monte Carlo No. 1, Monte Carlo No. 2, Monte Carlo No. 3, Monte Carlo No. 4 and Monte Carlo No. 5, M.S. 3177 Patented Mining Claim situated in Yreka Mining District in Sections 7 and 18, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 63, Deeds, at page 183.

PARCEL 96:
Long John, M.S. 3179 Patented Mining Claim situated in Yreka Mining District in Section 7, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 63, Deeds, at page 611.

PARCEL 97:
L-1, M.S. 3214 Patented Mining Claim situated in Yreka Mining District in Section 2, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 64, Deeds, at page 284.

PARCEL 98:
Pete, Prominade, Sam and Zeke, M.S. 3389 Patented Mining Claim situated in Yreka Mining District in Section 10, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 77, Deeds, at page 173.

PARCEL 99:
Battleship Oregon, Charly T., Lucia, Marblehead, Margaret, Nancy B., Olympia and Phil, M.S. 3390 Patented Mining Claims situated in Yreka Mining District in Sections 11 and 14, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 77, Deeds, at page 338.

PARCEL 100:
Beta, M.S. 3471 Patented Mining Claim situated in Yreka Mining District in Section 13, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded as Instrument No. 168414, records of Shoshone County, State of Idaho.

PARCEL 101:
Spokane Central No. 1, Spokane Central No. 2, Spokane Central No. 3, Spokane Central No. 3 Fr., Spokane Central No. 4 and Spokane Central No. 5, M.S. 3472 North Fork Coeur d'Alene Patented Mining Claim situated in Yreka Mining District in Sections 19, 20 and 29, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patents recorded as Instrument No. 179430 and as Instrument No. 219606, records of Shoshone County, State of Idaho.

PARCEL 102:
Anaconda, Apex, Apex no. 2, Apex No. 3, Blue Bird, Blue Grouse, Bob White, Butte, Butte Fraction, Cougar, Galena, Huckleberry No. 2, Leopard, Lynx, MacBenn, Martin, Pheasant, Robbin and Sonora, M.S. 3361 Patented Mining Claims situated in Yreka Mining District in Sections 1 and 2, Township 47 North, Range 2 East, B.M., and in Section 35, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 76, Deeds, at page 626.

PARCEL 103:
A 1/6 interest only in the Baby, Keystone, Van and Woodrat, M.S. 2856 Patented Mining Claims situated in Yreka Mining District in Sections 2 & 3, Township 47 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 56, Deeds, at page 52.

PARCEL 104:
Evening Star, Evening Star Fraction, Maryland, Monmouth, Oregon, Oregon No. 2 and Silver Chord, M.S. 2274 Patented Mining Claims situated in Yreka Mining District in Section 15, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 43, Deeds, at page 36.

PARCEL 105:
Spring, M.S. 3298 Patented Mining Claims situated in Yreka Mining District in Section 15, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 73, Deeds, at page 394.

PARCEL 106:
Milo Millsite, M.S. 2869 Patented Mining Claims situated in Yreka Mining District in Sections 8 and 17, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 61, Deeds, at page 111.

PARCEL 107:
Black Diamond, Carbonate, Enterprise, Enterprise Extension, Gelatin, Giant and Rolling Stone, M.S. 3423 Patented Mining Claims situated in Yreka Mining District in Sections 3 and 10, Township 48 North, Range 3 East, B.M., Shoshone County, State of Idaho.

PARCEL 108:
Chief No. 2 and Sugar, M.S. 2862 Patented Mining Claims situated in Yreka Mining District in Section 11, Township 48 North, Range 2 East, B.M., Shoshone County, State of Idaho. Patent recorded in Book 55, Deeds, at page 585.

4.1.2 OTHER BUNKER HILL PROPERTY CONSIDERATIONS

Patented mining claims in the State of Idaho do not require permits for underground mining activities to commence on private lands. Other permits associated with underground mining may be required, such as water discharge and site disturbance permits. Water discharged from Bunker Hill Mine is being treated at the Central Treatment Plant ("CTP"), which is located across the street from Bunker Hill Mine. The facility is owned by US EPA. Water discharged from the CTP meets the requirements of an existing NPDES permit for discharge into the South Fork of the Coeur d'Alene River. The company is required to obtain its own NPDES water discharge permit by May 14, 2023. Engineering work is expected to be completed in 2022 for a water treatment system at Bunker Hill Mine that will meet NPDES discharge limits (now Idaho Pollutant Discharge Elimination System, or "IPDES").

The land package included purchase of Bunker Hill Mine by BHMC includes approximately the same land and mine infrastructure that was transferred to PMC in 1992. Over 90% of surface ownership of patented mining claims not owned by PMC is owned by different landowners. These include: Stimpson Lumber Co.; Riley Creek Lumber Co.; Powder LLC.; Golf LLC.; C & E Tree Farms; and Northern Lands LLC.

4.2 ENVIRONMENTAL LIABILITIES

On May 14, 2018, Bunker Hill Mining Corp. ("BHMC"), the U.S. Environmental Protection Agency ("EPA") and the Department of Justice ("DOJ") entered into an administrative settlement agreement and order on consent. Concurrent with this administrative settlement agreement, on March 12, 2018, EPA and DOJ lodged a consent decree with the owner of the mine at the time, Placer Mining Corporation ("PMC"). The settlement package was essential for the redevelopment of Bunker Hill Mine that is now beginning because it established specific limitations on liability for past environmental damage related to CERCLA, also known as the United States Superfund, for the Bunker Hill Mine.

The Settlement Agreement and Order on Consent (the "Settlement") specifically limits BHMC's liability for past environmental damage in exchange for performance of obligations that are described later in the agreement. The "Settlement" can be found and read in its entirety on the US EPA's website under CERCLA Docket No. 10-2017-0123. These obligations include $20 million in recovery of past EPA response costs for the mine's water treatment through a schedule of payments that were to occur over a 7-year period starting in 2018. BHMC also became liable for ongoing water treatment costs incurred by the EPA at the water treatment facility located across the street from the Mine, known as the Central Treatment Plant ("CTP"). The agreement also specified a range of care and maintenance activities within the mine that would be required jointly with PMC.

On December 18, 2021 BHMC signed an amendment to the Settlement Agreement along with the EPA, US DOJ and the Idaho Department of Environmental Quality ("IDEQ"). Material changes to the Settlement Agreement included a rescheduling of the payments so that $17 million of the historical cost recovery payments BHMC anticipates making from projected future cash flow from sales of concentrate produced by the mine. The amended payment schedule is:

Date	Amount
Within 30 days of the First Amendment Effective Date	$2,000,000 (paid by BHMC)
November 1, 2024	$3,000,000
November 1, 2025	$3,000,000
November 1, 2026	$3,000,000
November 1, 2027	$3,000,000
November 1, 2028	$3,000,000
November 1, 2029	$2,000,000 plus accrued interest

Other changes included a modification of payment for current ongoing water treatment services provided to the mine by EPA and IDEQ. Rather than two semi-annual payments of $480,000, BHMC will make a monthly payment of $140,000 for the first 12 months after execution of the amendment. From months 13 onward, the monthly payment will increase to $200,000. The increase in annualized costs of water treatment is the result of recently completed upgrades of the water treatment system at the CTP that allow it meet more stringent discharge standards. If and when BHMC develops its own water treatment system that is capable of meeting water discharge standards, these payments will cease. BHMC will also make an addition payment to EPA of approximately $2.9M within 90 days of the effective date of the Settlement Amendment.

These constitute the current environmental obligations and responsibilities of BHMC related to Bunker Hill mine site.

4.2.1 HISTORY OF SUPERFUND LIABILITIES

In 1983, Bunker Hill Mine was included in the 21-square mile box (the “Site”) listed on the Environmental Protection Agency’s National Priorities List as a Superfund Site. In 1992, PMC purchased a portion of the Site, which includes underground workings, mineral rights, and much of the land surface above the Mine, from Bunker Limited Partnership. PMC did not purchase the entire Complex nor the Central Treatment Plant (“CTP”) that was constructed by Gulf Resources in 1974 and operated until the sale of Bunker Hill to BLP.

At the time of purchase, PMC assumed liability for Bunker Hill Mine for environmental response costs and any claims under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), also known as Superfund.

In November 1994, Federal and State governments assumed operation of the CTP for ongoing treatment of Acid Mine Drainage.

Two years after PMC purchased Bunker Hill Mine, in 1994, EPA issued a Unilateral Administrative Order ("UAO") to PMC directing PMC to meet three main obligations related to Bunker Hill Mine effluent and water management in and around the mine site. These included:

- Keeping the mine pool (flooded workings within the mine) pumped to an elevation below the level of the South Fork of the Coeur d'Alene River (at or below Level 11 of the Mine)
- To convey mine water to the EPA’s Central Treatment Plant for treatment unless an alternative form of treatment was approved,
- Provide for emergency mine water storage within the mine.

In 2017, EPA issued an additional UAO to PMC directing PMC to:

- Control mine water flows to the CTP during needed upgrades at the CTP
- In high flow periods, to conduct operation and maintenance of the Reed Landing Flood Control Project,
- To file an environmental covenant on a portion of the Mine property regarding access and operation and maintenance,
- Allowing PMC to fill the mine pool to Level 10 during specific events.

EPA has incurred costs in operating the CTP, which treats the approximately 1,300 to 1,400 gallons-per-minute of acid mine drainage released from the mine on an ongoing daily basis.

The consent decree of 2018 and administrative settlement agreement, mentioned above, embody a settlement package involving PMC, BHMC, and the United States at the Bunker Hill Mining and Metallurgical Superfund Site. The consent decree and administrative settlement agreement work in tandem. The Settlement Amendment does not include PMC. It was signed only between BHMC, US EPA, DOJ and IDEQ.

4.3 OBSERVATIONS

To the extent known, the Authors know of no other royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject.

The Author knows of no other environmental liabilities to which the Property is subject.

The Author is unaware of any other permits that must be acquired to conduct work on the Property.

The Author knows of no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Property.

4.4 ENVIRONMENTAL LIABILITIES

BHMC’s environmental liabilities are limited with respect to past environmental damage by paragraph II.5. of its Settlement Agreement and Order on Consent with the US EPA (“Settlement Agreement”). This paragraph states:

> "In view of the complex nature and significant extent of the work to be performed in connection with the response actions at the Mine and the Site, and the risk of claims under CERCLA being asserted against Purchaser as a consequence of Purchaser's activities at the Site pursuant to this Settlement Agreement, one of the purposes of this Settlement Agreement is to resolve, subject to the reservations and limitations contained in Section XVIII ("Reservations of Rights by United States"), any potential liability of Purchaser under CERCLA for the Existing Contamination and Work as defined by Paragraph 10."

The Work program defined in Paragraphs 9 of the Settlement Agreement is described in the "Environmental Activities" section of this study as "Ongoing Work Required by US EPA." The liabilities of BHMC are further described in the Settlement Agreement in paragraph 10, which stipulates as follows:

> "For so long as the BHMC leases, owns, and/or occupies Bunker Hill Mine, BHMC is responsible for paying on behalf of Placer Mining Corporation (PMC), as a portion of the purchase price, and in satisfaction of US EPA's claim for cost recovery against PMC as set forth in the Complaint filed by the United States on March 17,2004 in the United States District Court for the District of Idaho (2:04-cv-00126), to US EPA $20,000,000 in accordance with the following payment schedule:

Table 4-1 Water Treatment Cost Recovery Schedule

Date	**Amount**
Within 30 days of the Effective Date of the Settlement Agreement	$1,000,000 (Paid by BHMC in 2018)
Within 30 days of the First Amendment Effective Date	$2,000,000 (paid by BHMC in Jan 2022)
November 1, 2024	$3,000,000
November 1, 2025	$3,000,000
November 1, 2026	$3,000,000
November 1, 2027	$3,000,000
November 1, 2028	$3,000,000
November 1, 2029	$2,000,000 plus accrued interest

> BHMC is responsible for making all future cost recovery payments to US EPA now that it has purchase the Bunker Hill Mine from PMC.
>
> BHMC's liability for such payments does not extend to any year in which BHMC no longer leases, owns, and/or occupies the Mine after July 1.

Beginning on the first day of the month following the First Amendment Effective Date, BHMC shall additionally make monthly payments in the amount of $140,000 to IDEQ, unless otherwise directed by EPA, for the estimated costs at the CTP associated with the treatment of water from the Mine. One year after the First Amendment Effective Date, BHMC shall make monthly payments in the amount of $200,000 to IDEQ, unless otherwise directed by EPA, for the estimated costs at the CTP associated with the treatment of water from the Mine. Two years after the First Amendment Effective Date, BHMC shall make monthly payments of the estimated mean average costs over the previous two years associated with the treatment of water from the Mine to IDEQ, unless otherwise directed by EPA. EPA and IDEQ will determine actual costs incurred and attributable to the Mine based on the following: (1) water treatment costs for lime and flocculants will be determined based on the Mine waters relative proportion of lime demand per month; (2) all other water treatment costs, including on-call maintenance and emergency responses (OMERs) except those that meet the criteria of number (3) will be determined based on the Mine's relative percentage of hydraulic load per month; and (3) OMERs attributable to changes in the Mines water chemistry and/or hydraulic load will be 100% billed to BHMC. IDEQ will send written notification to BHMC with a copy to EPA annually to reconcile water treatment costs paid with actual costs incurred, along with a bill for any owed costs, as appropriate. Within 30 days of receipt of the annual notification and bill, BHMC may request to meet with EPA and IDEQ to discuss the amounts billed. If BHMC disagrees with any amount billed, BHMC may utilize dispute resolution pursuant to Section XIV of the Settlement Agreement. Payment of any undisputed owed costs as indicated in such notification and bill shall be paid 60 days after the date of such bill. BHMC shall continue to make all of the foregoing water treatment payments for so long as EPA and/or IDEQ are treating water from the Mine.

The activities planned in this Technical Report will create minimal surface disturbance and are low environmental impact in nature. As currently conceived, crushing, milling and processing will be done in a manner that does not create additional disturbance and generates no negative impact of significance. If for any reason waste and/or tailings are required to be deposited on surface at any point in the future, the design, engineering and construction of the facility will meet ICOLD (International Commission on Large Dams) standards as well as all applicable environmental laws and regulations. It is planned that equipment will potentially be battery powered in year 4 and beyond. Carbon offsets will be purchased to ensure that the mine is Scope 1 and Scope 2 carbon neutral from year 1 of mine production onward.

No additional environmental liabilities are anticipated as a result of the activities planned by BHMC. The company will initiate a voluntary Environmental Social and Health Impact Assessment that conforms to ISO and IFC standards. The study will commence in March of 2022 and is expected to conclude in May of 2023. The study contains 13 component studies that will measure a broad range of impacts. The study will be used to development plans and activities that maximize positive impacts of the mine’s production and mitigate any negative impacts.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Bunker Hill Mine Project is located at Kellogg, Idaho within the Coeur d'Alene mining district, Shoshone County, Idaho. The area is accessed from Spokane, Washington via Interstate 90 east, to the mile 50 exit. Access to the Kellogg Tunnel is via McKinley Avenue, a public road, then using the Bunker Mine Road to the Kellogg tunnel entrance. The elevation of the mine is approximately 2,300 feet above sea level.

The Bunker Hill Mine Project is in a sub-alpine mountainous region of the state and is deeply incised by the Coeur d'Alene river. Average annual rainfall is approximately 25 inches (635 mm) and average annual snowfall is approximately 1,220 mm). Summers are generally dry and warm while winter can bring heavy accumulations of snow in the mountains. Vegetation is composed mainly of grass lands on south facing slopes and conifer forest on north facing slopes. The climate is favorable for year-round mining operations.

The closest major airports to the Bunker Hill Mine Project are in Spokane, Washington, 32 miles (51.5 km) west of Coeur d'Alene on I-90 and Missoula, Montana, 108 miles (174 km) east of Lookout Pass on I-90. Necessary supplies, equipment, and services to carry out exploration and mine development projects are available in Kellogg, Wallace, Mullan, Coeur d'Alene, and Wardner, Idaho, as well as Spokane, Washington. A trained mining workforce is available in the above-mentioned communities.

6 HISTORY

The Bunker Hill Mine is one of the most storied base metal and silver mines in American history. Initial discovery and development of the property began in 1885, and from that time until the mine closed for the final time in 1991 total production from the mine totaled 42.77 million tons at an average grade of 8.43% Pb, 3.52 oz Ag/ton and 4.52% Zn. Through its history the area encompassing the Bunker Hill mine accounts for nearly 42% of the total lead, 41% of the zinc and 15% of the silver production in the Coeur d'Alene Mining District. Only the Sunshine and Galena mines have produced more silver. Over this long history, over 40 separate mineralized zones were exploited at the Bunker Hill mining complex.

6.1 DISCOVERY AND HISTORICAL OWNERSHIP

Discovery of Bunker Hill occurred in the summer of 1885 when Noah Kellogg, a prospector from Murray Idaho, discovered the Bunker Hill outcrop. Through a series of partnerships and sales, The Bunker Hill and Sullivan Mining and Concentrating Company was incorporated in July of 1887. Operations focused on the upper levels easily accessed by means of surface portals. Mined material was transported by aerial tramway to the mill site in Kellogg. By 1893 mining had progressed to the creek level near Wardner, ID where it became evident that continued operations would require a significant investment to access down dip extension to mineralized veins and bedding. Work began on the eponymous Kellogg Tunnel during 1893 which was completed in 1902. The tunnel provided access to the 9-Level (2,406 msl) of the mine which became the main area of operations for the mining operation. A series of shafts provided access down-dip where exploitation of the resource reached the 28-Level (-1,200 msl). The company began public trading in 1905. In 1912 construction of a lead smelter commenced which became operational five years later in 1917 followed by an electrolytic zinc smelter in 1927. In 1956 the corporate name was shortened to The Bunker Hill Company where operations continued until 1968 when, as result of a hostile merger, the Bunker Hill Company became a wholly-owned subsidiary of Gulf Resources and Chemical Corporation.

In 1981 a decline in metal prices led to a slow-down in operations at the mine and resulted in significant lay-offs. Continued uncertainty about metal prices, the unlikelihood of winning wage rollbacks from labor, and increasingly stringent environmental regulations contributed to Gulf Resources' decision in August 1981 to close its Bunker Hill operations and put the company up for sale. In 1982 the company was sold to the Bunker Limited Partnership. BLP reopened the mine while keeping the lead and zinc operations closed. The mine operated from 1988 to 1991 at which point BLP filed for bankruptcy. On May 1, 1992, mineral rights were transferred to Robert Hopper, owner of Placer Mining Co., of Bellevue, Washington.

On August 28, 2017, Bunker Hill Mining entered into a definitive agreement with Placer Mining Corp. on a lease with an option to purchase the Bunker Hill Mine. As of the date of this Technical Report the agreement has been modified and extended through August 2022. The agreement includes mining claims, surface rights, fee parcels, mineral interests, existing infrastructure, machinery and buildings at the Kellogg Tunnel portal in Milo Gulch, or anywhere underground at the Bunker Hill Mine Complex; except exclusions of the Machine Shop Building and Parcel, unprocessed mineralization on deck and residual lead/zinc mineralization mined and broken, but not removed from the Bunker Hill Mine. The lease period can be extended by a further 12 months at the Company's discretion. During the term of the lease, the Company must make US$60,000 monthly mining lease payments. Bunker Hill Mining has an option to purchase the Bunker Assets at any time before the end of the lease for $11M ($M5.9 cash, $M4.9 stock). There are no other royalties or other encumbrances in the modified lease terms. After the purchase of the Bunker Hill Mine by BHMC on January 7, 2022, the terms and obligations of the lease have been replaced by the terms of a sale and purchase agreement between the two companies.

6.2 HISTORIC OPERATIONS

The Bunker Hill lode, in Milo Gulch, was discovered by prospector Noah S. Kellogg on September 9, 1885. Legend has it that Kellogg's wandering burro found the mineralized outcrop. Grubstaking a prospector was common in the early days of the Coeur d'Alene Mining District and it was under these arrangements that local Murray merchants John T. Cooper and Origin O. Peck outfitted Noah Kellogg when he set out to look for gold up the South Fork of the Coeur d'Alene River in August of 1885.

Soon after the discovery, the partners entered into an agreement with Jim Wardner whereby he secured capital for development of the mine and construction of a mill. After negotiating a contract with Selby Smelting Company to treat the process plant product, Wardner was able to interest a syndicate who organized the Helena Concentrating Co. This company built the first process plant on the Sullivan side of the gulch in July of 1886.

In 1887 Simeon Gannet Reed purchased the claims and process plant for a total of $750,000 and, in partnership with Martin Winch and Noah Kellogg, incorporated the Bunker Hill and Sullivan Mining and Concentrating Company. The financial headquarters of the company was transferred to San Francisco in September 1891. The Oregon corporation was dissolved on March 24, 1924, and the company was reincorporated in Delaware. In 1956 that the name was shortened to The Bunker Hill Company.

As the mine production increased, a process plant of larger capacity was needed, and in 1891 a 400 ton (363 tonne) per day process plant was built in the main valley below the confluence of Milo Creek with the South Fork of the Coeur d'Alene River. To transport mineralization to the process plant, an aerial tramway, with a horizontal length of 10,000 ft (3,048 m), was constructed from Wardner. This tramway served to transport all mine mineralization until the two-mile (3.2 km) Kellogg Tunnel was completed in 1902. In 1898 the Bunker Hill and Sullivan Mining and Concentrating Co. and the Alaska Treadwell Company each purchased 31.34 percent of the stock of the Tacoma Smelter on Puget Sound, rehabilitated the plant, and thereby provided a facility for smelting. When the smelter closed its lead plant in 1912, lead from the Bunker Hill Mine was shipped to Selby, California, and East Helena, Montana for processing. In 1916 the company began the construction of a lead smelter at Kellogg which went into operation in July 1917.

The Kellogg Tunnel, started in 1893 and completed in 1902, permitted exploration work to take place on the tunnel level and the intervening ground between the tunnel and the surface. This resulted in the opening up of the Carey and July stopes on the 7th and 8th levels and the March stope on the tunnel or No. 9 level. These were three of the highest grade and most productive stopes in the history of the mine.

At Kellogg, the company operated the Bunker Hill lead-zinc-silver Mine and the Crescent Silver-Copper Mine, a lead smelter and refinery, electrolytic zinc reduction plant, cadmium plant, zinc fuming plant, sulfuric acid plant and a phosphoric acid plant. Historically, the Bunker Hill Mining Company accurately recorded the production grades from individual mining areas. In the early mine life, a portion of the mining was carried out by contractors or “leasers” who were paid for the mineral content of the mineralization shipped to the process plant by sampling each carload of mineralization shipped. Accurate records of their production are documented and represent the grade of mineralization shipped for processing.

Pre-development exploration drilling and assaying was limited the early years of production and accelerated later in the mine’s life with a total sum of over 3500 drill holes representing over 200,000 feet of drilling. Early exploration was primarily done by exploratory drifting and cross-cutting. Over the course of several years in the late 1970s, a dedicated team of geologists conducted ground-breaking research on the mineralized controls of the veins. The research for the first time defined distinct stratigraphic horizons in the upper Revett formation that could be correlated and mapped over distances of thousands of feet. The 1970s research ended shortly before the mine closed, and the new concepts were never fully applied to exploration.

6.3 PAST PRODUCTION

Total production from the past-producing Bunker Hill Mine from 1885 through 1981 is 35,779,448 tons (32,458,578.5 t) grading 8.76% lead, 3.67% zinc and 4.52 oz/ton (155 g/t) silver (Meyer and Springer 1985, Bingham 1985).

The largest individual zones include the March with 4,735,795 tons (4,296,242 tonnes) grading 12.03% lead, 2.25% zinc and 5.22 oz/ton (179 g/t) silver, and the Emery with 3,744,798 tons (3,397,224.5 tonnes) grading 10.31% lead, 3.86% zinc and 6.17 oz/ton (211.5 g/t) silver (Meyer and Springer 1985).

The highest-grade silver zones include the Caledonia mine with 263,182 tons grading 12.6% lead and 30.75 oz/ton silver, the Senator Stewart mine with 1,014,814 tons grading 7.9% lead and 6.34 oz/ton silver, the J-Vein with 1,130,414 tons grading 9.8% lead and 7.59 oz/ton silver, and the Truman-Ike vein with 1,861,295 tons grading 10.31% lead and 7.47 oz/ ton silver.

These historical production figures do not include production from the 18-month period when the mine was re-opened between 1989 and 1991.

Following its discovery in 1885, the Bunker Hill Mine operated continuously until 1981, except in times of labor stoppages. The mine was also operated from 1989 until January 1991 by the Bunker Limited Partnership.

During the mine operations, production came from 15 or more separate deposits mined over a vertical range of 4,800 ft (1,463 m) from 3,200 ft (975 m) above sea level to 1,600 ft (488 m) below sea level (Figure 6.1). The main entry was through the Kellogg Tunnel at 2,400 ft (732 m) elevation, (on nine level) and access to deposits below that level was by means of three major inclined shafts and other auxiliary inclines. In total, well over 100 miles (161 km) of major horizontal openings were maintained, as well as six miles (9.7 km) of shafts and raises.

Table 6-1 Mine Production by Zone

Mineral Zone	Final Year of Production	Tons Mined	Pb %	Ag opt	Zn %
Emery	1981	3,744,798	10.31	6.17	3.86
Truman - Ike	1967	1,861,295	9.79	7.47	2.10
Mac	1981	1,226,038	9.58	5.34	4.39
Roger (Pb)	1980	253,511	8.20	3.56	3.09
Shea	1981	2,088,383	7.31	4.27	3.55
Tallon	1980	1,270,295	2.13	1.06	7.71
Veral	1975	357,765	8.86	4.81	0.43
Pate	1967	322,271	9.42	4.36	6.80
Miscellaneous	1900	388,060	8.72	4.85	3.25
Tony	1979	362,393	1.94	1.24	9.72
South Chance	1980	7,175	3.41	1.85	1.77
Orr	1981	323,359	5.91	2.87	2.24
Forrest	1963	9,273	2.41	1.01	0.43
Francis	1981	972,315	11.84	5.68	4.47
FW Francis	1981	117,604	8.20	4.47	1.56
J	1980	1,130,434	9.88	7.59	0.59
Rosco	1981	563,340	1.60	1.24	5.93
Brown	1981	80,846	1.33	1.00	5.35
New Landers	1981	78,347	2.25	1.30	3.21
S. Tallon	1981	426,694	0.98	0.63	4.42
Barr	1981	254,016	8.50	3.76	0.88
Frank	1973	6,006	1.00	0.71	1.23
Jersey	1981	26,333	5.88	2.61	0.42
Towers	1979	636,033	13.26	5.44	2.46
Newgard	1981	1,204,015	1.27	0.72	3.10
Small Hopes	1980	825,634	2.46	1.61	2.98
Motor	1904	30,191	5.77	2.71	1.60
Dobbins	1976	429,656	12.05	4.64	3.09
Atkins	1981	245,323	3.44	2.06	5.49
Dull	1977	191	1.12	1.37	3.90
Guy	1946	99,105	3.76	1.84	14.26
Quill	1981	388,462	2.26	1.34	4.32
Henry	1979	35,172	7.83	5.08	1.90
Steve	1981	18,884	1.90	1.01	8.45
Roger (2n)	1979	665,549	2.64	1.50	7.24
Stanley	1957	1,891,285	7.80	3.30	9.23
March	1936	4,735,765	12.03	5.22	2.25
Dobbins Cave	1953	22,705	2.17	0.85	0.63
Guy Cave	1953	1,039,020	0.93	0.40	1.94
-9 Level Miscellaneous Pb	1970	2,725,251	12.80	5.99	2.62
+3 Level Misc Pb	1914	917,940	12.90	6.19	1.04
4 Level Misc Pb	1917	350,191	10.57	5.18	1.55
5 Level Misc Pb	1919	600,573	10.82	5.62	1.57
6 Level Misc Pb	1943	580,676	11.20	5.52	2.26
7 Level Misc Pb	1926	478,687	11.34	4.21	1.69

Mineral Zone	Final Year of Production	Tons Mined	Pb %	Ag opt	Zn %
8 Level Misc Pb	1942	1,849,625	12.38	5.44	4.90
9 Level Misc Pb	1922	135,042	13.61	6.10	2.60
Miscellaneous (Zn)	1968	44	0.19	0.32	0.54
Miscellaneous [Pb-Zn)	1958	1,560	3.70	2.20	1.40
Andy	1970	22,318	1.16	0.92	6.35
Total Mine Production		**35,799,448**	**8.84**	**4.55**	**3.66**

6.4 HISTORIC MINING AT BUNKER HILL

The primary access to the Bunker Hill Mine is the 10,000-foot (3,048 m) Kellogg Tunnel at the 9 Level elevation. The shaft extends down to the 31 level with the 29 level being the deepest developed level. The 29 level is 4,000 ft (1,220 m) below the Kellogg Tunnel. Over the 100 years of production, various mining methods have been used at the past producing Bunker Hill Mine. These include:

- Square set cut and fill;
- Captive cut and fill with classified mine tailings as backfill (below 8 Level only);
- Shrinkage mining without backfill (above 8 Level);
- Sub-level blast hole (Long hole) mining;
- Sub-level caving (Guy Cave)

Square-set cut and fill was likely the original mining method from the 1880s. The veins were mined with sets of timbers used as ground support which were then buried by sand fill pumped down from the surface. After backfilling, the next level above the sand was mined. The broken material was slushed to chutes where it dropped into passes to the level below. In other areas, a pillar mining method was used. Instead of timber as support, rib pillars were established. Sand fill was pumped in to provide the floor for the next cut. As the material was blasted, compressed air operated mucking machines transported it to a chute in the stope where it dropped into a pass to the lower level.

In the upper areas of the mine, sub-level blasthole stoping was used. Trackless equipment was used to cut levels at 40 foot (12.2 m) spacing. Long holes were drilled in the pillars between levels. The holes were blasted, allowing the material to fall to the bottom of the stope, where it was scooped by LHDs, which, depending on the area of the mine, either transported it to passes connected to the mine rail haulage system or place it on trucks for transport directly to the surface.

For mining areas above the Kellogg Tunnel, broken material was hauled by trackless equipment to one of two central passes which stored the material until it could be chute loaded into the main track haulage system operating in the Kellogg Tunnel.

For mining areas below the Kellogg Tunnel, trains powered by battery locomotives transported the material to bins located at the inclined hoisting shaft. In the shaft, skips were loaded and hoisted to skip dumps located above the Kellogg Tunnel level where the material was dumped into two large concrete bins until it could be chute loaded into the main track haulage system operating in the Kellogg Tunnel. Drawn from these storage areas by gravity, the material was chute loaded into 22 car trains pulled by 15-ton diesel locomotive and trammed two miles (3.2 km) to the surface process plant bins. The material was then processed by the Bunker Hill process plant to produce concentrates.

After 1970, diesel-powered equipment was utilized in parts of the lower mine to improve productivity and access to selected areas. In 1972, major production was resumed using bulk mining methods in the upper mine (above 9 Level), the portion above the Kellogg Tunnel, which had not been worked since the 1930s. The upper mine was partially mechanized with diesel equipment. This area of the mine produced approximately 7,000 tons (6,350 tonnes) per week (45% of total mine production) through April 1977. The upper mine was then placed on a care and maintenance basis pending improvement in the zinc market. Some production was obtained from the upper mine in the period 1978 to 1981 by extracting previously broken mineralization.

Following a 1977 strike, the lower mine resumed operations at a production rate of approximately 9,000 tons (8,165 tonnes) per week. Through April 1977, the flotation process plant operated on a three-shift basis, seven days a week, at approximately its full capacity milling rate of 2,300 tons (2,087 tonnes) per day. The concentrates produced were transported to Bunker Hill Mining Company's lead smelter and zinc plant by railway.

The Mine and Smelter Complex were closed in 1981 as result of weak commodity prices, failure to renew labor contract, and increased environmental regulation. The Bunker Hill lead smelter, electrolytic zinc plant and historic milling facilities were demolished about 25 years ago, and the area became part of the "National Priority List" for cleanup under EPA regulations, thereby pausing development of the Bunker Hill Mine for over 30 years. All of the cleanup of the old smelter, zinc plant, and associated sites has now been completed.

The Bunker Hill Mine main level is the nine level and is connected to the surface by the Kellogg Tunnel. Three major inclined shafts with associated hoists and hoistrooms are located on the nine level. These are the No. 1 shaft, which was used for primary muck hoisting for all locations below the nine level; the No. 2 shaft, which was a primary shaft for men and materials in the main part of the mine; and the No. 3 Shaft, which was used for men and materials hoisting for development in the northwest part of the mine. The Company believes that all three shafts remain in a condition that they are repairable and can be bought back into good working order and is in the process of beginning the engineering work to evaluate the strategic optionality of this infrastructure.

The water level in the mine is held at approximately the 11 level of the mine, 400 ft (122 m) below the nine level. The mine was historically developed to the 29 level, although the 27 level was the last major level that underwent significant development and past mining.

6.5 HISTORIC DRILLING

Over the 100-year history of active operations at Bunker Hill over 3,500 drill holes were drilled, logged and assayed. The first drillhole was drilled on the 5 level in 1889. All drill hole information including assays, lithology, and structure was recorded in hand written drill logs. Bunker Hill has painstakingly digitized the entire body of historic drill hole data and created a digital drill hole database. During the digitization process a collection of assay pulps was located and able to be associated with a subset of the historic drill holes. These pulps were re-assayed and compared to the historic assay data to verify the accuracy of the assay information.

6.6 HISTORICAL ESTIMATES

Mining operations ceased in January 1991. The Property hosted historical estimates which were categorized using categories other than those set out in NI 43-101. Estimates were categorized as Proven Reserves, Probable Reserves, Possible Reserves and Drill-Indicated Reserves. The main difference between the Historical Estimate classifications and NI 43-101 classifications is that NI 43-101 reserves are based on the conversion of resources to reserves. Historically, US mining operations such as Bunker Hill were prohibited from disclosing resources.

> **Proven Reserves.** Mineralization is Proven when it has been so exposed by development that its existence as to tonnage and tenor is of a high degree of certainty. A block developed and sampled on two or more sides in which continuity is established to the satisfaction of the mine's technical staff will be considered proven. Similarly, a block developed and sampled on one side as by horizontal or vertical development through which continuity can be established, will be considered proven for a distance of 50 feet (15.25 m) from that development.
>
> **Probable Reserves.** Mineralization is assigned to the Probable category when its continuity can be reasonably projected beyond the proven classification boundary. A Probable block extends between Proven blocks provided the distance between them does not exceed 100 feet (30.5 m). For a block developed on one side as by horizontal or vertical development and/or close spaced diamond drilling, the total of Proven and Probable mineralization will not exceed 100 feet (30.5 m) from the sampled side.
>
> **Possible Reserves.** Mineralization is considered to be in the Possible category when its continuity can be reasonably expected to extend beyond the Probable boundary. A Possible block extends between Probable

boundaries provided the distance between Probable Blocks does not exceed 200 feet (61 m). For a block developed on one side as by horizontal or vertical development and/or close spaced diamond drilling, the total of Proven, Probable and Possible will not exceed 200 feet (61 m) from the sampled development.

Meyer (1990) included mineralized material in the historical estimates on the basis of a cut-off equivalent to the production cost of mining. This was established at $23.00 per ton for material mined below the nine level. For material mined above the nine level the production cost was set at $20.00 per ton. Metals prices used were $0.40 / lb. for lead, $5.00/oz for silver and $0.65/lb for zinc. Net smelter values were calculated for the three metals using the then current metallurgical recoveries and net smelter payable values. Meyer's (1990, 1991) historical estimates were calculated by the following method: Volumes (and subsequent tonnage) were calculated by vertical projection from level plans of mined out areas. Grades were calculated by averaging the grades on the stope assay map from which the projections were made. The Bunker Hill Mine was an active mine at the time of Meyer's estimations and the procedures used were consistent with mineralization estimates made in other similar operations.

Meyer (1990) has reported on the historical estimate for the Bunker Hill Mine as of July 1, 1990. Meyer's (1990) report estimated that proven and probable reserves totaled 8,266,430 tons (7,499,181 tonnes) grading 2.13% lead, 1.12 oz/ton (38.4 g/t) silver and 4.73% zinc. Possible reserves totaled 2,588,081 tons (2,347,868 tonnes) grading 2.55% lead, 1.39 oz/ton (47.7 g/t) silver and 4.48% zinc. The possible "reserves" included drill indicated material at the Quill and Guy Cave zones.

Meyer (1991) estimated the historical estimates for the Bunker Hill Mine as of January 1, 1991. Meyer's (1991) report estimated that historical proven and probable reserves totaled 5,421,387 tons (4,918,200 tonnes) grading 2.46% lead, 1.37 oz/ton (47.0 g/t) silver and 5.17% zinc. Possible reserves totaled 3,719,722 tons (3,374,475 tonnes) grading 2.20% lead, 1.17 oz/ton (40.1 g/t) silver and 4.94% zinc. The possible reserves included drill indicated material at the Quill and Guy Cave zones.

The Author has reviewed supporting documentation including the date of the historical reserve estimate and the reliability of the estimate. The key assumptions, parameters and methods used to prepare the historic estimates have been reviewed, verified and are understood. The Historic Estimate used categories other than those referenced in NI 43-101 Standards of Disclosure for Mineral Projects, May 9, 2016, which are disclosed in this Technical Report. There are no more recent mineral historic resource estimates available.

The Issuer has not done sufficient work to classify the historical estimate as current mineral resources. The historic estimate is not being treated as the current mineral resource.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

7.1.1 REGION STRATIGRAPHY

The Northern Idaho Panhandle Region in which the Bunker Hill Property is located is underlain by the Middle Proterozoic-aged Belt-Purcell Supergroup of fine-grained, dominantly siliciclastic sedimentary rocks which extends from western Montana (locally named the Belt Supergroup) to southern British Columbia (Locally named the Purcell Supergroup) and is collectively over 23,000 feet in total stratigraphic thickness. The Belt-Purcell Supergroup comprises, from oldest to youngest:

- Black, pyritic argillites of the Pritchard formation, up to 13,100 ft thick.
- Quartzites, siltite, and argillites of the Ravalli Group, subdivided into the Burke, Revett and St. Regis formations, up to 8,200 ft total thickness. The Revett formation is the almost exclusive host unit to mineralization at Bunker Hill.
- Shallow-water dolomitic quartzites and arenaceous dolomites of the Middle Belt Carbonate Group, up to 6,560 ft thick.
- Interbedded quartzites and argillites of the Missoula Group, up to 1,640 ft thick.

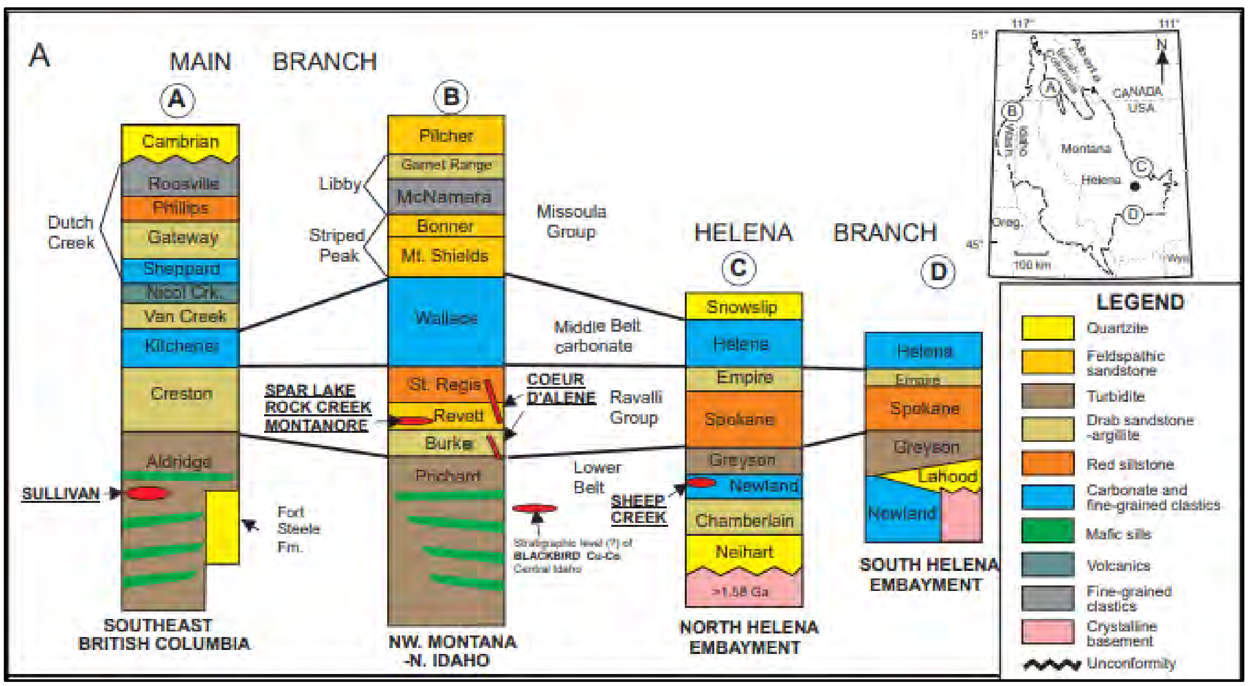


Figure 7-1 Stratigraphic section of Belt-Purcell Supergroup across northern Idaho and western Montana. Mineral deposits noted in red at stratigraphic position of host rocks (from Lyndon, 2007).

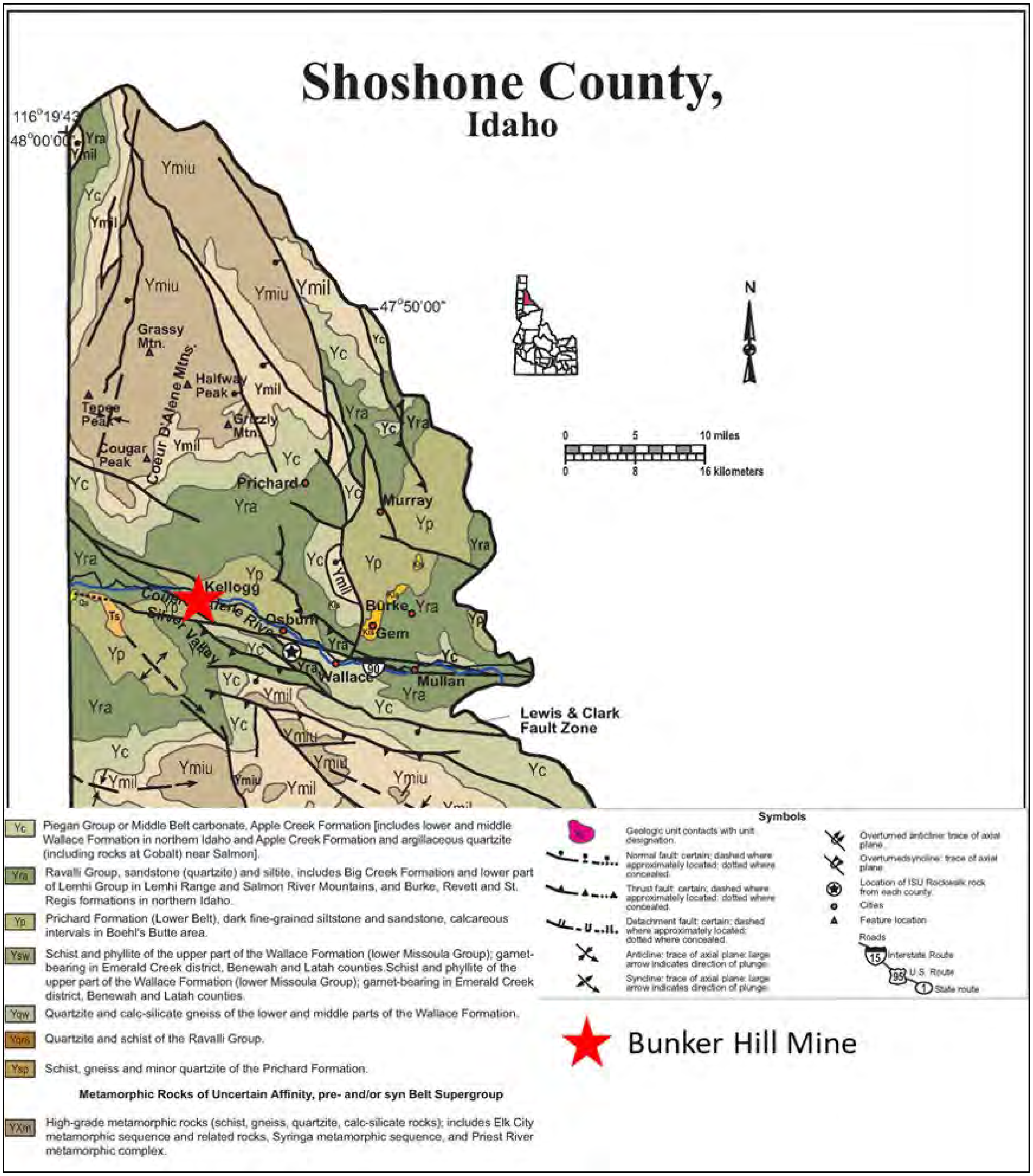


Figure 7-2 Geologic map of Shoshone County, clipped and centered on Coeur d'Alene Mining District, Bunker Hill Mine highlighted in red (IGS 2002).

The sediments of the Belt-Purcell rocks were deposited in an intra-cratonic basin associated with rifting in the interior of the Rodinia Supercontinent. As no known volcanism is associated with this rifting, it appears to be related to lithospheric tension and not the ascent of a magmatic plume in the crust shoving overlying sediments aside, making it a passive rather than an active rift system (Lyndon, 2007).

Contacts between rock units and progression between lithologies show a continuously aggrading sequence of deposition, largely from flooding in fluvial and tidal systems, with no erosional contacts or large-scale channel-scouring bedforms. This indicates deposition in a low-energy, shallow-water environment in a rapidly subsiding, sediment-starved basin with ample accommodation space for sediment inflow. Carbonate units in the Supergroup show periodic connections between the depositional basin and the open ocean allowed for shallow flooding of the entire basin by seawater, although lack of tidal and wave scouring textures or transgressive-regressive depositional and erosional sequences indicate that the connection was never large enough for transmission of tidal or oceanic storm forces.

Individual sedimentary beds and units within the Belt-Purcell Supergroup do not display strong lateral continuity, reflecting active subsidence in the basin and varying sediment sources. Thickening of the stratigraphic units to the south suggests that the basin in which they were deposited was growing at depth and laterally with down-to-the-south normal fault movement of crustal blocks within the basin (White, 1977). Sources for sediments have been identified as coming from the south and southwest for the majority of the life of the Basin.

Burial of the Belt Basin under later sedimentary and igneous rock packages, all now eroded away, lithified and preserved the entire stratigraphic section. Deep burial resulted in low-grade metamorphism, fusing the grains of sandstone together into hard, competent quartzites, and altering clay-rich shales into argillites and siltites (Herendon, 1983). Age dates for deposition of the Belt rocks have been established at 1400-1470 million years ago from U-Pb age dating of detrital volcanic zircon grains (Hobbs, et al, 1965).

7.1.2 REGIONAL STRUCTURE

The rocks of the Belt Supergroup have been subjected to a complex series of deformational events over the 1.4 billion years since deposition, with the focal point of many of these forces roughly underlying the current Coeur D'Alene Mining District ("CDA"). Regardless of which detailed geologic interpretation one chooses to define individual deposits, it is clear that the rocks have seen a complex structural history of folding, shearing and faulting that have given the entire District a deep-seated plumbing system for ascending, mineral-bearing hydrothermal fluids.

The following figures and much of the interpretation are taken from United States Geologic Survey Professional Paper 478: Geology of the Coeur d'Alene District, Shoshone County, Idaho (Hobbs, et al 1965). Structure-1 through Structure-6 are the insets showing progression of structural events in Figures 7-3 and 7-4 below.

The first structural event to affect the Belt Rocks in the CDA ("D1") was compressive forces coming from the southwest and northeast which formed northwest oriented anticline and syncline pairs with a moderate plunge to the northwest, with local overturned folds and thrust faulting (Fig 7-4: Structure-1). Following the formation of the NW trending folds, crustal stresses changed from SW-NE compression to west-northwest and east-southeast ductile shearing ("D2"). This bent and rotated the limbs of the D1 folds, creating kink-folds along the axial planes (Fig 7-4: Structure-2).

