



**Perpetua  
Resources**

December 2025

# STIBNITE GOLD PROJECT

## S-K 1300 TECHNICAL REPORT SUMMARY

**Valley County, Idaho, USA**



Prepared by: Perpetua Resources Idaho, Inc.  
BBA Consultants International, LP.

Report Date: 31 March 2026  
Effective Date: 31 December 2025

## Date and Signature Page

The technical report summary entitled "S-K 1300 Technical Report Summary on the Stibnite Gold Project, Valley County, Idaho, USA" dated 31 December 2025 was prepared by qualified persons employed by the registrant and third-party firms comprising mining experts:

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On behalf of BBA Consultants International, LP.

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## 1 SUMMARY

The Stibnite Gold Project (SGP or Project) is designed to redevelop an abandoned, brownfield mine site, and provide long-term employment and business opportunities for a rural area in Idaho, funded by an economically viable mining project. It would become one of the largest and highest-grade open pit gold mines in the United States and one of the country's major producers of antimony, a critical and strategic mineral.

This Technical Report Summary (TRS or Report) provides an overview of the Project and includes recommendations for future work. It discloses, at a Preliminary Feasibility Study (PFS) level, information about the geology, mineralization, exploration potential, Mineral Resources, Mineral Reserves, mining methods, processing methods, infrastructure, social and economic benefits, environmental protection, cleanup and restoration of historical third-party mining impacts, permitting, reclamation and closure concepts, capital and operating costs and an economic analysis for the Project. The information provided in this Report is dated as of December 31, 2025, unless expressly noted.

For readers to fully understand the information in this TRS, they should read this TRS in its entirety, including all qualifications, assumptions and exclusions that relate to the information set out in this TRS that qualifies the technical information contained in the TRS. The TRS is intended to be read as a whole, and sections should not be read or relied upon out of context. The technical information in the TRS is subject to the assumptions and qualifications contained in the TRS. The analyses included in this TRS provide only a summary of the potential Project economics based on the assumptions set out herein. There is no guarantee that the Project economics described herein can be achieved.

### 1.1 Key Results

The Project consists of mining the Yellow Pine, Hangar Flats and West End deposits using conventional open pit methods, conventional processing methods to extract gold, silver and antimony, and on-site production of gold (Au) and silver (Ag) doré and an antimony (Sb) concentrate. The Project also entails an extensive reclamation and restoration program for historical impacts to the site by third parties, including the recovery and reprocessing of historical tailings, restoration of fish passage during and after operations, relocation of historical mining wastes to engineered storage facilities, stream restoration, and reforestation of impacted areas. Perpetua Resources' plans for decommissioning the site include progressive and concurrent remediation, reclamation, and restoration activities, beginning at the start of construction and continuing beyond the operations phase, through Project reclamation and closure.

The Stibnite Gold Project economics, as contemplated in the TRS, are summarized in Table 1-1.

**Table 1-1: Stibnite Gold Project Study Highlights<sup>1</sup>**

Component	Early Production Years 1-4	Life-of-Mine Years 1-15
Recovered Gold Total	1,852 koz	4,223 koz
Recovered Antimony Total	69 million lbs	106 million lbs
Recovered Gold Annual Average	463 koz/yr	296 koz/yr
Cash Costs <sup>2</sup> (Net of by-product credits)	\$250/oz	\$581/oz
All-in Sustaining Costs <sup>2</sup> (Net of by-product credits)	\$498/oz	\$833/oz
Initial Capital – including contingency, capitalized operating costs	\$2,576 million	
Pre-production Revenue – Net of royalties and sales costs	\$52 million	
Adjusted Initial Capital – Net of pre-production revenue	\$2,524 million	
After-Tax Net Present Value 5% <sup>3</sup>	\$3,457 million	
Annual Average EBITDA	\$1,347 million	\$766 million
Annual Average After Tax Free Cash Flow	\$1,111 million	\$607 million
Internal Rate of Return (After-tax)	23.5%	
Payback Period in Years (After-tax)	2.4 years	

Notes: **1.** “M” = million, “k” = thousand, all amounts in US\$, gold and silver reported in troy ounces (“oz”) **2.** See non-International Financial Reporting Standards (“IFRS”) measures below. **3.** Base case prices US\$3,250/oz gold, \$40/oz silver and \$10.00/lb antimony, Post-Tax NPV at 5% discount rate. **4.** All numbers have been rounded and may not sum correctly. **5.** The Basic Engineering phase assumes 100% equity financing of the Project.

## 1.2 Regulatory Information

The Stibnite Gold Project is within the Stibnite-Yellow Pine mining district (District), Idaho and is wholly owned by direct or indirect subsidiaries of Perpetua Resources Corp. (PRC), a Toronto Stock Exchange (TSX:PPTA) and Nasdaq Stock Market (Nasdaq:PPTA) listed British Columbia, Canada company with headquarters in Boise, Idaho. Unless the context indicates otherwise, references to “Perpetua” or “Perpetua Resources” throughout this Report include one or more of the subsidiaries of PRC.

This TRS was prepared by Perpetua Resources under the direction of qualified persons (QPs) and in compliance with the United States Securities and Exchange Commission (SEC) Regulation S-K (Subpart 1300) (S-K 1300) for reporting mineral properties (CFR Title 17 § 229.1300-1305).

The purpose of this TRS is to update the technical report summary on the Stibnite Gold Project, Idaho, USA, dated as of December 31, 2021, and amended as of June 6, 2022 (2022 TRS). The TRS was developed in accordance with the mining property disclosure rules specified in S-K 1300 and Item 601(b)(96) under Regulation S-K.

The TRS provides a summary of the work completed on the Project through December 31, 2025. Updates since the 2022 TRS primarily relate to advancements in permitting, exploration drilling, engineering, land management, and updated financial analyses.

The most notable updates from the 2022 TRS include the following:

- The TRS incorporates engineering designs developed during the basic engineering phase completed in 2025, including design changes to the mineral processing plant, on and off-site infrastructure, and tailings management.
- The TRS provides updated financial analyses by reflecting operating costs, capital costs, taxes, and long-term metal price estimates as of December 31, 2025 to derive estimates of project economics. Costs included herein are based on fourth quarter 2025 estimates for construction and operations, as well as current and consensus commodity pricing for sales.
- This TRS incorporates updates derived from recent and ongoing environmental baseline studies, permitting application submittals and authorizations, and other environmental compliance and regulatory activities.
- The TRS integrates cost and technical data derived from recent and active contract negotiations relating to construction, professional services, and capital equipment procurement.

The TRS continues to be classified as a Preliminary Feasibility Study.

### 1.3 Property Description and Location

The Project is located in central Idaho, USA approximately 100 miles (mi) northeast of Boise, Idaho, 38 mi east of McCall, Idaho, and approximately 10 mi east of Yellow Pine, Idaho. Mineral rights controlled by Perpetua Resources include patented lode claims, patented mill sites, unpatented federal lode claims, and unpatented federal mill sites and encompass approximately 29,340 acres or 46 square miles. The claims are 100% owned by Perpetua Resources, except for 27 patented lode claims that are held under an option to purchase and portions of six patented millsites. These terms relating to the nature of Perpetua Resources claims are consistent with the United States General Mining Law of 1872.

In agreements dated May 9, 2013 (and thereafter amended), Perpetua Resources granted a 1.7% NSR royalty on future gold production from the Project properties to Franco-Nevada Idaho Corporation (Franco-Nevada). This gold royalty does not apply to production of antimony and silver. In March 2024, a wholly owned subsidiary of Perpetua Resources, sold Franco-Nevada a 100% royalty on the future payable silver production from the Project which would become effective in year seven after commercial production commences. This silver royalty does not apply to the production of antimony and gold.

A number of independent legal opinions in respect of mineral title have been prepared on behalf of Perpetua in support of its initial listing as a public company, subsequent financings, and sale of royalties to third parties. The most recent legal opinion, dated April 25, 2019, was prepared by Jason Mau of the law firm of Parsons, Behle & Latimer, which was later updated on March 21, 2024, and again in June 2025, by the law firm of Hardee, Piñol & Kracke, PLLC. These opinions reviewed the previous title work and historic and current ownership of the patented and unpatented lode mining and mill site claims owned or optioned Perpetua Resources Corporation's subsidiary, Idaho Gold Resources Company LLC (IGRCLLC) an Idaho registered business entity. There are six partial patented millsites within the Project boundary owned by Hecla Mining Company or one of its affiliates (Hecla). Hecla retains some surface rights, but no mineral rights on portions of these claims and an affiliate of Perpetua retains a Right of First Refusal should Hecla decide to sell them. Perpetua Resources is exploring alternatives with respect to these partial millsites, which may include acquiring such property from Hecla.

## 1.4 Geological Setting and Mineralization

Bedrock in the region can be subdivided into the pre-Cretaceous metasedimentary “basement,” the Cretaceous Idaho Batholith, Tertiary intrusions and volcanics, and Quaternary unconsolidated sediments and glacial materials. The SGP is situated along the eastern edge of the Idaho Batholith, on the western edge of the Thunder Mountain caldera complex and within the Central Idaho Mineral Belt.

Large, north-south striking, steeply dipping structures exhibiting pronounced gouge and multiple stages of brecciation occur in the District and are often associated with east-west and northeast-southwest trending splays and dilatant structures.

The Yellow Pine and Hangar Flats deposits are hosted primarily by intrusive phases of the Idaho Batholith along the Meadow Creek Fault Zone. The West End Deposit is hosted primarily by Neoproterozoic to Paleozoic metasedimentary rocks of the Stibnite roof pendant along the West End Fault Zone.

Mineralization and alteration in the District are associated with multiple hydrothermal alteration events occurring through the Paleocene and early Eocene epochs. Main-stage gold mineralization and associated potassic alteration typically occurs in structurally prepared zones in association with very fine grained disseminated arsenical pyrite (FeS<sub>2</sub>) and, to a lesser extent, arsenopyrite (FeAsS), with gold almost exclusively in solid solution in these minerals. Antimony mineralization occurs primarily associated with mineral stibnite (Sb<sub>2</sub>S<sub>3</sub>). Additional gold mineralization effecting rocks of the Stibnite roof pendant is associated with epithermal quartz-adularia-carbonate veins.

Deposits of the District are not readily categorized based on a single genetic deposit model due to complexities associated with multiple overprinting mineralization events and uncertainties regarding sources of mineralizing hydrothermal fluids.

## 1.5 Exploration

The District has been the subject of exploration and development activities for over 100 years, yet much of the area remains poorly explored due to its remote location, poor level of outcrop and extensive glacial cover. Perpetua has completed extensive exploration work over the last 15 years that has included: geophysics; rock, soil and stream sampling and analysis; geologic mapping; mineralogical and metallurgical studies; and drilling.

This newer data has been integrated with datasets from previous operators and provides a comprehensive toolkit for future exploration. These efforts have led to the identification of over 75 prospects with varying levels of target support. These prospective areas include targets within, under and adjacent to existing deposits; bulk mineable prospects along known or newly identified mineralized trends; high grade underground targets and early-stage greenfield prospects and conceptual targets based on geophysics or geologic inference. Details of some of the more promising targets are summarized in Section 7 of this Report.

Exploration targets include conceptual geophysical targets, geochemical targets from soil, rock and trench samples, and results from widely spaced drill holes; as a result, the potential size and tenor of the targets are conceptual in nature. There has been insufficient exploration to define mineral resources on these prospects and this data may not be indicative of the occurrence of a mineral deposit. Such results do not provide assurance that further work will

establish sufficient grade, continuity, metallurgical characteristics and economic potential to be classed as a category of mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

The Project area, including the three main deposits, has been drilled by numerous operators, totaling 826,693 ft in 2864 drill holes, of which Perpetua drilled 778 holes totaling over 375,000 ft since 2009. Pre-Perpetua drilling was undertaken by a wide variety of methods and operators while Perpetua employed a variety of drilling methods including core, reverse circulation, auger, and sonic throughout the District, but with the primary method being core.

It is the opinion of the QP responsible for the Mineral Resource estimates that the data and methods used for estimating the Mineral Resources and Mineral Reserves for the Hanger Flats, West End, Yellow Pine and Historical Tailings deposits is adequate for this purpose and may be relied upon to report the Mineral Resources and Mineral Reserves contained in the TRS.

## 1.6 Mineral Resource Estimates

The Mineral Resource Statement presented herein represents a mineral resource evaluation prepared for Perpetua Resources in accordance with S-K 1300. This evaluation includes Mineral Resource estimates for the Project's three lode gold deposits: Yellow Pine, Hangar Flats and West End, and reports the Mineral Resource estimate for the Historical Tailings deposit.

The Mineral Resource estimates for each of the Hangar Flats, West End and Yellow Pine deposits, and the Historical Tailings, were prepared using commercial mine-modeling and geostatistical software, consider relevant modifying factors, and have been verified by the QP. The consolidated Mineral Resource statement for the Project in metric tonnes (t) is shown in Table 1-2 based on a gold selling price of US\$1,500/troy ounce limiting pit shell.

**Table 1-2: Consolidated Mineral Resource Statement for the Stibnite Gold Project (Imperial Units)**

Classification	Metric Tonnes (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Indicated</b>							
Yellow Pine	56,445	1.67	3,025	2.10	3,820	0.09	115,022
Hangar Flats	28,065	1.37	1,239	3.20	2,884	0.15	90,925
West End	60,963	1.00	1,956	1.25	2,449	0.00	0
Historical Tailings	2,687	1.16	100	2.86	247	0.17	9,817
<b>Total Indicated</b>	<b>148,159</b>	<b>1.33</b>	<b>6,320</b>	<b>1.97</b>	<b>9,400</b>	<b>0.07</b>	<b>215,764</b>
<b>Inferred</b>							
Yellow Pine	8,021	0.85	219	0.59	153	0.00	62
Hangar Flats	17,021	1.00	548	2.30	1,259	0.09	32,146
West End	26,895	0.97	837	1.06	918	0.00	0
Historical Tailings	191	1.13	7	2.64	16	0.16	662
<b>Total Inferred</b>	<b>52,128</b>	<b>0.96</b>	<b>1,611</b>	<b>1.40</b>	<b>2,345</b>	<b>0.03</b>	<b>32,870</b>

Notes: **1.** All Mineral Resources have been estimated in accordance with S-K 1300. **2.** Mineral Resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a Mineral Resource. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. These Mineral Resource estimates include Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is also no certainty that these inferred Mineral Resources will be converted to the Indicated category through further drilling, or into Mineral Reserves once economic considerations are applied. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely. **3.** Open-pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **4. IMPORANT: Mineral Resources are inclusive of Mineral Reserves.**

The Yellow Pine and Hangar Flats deposits contain zones with substantially elevated antimony-silver mineralization, defined as containing greater than 0.1% antimony, relative to the overall mineral resource. The existing Historical Tailings Mineral Resource also contains elevated concentrations of antimony. These higher-grade antimony zones are reported separately in Table 1-3 to illustrate the potential for antimony production from the Project and are contained within the overall mineral resource estimates reported herein. Antimony zones are reported only if they lie within gold mineral resource estimates.

**Table 1-3: Antimony Sub-Domains Consolidated Mineral Resource Statement**

Classification	Metric Tonnes (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Indicated</b>							
Yellow Pine	9,569	2.27	697	5.33	1,639	0.51	108,306
Hangar Flats	6,771	2.08	453	8.22	1,790	0.57	85,509
Historical Tailings	2,687	1.16	100	2.86	247	0.17	9,817
<b>Total M &amp; I</b>	<b>19,027</b>	<b>2.04</b>	<b>1,250</b>	<b>6.01</b>	<b>3,677</b>	<b>0.49</b>	<b>203,632</b>
<b>Inferred</b>							
Yellow Pine	12	1.16	0	2.52	1	0.20	52
Hangar Flats	1,312	2.32	98	15.59	658	1.08	31,274
Historical Tailings	191	1.13	7	2.64	16	0.16	662
<b>Total Inferred</b>	<b>1,515</b>	<b>2.16</b>	<b>105</b>	<b>13.86</b>	<b>675</b>	<b>0.96</b>	<b>31,988</b>

Notes: **1.** Antimony mineral resources are reported as a subset of the total mineral resource within the conceptual pit shells used to constrain the total mineral resource in order to demonstrate potential for economic viability; mineralization outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. **2.** Open pit antimony sulfide mineral resources are reported at a cut-off grade 0.1% antimony within the overall 0.40 g/t Au cut-off. **3. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

## 1.7 Mineral Reserve Estimates

The Mineral Reserve estimates for the Project were estimated in conformity with the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) “International Reporting Template for the public reporting of Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves” and are reported in accordance with S-K 1300. The Mineral Reserve estimates for each of the Yellow Pine, Hangar Flats, and West End deposits, and the Historical Tailings, were prepared to industry standards and best practices and take into consideration modifying factors including mining, processing, metallurgical, environmental, location and infrastructure, market factors, legal, economic, social, and governmental factors. The Mineral Reserve estimates are based on a mine plan and pit design developed using modifying parameters including metal price, metal recovery based on performance of the processing plant, and operating cost estimates.