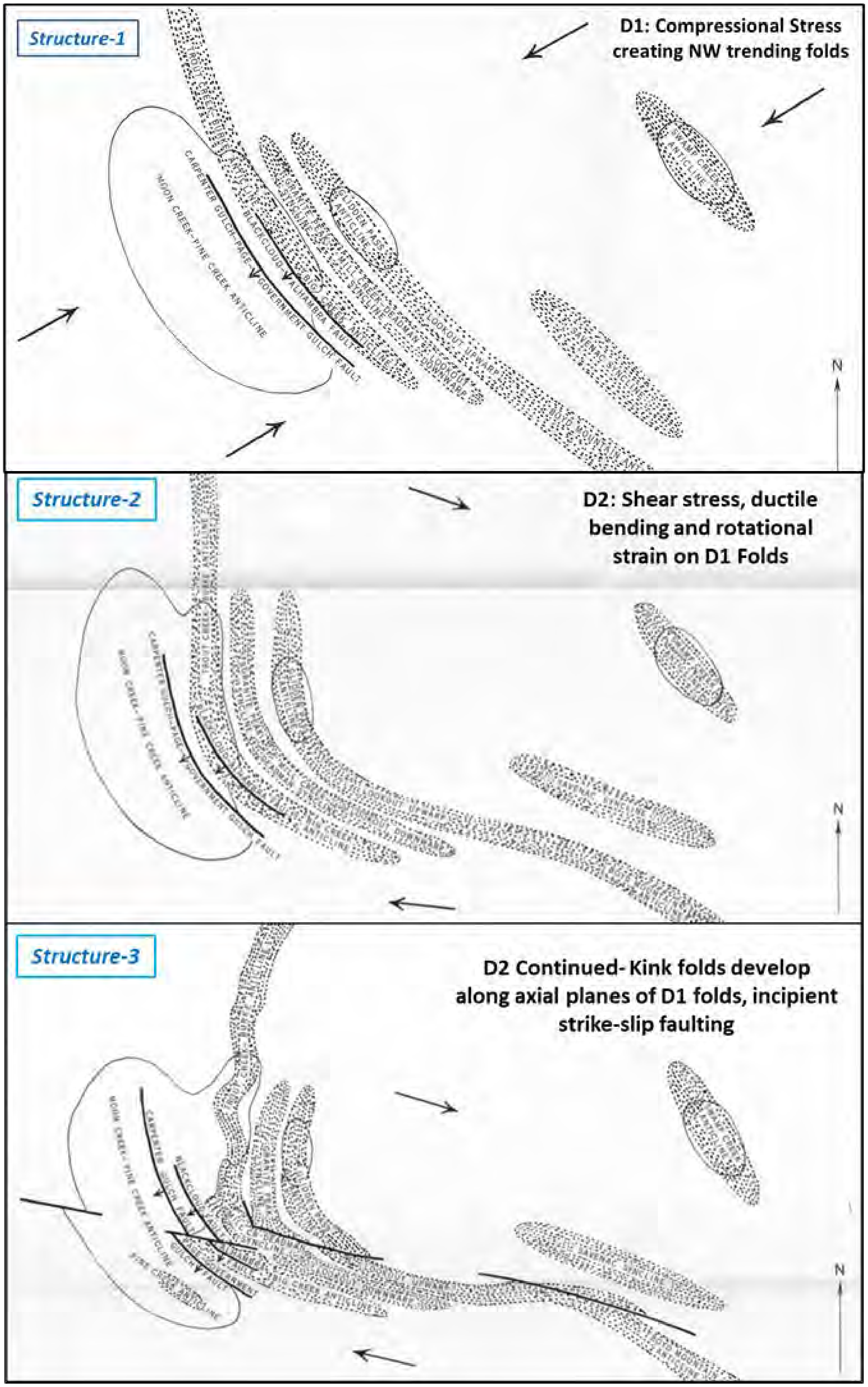


Figure 7-3- (1 of 2) Diagrammatic sequence of large-scale events in the structural history of CDA District rocks

Folding and rotation continued to intensify in a structural knot centered over the current CDA Mining District, with incipient strike-slip faulting beginning to accommodate stress within the plunging hinges and along the axial planes of the D2 folds and rotation centers (Fig 7-4, Structure-3). This was followed by emplacement of monzonite stocks in elongate bodies, roughly parallel to the rotated N-S fold axes, north of the ancestral Osburn Fault (Fig 7-4, Structure-4). These monzonite stocks have been dated at roughly 100 million years old by lead-alpha methods (Hobbs, et al, 1965), placing them in the same Cretaceous age range as the rocks of the Atlanta and Bitterroot lobes of the Idaho Batholith to the south. Much of the mineralization in the CDA Mining District was likely emplaced during this episode of maximum folding and stretching, along with the added heat source of the intrusions. Although there have been many theories regarding the timing, formation and source of mineralization in the CDA Mining District over the 140 years of mining and exploration, the culmination of fold intensity and intrusive emplacement agrees with most all further, more-detailed interpretations.

With continued crustal stresses, discontinuous fractures propagated through the stratigraphic section to become through-going structures. Ductile folding of the rock package ceased as strike-slip movement along these W-NW striking faults accommodated crustal stresses (Fig 7-4, Structure-5). This corridor corresponds with the Lewis and Clark Structural Zone, a long-lived, apparently basement-rooted, westerly trending structural zone cutting across northern Idaho and western Montana (White 2015). Further movement along these westerly faults coalesced into the Osburn Fault, the major structure throughout the Silver Valley and CDA District, which at present position shows as much as 16 miles of right-lateral, strike-slip displacement. The Structure-6 inset in Figure 7-4 shows the current position of the fold axes, faults and intrusive bodies.

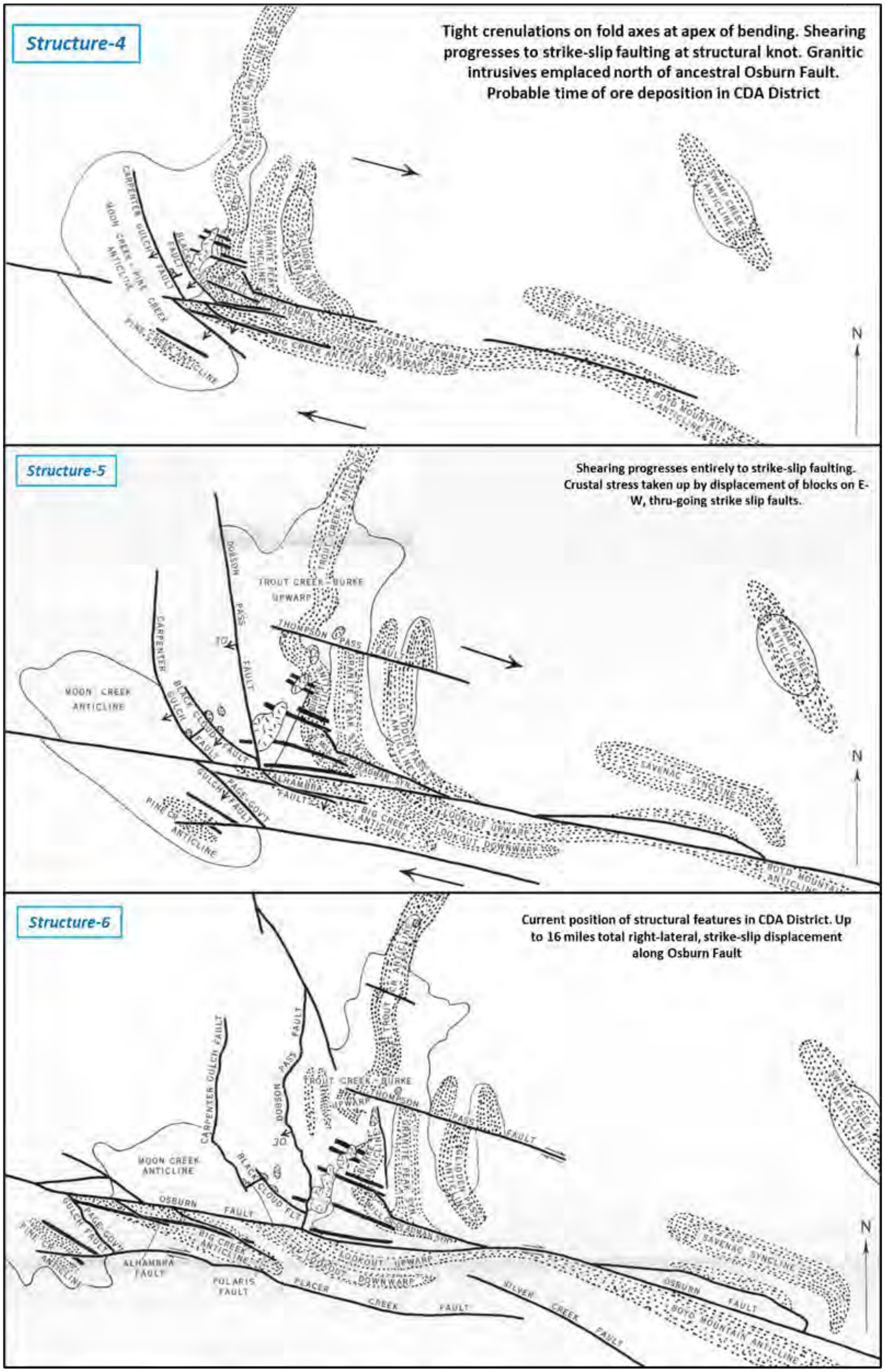


Figure 7-4 (2 of 2) Diagrammatic sequence of large-scale events in the structural history of CDA District rocks Property Geology

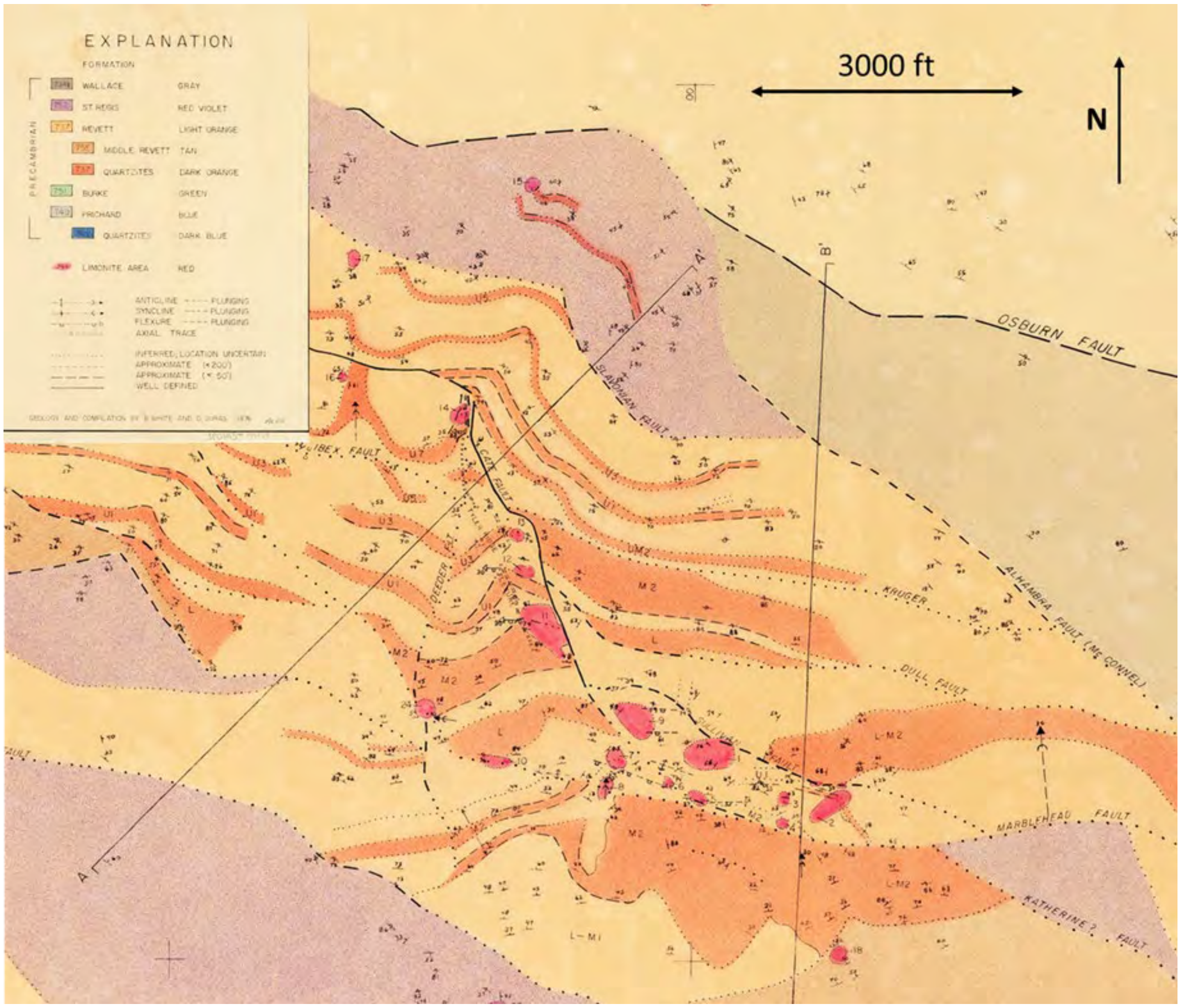


Figure 7-5 Surface geology over Bunker Hill Mine. Cross-Section A-A' shown below in Fig. 7-10. (White and Juras 1976)

7.1.3 LOCAL STRATIGRAPHY

Mineralization at the Bunker Hill Mine is hosted almost exclusively in the Upper Revett formation of the Ravalli Group, a part of the Belt Supergroup of Middle Proterozoic-aged, fine-grained sediments (Fig. 7-5). As the Middle and Lower Units of the Revett formation and the stratigraphically overlying St. Regis formations do not host appreciable mineralization, mine geologists at Bunker Hill did not spend a great deal of time mapping or interpreting these units. As this is still the case as far as known mineralization or exploration targets, the local rock package is restricted to the Upper Revett formation sediments. One west-northwest striking mafic dike has been noted on mine maps in development drifts to the north of any known mineralization, but little is known of this feature and no mineralization or alteration is associated with it.

Given the ubiquitous fine-grained nature of Belt Group sediments in the CDA District, putting together a proper stratigraphic section had always proved enigmatic to area geologists, with correlation between adjacent mines difficult due to discontinuity of units and differences in nomenclature. It was recognized that there are fairly abrupt lateral gradations of compositions and textures within the stratigraphic package, reflecting active subsidence of the Belt Basin and the changing influx of sediments. As has long been informally recognized by mine operators in the Bunker Hill area, preferential host rocks for mineralization are the more competent quartzite units within the Upper Revett formation.

For much of the history of the Bunker Hill, mining focused on mineralized zones and veins that outcropped on surface, and so little geologic knowledge was needed to find or follow these structures. By the mid 1970's, these large mineral bodies (such as the March) had been mined out, and the Company had to develop an exploration plan to locate additional resources.

Following extensive mapping, measured stratigraphic sections and comparison with drill core and mine level mapping during a research program in the 1970's, Brian White developed a detailed stratigraphic section for the Upper Revett formation in the immediate Bunker Hill Mine area that greatly simplified interpretations of structural offsets and eliminated needless ranges of description for rocks of the same lithologic facies (Fig. 7-6).

White delineated the rocks in the Bunker Hill Mine area into three lithologic types:

(**Q**) Quartzite: fine-grained, clean and well sorted with a vitreous appearance on fractures, almost entirely quartz with minor feldspar, thick bedded to massive, local crossbedding. Quartz grains fully fused, continuous metal streak with nail scratcher, ideal host to mineralization. Generally white to light gray color.

(**SQ**) Sericitic Quartzite: dominantly fine-grained quartz sand protolith, feldspar and clay content altered and mobilized to interstitial sericite during burial metamorphism. Fairly competent, intermittent streak with metal scratcher, thick to thin bedded, decent to marginal host rock to mineralization. Light to dark gray in color, distinct light green-gray in weathered outcrop.

(SA) Siltite-Argillite: anything that is a dominantly mud, silt or clay protolith, representing a distinct lower-energy, deeper water depositional facies than the shallow-water to sub-aerial, relatively high-energy quartzite units. Thin, planar bedding with local ripple marks and sediment loading textures. Very poor host rock for mineralization unless cut obliquely by vein structures. Highly variable color, generally shades of green with occasional shades or red and purple.

A series of distinct sediment packages were identified in the Upper Revett formation across the mine workings. From bottom to top of the section (Fig. X6), these are the:

Lower **L-0** though **L-6** quartzites

Middle **M-1** siltite-argillite, **M-2** quartzite and **M-3** siltite-argillite

Upper **U-1,2,3,4** and **5** quartzites and **U-6** siltite-argillite

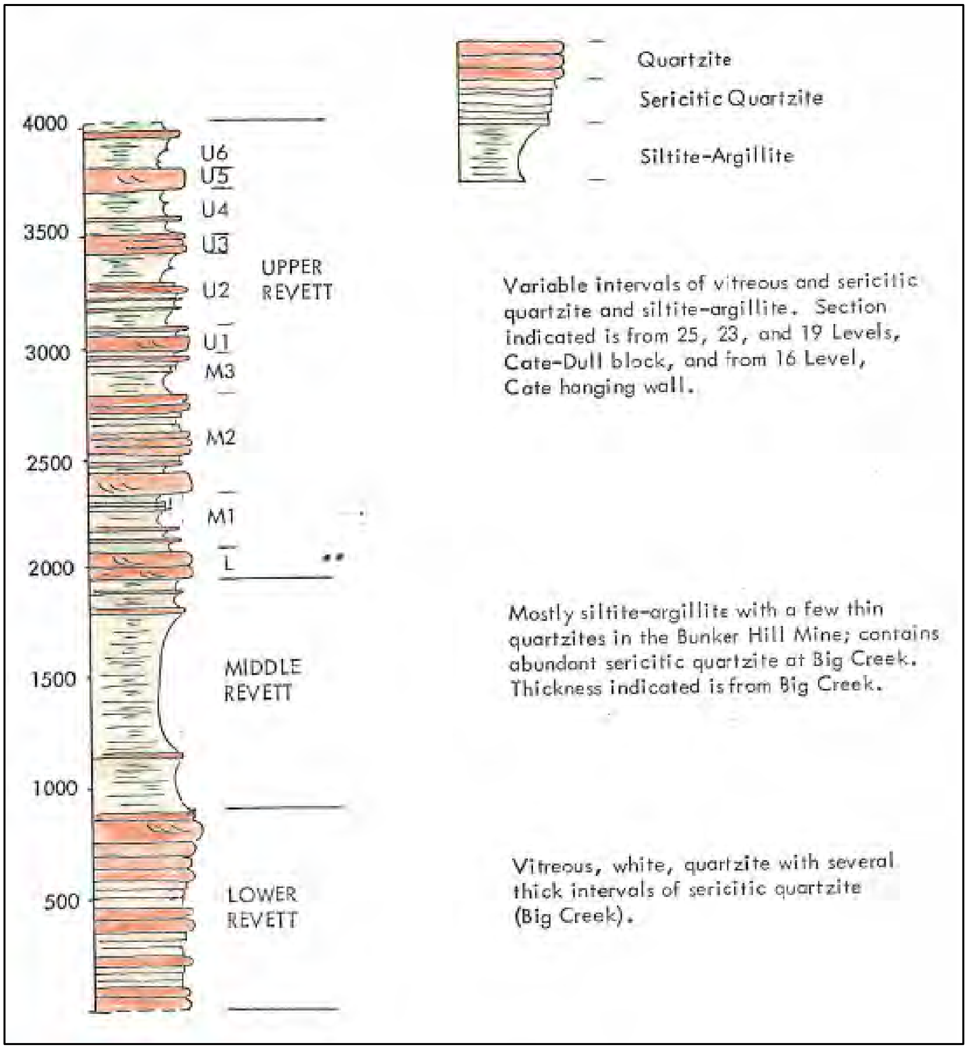


Figure 7-6 Stratigraphic section of Revett formation in Bunker Hill area (White, 1976)

Geologic mapping and interpretation progressed by leaps and bounds following the recognition of a predictable stratigraphic section at the Bunker Hill Mine and enabled the measurement of specific offsets across major faults, discussed in the following section. From an exploration and mining perspective, there were two critical conclusions from this research: all significant mineralized shoots are hosted in quartzite units where they are cut by vein structures, and the location of the quartzite units can be projected up and down section, and across fault offsets, to targets extensions and offsets of known mineralized shoots and veins.

An example of mine level mapping from Bunker Hill Level 17 is shown in Figure 7-7 below. Quartzite packages are the orange colored units and the outline of mine workings is in black along the right half of the image. As one can see from the drill holes shown in the center with lithology logging drawn on, exploration efforts in the 1970’s were targeting quartzite units at fold hinges and intersections with mineralized structures.

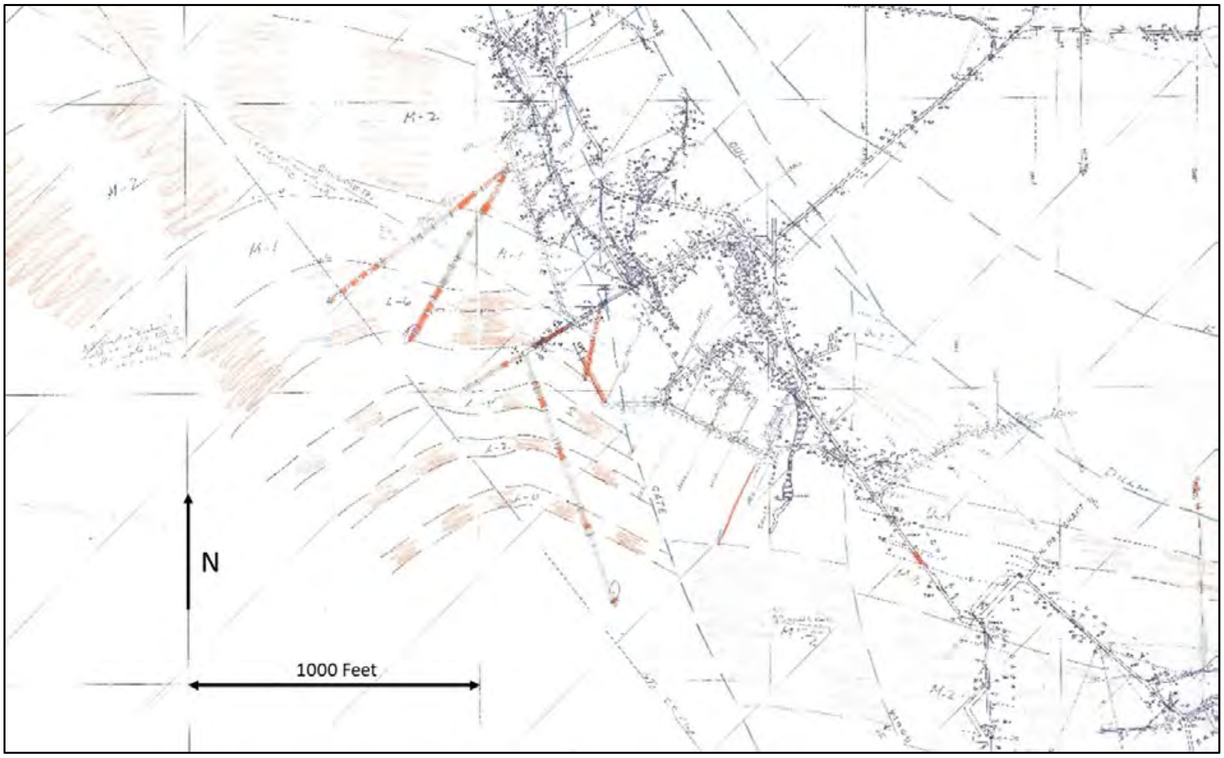


Figure 7-7 Geologic Map of Bunker Hill Mine 17 Level showing quartzite units and exploration drill holes

7.1.4 LOCAL GEOLOGIC STRUCTURE

The rocks of the Bunker Hill Mine have a very complex geologic history, as described in Section 7.1.2 of this Technical Report. On a mine scale, many of the regional patterns are evident in local folding and fault offsets.

7.1.4.1 FOLDING

The oldest structural feature evident on the Property is the Tyler Ridge flexure, the anticlinal portion of a parasitic fold on the north flank of a large-scale, northwest-trending fold to the southwest that formed from the D1 event described in Section 7.1.2 (Figure 7-3, Inset Structure-1). This fold originally trended W-NW, and plunged gently NW (Juras, 1977).

The next significant structural event to affect the rocks was the upwarping of the Big Creek anticline, an E-W trending fold with a slight dip E. The rocks of Bunker Hill are in the north limb of this anticline, which has been overturned to the north due to compressive stress from the south. The axial plane of the Tyler Ridge Flexure has thus been rotated to plunge to the W-NW at -20 to -35 degrees (Fig. 7-8), and the local bedding rotated to be overturned and dipping steeply to the S-SW (Juras, 1977). The Bunker Hill Mine workings lie in the north limb of both the Flexure and the Big Creek Anticline, and mineralization roughly parallels the plunge of the apex of the Tyler Ridge Flexure.

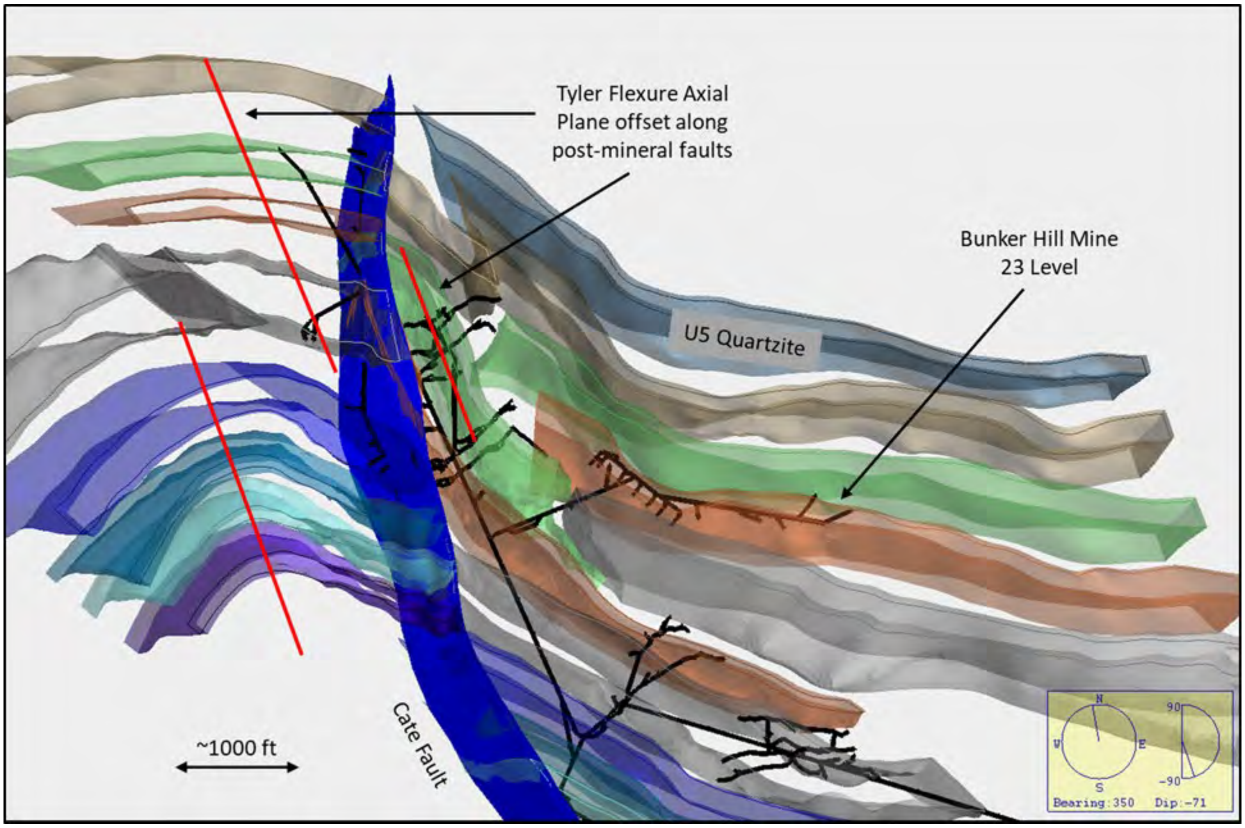


Figure 7-8 Isometric view of Vulcan 3D model of L-0 through U-5 Quartzite units, looking nearly down-plunge on the Tyler Ridge Flexure axial plane, shown as red lines offset by faults. Only Cate fault is shown for simplicity.

Structural preparation in the form of brecciation along the apexes of folds, bedding-plane shearing and faulting, axial planar fracturing, and flexural cracks in quartzite beds of the Upper Revett formation during these two structural events, shown diagrammatically in Figure 7-9 below, was undoubtably critical for the emplacement of mineralization. Some workers have concluded that mineralization at Bunker Hill was emplaced contemporaneously with these folding events. Reports by Dwight Juras (1977, 2020) have indicated that siderite-pyrite-sphalerite veins (Bluebird Veins) formed during this W-NW folding event, and later, cross-cutting argentiferous galena-chalcopyrite-pyrite-quartz veins (Galena-Quartz Veins) were emplaced during formation of the E-W trending, north-verging Big Creek Anticline. Others have argued that metals in the CDA District sourced from a shear-zone type base metal + silver mineralizing system, similar to a shear-zone hosted gold deposit, associated with later movement in the Lewis and Clark Structural Zone, with mineralizing fluids taking advantage of the same structural preparation in the quartzite host rocks (White 1994, 2015).

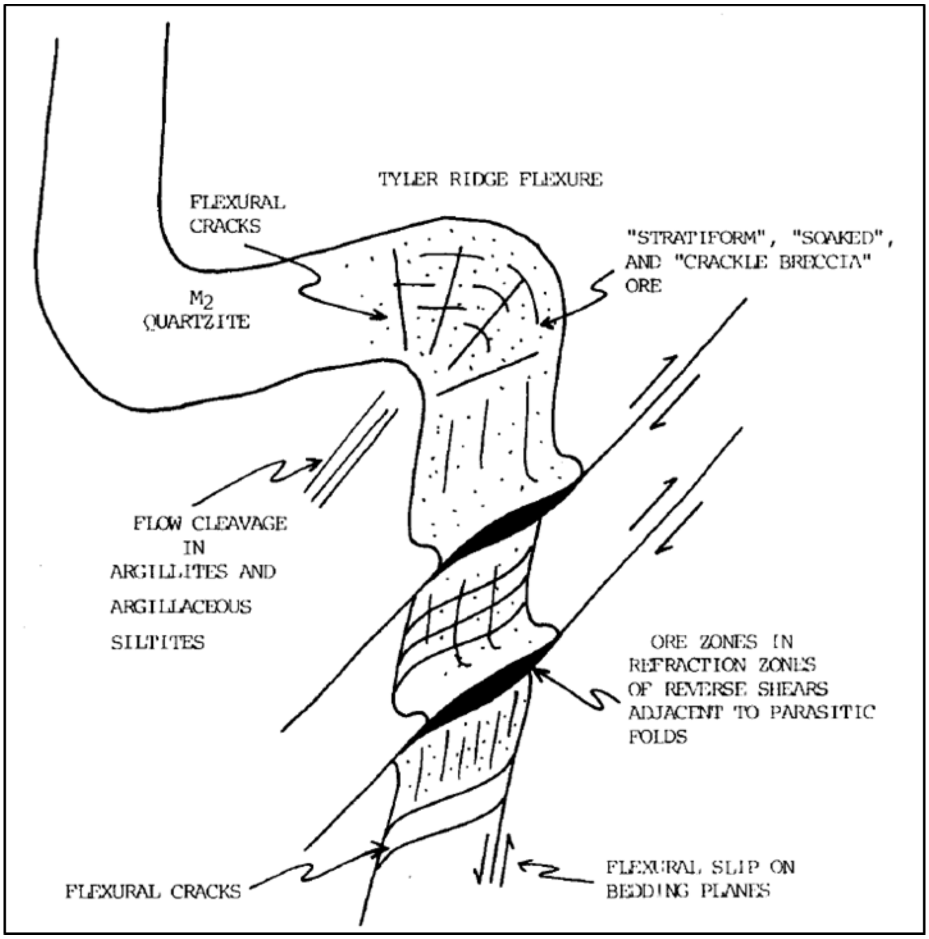


Figure 7-9 Diagram of structural preparation of a quartzite bed from folding stresses (Juras and Duff, 2020)

7.1.4.2 FAULTING

The district-scale Osburn Fault lies immediately to the north of the Bunker Hill Mine workings, striking E-W and dipping steeply south. This fault has had the most recent and significant movement in the CDA District, with up to 16 miles of right-lateral displacement. Because of this movement, and the likely rotation of other fault surfaces and bedding that are cut by it, many of the faults at Bunker Hill appear, in plan view, to be S-SE horsetail splays out of the Osburn Fault (Fig. 7-5). This is not the case however, as the other faults in the Mine area pre-date the Osburn Fault and resulted from entirely separate and different stress regimes.

The oldest faults at Bunker Hill are N-NW striking, flat to gently SW dipping, and have from 100-1600 ft of reverse offset, generally to the north or east (Towers, Motor, Sierra Nevada and others). These structures host vein mineralization in some areas where crossing preferential quartzite units, but otherwise cut and offset all vein types in the mine (Juras and Duff, 2020). These are the least understood of the faults at the mine, as it is difficult to represent flat-lying structures with traditional geologic mapping methods, and difficult to drill-test these structures from mine workings at similar elevations.

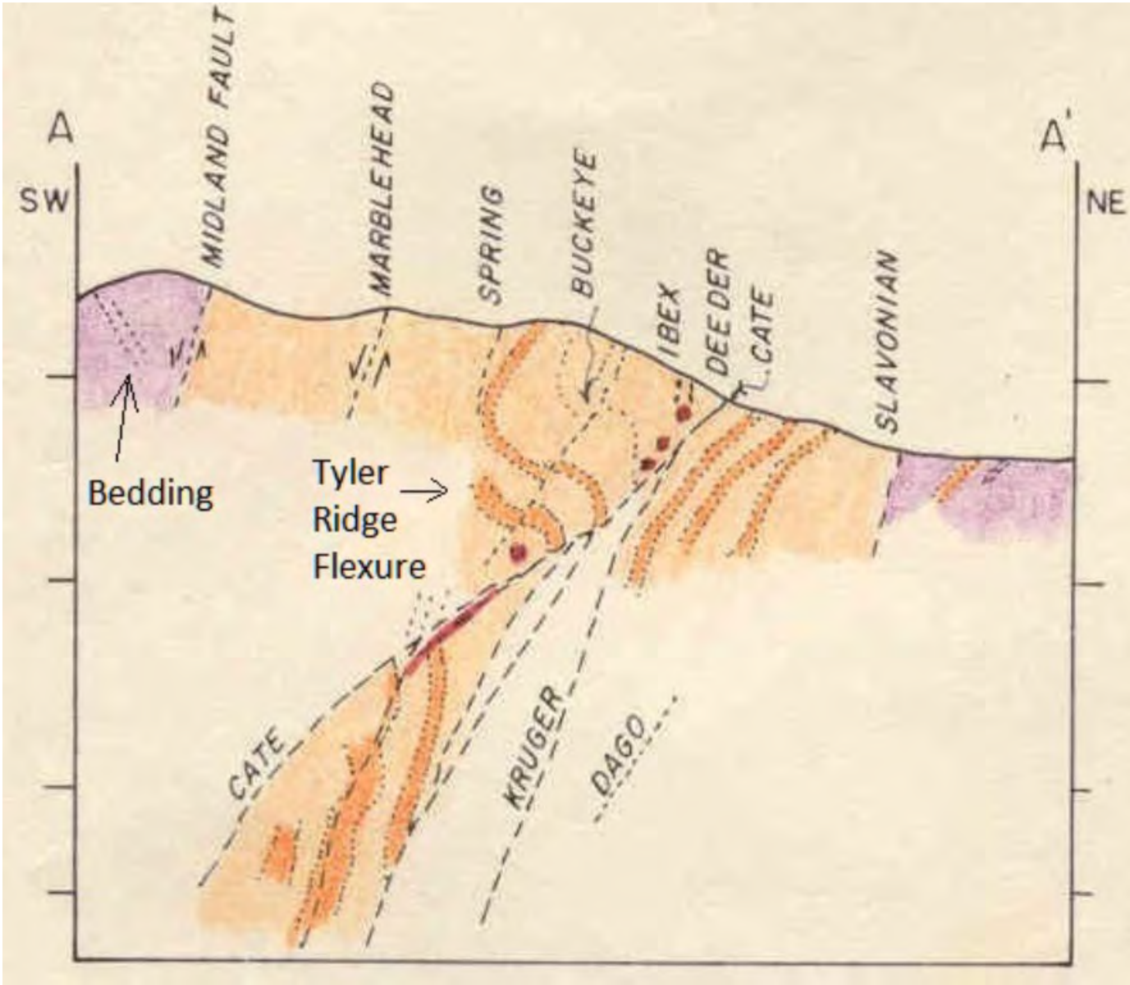


Figure 7-10 Cross-section A-A' looking W-NW, not to scale, from surface geology map Fig. 7-5 (White and Juras 1976). Darker orange is quartzite bed in Upper Revett Formation, legend on Fig. 7-5

The next faulting event is a series of steeply W-NW striking, south-dipping normal faults with significant offset down to the south. The most prominent of these, the Kruger, Slavonian and Dull Faults from east to west (Fig. 7-10, Slavonian and Dull are unlabeled fault traces between Kruger and Cate Faults), each have +1000 ft of displacement, and combined with other subparallel faults, the total displacement across these structures is estimated at more than 6000 ft (Farmin, 1977). These faults run subparallel to bedding in the Upper Revett formation, generally staying in the same siltite-argillite bed for great distances until they cross a structural inflection and jump up or down in the section. This factor, along with conspicuously thin zones and limited fault gouge given the amount of displacement, indicates these are largely bedding-slip faults resulting from differential movement between beds during folding. There is a similar set of faults in the hanging wall of the younger Cate Reverse Fault (Marblehead, Buckeye, Ibex and others) that also show down-to-the-south, normal-fault offset. These are likely directly related to the faults in the footwall of the Cate Fault, at least in age and genesis, but the large reverse offset along the Cate Fault has obscured this relationship.

The youngest and most prominent major fault in the Mine is the Cate Fault, a NW-striking, SW-dipping reverse fault with 400 vertical feet of up-to-the-north displacement and some rotational movement (Fig. 7-8). This fault likely formed at the waning stages of the northward-verging folding that produced the Big Creek Anticline, and seems to have accommodated a transition from ductile to brittle deformation, possibly due to a shallower depth within the crust after up-warping from folding. The Cate Fault is younger than all major folds, faults and veins in the Mine. Movement along the Cate Fault, and more recent movement along the Osburn Fault, has caused slight remobilization along many older structures, resulting in small-scale structural textures that have been troublesome to placing actual structural events in the proper chronological order.

Much of the historic production at Bunker Hill came from W-NW trending, SW dipping veins with sphalerite-pyrite-siderite mineralization ("Bluebird Veins") and hybrid mineral bodies where these veins are cut by later NE striking, SE dipping Galena-Quartz Veins, discussed in next section. Because the Cate Fault follows the trend of the Bluebird Veins, it was thought that the Cate Fault and related structures were the plumbing and driving mechanism behind vein emplacement for the first 90 years of mining. Geologic studies towards the end of major mining operations at Bunker Hill in the late 1970's established that movement along the major faults mapped on surface and underground cuts and offsets all know types of mineralization (Juras 1977).

7.1.4.3 VEINING

The Bunker Hill Mine has largely exploited mineralization that, in a general sense, can be defined as vein deposits. These will be discussed in detail in the following section of this Technical Report, but are also included here to provide proper structural context. The vein deposits can be divided into two groups based on cross-cutting relationships, orientation and mineralogy (Juras and Duff, 2020):

Bluebird Veins: Earlier event, W-NW striking, SW-dipping (Fig. 7-11), variable ratio of sphalerite-pyrite-siderite mineralization. Associated with axial planar fracturing, flexural cracks, and brecciation in quartzite beds along the hinge line of W-NW trending folds. Where mined, these are thick, tabular zones that have abrupt but gradational margins, with fairly solid zones of sulfide mineralization laterally grading to mineralized sheeted fractures and thin stringers along bedding in adjacent sediments. These "Stringer" zones can be large enough to constitute economic mineralization, as in the Guy Cave, UTZ, Newgard and Quill Zones, but they reflect a second-order control on mineralization.

Galena-Quartz Veins: E to NE striking, S to SE dipping (Fig. 7-11), quartz-argentiferous galena +/- siderite-sphalerite-chalcopyrite veins, sinuous-planar with sharp margins, cross-cut Bluebird Veins. Large, Hybrid mineralized zones are formed at the intersection of Galena-Quartz Veins with Bluebird Veins, where the Bluebird Vein is enriched in lead and silver by the replacement of siderite by galena.

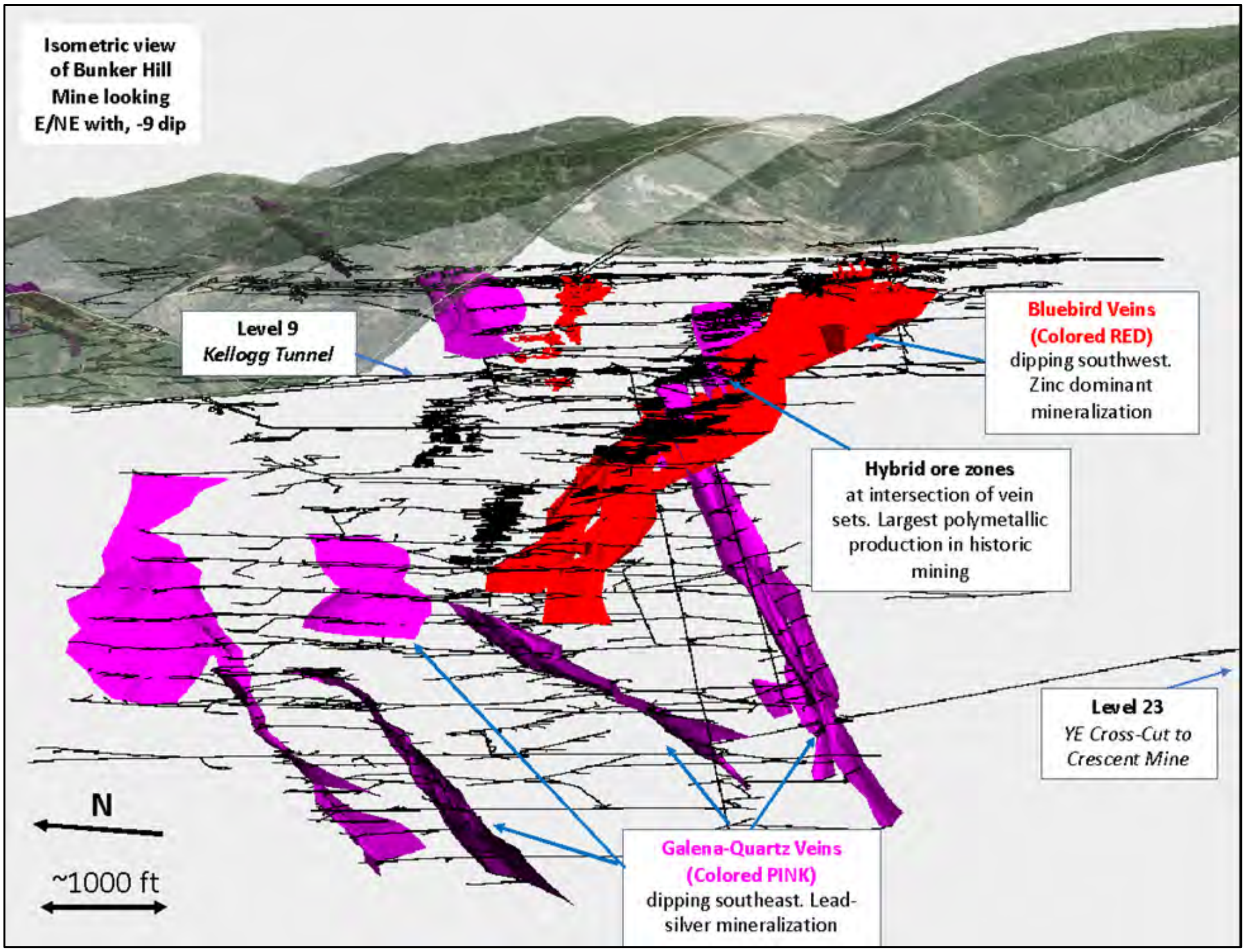


Figure 7-11 Bunker Hill Mine workings with 3D vein models showing difference between Bluebird and Galena-Quartz Vein systems and location of hybrid mineralized zones.

7.2 MINERALIZATION

The Coeur d'Alene (CDA) Mining District has produced phenomenal quantities of silver, lead and zinc, with significant copper, antimony and cadmium byproducts, and a peripheral belt of small gold deposits to the north. This production has come from a spectrum of deposits that reflect the varying structural, pressure-temperature and geochemical characteristics of the mineralizing systems. Mineralization at Bunker Hill has similarities to other mines in the District such as the Sunshine, Crescent and Galena, but represents a distinct suite of structural controls and mineralogy that is probably part of a large-scale zonation pattern.

The Bunker Hill Mine workings extend 8,600 feet along strike of the overturned beds of the Upper Revett formation that host the mineralization, extending 7,000 feet downdip parallel to the axial plane of the plunging anticline, covering 5,200 vertical feet from ~3,500 ft msl to -1,700 ft msl. More than 30 individually named deposits were mined historically in separate stopes, with two distinct types of deposits exploited: tabular Bluebird (BB) zones that parallel bedding and are associated with the fold structures, and later Galena-Quartz (GQ) Veins cutting through bedding with sharp walls. The Bluebird Deposits, such as the March, have been mined for up to 1,400 ft along strike, 4,000 ft downdip, covering 2,400 ft in elevation, with thicknesses of the generally tabular zones up to 150 ft. Galena-Quartz Veins were historically mined along strike lengths of up to 800 ft, and downdip up to 3,700 ft, with mined thicknesses from 5-15 ft.

Virtually all modern metal production at Bunker Hill has come from lead (galena) and zinc sulfide (sphalerite) mineralization, with silver a by-product of lead refining. Historic production in the upper levels of some of the GQ veins came from tetrahedrite (copper-iron-antimony sulfosalt, silver can substitute for copper to create very high Ag values) and cerussite mineralization (lead carbonate, surface weathering product of galena), and silver values in these working likely had some degree of supergene enrichment.

Stopes on the Jersey vein at Bunker Hill encountered oxidized lead-silver mineralization with abundant world-class pyromorphite crystals near their northern extent. Attempts were made to process this material through an oxide circuit at the mill, but the attempts proved to be non-economic. The pyromorphite zone was mined for mineral specimens after the close of major mining operations, and fine pieces from this are undoubtably some of, if not the highest value-per-ton material that has ever been extracted at Bunker Hill, gracing cabinets at most prestigious mineral museums across the world.

Mineralization at Bunker Hill falls in four categories, described below from oldest to youngest events:

Bluebird Veins ("BB"): W--NW striking, SW-dipping (Fig. 7-11), variable ratio of sphalerite-pyrite-siderite mineralization. Thick, tabular cores with gradational margins bleeding out along bedding and fractures. Detailed description in Section 7.2.2.

Stringer/Disseminated Zones: Disseminated, fracture controlled and bedding controlled blebs and stringer mineralization associated with Bluebird Structures, commonly as halos to vein-like bodies or as isolated areas where brecciated quartzite beds are intersected by the W-NW structure and fold fabrics.

Galena-Quartz Veins ("GQ"): E to NE striking, S to SE dipping (Fig. 7-11), quartz-argentiferous galena +/- siderite-sphalerite-chalcopyrite-tetrahedrite veins, sinuous-planar with sharp margins, cross-cut Bluebird Veins. Detailed description in Section 7.2.2.

Hybrid Zones: Formed at intersections where GQ veins cut BB veins (Fig. 7-11), with open space deposition of sulfides and quartz in the vein refraction in quartzite beds, and replacement of siderite in the BB vein structure by argentiferous galena from the GQ Vein.

Mining efforts at Bunker Hill focused on different types of mineralization as discovery, technology and metal prices demanded and allowed. Early mining in the late 1800's was focused on outcropping or near-surface, silver-rich Hybrid Zones and Galena-Quartz Veins. With the construction of a lead smelter in 1917 and an electrolytic zinc recovery plant in the 1920's, the Company began to mine larger tonnage, zinc-dominant Bluebird zones such as the Guy Cave and the UTZ, Quill and Newgard Zones. All galena at Bunker Hill is argentiferous, and the vast majority of the silver that has been recovered over the life of the mine has come from smelting galena. Silver-rich tetrahedrite (freibergite) has been found in some of the shoots on the GQ veins, but has not been a major constituent of the overall tonnage.

The four types of mineral zones listed above are truly only two separate structural events: the NW trending Bluebird Veins and the E-NE trending Galena-Quartz Veining. Initial 3D modeling (Rangefront Technical Services 2020) and structural + mineral zonation analysis (Juras and Duff, 2020) has indicated the various vein segments are likely post-mineral offsets of two vein systems that initially comprised four distinct Bluebird Veins and three to five Galena-Quartz Veins.

Although the mineralogy of the two vein types is distinct, and there are significant differences in vein textures and structures that are not germane to this Technical Report, the physical mechanism of both types of mineralization is sulfide minerals filling open spaces (Duff, personal communication, 2020). The creation of intra-bed open space by differential movement of a folded rock package leading to a structurally prepared host rock, as shown in Figure 7-9, is one of the main theories regarding the origins of mineralization along these structures (Juras and Duff, 2020).

Quartzite is the primary host to mineralization in all vein types, deposited in open-space caused by refraction of the vein structure as it passes from softer siltite-argillite packages into quartzite units. The vein deflects to cross the quartzite unit more orthogonally, bending to normal with the bedding plane, in essence decreasing the length of quartzite that needs to fracture to continue propagation. Mineralizing fluids ascending the vein structure deposited sulfides in the open-spaces and pressure shadow created by these refractions. Although the veins are commonly mineralized to some degree along their entire length, economic shoots in historic mining operations were largely hosted in these dilated zones in quartzite beds, with the shoot plunging up and down at an orientation defined by the intersection between the vein and bedding (Juras and Duff, 2020).

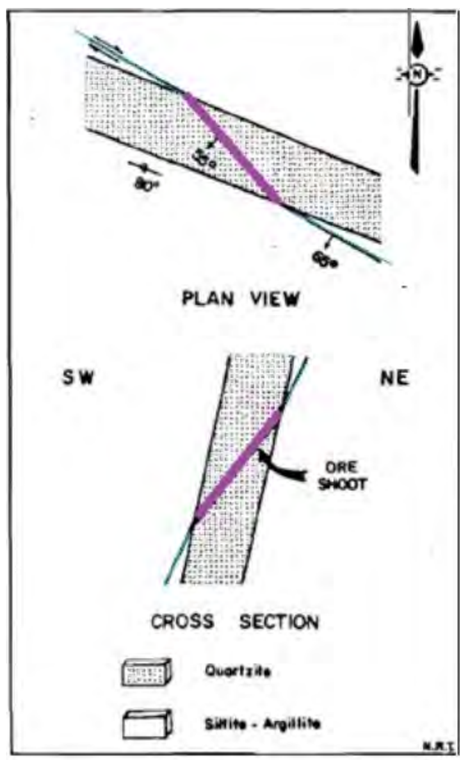


Figure 7-12 Plan view and cross-sectional diagram of formation of mineralized shoot along vein in quartzite unit where rheologic contrast between argillite and quartzite causes refraction of vein surface (Juras, 1977)

The largest historically mined stopes were on Hybrid Zones such as the March, which was mined for more than 40 straight years (Fig. 7-11). The large size reflects the open space available to mineralizing fluids, in the form of the refraction shoot created in the quartzite as shown above, and the replacement of siderite (iron carbonate) in the original Bluebird Vein by argentiferous galena from the Galena-Quartz Vein. This essentially replaces portions of the Bluebird vein that are non-metal bearing with lead-silver mineralization, while leaving the zinc deposited during the BB vein event, creating high-value polymetallic grades of mineralization.

7.2.1 ALTERATION

Alteration in the CDA Mining District in general is not as obvious or pronounced as large, predictable zonation patterns that are commonly found around porphyry Cu, epithermal vein Ag-Au, Carlin-Type gold and many other deposit types. There are halos of disseminated sulfide minerals and siderite in wallrock surrounding both BB and GQ vein types, diminishing rapidly away from the vein contact, typically along bedding or pre-existing fractures. Some bleaching is associated with mineralized structures, and limonite staining where they outcrop on surface, but these are largely weathering features on sulfide bearing rocks.

Elsewhere in the CDA District, disseminated carbonate zonation has been observed in vein wallrock, progressing from proximal siderite (iron carbonate) to ankerite (iron-calcium carbonate) to distal calcite (White, 2015). This has not been well documented or commonly observed at Bunker Hill and so is not currently mapped or modeled.

As it is currently understood and observed, there are no distinct alteration patterns at Bunker Hill that can be used for detailed exploration targeting, nor any alteration types that would impede potential future mining operations.

8 DEPOSIT TYPES

The metallic deposits in the Coeur d'Alene Mining District (the "District") are amongst the most studied in the world due to the prodigious metal production and long history of mining. There are large scale similarities between the deposits as a whole, but each deposit has its own specific structural, lithologic and mineralogical zonation controls. These controls became increasingly well understood at mine-scale across the District in the 1970's and 80's, but regional-scale controls remain enigmatic, conceptual and subject to much academic debate.

In the most general sense, deposits in the District are orogenic, polymetallic veins with lesser disseminated mineralization emanating from the principal veins. There are clearly multiple phases of mineralization, with different causative structural events for each, hosted across the Ravalli Group stratigraphy (St. Regis, Revett and Burke formations) within the District. lead, zinc and silver in varying ratios are the principal metals at all of these deposits, with lesser copper, antimony and cadmium historically recovered.

The veins in the District have been divided into two groups based on metallic mineralogy: a low-silver galena-sphalerite-pyrrhotite-pyrite type, and a high-silver galena-tetrahedrite type (Leach et al., 1998). Prior studies had given ages of 1400-1500 Ma by Pb/Pb isotope modeling of galena from a low-silver type vein (Zartman and Stacey, 1971). In the 1998 Leach Report, gangue minerals from a high-silver type vein were age dated using Ar/Ar and Rb/Sr methods and gave ages as young as ~90-110 Ma). These disparate age dates were explained in that report by two mineralizing events: an earlier low-silver, lead-zinc-silver event during diagenesis and folding in the mid-Proterozoic, and a later high-silver galena-tetrahedrite event in the Cretaceous, associated with emplacement of the Idaho Batholith and smaller, stocks of similar age and composition to those north of the Osburn Fault in the CDA District.

Reports on Bunker Hill Mine Geology by Juras and Duff (2020) note two vein types as well (BB and GQ as described in Section 7), that roughly match the compositional differences and have the same age relationships as the two types described by Leach. Juras interprets emplacement of the earlier Bluebird series of veins at Bunker Hill to be contemporaneous with early W-NW fold development (see section 7), and the later NE Galena-Quartz veins to represent a separate, more brittle structural event, likely related to the E-W Big Creek Anticline uplift.

Both vein sets at Bunker Hill exhibit textures typical of orogenic veins, with no boiling textures or sharp textural differences from pressure-temperature changes, nor any significant wallrock alteration other than disseminations of the vein minerals. The huge vertical extent (3,000-6,00ft+) of mineralization typical of all the vein types in the District strongly indicates that all mineralization was emplaced at moderate to deep crustal levels. Juras and Duff note examples of open-space-filling textures in sulfide minerals in veins in their 2020 report, and classify all of the veins at Bunker Hill as open space fissure veins. If all of these observations hold true, an active fold system is one of the few ways to geologically explain the spaces and pressure shadows necessary to form those open-space cavity-fill textures under the pressures and temperatures present at the time of vein emplacement.

As noted earlier in Section 7, Brian White (1994) has suggested that the entire CDA District is the base metal equivalent of a Shear-Zone hosted gold deposit, with shearing along the Osburn Fault splay of the Lewis and Clark Structural Zone, and heat supplied by the Cretaceous-aged intrusive rocks. In this model the mineralizing fluids travel up metamorphic lineations and take advantage of the same structurally prepared quartzite host rocks and structural pathways as the Juras-Duff model. Since the Juras-Duff Model is built on the same data set currently available to the Company and actively being used for geologic modeling, the fold-associated vein emplacement theory is the geologic model currently being employed to aid exploration and resource delineation drill planning.

9 EXPLORATION

BHMC has a rare exploration opportunity available at the Mine and has embarked on a new path to fully maximize the potential. A treasure trove of geologic and production data has been organized and preserved in good condition in the mine office since the shutdown of major mine operations in the early 1980s. This data represents 70+ years of proper scientific data and sample collection with high standards of accuracy and precision that were generally at or above industry standards at the time.

The Company saw the wealth of information that was available, but not readily usable, and embarked on a scanning and digitizing program. From this they were able to build a 3D digital model of the mine workings and 3D surfaces and solids of important geologic features. To add to this, all of the historic drill core lithology logs and assay data (>2900 holes) were entered into a database and imported with the other data into Maptek Vulcan 3D software.

By digitizing geologic maps of the mine levels, and connecting major faults, veins and stratigraphic blocks, it was possible to put into three dimensions ideas that had previously been confined to the brains of Company geologists, plan maps and paper cross-sections with data projected by hand. See an example in Figure 9-1 below, an isometric view of a cross section along the Bunker Hill #2 shaft, with slices of maps from Brian White's 1977 stratigraphic research program shown in proper georeferenced location for the 9, 11, 13, 15, 17, 19, 21, 23, 25 and 27 Levels.

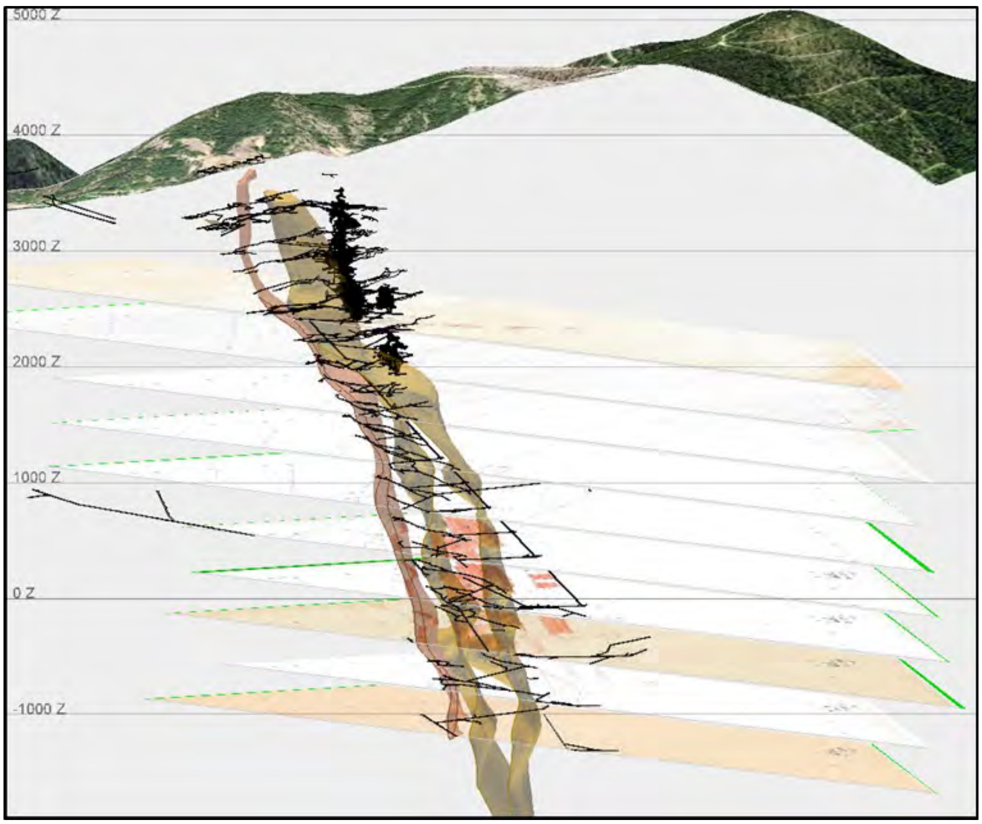


Figure 9-1 1500 ft thick cross-section along BH #2 Shaft, looking at 106 azm, -12 degrees. Mine levels and shafts are black lines, thin dark orange shape between levels on left is 3D model of U-1 quartzite unit of the upper Revett formation, thick orange shape is M-3 siltite-argillite unit. Shapes built directly from original field mapping.

There were a number of research programs at Bunker Hill undertaken in the 1970's to discern lithologic and structural controls on mineralization so as to conduct more effective exploration programs to replace diminishing reserves, discussed in Section 7 and 8 of this Technical Report (White, 1976, Juras, 1977). The Company is now able to apply the knowledge and conclusions from these studies in a far easier and more accurate manner than those which were available to prior generations.

The important lithologic control to mineralization is the quartzite units of the Revett formation. These have now been modeled in 3D from level maps and drill hole data, and post-mineral fault offsets can be reversed to reconstruct the folded position of the host rocks at the time of vein emplacement. Bedding patterns can be matched up at scales that were not noticeable in small-scale detailed field mapping in limited mine drift access. Fault offsets can now readily be determined and measured by positions of stratigraphic blocks. Flat faults that cut all types of mineralization, and were previously difficult to map or project, are now readily apparent in horizontal bends and offsets along units. Not enough work has been done to refine any of the above ideas down to an exact model yet, but the Company has the original data set almost entirely converted to 3D digital format. Figure 9-2 shows models of quartzite beds with offsets along modeled fault planes, cutting through the 9 Level stratigraphic map by White at 2405 ft elevation.

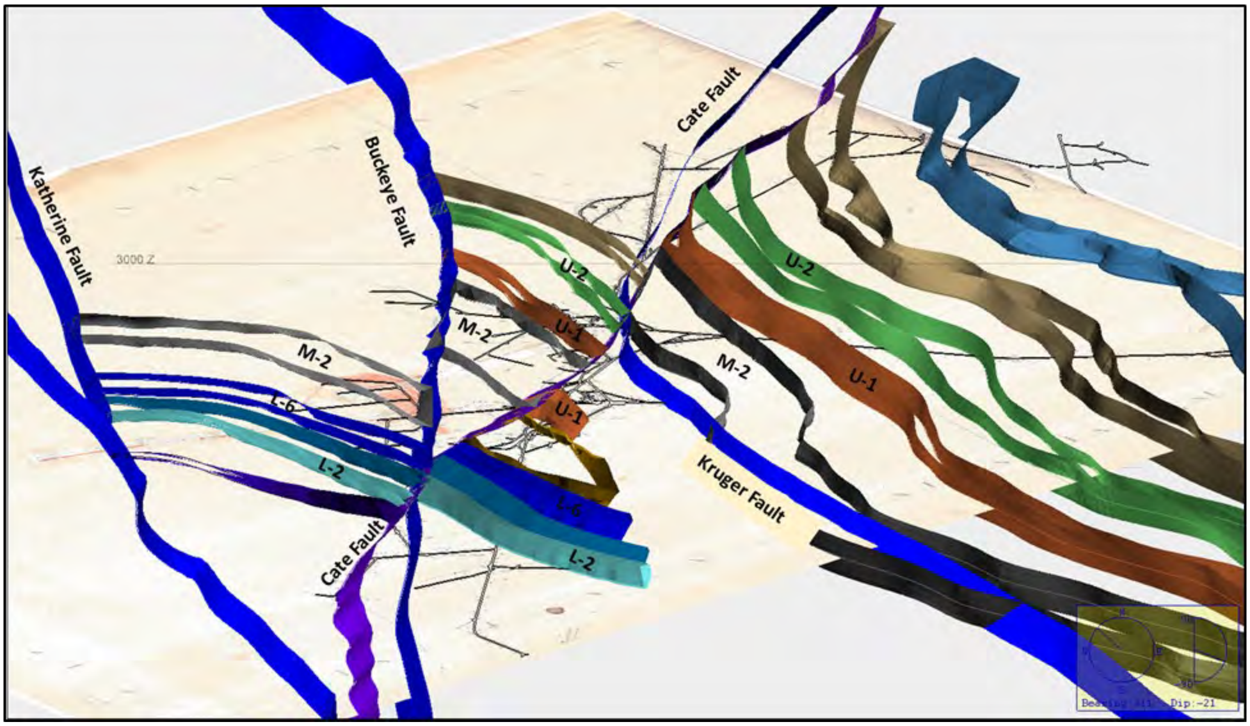


Figure 9-2 Isometric view of plan section through 3D lithology and Fault Models at BH 9 Level. View is looking 311 azm, -21 dip, with 100' window on either side of stratigraphy map at 2405' elevation.

Reversing fault offsets to reconstruct original positions has shown that the Bluebird and Galena-Quartz vein segments are offsets of original master structures for each type. Modeling is currently on-going to determine the proper offsets to reconstruct the original geometry of these vein systems at time of emplacement, which will likely identify previously unrecognized vein segments, and provide clues to locate offset segments of historically mined veins that were never found with exploratory drifting or drilling from underground.

The Company's current primary exploration focus is on high-grade silver targets that are relatively near surface. Many of the early mines on the Property, that were later consolidated under the original Bunker Hill Mining Company, extracted high-grade silver mineralization from Galena-Quartz veins, such as the Veral, Sierra Nevada, Caledonia and Deadwoods Veins. Mining stopped in the early 1900's on many of these structures when they were lost where they were cut off by faults. As the geology was poorly understood at the time, and core drilling was not available, many of the offset segments were never located and the mines shut down. With the discovery of the extremely large Hybrid March mineral body in the 1950's, mining shifted to this easily accessible, high-grade polymetallic mineralization that seemed to have no end in sight.

With so many stopes available to work on this huge Hybrid zone, proper geologic exploration fell by the wayside until the 1970's when the aforementioned research programs were started. With mining ceasing just a few years after the completion of this research, most of the ideas and targets developed did not get tested due to lack of time and resources before the mine closed. High silver prices in the mid 1980's caused the owners to examine silver exploration potential in close proximity to existing mine development (Meyer and Springer, 1985). A number of targets were developed, but once again, only a few were tested with any type of drilling or drifting. The geologic modeling described above is now allowing for Company geologists to examine these silver exploration targets in detail, and project lithology and structural modeling into the areas to refine and adjust the drill targeting and further evaluate the potential. Current exploration targets are portions of GQ Veins that have been offset along steep normal faults, an example of which is shown below in Figure 9-3.

The conversion of so many years of geologic work into a format in which all possible data can be isolated and looked at in 3D at the same time, same scale and same color scheme has allowed Bunker Hill Mining Company to rapidly employ the concepts and ideas of prior generations in exploration targeting, and has allowed comparison of data that was not possible with historic, paper-based geologic techniques. The Company intends to evaluate all of the exploration targets proposed in the waning stages of mining with the newly compiled dataset, and test as many of them as fit within the current realities of access and water levels.

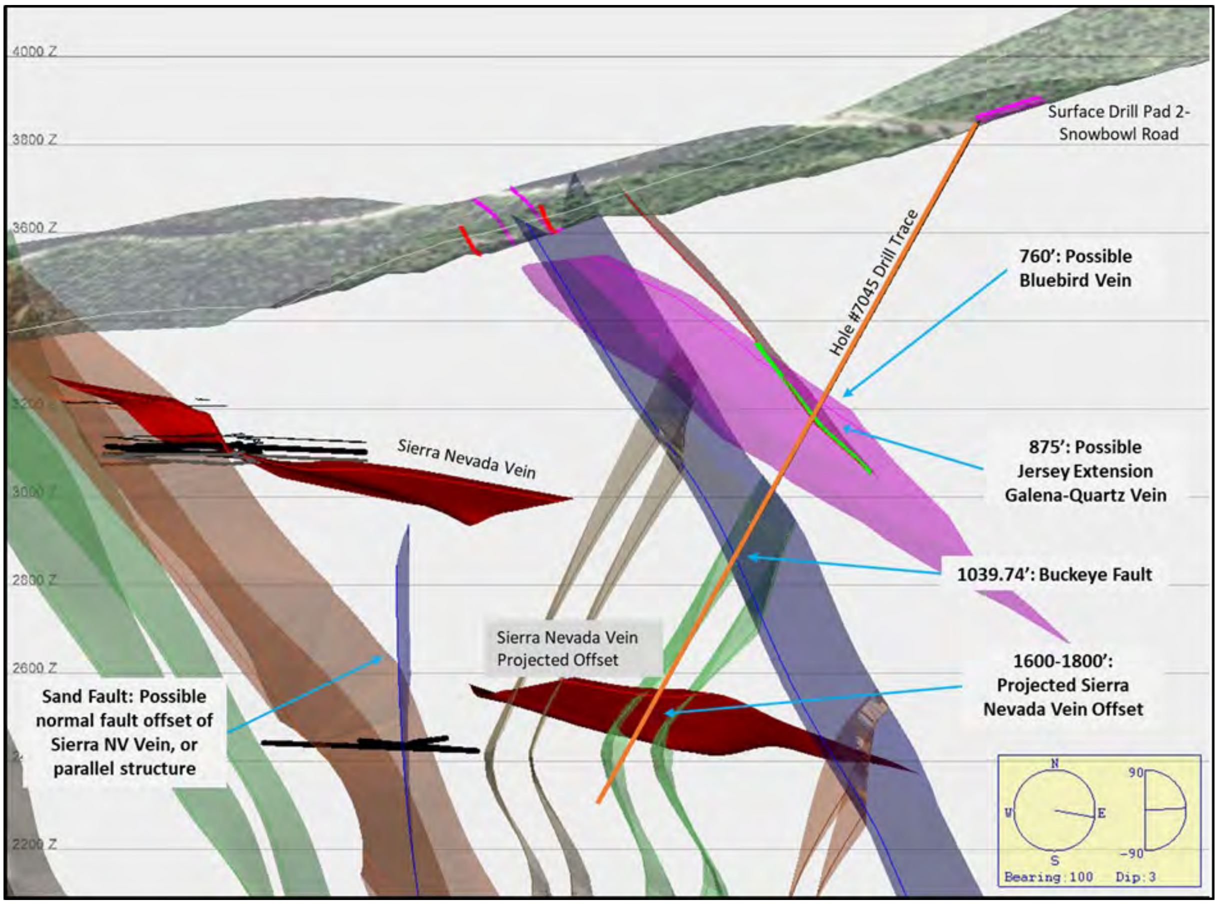


Figure 9-3 Cross-section through Vulcan 3D models along planned drill hole trace showing expected downhole depths of projected geologic features. Historic Sierra Nevada Mine levels in black center right.

10 DRILLING

10.1 BUNKER HILL DRILLING PROGRAM

Drilling began in September of 2020 and in several locations and definition drilling to expand the Bunker Hill Resources in the UTZ started in September of 2020 and continued into assay cutoff date of October 10, 2021, 2021. This drill program produced 55 holes that were drilled in either the UTZ or Quill-Newgard areas of the mine comprising 20,689 feet of core drilled. Holes were typically drilled at HQ diameter, but for future use as utility passes select holes were drilled at PQ diameter. Much of the drilling was related to the data verification described later in this report. Some exploration drilling occurred from multiple surface locations, with several holes drilled at the historic Homestake portal to expand the UTZ. Also drilled were definition and exploration targets on the 5-level accessed from the Russel tunnel, and exploration targets on the 9-level accessed via the Kellogg tunnel.

Drill pad prep and drill rig mobility logistics were managed on site by a drilling manger from Bunker Hill, supervisory staff from American Drilling Company (“ADC”) and the onsite Rangefront geologists. A Reflex TN14 gyroscope assisted in lining up the drill rig at the collar. A 50’ survey shot was taken during drilling to allow geologists to determine hole viability. Upon reaching the target depth, a geologist observed the core and determined whether to terminate the hole or continue drilling. Upon completion, the survey tool was sent down to take an end of hole survey shot plus one shot every 100’ on the way out of the drill hole. These surveys were then approved by the geology team in accordance with industry standard practices and uploaded into the database along with collar locations picked up by the survey team. Throughout the program, Vulcan software was used to plan and modify holes, check proximity to historic workings, evaluate deviation, and assess assay results. At the end of the program, surface holes were grouted in accordance with the Idaho Water Department guidelines.

Rangefront employees and ADC employees ensured security of the core throughout the program. Core was initially held by ADC at the drill rig with the rigs both on the surface and underground on the 5 level. Rangefront employees made daily trips to pick up core and receive a signed chain of custody. On the 9 level, ADC brought the core out the Kellogg Tunnel and it would be signed over to Rangefront at the morning shift change. Winter conditions on mountainous roads eventually necessitated the deposition of core into the core shed by ADC employees.

The core was housed on site in a secure core shed where it was washed, logged, photographed, cut, sampled, and then shipped to an assay lab (see Section 11 for details on sampling and assaying details). Geologic characteristics noted during the logging process included lithology, color, hardness, structure, alteration, observed mineralization, point data and geotechnical data. Rangefront employees ensured Chain of Custody during the entire process.

A portion of one hole was drilled prior to the drill program beginning in September. The hole was re-entered and completed in October of 2020.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

This section does not describe sample preparation, analysis or security measures taken prior to the initiation of the 2020-2021 Bunker Hill drill program. Drilling prior to 2020, actually prior to 1991, was conducted by the owners of the mine beginning in 1898. Drilling records have been maintained since that time. Sample preparation, analysis and security records do not exist. Only assay results and geological logging remain as the records. As noted throughout the report, the Bunker was among the premier mining companies in the United States. Drilling, muck sampling and data analysis was carried out to the highest standards of the time. Review and approval of results went through a hierarchy of engineers and other professional before being used to estimate mineralization for the mine.

This following describes sample preparation, analysis and security activities conducted by Bunker Hill through 2020-2021.

Drill core samples are cut and prepared by Rangefront employees prior to shipment. Half of the core was returned to the core boxes for archive purposes, while half was inserted into sample bags for shipment to the labs for analysis. Drill core and channel samples were stored in the locked core shed located on the mine site and kept until dispatched to the lab. Access to the core shed is monitored at all times.

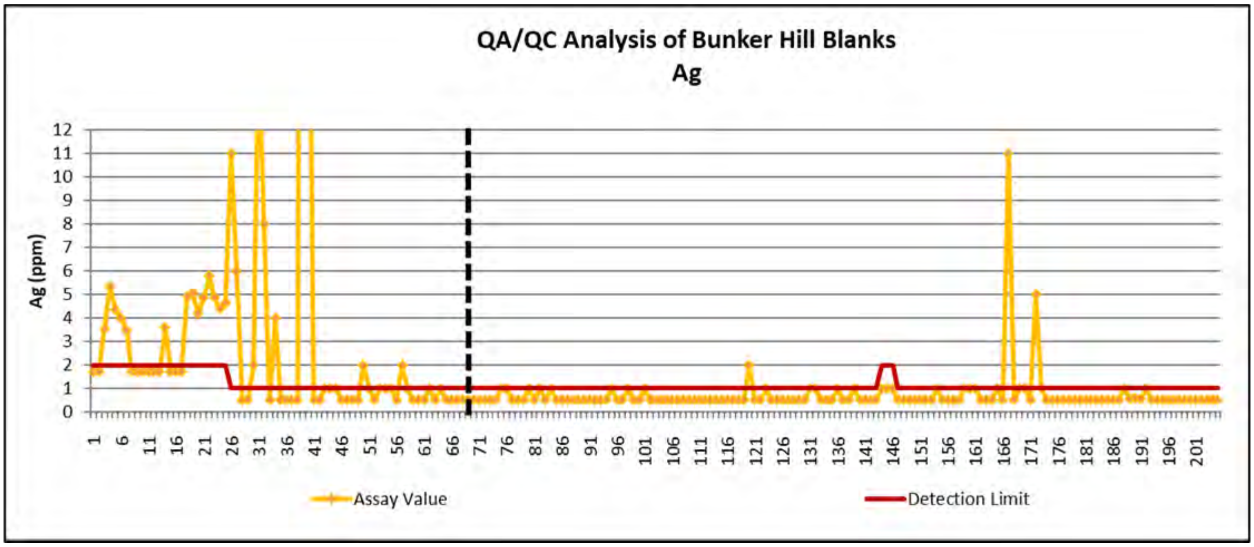
Prior to dispatch, core is measured for recovery and sample identification numbers are associated and assigned. Core intervals are photographed for posterity and accuracy. Half core is cut and bagged with the same sample identification number. Assay results are compared against the submitted sample numbers before acceptance of the results.

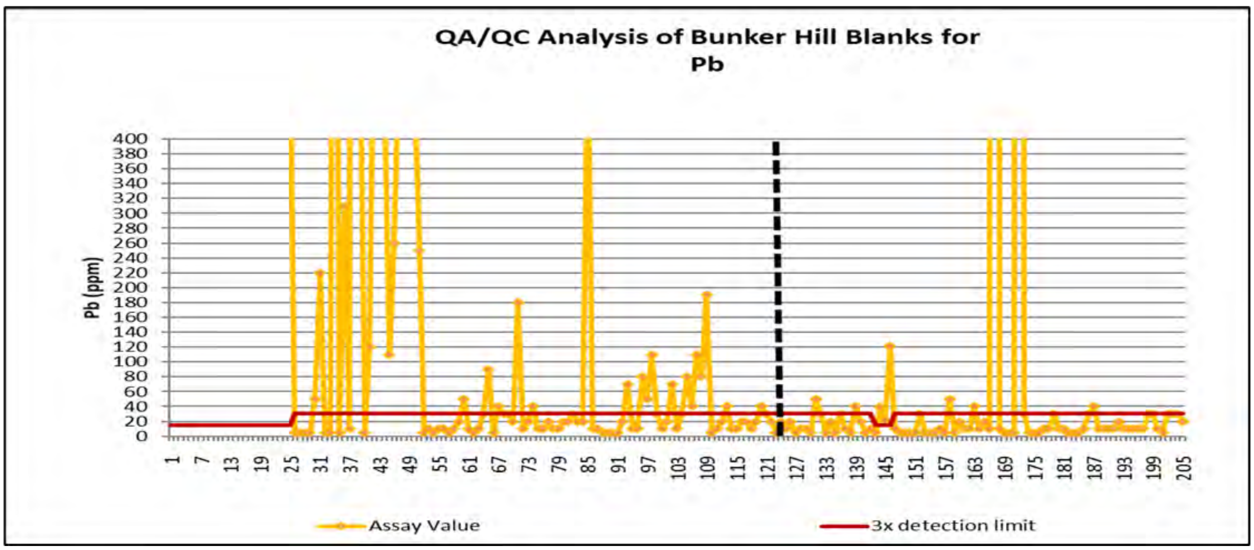
Throughout the project, multiple analytical laboratories performed assays on the 5,067 drill core and channel samples collected. The QA/QC protocol in place, in conjunction with the data collected from the laboratories, determined that ALS Global “ALS” (ISO/IEC 17025:2005) provided the most accurate and repeatable results. Both Paragon Geochemical (ISO/IEC 17025:2017) and American Analytical Services, INC “American” (ISO 17025:2005) were used in the early and mid-stages of the project but failed to yield timely and repeatable results.

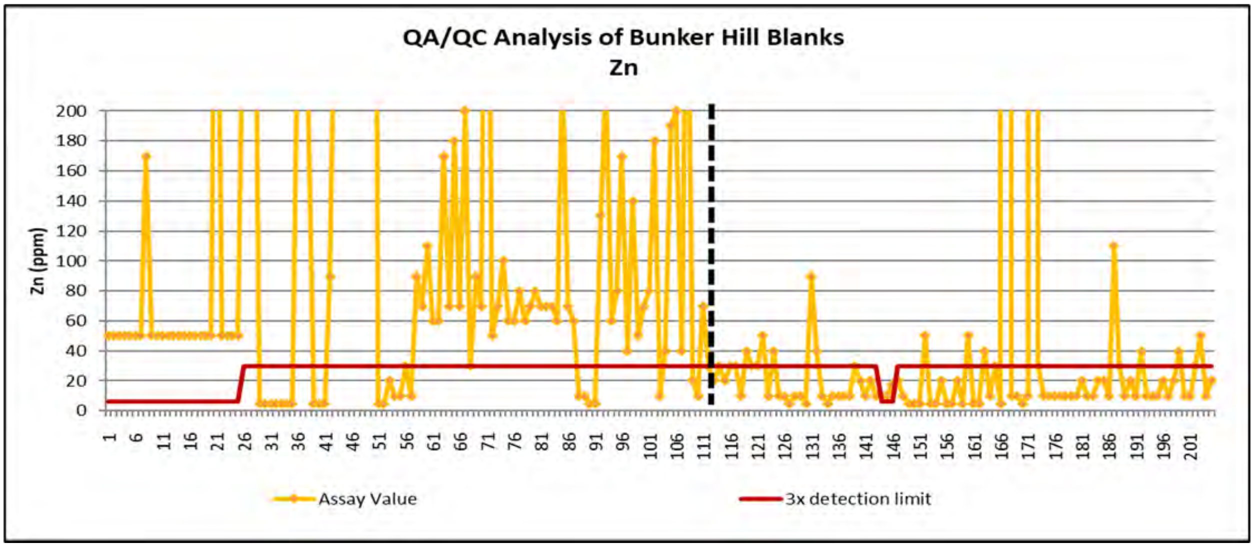
Upon arrival, the laboratory crushed, split, pulverized and screened all samples at 200 mesh. ALS then performed a 4-acid digestion assay (ME-OG62) for silver, lead and zinc on the drill core and channel samples. Finalized results reported to an onsite Rangefront Geologist then entered into the geologic database managed by an independent entity. All results in this Technical Report are based on and published with a high level of confidence in the work performed by ALS Global.

Blank material:

Blank material was inserted into the sample sequence at a ratio of 1:20 or roughly every 100’ of core/channel sampling. At the start of the project the blank material used was marble Landscaping chips from Ace Hardware. This material failed QAQC due to contamination. Silica sand replaced the marble chips but still showed material contaminations as well. At Bunker Hill’s request, the samples sent to Paragon had blank material inserted by the lab. The samples material used were rock chips from a quarry located outside of Sparks, NV. These too had a high baseline for Pb and Zn. Finally, a lab certified blank, OREAS-21e, was used and produced satisfactory and repeatable results. The Ag element did not have the contamination as much as Pb and especially Zn did. The dashed vertical line represents the transition to the OREAS-21e material that is currently being used (right of line). The below figures represent blank data for all drill holes completed between 2020 and 2021 used in the updated December 29, 2021 Mineral Resource Estimate. OREAS-21e arrives in pre-sized packets of pulverized material and therefore did not undergo the preparatory work done on coarse material. It is recommended that Bunker utilize both lab-certified blank material and work to acquire bulk blank reference material that will require a comparable preparation and analysis suite as the non-check material submitted for assay.

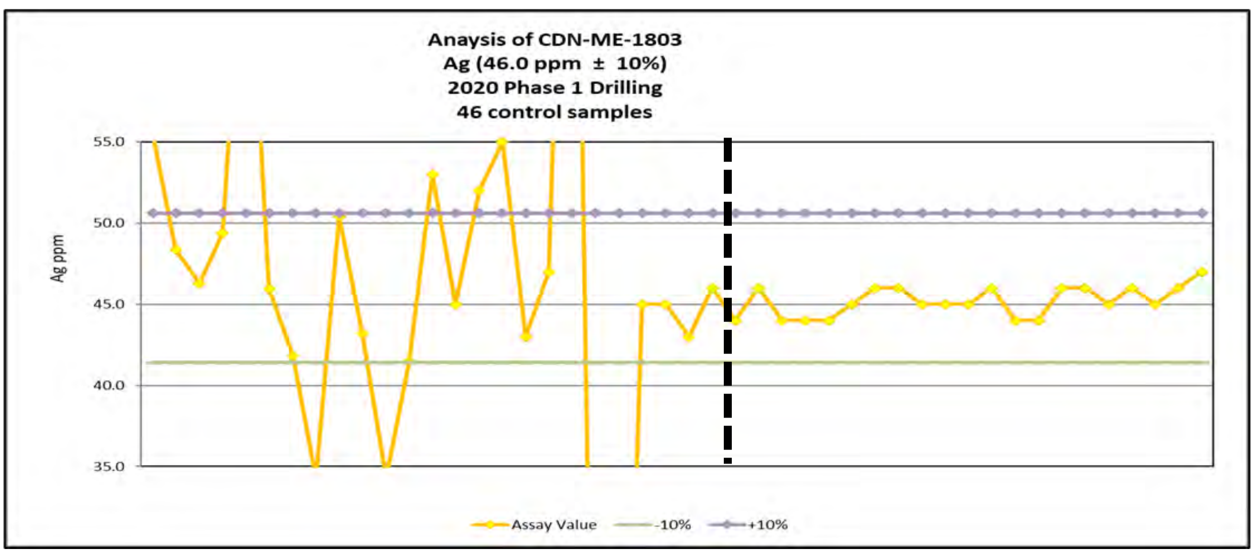

QA/QC Analysis of Bunker Hill Blanks
Ag
Ag (ppm)
Assay Value
Detection Limit

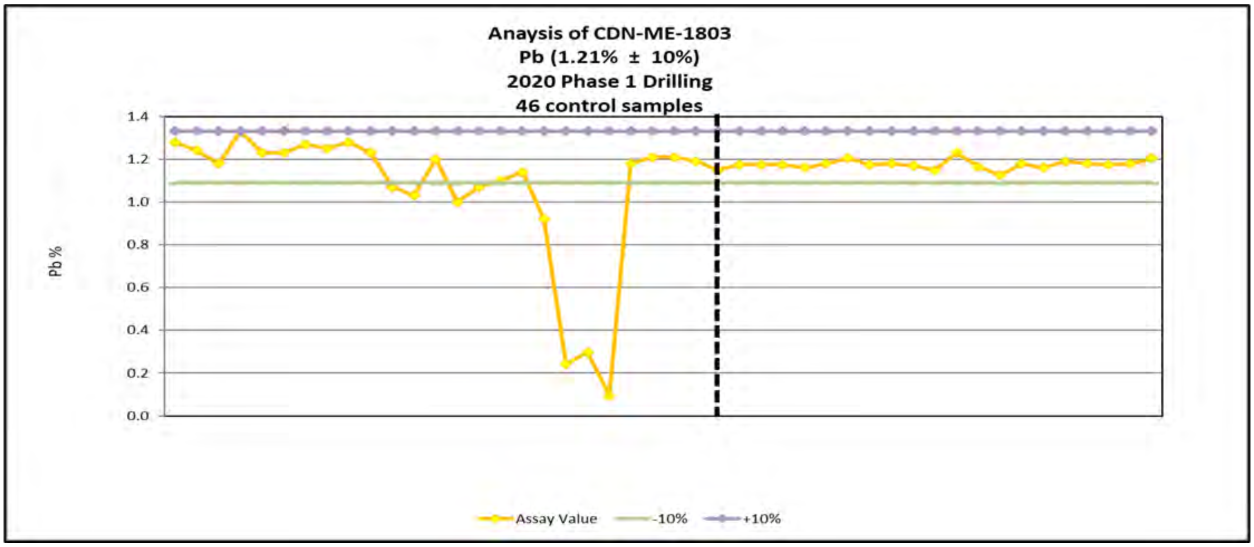

QA/QC Analysis of Bunker Hill Blanks for
Pb
Pb (ppm)
Assay Value
3x detection limit

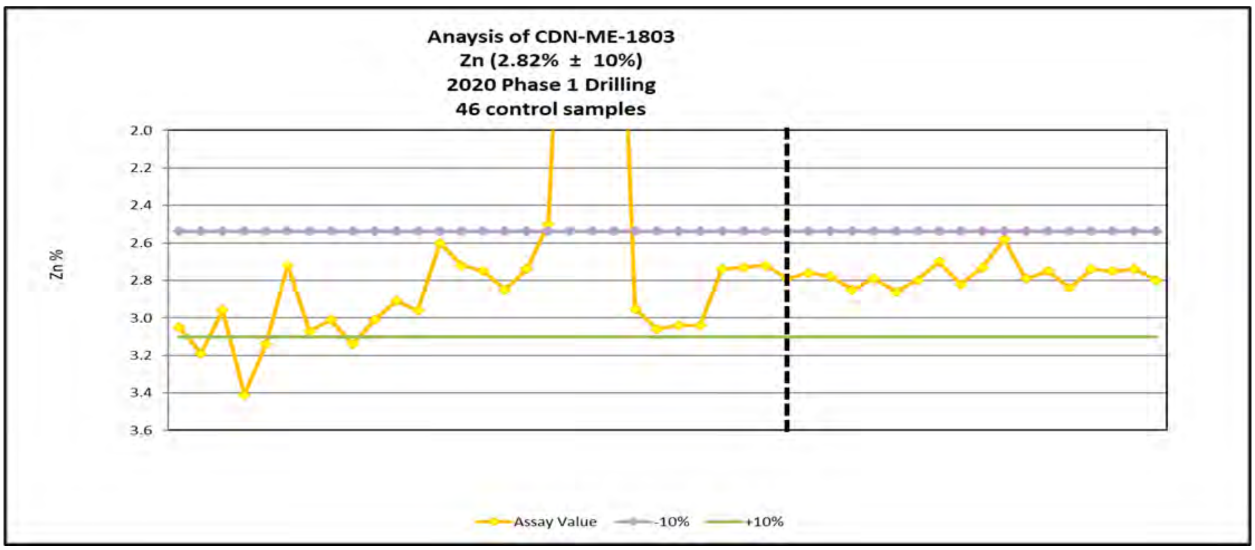


Certified Reference Materials

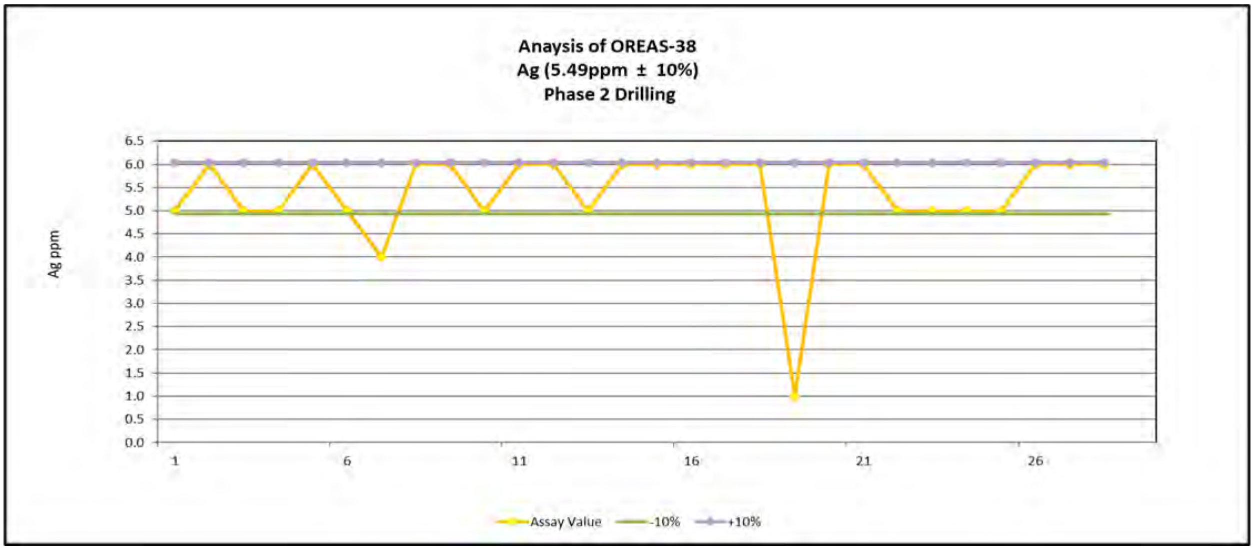
Certified Reference Materials ("CRMs," "standards") were used to monitor the accuracy of the assay results reported by all labs. Standards were inserted into the sample sequence at a ratio of 1:20 or roughly every 100' of core/channel sampling. At the start of the project, two different VMS (volcanic hosted massive sulfide) standards were used from CDN Resource Laboratories Ltd. The below graphs show the accuracy and repeatability issues with the first two labs that analyzed the samples. The dashed vertical line represents the division between the QAQC at American and Paragon (left of line) vs ALS (right of line). The below figures represent CRM data for all drill hole assays completed between 2020 and 2021 with a data cutoff date of October 10, 2021 and subsequently used in the Mineral Resource Estimate with an effective date of November 29, 2021.

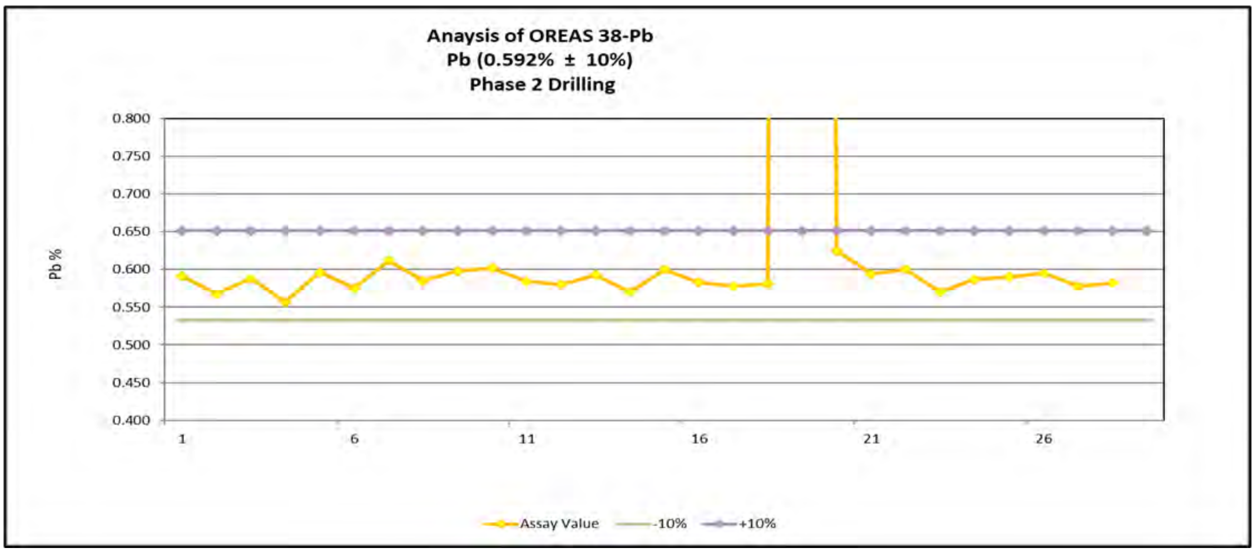


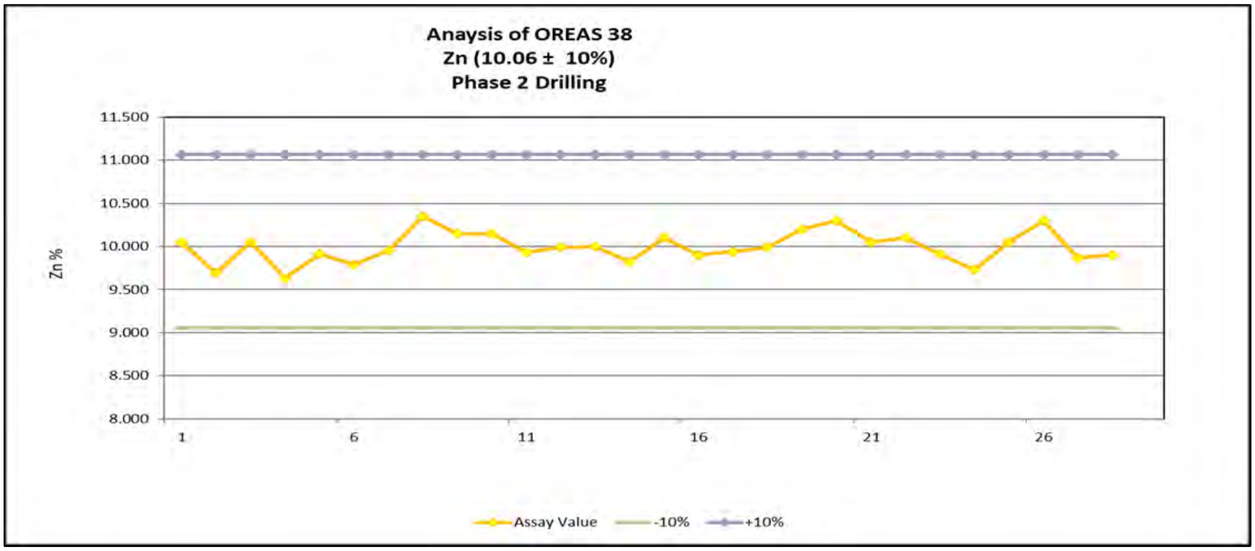




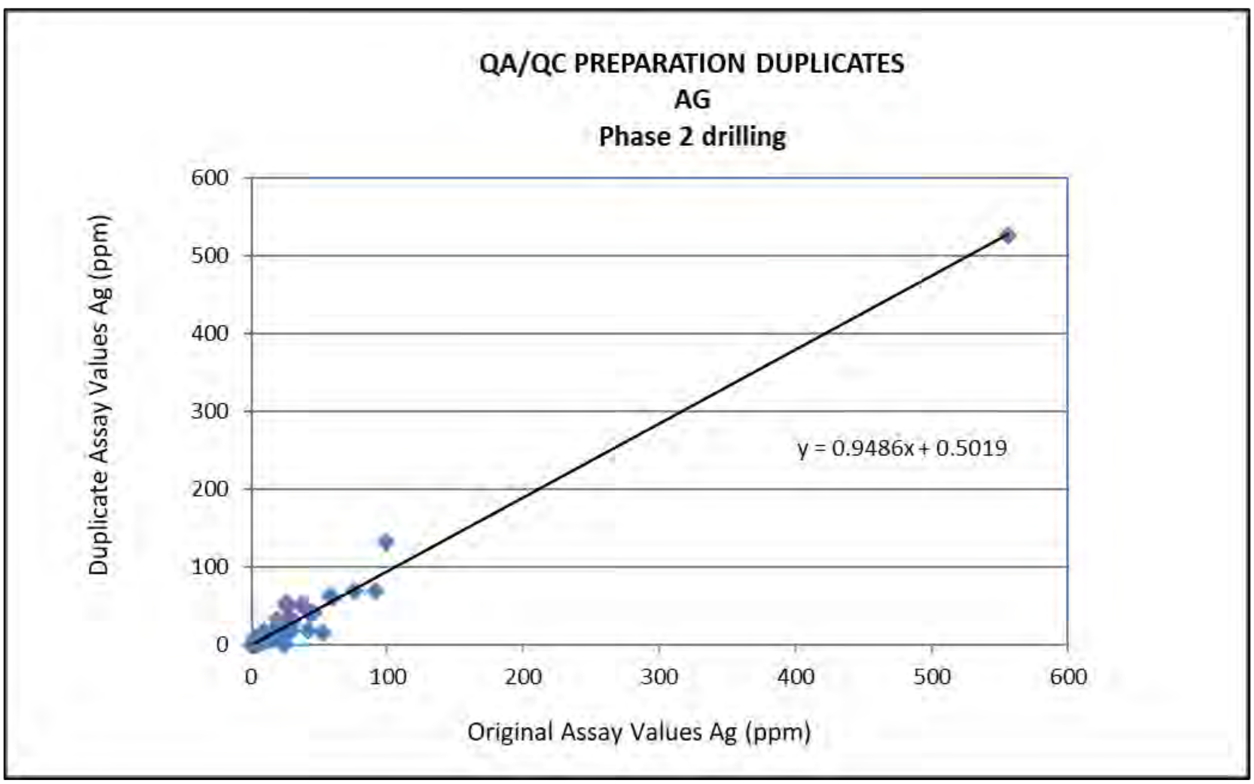
In October 2020, Bunker Hill discontinued the CDN standard reference material and began using four different standard materials from Ore Research & Exploration PTY LTD. This material was of meta sedimentary origin and matched theoretical metal grades from Bunker Hill. Below are the charts that represent the QAQC of the most widely used standard throughout phase 2 of the drill program, OREAS-38.