The Mineral Reserve was developed by allowing only Indicated Mineral Resource blocks to contribute positive economic value and is a subset of the Mineral Resource comprised of the Probable Mineral Reserve that is planned for processing over the life-of-mine plan, with assumptions summarized in Sections 12 and 13 of this Report. No economic credit has been applied to Inferred mineralization in the development of the Mineral Reserve, even if they lie within the Mineral Reserve pit.

The mine design included in this TRS, including the mine features, mining methods, process and recovery methods, and infrastructure, are generally consistent with the 2021 Modified Mine Plan which was approved by the Forest Service in January 2025 in its final Record of Decision and was incorporated by Perpetua Resources in its Plan of Operations that was approved by the Forest Service in October 2025. The Clean Water Act Section 404 permit issued by the U.S. Army Corps of Engineers in May 2025 and various state permits issued as of December 31, 2025, are also generally based on this 2021 Modified Mine Plan.

The general mine planning sequence to produce the Mineral Reserve estimates, and associated mill feed schedule consisted of an ultimate pit limit analysis, pit shell selection, ultimate pit designs, internal pit phase design, mining sequence schedule, and mill feed optimization. A suite of nested pit shells for each deposit was generated using Geovia Whittle™ and a gold selling price ranging from \$100 to \$2,000 per troy ounce in \$50 increments. The pit limit analysis was performed based on gold recovery only, to ensure the ultimate pit geometries would not be dependent on silver or antimony values. Mining costs used for the pit limit analysis are based on a first principles cost buildup for equipment requirements, labor estimates, and consumables price quotes. Selection of the optimal pit shells for each deposit was based on discounted cash flow analysis. For Yellow Pine and West End, the incremental change in discounted pit value (NPV) and strip ratio between potentially optimal pit shells is gradual, and pit shells representing gold selling prices of \$1,250/oz and \$1,300/oz respectively were selected. For Hangar Flats, the pit limit analysis suggested selecting the \$1,150/oz pit shell but, due to additional technical considerations, the \$750/oz pit shell was selected.

The ultimate pit designs were based on the selected pit shells, design parameters for 150-ton haul trucks, geotechnical design criteria, and additional mine sequencing and haulage considerations. Cut-off determination utilized a net smelter return (NSR) methodology to account for varying ore types and separate process streams with unique process costs. The cut-off strategy applies elevated cut-off values to ensure the highest-grade ore available in the mine plan is processed preferentially and lower grade ore is stored in ore stockpiles for processing later in the Project life.

Cutoff grades for Mineral Reserves were developed assuming long term metal prices of \$1,600/oz gold, \$20.00/oz silver, and \$3.50/lb antimony for material lying within the pit designs based on the pit shells selected above (\$1,250, \$750 and \$1,300/oz Au for Yellow Pine, Hangar Flats and West End, respectively). Mineral Reserves are reported from the reference point of delivery to the processing plant. This results in a Life-of-Mine (LOM) average gold cut-off grade of 0.48 g/t for open-pit mining. The Mineral Reserves are summarized in Table 1-4 and Table 1-5.

**Table 1-4: Probable Mineral Reserves Summary (Imperial Units) at the end of the fiscal Year 2025 based on \$1,600/oz gold**

Deposit	Tonnage	Average Grade			Total Contained Metal		
		Gold	Antimony	Silver	Gold	Antimony(4)	Silver
Imperial Units	(kst)	(oz/st)	(%)	(oz/st)	(000s oz)	(000s lb)	(000s oz)
<b>Yellow Pine</b>							
Low Sb Sulfide – Probable	41,463	0.049	0.009	0.045	2,047	7,859	1,881
High Sb Sulfide – Probable	11,279	0.060	0.460	0.137	671	103,758	1,543
<b>Yellow Pine Probable Mineral Reserves</b>	<b>52,742</b>	<b>0.052</b>	<b>0.106</b>	<b>0.065</b>	<b>2,718</b>	<b>111,617</b>	<b>3,423</b>
<b>Hangar Flats</b>							
Low Sb Sulfide – Probable	5,696	0.039	0.018	0.048	223	2,104	273
High Sb Sulfide – Probable	3,411	0.056	0.369	0.141	191	25,148	483
<b>Hangar Flats Probable Mineral Reserves</b>	<b>9,107</b>	<b>0.046</b>	<b>0.150</b>	<b>0.083</b>	<b>414</b>	<b>27,252</b>	<b>756</b>
<b>West End</b>							
Oxide – Probable	5,235	0.016	-	0.025	83	-	133
Low Sb Sulfide – Probable	16,801	0.039	-	0.038	649	-	635
Transitional – Probable	28,483	0.030	-	0.043	855	-	1,236
<b>West End Probable Mineral Reserves</b>	<b>50,519</b>	<b>0.031</b>	<b>-</b>	<b>0.040</b>	<b>1,587</b>	<b>-</b>	<b>2,004</b>
<b>Historical Tailings (2)</b>							
Low Sb Sulfide – Probable	2,019	0.034	0.166	0.084	68	6,692	169
High Sb Sulfide – Probable	943	0.034	0.166	0.084	32	3,125	79
<b>Historical Tailings Probable Mineral Reserves</b>	<b>2,962</b>	<b>0.034</b>	<b>0.166</b>	<b>0.084</b>	<b>100</b>	<b>9,817</b>	<b>247</b>
<b>Probable Mineral Reserves</b>							
Oxide – Probable	5,235	0.016	-	0.025	83	-	133
Low Sb Sulfide – Probable	65,980	0.045	0.013	0.045	2,988	16,656	2,958
High Sb Sulfide – Probable	15,632	0.057	0.422	0.135	894	132,031	2,104
Transition – Probable	28,483	0.030	-	0.043	855	-	1,236
<b>Total Probable Mineral Reserves (3)</b>	<b>115,330</b>	<b>0.042</b>	<b>0.422</b>	<b>0.056</b>	<b>4,819</b>	<b>148,686</b>	<b>6,431</b>

Notes: **1.** Mineral Reserves are reported from the reference point of delivery to the processing plant. These reserves are subject to variable metallurgical recoveries for gold, silver, and antimony depending on the host rock, process flowsheet, and product (i.e., doré bullion or antimony concentrate). The average recoveries into bullion are 87% for gold and 13% for silver. The average recoveries into antimony concentrate are 68% for antimony, 0.1% for gold, and 2% for silver. **2.** Historical Tailings ore type classification is proportional to the pit-sourced mill feed during Historical Tailings processing. **3.** Metal prices used for Mineral Reserves: \$1,600/oz Au, \$20.00/oz Ag, \$3.50/lb Sb. **4.** Antimony recovery is expected from High Sb Sulfide ore only and contains 132,031 klbs of Sb.

**Table 1-5: Probable Mineral Reserves Summary (Metric Units) at the end of the fiscal Year 2025 based on \$1,600/oz gold**

Deposit	Tonnage	Average Grade			Total Contained Metal		
		Gold	Antimony	Silver	Gold	Antimony <sup>(3)</sup>	Silver
Metric Units	(kt)	(g/t)	(%)	(g/t)	(t)	(t)	(t)
<b>Yellow Pine</b>							
Low Sb Sulfide – Probable	37,615	1.69	0.009	1.56	63.7	3,565	58.5
High Sb Sulfide – Probable	10,232	2.04	0.460	4.69	20.9	47,064	48.0
<b>Yellow Pine Probable Mineral Reserves</b>	<b>47,847</b>	<b>1.77</b>	<b>0.106</b>	<b>2.23</b>	<b>84.5</b>	<b>50,629</b>	<b>106.5</b>
<b>Hangar Flats</b>							
Low Sb Sulfide – Probable	5,167	1.34	0.018	1.65	6.9	954	8.5
High Sb Sulfide – Probable	3,095	1.92	0.369	4.85	5.9	11,407	15.0
<b>Hangar Flats Probable Mineral Reserves</b>	<b>8,262</b>	<b>1.56</b>	<b>0.150</b>	<b>2.85</b>	<b>12.9</b>	<b>12,361</b>	<b>23.5</b>
<b>West End<sup>(1)</sup></b>							
Oxide – Probable	4,749	0.54	-	0.87	2.6	-	4.1
Low Sb Sulfide – Probable	15,242	1.33	-	1.30	20.2	-	19.7
Transitional – Probable	25,839	1.03	-	1.49	26.6	-	38.5
<b>West End Probable Mineral Reserves</b>	<b>45,830</b>	<b>1.08</b>	<b>-</b>	<b>1.36</b>	<b>49.3</b>	<b>-</b>	<b>62.3</b>
<b>Historical Tailings<sup>(1)</sup></b>							
Low Sb Sulfide – Probable	1,832	1.16	0.166	2.86	2.1	3,036	5.2
High Sb Sulfide – Probable	855	1.16	0.166	2.86	1.0	1,417	2.4
<b>Historical Tailings Probable Mineral Reserves</b>	<b>2,687</b>	<b>1.16</b>	<b>0.166</b>	<b>2.86</b>	<b>3.1</b>	<b>4,453</b>	<b>7.7</b>
<b>Probable Mineral Reserves</b>							
Oxide – Probable	4,749	0.54	-	0.87	2.6	-	4.1
Low Sb Sulfide – Probable	59,856	1.55	0.013	1.54	92.9	7,555	92.0
High Sb Sulfide – Probable	14,181	1.96	0.422	4.61	27.8	59,888	65.4
Transitional – Probable	25,839	1.03	-	1.49	26.6	-	38.5
<b>Total Probable Mineral Reserves<sup>(2)</sup></b>	<b>104,625</b>	<b>1.43</b>	<b>0.064</b>	<b>1.91</b>	<b>149.9</b>	<b>67,443</b>	<b>200.0</b>

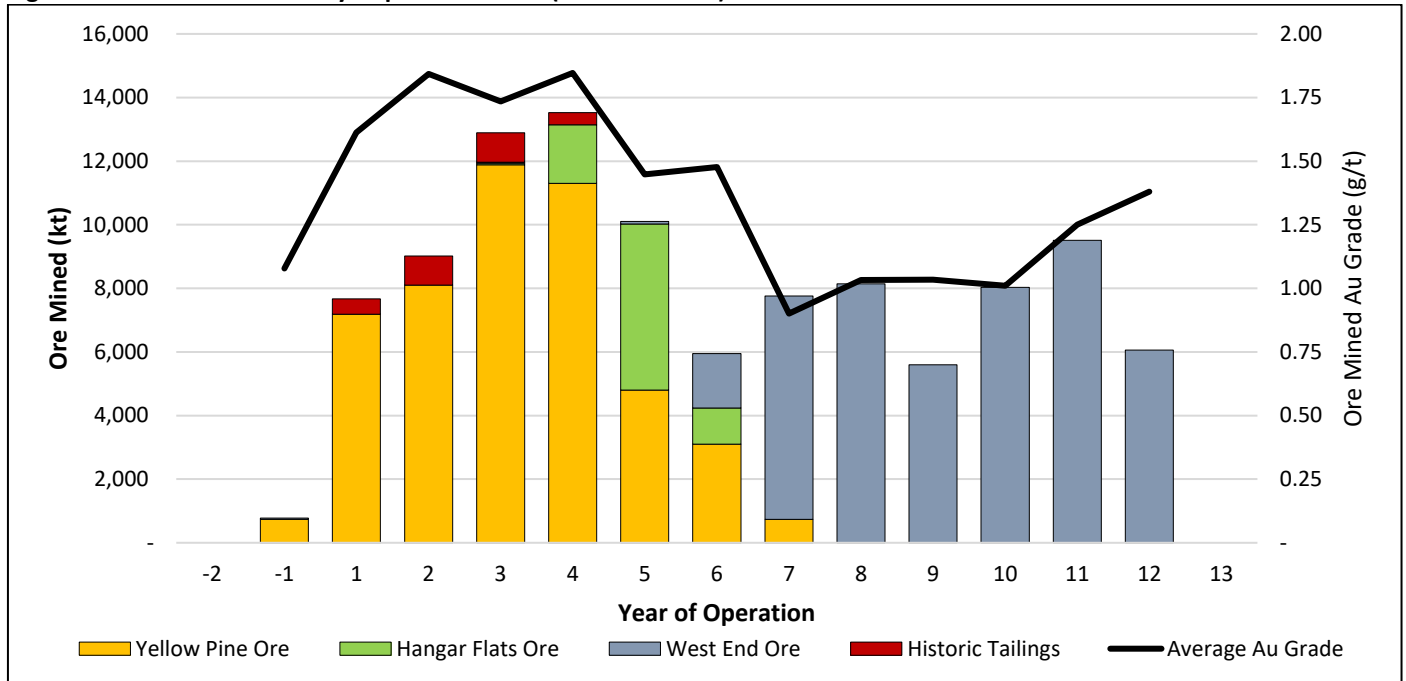
Notes: 1. Historical Tailings ore type classification is proportional to the pit-sourced mill feed during Historical Tailings processing. 2. Metal prices used for Mineral Reserves: \$1,600/oz Au, \$20.00/oz Ag, \$3.50/lb Sb. 3. Antimony values are reported only for ore scheduled in the mine plan that is classified as High Sb Sulfide. 4. Mineral Reserves are reported from the reference point of delivery to the processing plant. These reserves are subject to variable metallurgical recoveries for gold, silver, and antimony depending on the host rock, process flowsheet, and product (i.e., doré bullion or antimony concentrate). The average recoveries into bullion are 87% for gold and 13% for silver. The average recoveries into antimony concentrate are 68% for antimony, 0.1% for gold, and 2% for silver. 5. All numbers have been rounded in above table and may not sum correctly

## 1.8 Mining Methods

The mine plan developed for the Project incorporates the mining of the three in situ deposits: Yellow Pine, Hangar Flats, and West End and their related development rock; and the re-mining of Historical Tailings along with its cap of spent heap leach ore. The general sequence of open pit mining would be Yellow Pine deposit first, Hangar Flats deposit second, and West End deposit last, as shown on Figure 1-1. This sequence generally progresses from mining highest value ore to lowest value ore and accommodates the sequential backfilling the Yellow Pine and Hangar Flats open pits with material mined from West End open pit. Lower grade ore extracted during mining of the three pits is stockpiled

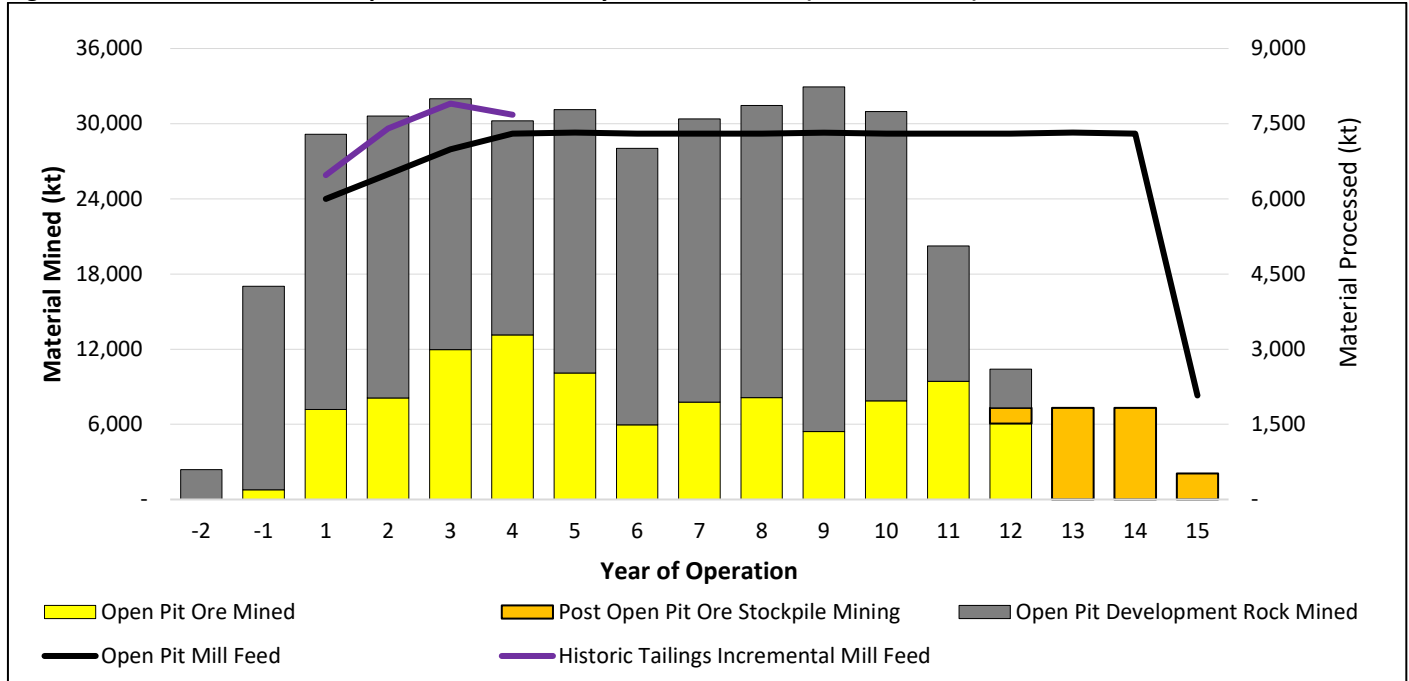
and then processed during the later operating life of the mill. The spent ore that overlies the Historical Tailings would be used as tailings storage facility (TSF) construction material and is treated as stripping. Most development rock would be sent to one of five destinations: the TSF embankment, the TSF buttress, the Yellow Pine pit as backfill, the Hangar Flats pit as backfill, or the Midnight area within the West End pit as backfill. The Historical Tailings would be hydraulically transferred to the process plant during the first four years of operation, concurrent with mining ore from the Yellow Pine open pit.