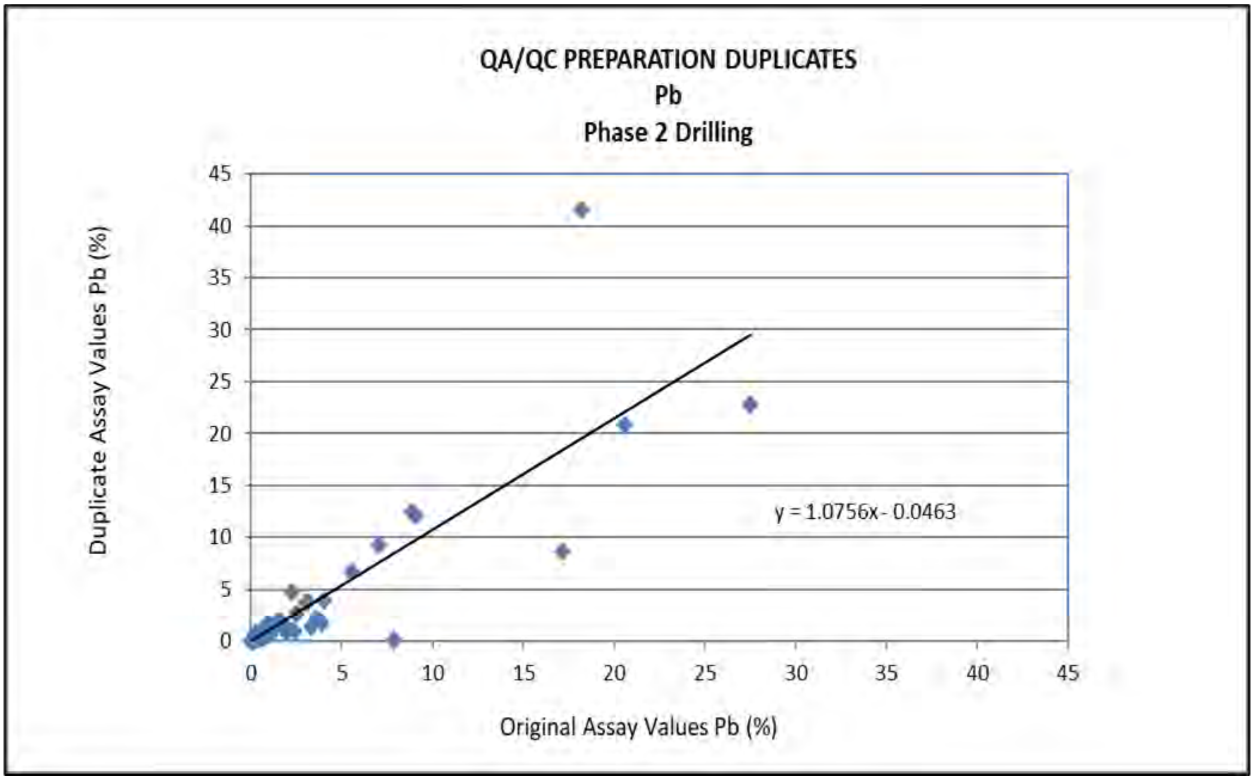

Anaysis of OREAS-38
Ag (5.49ppm ± 10%)
Phase 2 Drilling
Ag ppm
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1
6
11
16
21
26
Assay Value
-10%
+10%

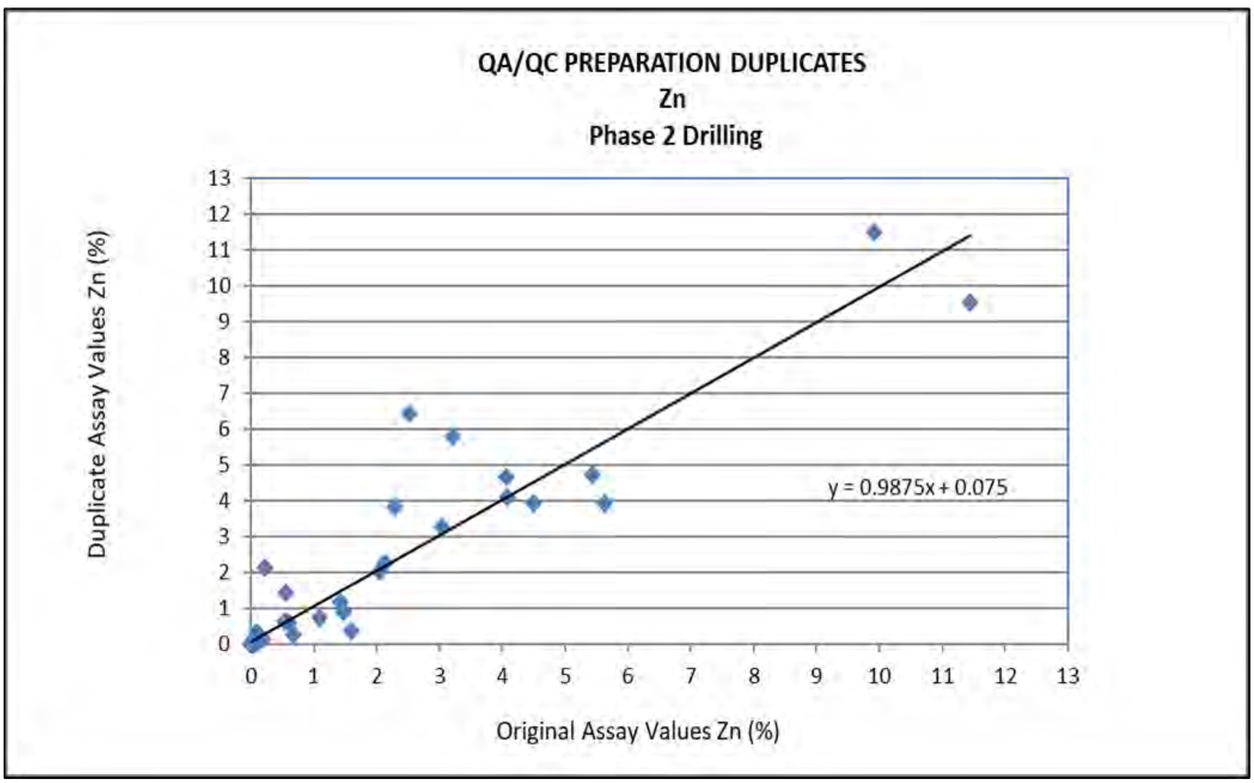

Anaysis of OREAS 38-Pb
Pb (0.592% ± 10%)
Phase 2 Drilling
Pb %
0.800
0.750
0.700
0.650
0.600
0.550
0.500
0.450
0.400
1
6
11
16
21
26
Assay Value
-10%
+10%



Bunker has initiated a duplicate prepping procedure that involves quartering the core. Half the quarter would be grabbed by hand and put into one bag and the half into another. Due to the nuggety and fractured nature of the mineralization, obtaining an exact duplicate was not achievable. After investigating these results, the core shed obtained a crusher and riffle splitter to make a more homogenic sample for a more accurate duplicate that will tests the labs repeatability. The below figures represent duplicate data for all drill holes completed between 2020 and 2021 with a data cutoff date of October 10, 2021 and subsequently used in the Mineral Resource Estimate with an effective date of November 29, 2021. All material not passing QAQC variance limits was re-run through the same analysis suite, along with the preceding and following samples adjacent to the failed sample. It is recommended that Bunker maintain a protocol for handling of QAQC failures and work with laboratory personnel to run samples sequentially based on sample number assigned by Bunker geologists.




QA/QC PREPARATION DUPLICATES
Pb
Phase 2 Drilling
Duplicate Assay Values Pb (%)
Original Assay Values Pb (%)
y = 1.0756x - 0.0463
0
5
10
15
20
25
30
35
40
45


QA/QC PREPARATION DUPLICATES
Zn
Phase 2 Drilling
Duplicate Assay Values Zn (%)
Original Assay Values Zn (%)
y = 0.9875x + 0.075
0
1
2
3
4
5
6
7
8
9
10
11
12
13

It is the opinion of the author that security of the samples remained uncompromised throughout the sampling program. Adequate sample preparation methods and QA/QC protocols are followed. Laboratories performed proper analyses on the samples, and the author has full confidence in the validity of the published results.

ALS Global testing laboratories are located at 4977 Energy Way, Reno NV 89502.

ALS has no relationship other than that of a vendor to BHMC.

12 DATA VERIFICATION

Mineralization at Bunker Hill was exploited for over 100 years prior to being shut down due to environmental concerns as described in Section 4 and Section 6. A producing polymetallic mine stopped production with blasted mineral inventories in the ground. Documentation of a century of historic estimates remain intact to this day. Production records from hundreds of stopes exist to this day. Quarterly and yearly records of depletion, addition and tracking of material produced and delivered to a mill and two smelters is factual and supported by existing records. The bulk of the mine, known mineralization, and hundreds of production stopes are flooded up to the 11 level. Thousands of records of sampling and drilling exist.

The dilemma for the author, or any QP, at this particular deposit, is how to prove that existing data may be used for estimation of mineral resources. Sampling and drilling assay results were collected to the best standards throughout the history of the mine. Drilling records including surveyed collar coordinates. Driller names and geologist names are recorded. The actual hand written log from drillhole # 1, drilled in 1898, is still kept on record at the mine. QAQC protocols are not documented. Based on the author's experience reviewing and working at older projects, QAQC protocols were never historically utilized at mines until the 1980's and 1990's. It is understood that these protocols are necessary in terms of documenting proof of results in order to detect errors or even fraud, as is so important in the mining business of the 21st century.

Item 12 of NI43-101F1 requires three steps of the qualified person to describe verification procedures employed:

(1) The data verification procedures applied by the qualified person (described in this section)
(2) Any limitations on or failure to conduct such verification, and the reasons for any such limitations or failure; and
(3) The qualified person's opinion on the adequacy of the data for the purposes used in the technical report.

The following sections describe verification procedures recommended by the author; namely stope block sampling and core drilling. BHMC expended in excess of $4 million for verification of the nature and existence of mineralization at the mine. There were no limitations placed on the QP's requirements for data verification. In the opinion of the author, the results of the data verification program conducted at Bunker Hill are adequate and can be relied upon to estimate mineral resources for the mine.

Three important items were evaluated that give the author confidence that results are appropriate to be used for mineral resource estimates at Bunker Hill.

1. Existing stope block validation
2. Core drilling through known historic areas of mineralization which is described in Section 10
3. The re-assaying of un-oxidized pulps left over from the last drilling in the late 1980's

12.1 STOPE BLOCK VALIDATION

In order to gather data in areas inaccessible to drilling (specifically, historic stopes), BHMC implemented an underground sampling program under the strict guidance of the author. Beginning in March 2020, BHMC launched a significant underground sampling program with the intent of verifying historic assays and data located on the mine site. PMC, owner of the Bunker Hill Mine, granted access to the onsite historic data, as well as underground portions of the mine. Underground channel sample collection began on March 28, 2020. Over the following 3 months, a total of 753 samples were collected across ten levels and sub-levels of the mine. Underground sampling concluded on the June 24, 2020. The underground channel, or chip samples, in conjunction with diamond drilling described in Section 11, substantiated the well-documented mineralization of the historic mine.

12.1.1 SAMPLING TEAMS

Initially, two samplers began sampling using methods described below. Within three weeks, the sampling crew grew from two samplers to a team comprising a sample crew chief and six samplers. As the number of samplers increased, a geologist began to accompany samplers underground daily to perform sample layout, assist with the organized collection of samples and review the work performed.

12.1.2 METHODOLOGY

Collection of samples underground involved a multi-step process beginning with the identification of possible sample locations using historic maps. Targeted stopes fell within the boundaries of the UTZ, Newgard and Quill deposits. Scanned mylar maps provided excellent information about underground sample areas. Occasionally, the sample crew discovered an unmapped drift or finger. However, the maps proved to be roughly 95% accurate.

Upon arrival at a sampling location, the geologist began the orientation process by labeling mined out areas and designating each drift, finger, or pillar with a number using spray paint on the ribs. All such labeling was carefully recorded on field maps created from the mylar scans. In several sampling locations, room and pillar methods of mining left pillars that proved both useful in navigating large pillared “rooms” and simultaneously provided opportune sample locations. Once comfortably oriented, the geologist identified specific sampling locations on ribs (and where appropriate, on the back), where samples could be collected perpendicular to the bedding planes of the rock to accurately define the width of a mineralized interval. Inspection of the orientation of the bedding took place at every interval sampled.

While the geologist identified sampling locations within the designated area, samplers barred down loose rock and mitigated for a variety of potential safety hazards. Occasionally, historic mining clutter (pipes, old equipment, timber, etc.) blocked potential sample sites, necessitating its removal prior to sampling.

Sample layout commenced with the geologist and a sampler using a measuring tape reel and spray paint to indicate 5 ft. sample intervals. Vertical lines were painted 5’ apart on the ribs, and a single horizontal line connected the two, to indicate to the samplers where to perform the chip sampling (see Figure 12-1 below). Samples were laid out perpendicular to bedding in 5’ sections for as long as there was rock to sample. Prior to painting the ribs, the geologist assessed the stability/safety of each interval. Occasionally, poor ground conditions required skipping an interval where the possibility of rockfall existed. The sampling crew assessed the potentiality for back samples where gaps between the ribs existed. All sample intervals and footages were carefully recorded on field maps.

Initially, samplers approached the sample location with a tarp, a hand sledge and chisel, sample bag, aluminum sample ID tags and a sample tag book. Prior to sampling, the sampler recorded information regarding the sample location including the date, sampler, level and stope, finger/rib/pillar as designated by the geologist, sample interval footage, and rock/mineral description. The sampler wrote the sample ID number on the bag and inserted the paper tag from the sample tag book with the same sample ID into the bag.

Samplers carefully laid the tarp on the sill (floor) beneath the interval to be sampled. Chiseled rock chips removed from the rib or back would fall onto the tarp. Once a sampler removed the appropriate amount of material (between 1 and 10 lbs.) from the sample interval, the chips were collected from off the tarp and placed in the sample bag. The sampler placed the filled sample bag below the sample interval to be photographed and nailed an aluminum tag with the appropriate sample ID number on the right-hand side of the sample interval. Finally, the tarp was removed and cleaned to not cross-contaminate samples, and then moved on to the next sampling interval.

The sampling team quickly realized, however, that the hardness of the host rock (quartzite) significantly hindered the pace of sample collection. The team acquired two battery-operated, hand-held rock saws and, after the geologist performed sample layout, a sampler with the saw made two, 1-inch deep cuts in the rock roughly an inch apart, providing samplers a consistent edge to chisel easily along the entire sample interval. The rock saw significantly improved the rate of sample collection. And as the number of samplers and rate of sample collection increased, the crew chief, with assistance of the geologist, became responsible for preparing sample bags, recording the sample information, and photographing each interval to streamline the process.

Figure 12-1 Rib sample collected from the 082-25-80 sublevel

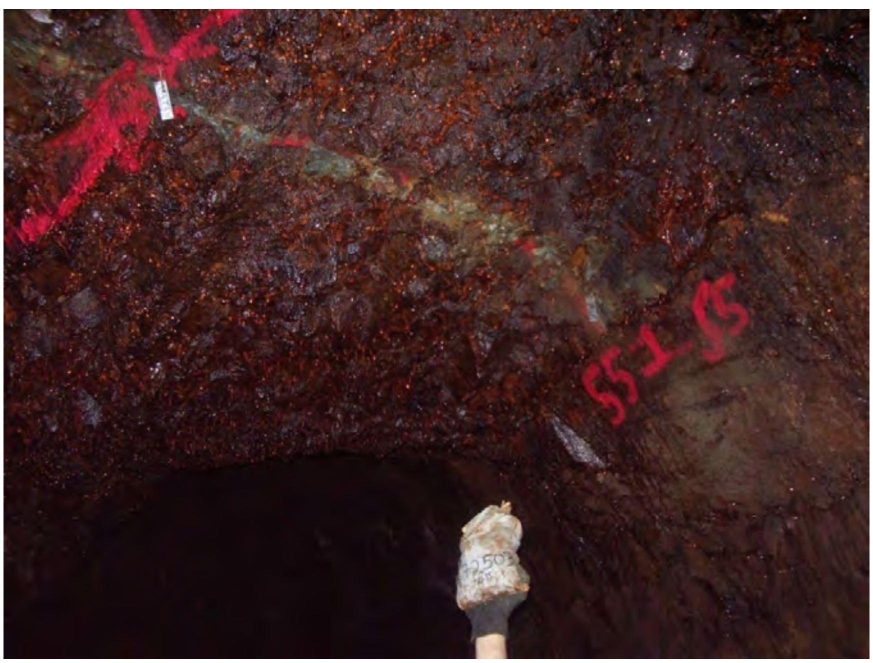


Figure 12-2 Back Sample collected from the 082-25-80 sublevel

At the end of a day of sampling, the sampling crew removed channel samples from the mine and transferred them to the core shed. As soon as the sampling crew accounted for each sample collected, standards and blanks were prepared and inserted in with the channel samples at a 1:20 interval for both standards and blanks.

After the samples were secured, the sample crew chief and geologist entered the data about each sample taken during the day's sampling into an excel spreadsheet. Furthermore, they documented the precise location of each sample using georeferenced AutoCAD DWG files (see Figures 1-3 below) to generate a sample's X, Y, and Z coordinates. Merging the sample's physical location with the assay data proved useful in following mineralization trends and comparing current data to the historic results.

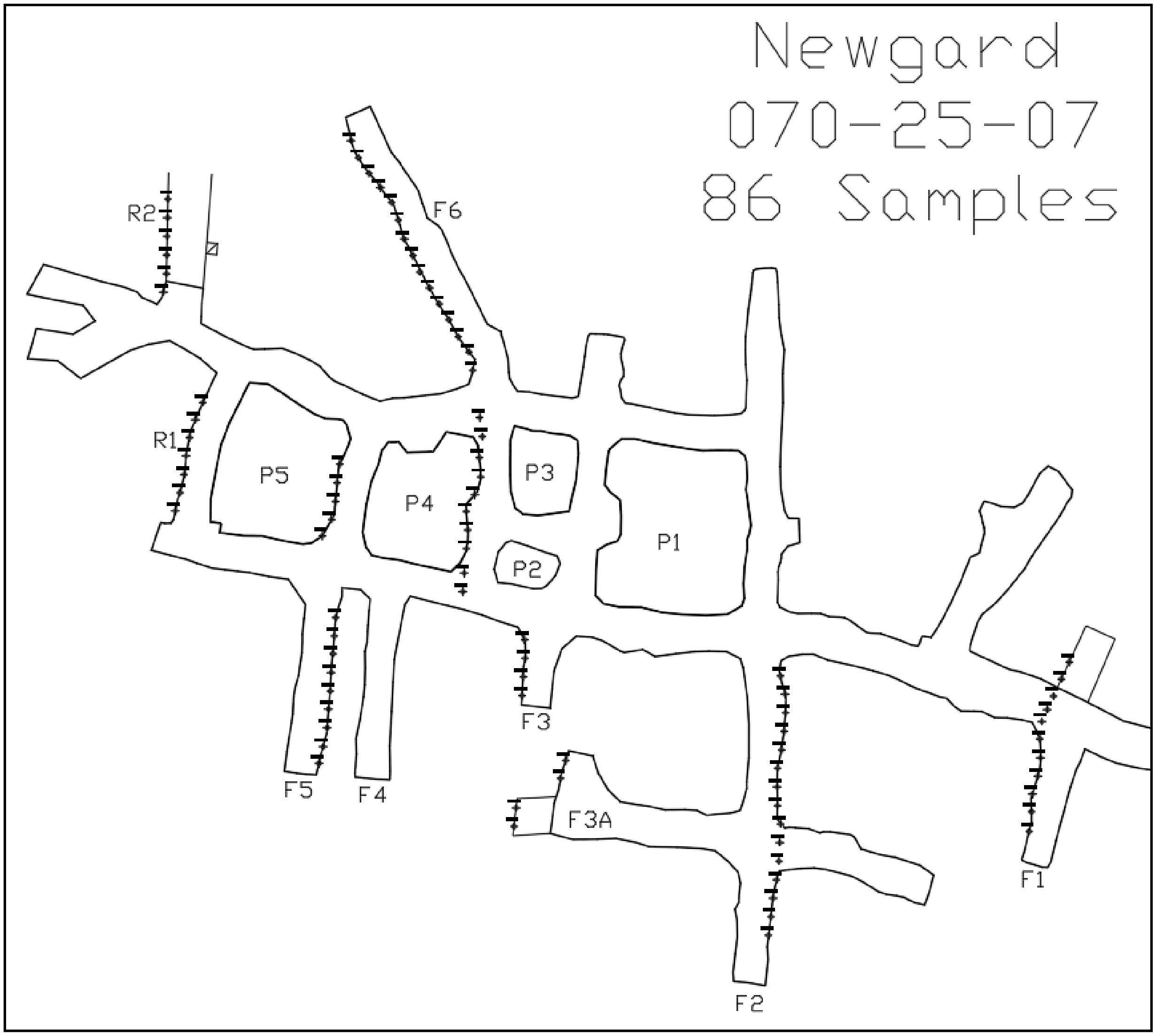


Figure 12-3 Sample locations on the 070-25-07 sublevel using geo-referenced AutoCAD files

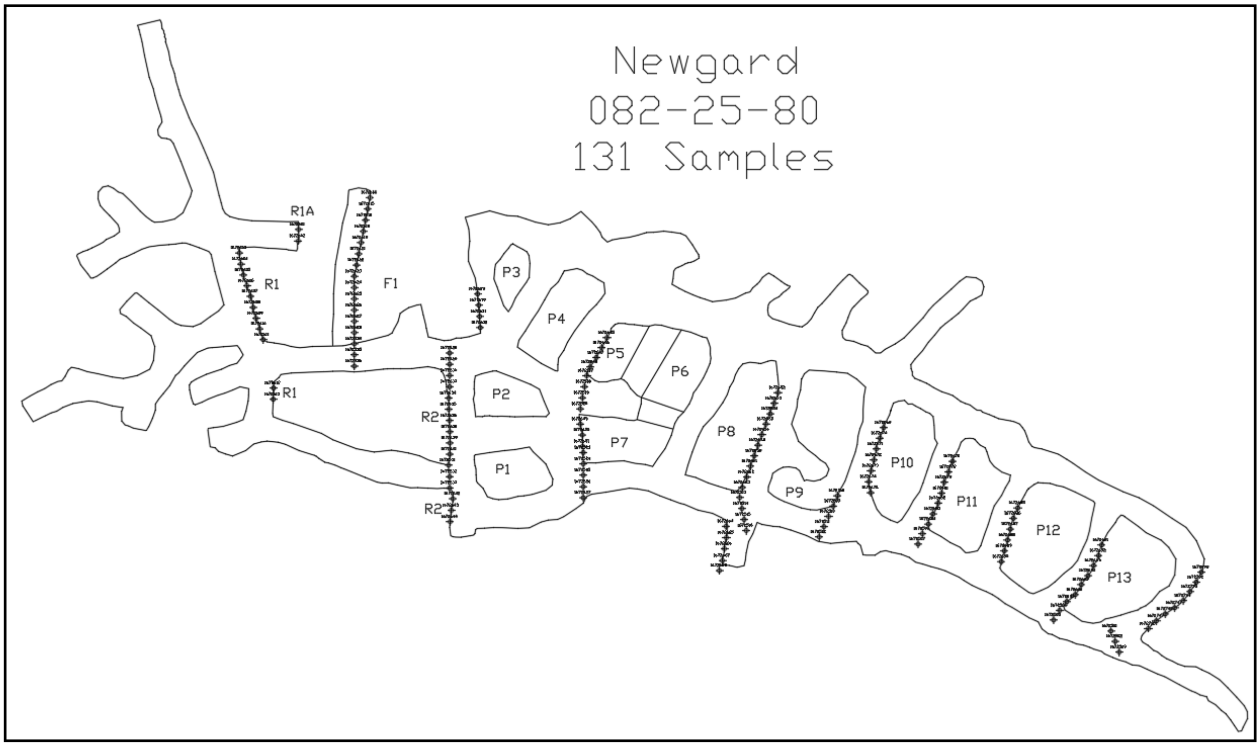


Figure 12-4 Sample locations on the 082-25-80 sublevel using geo-referenced AutoCAD files

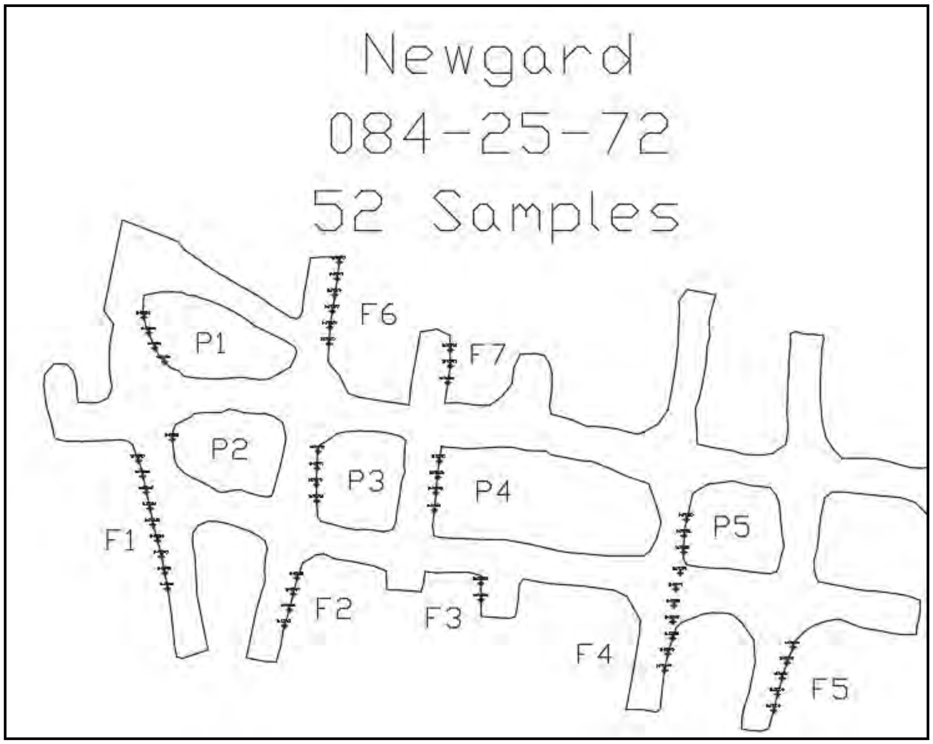


Figure 12-5 Sample locations on the 084-25-72 sublevel using geo-referenced AutoCAD files

A breakdown of sampled areas and the number of samples collected is shown in Table 12-1.

Table 12-1 Channel Sample Breakdown

Stopes Samples	Number of Samples
UTZ	111
071-25-05	30
070-25-07	86
071-25-07	52
082-25-80	131
080-25-25	62
080-25-23	101
9 Level I-drift	68
10 Level	70
11 Level	42

Throughout the underground sampling program, a number of safety and logistical constraints dictated sampling locations. The sampling crew navigated issues such as high backs, unstable or faulted ribs and pillars, poor air quality and gases, ground support, standing bodies of water, areas filled with waste rock, poor ground conditions, undetonated historic explosives, and gaping holes in the back or sill. Samplers frequently consulted with the mine safety manager and, where possible, found a way to safely collect samples. Occasionally, no viable solution to remedy safety issues required samplers to forego sampling in a desired location. Despite the obstacles, no safety incidents occurred during the 3 months of underground sampling.

12.2 RESULTS OF STOPE VERIFICATION SAMPLES.

Of the 753 channel samples collected, 749 samples contained measurable amount of mineralization. The grades of Ag, Zn and Pb very closely matched the historic production car sample grades. Table 12-2 summarizes the results of the channel data verification program. Of note the coefficients of variance are low which gives the author confidence that the data may be used of mineral resource estimation.

Variable	Sample Count	Minimum Grade	Maximum Grade	Average Grade	Standard. Deviation	Coefficient of Variance
Zn	749	0.001%	36.9%	3.92%	4.98	1.27
Ag	749	0.015(opt)	9.99(opt)	0.66(opt)	1.00	1.50
Pb	749	0.001%	19.00%	1.68%	2.35	1.39

12.3 HISTORIC DRILLING PULP RE-ASSAYS

During a cleanup of a storage warehouse, 758 unoxidized, well-kept pulp envelopes were discovered. The pulps were labeled and associated with the final drilling programs at Bunker prior to closure. The pulps are associated with the Quill and Newgard deposits which are the subject of this report. The pulps were submitted for assaying along with standards and duplicates to ensure proper QAQC protocols were followed. As an example, results Figure 12-6 of the analysis for Zn, shows a one-to-one correlation which gives comfort that the historic drilling assays can be used for mineral estimation purposes at Bunker Hill.

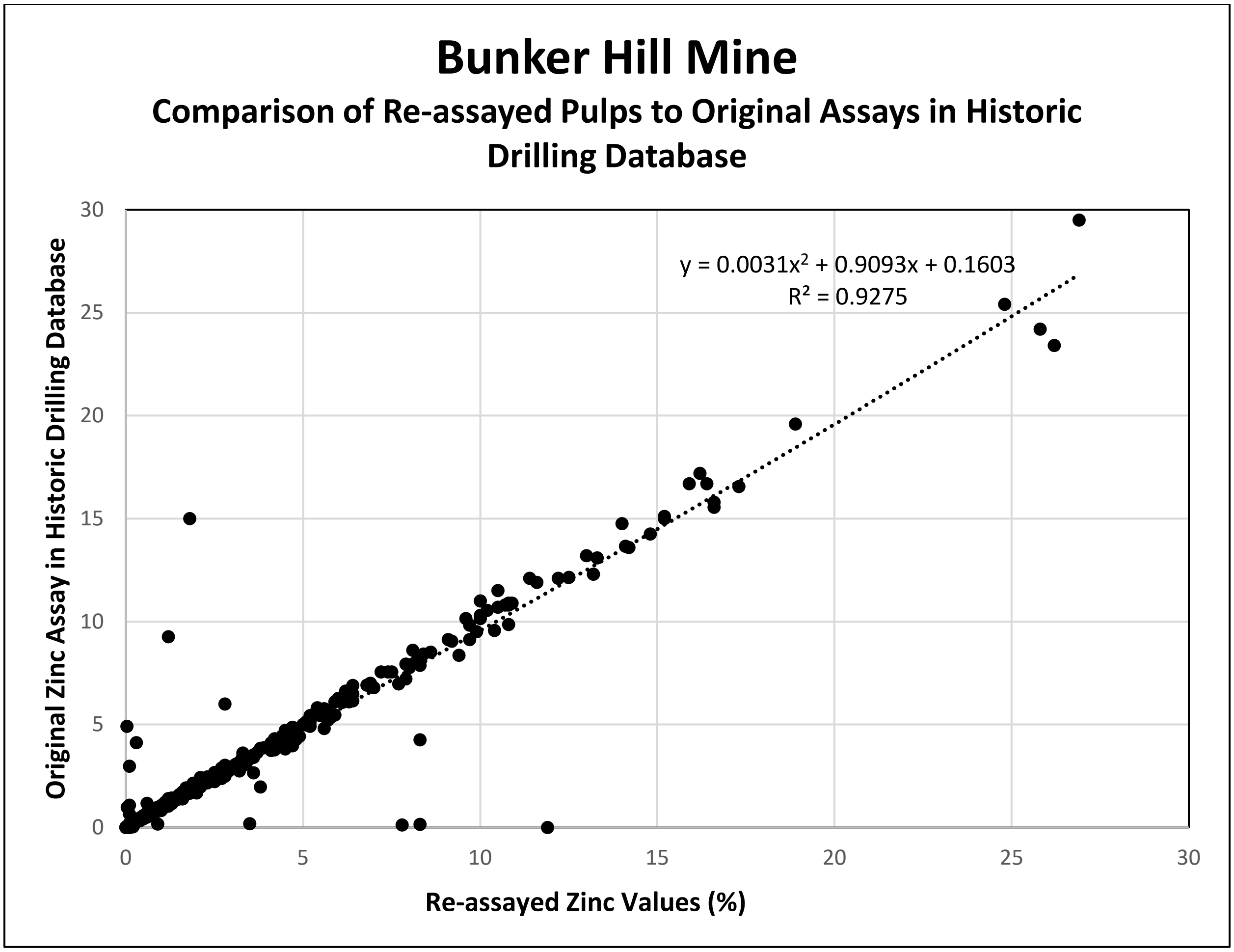


Figure 12-6 Original Assays Compared to Re-assaying of Pulps.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Bunker Hill Mining Corporation initiated metallurgical test work at Resource Development Inc. (RDi) recently. No historical metallurgical test data was available for review. However, both production data from 1972 to 1981 and plant description of the Bunker Hill Concentrator were available and the information has been used for the PEA.

13.1 HISTORICAL METALLURGICAL DATA

The Bunker Hill Concentrator, which processed 2,400 tpd, consisted of two-stage crushing circuit to produce feed for the ball mills. The ground product was sequentially floated, namely lead first followed by zinc minerals. Both lead and zinc rougher concentrates were cleaned twice to produce marketable-grade products.

The production data are summarized in Table 13-1. The lead concentrate assayed ±64% Pb, 40 opt Ag and 5% Zn. The zinc concentrates assayed ±55% Zn, 3 opt Ag and 1% Pb. The feed grades were not reported.

The plant description indicated the flotation reagents employed were sodium cyanide, zinc sulfate, lime, copper sulfate, xanthate and methyl isobutyl carbonyl. The same reagents are commonly used today for processing of polymetallic mineralization.

13.2 RESOURCE DEVELOPMENT INC. (RDI) 2021 TEST WORK

RDi has completed open-cycle flotation test work and is continuing with locked cycle flotation test work to construct and optimize a process flowsheet, metal recoveries and concentrate metal grades. For the updated MRE (Section 14) listed in this, December 29, 2021, version of the Technical Report, open-cycle cleaner results for recoveries and concentrate assay values were used with an effective date of November 15, 2021 in construction of the NSR value.

To obtain sufficient sample material for continued metallurgical studies, a bulk sample was mined from a section of the 5-level UTZ zone of mineralization to represent average expected mineralized material throughout the UTZ, Quill and Newgard portions of the MRE. Geological records indicate that although grade and concentration variation exist throughout the UTZ, Quill and Newgard portions of the mine, mineralogically the 3 zones are similar. This sample was submitted for analyses on grind characteristics, work indices, recovery optimization and flotation reagent characterization and consumption. Highlights of the program thus far are as follows:

- Composite head assay grades of 49.7 g/mt Ag, 4.1% Pb, 6.42% Zn
- Bond's Ball Mill Work Index of 13.47 (kWh/st) and Abrasion Index of 0.6137
- Lead concentrate assaying 486 g/mt Ag and 59.7% Pb, recovering 82% total Ag and 88% total Pb
- Zinc concentrate assaying 54.7% Zn, recovering 92% total Zn

Locked-Cycle testing is currently underway utilizing a primary grind size of 270 mesh with a subsequent re-grind to 400 mesh on the lead circuit after rougher flotation. No re-grind is necessary for the zinc circuit which will be run with material at 270 mesh.

Table 13-1 Historical Production Data for Bunker Hill Concentrator

Process Parameter	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Tons Milled, 000	535	601	745	797	819	456	571	583	592	642
Recoveries, %										
Lead	94.8	94.1	92.4	91.3	90.8	90.3	90.7	90.1	89.4	90.1
Silver	94.7	94.7	92.7	90.9	89.8	90.1	90.3	88.1	87.2	88.7
Zinc	93.8	94.1	91.1	90.3	91.4	90.1	92.2	89.6	91.3	92.9

13.3 CONCLUSION

The preliminary test work at RDi indicated that a sequential flotation process will be able to produce lead and zinc concentrates. Testing is on-going, and further optimization through locked-cycle testing on both Pb and Zn concentrate streams will work to further improve the above data obtained through open-cycle testing, as well as establish a process flowsheet. In the absence of current test work, historic mill records can be considered as indicative of the metallurgical recoveries and concentrate grades that can be obtained from the mineralized material from the same locations that were processed historically.

14 MINERAL RESOURCE ESTIMATES

14.1 SUMMARY

Mineral Resource Estimates ("MRE") in this report have been determined by using inverse distance weighting techniques for the Quill, Newgard and UTZ mineralization bodies. Mineral assays were derived from the 2020 drilling program, historic drilling, historic production car samples and channel samples gathered during the summer of 2020. Mineral Resource Estimates have been determined according to the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. This Technical Report represents the maiden estimate of mineral resources for the UTZ zone. Mineral Resources have been reported in accordance with the disclosure obligations under NI 43-101.

Table 14-1 summarizes the Bunker Hill Mineral Resource Estimate, classified according to CIM definitions for the Project. Reasonable prospects of eventual economic extraction assume underground mining, mill processing and flotation of Pb and Zn concentrates. Mineral resource estimates are reported at an NSR cutoff of $70 per ton. Metallurgical recoveries are described in Section 13 and section 17 of this report.

Net smelter return (NSR) is defined as the return from sales of concentrates, expressed in US$/t, i.e.: NSR = (Contained metal) * (Metallurgical recoveries) * (Metal Payability %) * (Metal prices) – (Treatment, refining, transport and other selling costs). NSR values are estimated using updated using metallurgical recoveries of 92%, 82% and 88% for Zn, Ag and Pb respectively, and concentrate grades of 54.7% Zn in zinc concentrate, and 59.7% Pb and 14.18 oz/ton Ag in lead concentrate.

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves.

Table 14-1 Bunker Hill Mine Mineral Resource Estimate – NSR $70/ton cut off – Ag selling price of $20/oz (troy), Lead selling price of $0.90/lb, Zn selling price of $1.15/lb. Effective date of January 7, 2022)

Classification	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
Measured (M)	2,229	$ 117.25	1.04	2,309	2.51	111,975	5.52	246,046
Indicated (I)	4,385	$ 117.55	1.02	4,484	2.42	212,519	5.63	493,902
Total M & I	**6,614**	**$ 117.45**	**1.03**	**6,793**	**2.45**	**324,495**	**5.59**	**739,948**
Inferred	6,749	$ 125.22	1.54	10,410	2.91	392,757	5.01	669,358

The Qualified Person for the above estimate is Scott Wilson, C.P.G., SME. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Columns may not add up due to rounding.

Project mineralization extends to great depths accessible by a complicated system of shafts to access levels and mine development headings. The mine is flooded up to the 11 Level of the mine. Other than pumping water according to EPA requirements, and limited care and maintenance, access to the depths of the mine has not been accessible since 1989. For these reasons, over half of the estimated mineral resources are considered to be inferred mineral resources.

Aside from criteria described in Section4 and in Section 20, the author knows of no environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that may materially affect the Mineral Resource estimate in this Technical Report.

The entire length of the MRE is assumed to be geologically continuous but differing in orientation due to underlying lithological constraints and faults. In order to constrain the MRE, three separate mineral domains were constructed to segregate the continuous mineralized zone comprising the UTZ, Quill and Newgard deposits. Figure 14-1 shows in plan-view the historic depletion and development solids associated with each section of the mine. Mapping shows that fault structures offset but do not truncate mineralization between the Quill, Newgard and UTZ. Historically, the Quill-Newgard zone of mineralization was mined as a continuous mineralized body and therefore has been constructed as a single domain solid ("QN").

UTZ was mined as multiple stope blocks separated by the Cate fault which runs roughly parallel to trend of mineralization in the UTZ. Both the hanging wall and foot wall of UTZ was mined, but stopes rarely crossed between the two zones. Therefore, UTZ has been defined as two domains; the Cate hanging wall (CHW) and the Cate foot wall (CFW) domains.

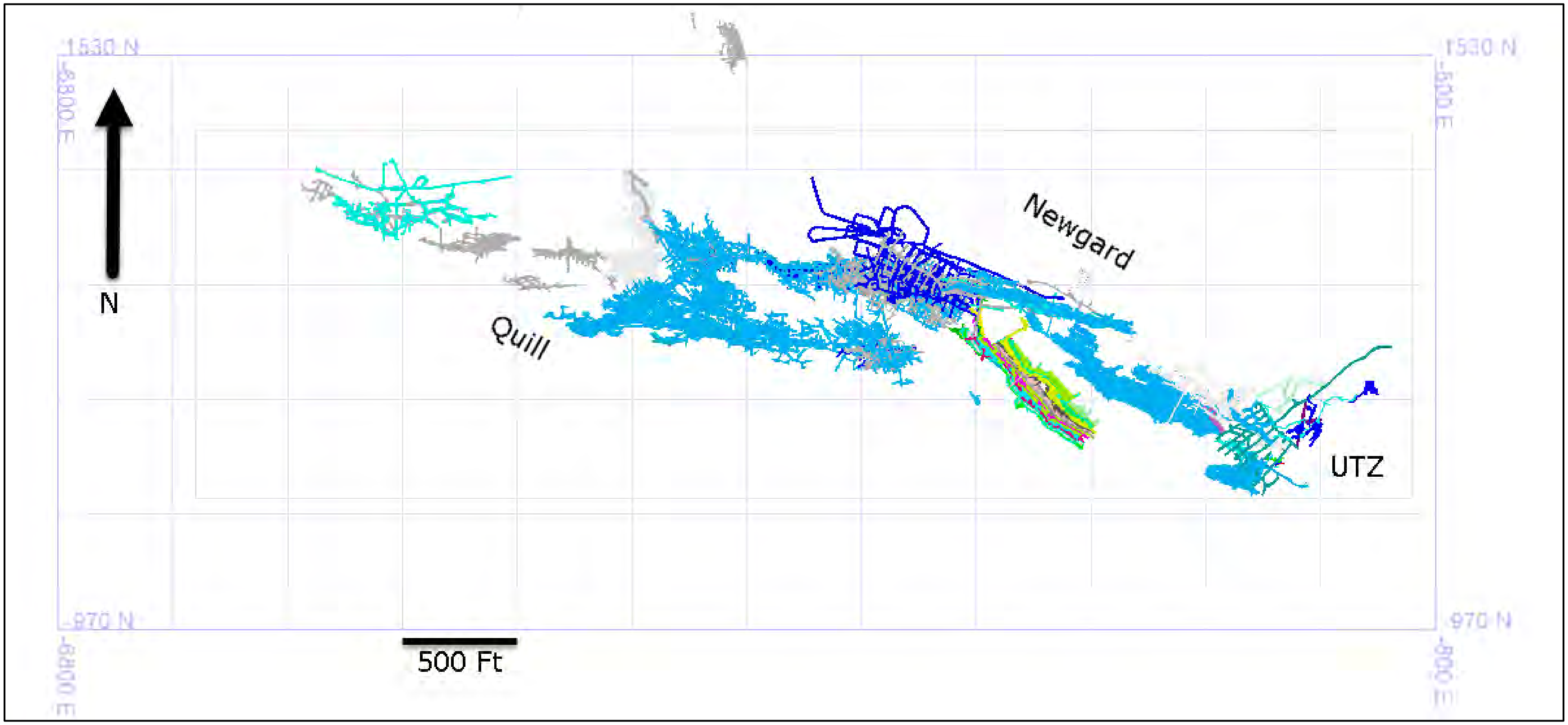


Figure 14-1 Quill, Newgard and UTZ deposits of the Bunker Hill Mine Plan View.

The stopes and workings displayed above have were surveyed during production and drafted on to mylar sheets. The Mylar sheets were recently digitized by Rangefront and converted to solid triangulations. In general mineralization strikes S070E with a nearly vertical dip.

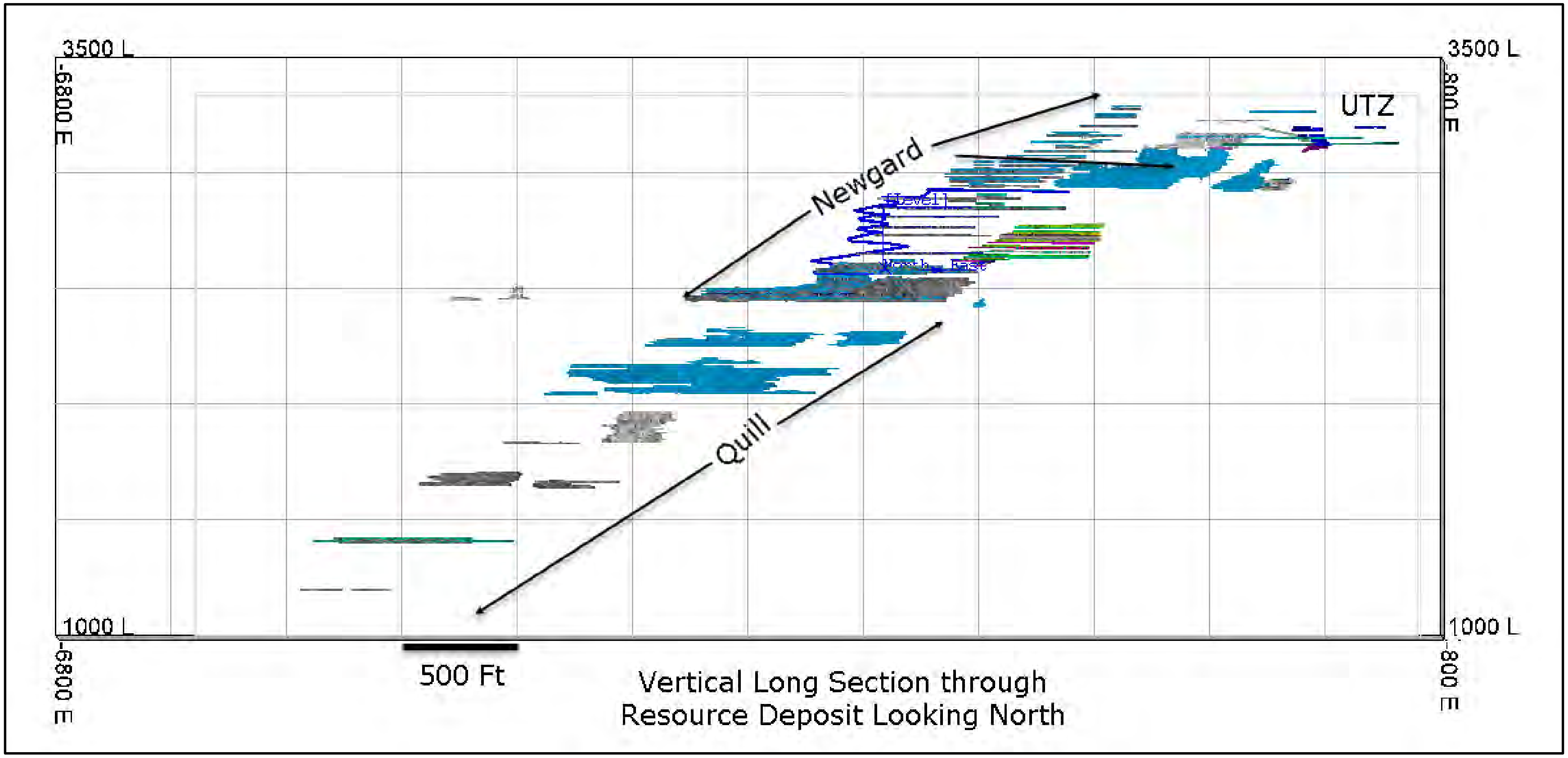


Figure 14-2. Vertical long section through the deposit showing depleted stopes down-dip and mineralized pillars between stopes

Nearly 2,500 vertical feet of continuous mineralization is present in UTZ, Newgard and Quill deposits. All areas between the existing stopes have been estimated using a block model and ID3 estimation techniques. A resource constraining shell (Figure 14-3) has been explicitly designed around known mineralization and used as a limit to resource estimates for the Project. Continued exploration drilling and geological modelling is required to expand mineralization.

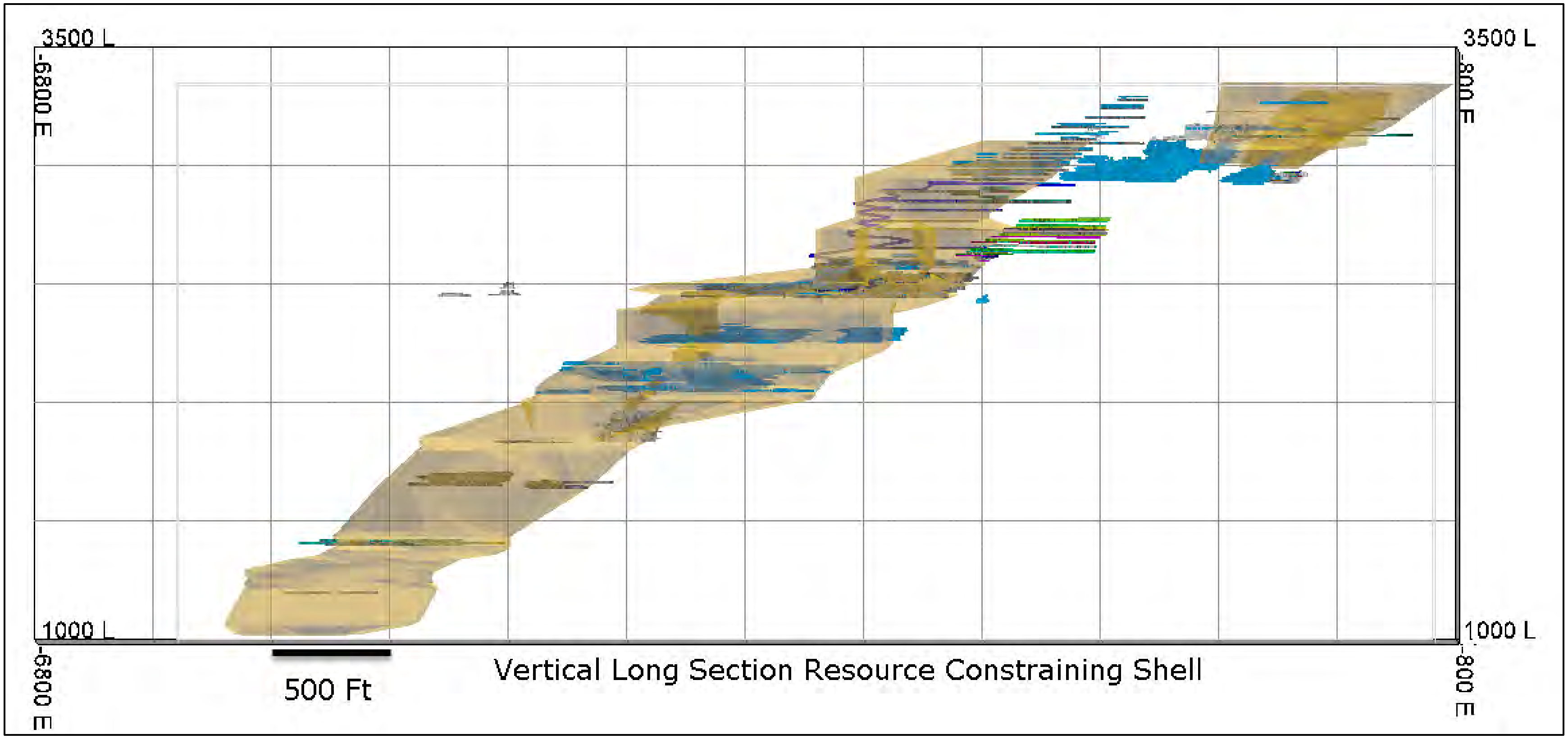


Figure 14-3 Interpretation of mineral envelope based on drilling, mining, and sampling of the deposit

14.2 DATABASE

A single database of composites was used for the Mineral Resource Estimation. Data for the composites was generated from production car samples, channel samples and core drilling data. Table 14-2through Table 14-4 display database statistics for the three sources of information respectively.

Table 14-2 Statistics for 2020-2021 Drill Program. 41 Core holes

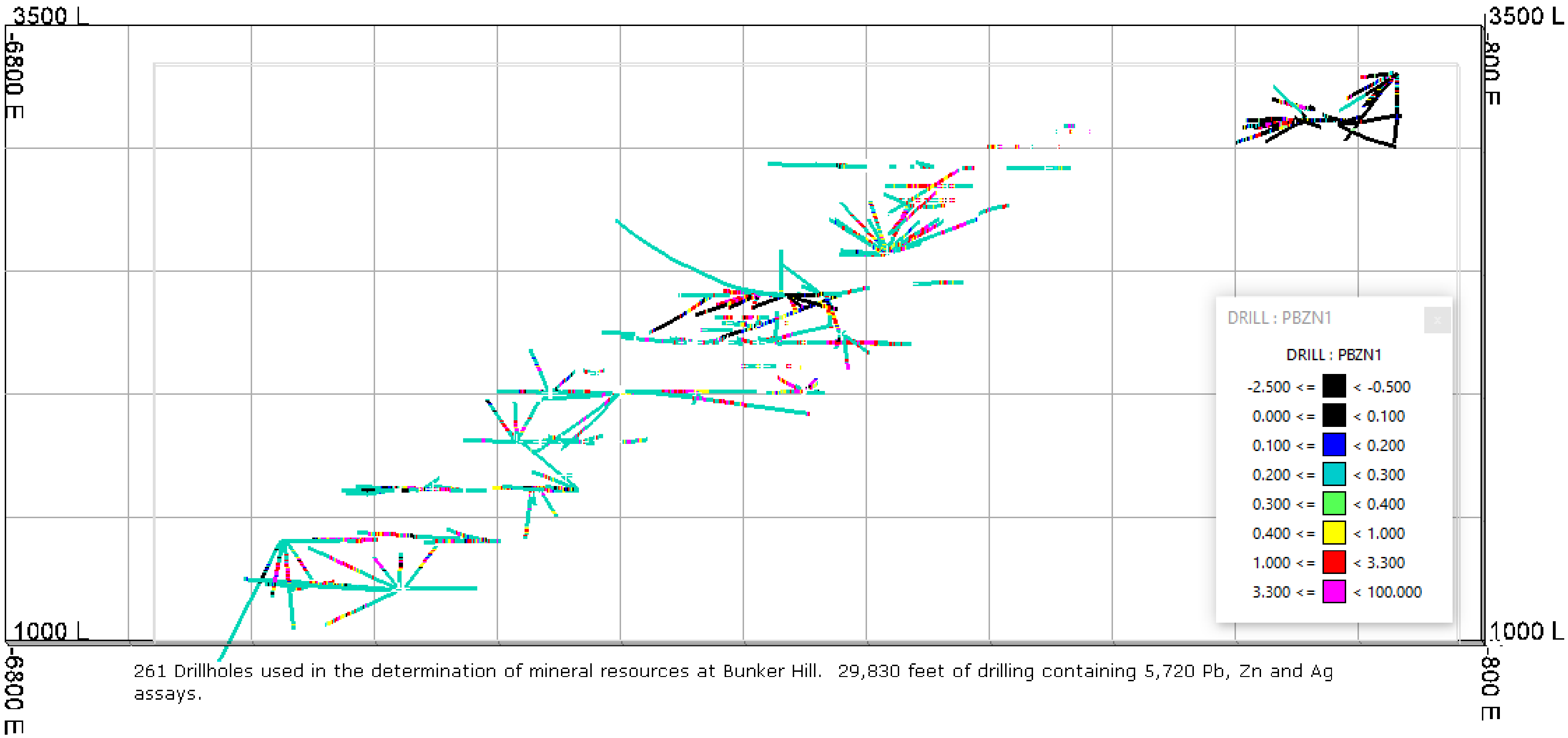
		2020-2021 Drilling Assays					
		ag_opt	ag_capped	pb%	pb_capped	zn%	zn_capped
CFW	Composites	862	862	862	862	862	862
	Min Value	0.0146	0.0146	0.0005	0.0005	0.0005	0.0005
	Max Value	20.738	15	39.81	30	14.35	13
	Mean Value	**0.666**	**0.659**	**1.641**	**1.607**	**0.585**	**0.583**
	Median Value	0.117	0.117	0.251	0.251	0.073	0.073
	Std. Deviation	1.676	1.606	4.260	3.990	1.461	1.447
CHW	count	423	423	423	423	423	423
	min	0.0146	0.0146	0.0005	0.0005	0.0005	0.0005
	max	34.854	10	22	20	26.7	25
	mean	**0.743**	**0.669**	**1.642**	**1.637**	**2.760**	**2.756**
	median	0.386	0.386	0.947	0.947	0.972	0.972
	std_dev	1.982	1.000	2.338	2.298	4.444	4.423
QN	count	363	363	363	363	363	363
	min	0.0146	0.0146	0.001	0.001	0.001	0.001
	max	8.254	8.254	13.15	13.15	23	23
	mean	**0.346**	**0.346**	**0.576**	**0.576**	**1.019**	**1.019**
	median	0.058	0.058	0.059	0.059	0.09	0.09
	std_dev	0.870	0.870	1.259	1.259	1.984	1.984

Table 14-3 Statistics for pre-2020 Drilling from 220 Core Holes

		Historic Drilling Assays					
		ag_opt	ag_capped	pb%	pb_capped	zn%	zn_capped
QN	count	2507	2507	2507	2507	2507	2507
	min	0.01	0.01	0.001	0.001	0.001	0.001
	max	131	25	43.4	25	44.8	32
	mean	**0.673**	**0.608**	**1.540**	**1.502**	**3.846**	**3.838**
	median	0.2	0.2	0.7	0.7	2.1	2.1
	std_dev	3.311	0.988	2.933	2.517	4.823	4.771

Table 14-4 Statistics for Production Car Samples (4,059 samples) and 2020 Channel Samples (394 Samples)

		Production Samples and 2020 Channel Samples					
		ag_opt	ag_capped	pb%	pb_capped	zn%	zn_capped
CFW	Composites	-	-	27	27	29	29
	Min Value	-	-	0.1	0.1	0.1	0.1
	Max Value	-	-	3.4	3.4	2.1	2.1
	Mean Value	**-**	**-**	**1.048**	**1.048**	**0.548**	**0.548**
	Median Value	-	-	0.8	0.8	0.3	0.3
	Std. Deviation	-	-	0.926	0.926	0.467	0.467
CHW	Composites	85	85	211	211	212	212
	min	0.05	0.05	0.05	0.05	0.01	0.01
	max	4.42	4.42	17.6	17.6	36.9	25
	mean	**0.908**	**0.908**	**2.579**	**2.579**	**4.276**	**4.183**
	median	0.7	0.7	1.9	1.9	2.85	2.85
	std_dev	0.725	0.725	2.340	2.340	4.710	4.168
QN	Composites	3000	3000	4059	4059	4059	4059
	min	0.01	0.01	0.05	0.05	0.01	0.01
	max	32.34	25	30.2	25	39	32
	mean	**1.063**	**1.060**	**1.773**	**1.771**	**4.427**	**4.390**
	median	0.68	0.68	1.21	1.21	3.325	3.3
	std_dev	1.390	1.341	1.846	1.828	3.751	3.734



261 Drillholes used in the determination of mineral resources at Bunker Hill. 29,830 feet of drilling containing 5,720 Pb, Zn and Ag assays.

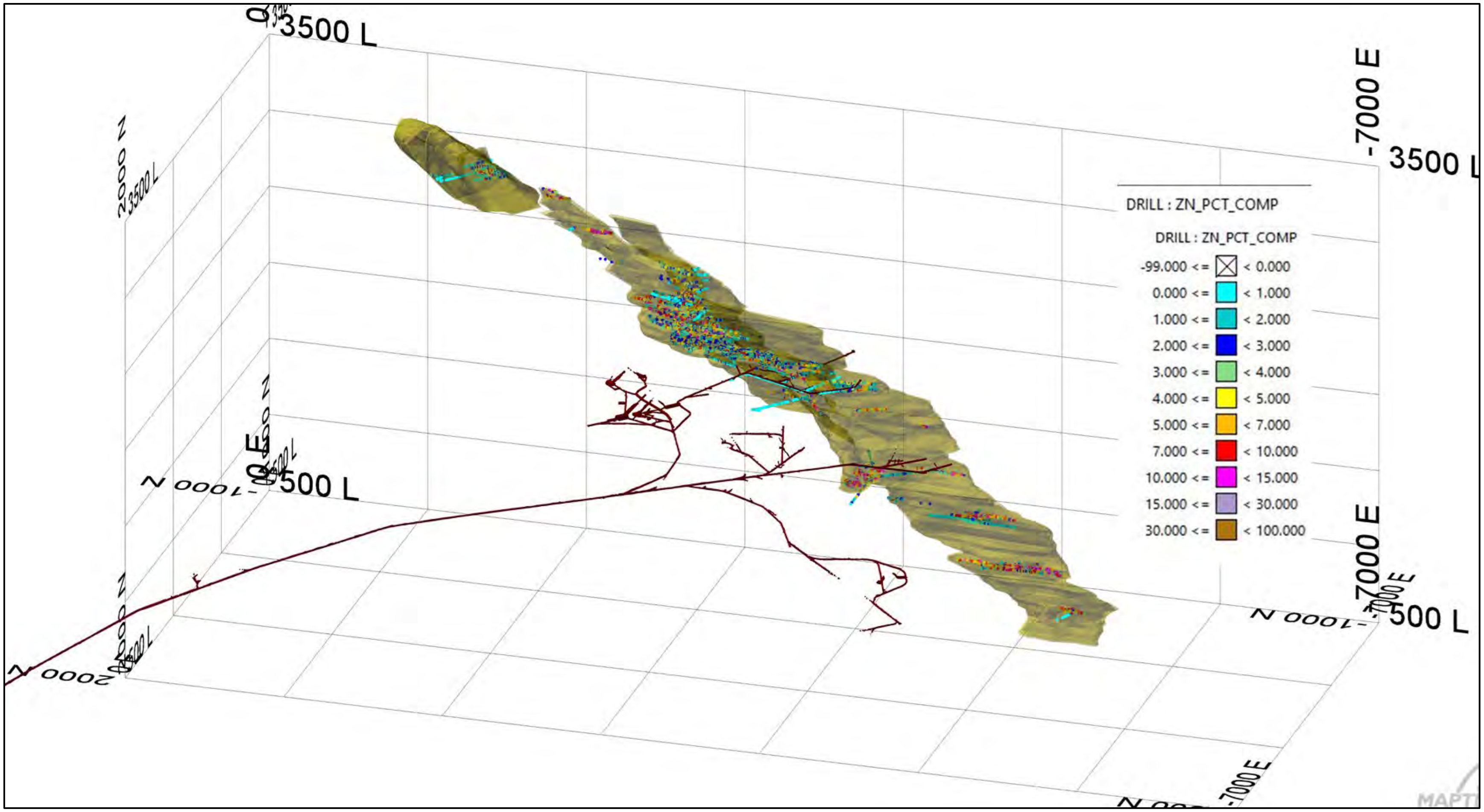


Figure 14-4 Oblique View MRE Domains with Production and Channel Samples Zn%

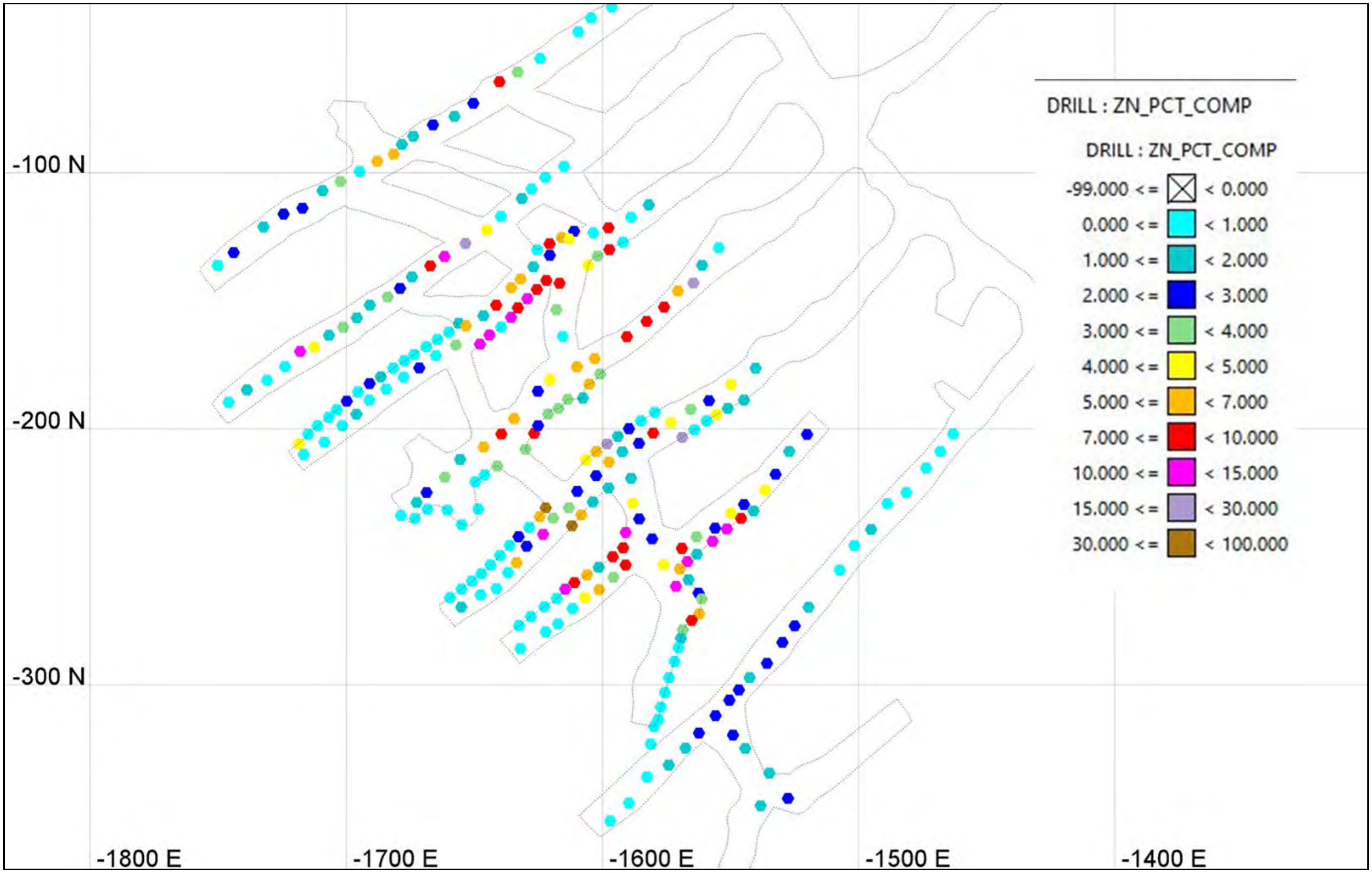


Figure 14-5 5-Level UTZ Channel Samples Zn%

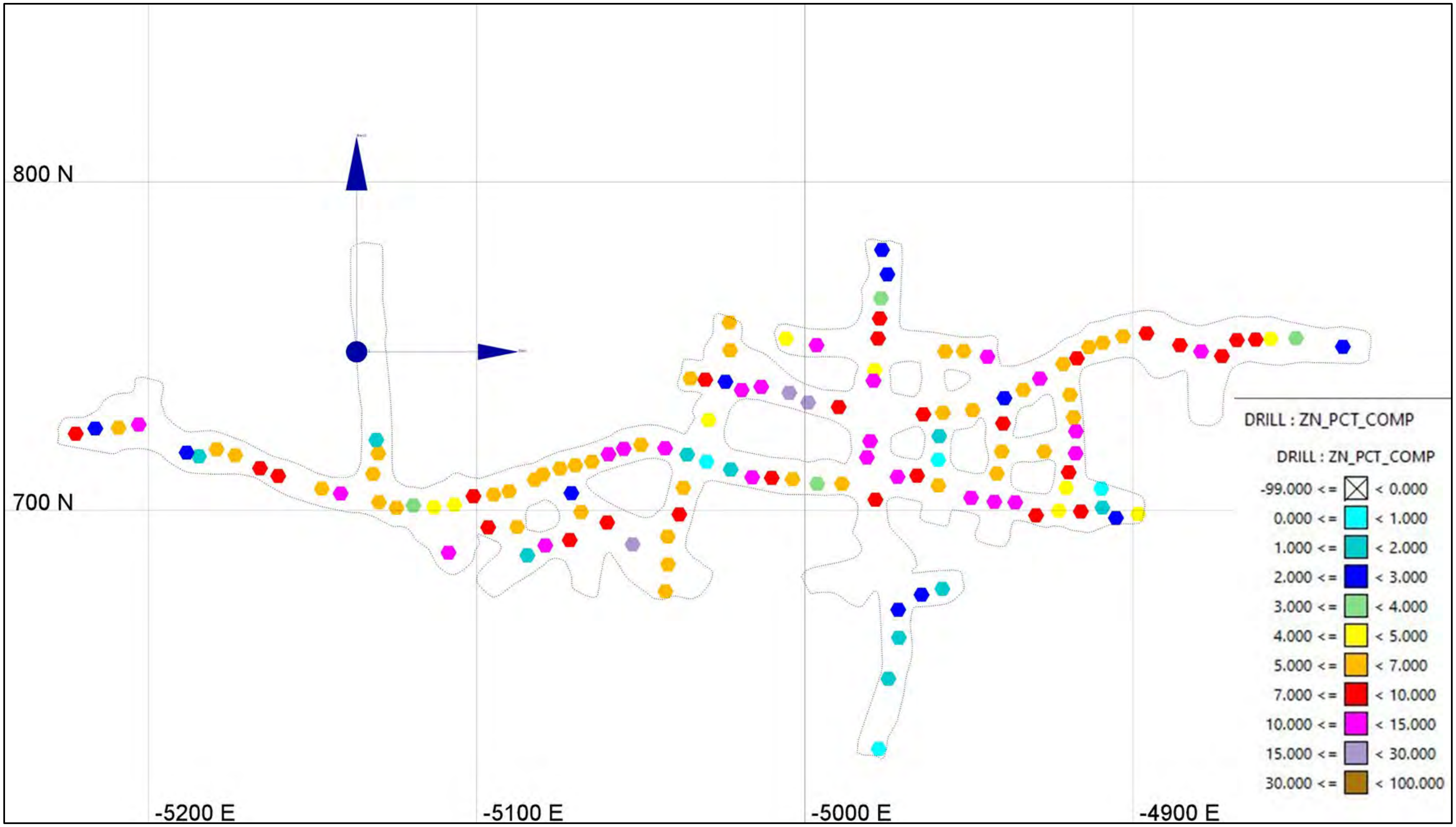


Figure 14-6 13-Level Quill Production Car Samples Zn%

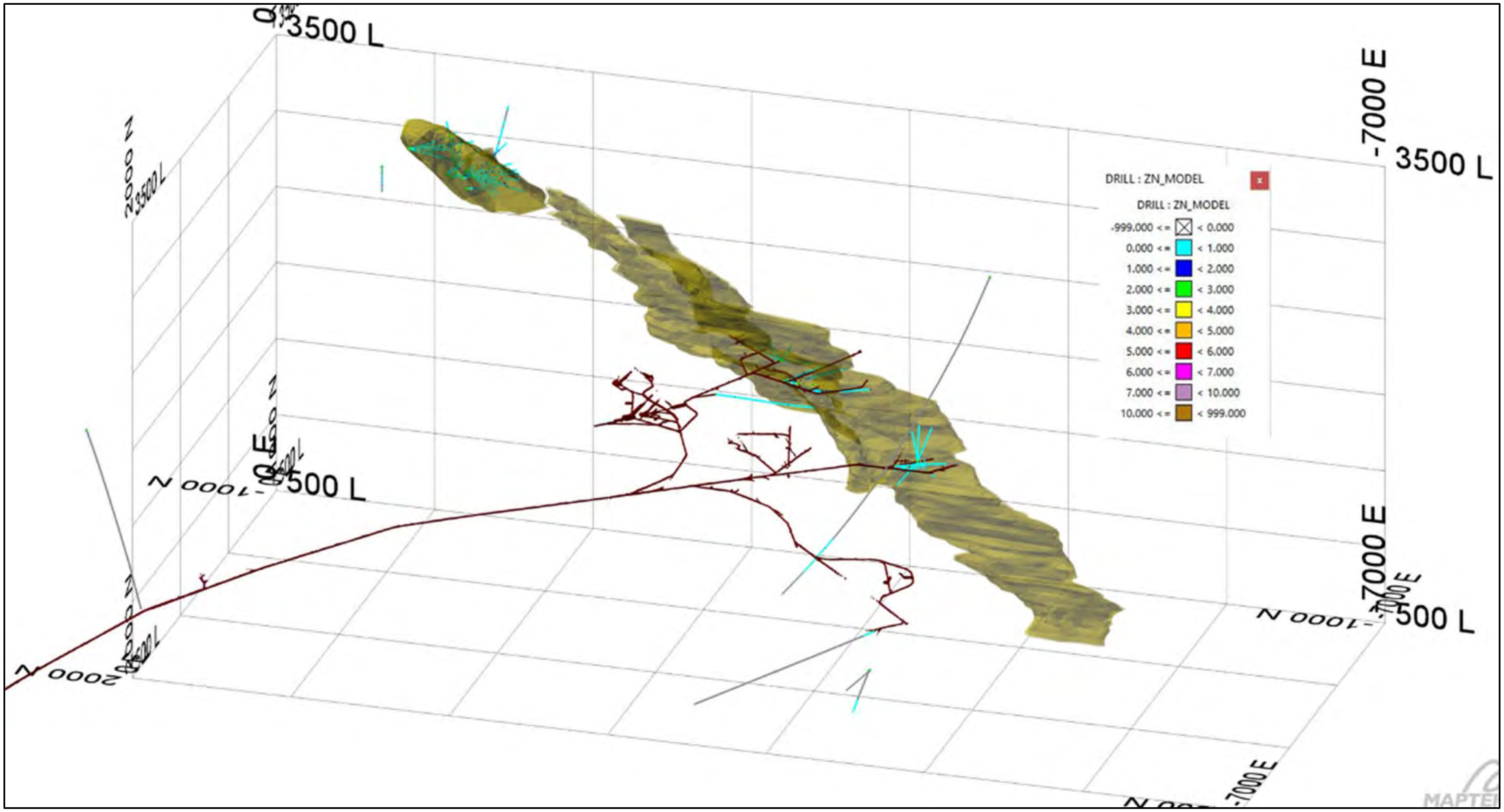


Figure 14-7 Oblique View MRE Domains with 2020-2021 Drilling Zn%

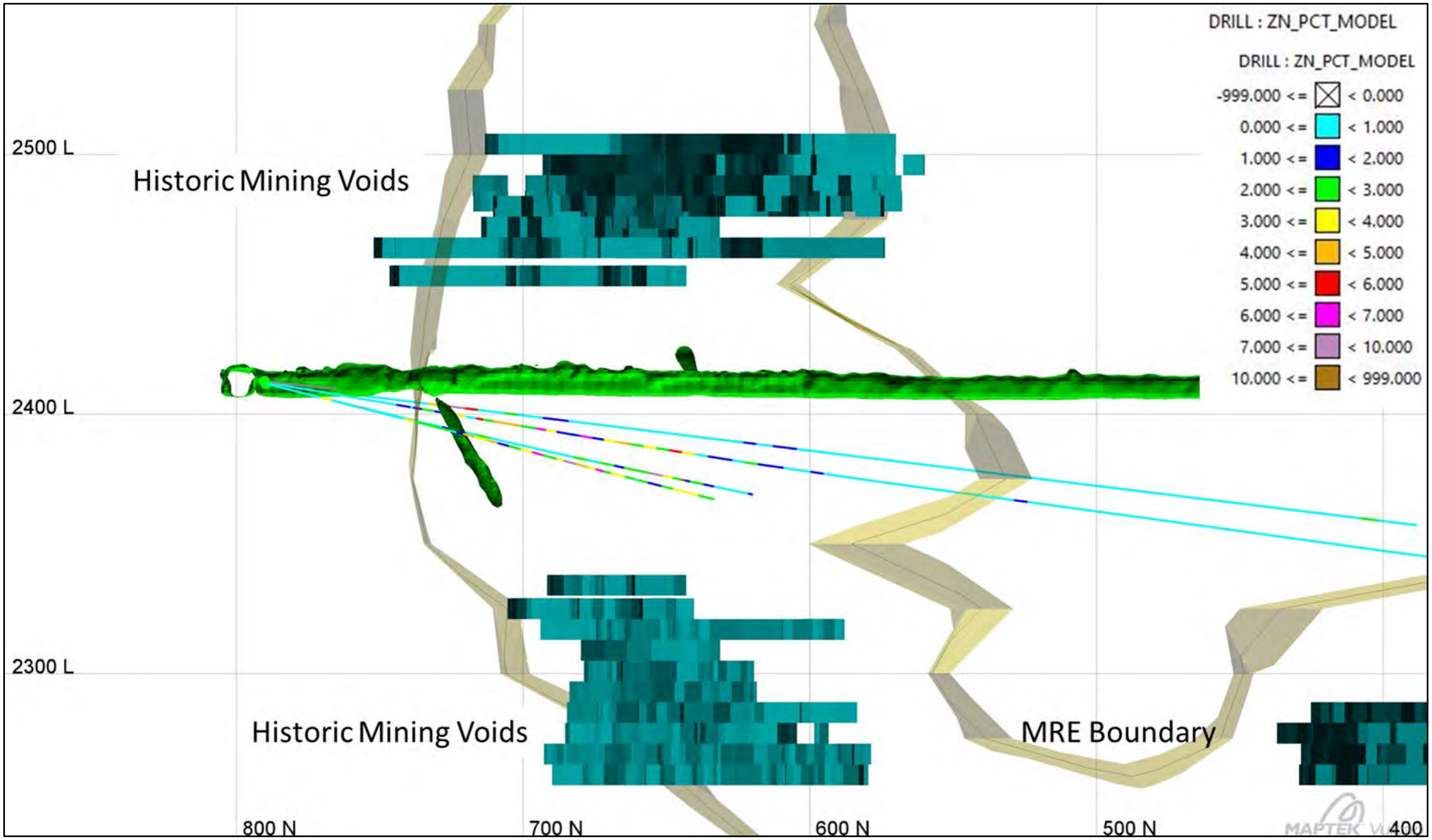


Figure 14-8 Section View DDH 7021A 9-Level Newgard Looking SE (115°). 2020-2021 Drill Holes Zn%

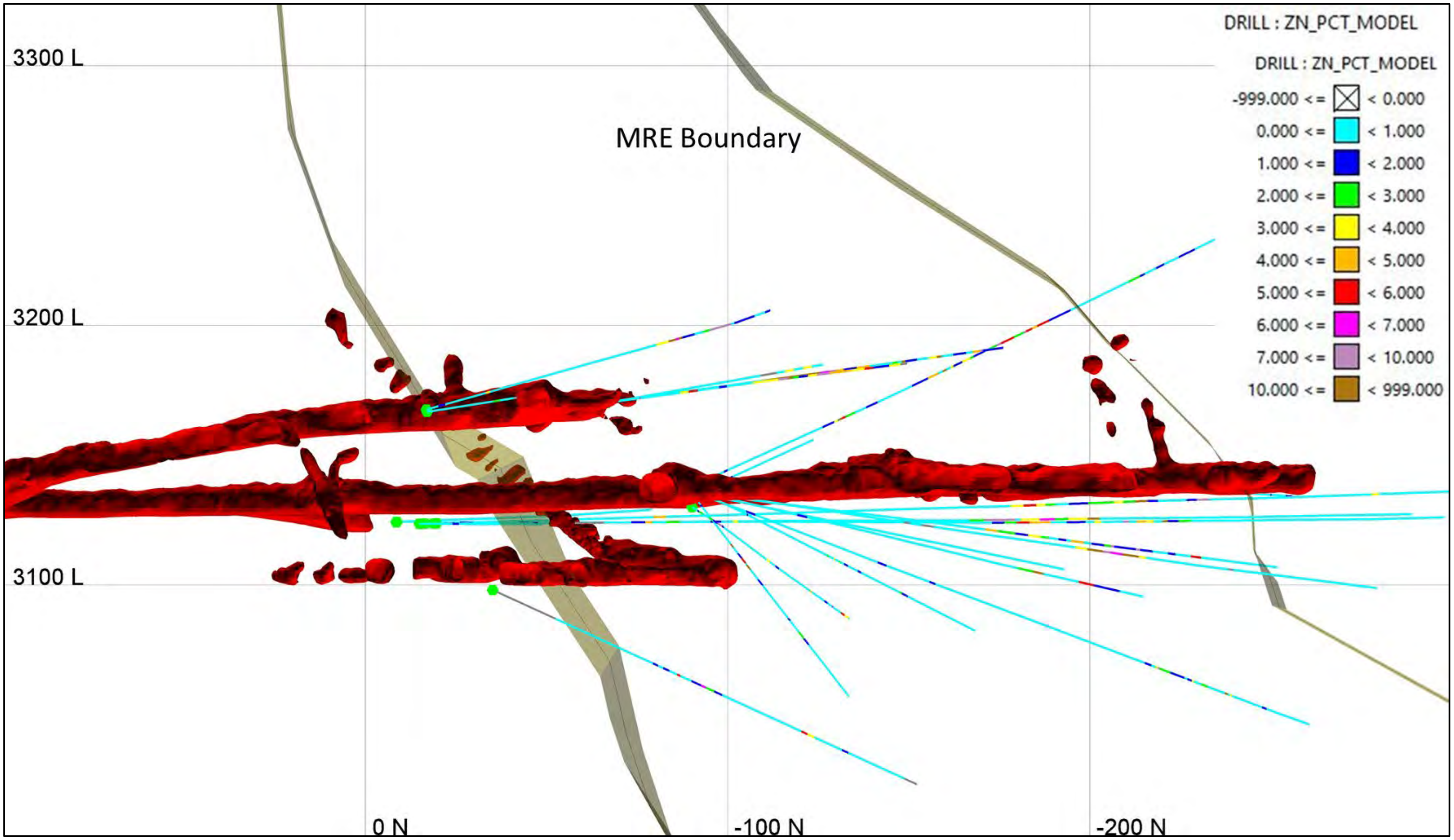


Figure 14-9 Section View DDH 7055 5-Level UTZ Looking SE (135°). 2020-2021 Drill Holes Zn%

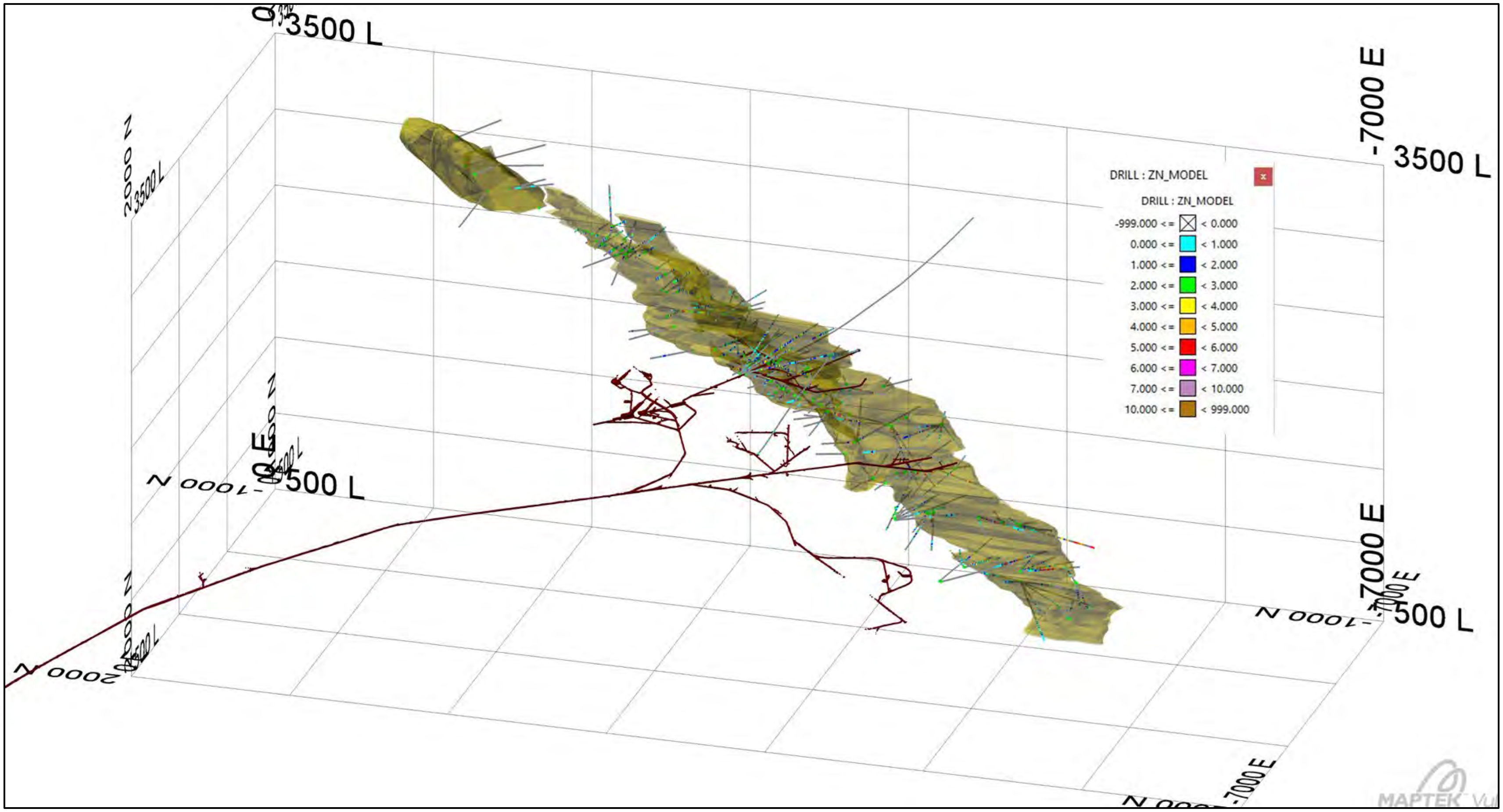


Figure 14-10 Oblique View MRE Domains with Pre-2020 Drilling Zn%

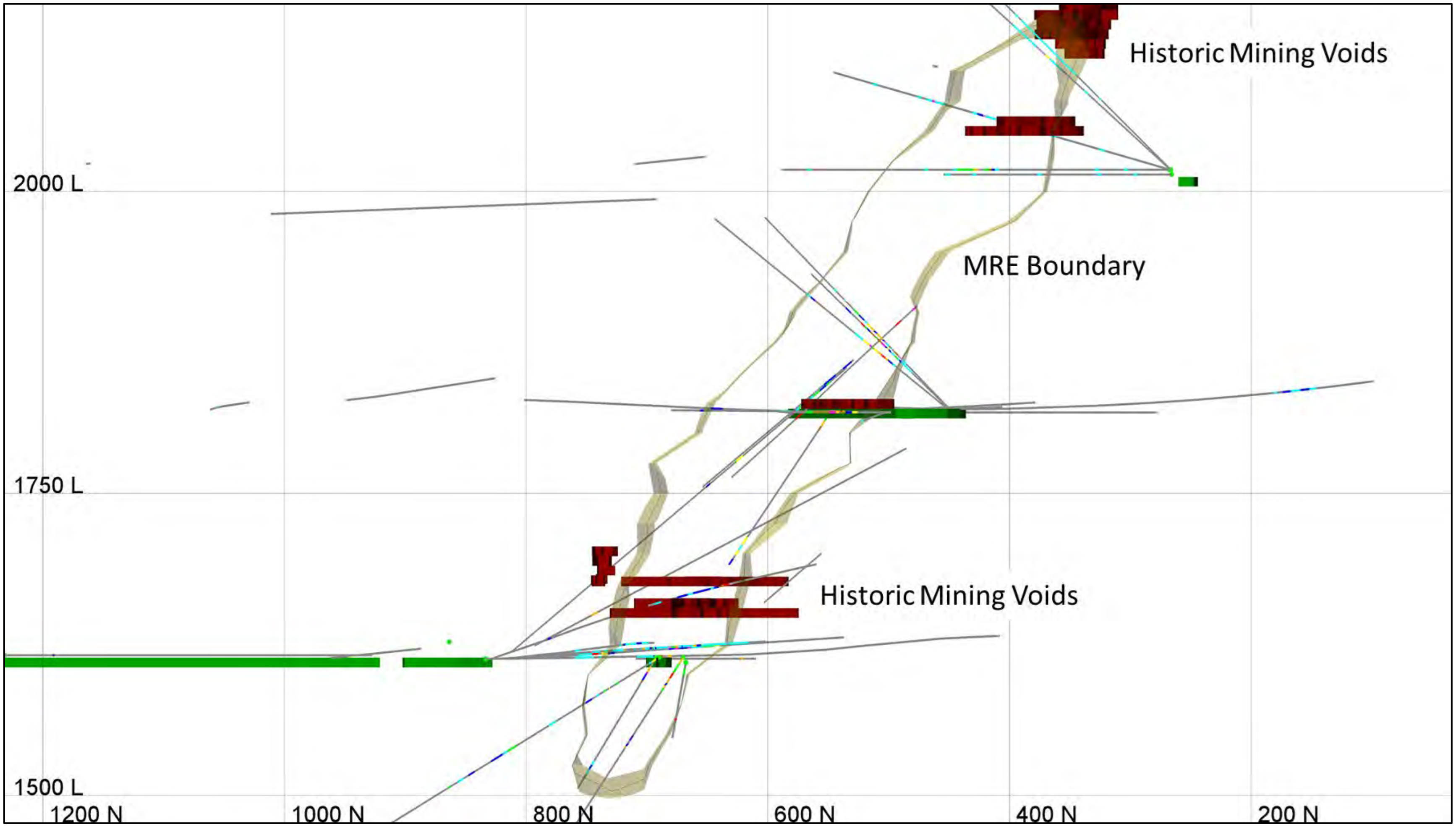


Figure 14-11 Section View DDH 6021 12-Level Quill Looking E (090°). Pre-2020 Drill Holes Zn%

14.3 CAPPING

Utilizing the flag identifier for assay intervals included in each of the domains, capping values were decided based on a per-metal, per-domain basis. Capping was assigned prior to compositing to better reflect actual assayed intervals. Intervals were extracted, and then used to construct CDF plots to look at the upper end assay values and correlation to the rest of the data set. Overall, all groups showed strong correlation throughout the assay value range indicating that capping values should lie close to the upper limit of received values. Table 14-5 shows the various capping values used in the Mineral Estimation parameters.

Table 14-5 Capped Values for Each Metal

	Capped Values		
Domain	**Ag_OPT**	**Pb%**	**Zn%**
CFW	15	30	13
CHW	10	20	25
QN	25	25	32

Capping values assigned to assays prior to compositing.

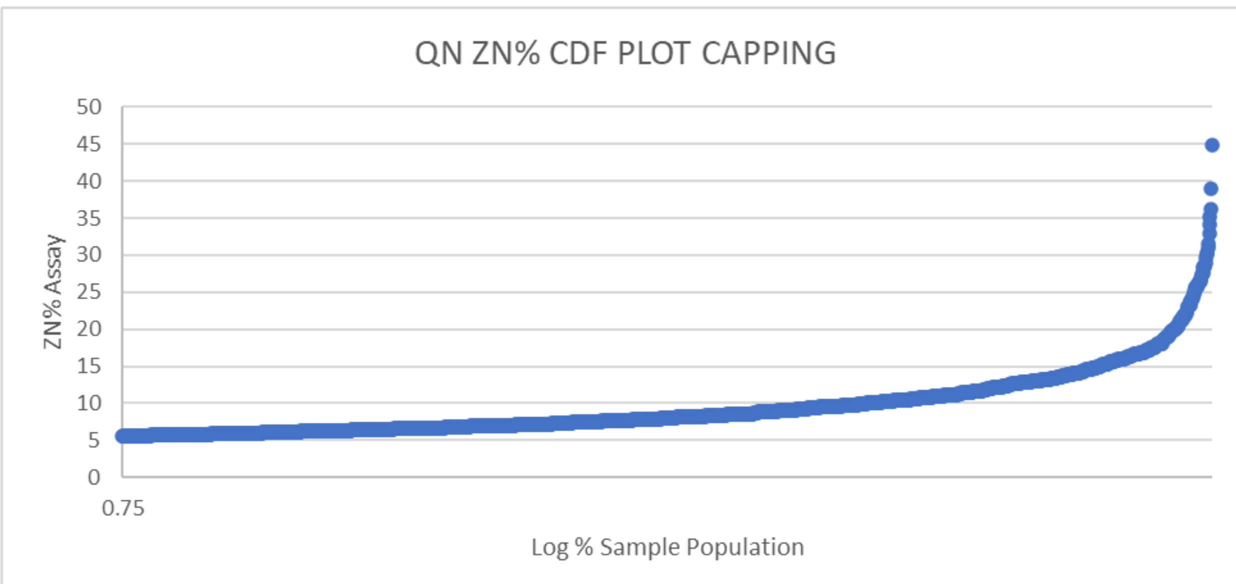


Figure 14-12 CDF Plot for Zn% Assays Within the QN Mineral Domain
Plot displays highest 25% of samples to better highlight capped segment.

After the capping values were determined, the capped field in the database was run through a script designed to adjust all negative and "0" value assays to ½ of the lower detection limit of the assay method for that element, or for historic data, the lowest value assigned in historic logs representing the lowest detection limit at that time for that element. Capping results by domain are included in Table 14-2 through Table 14-4 above.

14.4 COMPOSITING

Subsequent to capping, 5-foot composites were generated for each of the three metals Pb Ag and Zn. There are far fewer Ag values than there are Pb or Zn values in the database. Prior operators did not assay for Ag. Historically Ag was considered a by-product only.

Composites were broken on the domain and geologic boundaries. Production car samples are digitized as point data and were appended directly into the composited database without length adjustment.

14.4.1 DECLUSTERING

Assay data is rarely collected randomly. This is certainly true for assays related to underground mining operations where samples are collected every five feet in crisscross patterns such as Bunker. Large amounts of higher-grade areas contain the most assays. The data is important should not be change but there is a requirement to adjust the summary statistics to be representative of the entire volume being estimated. Cell declustering was applied to the capped composites values of the deposit. The parameters and results from the declustering can be seen in Table 14-6, along with the adjusted declustered weight statistics of the composite database. Parameters were set to determine the minimum mean weighted assay values of each of the metals over each of the three domains. This was done to help ensure that estimated grades are representative of the entire volume and especially between levels where the clustered data has been collected every 200 feet vertically. The declustered weights of the database assays were applied on a block-by-block basis in the block model.

Table 14-6 Composite Database Statistics and Declustering Parameters

	CFW			CHW			QN		
	Ag_OPT	Pb%	Zn%	Ag_OPT	Pb%	Zn%	Ag_OPT	Pb%	Zn%
N	750	750	750	603	603	603	7245	7245	7245
Min Grade	0.0146	0.0005	0.0005	0.0146	0.0005	0.0005	0.01	0.0005	0.0005
Max Grade	13.572	24.107	9.876	6.589	19.910	25	25	25	32
Mean Grade	**0.486**	**1.174**	**0.454**	**0.482**	**1.756**	**2.835**	**0.689**	**1.562**	**3.930**
Median Grade	0.142	0.293	0.123	0.288	1.2	1.466	0.36	1	2.78
Std. Deviation	1.050	2.441	0.973	0.687	2.074	3.678	1.241	1.923	3.853
Declustered Mean Grade	**0.407**	**1.026**	**0.409**	**0.378**	**1.325**	**2.149**	**0.640**	**1.509**	**3.652**
Min Declus Weight	0.203	0.215	0.234	0.185	0.186	0.186	0.224	0.224	0.207
Max Declus Weight	7.167	8.009	8.853	5.133	5.303	5.303	9.364	9.364	10.898
Mean Declus Weight	1.00000133	1.000004	1	1	1	1	1.00000028	1.00000028	1.00000262
Median Declus Weight	0.6635	0.68	0.6565	0.589	0.594	0.594	0.736	0.736	0.745
Std. Dev. Declus Weight	0.897	0.924	0.976	0.906	0.907	0.907	0.820	0.820	0.811
Declus Cell Size (Ft)	72.819	88.524	93.758	85.906	80.671	80.671	78.054	78.054	75.436

14.5 DENSITY

BHMC started a systematic determination of the specific gravity of the mineral types during the 2020 drilling campaign. There has not been enough data collected to determine a variance for the deposit at this time. A tonnage factor of 11.3 Ft^3/t was applied to mineralized material of the Bunker Hill mine throughout the decades. The same factor has been applied to the MRE.

14.6 BLOCK MODEL

Two separate block models were created. One for UTZ and one for Quill-Newgard. The models were constructed to best capture the geometries the domains. This helps recognize the shallower dip of UTZ. This is also important for subsequent mine planning exercises. Models were populated with physical and estimation variables. Block tonnages have been by flagging blocks within historic mined-out or development solids. Depletion represents percentages of the block mined, and these values were accounted for in all reporting stated for the MRE.

Table 14-7 Block Model Construction Details

Model	Bearing	Plunge	Dip	X-Length	Y-Length	Z-Length
UTZ	310°	0°	0°	5'	5'	2.5'
QN	285°	0°	0°	5'	5'	5'

UTZ Model zone contains both the Cfw and Chw domains

14.7 MINERAL RESOURCE ESTIMATION

Search parameters for the estimation ellipses were established using previous geological maps and production data from various levels of the mine associated with the MRE mineralization.

Table 14-8 Grade Estimation Search Parameters

Domain	Bearing	Plunge	Dip	Major Axis	Semi-Minor Axis	Minor axis	Min Sample	Max Sample	Sample Limits
cfw/chw	310°	-45°	-40°	150'	50'	100'	3	15	5/ddh
qn	285°	-35°	0°	350'	100'	250'	3	15	5/ddh

Cfw/Chw domains were estimated with the same parameters

14.8 GRADE ESTIMATION

Metal grades for the mineral resource are estimated using Inverse Distance Weighting. Inverse distance methods are a suite of weighted average estimation methods. These result in estimates that are smoothed versions of the original sample data. Inverse distance methods are based on calculating weights for the samples based on the distance from the samples to the centroid of a model block. This is essentially a linear estimate where sample weights are assigned to composite values for all composites used in the estimate. The calculation of the weights is based on the inverse of the distance between the composite and the center of the block being estimated. Sample weights are standardized to a sum of 1 to ensure there is not a globally biased estimate. In the mining industry there are two common exponents used, Inverse Distance squared (ID2) and Inverse Distance cubed (ID3). ID3 is used when large weights are desired for the closest composites. This is applicable when the variable being estimated is erratic and the current data spacing is weighted (declustered) relative to the data that would be available for mineral boundary decision making. Such as with metallic distributions of mineralization. ID3 methodologies are widely used in the mining industry and have proven through the decades to be an acceptable and reliable methodology for the estimation of metal distributions in both large-scale disseminated and tightly concentrated vein type mineral deposits.

Three-pass Inverse Distance Cubed (ID3) estimates were run for each of the composite metal values (Ag, Pb, Zn) with the same parameters for each metal. Capped database values were used for all estimates. Results from visual, nearest-neighbor and statistical analysis showed the ID3 model to well represent actual assay values versus estimated grade over both the QN and UTZ models.

Figure 14-13shows the final mineral estimate distribution for Zinc for the three domains.

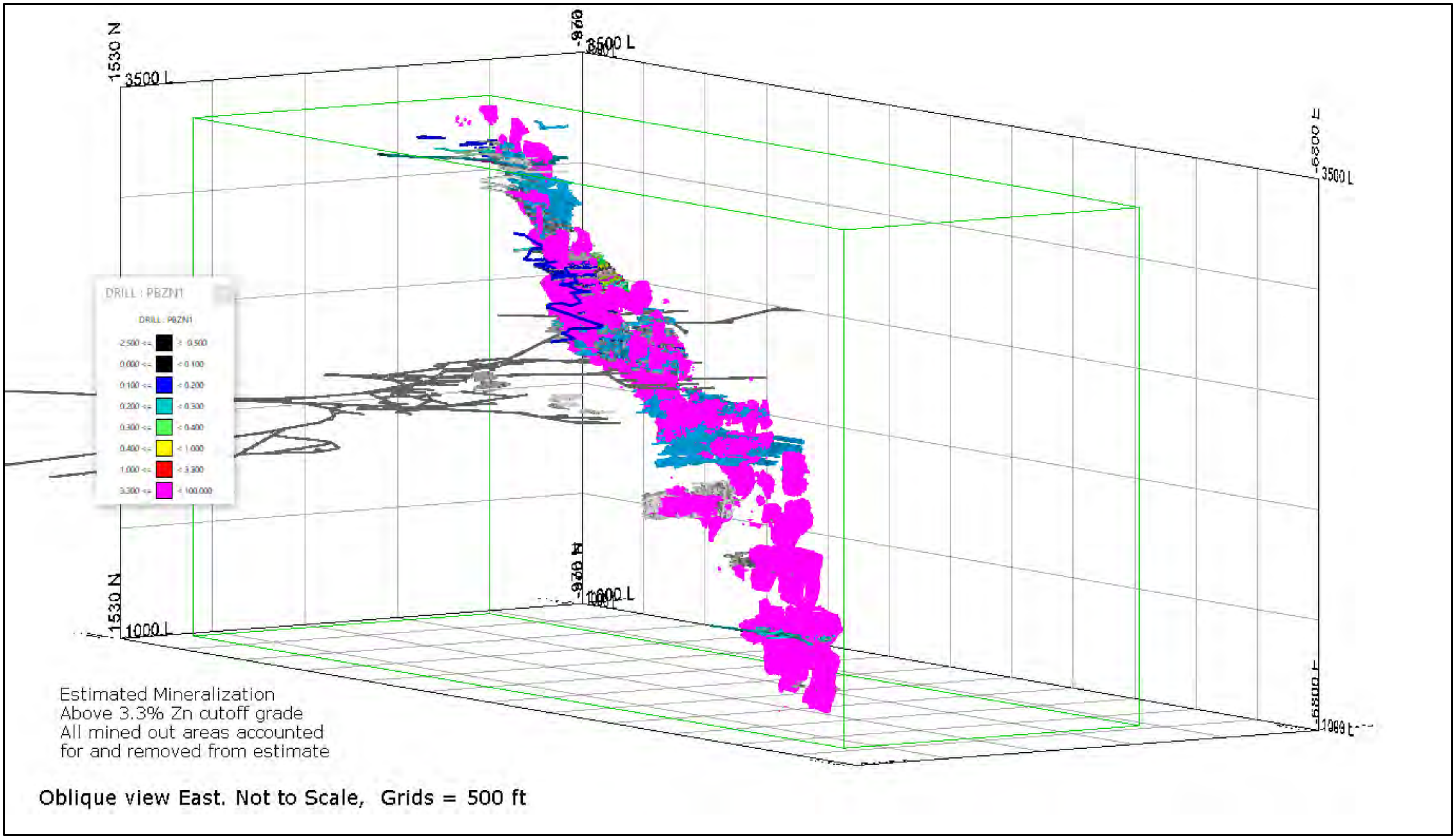


Figure 14-13 Estimated Mineralization at the Zn cutoff grade of 3.3%Zn

14.9 RESOURCE CLASSIFICATION

Mineral resources are classified according to CIM Definitions Standards, which are incorporated by reference in NI43-101. Mineralization at Bunker Hill has been categorized as Inferred Mineral Resources, Indicated Mineral Resources and Measured Mineral Resources, based upon increasing levels of confidence in various physical characteristics of the deposit. Drill hole spacing, search neighborhoods, metallurgical geological confidence and many other factors were used to give the author confidence in the MRE for the Project. The author is satisfied that the geological modeling for Bunker Hill honors the geological information and knowledge of the mineral deposit. The location of the samples and the assay data are sufficiently reliable to support resource evaluation.