Figure 1-1: Ore Mined by Deposit and Year (Metric Tonnes)



Mining at the Project would be accomplished using conventional open pit hard rock mining methods with a production fleet consisting of two 28-yd<sup>3</sup> hydraulic shovels, two 28-yd<sup>3</sup> wheel loaders, and a fleet of approximately eighteen 150 ton haul trucks. Mining is planned to deliver 7.30 Mt of ore to the crusher per year (nominally 20 kt per day) and approximately 22.1 Mt of development rock per year to Development Rock Storage Facility (DRSF). Pre-stripping the open pits would begin two years prior to ore processing and open pit mining would continue until year 12 of operation. Once open pit mining is completed, the mining fleet will continue to provide ore to the mill from ore stockpiles until approximately the end of the first quarter in year 15 (Figure 1-2). A total of 102 million metric tonnes of ore would be mined from the three open pits and an additional 2.7 million metric tonnes of historic tailings would be mined. Approximately 254 Mt of development rock would be mined from the three open pits for a total of 356 million metric tonne mined from the open pits and an average strip ratio (waste:ore) of 2.43.

Figure 1-2: Ore and Development Rock Mined by Year and Source (Metric Tonnes)



Long-term lower-grade ore stockpiles have been incorporated into the mine plan located for the most part within the footprint of the TSF buttress, thereby minimizing their incremental disturbance. The primary benefits to adding ore stockpile capacity are increased potential to optimize process ore feed value throughout the mine life, improved utilization of the Mineral Resource, reduced peak water treatment needs, reduced development rock tonnage and associated mining impacted water management. The stockpiling strategy is particularly significant during the first half of the mine life when Yellow Pine high value ore is mined at a rate greater than process plant throughput capacity. If stockpile capacity is not available, either the period-based cut-off value must increase resulting in ore converted to waste, or the mining rate reduced to align with process plant throughput capacity resulting in deferred access to high-value ore deeper in the open pit. The addition of long-term ore stockpiles allows for relatively high value ore mined from Yellow Pine open pit to be stockpiled and made available to process when lower value ore is being mined in West End open pit (Figure 1-3 and Figure 1-4).

Figure 1-3: Ore Stockpile Balance (Metric Tonnes)

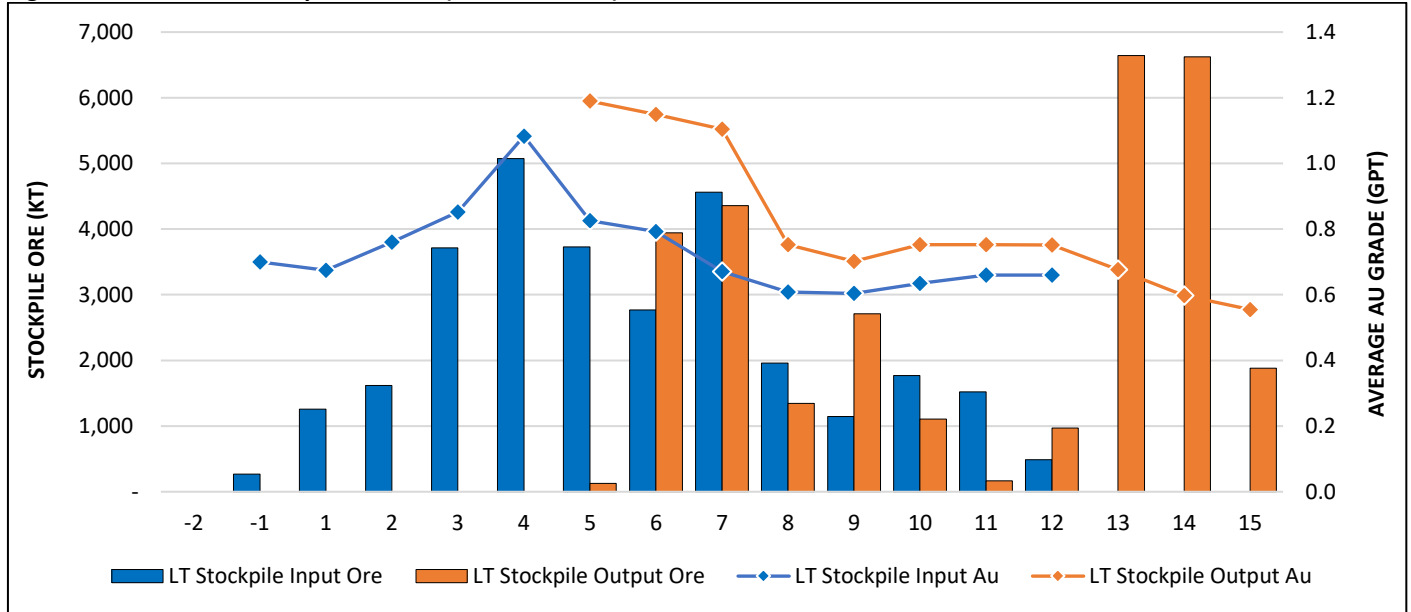
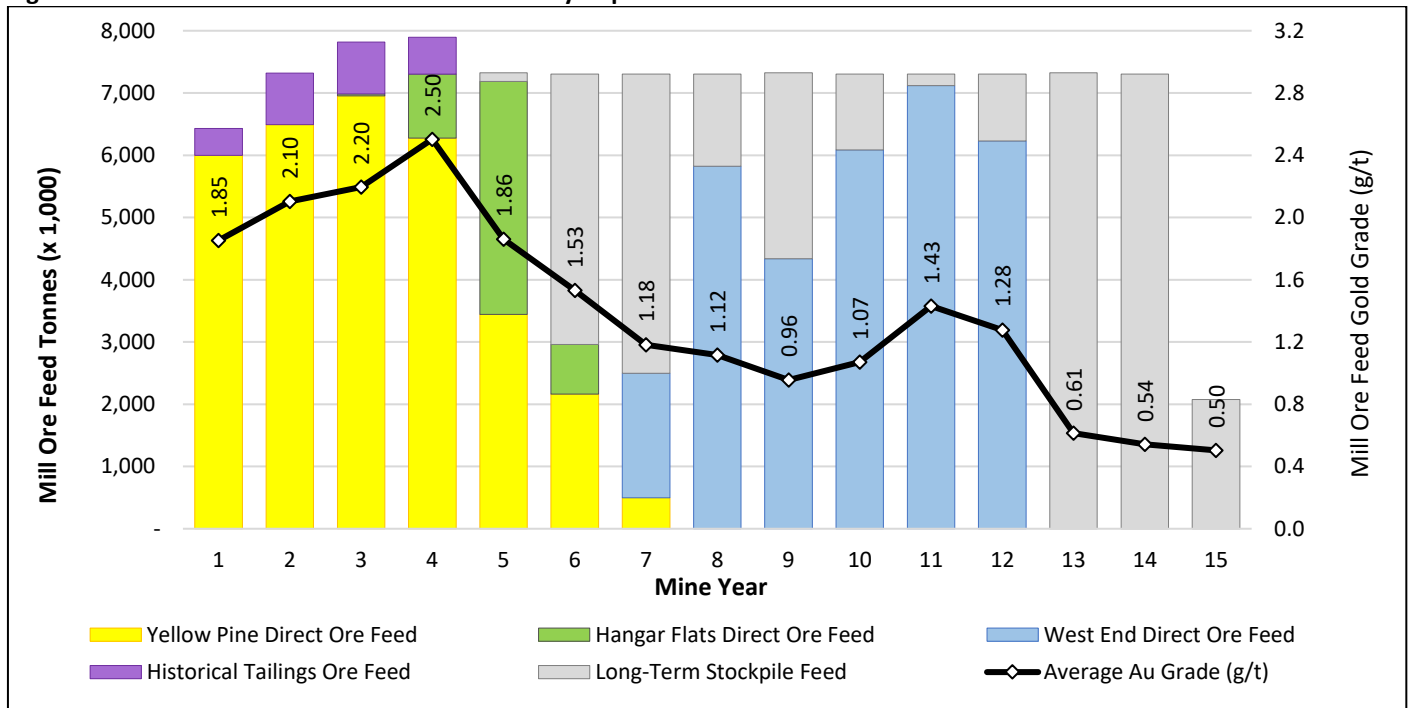


Figure 1-4: Mill Feed and Gold Head Grade by Deposit and Year



A summary of the mining statistics by ore type is provided in Table 1-6.

**Table 1-6: Life-of-Mine Mining Statistics**

General Life-of-Mine Production	Unit	Value
Open Pit Development Rock Mined	Mt	254
Open Pit Ore Mined	Mt	102
Open Pit Strip Ratio	waste:ore	2.43
Historical Tailings Mined	Mt	2.7
Mining Cost	\$/Mt	3.44
Daily Mill Throughput	kt/day	20.0
Annual Mill Throughput	Mt/yr	7.30
Mine Life	years	12
Mill Life	years	14.25

Life-of-Mine Production	Unit	Total Ore	Oxide Ore	High Sb Ore	Low Sb Ore	Transition Ore
Tonnage Milled	Mt	104.3	4.5	14.2	59.9	25.8
Contained Au Mined	koz	4,815	78	894	2,988	855
Contained Ag Mined	koz	6424	126	2,103	2,959	1,236
Contained Sb Mined	klb	148,683	-	131,988	16,695	-
Contained Au Grade Mined	g/t	1.44	0.54	1.96	1.55	1.03
Contained Ag Grade Mined	g/t	1.91	0.88	4.61	1.54	1.49
Contained Sb Grade Mined	%	0.065	-	0.422	0.013	-

## 1.9 Recovery Methods

The process flowsheet for most of the Yellow Pine, Hangar Flats, and West End material uses bulk sulfide flotation to maximize recovery of gold to a sulfide concentrate amenable to treatment by pressure oxidation for materials assaying less than 0.1% antimony. High antimony materials would be first subject to a selective antimony flotation process, thereby producing a shippable antimony concentrate, with a gold-bearing bulk sulfide rougher concentrate to be floated from the antimony flotation tailings. Some of the oxidized West End ores are more transitional or free milling in nature, and an ore leaching process was developed to treat these materials. Testing was also conducted on samples of the historical (Bradley) tailings. This work showed the historical tailings could be processed using the same flowsheet as, and most likely as a blend with, fresh sulfide ores. Metallurgical testing programs conducted to support process development are detailed in Section 10.

Projected gold flotation recoveries for low-antimony materials to a concentrate assaying 6.5% sulfur are estimated at 93.8% for Yellow Pine and 92.1% for Hangar Flats. Silver recoveries are estimated as 90.1% for Yellow Pine and 89.1% for Hangar Flats. Gold and silver flotation recoveries are independent of gold or silver grade. For high-antimony materials from the Yellow Pine deposit, gold misplacement to the antimony concentrate and overall gold recoveries to POX are functions of pyritic sulfur grade and gold recoveries are estimated to range from 83.6% to 95.5%. Constant gold and silver recoveries are projected for Hangar Flats high-antimony material at 89.7% for gold and 43.2% for silver. West End sulfide material is highly refractory while transition material has a significant free milling gold content. Sulfide

material will be processed by flotation, concentrate POX and cyanide leaching of the concentrate; transition material will be treated similarly, however the flotation tailings will also be leached; oxide materials will just be leached.

Pressure oxidation testing results demonstrated that neutralization of acid inside the autoclave, or “*in-situ* acid neutralization” (ISAN) facilitates stabilization of arsenic in the POX residue. Neutralization of acid inside the autoclave was accomplished by adding ground limestone slurry in the POX feed to control free acid and sulfate concentrations and limit the formation of jarosite and basic iron sulfates. Higher ferric concentrations available for scorodite formation and lower sulfate concentrations were found to inhibit pitticite (an unstable arsenic compound) formation. However, subsequent environmental geochemical testing completed on commingled flotation and detoxified cyanide leach tailings from the pilot plant indicated that arsenic destabilized at some point downstream of the POX process. Further ISAN POX tests targeting free acid of 8 to 15 mg/L of H<sub>2</sub>SO<sub>4</sub>, followed by an atmospheric arsenic precipitation (AAP) stage where the slurry was allowed to cure at an elevated temperature (92°C) and a retention time of 4 to 5 hours produced a stable scorodite precipitate (FeAsO<sub>4</sub>·2H<sub>2</sub>O). The slurry is slowly neutralized during the cure where limestone slurry is added to the POX residue to achieve a pH of approximately 2.

The POX testing confirmed consistent gold recoveries in the 96.5-99.0% range.

The Project’s process plant has been designed to process sulfide, transitional and oxide material from the Yellow Pine, Hangar Flats, and West End deposits. The processing facility is designed to treat an average of 22,046 st/d (20,000 Mt/d). Additionally, the Historical Tailings would be reprocessed early in the mine life to recover precious metals and antimony, and to provide space for the TSF embankment and buttress.

The process operations include crushing, grinding, antimony and gold flotation, pressure oxidation, POX leaching and carbon-in-pulp (CIP) recovery, cyanide detoxification, carbon handling and pressure stripping, precious metal electrowinning, mercury retort removal, and doré bar production. Auxiliary operations include a plant to supply oxygen to the autoclave, and limestone mining operations including crushing, grinding, and calcining to provide limestone slurry and milk of lime for neutralization and pH adjustment for the process. A leaching, CIP recovery, and detoxification process is planned for late in the mine life to process crushed and ground oxide material and recover gold from the tailings of transitional (mixed oxide-sulfide) sulfide flotation material. Two finished products from the Stibnite Gold Project ore processing facility will be doré bars and antimony concentrate.

The comparison of recovery and payable metal between the 2022 TRS and this TRS is summarized in Table 1-7. The Antimony metal produced in this TRS production plan is lower compared with the 2021 TRS due to revised recovery models that align better with the bench scale test work data.

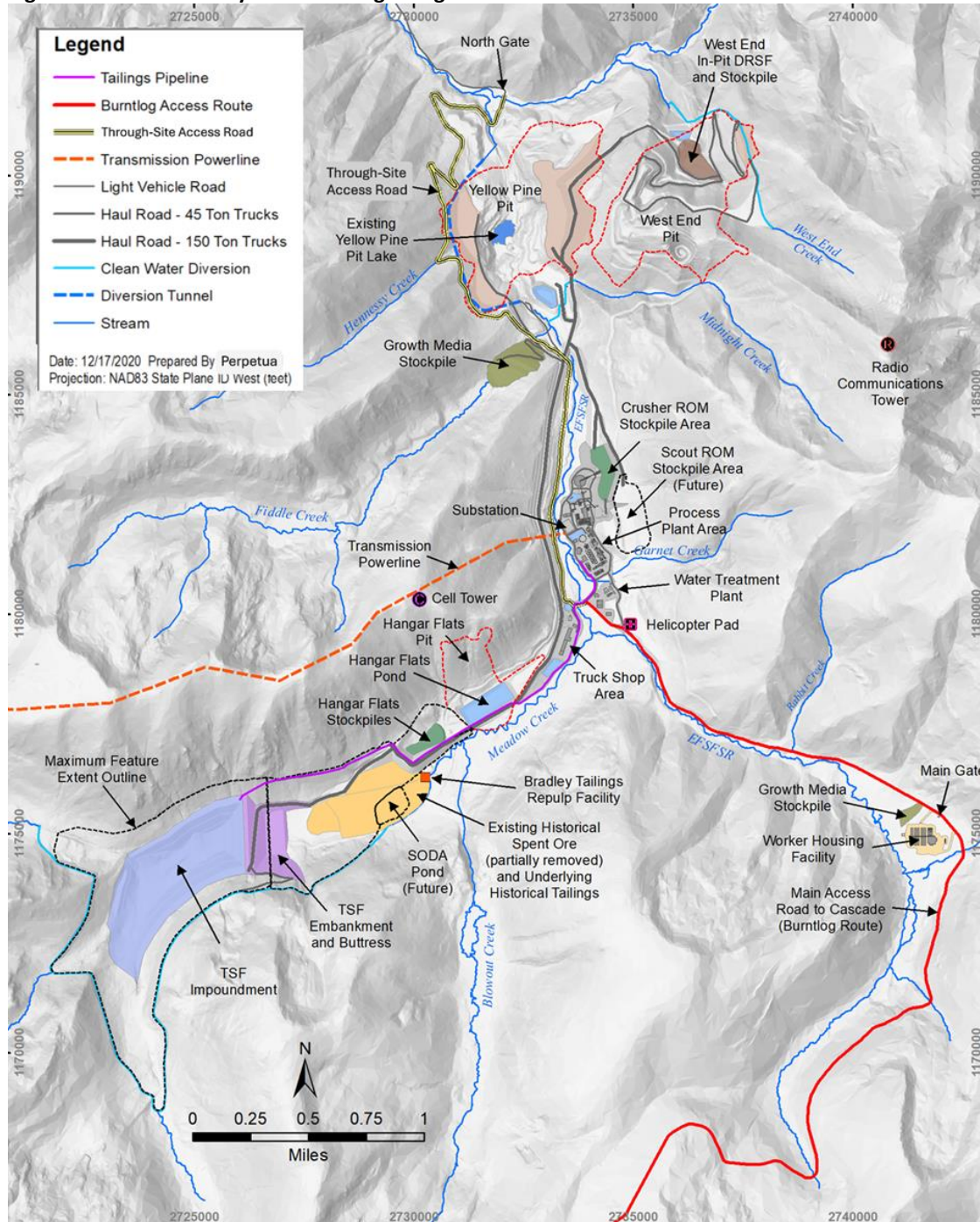
**Table 1-7: Comparison of Projected Recovered and Payable Metal**

	Units	Metal Recovered 2022 TRS	Metal Recovered (this TRS)	Metal Payable 2022 FS	Metal Payable (this TRS)
Antimony – Sb Concentrate	Mlbs	115.3	106.5	78.4	90.5
Gold – Sb Concentrate	koz	20.4	32.0	3.7	7.5
Silver – Sb Concentrate	koz	827	647	134	85
Gold – Doré	koz	4,217	4,191	4,196	4,187
Silver - Doré	koz	852	515	835	505

## 1.10 Infrastructure

The Project will require upgrades to existing offsite infrastructure such as roads and power supply, as well as onsite and offsite infrastructure additions such as worker accommodations, water management systems, and tailings management systems. Section 15 of this Report provides a complete list and detailed descriptions of the infrastructure upgrades and additions required for the Project; provided below are summaries of some select key infrastructure. Figure 1-5 provides a general overview of the mine site at the beginning of the mine life.

Figure 1-5: Site Layout at the Beginning of Mine Life



### 1.10.1 Site Access

The site is currently accessed by the Stibnite Road, National Forest (NF-412), from the village of Yellow Pine, with three alternative routes up to that point. Alternative access via the Burntlog Route was selected over several other possible alternatives because it provides safer year-round access for mining operations and has lesser environmental impacts, reducing the proximity of roads to major fish-bearing streams, and this route respects the advice and privacy of community members close to the Project location. The route originates from the intersection of Highway 55 and Warm Lake Road and is approximately 71 miles long. The route consists of 34 miles of existing highway (Warm Lake Road), 23 miles of upgraded road, and 14 miles of new road. The 37 miles of new and upgraded road has a design speed of 20 mph, maximum 10% grade, a 21-foot width, and intermediate-sized tractor trailer loading criteria. A maintenance facility would be constructed along the route. Additional details on the Burntlog Route and maintenance facility are provided in Section 15 of this Report.

### 1.10.2 Logistics Facility

Offsite administrative offices, transportation hub, and warehousing needed for the Project, referred to as Stibnite Gold Logistics Facility (SGLF), will be located on private land in Valley County, with easy access to State Highway 55. The administration building includes offices for managers, safety and environmental services, human resources, purchasing, and accounting personnel, as well as conference rooms, a break room, and restrooms. Operating supplies for the mine will be staged and consolidated at the SGLF to reduce traffic to the site.

### 1.10.3 Power Supply and Transmission

Grid power was selected as the preferred primary power supply for the Project based on its low operating cost, low unit prices, and existing clean energy portfolio of Idaho Power Company (IPCo). The existing grid network would need to be upgraded to provide the power necessary to support the 65-megawatt (MW), 72MVA load.

The upgrades required to integrate the Project load into the IPCo network include an increased 230/138 kV transformer capacity; approximately 41.3 miles of 69 kV lines upgraded to 138 kV; approximately 21.0 miles of 12.5 kV line upgraded to 138 kV line; and approximately 9.2 miles of new 138 kV line. Measures to increase the voltages on the IPCo system include new or upgraded 138 kV substations at McCall, Lake Fork, Cascade, Scott Valley, Warm Lake, Thunderbolt Drop, Johnson Creek, and Stibnite. IPCo would need to resupply small consumers between the Johnson Creek substation and users to the south via an underground 12.5 kV replacement line. Two route modifications were identified during public outreach and were incorporated into the design. The key reasons for the modifications were to avoid wetland disturbance and impacts to private property.

The 138-kV line would be routed to the Project site's main electrical substation where transformers would step the voltage down to the distribution voltage of 34.5 kV. The main substations will be redundant dual 138 to 34.5 kV transformers to prevent loss of power due to failure.

#### 1.10.4 Worker Accommodations

Perpetua Resources has an existing on-site worker housing facility with a capacity for approximately 60 workers. A temporary housing facility is currently under construction and is designed to accommodate up to 140 personnel to support early-works construction activities at the Project site.

Since the Project is in a relatively remote area of Idaho, accommodation will be required for construction and operations personnel. The location selected for the worker housing facility (WHF) is approximately 1½ miles southeast of the confluence of the EFSFSR and Meadow Creek, just off the existing Thunder Mountain Road.

The new WHF and ancillary temporary lodging facilities will house the construction workforce. The existing exploration housing facility will be decommissioned and demobilized once the new worker accommodations are built and commissioned.

#### 1.10.5 Water Management

Perpetua Resources will develop a water management system that protects or improves water quality in Project-area streams and provides water for ore processing, fire protection, exploration activities, surface mining (dust control), and potable water needs.

The key water management consideration for the Project site is the large amount of snowmelt runoff during the months of April through June, making spring melt the critical time for water management, storage, and treatment. In general, surface water that comes in contact with materials that have the potential to introduce mining- and process-related contaminants (contact water) is kept separate from surface water that originates from undisturbed, uncontaminated ground (non-contact water). This is accomplished by diverting clean water around mine facilities and collecting and reusing, evaporating, or treating and discharging contact water.

The water needed for ore processing is planned to come from meteoric and tailings consolidation water reclaimed from the TSF, water from pit dewatering, contact water, groundwater wells, and a surface intake near the upstream portal of the EFSFSR diversion tunnel. Contact water from the pits, stockpiles, TSF buttress, truck shop, ore processing facilities, and legacy materials exposed during construction would be collected in lined ponds or in-pit sumps for later use in ore processing, dust control, or treatment for discharge. Excess dewatering water not used for ore processing would be treated, if required, and discharged to a surface outfall.

Major water diversions include construction of a tunnel and fishway to divert the EFSFSR and provide fish passage around the Yellow Pine pit, and surface diversions of Meadow Creek at the TSF, TSF Buttress, and Hangar Flats pit. Other smaller scale diversions are provided to intercept hillslope runoff and minor tributaries at the TSF, TSF Buttress, Fiddle GMS, Bradley Tailings reprocessing operation, open pits, and process plant area.

#### 1.10.6 Tailings Management

The Project would produce approximately 120 million short tons of tailings solids. The tailings would contain trace amounts of cyanide and metals (including arsenic and antimony), so a fully lined containment facility utilizing a composite liner with leak collection/recovery system will be used to isolate the tailings and process water.

The TSF would consist of a rockfill embankment, a fully lined impoundment with leak collection/recovery system, and appurtenant water management features including a surface diversion of Meadow Creek and its tributaries around the facility. The TSF Buttress located immediately downstream of, and abutting against, the TSF embankment would substantially enhance embankment stability. Historical spent heap leach ore would be reused in TSF construction, in locations isolated from interaction with water, but the majority of the rockfill would be development rock sourced from the open pits. Design criteria were established based on the facility size and risk using applicable dam safety and water quality regulations and industry best practice for the TSF embankment on a standalone basis; the addition of the buttress substantially increases the safety factor for the design. The TSF impoundment, embankment, and associated water diversions would occupy approximately 423 acres at final buildout, with an approximately 480-foot ultimate height. The TSF location relative to other Project features is shown on Figure 1-5.

Table 1-8 summarizes TSF design features.

**Table 1-8: TSF Design Summary**

Design Aspect	Description
Underdrains	Mains: perforated pipe and gravel in geotextile-wrapped trenches. Laterals: DRAINTUBE® geocomposite drains.
Subgrade	Reworked and compacted in situ materials, or minimum 12 inches of liner bedding fill.
Liner Subbase	Geosynthetic clay liner.
Secondary Liner / Leak Collection and Recovery System (LCRS)	60-mil HDPE MicroDrain® installed drainage studs facing upwards
Primary Liner	60-mil HDPE geomembrane, double-side textured.
Overliner drains	DRAINTUBE® geocomposite drains.
Leak Detection	Sampling of LCRS, underdrains, and downgradient monitoring wells.
Deposition Strategy	Subaerial; depositing from perimeter of impoundment and embankment with pool on south (early) then east (later) side near, but not normally in contact with embankment.
Reclaim	Pumped from barge (vertical turbine pumps).
Excess Water Disposal	Consumption in process (operations), mechanical evaporators (operations and closure), water treatment and discharge (closure).
Diversions	Surface channels, in rock cut or lined with geosynthetics (e.g., concrete cloth, HydroTurf®) or riprap and GCL. Parallel or embedded pipe for low flows (stream temperature mitigation measure).

### 1.11 Metal Prices

The economic analysis completed for this TRS assumed that gold and silver production would be in the form of doré with appropriate deductions for payabilities, refining, transport charges and royalties. The metal prices selected for the four economic cases in this Report are shown in Table 1-9.

**Table 1-9: Assumed Metal Prices**

Case	Metal Prices			Basis
	Gold (\$/oz)	Silver (\$/oz) <sup>1</sup>	Antimony (\$/lb) <sup>1</sup>	
Case A	\$3,250	\$40.00	\$10.00	Case corresponds to long-term average metal price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case B	\$4,000	\$40.00	\$10.00	Case corresponds to 4-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case C	\$4,500	\$40.00	\$10.00	Case corresponds to 3-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case D	\$5,000	\$40.00	\$10.00	Case corresponds to recent spot gold pricing in Q1 2026, and long-term average price forecasts for silver and antimony

Notes: 1. The company has elected to use flat antimony (\$10/lb) and silver (\$40/oz) prices in its analysis, which reflect long-term consensus estimates.

## 1.12 Environmental Studies, Permitting and Social/Community Impact

### 1.12.1 Environmental Data Collection and Analyses

An extensive dataset demonstrating historical and existing conditions exists for the Project site, including data collected for the USFS, EPA, US Fish and Wildlife Service, National Marine Fisheries Service, USGS, and Idaho Departments of Environmental Quality, Water Resources, and Lands.

Assessments determined that there were a number of pre-existing significant and moderate recognized environmental conditions and overall water quality in all drainages was adversely affected due to naturally occurring mineralization and impacts associated with historical mining activities by third parties unrelated to Perpetua Resources.

Perpetua Resources' environmental resource baseline data collection program was initiated in 2011, and the initial suite of baseline monitoring reports were submitted in 2017 to regulators. Since then, additional monitoring data have been collected and provided to the agencies and supplemental environmental resource studies. Baseline data from all sources have informed and refined environmental modeling and Project design (including mine plan refinements and modifications) and have been used to develop mitigation and monitoring plans.

Perpetua Resources and its contractors developed predictive models for use in environmental evaluation and feasibility level engineering studies. Environmental models include air emissions modeling, a regional hydrogeologic/groundwater flow model and meteoric water balance, stream and pit lake network temperature model (SPLNT), geochemistry / site-wide water chemistry (SWWC) loading model, and site-wide water balance (SWWB). The suite of models facilitated environmental analysis, evaluation of alternate design scenarios, design trade-offs, and compliance with environmental review and permitting requirements. Environmental modeling has been a key tool for advanced engineering and identification of Project modifications and appropriate mitigation measures to reduce cost and environmental impact.

The seasonal water balance excess and predicted leaching of arsenic and antimony from mined materials lead to a need to dispose of water during operations which may be above certain numeric water quality criteria when they are applicable (the numeric water quality criteria may not be legally applicable in all circumstances where they relate to legacy conditions). Based on measured and predicted water quality data, Perpetua Resources has developed plans to treat certain waters before discharges to surface waters during operations. In closure, once other facilities are reclaimed, models predicted that TSF water quality would require treatment for up to 42 years, at which time water treatment would no longer be necessary. Mechanical evaporation would be used along with active water treatment to manage excess water at site.

### 1.12.2 Permitting

Approval of the Project required completion of the Project Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA), which requires federal agencies to study and consider the probable environmental impacts of certain major federal actions before making a decision on such actions. The Final EIS resulted in a final Record of Decision (ROD) issued by the Forest Service in January 2025. The Final ROD approves, with various conditions and requirements, the 2021 Modified Mine Plan for the Project. The U.S. Army Corps of Engineers (USACE) issued its Clean Water Act Section 404 permit for the Project and an associated ROD in May 2025. These RODs from the Forest Service and USACE were followed in October 2025 by the Forest Service's approval in October 2025 of the Plan of Operations for the Project. After the Forest Service approved the Plan of Operations, Perpetua also posted construction phase financial assurance for the Project in Q4 2025 in accordance with the approvals of the relevant federal and state agencies.

In addition to federal permits, the Project requires multiple state and local permits and other regulatory approvals. State and local permitting processes were mostly completed concurrent with, or shortly after, preparation of the EIS and Forest Service's issuance of the ROD, although certain regulatory permit reviews remain ongoing as of December 31, 2025. The state and local permits include water discharges (industrial and sanitary IPDES), air quality, cyanidation, water rights, dam safety, mine and reclamation, building permits, sewer and water systems, among others.

These various federal and state permits and approvals are based on a Project design generally incorporating the 2021 Modified Mine Plan. Section 17 of this Report provides detailed descriptions and the status of each of the permits required prior to construction and operation of the Project.