Classification of mineral resources for Bunker Hill are based on the distance to the nearest samples used to derive the metal grades for each individual block in the deposit. A minimum of three samples is required for the estimate to be considered a resource of any confidence. Classification criteria are summarized in Table 14-9.

Table 14-9 Classification Parameters

Resource Class	Samples Used for Estimation	DDH Used for Estimation	Sample Nearest-Neighbor Distance
Measured	>= 8	>= 4	<= 30'
Indicated	>= 6	>= 3	<= 50'
Inferred	>= 3	>= 3	<= 85'

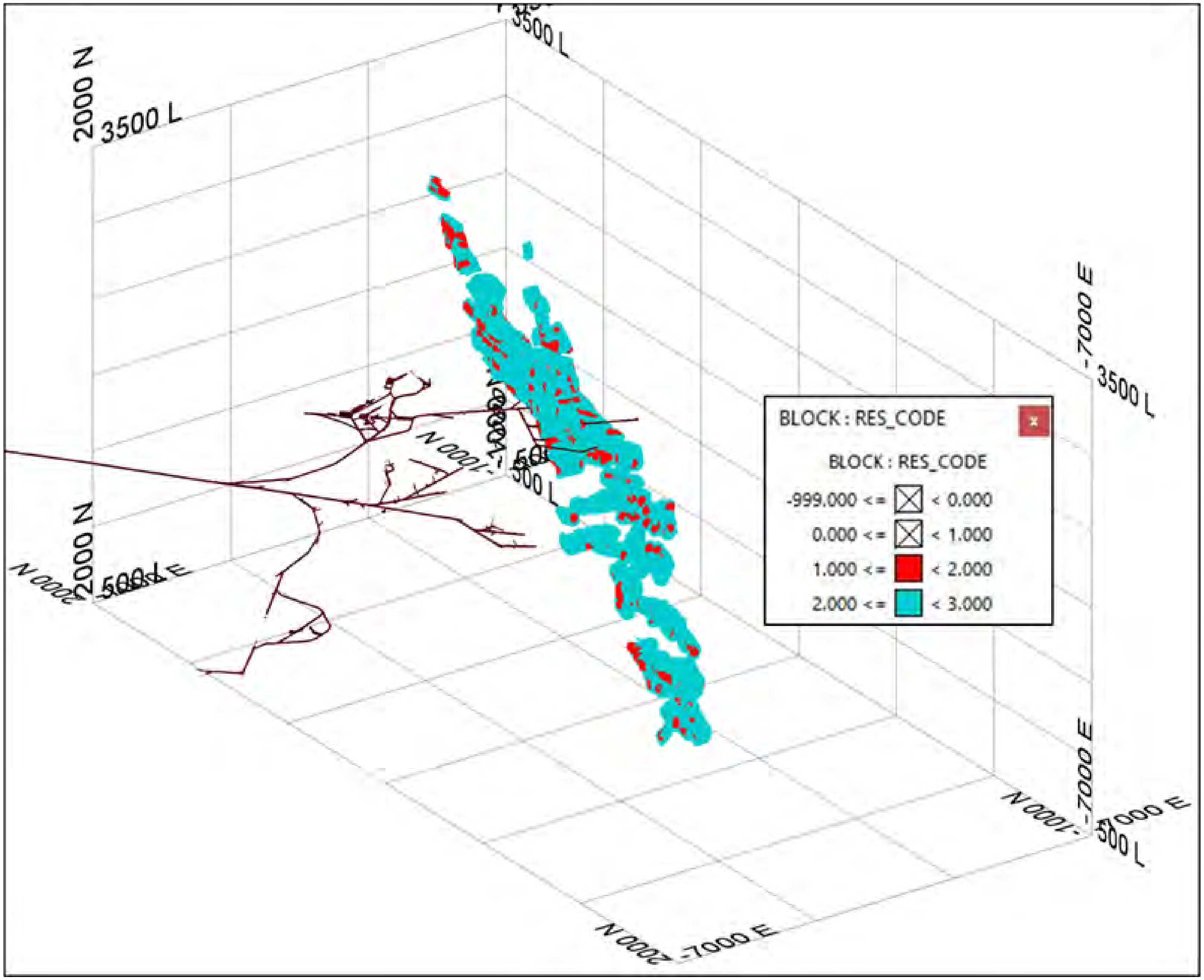


Figure 14-14 Resource Classification Distribution of Quill and Newgard

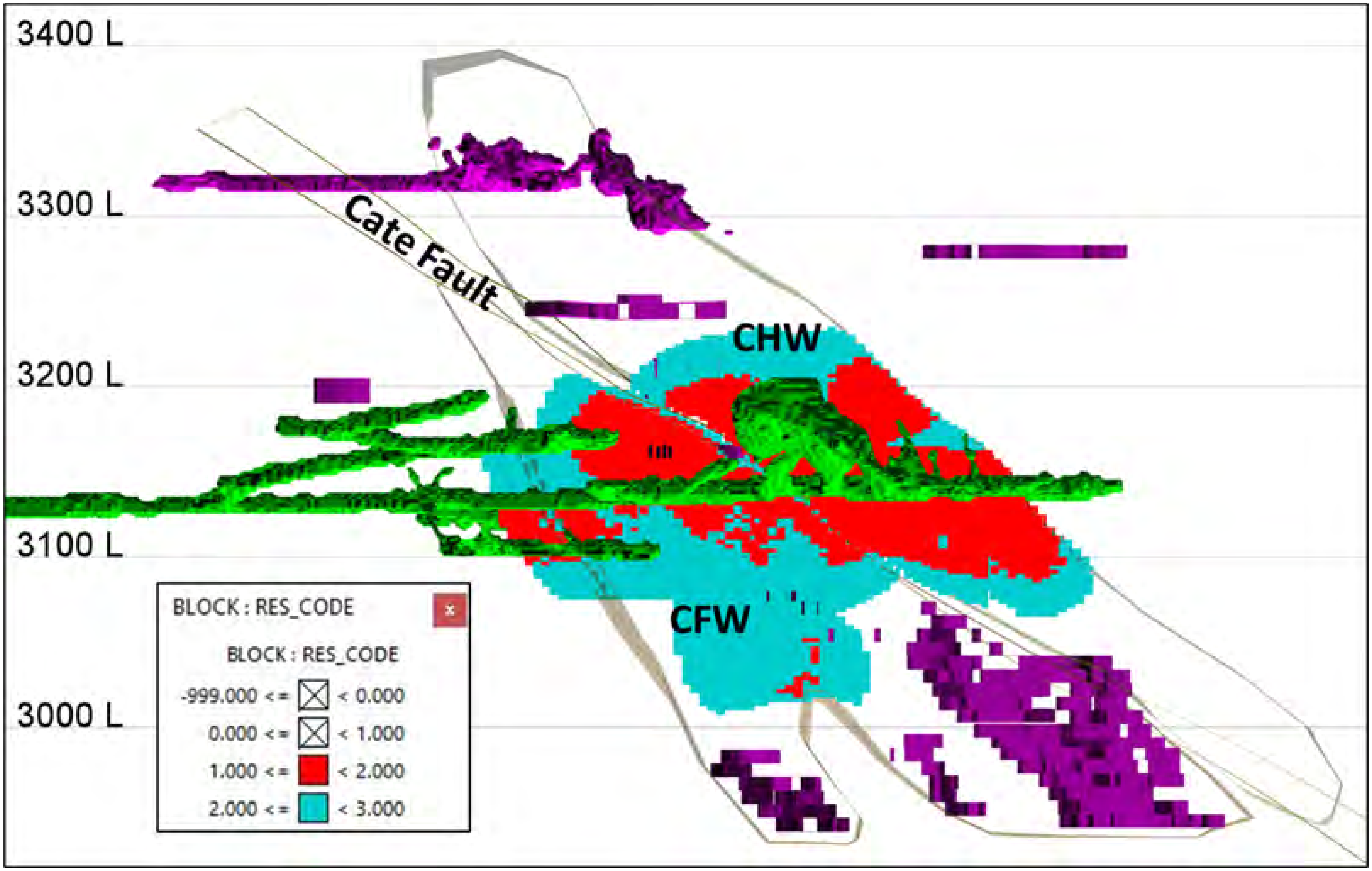


Figure 14-15 Resource Classification for UTZ Model Sections. Section view looking N45E. Measured blocks shown in Red, Indicated blocks shown as Teal.

14.10 MINERAL RESOURCE ESTIMATE DETAILS AND SENSITIVITIES

Tables below illustrate the Mineral Resource Estimate for the Bunker Hill Mine, as well as various sensitivity analyses applied to cutoff grades and metals prices.

Table 14-10 summarizes the Bunker Hill Mineral Resource estimate, classified according to CIM definitions for the Project. Reasonable prospects of eventual economic extraction, defined in this section of the report, assume underground mining, mill processing and flotation. Mineralization at polymetallic mines typically require separate Pb flotation and Zn flotation circuits. Mineral resources are estimated at $70/ton NSR.

Net smelter return (NSR) is defined as the return from sales of concentrates, expressed in US$/t, i.e.: NSR = (Contained metal) * (Metallurgical recoveries) * (Metal Payability %) * (Metal prices) – (Treatment, refining, transport and other selling costs). NSR values are estimated using updated using metallurgical recoveries of 92%, 82% and 88% for Zn, Ag and Pb respectively, and concentrate grades of 54.7% Zn in zinc concentrate, and 59.7% Pb and 14.18 oz/ton Ag in lead concentrate.

Table 14-10 Bunker Hill Mine Mineral Resource Estimate – NSR $70/ton cut off – Ag selling price of $20/oz (troy), Lead selling price of $0.90/lb, Zn selling price of $1.15/lb. Effective date of November 29, 2021)

Classification	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
Measured (M)	2,229	$ 117.25	1.04	2,309	2.51	111,975	5.52	246,046
Indicated (I)	4,385	$ 117.55	1.02	4,484	2.42	212,519	5.63	493,902
Total M & I	**6,614**	**$ 117.45**	**1.03**	**6,793**	**2.45**	**324,495**	**5.59**	**739,948**
Inferred	6,749	$ 125.22	1.54	10,410	2.91	392,757	5.01	669,358

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves.

14.11 GRADE SENSITIVITY ANALYSIS

Mineral resources are sensitive to the selection of a cutoff grade. To illustrate this sensitivity, the block quantities and grade estimates for the estimated mineralization are presented in Table 14-11 at linear increases in the cutoff grades for Measured, Indicated and Inferred mineral resources at Bunker. The same results are presented graphically in Figure 14-16. The reader is cautioned that Table 14-11 should not be misconstrued as a mineral resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of varying NSR values. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14-11 NSR Cutoff Sensitivity Analysis

	Measured								Indicated							
Cutoff NSR ($/Ton)	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
60	2,720	$ 107.80	0.95	2,589	2.30	125,204	5.08	276,511	5,352	$ 108.04	0.94	5,008	2.22	237,832	5.19	555,093
62	2,617	$ 102.23	2.02	2,534	5.40	122,642	0.92	270,492	5,151	$ 109.88	0.95	4,904	2.26	232,983	5.27	543,042
64	2,521	$ 111.41	0.99	2,484	2.38	120,126	5.25	264,658	4,955	$ 111.73	0.97	4,803	2.30	228,128	5.36	530,908
66	2,423	$ 113.30	1.00	2,428	2.42	117,487	5.34	258,558	4,763	$ 113.62	0.99	4,700	2.34	223,145	5.45	518,783
68	2,325	$ 115.24	1.02	2,369	2.47	114,764	5.43	252,308	4,574	$ 115.54	1.00	4,594	2.38	217,968	5.54	506,476
70	2,229	$ 117.25	1.04	2,309	2.51	111,975	5.52	246,046	4,385	$ 117.55	1.02	4,484	2.42	212,519	5.63	493,902
72	2,139	$ 119.18	1.05	2,252	2.56	109,327	5.61	240,036	4,201	$ 119.59	1.04	4,377	2.47	207,161	5.73	481,179
74	2,052	$ 121.14	1.07	2,197	2.60	106,646	5.70	233,983	4,030	$ 121.57	1.06	4,276	2.51	202,015	5.82	469,062
76	1,970	$ 123.06	1.09	2,141	2.64	104,092	5.79	228,168	3,863	$ 123.58	1.08	4,174	2.55	196,858	5.91	456,963
78	1,887	$ 125.09	1.10	2,085	2.68	101,325	5.89	222,172	3,707	$ 125.54	1.10	4,074	2.59	191,934	6.01	445,333
80	1,806	$ 127.15	1.12	2,028	2.73	98,616	5.98	216,139	3,560	$ 127.46	1.12	3,981	2.63	187,205	6.10	434,018

	Measured & Indicated								Inferred							
Cutoff NSR ($/Ton)	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
60	8,072	$ 107.96	0.94	7,597	2.25	363,037	5.15	831,604	7,396	$ 119.94	1.46	10,779	2.77	409,881	4.85	716,837
62	7,768	$ 109.80	0.96	7,438	2.29	355,625	5.24	813,534	7,263	$ 121.03	1.47	10,710	2.80	406,708	4.88	708,899
64	7,477	$ 111.62	0.97	7,287	2.33	348,253	5.32	795,566	7,134	$ 122.08	1.49	10,642	2.83	403,451	4.91	700,983
66	7,186	$ 113.51	0.99	7,127	2.37	340,631	5.41	777,342	7,007	$ 123.11	1.51	10,568	2.85	400,068	4.95	693,142
68	6,899	$ 115.44	1.01	6,963	2.41	332,732	5.50	758,784	6,882	$ 124.13	1.52	10,492	2.88	396,669	4.98	685,148
70	6,614	$ 117.45	1.03	6,793	2.45	324,495	5.59	739,948	6,749	$ 125.22	1.54	10,410	2.91	392,757	5.01	676,409
72	6,340	$ 119.45	1.05	6,629	2.50	316,488	5.69	721,215	6,616	$ 126.30	1.56	10,329	2.94	388,830	5.04	667,478
74	6,082	$ 121.42	1.06	6,474	2.54	308,662	5.78	703,045	6,493	$ 127.32	1.58	10,250	2.97	385,121	5.07	658,857
76	5,833	$ 123.40	1.08	6,315	2.58	300,950	5.87	685,130	6,372	$ 128.31	1.60	10,169	2.99	381,296	5.10	650,216
78	5,594	$ 125.39	1.10	6,158	2.62	293,258	5.97	667,506	6,257	$ 129.25	1.61	10,086	3.02	377,576	5.13	641,901
80	5,366	$ 127.36	1.12	6,009	2.66	285,821	6.06	650,158	6,147	$ 130.15	1.63	10,007	3.04	373,931	5.15	633,680

Mineral resources are not mineral reserves and do not have demonstrate economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves.

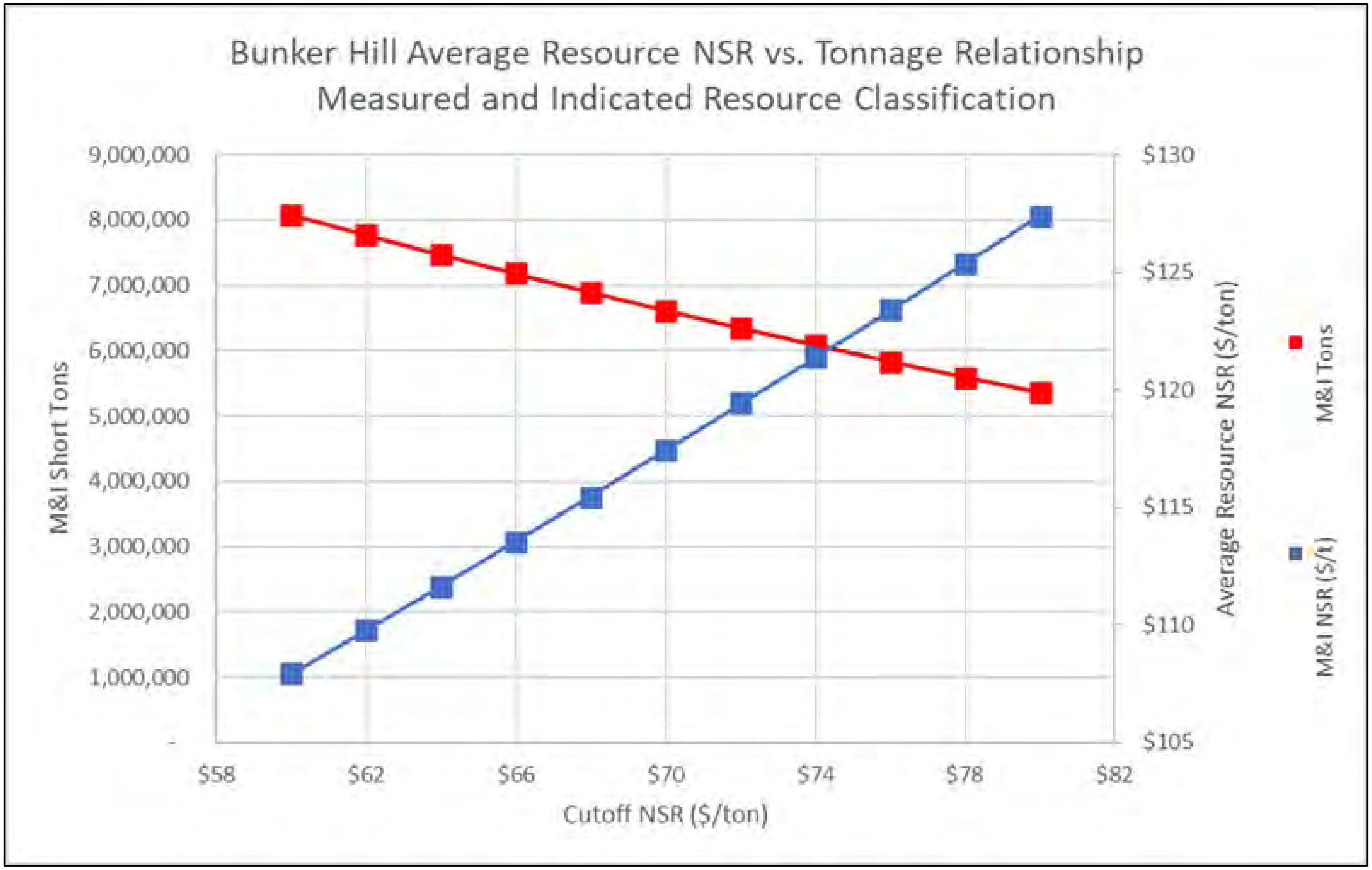


Figure 14-16 Grade vs Tonnage Chart for NSR Cutoff Sensitivity

14.12 SENSITIVITY OF MINERALIZATION TO METAL PRICES.

The sensitivity of mineralization defined by the evaluation of the mineral inventory at different metal prices was performed by estimating metal prices at -20% and at metal prices +20%. Table 14-12 lists the amount of the mineralization that would support mineral resources at those metal prices. Table 14-12 should not be misconstrued as mineral resources for the Project. These quantities are only meant to describe mineralization volumes related to the described metal selling prices.

Table 14-12 Metals Price Sensitivity Analysis for Bunker Hill Mineral Resource Estimate

Prices	Classification	Ton (x1,000)	NSR ($/Ton)	Ag Oz/Ton	Ag Oz (x1,000)	Pb %	Pb Lbs. (x1,000)	Zn %	Zn Lbs. (x1,000)
Ag: 16$/Oz Pb 0.72 $/lb Zn: 0.92 $/lb	Measured (M)	1,303	$ 105.38	1.27	1,653	3.06	79,608	6.71	174,765
	Indicated (I)	2,605	$ 105.10	1.28	3,323	2.94	153,355	6.77	352,604
	Total M & I	**3,908**	**$ 105.20**	**1.27**	**4,976**	**2.98**	**232,963**	**6.75**	**527,369**
	Inferred	5,359	$ 123.46	1.75	9,397	3.21	344,093	5.29	567,114
Ag: 20$/Oz Pb 0.90 $/lb Zn: 1.15 $/lb	**Classification**	**Ton (x1,000)**	**NSR ($/Ton)**	**Ag Oz/Ton**	**Ag Oz (x1,000)**	**Pb %**	**Pb Lbs. (x1,000)**	**Zn %**	**Zn Lbs. (x1,000)**
	Measured (M)	2,229	$ 117.25	1.04	2,309	2.51	111,975	5.52	246,046
	Indicated (I)	4,385	$ 117.55	1.02	4,484	2.42	212,519	5.63	493,902
	Total M & I	**6,614**	**$ 117.45**	**1.03**	**6,793**	**2.45**	**324,495**	**5.59**	**739,948**
	Inferred	6,749	$ 125.22	1.54	10,410	2.91	392,757	5.01	669,358
Ag: 24$/Oz Pb 1.08 $/lb Zn: 1.38 $/lb	**Classification**	**Ton (x1,000)**	**NSR ($/Ton)**	**Ag Oz/Ton**	**Ag Oz (x1,000)**	**Pb %**	**Pb Lbs. (x1,000)**	**Zn %**	**Zn Lbs. (x1,000)**
	Measured (M)	2,975	$ 130.57	0.91	2,708	2.20	131,115	4.89	290,867
	Indicated (I)	5,854	$ 130.86	0.89	5,219	2.13	248,812	4.99	584,465
	Total M & I	**8,828**	**$ 130.77**	**0.90**	**7,927**	**2.15**	**379,927**	**4.96**	**875,332**
	Inferred	7,722	$ 132.09	1.42	10,935	2.70	417,307	4.76	723,683

Mineral resources are not mineral reserves and do not have demonstrate economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves.

15 MINERAL RESERVES

There are no mineral reserves estimated for the Project.

16 MINING METHODS

The Bunker Hill mine was established in 1885. It was operated until 1981 when it was closed due to low metal prices, an extended labor strike, and capital short-falls required to meet new environmental standards. Although attempts were made to modernize and operate the mine until 1991, it was finally closed. By this time Bunker Hill had processed 35.78 million tons of mineralized material with head grades averaging grades of 4.52 opt Ag, 8.76% Pb and 3.67% Zn, containing 161.72 million ounces of Ag, 3.13 million tons of Pb and 1.31 million tons of Zn. Miners had a specific exemption from the draft during World War II due to the vital need for zinc and lead. Mining and development methods evolved over the years and included square-set timber stoping, open stoping via caving methods, overhand cut-and-fill mining with hydraulic fill and room-and-pillar mining with and without hydraulic fill. Long-hole stoping with fill, cut-and-fill and possibly room-and-pillar mining with fill are the only methods viable for sustained operations today. Room-and-pillar mining is not in the current plan. Timbered ground support has been replaced with newer ground support technology of rock bolts, mesh, shotcrete and steel sets as required. Ground conditions are generally good to excellent at Bunker Hill and the rest of the mines in the Silver Valley. Bunker Hill does not have a history of rock burst events that are frequent in the deeper mines to the east.

16.1 LONG-HOLE OPEN STOPING WITH HYDRAULIC FILL

Long-hole open stoping (LHOS) is employed with engineered hydraulic fill. This mining method is less selective than cut-and-fill mining however can be accomplished at a lower cost due to greater labor efficiencies and reduced primary ground support and hydraulic fill requirement. Long-hole panels are established by driving a top cut and bottom cut into the mineralized zone leaving a bench between the upper and lower cuts. This bench is then extracted utilizing the top cut as drilling and loading access and the lower cut for mucking access. LHOS are typically mucked with remote control equipment for safety. Stope centerlines are laid out and designated as alternating primary and secondary excavations. The primary stopes are taken first with native rock on all sides. As they are mined-out, they are filled with an engineered hydraulic backfill. The secondary stopes are then mined out adjacent to the primary backfill, figure 16 – 1 Long-hole open stoping. The fill strength requirements for secondary stopes are typically much less as they are the last excavations taken in an area. Secondary stopes are typically filled with development material and low or zero cement content hydraulic fill. The LHOS areas are accessed through existing Bunker Hill excavations rehabilitated to modern mining standards in addition to new development ramps as required.

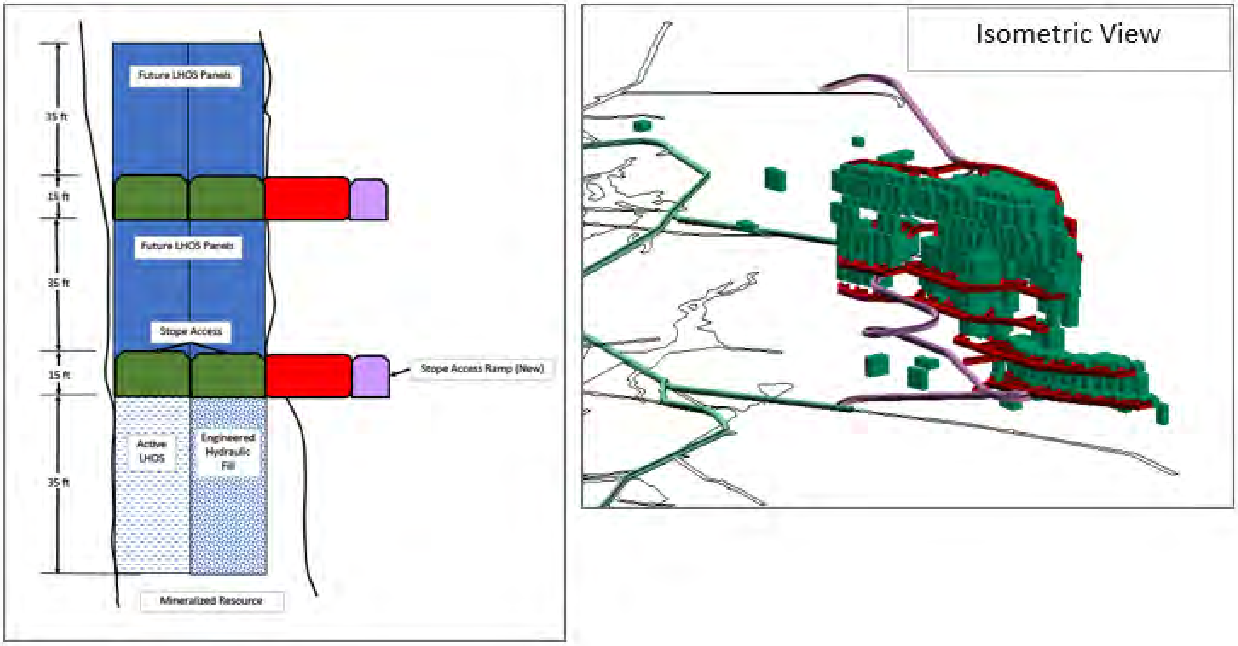


Figure 16-1 Long-hole open stoping (NTS)

16.2 OVERHAND CUT-AND-FILL MINING

Overhand cut-and-fill mining is a selective method that can maintain grade and minimize dilution. It has been a staple of underground mining in the Coeur d 'Alene district for years. Rubber tire access ramps have replaced raises, slusher and rail car haulage systems and provide greater production efficiencies. Even greater efficiencies are now possible with the relatively new development of viable battery electric vehicles (BEV's) which greatly mitigates mine ventilation air quality and heat demands.

Overhand mining is a bottom-up method to mine successive stope cuts between main mining levels. Typical cut dimensions are estimated at 12 ft by 14 ft. Ground support is installed as required during each cut. As each cut is completed, it is filled with an engineered hydraulic fill. Then the next stope cut is taken on top of the placed fill and the process repeated until the mining panel between main mine levels is extracted, Figure 16 – 2 Cut-and-Fill Mining.

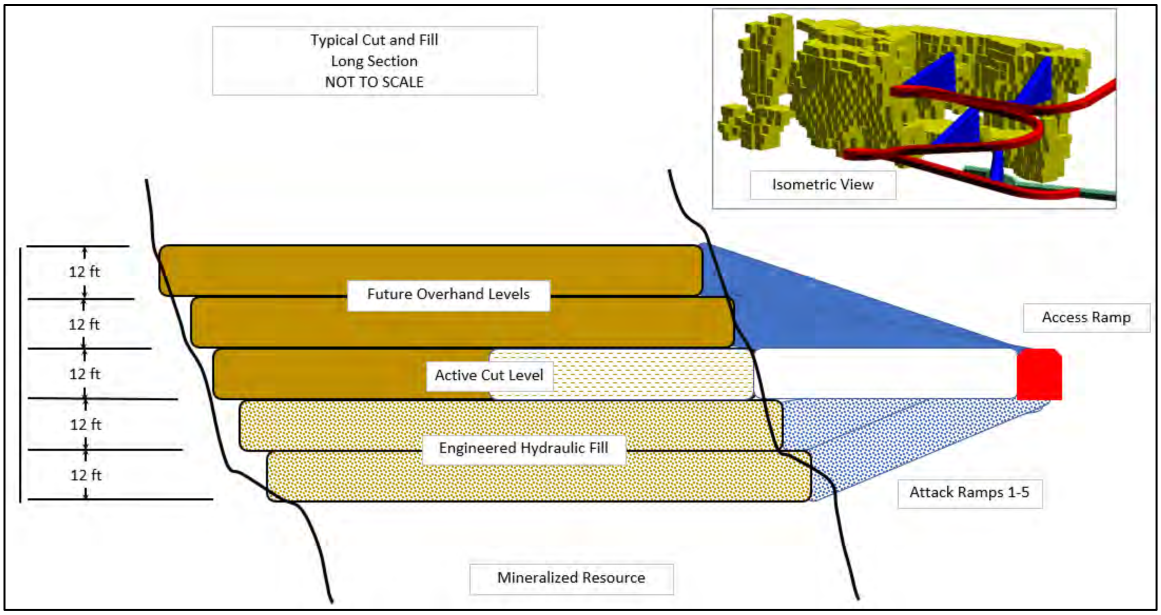


Figure 16-2 Cut and fill mining

The cut and fill stopes are accessed via an inclined ramp developed between levels. The ramp provides ventilation, utilities, and secondary escapeway as well as connecting the mine levels with rubber tire access.

16.3 CUT-OFF GRADE ANALYSIS

The PEA is based on the Bunker Hill Mineral Resource published March 22, 2021, following the drilling program conducted in 2020 and early 2021 to validate previous resources. This PEA is based on projected production 6.38Mt from the mine. Given the 13-year mine life, the mine plan has been based on prioritizing higher-grade material. The mine production schedule for the Newgard, Quill and UTZ portions of the mine included in the block model is based on an $80/ton NSR operating cut-off grade (COG). Mineralized portions of the mine plan external to the Quill, Newgard and UTZ zones were calculated using a zinc equivalent cut off of 5%, calculated using the formula: zn price ($/lb) + (pb grade (%)*(zn price ($/lb)/(pb price ($/lb) + (ag grade (oz/t)*(zn price ($/lb)/(ag price ($/toz)*(toz/1lb)).

Two concentrate streams will be produced during the milling process: a zinc concentrate and a lead/silver concentrate. Silver follows lead though flotation. Any silver reporting to the zinc concentrate is considered to be non-payable.

Table 16 – 1 represents the estimated realized NSR value per projected ton after smelter treatment, process and shipping charges and projected milling recoveries for each metal commodity. The NSR values for the block model were calculated by multiplying the effective realized NSR for each metal by its respective grade in each block.

Table 16-1 Realized NSR for Projected Processed Ton

Bunker Hill Mining Company		Zinc		Lead		Silver	
Smelter Per Ton of Concentrate	Plan Forecast Metal Prices	$1.15	per pound	$0.90	per pound	$20.00	$US/t-oz
		$2,300	$US/short-ton	$1,800	$US/short-ton		
	Smelter Metal Charge Deductions	($245.97)	$US/dry short-ton	($234.18)	$US/short-ton	(1.25)	$US/t-oz
	Concentrate Land Shipping	($24.38)	$US/dry short-ton	($24.97)	$US/dry short-ton		
	Sub-Total Deductions Short Tons	($270.35)	$US/dry short-ton	($235.10)	$US/short-ton	(1.25)	$US/t-oz
	Less Non-Payable	($345.00)	15.00%	($99.21)	5.00%	(1.00)	5.00%
	Percentage Realized Commodity Value	73.25%		81.43%		88.75%	
	Effective NSR Value Returned to Mine	$1,684.65	$US/short-ton	$1,465.70	$US/short-ton		
		$0.84	per pound	$0.73	per pound	$17.75	$US/t-oz
						Silver Follows Lead Concentrate	
	Concentrate in terms of Ore Tons	8.78%	Zinc Conc Tons	3.97%	Lead Conc Tons	1.36	t-oz in Lead Conc
	Mill Concentrate Recovery per Commodit	92.00%		91.00%		89.00%	
	Realized NSR Value/Ore ton	$136.05		$52.89		$21.41	
	Realized Commodity Price	**210.35**	**$US/short-ton**				

The breakeven COG based on the realized commodity value per ton in terms of zinc with the itemized operating cost line items is in Table 16 – 2 for cut-and-fill stopes and LHOS mining.

Table 16-2 Breakeven Cut-off Grade per Ton in Terms of Zinc

Bunker Hill Mining Company	Cut & Fill		LHOS	
	Zn % COG	$/Ore Ton	Zn % COG	$/Ore Ton
Processing				
Processing	0.54%	$ 13.00	0.54%	$ 13.00
Power	0.07%	$ 1.62	0.07%	$ 1.62
Total Process	**0.61%**	**$ 14.62**	**0.61%**	**$ 14.62**
Mining				
Ore Mining	1.85%	$ 44.38	1.05%	$ 25.13
Expensed Waste Development	0.22%	$ 5.17	0.22%	$ 5.17
Backfilling Cost ($/Ore Ton)	0.35%	$ 8.29	0.35%	$ 8.29
Management and Overhead incl. Milling	0.20%	$ 4.83	0.20%	$ 4.83
U/G Hoisting & Indirects	0.01%	$ *0.28*	0.01%	$ 0.28
Mine Maintenance - Indirects	0.19%	$ *4.45*	0.19%	$ 4.45
Dewater, Treatment & Tail placement	0.06%	$ 1.33	0.06%	$ 1.33
Mine Power U/G and Surface	0.18%	$ 4.43	0.18%	$ 4.43
Total Mining Cost	**3.05%**	**$ 73.16**	**2.25%**	**$ 53.91**
Total BCOG	**3.66%**	**$ 87.78**	**2.86%**	**$ 68.53**

Table 16-3 Summary of Mining Methods, Cutoff Basis and Mineral Inventory

Newgard - Quill - UTZ		Block Model	Tons[(1)]	NSR k$	NSR $/t[(2)]	Ag kOz	Ag OPT	Pb Tons	Pb %	Zinc Tons	Zn %
		Cutoff Basis									
Indicated	LHOS	$80/ton NSR	1,146,397	$143,634	$125	1,195	1.04	27,777	2.42%	67,144	5.86%
Inferred	LHOS	$80/ton NSR	1,501,875	$178,098	$119	1,325	0.82	30,361	2.01%	79,710	5.26%
Inferred	C&F	$80/ton NSR	116,936	$14	$119	60	0.51	2,222	1.90%	5,496	4.70%
		Sub-total	2,765,208	$335,598	$121	2,520	0.91	60,359	2.18%	152,349	5.51%
Mineral Inventory Outside-Below Block Model											
		Cutoff Basis									
Inferred	LHOS	5% Zinc equivalent	3,608,142	$503,581	$140	6,473	1.79	105,561	2.93%	139,626	3.87%
		Sub-total	3,608,142	$503,581	$140	6,473	1.79	105,561	2.93%	139,626	3.87%
		Total	**6,373,350**	**839,179**	**$132**	**8,993**	**1.41**	**165,921**	**1.90%**	**291,976**	**4.70%**
	Metal Prices		**$20.00** Silver - $/t-Oz								
			$1.15 Zinc - $/lb								
			$0.90 Lead - $/lb								
	NSR Values[(3)]		**$17.75** Silver - $/t-Oz								
			$0.84 Zinc - $/lb								
			$0.73 Lead - $/lb								

16.4 MINE PLANNING AND SCHEDULING

Backfill is provided via an underground hydraulic backfill plant and distribution system located on the 5-level above a majority of the workings to allow for gravity placement of thickened fill to the greatest extent possible. The plant will produce engineered geotechnical hydraulic fill for the mining operations and a thickened tailing byproduct to be placed in existing open stopes and select secondary stopes. Delineation drilling in advance of mining will be used to confirm final stope geometries and identify historically non-filled stopes which will be appropriately backfilled prior to new mining advancements.

Contract mining is envisioned with the contractor supplying labor and equipment and Bunker Hill providing materials, supplies, engineering, geology and overall site management. BEV's will be used to the greatest extent possible. Drill and bolter jumbos will be electric/hydraulic units with either diesel or battery electric tram. Bunker Hill and contractor labor estimates are presented in Table 16 – 4 and equipment estimates in Table 16 – 5.

Table 16-4 Bunker Hill and Contractor Labor Requirements

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Contractor Supplied														
Shift Supervisors		4	4	4	4	4	4	4	4	4	4	4	4	4
Lead Miner		16	16	16	16	16	16	16	16	16	16	16	16	8
Miner		16	16	12	12	12	12	12	12	12	12	12	12	6
UG Labor		4	4	4	4	4	4	4	4	4	4	4	4	4
Backfill Plant Operators		-	8	8	8	8	8	8	8	8	8	8	8	8
Hoistman		4	4	4	4	4	4	4	4	4	4	4	4	2
Cage Tenders		4	4	4	4	4	4	4	4	4	4	4	4	2
Mechanics		5	8	8	8	8	8	8	8	8	8	8	8	4
Electricians		3	4	4	4	4	4	4	4	4	4	4	4	2
Total		56	68	64	64	64	64	64	64	64	64	64	64	40
Bunker Hill Supplied	**Budget Each**													
Mine/Mill Superintendent	$175,500	1	1	1	1	1	1	1	1	1	1	1	1	1
Technical Services Manager	$155,250	1	1	1	1	1	1	1	1	1	1	1	1	1
Accountant	$135,000	1	1	1	1	1	1	1	1	1	1	1	1	1
Human Resources	$114,750	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineers	$121,500	2	3	3	3	3	3	3	3	3	3	3	3	3
Geologists	$121,500	2	3	3	3	3	3	3	3	3	3	3	3	3
Environmental	$128,250	1	1	1	1	1	1	1	1	1	1	1	1	1
Purchasing Agent	$128,250	1	1	1	1	1	1	1	1	1	1	1	1	1
Chief Assayer	$94,500	1	1	1	1	1	1	1	1	1	1	1	1	1
Samplers UG	$83,700	2	4	4	4	4	4	4	4	4	4	4	4	4
Assayers/Lab	$81,000	1	3	3	3	3	3	3	3	3	3	3	3	3
Clerk	$81,000	1	2	2	2	2	2	2	2	2	2	2	2	2
Total		15	22	22	22	22	22	22	22	22	22	22	22	22

Table 16-5 Bunker Hill and Contractor Equipment Requirements

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Contractor Supplied														
Drill Jumbo		3	3	3	2	1	1	1	1	1	1	1	1	1
Bench Drill			1	2	2	2	2	2	2	2	2	2	2	1
Explosive Loaders		3	2	1	1	1	1	1	1	1	1	1	1	1
Loaders		2	3	3	3	3	3	3	3	3	3	3	3	2
Trucks		2	3	3	3	3	3	3	3	3	3	3	3	2
Bolters		2	2	2	2	2	2	2	2	2	2	2	2	1
Utility Equipment		4	4	4	4	4	4	4	4	4	4	4	4	4
Total Units		16	18	18	17	16	16	16	16	16	16	16	16	12
Bunker Hill Supplied ($)	**LOM Budget**													
Telehandler	175,000	175,000												
Concentrate Containers	400,000		400,000											
Miscellaneous - Allowance	200,000	200,000												
UG Transport for BNKR Personnel	275,000	100,000	50,000	50,000	50,000			25,000						
Light Vehicles -(incl. replacements)	250,000	150,000				50,000			50,000					
Sub-Total	1,300,000	625,000	450,000	50,000	50,000	50,000	-	25,000	50,000					
Sales Tax	78,000	37,500	27,000	3,000	3,000	3,000	-	1,500	3,000					
Total	1,378,000	662,500	477,000	53,000	53,000	53,000	-	26,500	53,000					

Production commences six months following the start of construction, targeting 200 tons/day (tpd) ramping up to 1,500 tpd over a 14-month period. The scheduled ramp-up allows for infrastructure components to be completed and commissioned and to ensure the mine is adequately developed to maintain consistent production. Initially, production will be targeted above the 9-level as the hoists and first sections of shaft rehabilitation are completed. The mine plan is developed to allow sequential water draw-down and shaft rehabilitation between levels as new production horizons are required. This sequencing is continued to the 26-level.

As the mine matures and progresses deeper, the resource transitions from primarily zinc to primarily lead mineralization in Year 9. In Year 8, the mine plan also transitions away from cut and fill production to LHOS for the remainder of the mine life. Table 16 – 6 shows the project mine production schedule.

Table 16-6 Production Schedule

Bunker Hill Mining Corp	LOM Total	Year 1 (1)	Year 2	Year 3	Year 4	Year 5	Year 6
Mineralized material mined (kt)	6,377	135	396	548	548	548	548
Zinc grade (%)	5.0%	6.9%	6.6%	5.2%	6.3%	5.8%	5.1%
Lead grade (%)	2.8%	2.3%	2.3%	2.8%	2.1%	1.8%	2.2%
Silver grade (oz/t)	1.5	0.3	0.7	1.2	1.1	0.5	1.2
Zinc concentrate (t)	509,603	14,674	41,556	45,549	54,838	50,395	44,634
Lead concentrate (t)	241,131	4,159	12,314	20,953	15,440	13,052	16,000
Zinc in Concentrate) (klbs)	591,140	17,022	48,204	52,837	63,613	58,459	51,776
Lead in Concentrate (klbs)	323,116	5,573	16,500	28,077	20,690	17,489	21,441
Silver in Concentrate (koz)	8,418	38	238	575	515	249	603

Bunker Hill Mining Corp	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13 (2)
Mineralized material mined (kt)	548	548	548	548	548	548	372
Zinc grade (%)	4.7%	5.7%	4.7%	5.2%	3.4%	2.1%	5.7%
Lead grade (%)	1.3%	2.2%	2.3%	1.8%	4.3%	6.5%	4.3%
Silver grade (oz/t)	1.0	1.4	1.4	1.2	2.7	3.7	2.0
Zinc concentrate (t)	41,221	49,781	40,461	44,755	29,735	18,366	33,638
Lead concentrate (t)	9,842	16,183	17,228	13,493	32,319	48,674	21,474
Zinc in Concentrate) (klbs)	47,816	57,745	46,935	51,916	34,492	21,304	39,020
Lead in Concentrate (klbs)	13,188	21,686	23,086	18,080	43,308	65,223	28,776
Silver in Concentrate (koz)	479	700	668	576	1,320	1,792	663

(1) Year 1 is pre-production and initial Capex period
(2) The last year of mine life is a partial year.
(3) Mineral resources are not mineral reserves and do not have demonstrated economic viability

Capital and expensed development tonnages and footages are presented in Table 16 – 7. Expensed development is defined as having a useful depreciable life of less than one year. Actual development cost for like-sized cross sections is the same.

Table 16-7 Capital and Expense Development Quantities Schedule

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	LOM (Year 1 - LOM)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Capital Development														
Total Capital Horizontal Advance, ft														
Total Capital Horizontal Waste, tons	37,619	5,787	3,290	3,079	3,394	2,594	2,540	1,335	7,800	2,600	2,600	2,600	-	-
Total Capital Vertical Advance, ft	356,024	54,156	40,221	27,921	30,336	22,953	24,285	12,196	71,978	23,993	23,993	23,993	-	-
Total Capital Vertical Waste, tons	5,200	400	800	400	400	400	-	200	500	700	700	700	-	-
Expensed Development	25,592	1,969	3,937	1,969	1,969	1,969	-	984	2,461	3,445	3,445	3,445	-	-
Total Expensed Horizontal Advance, ft														
Total Expensed Horizontal Waste, tons	41,391	12,555	13,137	10,012	5,264	423	-	-	-	-	-	-	-	-
Total Waste Development	381,956	115,858	121,228	92,391	48,576	3,903	-	-	-	-	-	-	-	-
Total Advance, ft														
Total Waste, tons	84,210	18,742	17,227	13,491	9,058	3,417	2,540	1,535	8,300	3,300	3,300	3,300	-	-
	763,573	171,982	165,386	122,280	80,880	28,825	24,285	13,181	74,439	27,438	27,438	27,438	-	-

16.5 OTHER MINE RELEVANT CONDITIONS

The mine is currently flooded to just above the 11-level. Pumps are located in the #2 shaft compartment to maintain this level. Mine discharge water is actively treated underground to reduce contaminants and neutralize pH before exiting the mine and being delivered to the surface water treatment plant. Mine water inflows have traditionally been collected in sumps on the working levels and pumped out of the mine. Level collection and pumping will continue and underground wells or upper-level clean water inflow sumps will be installed to provide a source of mine process and drill water. Mine drill water currently is collected sumps near the point of use and there is not a mine wide water system. The development cost estimate includes installation of mine water, discharge water, communications, electric and air lines to and from the working headings.

17 RECOVERY METHODS

The conceptual process flowsheet and the process design criteria were developed based on the on-going test work at Resource Development Inc. (RDi) and the historical plant description discussed in Section 13.

17.1 CONCEPTUAL PROCESS FLOWSHEET

The historical and on-going current test work at RDi indicated that sequential flotation process can produce marketable-grade Pb/Ag and Zn concentrates. The conceptual process flowsheet was developed based on limited test work, historical plant flowsheet and plants processing similar polymetallic mineralization. The process flowsheets, given in Figure 17-1 and 17-2, consist of two-stage crushing to produce a feed of P_{80} of 0.5 inch for the milling circuit. The mill feed will be ground in a ball mill to P_{80} of 150 mesh (104 micrometers) with sodium cyanide and zinc sulfate. The ground slurry will be subjected to rougher flotation of lead and silver minerals using xanthate and MIBC. Concentrates may be reground and cleaned up to three times to produce lead/silver concentrate.

The lead rougher- and first-cleaner tailings will be combined and conditioned with copper sulfate and then pH adjusted, and zinc minerals floated with xanthate and MIBC. The zinc rougher concentrate could be reground and cleaned up to three times to produce marketable zinc concentrate.

The zinc rougher- and first-cleaner tailing will be combined and sent to paste thickening plant.