### 1.12.3 Closure and Restoration

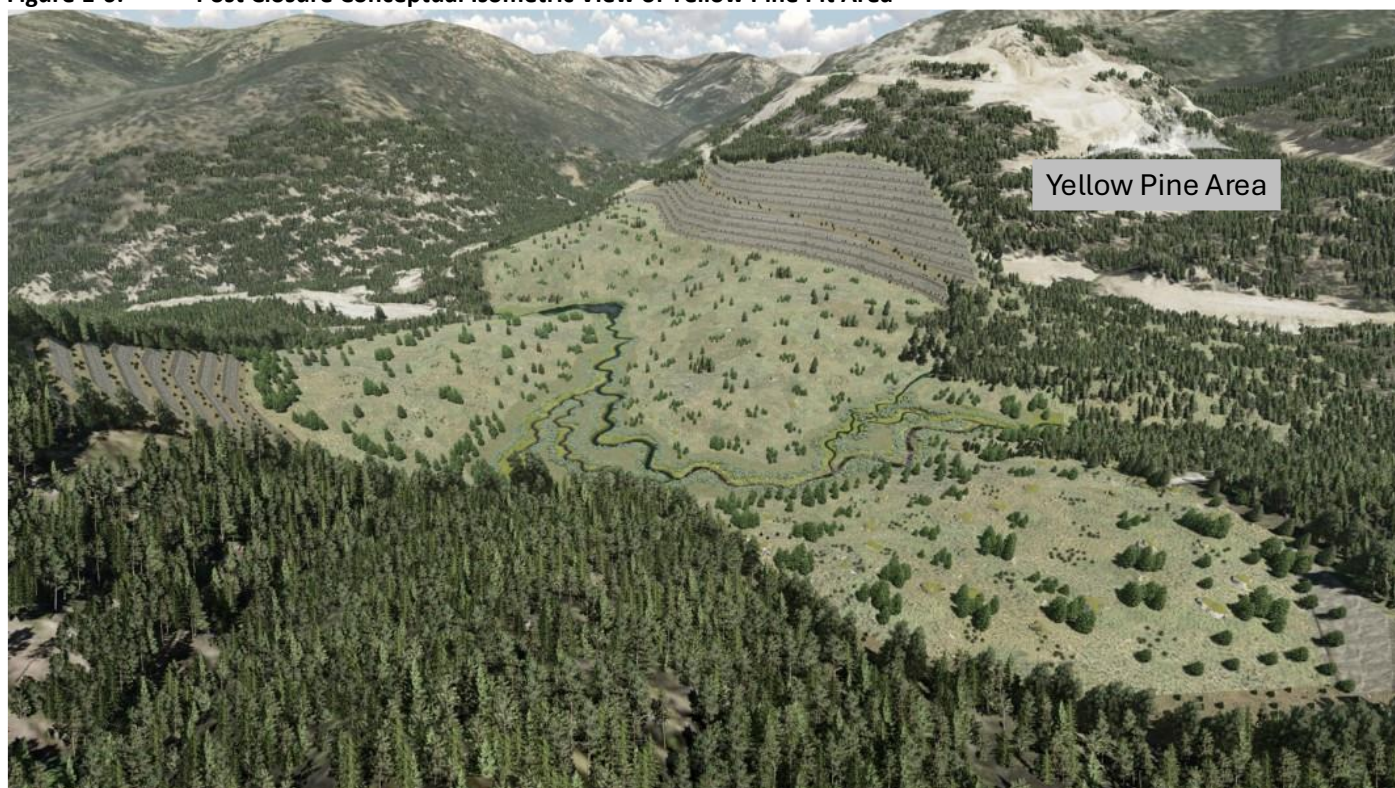
Perpetua Resources has a goal of net benefit to the environment and has focused on several key restoration and mitigation principles. These principles include: conduct activities in an environmentally responsible manner; utilize previously disturbed areas; improve fish passage and habitat; remove, reprocess, or reuse legacy mine wastes to protect water quality; revegetate disturbed or burned areas to improve wildlife habitat and reduce sediment loads; and repair, relocate, or construct new ecologically diverse stream channels and wetlands to mitigate those disturbed by legacy and new mine development.

Perpetua Resources developed closure and restoration plans with the objectives, when practical, to establish a sustainable fishery with enhanced habitat to support natural populations of salmon, steelhead, and bull trout; improve water quality; establish vegetation; and enhance wildlife habitat, all contributing to a self-sustaining and productive

ecosystem. Closure, reclamation and restoration activities are designed to achieve post-mining land uses of wildlife and fisheries habitat and dispersed recreation at the mine site.

Significant components of reclamation and restoration are designed to occur concurrently with operations, including: removing and reprocessing and/or reusing historical tailings, development rock and spent ore; enhancing existing streams; improving water quality; backfilling and reclaiming the Hangar Flats and Yellow Pine (Figure 1-6) pits; stream restoration; and establishing permanent fish passage to the headwaters of the EFSFSR. The remaining closure activities are planned to occur in the first 10 years after operations cease: further improvements to water quality; restoring additional streams, wetlands, and riparian habitat throughout the site; decommissioning onsite infrastructure and facilities; replacing growth media; re-contouring artificial landforms to blend into the landscape; and replanting Project and historical disturbance areas. Closure maintenance, water treatment, and long-term monitoring are anticipated to continue longer to protect water quality gains and ensure that closure features are performing as intended.

**Figure 1-6: Post Closure Conceptual Isometric View of Yellow Pine Pit Area**



Source: Perpetua Resources, 2024

#### 1.12.4 Social and Community Impacts

Perpetua Resources' objective is to make the Project a sustainable, and socially and environmentally responsible operation through open communications and accessibility.

Perpetua Resources entered into a Community Agreement in 2018 with the Village of Yellow Pine, the cities of Cascade, Donnelly, New Meadows, Riggins and Council, and Adams and Idaho counties. The Community Agreement established the Stibnite Advisory Council, which brings communities together to discuss the challenges and opportunities presented by the Project; and the Stibnite Foundation, which distributes funds to projects from milestone and future share of profits contributions by Perpetua Resources. Given its regulatory obligations for the Project, Valley County determined it was not in a position to enter into the Community Agreement.

Perpetua Resources respects the sovereign treaty rights of Native American tribes and recognizes the Government-to-Government consultation obligations of the United States under federal statutes and regulations. Three federally recognized tribes - the Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone-Paiute Tribes - were consulted with throughout the permitting process through formal Government-to-Government consultation conducted by the U.S. Forest Service (USFS or Forest Service) and U.S. Army Corps of Engineers (USACE). Separately, Perpetua Resources has engaged with these Tribal entities in various ways and incorporated feedback from these Tribes into the Project design.

### **1.13 Capital and Operating Costs**

Capital expenditures or capital costs (CAPEX) and operating expenditures or operating costs (OPEX) estimates were developed based on Q4 2025, un-escalated U.S. dollars. Vendor quotes were obtained or updated for major equipment to account for inflation or price changes since the 2024 update. Most costs were developed from first principles, although some were estimated based on factored references and experience with similar projects elsewhere. Vendor quotes were obtained for all major equipment and operating consumables. The capital costs exclude reclamation final assurance costs and discretionary corporate costs, including G&A, debt service, and project-related exploration costs incurred during construction.

#### **1.13.1 Capital Costs**

The Project CAPEX estimate includes four components: (1) the initial CAPEX to design, permit, pre-strip, construct, and commission the mine, plant facilities, ancillary facilities, utilities, operations camp, and pre-production on and off site restoration and environmental mitigation; (2) the sustaining CAPEX for facilities expansions, mining equipment replacements, expected replacements of process equipment and ongoing concurrent restoration and environmental mitigation activities during the operating period; (3) working capital to cover delays in the receipts from sales and payments for accounts payable and financial resources tied up in inventory, and (4) closure CAPEX to cover post operations reclamation and restoration and water treatment costs. Initial and working capital are the two main categories that need to be available to construct the Project. Table 1-10 provides a CAPEX summary for the Project.

**Table 1-10: Capital Cost Summary**

Category	Initial Capital \$M	Sustaining Capital, \$M	Closure Costs, \$M	Total, \$M
Mining	183.6	211.4	-	395.0
Process Plant	740.6	93.4	-	834.0
Additional Process Facilities	73.1	-	-	73.1
On-Site Infrastructure	336.3	305.1	-	641.4
Off-Site Infrastructure	395.5	0.4	-	395.9
Project Indirects	180.3	-	-	180.3
Project Delivery	233.5	-	-	233.5
Project Owner Team Costs	231.7	112.3	118.1	462.1
Taxes	9.2	-	-	9.2
Contingency	191.9	44.3	-	236.2
<b>Subtotal</b>	<b>2,575.8</b>	<b>766.9</b>	<b>118.1</b>	<b>3,460.7</b>
Pre-Production Revenue <sup>1</sup>	-52.1	-	-	-52.1
<b>Adjusted Total \$M</b>	<b>2,523.7</b>	<b>766.9</b>	<b>118.1</b>	<b>3,408.7</b>

1. Revenue derived from doré sales net of costs of sale assumed to occur prior to start of commercial production.

### 1.13.2 Operating and All-In Costs

The Project OPEX estimate includes mine operating costs, process plant operating costs, and mine level general and administrative (G&A) costs. Cash costs, expressed in dollars per short ton (\$/st) milled or dollars per troy ounce of gold (\$/oz Au) produced, are typically expressed before and after by-product credits (from antimony concentrate sales). Total cash costs include smelting and refining charges, transportation charges, and royalties. The All-In Sustaining Costs (AISC) include total cash costs and sustaining CAPEX. The All-In Costs (AIC) include non-sustaining CAPEX, and closure and reclamation CAPEX. A summary of these Project costs is presented in Table 1-11. The details that comprise the OPEX are provided in Section 18 of this Report.

**Table 1-11: Operating Cost, AISC and AIC Summary**

Total Production Cost Item	Years 1-4		LOM	
	(\$/st milled)	(\$/oz Au)	(\$/st milled)	(\$/oz Au)
Mining	14.13	248	10.78	295
Processing	14.15	249	14.00	383
G&A	4.55	77	4.55	125
<b>Cash Costs Before By-Product Credits</b>	<b>32.83</b>	<b>574</b>	<b>29.32</b>	<b>803</b>
By-Product Credits	-18.47	-324	-8.10	-222
<b>Cash Costs After By-Product Credits</b>	<b>14.36</b>	<b>250</b>	<b>21.25</b>	<b>581</b>
Royalties	3.24	56	2.36	65
Refining and Transportation	0.27	5	0.15	4
<b>Total Cash Costs</b>	<b>17.86</b>	<b>312</b>	<b>23.76</b>	<b>650</b>
Sustaining CAPEX	10.68	188	6.67	184
<b>All-In Sustaining Costs</b>	<b>28.54</b>	<b>498</b>	<b>30.42</b>	<b>833</b>
Reclamation and Closure <sup>(1)</sup>	-	-	<b>1.03</b>	<b>28</b>
Initial (non-sustaining) CAPEX <sup>(2)</sup>	-	-	<b>22.31</b>	<b>614</b>
<b>All-In Costs</b>	<b>-</b>	<b>-</b>	<b>53.76</b>	<b>1,476</b>

Notes: 1. Defined as non-sustaining reclamation and closure costs in post-operations period. 2. Initial Capital includes capitalized preproduction. 3. st=short tons.

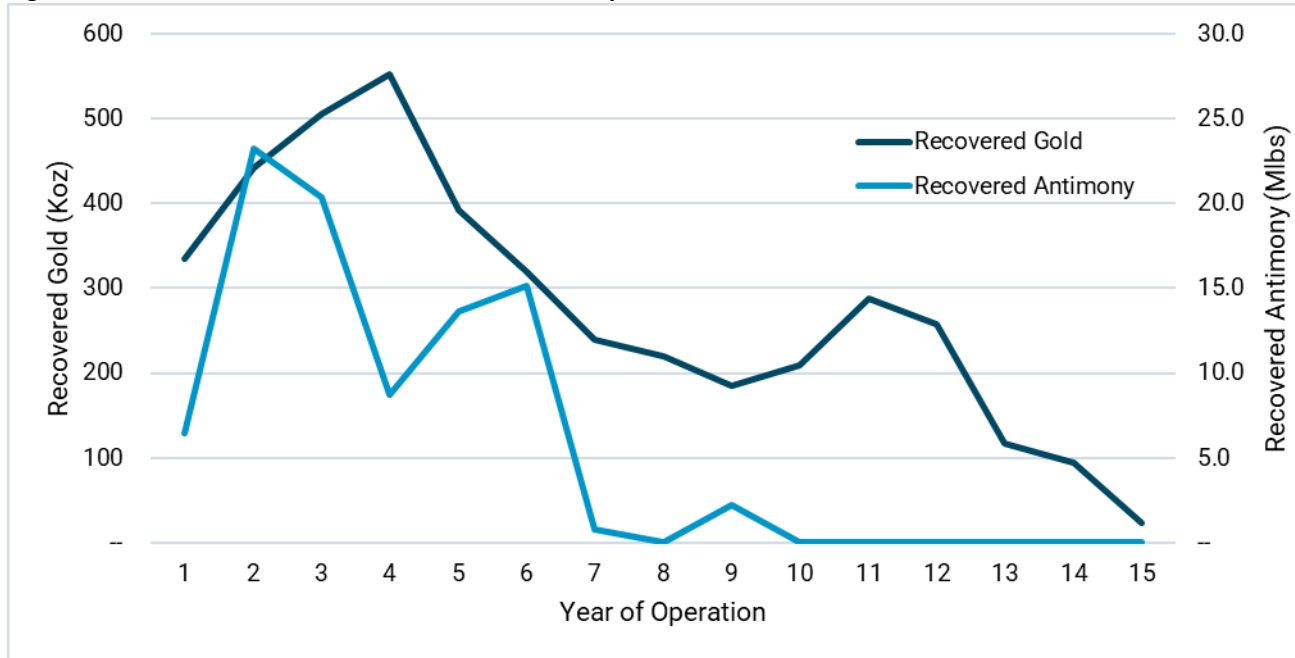
### 1.13.3 Metal Production

Recovered metal production by deposit is summarized in Table 1-12 and illustrated on an annual basis on Figure 1-7.

**Table 1-12: Recovered Metal Production**

Product by Deposit	Gold (koz)	Silver (koz)	Antimony (klbs)
<b>Doré Bullion</b>			
Yellow Pine	2,498	54	-
Hangar Flats	372	10	-
West End	1,230	441	-
Historical Tailings	90	4	-
<b>Doré Bullion Recovered Metal Totals</b>	<b>4,191</b>	<b>509</b>	<b>-</b>
<b>Antimony Concentrate</b>			
Yellow Pine	25	421	86,506
Hangar Flats	6	205	17,441
Historical Tailings	1	21	2,538
<b>Antimony Concentrate Recovered Metal Totals</b>	<b>32</b>	<b>647</b>	<b>106,484</b>
<b>Total Recovered Metals</b>	<b>4,223</b>	<b>1,156</b>	<b>106,484</b>

Figure 1-7: Annual Recovered Gold and Antimony



### 1.14 Economic Analysis

The economic model described in this TRS is not a true cash flow model as defined by financial accounting standards but rather a representation of Project economics at a level of detail appropriate for a pre-feasibility level of engineering and design. With completion of the EIS in 2024 and receipt of the Record of Decision received on January 5, 2025, the Company began early works construction in the Fall of 2025. The first year of analysis starts with the decision point of commencing early works construction (Year -3 or three years before the start of commercial production). Taxation was taken into account using current federal, state, and county rates but the overall tax calculation is approximate and uses rudimentary depletion and depreciation estimates.

Four cases were run in the economic model to present a range of economic outcomes using varying metal prices. The metal prices used in the economic model are shown in Table 1-9. There is no guarantee that any of the metal prices used in the four cases are representative of future metals prices. The constant parameters for all cases are listed in Table 1-13.

**Table 1-13: Financial Assumptions used in the Economic Analyses**

Item	Unit	Value
Net Present Value Discount Rate	%	5
Federal Income Tax Rate	%	21
Idaho Income Tax Rate	%	5.7
Idaho Mine License Tax	%	1.0
Percentage Depletion Rate for Gold and Silver	%	15
Percentage Depletion Rate for Antimony	%	22
Depreciation Term	Years	7
Equity Finance Assumption	%	100

The results of the pre- and after-tax economic analyses are provided in Table 1-14.

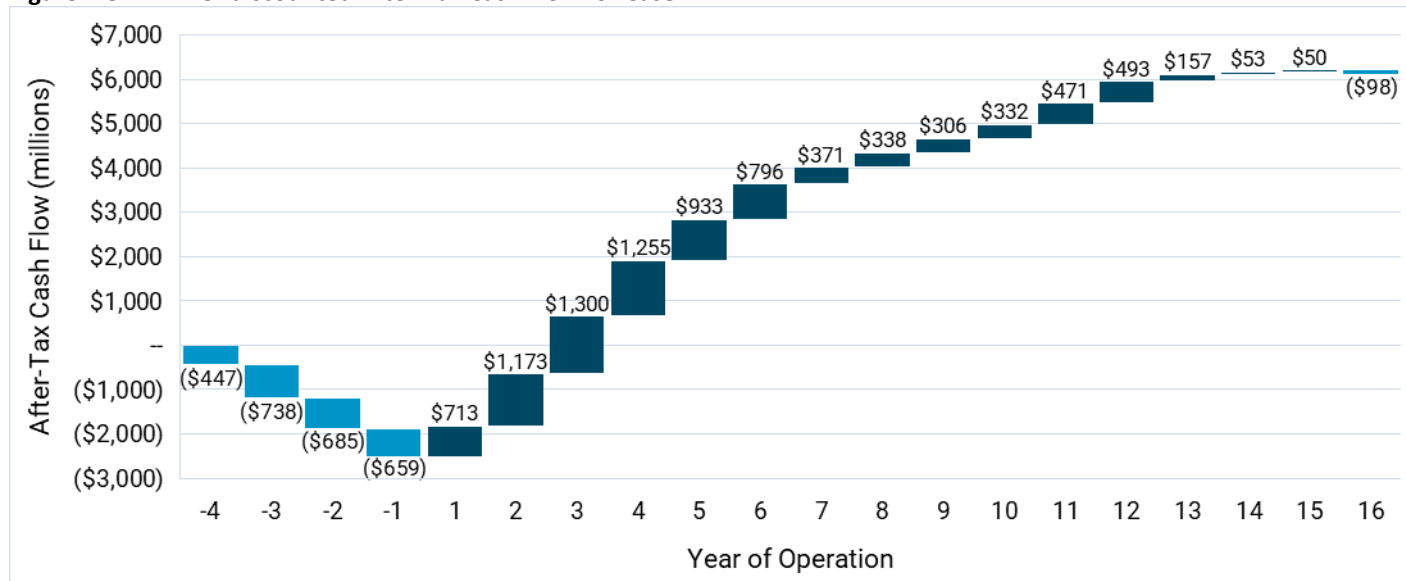
**Table 1-14: Pre- and After-Tax Economic Results by Case**

Parameter	Unit	Pre-tax Results	After-tax Results
<b>Case A – \$3,250/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	7,506	6,115
NPV5%	M\$	4,349	3,457
Annual Average EBITDA	M\$	766	-
Annual Average After-Tax Free Cash Flow	M\$	-	607
IRR	%	26.6	23.5
Payback Period	Production Years	2.3	2.4
<b>Case B – \$4,000/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	10,599	8,526
NPV5%	M\$	6,344	5,012
Annual Average EBITDA	M\$	983	-
Annual Average After-Tax Free Cash Flow	M\$	-	775
IRR	%	33.0	29.0
Payback Period	Production Years	1.9	2.1
<b>Case C – \$4,500/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	12,661	10,128
NPV5%	M\$	7,674	6,045
Annual Average EBITDA	M\$	1,128	-
Annual Average After-Tax Free Cash Flow	M\$	-	887
IRR	%	36.8	32.3
Payback Period	Production Years	1.7	1.9
<b>Case D – \$5,000/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	14,722	11,727
NPV5%	M\$	9,004	7,076
Annual Average EBITDA	M\$	1,273	-
Annual Average After-Tax Free Cash Flow	M\$	-	999
IRR	%	40.3	35.3
Payback Period	Production Years	1.5	1.8

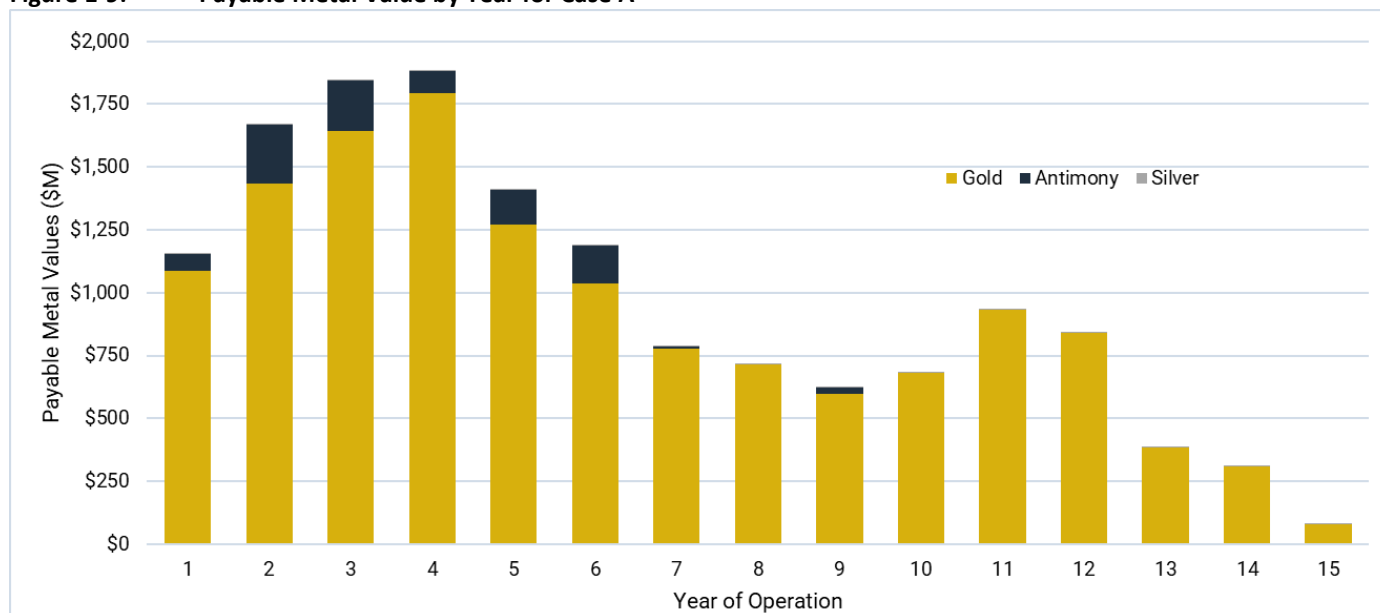
The contribution to the Project economics, by metal, is approximately 96% from gold, 4% from antimony, and less than 1% from silver.

The undiscounted after-tax cash flow for Case B is presented in Figure 1-8. The payable metal value by year for Case A is summarized in Figure 1-9.

**Figure 1-8: Undiscounted After-Tax Cash Flow for Case A**



**Figure 1-9: Payable Metal Value by Year for Case A**



### 1.15 Risks and Opportunities

Risks and opportunities have been identified concerning the Project; apart from industry-wide risks and opportunities (such as changes in law and changes in capital and operating costs related to inputs like steel and fuel, metal prices, permitting timelines, etc.). Project specific risks and opportunities are summarized below.

Risks, which additional information could eliminate or mitigate include:

- Delay in permitting or necessary Project changes resulting from permitting or design changes;
- Legal challenges to the USFS ROD or other regulatory approvals or environmental complications associated with legacy mining impacts;
- Water management and chemistry that could affect diversion and closure designs and/or the duration of long-term water treatment;
- Geological uncertainties which may affect Mineral Resources and Mineral Reserves;
- Geotechnical uncertainties in the open pit walls and infrastructure areas could impact the allowable pit slopes and design criteria;
- Increases to estimated capital and operating costs; and
- Delays or modifications to the construction schedule.

Opportunities that could improve the economics, and/or permitting schedule of the Project, including a number with potential to increase the NPV5% by more than \$100 million include:

- In-pit conversion of approximately 9.8 Mt of Inferred Mineral Resources grading 1.02 g/t Au occurring within the Mineral Reserve Pits containing approximately 321 koz of gold, to Mineral Reserves, increasing Mineral Reserves and reducing the strip ratio;
- Out-of-pit conversion of approximately 27.1 Mt of Inferred Mineral Resources grading 1.26 g/t Au occurring outside the current Mineral Reserve Pits containing approximately 1,098 koz of gold, to Mineral Reserves;
- Out-of-pit conversion of approximately 26.2 Mt of Indicated Mineral Resources grading 1.09 g/t occurring outside the current Mineral Reserve Pits containing approximately 917 koz of gold, to Mineral Reserves;
- In-pit conversion of unclassified material currently treated as development rock to Mineral Reserves, increasing Mineral Reserves and reducing strip ratios;
- Discovery of additional antimony Mineral Resources and Mineral Reserves in the Hangar Flats and Yellow Pine deposits as improved continuity of stibnite vein arrays and/or additional discrete zones of higher-grade antimony mineralization;
- Increased Mineral Resources and Mineral Reserves in West End due to denser drilling to demonstrate improved continuity of higher-grade gold mineralization and through addition of fire assay information in areas where only cyanide assays were available for the current Mineral Resource estimates;
- Potential for the definition of higher-grade, higher-margin underground Mineral Reserves at Scout, Garnet, Hangar Flats, or other advanced prospects; and
- Potential to delineate other critical minerals on the Project, most notably tungsten. The Stibnite District was a significant past producer of tungsten, in addition to antimony. Between 1941-45 the operation produced approximately 50% of the tungsten and 90% of the antimony of US demand. Tungsten has the highest melting

point of all metals and this property along with its density and toughness make it a critical component of armor, drones, ammunition, and is used in many other military and industrial applications. While Perpetua has not defined tungsten mineral resources at this time, previous drilling by Perpetua and historic operators has returned sufficiently high grades of tungsten to warrant further investigation and analysis.

- Discovery of other new deposits with attractive operating margins.

Mineral Resources exclusive of Mineral Reserves are reported based on a fixed gold cut-off grade of 0.40 g/t for sulfide and 0.35 g/t for oxide, and in relation to conceptual Mineral Resource pit shells and Mineral Reserve pits to demonstrate potential economic viability as required under S-K 1300. Indicated mineral resources exclusive of mineral reserves are reported to demonstrate potential for future expansion should economic conditions warrant. Inferred mineral resources exclusive of mineral reserves are reported to demonstrate potential to increase in-pit production should inferred mineral resources be successfully converted to mineral reserves; mineralization lying outside of Mineral Resource pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated.

Opportunities with a medium impact (\$10 to \$100 million increase in Project NPV5%) include improved metallurgical recoveries, secondary processing of antimony concentrates, steeper pit slopes, and government funding of off-site infrastructure. A number of lesser impact opportunities also exist, including potential recovery of tungsten as a by-product from processing of the antimony mineralized materials which are often associated with tungsten mineralization.

If any of the opportunities described above were to result in changes to the Project design or other features incorporated into the Plan of Operations approved by the Forest Service in October 2025 or into other federal or state permits issued for the Project, additional requirements with respect to environmental review (NEPA) or permit amendments or modifications may be required. Any such additional environmental review and permitting requirements, if applicable, would be completed before proceeding with actions requiring such regulatory approvals.

### 1.16 Other Relevant Data and Information

Upon commencement of production the Project would become a significant producer of domestically sourced antimony. Antimony was designated as a critical mineral in the U.S. Department of Interior's final list of 60 critical minerals published in 2025 (U.S. Dept. of Interior, 2025) due to a complete lack of primary domestic production in the United States and reliance on imports, directly or indirectly, from non-aligned countries such as China, Russia, and Tajikistan, which produce approximately 86% of the world's antimony, according to the U.S. Geological Survey, Mineral Commodity Report Summaries, January 2026.

## 1.17 Interpretation and Conclusions

Industry standard mining, processing, construction methods, and economic evaluation practices were used to assess the Project. Adequate geological and other pertinent data were available to support the study.

The financial analysis presented in Section 19 of this Report demonstrates that the Project is financially sound and has the potential to generate positive economic returns based on the assumptions and conditions set out in this Report, while other sections of the TRS demonstrate that the Project is technically and environmentally viable.

Except as discussed in this Report, the QPs that have prepared this Report are not aware of any significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration results, Mineral Resource or Mineral Reserve estimates, or projected economic outcomes based on the data and information available to date.

## 1.18 Recommendations

After many years of study, analysis, planning, and community and stakeholder engagement, Perpetua Resources prepared a comprehensive plan for the restoration and redevelopment of Stibnite, known as the PRO (Alternative 1 in the DEIS) and that plan was modified to form the ModPRO (Alternative 2 in the DEIS). Public and agency comments on the Modified Proposed Action (ModPRO), along with refinements to predictive modeling and the incorporation of additional environmental resource data, resulted in further revisions to the ModPRO. These refinements culminated in the development of the ModPRO2 mine plan of operations, which is consistent with the Prefeasibility Study (M3, 2020). Through the NEPA review process, ModPRO2—identified as the 2021 Modified Mine Plan (MMP) in the Supplemental Draft Environmental Impact Statement (SDEIS) and Final Environmental Impact Statement (FEIS)—was selected as the Agency’s Preferred Alternative in both the SDEIS and FEIS. The 2021 MMP forms the basis of the Plan of Operations approved by the Forest Service in October 2025. The 2021 MMP lays out a safe, technically feasible, economically viable, environmentally sound and socially responsible path forward for the redevelopment and restoration of the Site. This path forward will comply with applicable laws and regulations and incorporates environmental improvements that were developed in concert with Project NEPA analysis.

Based upon the updates since the 2022 TRS relating to advancements in permitting, exploration drilling, engineering, land management, and updated financial analyses demonstrating positive Project economics, it is recommended that Perpetua Resources continue to advance the Project towards a full construction decision and ultimately, commercial production.

## 2 INTRODUCTION

### 2.1 Introduction

This technical report summary (TRS or Report) was commissioned by the registrant, Perpetua Resources Corp. (PRC) (formerly Midas Gold Corp.), a corporation incorporated under the Business Corporations Act (British Columbia), for its gold-antimony-silver project (Stibnite Gold Project or Project) at Stibnite, Idaho for the purpose of reporting mineral reserves. PRC is exploring options for the redevelopment and restoration of the Project area through its wholly-owned subsidiaries, Perpetua Resources Idaho, Inc. (PRII), an Idaho corporation, and Idaho Gold Resources Company, LLC (IGRCLLC), an Idaho limited liability company. Unless the context indicates otherwise, references throughout this Report to “Perpetua Resources” or “Perpetua” includes one or more of the subsidiaries of PRC.

The purpose of this TRS is to update the technical report summary on the Stibnite Gold Project, Idaho, USA, dated as of December 31, 2021, and amended as of June 6, 2022 (2022 TRS), in accordance with the mining property disclosure rules specified in Regulation S-K subpart 1300 (S-K 1300) promulgated by the U.S. Securities and Exchange Commission (SEC). This TRS was prepared under S-K 1300 and Item 601(b)(96) under Regulation S-K.

The TRS provides a summary of the work completed on the Project through December 31, 2025. Updates since the 2022 TRS primarily relate to advancements in permitting, exploration drilling, engineering, land management, and financial analyses since the 2022 TRS.

The most notable updates from the 2022 TRS include the following:

- The TRS incorporates engineering designs developed during the basic engineering phase completed in 2025, including design changes to the mineral processing plant, on and off-site infrastructure, and tailings management.
- The TRS provides updated financial analyses by reflecting operating costs, capital costs, taxes, and long-term metal price estimates as of December 31, 2025 to derive estimates of project economics. Costs included herein are based on fourth quarter 2025 estimates for construction and operations, as well as current and consensus commodity pricing for sales.
- This TRS incorporates updates derived from recent and ongoing environmental baseline studies, permitting application submittals and authorizations, and other environmental compliance and regulatory activities.
- The TRS integrates cost and technical data derived from recent and active contract negotiations across construction, professional services, and capital equipment procurement.

The TRS continues to be classified as a Preliminary Feasibility–level study.

This TRS provides an overview of the Project at the level of detail appropriate to the level of engineering and design and in accordance with the stage of the Project as of December 31, 2025, and includes recommendations for future work programs required to advance the Project to a final investment decision. Detailed engineering, contracting,

permitting and exploration activities are ongoing, each of which may result in changes to the information and recommendations set forth herein. This TRS defines an economically feasible, technically and environmentally sound Project that is designed to mitigate potential environmental and community impacts and maximize social and economic benefits.

This TRS provides information about geology, mineralization, exploration, mineral resource potential, mining methods, ore process methods, infrastructure, social and economic benefits, environmental protection, repair of historical impacts, reclamation and closure concepts, capital and operating costs, and economic analysis for the Project. Economic and technical analyses included in this Report provide only a summary of the potential Project economics based on the many assumptions set forth herein. There is no guarantee that the Project economics described herein can be achieved in whole or in part, if at all.