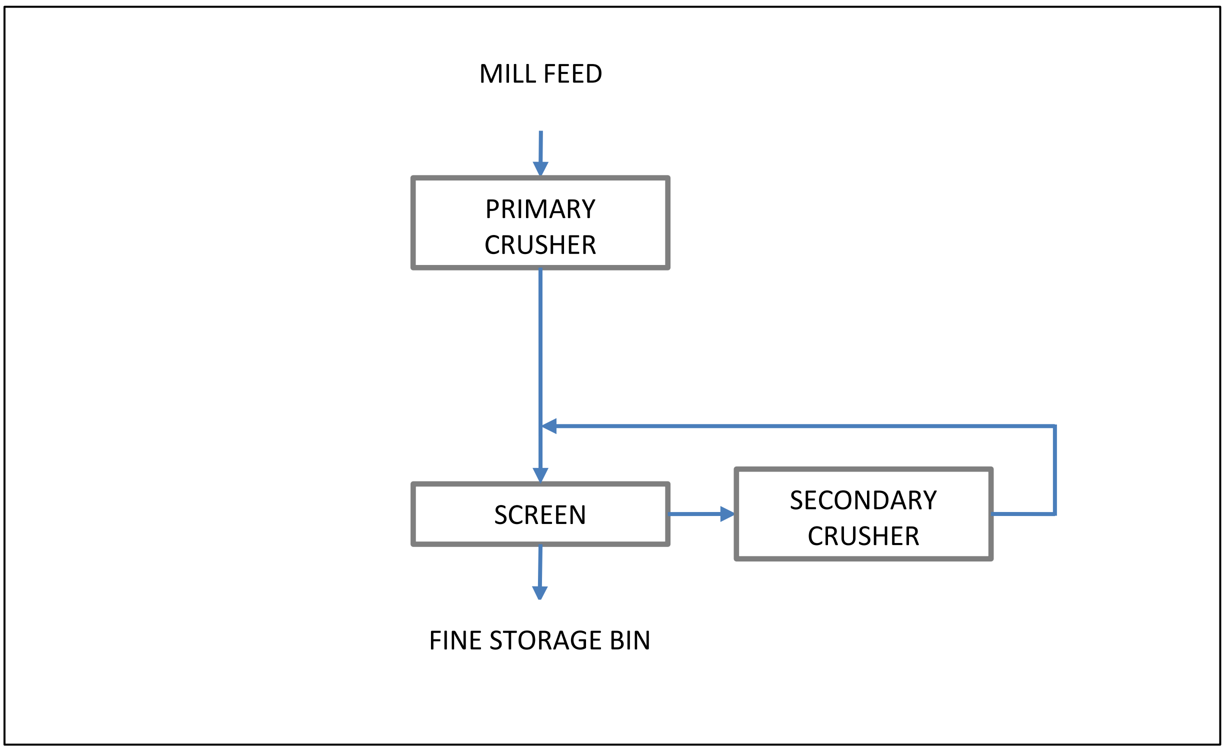


Figure 17-1 Crushing Circuit Flowsheet

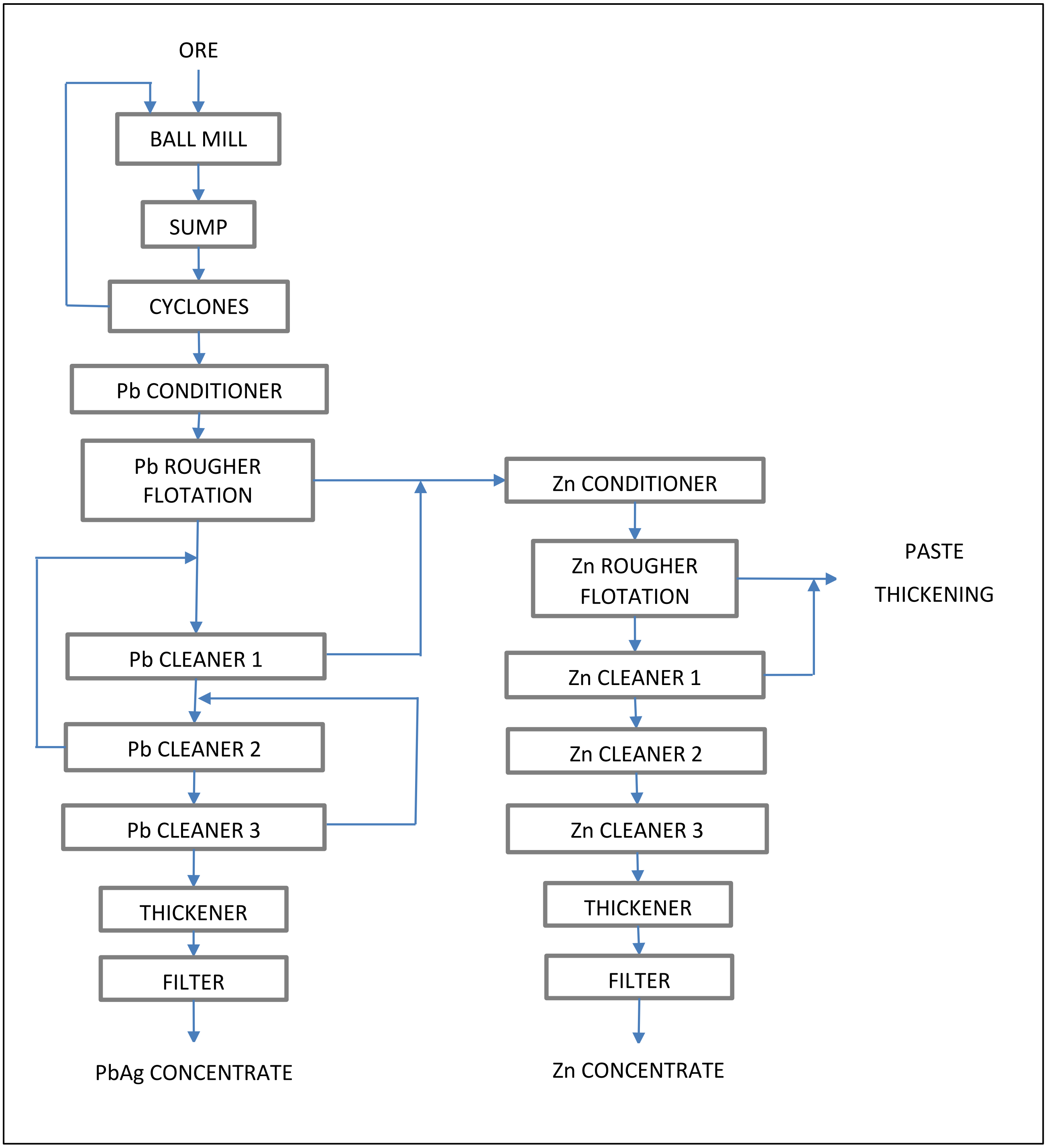


Figure 17-2 Conceptual Process Flowsheet

17.2 PROCESS DESIGN CRITERIA

The plant is designed to process 1500 tpd with an overall availability of 92%. The design criteria are given in Table 17-1

Table 17-1 Design Criteria

No.	Parameter	Unit	Value	Source
GENERAL				
1.	Plant tonnage	stpd	1500	Client
2.	Plant availability	%	92	Pro Solv
3.	ROM moisture	%	3	Pro Solv
4.	Design plant throughput	Stpd/stph	1630/68	Calculated
5.	Specific gravity	g/cc	2.8	Calculated
6.	Bulk density	Lb/Cuft	125	Assumed
CRUSHING				
7.	Operating hours	hr./day	16	Assumed
8.	Crusher availability	%	75	Assumed
9.	Crusher feed	stph	125	Calculated
10.	ROM feed, F_{80}	Ins	8	Assumed
11.	Primary crusher product, P_{80}	Ins	2.5	
12.	Secondary crusher, P_{80}	Ins	0.5	
13.	Screen opening	Ins	¾	Assumed
14.	Screen undersize, P_{80}	Ins	½	
15.	Fine storage bin capacity	hrs. tons	12 815	Assumed calculated
MILLING				
16.	Ball Mill Work Index		13.7-15.6	RDi
17.	Design BW_i		15.6	Pro Solv
18.	Mill Feed, F_{80}	Microns tph	12,500 68	Crusher product calculated
19.	Mill Product, P_{80} (cyclone overflow)	microns	75-104	RDi
FLOTATION				
20.	Lead Rougher Flotation Lab time	min	8	RDi
21.	Plant Residence Time	min	20	Calculated
22.	Zn Rougher Flotation Plant Time	min	20	Calculated
23.	Pb Cleaner 1 Flotation	min	12	Assumed
24.	Pb Cleaner 2 Flotation	min	8	Assumed
25.	Pb Cleaner 3 Flotation	min	5	Assumed
26.	Zn Cleaner Flotation	Same as cleaners		Assumed
27.	Pb Concentrate Thickener	$Ft^2/t/day$	1	Assumed
28.	Pb Concentrate Filter	$lb./ft^2/hr.$	300	Assumed
29.	Zn Concentrate Thickeners	$Ft^2/t/day$	1	Assumed
30	Zn Concentrate Filter	$lb./ft^2/hr.$	300	Assumed

17.3 PROJECTED PLANT RECOVERIES AND GRADES

Historical metallurgical results have been used for metal recoveries and concentrate grades (Table 13-1). The results were averaged for the last ten years of operation. The lead concentrate assaying an average of 67% Pb and 34 opt Ag, is estimated to recover 91% of lead and 89% of silver. The zinc concentrate, assaying 58% Zn, will recover 92% of zinc. The projected values of recoveries and grades will need to be confirmed in the on-going test program.

17.4 CAPITAL COST FOR MILLING OPERATIONS

The following methodology was used to develop the capital cost for the processing plant treating 1500 tpd and 92% plant availability:

1. Major equipment was sized based on available metallurgical data. The list of equipment along with the cost are provided in Table 17-2.

2. The major new equipment is estimated to cost approximately $7.17 million. Assuming some of the major equipment is available in the used market, the purchased equipment cost can be reduced by 25% to ±$5.38 million.

3. Since the mill is planned to be built underground on level 9, mill building will not be needed.

4. The tailings handling cost has been separately estimated to be $1 million.

5. The construction, installation, EPCM, etc. were factored for the study and is estimated at 2.6 times the equipment cost.

The total plant cost is estimated to be $19 million

Table 17-2 Cost of Processing Plant Equipment for 1500 tpd Capacity

No.	Equipment	HP	No. of Units	Cost/unit $	Total Cost $
1.	22 in x 50 in Jaw	125	1	245,000	245,000
2.	44 in standard conc	300	1	422,400	422,400
3.	3 ft. short head conc. (optional)	200	1	375,900	375,900
4.	6 ft. x 10 ft. vibrating screen	15	1	66,500	66,500
5.	100 ft. length 30 in conveyors	240	6	74,200	445,200
6.	24 ft. x 24 ft. x 24 ft. fines bin	-	1	285,000	285,000
7.	12 ft. diam. x 22 ft. long ball mill	1600	1	1,200,000	1,200,000
8.	8 ft. x 8 ft. x 8 ft. mill discharge sump	-	1	31,000	31,000
9.	5-15 in cyclone system	-	1	125,000	125,000
10.	8 ft. diam. x 16 ft. high Pb conditioner	-	1	30,000	30,000
11.	Four 500 cu ft. cells bank	160	1	400,000	400,000
12.	Six 40 cu ft. cell bank	45	1	240,000	240,000
13.	Pb Cl # 2/# 3 cells	-	-	-	240,000
14.	Zn Roughers:4-500 cu ft cell bank	160	1	400,000	400,000
15.	Zncl # 1: six 100 cu ft cells bank	90	1	300,000	300,000
16.	Zncl # 2/ # 3 cells	-	-	300,000	300,000
17.	30 ft. diam. Pb thickener	3	1	187,000	187,000
18.	10 ft. diam. Zn thickener	2	1	30,000	30,000
19.	Pb conc 6 ft diam x 4 ft long filter	2	1	135,000	135,000
20.	Pb Vacuum system	20	1	63,600	63,600
21.	Zn Conc 8 ft. diam. x 8 ft Long drum filter	2	1	173,600	173,600
22.	Zn Conc. Filter vacuum system	10	1	27,800	27,800
23.	Sump Pump 4/16, 400 gpm	14	1	50,000	50,000
24.	Cyclone o/f 1488 gpm Pumps 10/26	66	3	34,000	102,000
25.	Conc. Pumps 2/9	8	4	11,000	44,000
26.	Tailing Pump 730 gpm 6/20	9	1	50,000	50,000
				Sub-total	5,972,400
27.	Miscellaneous Equipment @ 20% of Sub-total				1,200,000
				TOTAL	7,172,400
28.	Installation, concrete, piping, structural steel, insulation, instrumentation, electrical, tailing facility, engineering design and construction management (2.6 times capital equipment cost)				(5,380,000) * 13,988,000
				TOTAL CAPITAL COST	**19,368,000**

***Note:** If major equipment purchased as used, total capital cost will be $5.38 million.

17.5 OPERATING COSTS FOR MILLING OPERATIONS

The milling cost estimation requires detailed information regarding labor rates, power costs and reagent consumption and costs. Since it is early in the project to obtain these costs, milling operating costs were bench marked with similar mill operations in North Idaho. It was estimated to be $15/ton of mineralization processed.

18 PROJECT INFRASTRUCTURE

The Bunker Hill complex is a mature mine with much of the underground infrastructure and development still in place. The mill, smelter and tailing impoundment have been removed and these sites have been reclaimed. Part of the reclamation included surface water diversion structures which are still in use and are maintained in good condition. The original Bunker Hill mine offices, car and maintenance shops, and change house are located near the Kellogg Tunnel (KT) portal and are in serviceable condition, (Figure 18-1).

Figure 18-1 Kellogg Office Complex and Kellogg Tunnel Portal

Road access to the property and the various mine access portal locations are good to excellent. The KT portal is located immediately adjacent to the mine offices at the 2,380 ft elevation. The KT is currently rail haulage and connects to the main hoist rooms and inclined shafts approximately 9,500 ft laterally to the south-southwest on the 9-level at the 2,415 ft elevation. Levels 8 through 4 are above the 9-Level on approximately 175 ft intervals. Levels 10 to 28 are below the 9-Level at approximately 200 ft intervals. Additional mine portals provide access to the 5-level on the Wardner side of the mine. There is a tremendous complex of underground shafts, raises and other infrastructure at Bunker Hill, only infrastructure germane to restarting mining operations are addressed in this report. Surface mine facilities locations are shown in Figure 18 – 2. Avista Utilities (Avista) supplies electrical power to the mine from a sub-station located near the Kellogg side office complex. The Kellogg offices have a high-speed internet connection.

Figure 18-2 Bunker Hill Site Layout

18.1 SITE ACCESS AND COMMUNITY

Bunker Hill is located in Kellogg Idaho along the Interstate 90 corridor on the west side of what is traditionally known as the Silver Valley. It is 60 miles from the Spokane, WA airport to the west and 125 miles to the Missoula, MT airport to the east. The Silver Valley of north Idaho is a desirable place to live and is home to an enthusiastic and talented underground mining work force.

18.2 ELECTRICAL POWER AND DISTRIBUTION

The Avista substation is located next to the Bunker Hill main offices and supplies power to the mine and other local consumers. The current mine load is 0.5 MVA and there is an additional 2.6 MVA available for use by Bunker year around for a total load of 3.1 MVA. There is an additional 1.5 MVA available for the mine during the winter months, or 4.6 MVA total. This additional 1.5 MVA is consumed by other local air conditioning loads during the summer months.

There are two existing distribution lines now supplying the mine. One feeds the surface mine facilities and the underground loads from the Kellogg side, the other feeds the Wardner portals and facilities. There is enough power available to begin mine operations initially; however, the Avista substation will need to be upgraded to service the full mine operation by about year three of operations as the mine dewatering load increases. The surface and underground power feeds to the mine will be upgraded immediately upon a positive mine re-start decision. The existing power infrastructure will be replaced with new surface and underground equipment and power lines. The current 2.5kV mine distribution system will be upgraded to 13.2kV. The overhead powerlines leading to the Wardner side of the mine will be upgraded and new underground power feeds will be brought in on the Wardner side on 5-level and dropped down to the 9-level for distribution to the mine. The 9-level around the #1 and #2 hoist rooms will remain the hub of underground infrastructure. The existing u/g substations and switchgear will be replaced with modern equipment. Overhead lines and distribution from the Avista substation to the Kellogg office and shop complex will also be upgraded to modern standards.

18.3 MINE WATER

Mine discharge water now gravity drains out the 9-level through the KT via a ditch adjacent to the rail line to the portal. It is then routed to a water treatment plant which is currently operated by the EPA, see section 4.2. The mine has recently installed and is operating an underground water pre-treatment plant to reduce metal loads and neutralize pH before water is routed to the surface treatment plant. Water above the 9-level naturally drains out the KT and averages 500 gpm. Below the 9-level water must be pumped to dewater the workings. Maintaining a water level below the 9-level requires about 700 gpm (1,200 gpm total out of the mine). An additional capacity of 600 gpm was assumed to draw the water table down to successive levels in the mine based on operational experience. It is envisioned to handle the water above and below the 9-level in separate pipeline systems out the KT. Water below the 9-level will be staged up through a series of pump stations located on each level.

Mine and process water distribution will be developed from underground water sources with either clean water collection sumps or underground interception wells. There is currently not a mine wide water distribution system and systems for process and dewatering systems are included in the capital estimates. Capex has been budgeted for an underground mill process water treatment plant to maximize water reuse and minimize water discharges.

18.4 NUMBER 1 AND 2 HOISTING PLANTS AND SHAFT INFRASTRUCTURE

The existing #1 and #2 Shafts are inclined at 50-degrees and 40-degrees respectively and provide skipping, personnel and materials handling capabilities to the lower levels of the Mine. The headworks, hoist rooms, shops, switchgear, motor control centers, power distribution and dump bins are located on the 9-level about 9,500 feet to the south-southwest of the KT portal. Access is via the rail system in the KT. Power and other services are also routed through the KT.

The # 1 Shaft is the primary skipping shaft providing the production hoisting capacity for the lower mine (Levels 9 thru 27). The existing hoist is located in a reinforced concrete hoistroom 80’ long x 50’ wide with a back height of 30’. The existing hoist is an offset double-drum hoist manufactured by Nordberg in the 1940’s. This hoist is in an advanced state of decay and would be very difficult to refurbish to running condition. The electrical controls and drives are severely deteriorated and dated. This hoist will be dismantled, and the hoist room and associated motor-generator bay be utilized for the housing of milling equipment. The condition of the hoist room itself is good and can be returned to practical service with a minimum of effort, (Figure 18 – 3 & 4).

Figure 18-3 #1 Hoist and Hoist Room 9-Level

Figure 18-4 #1 Hoist Drum

The #1 Shaft and #2 Shafts will require rehabilitation of the tracks and rollers to facilitate access and future hoisting capabilities. Two small hydraulic single drum hoists, one for each shaft, is included in the capital cost estimate to support the rehabilitation and repair the shafts. The existing dump bins and chutes appear to be in good condition and should require a minimum effort to restore to proper working condition. This will permit the hoisting of mill feed and waste as needed at 1500-2000 tpd. A new hoist will be installed for the #1 shaft with a line pull of 18,000 lbs. and an installed electrical requirement of 700 nominal horsepower. A quote for the replacement hoist and conveyances are included in the capital cost estimate. The new production hoist and old off-set double drum #1 hoist locations and the relationships of them and the #2 hoist room are shown in Figure 18 – 5. The old off-set double drum will be removed and new hoist installed as shown. The 9-level development rib, back and sill lines shown are existing.

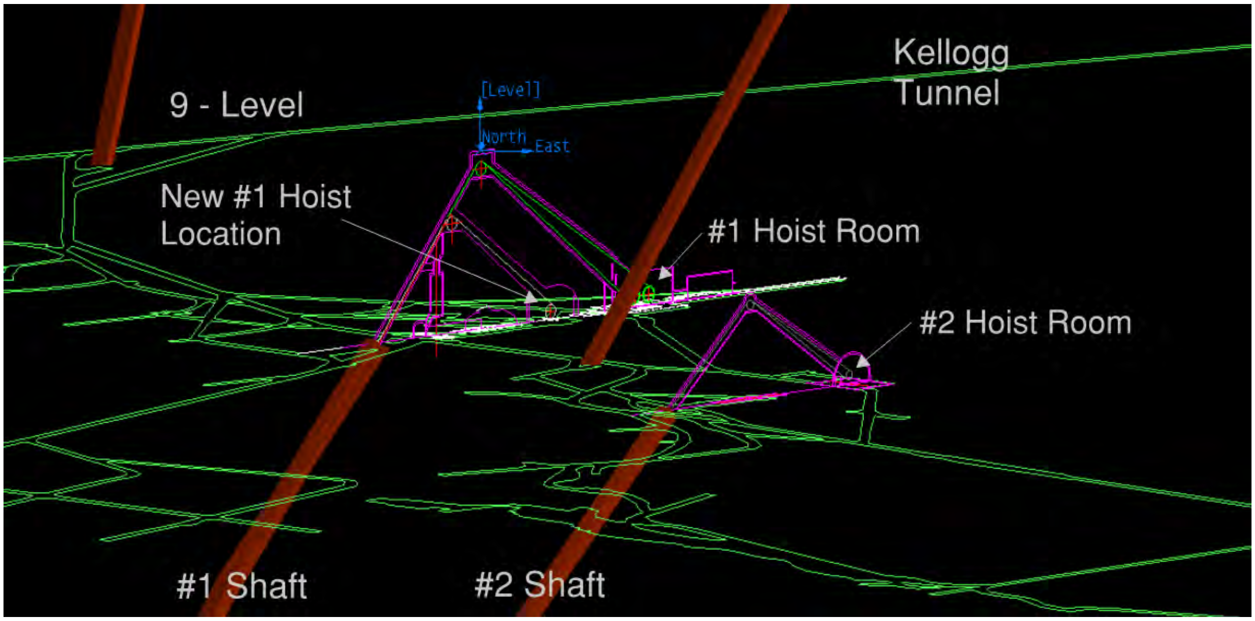


Figure 18-5 #1 & #2 Hoist Rooms Area View Looking North-Northwest

New conveyances will be constructed and modifications to the dump to use a more conventional dumping method vs the Kimberly style dump on the existing skips. A modular track system is envisioned to replace the timber and rail system currently in the shaft. Figures 18 – 6 and 18 – 7 show the old and proposed new #1 shaft arrangements respectively.

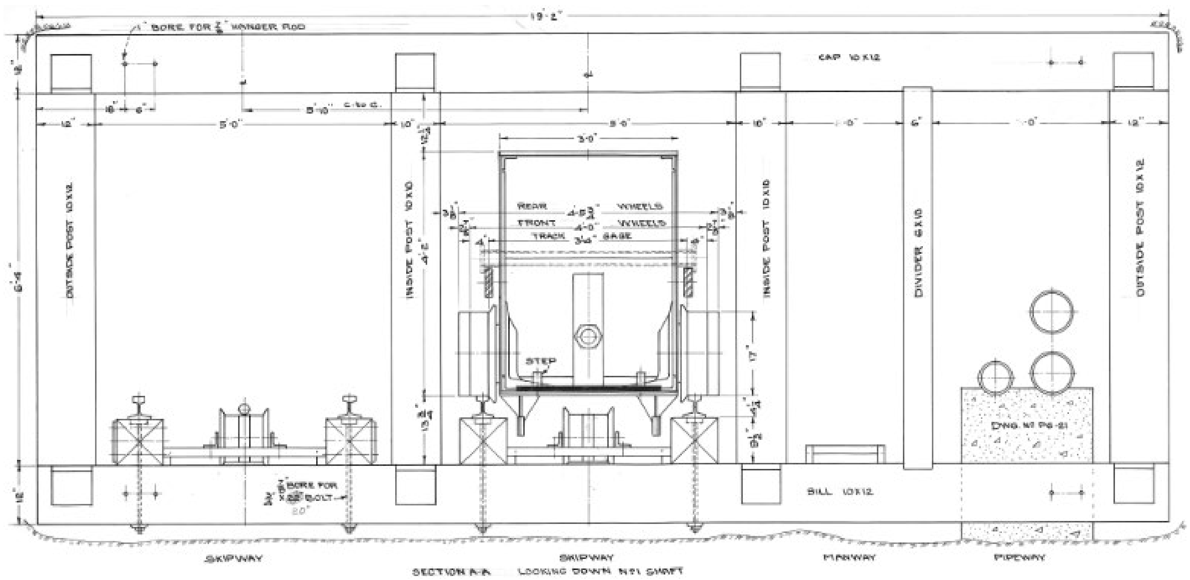


Figure 18-6 Current Timber System Looking down #1 Shaft

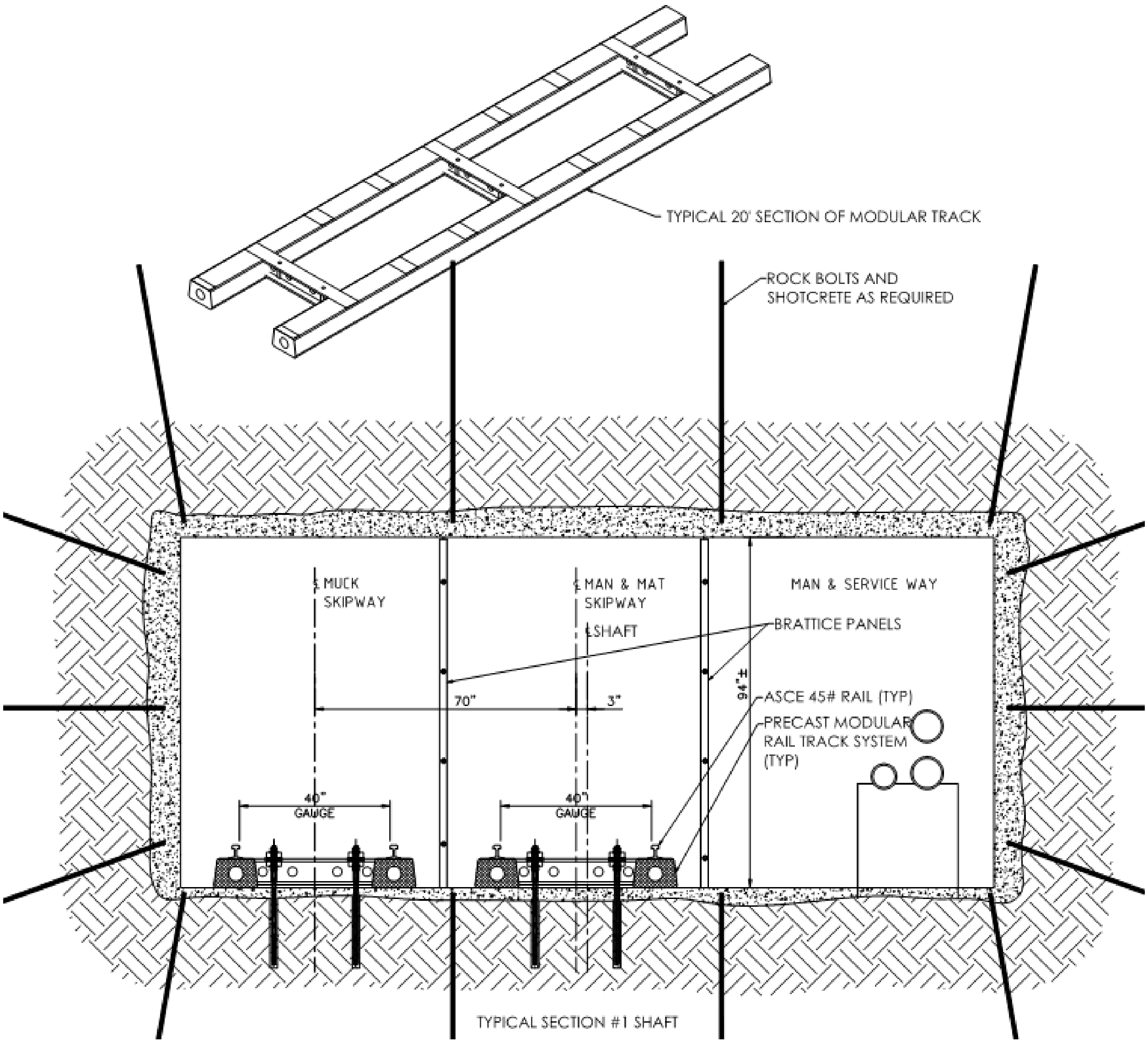


Figure 18-7 Proposed New Modular Rail System #1 Shaft
Cable Rollers not Shown

The modular track concept for shaft refurbishment will be conducted as the mine develops down to the lower levels. The shafts will be refurbished one or two levels ahead of the active mining so that adequate bulkheads. A small hydraulic hoist will be installed to support the shaft work. It is much easier to perform this concurrent renovation with an incline shaft arrangement as compared to a vertical shaft operation.

The #2 shaft is adjacent to the #1 Shaft and provides personnel and materials access from the 9-Level to the 21-Level. The existing hoist is located in a reinforced arched back concrete hoistroom 54'-10" long, 47'-0" wide and 26'-9" high. It is a double-drum hoist manufactured by Coeur D'Alene Foundry in the 1940's, see Figure 18-8 and 18- 9. The hoist has been well maintained and is functionable. The mechanical portion of the hoist including the clutches, brakes and gearbox are all in good condition although non-destructive test work (NDT) has not been performed. The electrical drive is obsolete and will be upgraded. The controls system is manual and will be upgraded to modern standards. The braking system is hydraulic, but is manually controlled. This will be upgraded to ensure repeatable braking rates. A quote for the hoist refurbishment is included in the capital cost estimate.

Figure 18-8 #2 Shaft Double Drum Hoist Room

Figure 18-9 #2 Double Drum Coeur d'Alene Hoist

The #2 Shaft is in use, but requires repairs and refurbishment including timber, rails and rollers. The personnel conveyances will be upgraded to enclosed units with dogging mechanisms to allow self-arrest in the event of a rope failure. The proposed refurbishment of the #2 shaft is very similar to that for the #1 shaft with the exception of the narrower track gauge of 24".

18.5 UNDERGROUND MILL CONCEPT AND BACKFILL PLANT

A crushing and milling plant will be centrally located on the 9-level. Milled material will then be pumped as a slurry to the flotation and hydraulic backfill plant on the 5-level. The flotation plant will generate concentrates which will be transported horizontally to surface for shipment. The backfill plant will generate an engineered hydraulic product for geotechnical fill for ongoing mining and provided for excess tailing disposal in existing open stopes and workings in the mine. This approach optimizes material transport costs while eliminating the need for surface tailings disposal.

A traditional mill grinding circuit followed by lead and zinc flotation circuits is envisioned. Payable silver follows the lead and reports to the lead concentrate. Metallurgical test work with recent drill samples is being conducted at Resource Development Inc. (RDi). Preliminary results indicate that a conventional polymetallic process flowsheet will be able to produce the marketable grade concentrates. Historical metallurgical results have been used for concentrate recoveries and grade. The results were averaged for the last ten years of operation. The lead concentrate, assaying an average 67% Pb and 34 oz/t Ag, is estimated to recover 91% Pb and 89% Ag. The zinc concentrate, assaying 58% Zn, will recover 92% Zn.

Metallurgical work is ongoing and the Company is evaluating multiple sourcing alternatives for processing and equipment.

19 MARKET STUDIES AND CONTRACTS

As of April 2021, the global market for the Company's zinc and lead concentrates was at historically favorable levels for concentrate producers, with annual treatment charge benchmarks of $159 per dry metric tonne ("DMT") for zinc concentrate and $141 per DMT for lead concentrate. Spot treatment charges for delivery into Chinese smelters were significantly lower than these benchmark levels.

Based on historical concentrate specifications, which the Company believes is representative of future production, the Company's zinc and lead concentrates are considered to be of relatively "clean" quality and are expected to be marketable to a wide range of North American and international smelters, including China. For the modelling of smelter charges and freight, the Company assessed concentrate deliveries to multiple markets, and engaged a third-party consultant to provide estimates of long-term pricing. Key assumptions included long-term treatment charges of approximately $220 per DMT for zinc concentrate and $190 per DMT for lead concentrate.

Life of mine average smelter charges and freight in the PEA total approximately $300 per dry metric tonne of zinc and lead concentrate.

Based on current market conditions, the Company believes that it could achieve lower smelter charges and freight than are contemplated in the PEA. For each $10 per dry metric tonne reduction in smelter charges and freight, average annual free cash flow in the PEA would increase by approximately $0.5 million.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 BACKGROUND

Environmental contamination of surface water, groundwater, soil, and sediment occurred at the Site as a result of mining, milling and smelting operations in the Silver Valley, including but not limited to, at the Bunker Hill Mining and Metallurgical Complex ("Complex"), of which the Mine was a part. Operations at the Complex started in 1885 and continued through the 1980s, and included an integrated system of mining, milling and smelting. Prior to 1928, liquid and solid waste from the Complex was discharged directly into the South Fork of the Coeur d'Alene River and its tributaries. Following 1928, waste from the Complex was directed to a nearby floodplain where a Central Impoundment Area ("CIA") was developed. Acid mine drainage ("AMD") and wastewater from the Complex were discharged to a settling pond in the CIA. In 1974, a Central Treatment Plant ("CTP") was built by the Bunker Hill Mining Company, the owner and operator of the Complex at the time. AMD and wastewater from the Complex were stored in an unlined pond in the CIA before being decanted to the CTP. In 1981, following the closure of the smelter, the CIA was no longer required to impound wastewater from the Complex, although surface run off from the Complex and AMD from the Mine were still routed to the CIA prior to treatment at the CTP. Sludge which formed during the treatment process was also disposed in unlined ponds at the CIA.

Ownership of the Complex passed through a number of companies throughout the 100-year operation of the Complex. In early 1991, the Bunker Limited Partnership, then owner of the Complex and operator of the CTP, closed the Mine and filed for bankruptcy. In late 1991 and 1992, PMC purchased a portion of the Site, which includes underground workings, mineral rights, and much of the land surface above the Mine, from Bunker Limited Partnership. PMC did not purchase the entire Complex nor the CTP. In November 1994; federal and State governments assumed operation of the CTP for ongoing treatment of AMD.

AMD is a result of acid-forming reactions occurring within the Mine among water, oxygen, sulfide minerals (especially pyrite) and bacteria. AMD is acidic with typical pH levels between 2.5 and 3.5, and it contains high levels of dissolved and suspended heavy metals. For human receptors, the constituents of primary concern at the Site found in the AMD are arsenic, cadmium, lead, mercury, and thallium, and for aquatic and terrestrial receptors they are aluminum, arsenic, cadmium, copper, iron, lead, manganese, mercury, selenium, silver, and zinc. Impacts on human health from exposure to these constituents include carcinogenic effects, skin lesions, neuropathy, gastrointestinal irritation, kidney damage, interference with metabolism, and interference with the normal functioning of the central nervous system. Impacts on the environment from exposure to these constituents include significant mortality offish and invertebrate species, elevated concentrations of metals in the tissues of fish, invertebrates, and plants, and reduced growth and reproduction of aquatic life.

AMD is generated and discharged from the Mine continuously. AMD from the Mine is drained through the Kellogg Tunnel portal and then passes through a conveyance system to the CTP for treatment. Average AMD discharge from the Mine during typical flow periods is approximately 1300 gallons per minute. During high flow periods AMD may be diverted to a lined surface impoundment on the Site, where it mixes with other minimal wastewater streams from the Mine. From the impoundment, it is pumped to the CTP for treatment. If not collected and treated at the CTP, AMD from the Mine would flow downhill through the mine yard, across properties where public and environmental exposures would occur, and into Bunker Creek and the South Fork Coeur d'Alene River where it would have significant detrimental effects on water quality and the ecosystem.

Initially, the Bunker Hill Superfund Site was divided into two operable units, the Populated Areas and the Non-Populated Areas, in order to focus investigation and cleanup efforts. A Record of Decision ("ROD") for the Non-Populated Areas Operable Unit was signed on September 22,1992. A ROD Amendment for the Non-Populated Areas Operable Unit, addressing the management of AMD was issued in December 2001. A third operable unit was created to address contamination in the Coeur d'Alene Basin, and a ROD for Operable Unit 3, the Coeur d'Alene Basin, was issued in 2002.

In 1994, EPA issued a unilateral administrative order("UAO") to PMC directing PMC to keep the mine pool pumped to an elevation below the level of the South Fork Coeur d'Alene River (at or below Level 11 of the Mine) to prevent discharges to the river, to convey mine water to the CTP for treatment unless an alternative form of treatment was approved, and to provide for emergency mine water storage within the mine. In 2017, EPA issued a UAO to PMC directing PMC to control mine water flows to the CTP during needed upgrades at the CTP and in high flow periods, to conduct operation and maintenance of the Reed Landing Flood Control Project, to file an environmental covenant on a portion of the Mine property regarding access and operation and maintenance, and allowing PMC to fill the mine pool to Level 10 during diversion events.

Response actions required by the 1994 and 2017 UAOs are currently being performed by Bunker Hill Mining Corp. Upon the later of the Effective Date of the Settlement Agreement, US EPA withdrew the 1994 and 2017 UAOs. To the extent that aspects of those UAOs required ongoing work, Bunker Hill Mining Corp agreed to perform such work when it became the operator of the Mine, and is now continuing to perform that work now that Bunker Hill Mining Corp is the owner of the Mine.

20.2 ONGOING ENVIRONMENTAL ACTIVITIES

BHMC began a study of the Bunker Hill Mine water system in March of 2020. The review included studies conducted by the US EPA and research conducted by the Bunker Hill Water Management team. This led to a formulation of the following near-term water management activities:

- Acid Mine Drainage ("AMD") Collection System – this captures and controls flows of Acid Mine Drainage to keep them separate from cleaner water in the mine. Total collected AMD flows from levels 5 through 9 fluctuate between 6 gallons per minute and 30 gallons per minute depending on the season that contains approximately 70% of the metal load in the effluent of the Mine.
- Pilot Water Treatment System – Flows from the AMD Collection System combine into a single pipe on the 9 level. The combined flows were mixed with a lime slurry produced by the Pilot Water Treatment System. This created a resulting solution with a pH of 10.0 on average, which also precipitated metals and creates a sludge that was piped to the lower levels of the west side of the mine pool. This significantly reduced the amounts of metals that were present in the mine's effluent and elevated the pH of discharge water. The system formed part of the study for efficacy of a passive treatment technology and an active treatment alternative that is currently being used to inform engineering for a water treatment system at Bunker Hill Mine. Any system that is developed by the Mine will meet IPDES water discharge standards.
- Water Treatment System Engineering – BHMC is working with MineWater LLC to complete engineering and testing of a water treatment system that uses recirculating high-density sludge and lime precipitation. Design and engineering of the system will conclude in 2022 after an iterative process of testing and analysis informs refinement of system design. An IPDES water discharge permit application will be submitted once testing demonstrates the system is capable of treating effluent to IPDES water discharge standards under the range of dynamic features of the water system and its varying rates of dynamism.
- Surface Water Infiltration Study – BHMC has entered into a Sponsored Research Agreement with University of Idaho to conduct a study of infiltration of surface waters into Bunker Hill Mine. The study will be conducted by a Water Resources graduate student with support from the Hydrology and Hydrogeology faculties. This will inform future source control projects that will seek to limit water infiltration.
- Source Control Program –This will reduce the amount of surface waters entering the mine, which is ultimately expected to reduce water treatment costs by reducing the amount of water requiring treatment. The initial project is a series of test plots of trees, shrubs and grasses to determine which mix of plants will most effectively revegetate the surface expression of the Guy Cave with a dense and broad root network. This project is being carried out in collaboration with the University of Idaho. This area is a barren hillside that is a major point of water infiltration. Within the mine, the Guy Cave is rich in pyrite, which produces Acid Mine Drainage when mixed with air and water. Reducing the amount of water infiltration into this area will significantly reduce the amount of Acid Mine Drainage produced within the mine. The second area of collaboration with the University of Idaho that aims to reduce water in-flow through the surface expression of the Guy Cave is an engineering project that will evaluate the effectiveness and cost of different approaches to establishing a cap or a barrier to flow. This has been designed as a 3-year initiative.

- Water Sampling and Testing – Water samples are collected on monthly basis for wide spectrum testing that includes 45 different analytes. Once a sufficient amount data has been collected, these results will allow BHMC to apply for an IPDES water discharge permit in the future. Field parameters are measured on a biweekly basis by the BHMC Water Management team using a collection of instruments. The parameters include conductivity, pH, dissolved oxygen, total dissolved solids, water temperature, ambient temperature, ambient humidity and flow rate. The sum total of this information provides insights into the efficacy and impacts of water management program activities and deepen understanding of the Bunker Hill Mine water system. Much of this information is available to the public in the "Interactive Database" section of the BHMC website. BHMC is collaborating with the University of Idaho in a multi-year study of the water system as well. This study focuses on the presence of specific isotopes within water molecules that create a unique signature that all the research team to determine the pathways and rate of flow of water from snowpack on the mountains above the mine on their journey into and out of the mine. This will ultimately inform water modeling and lead to more efficient water management practices.

Many of these activities will continue and extend far into the future. The duration and intensity of these activities will depend primarily on two factors: (1) development of understanding through continuous improvement of a Conceptual Site Model and (2) the magnitude of impacts generated by the activities as measured and recorded by BHMC performance monitoring.

20.3 ONGOING WORK REQUIRED BY US EPA

BHMC is required by US EPA to perform all work required to manage AMD at Bunker Hill Mine. Several activities are described in the Settlement Agreement that related to this responsibility.

In-Mine Diversion System and Mine Pool:

BHMC has constructed an In-Mine Diversion System and manages the mine pool such that, when so directed by US EPA, diverted flows of Mine Waters will be stored within the mine or discharged at a controlled rate, and not result in uncontrolled discharge to the environment. The following criteria describe the performance criteria to be met:

1 Mine Waters to be Stored: Waters to be stored by Purchaser include all mine water which originate upstream of the Barney Switch within the mine, including the east side (Milo)gravity flows, the west side (Deadwood) gravity flows, and the lower country (Mine Pool) pumped flows.

2. Mine Pool Storage Volume: BHMC has provided storage volume using all void space (the mine workings) from a minimum of 30 feet below the sill of 11 Level at the No.2 Raise to the sill of 10 Level at the No.2 Raise.

3. In-Mine Diversion System Construction: BHMC and PMC constructed a diversion dam system in the Kellogg Tunnel downstream from the Barney Switch which backs up all Mine Waters into the Barney Vent Raise or other appropriate and approved location. The system has the capability to divert a minimum of 7,000 gallons per minute.

4. In-Mine Diversion System Activation: BHMC is required to activate the In- Mine Diversion System under the following circumstances:

    a. For emergencies: Within 4 hours of notification from US EPA, for a duration to be determined and requested by EPA based on the emergency situation, which may occur at any time; and

    b. For CTP or Conveyance Line Maintenance: Within 14 days of notification from EPA, for a duration to be determined and requested by US EPA based on the maintenance required.

5. In-Mine Diversion System Operation and Maintenance: BHMC will maintain and operate the In-Mine Diversion System until notification from US EPA that the system may be decommissioned and removed, in accordance with the following:

    a. The amount of In-Mine Diversion System building materials continuously kept at the diversion structure location shall be sufficient to divert all flows as required above, and to construct the diversion dam to provide the storage capacity required above;

b. The diversion dam structure, location as described above, and adjoining ditches, are to be kept serviceable and in operable condition at all times for diversion dam construction, operation, and maintenance.

c. The entire In-Mine Diversion conveyance system (e.g., Barney Vent Raise or other appropriate and US EPA-approved location) shall be inspected a minimum of twice per year, and more frequently if there are concerns regarding its ability to convey the capacity required above. BHMC maintains a written report of each inspection.

d. The In-Mine Diversion conveyance system is cleaned, by hydraulic flushing or other means as necessary, at least once per year, and more frequently if needed to provide the capacity required in above. BHMC is required to inform US EPA within 7 days of completing each cleaning.

e. Written diversion dam construction procedures and In-Mine. Diversion System operation and maintenance procedures are posted near the diversion dam structure location. This provides sufficient detail for diversion dam construction, and system operation and maintenance by all crew members. The written diversion dam construction procedures and system operation and maintenance procedures are periodically updated as needed. BHMC is required to provide the written procedures to US EPA upon request.

f. Diversion dam construction procedures and system operation and maintenance procedures required above are periodically practiced, at least once per year, or more frequently as needed to ensure the required diversion response time can be met. BHMC is required to inform US EPA a minimum of 7 days prior to each diversion dam construction practice.

Kellogg Portal Contingency Diversion System:

Purchaser shall obtain and store a sufficient quantity of sandbags or other appropriate materials near the entrance to the Kellogg Tunnel with the designated purpose of containing, damming, and/or rerouting any flows into the Kellogg Tunnel ditch, in order to prevent any overland flow outside the ditch.

6. Waters to be diverted: All mine waters that are not contained within the Kellogg Tunnel ditch that are either within the Kellogg Tunnel or outside of the Kellogg Tunnel in the mine yard.

7. Continency Diversion System Materials: Sandbags or other materials that could be easily transported and assembled to route mine water back to the ditch in an emergency situation.

8. Contingency Diversion System Activation:

   a. Deployment of Contingency Diversion System: Within 1 hour of the first indication, or when BHMC knowns or should know, of mine water flowing outside of the Kellogg Tunnel ditch, regardless of cause.

9. Continency Diversion System Operation and Maintenance: BHMC is required to maintain and operate the Contingency Diversion System until notification from US EPA that the system may be decommissioned and removed, in accordance with the following:

   a. The amount of Contingency Diversion System building materials kept on-hand at all times must be sufficient to divert all flows as required above and shall be deployed in accordance with procedures described above in order to control flows during high flow events or to respond to emergencies.

   b. The Contingency Diversion System storage location and materials are kept serviceable and in operable condition at all times for Contingency Diversion System construction and operation.

   c. Written Contingency Diversion System construction procedures are posted near the diversion system materials storage location. Construction procedures provide sufficient detail for diversion system construction by all crew members. The construction procedures are periodically updated as needed. BHMC is required to provide the construction procedures to US EPA upon request.

d. Contingency Diversion system procedures are periodically practiced, at least once per year, or more frequently as needed, to ensure that the required diversion response times as described above can be met. BHMC is required to inform US EPA a minimum of7 days prior to each Contingency Diversion System construction practice.

Reed Landing Flood Control Project Operations and Maintenance:

10. BHMC conducts operations and maintenance in accordance with the Reed Landing Flood Control Project Operations and Maintenance Manual ("O&M Manual"), which is appended to BHMC's Settlement Agreement with US EPA.

11. BHMC conducts inspections of the Reed Landing Flood Control Project in accordance with the frequency described in the O&M Manual and fills out the Inspection Checklist for each inspection. This is provided to US EPA and the State of Idaho upon request.

12. BHMC removes snow and takes any other necessary steps to maintain access roads to provide for safe access to the Reed Landing Project area year-round.

Manage mine wastes to prevent a release of such waste into the environment.

Water discharge permit:

BHMC is required to obtain an IPDES/NPDES permit for its discharge of AMD and any other Mine-related discharges by May 15, 2023. Until that time, BHMC is required to continue to convey AMD to the CTP for treatment. US EPA may approve the conveyance of other Mine-related discharges to the CTP for treatment during this interim period. After May 15, 2023, BHMC is required to treat all AMD and Mine-related discharges pursuant to an EPA-approved treatment option and in compliance with Section 402 of the Clean Water Act,33 U.S.C.§1342. Treatment options may include:

a. Entering into a lease agreement with EPA providing for Purchaser to lease and operate the CTP;
b. Purchasing and operating the CTP; or
c. Constructing and operating a treatment plant.

Treat any flows from the Reed and Russell portals prior to discharge into surface waters or route back into the Mine to prevent discharge, without treatment, off-site. Currently all waters are being directed back into the mine.

Inspections:

13. US EPA may require an inspection of the In-Mine Diversion System to determine compliance with the requirements described above.

14. US EPA may have an on-site presence during these activities. At US EPA's request, BHMC or BHMC's designee will accompany US EPA for inspections during the activities to be Performed.

15. BHMC is required to provide any specialty personal protective equipment needed for US EPA personnel, transportation, and an escort for any oversight officials to perform their oversight and/or inspection duties within the mine.

16. Upon notification by US EPA of any deficiencies during these activities on any component, BHMC is required to take all necessary steps to correct the deficiencies and/or bring the activities into compliance. If applicable, BHMC is required to comply with any schedule provided by US EPA in its notice of deficiency.

Emergency Response and Reporting:

The reporting requirements below are in addition to the reporting required by CERCLA § 103 and/or the Emergency Planning and Community Right-to-Know Act("EPCRA") § 304.

17. If any incident occurs during performance of the activities described above that causes or threatens to cause a release of Waste Material on, at, or from the Mine and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, BHMC is required

to:(1)immediately take all appropriate action to prevent, abate, or minimize such release or threat of release;(2)immediately notify the authorized US EPA officer; and (3) take such actions in consultation with the authorized US EPA officer.

18. Upon the occurrence of any incident during performance of the activities described above that BHMC is required to report pursuant to Section 103 of CERCLA, 42U.S.C.§9603, or Section 304 of EPCRA, 42U.S.C.§ 11004, BHMC is required to also immediately notify the authorized US EPA officer orally.

19. The "authorized US EPA officer" for the purposes of immediate oral notifications and consultations is the US EPA RPM, or the US EPA Emergency Response Unit, Region 10 at 206-553-1263(if the RPM is not available).

20. For any incident covered above, BHMC is required to: (1) within 14 days after the onset of such incident, submit a report to US EPA describing the actions or incidents that occurred and the measures taken, and to be taken, in response there to; and (2) within 30 days after the conclusion of such incident, submit a written report to US EPA describing all actions taken in response to such incident.

BHMC is required to perform all actions required by its Settlement Agreement with US EPA in accordance with all applicable local, state, and federal laws and regulations, except as provided in Section 121(e)of CERCLA, 42U.S.C.§9621(e), and 40C.F.R.§§300.400(e). All on-Site actions required pursuant to BHMC's Settlement Agreement with US EPA shall attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws as set forth in the 1992 Record of Decision and the 2001 Record of Decision Amendment.

20.4 FUTURE ENVIRONMENTAL AND SOCIAL ACTIVITIES

Water Treatment – Selection of a water treatment technology will be the outcome of the ongoing trade-off study that includes three active treatment options, one passive option and potential use of the Central Treatment Plant (either through lease and/or purchase). The cost estimation used in the PEA financial model includes a $3 million cost for capital expenditures for treatment facility based on a proposal from Colorado-based MineWater LLC (www.minewater.com).

This treatment facility is modeled on a hybrid of the water treatment systems currently operational at the Captain Jack Superfund Site near Jamestown, Colorado and the Gold King Superfund site in the Bonita Peak District in Colorado. In the case of the Captain Jack site, water quality of AMD being treated is similar but worse than that at Bunker Hill, yet it meets discharge requirements. The water treatment system that was designed for and built at Gold King treat effluent that is very similar in both water quality and hydraulic load to Bunker Hill. This system will be capable of meeting IPDES discharge requirements at Bunker Hill.

MineWater's principal conducted extensive studies of the water system of Bunker Hill Mine from 1995 to 2008. His detailed understanding of the seasonal fluctuations and spikes of both water flows and metal loads were instrumental in the conceptual design of the water treatment system used in this PEA. The guiding principle of system design was a need to meet IPDES water discharge permit limits using an average hardness of 94 for receiving waters in a mixing zone of the South Fork of the Coeur d'Alene River. This was estimated using the IDEQ Idaho Stream Water Quality Standards established for the South Fork of the Coeur d'Alene river and the discharge limit calculator published by IDEQ. The mixing zone between Elizabeth Park and Pinehurst on the South Fork of the Coeur d'Alene River is the same discharge point being used by the Central Treatment Plant at present. Bunker Hill may establish a different discharge point through the IPDES permitting process but no specific plans for this change exist at present.

Operating costs for the water treatment were estimated using factorized costs from MineWater's Captain Jack Big Five Tunnel facility and the Gold King Water Treatment facility. Labor costs were only partially allocated into the water treatment plant operations using trained miners at Bunker Hill who will be onsite performing a range of tasks. The partial allocation of labor costs significantly reduced the overall cost of operations of the water treatment facility concept incorporated into this PEA.

Environmental, Social and Health Impact Assessment (ESHIA) – BHMC will conduct a full voluntary ESHIA based on its mine plan and business model that includes deliberate focus on high levels of sustainability. This focus includes:

- Environmental Impact – Reduction of long-term water treatment costs by greater than 75% versus the status quo. This includes a range of initiatives including sealing AMD producing stopes with low porosity paste and source control projects.
- Environmental Impact – Net Positive Impact on biodiversity
- Emissions – Scope 1 and Scope 2 carbon neutrality
- Social Impact – Workforce training for residents of Shoshone, Kootenai and Benewah Counties
- Social Impact – Greater than 80 percent of new job to local residents
- Social Impact – Compensation for full-time employees that is significantly higher than the median household income for Shoshone County
- Social impact – local economic diversification investment
- Social impact – Employee equity award plan in place by 2023
- Governance – Labor representation on the Board of Director of the Mining Company
- Governance – Global Reporting Initiative (GRI) compliance by 2023
- Governance – Sustainability Accounting Standards Board and ISO 14001, 14004, 14005 compliant by 2023

The ESHIA study is anticipated to be complete by May 2023. The intent of conducting a voluntary ESHIA is to establish a broad spectrum of detailed baseline conditions against which stakeholders and the Company can measure impacts and can generate better informed programming in the future to maximize the positive impacts of the Mine's activities and mitigate any negative impacts.

Many of the ongoing environmental and sustainability activities are intended to continue far into the future. Efforts such as source control aiming at reducing the infiltration of water into the mine will likely take many forms over time but will continue to some degree for many years. Similarly, water sampling and testing is likely to be only one form of environmental testing that will be a regular recurring activity. These data will provide both insights into new activities that should and will be undertaken in the future and will allow BHMC and all of our stakeholders to measure the impacts of BHMC's environmental management activities. Provision of this data to our stakeholder community will be a core component of communication, development of trust and broad participation in inclusive decision-making.

A paste plant is included in the mine restart plan. This will be a core component of water treatment cost reduction and general mitigation of environmental impacts of past mining activities. The location and size of the stopes in the upper east side of Bunker Hill Mine are well understood by the BHMC Water Management Team. These are the stopes where most of the AMD in the mine is produced. BHMC anticipates that AMD reduction from paste production and stope sealing will begin to register in a meaningful way as early as 2025.

20.5 PERMITS REQUIRED FOR FUTURE MINING ACTIVITIES

The land package associated with Bunker Hill Mine consists of approximately 430 patented claims, of which approximately 45 include associated surface rights. The Mine also includes a few surface parcels unrelated to the federal land-patent process. All of the Mine property is located in Shoshone County, Idaho.

Some of the parcels have existing buildings on them that will not be used in mining operations. There was a milling parcel previously associated with the Mine; however, though BHMC is purchasing that parcel from Placer Mining Corp, it will not be used in the future for milling. In the current mine plan crushing, milling and processing will occur all underground. Furthermore, the mine plan also deposits all waste and tailings underground, which will remove the need for permitting of a tailing storage facility.

The State of Idaho has several statutory permitting requirements for surface mining and dredge, placer mining. Unlike surface or placer mining, BHMC intends to perform underground hardrock mining activities. Idaho statues do not independently regulate this type of activity on private lands for historical mine site where less than 50% of the ground will be disturbed.

At a local level, the Mine will be regulated by planning, zoning and building ordinances established by Shoshone County. These ordinances will impose use restrictions for the property, as well as building code requirements for future construction and/or renovations of existing structures. These codes will be reviewed prior to any construction activities or surface activities.

In addition to other requirements, Shoshone County Zoning ordinances create the Bunker Hill Superfund Site Overlay District ("BD"), which guides and controls "development in the area known as the federally created Bunker Hill Superfund Site by ensuring compliance with the environmental health code ("EHC") and institutional control program ("ICP") developed by the BD district. Monitoring compliance with and enforcement of EHC and ICP shall be the responsibility of the Panhandle Health District 1." Shoshone County Ordinance 9-4-17. ICP oversight generally consists of ensuring that the protective barriers put in place to hold the old mining contaminants are not disturbed and ensuring that construction activities would not expose these contaminants (or others) to the environment. Thus, certain permits may be required by the Panhandle Health District prior to any site disturbance activities at the surface of the Mine.

In terms of federal permitting requirements, the Mine activities will wastewater and other mine drainage. The Clean Water Act ("CWA") requires all point source discharges from mining operations, including discharges from associated impoundments, be authorized under a National Pollutant Discharge Elimination Systems (NPDES) permit from the US EPA or, in the case of Idaho now, an Idaho Pollutant Discharge Elimination Systems (IPDES) permit from the Idaho Department of Environmental Quality. BHMC is required to obtain an NPDES/IPDES permit by May 15, 2023 in accordance with its Settlement Agreement with US EPA. Until May 15, 2023, BHMC will be allowed to continue to discharge water to the Central Treatment Plant where it will be charged by US EPA for water treatment services that meet existing discharge standards.

This permitting analysis relies on the following assumptions:

- Milling uses conventional froth flotation technology.
- Concentrates produced will be shipped off site and sold to an appropriate smelter facility.
- No public lands are involved in any element of the restart of the project.
- No jurisdictional Waters of the U.S. will be impacted.
- No instream work is required nor any impacts to non-jurisdictional wetlands.

20.5.1 ENVIRONMENTAL PERMITS

The project has a long history of operations and commenced prior to any formal regulatory framework being in place for federal, state, and local agencies. Since all lands are patented mining claims, it eliminates federal land manager permitting and/or National Environmental Policy Act (NEPA). The project will only be subject to the State of Idaho mining regulations.

20.5.1.1 IDAHO DEPARTMENT OF LANDS

20.5.1.2 MINE LAND RECLAMATION PERMITS

Idaho Department of Lands (IDL) regulates surface mining and surface effects of underground mining. The authority to regulate surface effects of underground mining is a more recent change in the regulations. As such, the project is grandfathered and is not subject to the reclamation and bonding of surface disturbance associated with underground mining. It should be noted, however, that the rule will apply when the project expands disturbance. More specifically, IDAPA 20.03.02(b)(iv) states "Underground mines that existed prior to July 1, 2019 and have not expanded their surface disturbance by 50 percent more after that date." Bunker Hill Mine will not expand surface disturbance by more than 50 percent. Under the current Future Operating Plan and to the extent known, there are no mine closure or reclamation bond requirements that will materially affect operations at the Bunker Hill Mine.

20.5.2 IDAHO DEPARTMENT OF WATER RESOURCES

20.5.2.1 TAILINGS IMPOUNDMENTS/DAMS

Mine tailings impoundment structure, which is or will be more than 30 feet in height for purposes of storing mine tailings slurry, are subject to the Mine Tailings Impoundment Structure rules (IDAPA 37.03.05). Minimum standards are dictated in the rules. Dry stack tailings are not subject to this rule. Since Bunker Hill Mine will deposit tailings underground this permit will not be required.

20.5.2.2 WATER RIGHTS

Any use of surface or groundwater for "beneficial use" is subject to obtaining a water rights that must be obtained from IDWR. Existing water rights have been reviewed for beneficial use and place of use and this analysis confirms that they are properly allocated.

20.5.3 IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

20.5.3.1 AIR QUALITY PERMIT

An air quality permit (Permit to Construct) will be required for any crushing equipment, silos (lime silos, etc.), generators, petroleum fired equipment (lab furnaces, etc.) and other equipment/facilities that have the potential to emit any regulated pollutant or designated hazardous air pollutant

20.5.3.2 UNDERGROUND INJECTION CONTROLS

Placement of tailings back underground are authorized by rule as part of mining operations. They are therefore exempt from the groundwater quality standards and permitting requirements but are limited to injection of mine tailings only. The implementation of backfilling cannot affect beneficial use or exceed groundwater standards. If this may occur, the Director has the regulatory flexibility to require a project to obtain a UIC permit.

20.5.3.3 STORMWATER PERMIT

The project will be subject to stormwater permitting. At the time of this analysis, US EPA still maintains authority of the Multi-sector Industrial Stormwater Project; however, IDEQ will be taking over the program on July 1, 2021. Therefore, the project is currently subject to US EPA provisions and would be transferred into the State Program

20.5.4 IDAHO HEALTH DEPARTMENT

20.5.4.1 POTABLE WATER SUPPLY

If the project were to provide potable water to the project from water well or surface water, BHMC would be subject to obtaining approval for the public drinking water system. The provision is subject to providing water to more than 25 people. If water is supplied from a municipality, there is no requirement to apply for this permit. Currently there is no plan to provide drinking water to more than 25 people. As such this permit requirement does not apply.

21 CAPITAL AND OPERATING COSTS

The vast underground workings, surface portals, mine office, maintenance complex, and 9-level shaft access points for the Bunker Hill Mine remain intact. The Kellogg Tunnel (“KT”) portal adjacent to the surface infrastructure connects horizontally by rail to the underground hoisting facilities on 9-level, approximately 9,500 feet to the south. Water seepage above the 9-level drains naturally out of the KT, laterals below the 9-level must be dewatered prior to production commencement. All water is collected at the portal and sent for treatment. The underground workings are extensive, and only the infrastructure germane to the opening of the mine is being described in the PEA. Several shafts and raises connect to the 9-level and its underground infrastructure is central to the mine and home to the #1 and #2 hoistrooms, material bins, substations and shops. Shafts at the mine are inclined rail; the #1 being the production shaft and #2 materials and personnel. The mine is currently accessed by the KT and 5-level portals located just above the Town of Wardner. North Idaho is home to a very experienced contract and direct hire underground workforce. Capital and operating costs are based contractor rates and efficiency factors based on Idaho and other similar operating mines.

21.1 CAPITAL COSTS

The utilization of the existing infrastructure allows for a restart of the mine with a relatively low initial capital investment. Annual and Life-of-Mine (LOM) capital is presented in Table 21-1 Bunker Hill Capital Expenditure Schedule. A 20% contingency was applied to all capital costs.

Table 21-1 Bunker Hill Capital Expenditure Schedule

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	**LOM (Year 1-LOM)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
($USD)							
Shaft #1 Re-Habilitation/Hoist Installation	11,038,927	2,072,025	1,277,606	961,162	961,162	961,162	961,162
Shaft #2 Re-Habilitation	7,427,972	-	1,901,581	961,162	961,162	1,121,162	961,162
Kellogg Tunnel Re-Habilitation	1,444,370	1,444,370	-	-	-	-	-
Power Distribution Upgrade	1,500,000	1,025,000	475,000	-	-	-	-
Backfill Plant Install and Operation	1,950,000	0	1,200,000	100,000	100,000	100,000	50,000
Underground Processing Plant	16,000,000	8,500,000	7,500,000	-	-	-	-
Water Treatment (Process and Underground)	4,000,000	3,000,000	1,000,000	-	-	-	-
Other Capital Infrastructure	1,466,500	616,500	25,000	25,000	-	325,000	300,000
Capital Infrastructure (Sub-Total)	44,827,769	16,657,895	13,379,187	2,047,324	2,022,324	2,507,324	2,272,324
Capital Development	41,411,962	6,672,735	4,399,452	3,223,678	3,424,956	2,952,760	2,920,263
Capital Mobile Equipment (BNKR Only)	1,378,000	662,500	477,000	53,000	53,000	53,000	-
Other Engineering & Permitting	1,386,000	912,000	474,000	-	-	-	-
Capital Sustaining	2,135,000	-	80,000	280,000	230,000	180,000	230,000
Total Capital	91,138,731	24,905,130	18,809,639	5,604,002	5,730,280	5,693,084	5,422,587
Capital Contingency	18,227,746	4,981,026	3,761,928	1,120,800	1,146,056	1,138,617	1,084,517
Total Capital, $USD	**109,366,478**	**29,886,156**	**22,571,567**	**6,724,803**	**6,876,336**	**6,831,701**	**6,507,105**

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**	**Year 13**
($USD)							
Shaft #1 Re-Habilitation/Hoist Installation	961,162	961,162	480,581	480,581	480,581	480,581	-
Shaft #2 Re-Habilitation	961,162	560,581	-	-	-	-	-
Kellogg Tunnel Re-Habilitation	-	-	-	-	-	-	-
Power Distribution Upgrade	-	-	-	-	-	-	-
Backfill Plant Install and Operation	100,000	50,000	100,000	50,000	100,000	-	-
Underground Processing Plant	-	-	-	-	-	-	-
Water Treatment (Process and Underground)	-	-	-	-	-	-	-
Other Capital Infrastructure	25,000	-	125,000	-	25,000	-	-
Capital Infrastructure (Sub-Total)	2,047,324	1,571,743	705,581	530,581	605,581	480,581	-
Capital Development	1,774,795	7,491,111	3,123,212	2,939,087	2,489,912	0	-
Capital Mobile Equipment (BNKR Only)	26,500	53,000	0	0	0	0	-
Other Engineering & Permitting	-	-	-	-	-	-	-
Capital Sustaining	180,000	230,000	180,000	230,000	180,000	90,000	45,000
Total Capital	4,028,619	9,345,854	4,008,793	3,699,668	3,275,493	570,581	45,000
Capital Contingency	805,724	1,869,171	801,759	739,934	655,099	114,116	9,000
Total Capital, $USD	**4,834,343**	**11,215,025**	**4,810,552**	**4,439,602**	**3,930,592**	**684,697**	**54,000**

LOM mine capital improvements include the following:

- Connect the 5-level and 9-level with an access ramp
- Remove and replace Shaft#1 hoist and hoist works
- Recondition Shaft #2 hoist and hoist works
- Recondition Shafts #1 and #2; replace the existing rail with a modular track system and associated conveyances
- Install new mine wide power distribution
- Install fiber optic and Sentinel communications from the surface to the main underground facilities
- Install a backfill paste plant on the 5-level; allows efficient access to cement, fly ash and reagents
- Install a primarily gravity backfill distribution system to active and historical mining areas
- Recondition the KT and remove existing rail to convert to rubber tire access
- Introduce rubber tire development to the stopes as required
- Vertical development for muck passes, escapeways and ventilation
- Excavations for milling, flotation and backfilling equipment
- Fan and air control installations
- Active and passive underground water treatment plant

Capital development headings were estimated based on a 10 ft by 12 ft heading size with 6" overbreak, contracted labor and equipment. Both capitalized and expensed development used the same estimate as presented in Table 21-2.

Table 21-2 Capital Ramp Development Estimate – Contract Labor & Equipment

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA) - Bunker Hill Mine	Operating Cost	Materials Cost	Labor Cost	Rental Cost	Total
Development Cost/Foot - 10ft by 12ft Headings	$/ft	$/ft	$/ft	$/ft	$/ft
Jumbo Drilling	$22.63	$4.95	$37.69	$75.00	$140.27
Blasting	$4.04	$34.28	$17.11	$35.00	$90.43
Loading	$10.35		$18.65	$65.00	$94.00
Trucking	$54.93		$55.09	$65.00	$175.02
Bolting/Ground Support	$25.82	$19.20	$39.78	$75.00	$159.80
Other Consumables - Utilities		$136.35			$136.35
Total					$795.87

Indirect Labor - Mechanics, Electricians, etc. Scheduled Separately

21.2 Operating costs

Mine operating costs are based on experienced local contract labor and equipment for mining operations. A zero-based efficiency and cost estimate was completed based on current underground contractors' rates and guidance benchmarked against other like operations. Electrical power costs are based on scheduled projected loads applying an estimated power factor correction and applicable Avista Utilities rates for all projected mine, milling and site operations. Mining costs are based on cut and fill techniques in the Newgard, Quill and UTZ mineral zones, and long-hole stoping in the remaining deposits.

Mill operating costs are within guidance resulting from bench marking similar mill operations in north Idaho. Mine site general and administrative (G&A) costs are determined based on anticipated staffing levels and similar compensation compatible with area salaries. Mill power consumption is based on 1,500 tons per day at 92% availability. Capital costs include equipment and installation labor.

Annual and LOM cost summaries are presented in the Table 21-3. Bunker Hill general administrative and site indirect costs are further detailed in Table 21-4

Table 21-3 LOM and Annual Operating Costs

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	LOM (Year1-LOM)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
($USD)							
Expensed Development	32,952,203	9,995,287	10,458,628	7,970,753	4,190,776	336,759	-
LHOS Stope Development	31,232,036	2,059,755	3,336,405	7,283,380	6,605,933	6,224,560	3,668,987
LHOS Stope Production	165,580,358	2,255,984	9,072,539	10,161,636	10,771,198	11,114,355	13,413,844
Cut and Fill Production	6,343,790	-	-	-	-	-	-
Mine Power	17,588,468	653,586	1,079,012	1,520,669	2,011,021	2,027,537	2,044,057
Processing Cost	93,229,665	1,967,852	5,782,210	8,004,450	8,004,450	8,004,450	8,004,450
Mine G&A incl. Power	68,790,892	4,752,194	7,272,852	7,087,469	7,577,821	7,594,337	7,610,857
Total Operating Cost, $USD	415,717,412	**21,031,071**	**35,922,634**	**40,507,688**	**37,150,178**	**33,274,461**	**32,698,138**

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
($USD)							
Expensed Development	-	-	-	-	-	-	-
LHOS Stope Development	2,053,017	-	-	-	-	-	-
LHOS Stope Production	15,202,187	17,049,479	17,383,782	17,383,782	17,383,782	16,715,175	7,672,616
Cut and Fill Production	-	-	-	-	-	-	6,343,790
Mine Power	2,077,089	2,126,643	1,718,872	1,164,991	1,164,991	0	0
Processing Cost	8,004,450	8,004,450	8,004,450	8,004,450	8,004,450	8,004,450	5,435,103
Mine G&A incl. Power	7,643,889	7,693,443	7,285,672	6,731,791	6,731,791	5,566,800	2,830,444
Total Operating Cost, $USD	**32,903,543**	**32,747,372**	**32,673,904**	**32,120,023**	**32,120,023**	**30,286,425**	**22,281,953**

Table 21-4 General Administrative and Site Indirect Costs

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	LOM (Year1-LOM)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
($USD)							
Bunker Hill Staff G&A	29,850,000	2,250,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Mining Indirects	510,149	10,768	31,640	43,800	43,800	43,800	43,800
Shaft Operation and Maintenance	1,275,372	26,920	79,100	109,500	109,500	109,500	109,500
UG Mine Maintenance & Hoisting	28,400,000	800,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Site Facilities Power (Excl. Mine/Mill)	300,000	24,000	24,000	24,000	24,000	24,000	24,000
Tailing Operation (in Addition to BF Plant)	637,686	13,460	39,550	54,750	54,750	54,750	54,750
Water Treatment	7,180,000	960,000	1,180,000	480,000	480,000	480,000	480,000
Dewatering Operation and Maintenance	637,686	13,460	39,550	54,750	54,750	54,750	54,750
Total Site G&A, $USD	**68,790,892**	**4,098,608**	**6,193,840**	**5,566,800**	**5,566,800**	**5,566,800**	**5,566,800**

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA)	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
($USD)							
Bunker Hill Staff G&A	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	1,200,000
Mining Indirects	43,800	43,800	43,800	43,800	43,800	43,800	29,741
Shaft Operation and Maintenance	109,500	109,500	109,500	109,500	109,500	109,500	74,352
UG Mine Maintenance & Hoisting	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	1,200,000
Site Facilities Power (Excl. Mine/Mill)	24,000	24,000	24,000	24,000	24,000	24,000	12,000
Tailing Operation (in Addition to BF Plant)	54,750	54,750	54,750	54,750	54,750	54,750	37,176
Water Treatment	480,000	480,000	480,000	480,000	480,000	480,000	240,000
Dewatering Operation and Maintenance	54,750	54,750	54,750	54,750	54,750	54,750	37,176
Total Site G&A, $USD	**5,566,800**	**5,566,800**	**5,566,800**	**5,566,800**	**5,566,800**	**5,566,800**	**2,830,444**

Operating cost assumptions are the same as used for development work with contracted labor and equipment. Direct cut-and-fill mining costs per ton are presented in Table 21-5

Table 21-5 Cut-and-Fill Direct Mining Cost Estimate

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA) **Cut & Fill Cost/Ton- 12ft by 14ft Headings**	**Operating Cost** $/ton	**Materials Cost** $/ton	**Labor Cost** $/ton	**Rental Cost** $/ton	**Total** $/ton
Jumbo Drilling	$1.40	$0.34	$2.80	$3.90	$8.44
Blasting	$0.25	$2.72	$1.05	$1.82	$5.84
Loading	$0.66		$1.11	$3.38	$5.15
Trucking	$2.10		$2.41	$6.75	$11.27
Bolting/Ground Support	$1.81	$2.18	$2.71	$3.90	$10.60
Other Consumables		$3.09			$3.09
Total					$44.38

Direct mining costs for Long-hole mining is presented in Table 21-6.

Table 21-6 Long-hole Direct Mining Cost Estimate

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA) - Bunker Hill Mine **Long-hole Stope Cost/Ton - 20ft by 50ft**	**Operating Cost** $/ton	**Materials Cost** $/ton	**Labor Cost** $/ton	**Rental Cost** $/ton	**Total** $/ton
Jumbo Drilling	$0.45	$0.13	$0.75	$0.50	$1.84
Bench Drilling	$0.55	$0.69	$0.87	$0.50	$2.60
Blasting	$0.18	$4.72	$0.74	$0.47	$6.10
Loading	$0.73	$0.00	$0.65	$0.87	$2.24
Trucking	$5.66		$2.14	$1.73	$9.54
Bolting/Ground Support	$0.41	$0.41	$0.60	$0.50	$1.93
Other Consumables		$0.89			$0.89
Total					$25.13

Hydraulic backfill for both cut-and-fill and long-hole mining was based on a 6% cement content product placed in 70% of the stope openings and fill with no cement placed in the remaining 30% of the openings. Costs in Table 21-7 included labor, reagents, cement and operating cost estimates with estimates in terms of tons of fill and tons of mineralized material. Development rock would also be placed in secondary long-hole stopes with some being placed in cut-and-fill stope when appropriate.

Table 21-7 Hydraulic Backfill Cost Estimate

Bunker Hill Mining Corporation Preliminary Economic Assessment (PEA) - Bunker Hill Mine **Hydraulic Backfill Cost/Ton**	**Material Density** **FT^3/Ton**	**Operating Cost** $/ton	**Materials Cost** $/ton	**Total** $/ton
Operating Labor		*$5.11*		
Reagents			*$1.75*	
Maintenance		*$1.00*		
6% Cement Mix: $120/ton +$40 Freight			*$9.60*	
Cost per Ton of Hydraulic Fill	16.7	$6.11	$11.35	$17.46
Cost per Ore Ton *(density 11.3/16.7 or ~68%)*	11.3	$4.14	$7.70	$11.84
Assume 70% Cemented Backfill - Average Cost Per Ton Mined				**$8.29**

22 ECONOMIC ANALYSIS

The economic analysis is based on a 1500 tpd mine plan utilizing cut-and-fill and longhole open stoping with backfill. Metal recoveries are based on past mine and milling operating data and is consistent with other similar operations. Silver will be recovered in the lead concentrate and any silver reporting to the zinc concentrate is considered non-payable. This is consistent with typical smelter treatment charges and agreements. Projected metal prices of $1.15 zinc, $0.90 lead and $20.00 silver were used to calculated revenues for the full life of mine. Escalation was not applied to operating or capital costs other than a slight operating cost increase later in the mine life to reflex operating from the deeper-mine levels.

A US mining-focused tax consulting firm prepared the U.S. federal and Idaho state tax computations based on the Internal Revenue Code of 1986, as amended and the regulations thereunder and the Idaho Revenue and Taxation Statute – Title 63 as in effect as of April 10, 2021. The tax elections assumed and incorporated in the tax computation are the Bunker Hill:

1. is a single mine and property under Section 614.
2. will expense exploration expenditures as incurred
3. will elect to treat mine development costs as incurred as deferred expenses under Section 606(b).
4. will elect out of Section 168(K) bonus depreciation
5. will depreciate long-lived assets under the unit of production basis under Section 168(f)(1) and other assets will be depreciated under MACRS in accordance with Rev. Proc. 87-56.

(1) And, all metal sales will be delivered outside of the United States, and are therefore eligible for the FDII deduction under Section 250.

Property taxes and the Idaho Mine License tax are included as operating costs. Idaho Mine License tax is 1% of taxable mine income less depletion expense.

An initial capital investment of $44 million (including 20% contingency) is required to restart the mine. Bunker Hill is projected to generate approximately $25 million of annual average free cash flow over an extended 11-year mine life based on the current M I & I resource. It will produce over 590 million pounds of zinc, 320 million pounds of lead, and 8.4 million ounces of silver at an all-in sustaining cost (“AISC”) of $0.47 per payable pound of zinc (net of by-products).

The project is expected to generate pre-tax free cash flow of $285 million over its full13-year mine life and $233 million on an after-tax basis. The Company expects to reinvest a portion of its pre-tax cash flows on its high-grade silver program, which may reduce the tax assumptions accounted for in the project economics. Annual free cash flow increases in later years of the mine plan due to higher silver grades at deeper elevations. The Company’s goal is to significantly increase the free cash flow in earlier years based on its ongoing high-grade silver exploration program.

The preliminary economic assessment is preliminary in nature, and there is no certainty that the reported results will be realized. The Mineral Resource estimate used for the PEA includes Inferred Mineral Resources which are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the projected economic performance will be realized. The purpose of the PEA is to demonstrate the economic viability of the Bunker Hill Mine, and the results are only intended as an initial, first-pass review of the Project economics based on preliminary information. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Table 22-1 PEA Summary

Year	Initial Capex	1	2	3	4	5	6
Metal Prices							
Zinc ($/lb)	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Lead ($/lb)	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Silver ($/oz)	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Mine plan							
Ore mined (kt)	135	396	548	548	548	548	548
Zinc grade (%)	6.9%	6.6%	5.2%	6.3%	5.8%	5.1%	4.7%
Lead grade (%)	2.3%	2.3%	2.8%	2.1%	1.8%	2.2%	1.3%
Silver grade (oz/t)	0.3	0.7	1.2	1.1	0.5	1.2	1.0
Metal Production [(1)]							
Zinc concentrate (kt)	14,674	41,556	45,549	54,838	50,395	44,634	41,221
Lead concentrate (kt)	4,159	12,314	20,953	15,440	13,052	16,000	9,842
Zinc grade - Zn conc (%)	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%
Lead grade - Pb conc (%)	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
Silver grade - Pb conc (oz/t)		19.3	27.4	33.3	19.1	37.7	48.7
Zinc produced - Zn conc (klbs)	17,022	48,204	52,837	63,613	58,459	51,776	47,816
Lead produced - Pb conc (klbs)	5,573	16,500	28,077	20,690	17,489	21,441	13,188
Silver produced - Pb conc (koz)	38	238	575	515	249	603	479
Key Cost metrics							
Mining ($/t)		65	54	47	40	39	40
Processing ($/t)		15	15	15	15	15	15
G&A ($/t)		11	6	6	6	6	6
Opex - total ($/t)		90	74	68	61	60	60
Sustaining capex ($/t)		29	12	13	12	12	9
Cash costs: by-product ($/lb Zn payable)		0.76	0.54	0.54	0.62	0.45	0.66
AISC: by-product ($/lb Zn payable)		1.04	0.69	0.67	0.76	0.60	0.78
Cash costs: co-product ($/lb Zn payable)		0.88	0.79	0.73	0.76	0.71	0.81
AISC: co-product ($/lb Zn payable)		1.08	0.87	0.82	0.86	0.80	0.89
Free Cash Flow & Valuation ($000's)							
Zinc revenue		24,664	51,649	62,181	57,143	50,611	46,740
Lead revenue		7,870	24,005	17,690	14,953	18,332	11,276
Silver revenue		3,110	10,917	9,778	4,740	11,464	9,103
Gross revenue		35,643	86,571	89,649	76,836	80,407	67,120
TC - Zinc conc		(5,350)	(11,204)	(13,489)	(12,396)	(10,979)	(10,139)
TC - Lead conc		(1,671)	(5,095)	(3,755)	(3,174)	(3,891)	(2,393)
RC - Lead conc		(194)	(682)	(611)	(296)	(717)	(569)
Land freight		(702)	(1,634)	(1,722)	(1,554)	(1,488)	(1,251)
Net smelter return		27,727	67,955	70,072	59,416	63,333	52,767
Mining costs		(7,461)	(14,082)	(15,182)	(15,542)	(17,858)	(19,679)
Expensed development		(6,412)	(15,254)	(10,797)	(6,561)	(3,669)	(2,053)
Processing costs		(3,136)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)
G&A costs - water treatment		(940)	(480)	(480)	(480)	(480)	(480)
G&A costs - other		(1,315)	(2,687)	(2,687)	(2,687)	(2,687)	(2,687)
EBITDA		**8,463**	**27,448**	**32,922**	**26,141**	**30,634**	**19,864**
Sustaining capex - cap development		(1,510)	(3,868)	(4,110)	(3,543)	(3,504)	(2,130)
Sustaining capex - other		(4,679)	(2,856)	(2,766)	(3,288)	(3,003)	(2,705)
Initial capex	(43,743)						
Land & salvage value							
Pre-tax free cash flow	**(43,743)**	**2,273**	**20,723**	**26,046**	**19,310**	**24,127**	**15,030**
Taxes	(517)	(268)	(2,500)	(4,706)	(3,003)	(4,112)	(1,446)
Federal income tax	-	(104)	(1,448)	(3,002)	(1,798)	(2,602)	(747)
State income tax	-	-	(623)	(1,268)	(808)	(1,119)	(363)
Property & title tax	(250)	(431)	(430)	(436)	(397)	(390)	(336)
Free cash flow [(2)]	**(44,260)**	**2,006**	**18,223**	**21,340**	**16,307**	**20,016**	**13,584**
Gross revenue		79,402	88,793	82,917	77,791	73,763	77,701
EBITDA		22,252	30,837	29,515	27,687	25,249	28,385
Pre-tax free cash flow		12,882	24,088	21,897	21,548	19,578	20,361
Free cash flow		11,365	20,485	18,042	17,991	16,800	17,156
NPV (5%)	**143,471**						
NPV (8%)	**107,790**						
IRR (%)	**35.2%**						
Payback (years)	**2.6**						

Year	7	8	9	10	11	12	LOM Total
Metal Prices							
Zinc ($/lb)	1.15	1.15	1.15	1.15	1.15	1.15	**1.15**
Lead ($/lb)	0.90	0.90	0.90	0.90	0.90	0.90	**0.90**
Silver ($/oz)	20.00	20.00	20.00	20.00	20.00	20.00	**20.00**
Mine plan							
Ore mined (kt)	548	548	548	548	548	372	**6,377**
Zinc grade (%)	5.7%	4.7%	5.2%	3.4%	2.1%	5.7%	**5.0%**
Lead grade (%)	2.2%	2.3%	1.8%	4.3%	6.5%	4.3%	**2.8%**
Silver grade (oz/t)	1.4	1.4	1.2	2.7	3.7	2.0	**1.5**
Metal Production (1)							
Zinc concentrate (kt)	49,781	40,461	44,755	29,735	18,366	33,638	509,603
Lead concentrate (kt)	16,183	17,228	13,493	32,319	48,674	21,474	241,131
Zinc grade - Zn conc (%)	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%
Lead grade - Pb conc (%)	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
Silver grade - Pb conc (oz/t)	43.2	38.8	42.7	40.9	36.8	30.9	34.8
Zinc produced - Zn conc (klbs)	57,745	46,935	51,916	34,492	21,304	39,020	591,140
Lead produced - Pb conc (klbs)	21,686	23,086	18,080	43,308	65,223	28,776	323,116
Silver produced - Pb conc (koz)	700	668	576	1,320	1,792	663	8,418
Key Cost metrics							
Mining ($/t)	39	39	38	38	35	41	**41**
Processing ($/t)	15	15	15	15	15	15	**15**
G&A ($/t)	6	6	6	6	5	4	**6**
Opex - total ($/t)	60	60	59	59	54	59	**62**
Sustaining capex ($/t)	20	9	8	7	1	0	**10**
Cash costs: by-product ($/lb Zn payabl	0.40	0.42	0.50	(0.40)	(2.18)	0.02	**0.33**
AISC: by-product ($/lb Zn payable)	0.63	0.54	0.60	(0.27)	(2.14)	0.02	**0.47**
Cash costs: co-product ($/lb Zn payabl	0.67	0.72	0.72	0.60	0.52	0.58	**0.69**
AISC: co-product ($/lb Zn payable)	0.82	0.79	0.79	0.65	0.53	0.58	**0.77**
Free Cash Flow & Valuation ($000's)							
Zinc revenue	56,446	45,878	50,748	33,716	20,825	38,143	**538,744**
Lead revenue	18,541	19,738	15,459	37,028	55,766	24,603	**265,262**
Silver revenue	13,295	12,694	10,950	25,085	34,055	12,605	**157,797**
Gross revenue	88,283	78,311	77,157	95,830	110,646	75,351	**961,803**
TC - Zinc conc	(12,245)	(9,952)	(11,009)	(7,314)	(4,518)	(8,274)	**(116,868)**
TC - Lead conc	(3,935)	(4,190)	(3,281)	(7,859)	(11,837)	(5,222)	**(56,303)**
RC - Lead conc	(831)	(793)	(684)	(1,568)	(2,128)	(788)	**(9,862)**
Land freight	(1,618)	(1,417)	(1,428)	(1,532)	(1,663)	(1,356)	**(17,364)**
Net smelter return	69,654	61,960	60,754	77,557	90,500	59,711	**761,405**
Mining costs	(21,576)	(21,503)	(20,949)	(20,949)	(19,115)	(15,216)	**(209,112)**
Expensed development	-	-	-	-	-	-	**(44,746)**
Processing costs	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(5,435)	**(88,616)**
G&A costs - water treatment	(480)	(480)	(480)	(480)	(480)	(240)	**(5,980)**
G&A costs - other	(2,687)	(2,687)	(2,687)	(2,687)	(2,687)	(1,390)	**(29,573)**
EBITDA	**36,907**	**29,286**	**28,634**	**45,437**	**60,213**	**37,429**	**383,378**
Sustaining capex - cap development	(8,989)	(3,748)	(3,527)	(2,988)	-	-	**(37,918)**
Sustaining capex - other	(2,226)	(1,063)	(913)	(943)	(685)	(54)	**(25,181)**
Initial capex							**(43,743)**
Land & salvage value						8,463	**8,463**
Pre-tax free cash flow	**25,692**	**24,475**	**24,195**	**41,506**	**59,529**	**45,838**	**284,999**
Taxes	(4,964)	(3,749)	(3,316)	(6,999)	(9,789)	(6,323)	**(51,690)**
Federal income tax	(3,241)	(2,379)	(2,117)	(4,711)	(6,573)	(4,246)	**(32,969)**
State income tax	(1,369)	(1,082)	(960)	(2,021)	(2,904)	(1,880)	**(14,397)**
Property & title tax	(354)	(288)	(239)	(266)	(311)	(196)	**(4,324)**
Free cash flow (2)	**20,728**	**20,726**	**20,879**	**34,507**	**49,740**	**39,515**	**233,310**
Gross revenue	83,297	77,734	86,493	103,238	130,674		**961,803**
EBITDA	33,096	28,960	37,035	52,825	67,535		**383,378**
Pre-tax free cash flow	25,083	24,335	32,850	50,517	75,602		**328,742**
Free cash flow	20,727	20,803	27,693	42,124	64,385		**277,570**

(1) Includes zinc produced in zinc concentrate, lead and silver produced in lead concentrate.
(2) Life of mine ("LOM") includes initial capital expenditure.

(A) Initial capex period (Year 1) is expressed on an 18-month basis; "Year 2" is expressed on a 6-month basis; all other years expressed on a 12-month basis.
(B) All metrics expressed on a 12-month basis, beginning after the 18-month initial capex period.

Note: all figures expressed in USD 000's unless otherwise stated. Water treatment cost recovery $20,000,000 are corporate costs and are not included in this economic analysis.

As shown in Table 22-1, based on these free cash flow estimates, the financial model indicates a net present value of approximately $143 million at a 5% discount rate, or $108 million at an 8% discount rate. A 5% discount rate is often utilized with precious metals projects, while an 8% discount rate is often used with base metals projects. Lower discount rates are also typically associated with lower risk jurisdictions. Given the polymetallic nature of the Bunker Hill Mine, the historic and future importance of silver to the project's economic value, the low-risk jurisdiction of Idaho, USA, and the low interest rate environment as of the date of this report, it is helpful to understand the project valuation for both a 5% and 8% discount rate.

22.1 SENSITIVITIES

Table 22-2 below summarizes the after-tax sensitivities of NPV and IRR, with respect to metal prices and costs

Table 22-2 Sensitivity Analysis

	Metal Prices							Operating & Capital Costs						
			Zinc Price ($/lb)							Operating Costs (+/- %)				
			0.85	1.00	1.15	1.30	1.45			-20%	-10%	0%	10%	20%
NPV (5%) ($M)	Lead Price ($/lb)	0.70	19	66	110	154	198	Total Capital Costs (+/- %)	-20%	210	185	159	133	107
		0.80	37	83	127	171	215		-10%	203	177	151	125	100
		0.90	55	99	**143**	187	232		0%	195	169	**143**	118	92
		1.00	72	116	160	204	249		10%	187	162	136	110	84
		1.10	89	133	177	221	266		20%	180	154	128	102	77
			Zinc Price ($/lb)							Operating Costs (+/- %)				
			0.85	1.00	1.15	1.30	1.45			-20%	-10%	0%	10%	20%
IRR (%)	Lead Price ($/lb)	0.70	8%	18%	28%	40%	53%	Total Capital Costs (+/- %)	-20%	63%	53%	43%	35%	28%
		0.80	11%	21%	32%	44%	57%		-10%	56%	47%	39%	32%	25%
		0.90	14%	24%	**35%**	47%	61%		0%	51%	43%	**35%**	29%	23%
		1.00	18%	27%	39%	51%	65%		10%	46%	39%	32%	26%	20%
		1.10	21%	31%	42%	55%	70%		20%	42%	35%	29%	23%	18%

23 ADJACENT PROPERTIES

Adjacent properties are properties in which the issuer does not have an interest, has a boundary that is proximate to the Property being reported upon and has similar geological characteristics to the Property being reported on. Figure 23-1 shows the adjacent properties contiguous to the Bunker Hill Property.

Figure 23-1 Properties adjacent to Bunker Hill

The mineralized veins of the Crescent Silver Project are located approximately 1.25 miles (2 km) east-southeast of the past-producing Bunker Hill Mine (Figure 23.2). Crescent Silver Project mineral tenure consists of 1,280 acres (518 ha) of patented mining claims and is contiguous with the Bunker Hill Property.

The following information on the Crescent Silver Project has been taken from the Crescent Silver LLC. website. The Resource Estimate shown in Table 23-1 was summarized from the 2013 NI 43-101 Technical Report and Preliminary Economic Assessment by Pennington and Hartley.

The qualified person has been unable to verify the information within the Crescent Silver technical report. The information is not necessarily indicative of the mineralization at Bunker which is the subject of this technical report.

The Crescent Silver Project (Pennington and Hartley 2013) currently contains four known major mineralized zones. The mineralized veins of the Crescent Silver Project are typical "Silver Belt" veins, and are composed of siderite, quartz, and various sulfides including pyrite, tetrahedrite, chalcopyrite, arsenopyrite and galena.

Table 23-1 Crescent Silver Project Mineral Resource

Vein	Resource Class	Tons (x 1,000)	Silver		Copper	
			oz/ton	oz (x 1,000)	%	lb (x1,000)
Alhambra	Measured	8.2	18.4	150	0.32	52
	Indicated	101.4	15.5	1,568	0.24	485
	Measured + Indicated	109.6	15.7	1,718	0.25	538
	Inferred	442.4	14.0	6,189	0.19	1,709
Jackson	Measured	2.8	19.6	54	0.87	48
	Indicated	1.4	18.8	26	0.80	22
	Measured + Indicated	4.1	19.3	80	0.85	70
	Inferred	15.3	16.3	248	0.82	250
South	Measured	27.8	23.3	647	0.61	342
	Indicated	59.3	23.4	1,387	0.57	681
	Measured +	87.1	23.4	2,035	0.59	1,023
	Inferred	526.8	24.1	12,670	0.63	6,602
Total	Measured	38.7	22.0	851	0.57	443
	Indicated	162.1	18.4	2,981	0.37	1,189
	Measured + Indicated	**200.8**	**19.1**	**3,833**	**0.41**	**1,631**
	Inferred	948.5	19.4	19,107	0.43	8,561

The reader is cautioned that the above information is not necessarily indicative of the mineralization on the Bunker Hill Property.

The past-producing Sunshine Mine is located approximately 4 km east-southeast of the Bunker Hill Property. The Sunshine Mine Project mineral tenure consists of 10,377 acres (4,200 ha) of patented and unpatented mining claims and is contiguous with the Bunker Hill Property.

The information presented in Table 23-2 has been summarized from the NI 43-101 Technical Report, Resource Estimate and Preliminary Economic Assessment prepared for Sunshine Silver Mines Corporation by TetraTech and MTB (Bryan et al. 2014). The data contained in the technical report and website has not been originally sourced or verified by RDA.

Table 23-2 Sunshine Mine Mineral Resource Estimate

Resource Class	Tons Diluted	Ag Grade Diluted (g/t)	Ag Contained Ounces	Cu %	Pb %	Zn %
Measured	1,120,000	843	30,300,000	-	-	-
Indicated	1,870,000	752	45,200,000	-	-	-
Measured + Indicated	2,980,000	786	75,500,000	-	-	-
Inferred	8,170,000	842	221,300,000	0.22	0.35	0.02

24 OTHER RELEVANT DATA AND INFORMATION

As of January 25, BHMC has signed a memorandum of understanding (MOU) with Teck Resources Limited (Teck) for the purchase of the Pend Oreille process plant. The MOU is non-binding and offers the purchase option of either $2.75M cash or $3.0M as a combination of both cash and Bunker Hill shares. Definitive documentation, including demolition and safety plans are to be executed by March 1, 2022, otherwise Teck has the option to pursue alternatives or negotiations with third parties. When concluded, the deal is expected to have a material impact on project economics including capex.

The Authors know of no additional relevant data and information that would make the report understandable and not misleading.

25 INTERPRETATIONS AND CONCLUSIONS

The Bunker Hill Mine is one of the most storied base metal and silver mines in American history. Initial discovery and development of the property began in 1885, and from that time until the mine closed in 1981 it produced over 35.8 M tons (32.5 M tonnes) of mineralization at an average mined grade of 8.76% lead, 4.52 ounces per ton (155 g/t) silver, and 3.67% zinc. The acquisition of the Bunker Hill Mine Project includes existing infrastructure at Milo Gulch, and the majority of machinery and buildings at the Kellogg Tunnel portal level as well as all equipment and infrastructure anywhere underground at the Bunker Hill Mine Complex.

The PEA demonstrates that the restart of the Bunker Hill mine can reasonably be expected to generate a positive return on investment with an after-tax IRR of 35.2% based on the Measured Indicated & Inferred resources presented. Exploration and confirmation drilling, as well as additional research and interpretations of mine production records continue at Bunker Hill. It is reasonable to expect the conversion of Inferred resources to Indicated resources and indicated resources to measured resources to continue. Inferred Mineral Resources are considered too geologically speculative to have economic considerations applied to them to be classified as a Mineral Reserve. The mineral inventory for the PEA was based on a $80 NSR value per ton as presented in Table 16-1. Breakeven cutoff grades of 3.66% zinc for cut-and-fill mining and 2.86% for longhole mining were calculated for the economic data estimated in the PEA as presented in Table 16-2 of this report.

The mineralization of the Coeur d'Alene district consists of veins with variable proportions of sphalerite, galena, argentiferous tetrahedrite in either a quartz or siderite gangue. Most silver production has come from the mineral belt south of the Osburn Fault, the western part of which includes the Bunker Hill Mine and is known as the Silver Belt. The deposits are numerous and relatively large with strike lengths up to 984 ft (300 m) with dip lengths of over 3,280 ft (1,000 m). Wall rock alteration associated with veining consists of changes in carbonate mineralogy plus sulfidation and silicification. Pyritization of wall rocks is locally strong. Bleached halos resulting from destruction of hematite by hydrothermal fluids are also characteristic. The mineralization is partly oxidized to a depth of approximately 1,968 ft (600 m).

The Bunker Hill Mine comprises multiple zones of mineralization. Most production has come from structurally controlled zones along the northwest striking and southwest dipping Cate Fault, a splay structure of the Osburn Fault. Mineralization is primarily hosted by quartzites and siltites of the Revett and St. Regis Formations of the Ravalli Group. Mineralization occurs in veins in the footwall rocks of the Cate Fault, and from veins and stratabound mineralization in the hanging wall of the Cate Fault.

RDA is of the opinion that the past production of over 160 million ounces of silver should be investigated with vigorous exploration programs. While base metals are a very important component of the Project, the recent selling prices of silver demand attention. The confirmation drilling program identified intercepts of 10 to 20 ounces per ton of sliver. The J vein and Francis stopes hosted high grade silver mineralization. The near surface historic Caledonia and Sierra Nevada Mines were bonanza grade silver producers in the past. These and other known occurrences of silver must be followed up upon to determine if economic silver occurrences exist on the Bunker Hill Property land package.

This Technical Report is based on all available technical and scientific data available as of September 20, 2021. Mineral Resources are considered by the QP to meet the reasonable prospects of eventual economic extraction due two main factors; 1) cutoff grades are based on scientific data and assumptions related to the project and 2) Mineral Resources are estimated only within blocks of mineralization that have been accessible in the past by mining operations as well as by using generally accepted mining and processing costs that are similar to many projects in Idaho.

The exploration and development of mineral properties involves risk. There can be no assurance that the exploration program discussed in this Technical Report will result in additional Mineral Resource Estimates. Numerous factors such as commodity price fluctuations, property tenure, environmental and permitting issues, metallurgical and geotechnical considerations may have a material impact on the Bunker Hill Project.

26 RECOMMENDATIONS

Exploration programs should focus on the definition of silver resources. Silver resources that demonstrate the reasonable prospects of eventual economic extraction have been identified within the current mineral resource estimate. Significant silver mineralization encountered through exploration and past production suggests that these zones should be given as much weight as past Pb and Zn exploration and resource definition programs.

Metallurgical test work should be completed and the results thoroughly analyzed in order to further refine metallurgical recovery and concentrate grade assumptions, and optimize flowsheet characteristics.

Digitization of nearly 100 years of paper maps is nearly completed. In addition to unlocking the understanding of the geometry of the mineral deposit much of the information describes the mined-out portion of the Project. This will be critical for future mineral resource estimates as mined out voids need to be accounted for.

Results from the PEA indicate that the Project may support a Preliminary Feasibility Study. Plant and backfill engineering and metallurgical testing are recommended. Used equipment estimates should also be procured. The Newgard, Quill and UTZ block model has now been analyzed on an NSR basis.

Based on the aforementioned, the authors are not recommending successive phases of the work for the advancement of the project.

Table 26-1 Proposed Phase 1 Work Program to Advance Bunker Hill

Activity	Amount
Exploration Drilling (includes labor and assaying)	$0.50M
Metallurgical definition characteristics	$0.50M
Surface Geophysics	$0.40M
Ongoing Digital compilation of historical information	$0.25M
Environmental Studies as part of care and maintenance	$0.80M
Rehabilitation and Infrastructure Improvements	$1.30M
Plant Engineering	$0.50M
Hydraulic Backfill and Tailing Placement Engineering	$0.25M
Mine Rehabilitation, Care and Maintenance	$0.75M
Total	**$5.25M**

27 REFERENCES

Farmin, J., 1977. Geologic Research Progress Summary and 1977 Exploration Plans, Bunker Hill Mining internal memo.

Herndon, Stephen D., "Diagenesis and metamorphism in the Revett quartzite (Middle Proterozoic Belt) Idaho and Montana" (1983). Graduate Student Theses, Dissertations, & Professional Papers. 7510.

Hobbs, S. W., A. B. Griggs, R. E. Wallace, and A. B. Campbell, 1965, Geology of the Coeur d'Alene district, Shoshone Co., Idaho: U.S. Geological Survey Professional Paper 478, 139 p.

Idaho Geologic Survey, 2002. Geologic Map of Shoshone County, Open-File Publication. https://www.idahogeology.org/webmap.

Juras, D. S., 1977, Structural Geology of Bunker Hill Mine: Private report for the Bunker Hill Company, 111 p.

Juras, D. and Duff, J., 2020. Geology and Ore Controls at the Bunker Hill Mine, Coeur d'Alene District, Idaho: Private report for the Bunker Hill Company.

Leach, D.L., Hofstra, A.H., Church, S.E., Snee, L.W., Vaughn, R.B., and Zartman, R.E., 1998, Evidence for Proterozoic and Late Cretaceous-Early Tertiary ore-forming events in the Coeur d'Alene district, Idaho and Montana: Economic Geology, v. 93, p. 347-359.

Lydon, J.W., 2007, Geology and metallogeny of the Belt-Purcell Basin, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 581-607.

Meyer, R. L. and Springer, D., 1985, Proposal to Explore and Mine the Bunker Hill Property, Shoshone County, Idaho, Private report for Bunker Limited Partnership.

U.S. EPA Region 10 CERCLA Docket No. 10-2017-0123. "SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR RESPONSE ACTION BY BUNKER HILL MINING CORP., PURCHASER, UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT, 42 U.S.C. 9601-9675"

White, B. G., 1976, Revett stratigraphy of the Bunker Hill mine and vicinity: Private report prepared for The Bunker Hill Co., Dec. 31, 1976, 46 p., 4 plates.

White, B.G., 1994, Shear zone hosted ore deposits of the Coeur d'Alene mining district, Idaho, USA: Geological Society of America Abstracts with Program, v. 26, no.7, p.21.

White, B. G., and D. S. Juras, 1976, Surface geological map, and cross Sections of the Bunker Hill property: Private report for The Bunker Hill Co., December. 1976.

White, B., 2015. "New Concepts for the Exploration of the Bunker Hill Mine: 2015": Private Report for New Bunker Hill Mining Company.

Wilson, S.E., 2020, "Technical Report for the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA."

Wilson, S.E., 2021, "Technical Report for the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA."

Wilson, S.E. et al., 2021, "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA."

Wilson, S.E. et al., 2021, "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA. November 03, 2021. Effective Date September 20, 2021"

Wilson, S.E. et al., 2021, "Technical Report and Preliminary Economic Assessment for Underground Milling and Concentration of Lead, Silver and Zinc at the Bunker Hill Mine, Coeur d'Alene Mining District, Shoshone County, Idaho, USA. December 29, 2021. Effective Date November 29, 2021"