## 2.2 Sources of Information

The sources of information used in this Report include data and reports supplied by Perpetua Resources' personnel, and documents referenced in Section 24 of this Report. Revisions to previous data were based on research, recalculations, additional completed engineering, and information from other projects. The level of detail utilized in this TRS is appropriate for this level of study.

This TRS is based on information collected by the qualified persons (as defined in S-K 1300) (QPs or Qualified Persons) during their site visits, meetings, historical documentation, and the following sources of information:

- Personal inspection of the Stibnite Gold Project site and surrounding area.
- Technical information available to the QPs through various reports, including information and prior studies provided by Perpetua Resources.
- Budgetary quotes from vendors for engineered equipment and services.
- Technical and cost information provided by contractors and suppliers through ongoing contract negotiations concerning power supply, infrastructure construction, and equipment procurement and installation.
- Technical and economic information developed by Perpetua Resources' engineering consultants.
- Information provided by other experts with specific knowledge and expertise in their fields as described in Section 25 of this Report.
- Additional information obtained from public domain sources.

The information contained in this TRS is based on documentation reasonably believed to be reliable and accurate. Information utilized in this TRS will be retained in Perpetua Resources' offices located in Boise, Idaho. All figures and images presented in this TRS are supplied by Perpetua Resources, unless expressly noted to the contrary.

## 2.3 Units and Terms of Reference

The TRS is intended for the use of Perpetua Resources to further advance the Stibnite Gold Project toward a final investment decision. It provides mineral resource and mineral reserve estimates in accordance with the definitions of S-K 1300.

Imperial units (American System) of measurement are used in this TRS unless otherwise noted. Other units of measurement used in this TRS are defined when first used. All monetary values are in U.S. dollars (\$) unless otherwise noted.

## 2.4 Qualified Persons and Site Visits

The QPs who have prepared this TRS have extensive experience in the mining industry and are members in good standing of appropriate professional institutions. James Norine and Chris Dail are not independent from the issuer and are employees of Perpetua. BBA Consultants International LP (“BBA Consultants”, previously known as Tierra Group International) is a third-party firm independent from the issuer comprised of mining professionals who specialize in geological and geotechnical engineering. Table 2-1 provides a list of the QPs that have prepared this Report and sections in this Report for which each are responsible.

**Table 2-1: List of Qualified Persons**

Qualified Person	Firm	Sections Responsibility
James Norine, P.E.	Perpetua Resources	1.1, 1.9-1.11, 1.13-1.18, 2, 14, 15.1-15.7, 16, 18.1, 18.1.2-18.1.7, 18.2.2-18.2.5, 19, 22, 23, 24
Chris Dail, CPG	Perpetua Resources	1.2-1.8, 1.12, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17, 18.1.1, 18.2.1, 20, 21, 25
-	BBA Consultants International LP	15.8

James Norine has visited the site multiple times, with the latest visit being on January 29, 2026. During this visit, he completed a tour of all the proposed Project areas, including the process plant, the pits, ancillary facilities, off-site infrastructure and access roads. Chris Dail has visited the site on numerous occasions since April 2009, with the most recent visit in January 2026. While on site on the most recent visit, Mr. Dail visited areas of active geotechnical and exploration drilling, active early works excavation and construction activities and other areas around the entire site. Justin Knudsen (a representative of BBA Consultants) has visited the site several times, with the most recent visit in August 2025 to examine the site conditions and topography of the proposed Tailings Storage Facility.

## 2.5 Previous Reports

This TRS updates the 2022 TRS completed for Perpetua Resources that was commissioned in compliance with SEC regulations. The reserves reported herein are current as of the end of December 2025. The information in the 2022 TRS was based upon the “Stibnite Gold Project Feasibility Study Technical Report, Valley County, Idaho” effective December 22, 2020, prepared in compliance with the Canadian National Instrument (NI) 43-101 – Standards for

Disclosure of Mineral Projects within Canada. PRC is listed on the Toronto Stock Exchange (TSX:PPTA) and on the Nasdaq Stock Market (Nasdaq:PPTA).

### 3 PROPERTY DESCRIPTION

The Project is in central Idaho, USA, approximately 100 miles (mi) northeast of Boise, Idaho, 38 mi east of McCall, Idaho, and approximately 10 mi east of Yellow Pine, Idaho (see Figure 3-1). Mineral rights controlled by Perpetua Resources include patented lode claims, patented mill sites, unpatented federal lode claims, and unpatented federal mill sites and encompass approximately 29,340 acres (approximately 46 mi<sup>2</sup>) as shown on Table 3-2. The claims are 100% owned by Perpetua Resources, except for 27 patented lode claims that are held under an option to purchase and portions of six patented millsites described below in subsection 3.2.1. These terms relating to the nature of Perpetua Resources claims are consistent with the United States General Mining Law of 1872.

In agreements dated May 9, 2013 (and thereafter amended), Perpetua Resources granted a 1.7% net smelter return (NSR) royalty on future gold production from the Project properties to Franco-Nevada Idaho Corporation (Franco-Nevada). This gold royalty does not apply to the production of antimony and silver. The royalty agreement applies to all patented and unpatented mineral claims, with the exception of the Cinnabar claim group, where PRIL holds an option to purchase (OTP) but would be extended to the Cinnabar claim group were the OTP exercised. On March 21, 2024, Perpetua Resources and its subsidiaries granted a 100% NSR royalty on the future payable silver production from the Project to Franco-Nevada. The silver royalty agreement applies to the same properties as the gold royalty. The silver royalty agreement provides a mechanism whereby Franco-Nevada can receive minimum payments equal to 100% of the payable silver from the sale of doré commencing in the seventh calendar year following commercial production and ending upon the completion of the fifteenth calendar year following commercial production. This silver royalty does not apply to the production of antimony and gold.

#### 3.1 Location

The Project is in Valley County, Idaho, in all or part of the following sections (Boise Meridian):

- Township 17 North, Range 8 East, Sections 12 to 13, 23 to 24, and 26;
- Township 17 North, Range 9 East, Sections 4 to 8 and 13 to 19;
- Township 18 North, Range 9 East, Sections 1 to 30 and 32 to 36;
- Township 18 North, Range 10 East, Sections 5 to 8, 17 to 20 and 29 to 30;
- Township 19 North, Range 9 East, Sections 21 to 28 and 32 to 36; and
- Township 19 North, Range 10 East, Sections 19, 30, and 31.

The Project area elevations range from approximately 6,500 ft to more than 8,900 ft above sea level and is centered at latitude 44°54'25" N and longitude 115°19'37" W and, in State Plane Idaho West coordinates, at 1103:1,181,270 ft US N and 1103:2,734,259 ft US W.

## 3.2 Property Holdings

Perpetua Resources' Idaho property holdings consist of wholly-owned patented lode mining claims, patented mill site claims, unpatented federal lode mining claims and unpatented federal mill site claims (collectively, the Claims) (Figure 3-2). Additional patented lode claims containing approximately 487 acres adjacent to the SGP area to the east are subject to an Option to Purchase agreement. In early 2025, Perpetua executed an option to purchase a 207-acre property near Challis in Custer County, Idaho known as the Jones parcel. The property was acquired along with its existing water rights to provide additional water rights mitigation for the Project. In June 2025, Perpetua Resources purchased two adjacent parcels totaling approximately 0.28 acres in the Village of Yellow Pine to serve as office space, as a community meeting space and for historical displays.

A number of independent title opinions in respect of mineral title have been prepared on behalf of Perpetua Resources in support of its initial listing as a public company, subsequent financings, and sale of royalties to third parties. The most recent legal opinion, dated April 25, 2019, was prepared by Jason Mau of the law firm of Parsons, Behle & Latimer, which was later updated on March 21, 2024, and again in June 2025, by the law firm of Hardee, Piñol & Kracke, PLLC. These opinions reviewed the title status of the patented and unpatented lode mining and mill site claims owned or optioned by Perpetua Resources Corporation's subsidiary Idaho Gold Resources Company LLC (IGRCLLC). These opinions, performed by qualified, independent attorneys, confirmed IGRCLLC's ownership of the patented and unpatented lode mining and mill site claims, subject to certain qualifications and exceptions. The QP has reviewed these independent opinions concerning the status of mineral and surface ownership of the Project, and considers them as reliable representations of the current status of ownership of the property comprising the Project and has relied on them for the conclusions that there are no material exceptions or encumbrances to IGRCLLC's ownership of the patented and unpatented lode mining and mill site claims that should materially impede Project development or operations.

Through a series of name changes and consolidations, the various PRC subsidiaries identified in the Report have been consolidated into two entities: Idaho Gold Resources Company, LLC (IGRCLLC), an Idaho limited liability company; and Perpetua Resources Idaho, Inc. (PRII), an Idaho corporation and wholly-owned subsidiary of Perpetua Resources Corp. PRII has no ownership interest in the Stibnite Gold Project; rather, it is the designated operating entity and manages the Project activities. The property holding entity, IGRCLLC, is the surviving entity in a merger with Stibnite Gold Company (SGC) effective June 3, 2021, and is managed pursuant to an operating agreement with PRII. PRII and IGRCLLC are wholly-owned by PRC. IGRCLLC holds title to the Yellow Pine, Hangar Flats, and West End deposits, all of the patented mill sites and all of the unpatented federal lode mining claims and unpatented mill sites (subject to the exceptions described above).

Figure 3-1 Project Location Map

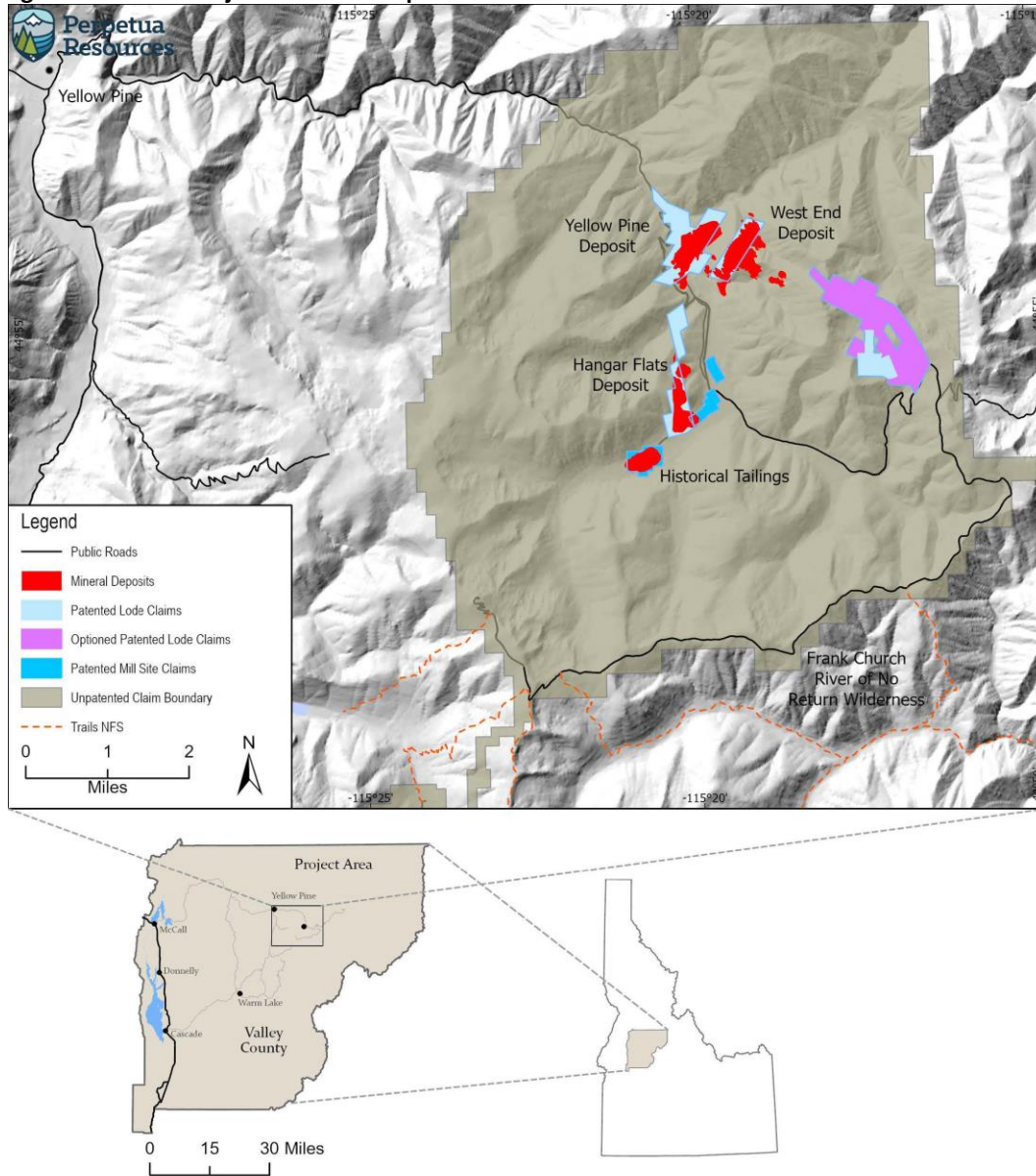
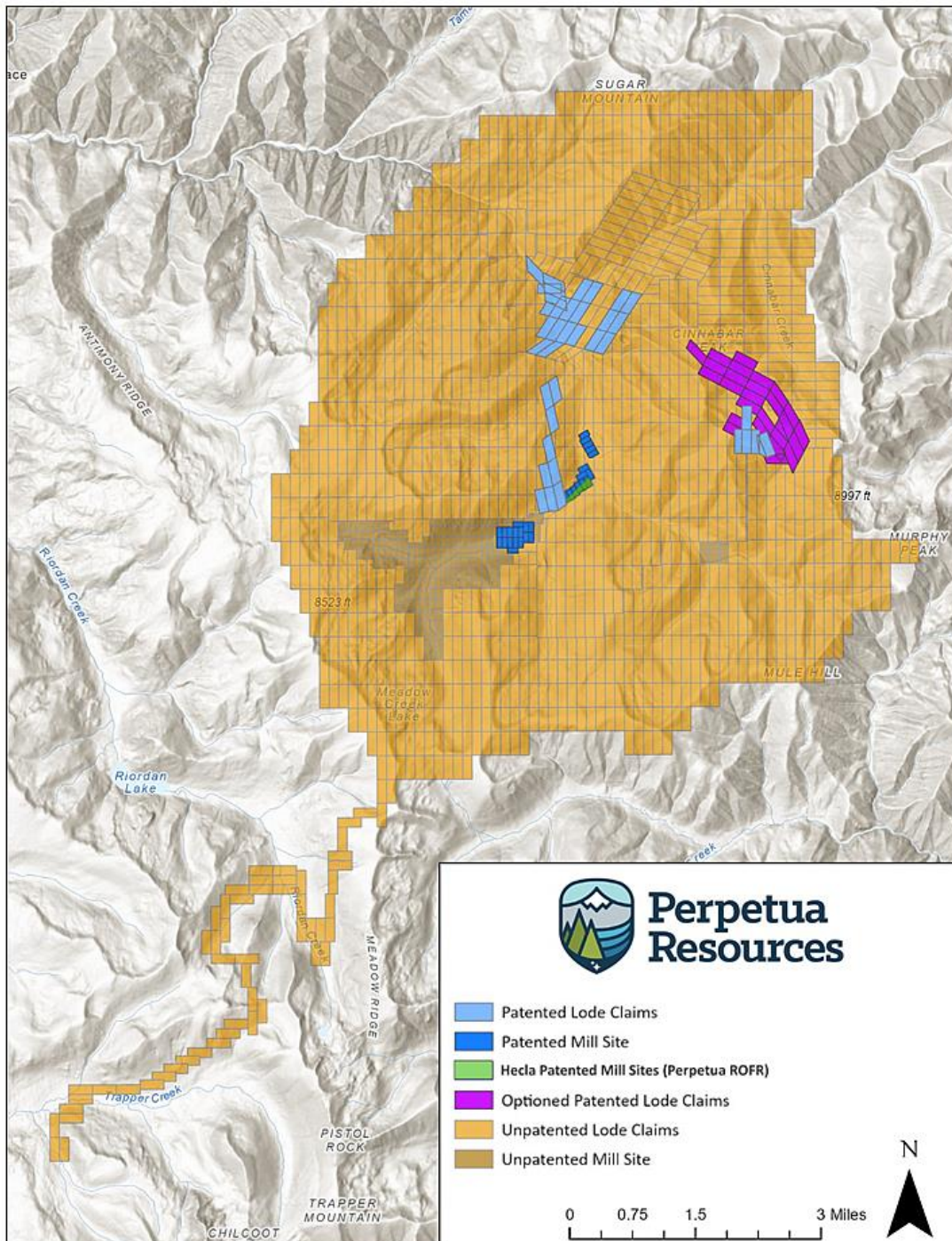


Figure 3-2 Land Status Map



### 3.2.1 Patented Lands

On June 11, 2009, a predecessor to Stibnite Gold Company acquired and exercised an option to purchase (OTP) the Meadow Creek group of nine patented lode claims totaling approximately 184 acres from Bradley Mining Co. (Bradley).

A predecessor entity to IGRCLLC secured an OTP agreement from the J.J. Oberbillig Estate on June 2, 2009, to acquire 30 patented mill site claims totaling approximately 149 acres and six patented lode claims totaling approximately 124 acres. The Oberbillig OTP agreement was exercised and title to property rights were acquired on June 2, 2015. An associated transaction included the purchase and extinguishment of a 5% NSR royalty to the Oberbillig estate covering certain lands within the SGP area. The majority of the mineralization constituting the West End Deposit is located within portions of these patented lode claims. Hecla Mining Company (Hecla) retains some surface rights on portions of six of the patented mill sites within the Project boundaries, but has no mineral rights and IGRCLLC has a right to use the surface for various purposes and holds a right of first refusal should Hecla's surface rights be offered for sale. Perpetua Resources is exploring alternatives with respect to these partial millsites, which may include acquiring such property from Hecla.

An OTP for patented lode mining claims covering portions of the Yellow Pine Deposit was conveyed to PRIL by way of a company merger between a predecessor entity to IGRCLLC and a subsidiary of Vista Gold Corp. (Vista) that was agreed to February 22, 2011. The OTP for the subject patented claims was exercised on November 28, 2012. As a result of the merger, the predecessor entity to IGRCLLC became a wholly-owned subsidiary of PRIL. The Yellow Pine claim group includes 17 patented lode mining claims totaling approximately 301 acres and eight unpatented lode mining claims (already included in the unpatented total below).

On April 28, 2011, a predecessor entity to IGRCLLC purchased 6 patented lode claims east of the Project area. This group of claims is referred to as the Fern claim group, totaling approximately 100 acres.

Property taxes for the patented claim groups are paid in full as of the effective date of this Report and are shown in Table 3-1.

**Table 3-1: Mineral Concession Summary<sup>3</sup>**

PATENTED CLAIMS						
Valley County Parcel ID	Owner <sup>5</sup>	Number of Claims		Assessed Acres <sup>2</sup>	Assessed Hectares <sup>2</sup>	Property Tax 2025
		Lode	Millsite			
RP18N09E155300	IGRCLLC	-	16	80.00	32.37	\$523.04
RP18N09E020026	IGRCLLC	6	-	129.82	52.54	\$11.68
RP18N09E115495	IGRCLLC	-	14	53.57	21.68	\$5,902.76
RP14N05E074475 <sup>1</sup>	IGRCLLC <sup>1</sup>	-	-	25.06	10.14	\$176.08
RP18N09E038995	IGRCLLC	4	-	81.63	33.03	\$60.48
RP18N09E108995	IGRCLLC	5	-	102.8	41.60	\$76.20
RP18N09E127345	IGRCLLC	6	-	99.87	40.42	\$30.32
RP18N09E030005	IGRCLLC	11	-	218.90	85.59	\$31.66
RP18N09E030020	IGRCLLC	6	-	81.17	32.85	\$30.12
<b>Totals</b>		<b>38</b>	<b>30</b>	<b>873</b>	<b>350</b>	<b>\$6,842.34<sup>3</sup></b>
UNPATENTED CLAIMS						
Owner	Claim Type	Number of Claims		Acres	Hectares	BLM Claims Fees
		Lode	Millsite			
IGRCLLC	Unpatented lode and millsite claims	1,422	252	30,216	12,228	\$334,800

Notes: **1.** The Scott Valley parcel for the Stibnite Gold Logistics Facility is a 100% owned fee-simple parcel, that is approximately 25 acres, with no mineral rights, and 2025 taxes of \$176.08. **2.** Not all values may sum due to rounding errors. Assessed acreage may not correspond exactly to surveyed acreage reported in text. **3.** This table summarizes the mineral rights and holding costs held by Perpetua Resources' wholly owned subsidiary, Idaho Gold Resources Company, LLC (IGRCLLC).

### 3.2.2 Unpatented Federal Lode Mining Claims and Unpatented Mill Site Claims

A subsidiary of a predecessor entity to IGRCLLC purchased 229 federal unpatented claims from previous owners in 2009 and 2011. These included 46 federal mill site claims and 183 federal unpatented lode mining claims. In addition to the purchased claims, IGRCLLC predecessors or subsidiaries acquired by staking an additional 36 federal unpatented lode mining claims in 2009, 217 lode claims in 2010 and 901 federal unpatented lode-mining claims in 2011, and one federal unpatented lode mining claim in 2012. An additional 126 unpatented lode claims were staked in 2015. Minor modifications such as re-staking and amended claim locations have occurred since original staking and/or acquisition.

In 2021, SGC merged with IGRCLLC, with IGRCLLC becoming the sole surviving entity and landowner of patented and unpatented mining claims and mill sites and various optioned properties. Currently, in addition to the patented lands, 1,674 unpatented lode mining and mill site claims totaling approximately 29,340 acres (11,873 hectares) constitute part of the overall land position as of the effective date of the Report. A complete List of active claims is shown in Table 3-2.

Maintenance of unpatented federal claims requires that IGRCLLC annually provide a list of claims and serial numbers to the Bureau of Land Management (BLM) along with annual maintenance fees, currently \$200 for each lode mining claim or mill site on or before September 1st each year. This was completed for the most recent filing year in August 2025, and an Affidavit of Satisfaction was subsequently recorded in Valley County in September 2025. There is no underlying royalty on these federal lode mining claims and mill site other than the Franco-Nevada Idaho Corporation (Franco-Nevada) royalties detailed in Section 3.4. None of the Claims are subject to back-in rights.

**Table 3-2: Mineral Concession Summary – Unpatented Claims Listing**

Claim Name	Serial Number	Claim Type	Claim Name	Serial Number	Claim Type	Claim Name	Serial Number	Claim Type
SF 1	ID101851911	LODE CLAIM	SF 1035	ID101526148	LODE CLAIM	SF 1070	ID101526162	LODE CLAIM
SF 10	ID101853098	LODE CLAIM	SF 1036	ID101526149	LODE CLAIM	SF 1071	ID101526163	LODE CLAIM
SF 1000	ID101522498	LODE CLAIM	SF 1037	ID101526150	LODE CLAIM	SF 1072	ID101526164	LODE CLAIM
SF 1001	ID101522499	LODE CLAIM	SF 1038	ID101526151	LODE CLAIM	SF 1073	ID101526165	LODE CLAIM
SF 1002	ID101522500	LODE CLAIM	SF 1039	ID101526152	LODE CLAIM	SF 1074	ID101526166	LODE CLAIM
SF 1003	ID101522501	LODE CLAIM	SF 1040	ID101526153	LODE CLAIM	SF 1075	ID101526167	LODE CLAIM
SF 1004	ID101522502	LODE CLAIM	SF 1041	ID101522518	LODE CLAIM	SF 1076	ID101526168	LODE CLAIM
SF 1005	ID101522503	LODE CLAIM	SF 1042	ID101522519	LODE CLAIM	SF 1077	ID101526169	LODE CLAIM
SF 1006	ID101522504	LODE CLAIM	SF 1043	ID101522520	LODE CLAIM	SF 1078	ID101526170	LODE CLAIM
SF 1007	ID101522505	LODE CLAIM	SF 1044	ID101522521	LODE CLAIM	SF 1079	ID101526171	LODE CLAIM
SF 1008	ID101522506	LODE CLAIM	SF 1045	ID101522522	LODE CLAIM	SF 108	ID101857722	LODE CLAIM
SF 1009	ID101522507	LODE CLAIM	SF 1046	ID101522523	LODE CLAIM	SF 1080	ID101526172	LODE CLAIM
SF 1010	ID101522508	LODE CLAIM	SF 1047	ID101522524	LODE CLAIM	SF 1081	ID101526173	LODE CLAIM
SF 1011	ID101522509	LODE CLAIM	SF 1048	ID101522525	LODE CLAIM	SF 1082	ID101526174	LODE CLAIM
SF 1012	ID101522510	LODE CLAIM	SF 1049	ID101522526	LODE CLAIM	SF 1083	ID101522539	LODE CLAIM
SF 1013	ID101522511	LODE CLAIM	SF 1050	ID101522527	LODE CLAIM	SF 1084	ID101522540	LODE CLAIM
SF 1014	ID101522512	LODE CLAIM	SF 1051	ID101522528	LODE CLAIM	SF 1085	ID101522541	LODE CLAIM
SF 1015	ID101522513	LODE CLAIM	SF 1052	ID101522529	LODE CLAIM	SF 1086	ID101522542	LODE CLAIM
SF 1016	ID101522514	LODE CLAIM	SF 1053	ID101522530	LODE CLAIM	SF 1087	ID101522543	LODE CLAIM
SF 1017	ID101522515	LODE CLAIM	SF 1054	ID101522531	LODE CLAIM	SF 1088	ID101522544	LODE CLAIM
SF 1018	ID101522516	LODE CLAIM	SF 1055	ID101522532	LODE CLAIM	SF 1089	ID101522545	LODE CLAIM
SF 1019	ID101522517	LODE CLAIM	SF 1056	ID101522533	LODE CLAIM	SF 109	ID101857723	LODE CLAIM
SF 1020	ID101526133	LODE CLAIM	SF 1057	ID101522534	LODE CLAIM	SF 1090	ID101522546	LODE CLAIM
SF 1021	ID101526134	LODE CLAIM	SF 1058	ID101522535	LODE CLAIM	SF 1091	ID101522547	LODE CLAIM
SF 1022	ID101526135	LODE CLAIM	SF 1059	ID101522536	LODE CLAIM	SF 1092	ID101522548	LODE CLAIM
SF 1023	ID101526136	LODE CLAIM	SF 106	ID101857720	LODE CLAIM	SF 1093	ID101522549	LODE CLAIM
SF 1024	ID101526137	LODE CLAIM	SF 1060	ID101522537	LODE CLAIM	SF 1094	ID101522550	LODE CLAIM
SF 1025	ID101526138	LODE CLAIM	SF 1061	ID101522538	LODE CLAIM	SF 1095	ID101522551	LODE CLAIM
SF 1026	ID101526139	LODE CLAIM	SF 1062	ID101526154	LODE CLAIM	SF 1096	ID101522552	LODE CLAIM
SF 1027	ID101526140	LODE CLAIM	SF 1063	ID101526155	LODE CLAIM	SF 1097	ID101522553	LODE CLAIM
SF 1028	ID101526141	LODE CLAIM	SF 1064	ID101526156	LODE CLAIM	SF 1098	ID101522554	LODE CLAIM
SF 1029	ID101526142	LODE CLAIM	SF 1065	ID101526157	LODE CLAIM	SF 1099	ID101526175	LODE CLAIM
SF 1030	ID101526143	LODE CLAIM	SF 1066	ID101526158	LODE CLAIM	SF 11	ID101853099	LODE CLAIM
SF 1031	ID101526144	LODE CLAIM	SF 1067	ID101526159	LODE CLAIM	SF 110	ID101857724	LODE CLAIM
SF 1032	ID101526145	LODE CLAIM	SF 1068	ID101526160	LODE CLAIM	SF 1100	ID101526176	LODE CLAIM
SF 1033	ID101526146	LODE CLAIM	SF 1069	ID101526161	LODE CLAIM	SF 1101	ID101526177	LODE CLAIM
SF 1034	ID101526147	LODE CLAIM	SF 107	ID101857721	LODE CLAIM	SF 1102	ID101526178	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1103	ID101526179	LODE CLAIM
SF 1104	ID101526180	LODE CLAIM
SF 1105	ID101526181	LODE CLAIM
SF 1106	ID101526182	LODE CLAIM
SF 1107	ID101526183	LODE CLAIM
SF 1108	ID101526184	LODE CLAIM
SF 1109	ID101526185	LODE CLAIM
SF 111	ID101857725	LODE CLAIM
SF 1110	ID101526186	LODE CLAIM
SF 1111	ID101526187	LODE CLAIM
SF 1112	ID101526188	LODE CLAIM
SF 1113	ID101526189	LODE CLAIM
SF 1114	ID101526190	LODE CLAIM
SF 1115	ID101526191	LODE CLAIM
SF 1116	ID101526192	LODE CLAIM
SF 1117	ID101526193	LODE CLAIM
SF 1118	ID101526194	LODE CLAIM
SF 1119	ID101526195	LODE CLAIM
SF 112	ID101857726	LODE CLAIM
SF 1120	ID101522555	LODE CLAIM
SF 1121	ID101522556	LODE CLAIM
SF 1122	ID101522557	LODE CLAIM
SF 1123	ID101522558	LODE CLAIM
SF 1124	ID101522559	LODE CLAIM
SF 1125	ID101522560	LODE CLAIM
SF 1126	ID101522561	LODE CLAIM
SF 1127	ID101522562	LODE CLAIM
SF 1128	ID101522563	LODE CLAIM
SF 1129	ID101522564	LODE CLAIM
SF 113	ID101857727	LODE CLAIM
SF 1130	ID101522565	LODE CLAIM
SF 1131	ID101522566	LODE CLAIM
SF 1132	ID101522567	LODE CLAIM
SF 1133	ID101522568	LODE CLAIM
SF 1134	ID101522569	LODE CLAIM
SF 1135	ID101522570	LODE CLAIM
SF 1136	ID101522571	LODE CLAIM
SF 1137	ID101522572	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1138	ID101522573	LODE CLAIM
SF 1139	ID101522574	LODE CLAIM
SF 114	ID101857728	LODE CLAIM
SF 1140	ID101522575	LODE CLAIM
SF 1141	ID101526196	LODE CLAIM
SF 1142	ID101526197	LODE CLAIM
SF 1143	ID101526198	LODE CLAIM
SF 1144	ID101526199	LODE CLAIM
SF 1145	ID101526200	LODE CLAIM
SF 1146	ID101526385	LODE CLAIM
SF 1147	ID101526386	LODE CLAIM
SF 1148	ID101526387	LODE CLAIM
SF 1149	ID101526388	LODE CLAIM
SF 115	ID101857729	LODE CLAIM
SF 1150	ID101526389	LODE CLAIM
SF 1151	ID101526390	LODE CLAIM
SF 1152	ID101526391	LODE CLAIM
SF 1153	ID101526392	LODE CLAIM
SF 1154	ID101526393	LODE CLAIM
SF 1155	ID101526394	LODE CLAIM
SF 1156	ID101526395	LODE CLAIM
SF 1157	ID101526396	LODE CLAIM
SF 1158	ID101526397	LODE CLAIM
SF 1159	ID101526398	LODE CLAIM
SF 116	ID101857730	LODE CLAIM
SF 1160	ID101526399	LODE CLAIM
SF 1161	ID101526400	LODE CLAIM
SF 1162	ID101499170	LODE CLAIM
SF 1163	ID101499171	LODE CLAIM
SF 1164	ID101499172	LODE CLAIM
SF 1165	ID101499173	LODE CLAIM
SF 1166	ID101499174	LODE CLAIM
SF 1167	ID101499175	LODE CLAIM
SF 1168	ID101499176	LODE CLAIM
SF 1169	ID101499177	LODE CLAIM
SF 117	ID101857731	LODE CLAIM
SF 1170	ID101499178	LODE CLAIM
SF 1171	ID101499179	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1172	ID101499180	LODE CLAIM
SF 1173	ID101499181	LODE CLAIM
SF 1174	ID101499182	LODE CLAIM
SF 1175	ID101499183	LODE CLAIM
SF 1176	ID101499184	LODE CLAIM
SF 1177	ID101499185	LODE CLAIM
SF 1178	ID101499186	LODE CLAIM
SF 1179	ID101499187	LODE CLAIM
SF 118	ID101857732	LODE CLAIM
SF 1180	ID101499188	LODE CLAIM
SF 1181	ID101499189	LODE CLAIM
SF 1182	ID101499190	LODE CLAIM
SF 1183	ID101522576	LODE CLAIM
SF 1184	ID101522577	LODE CLAIM
SF 1185	ID101522578	LODE CLAIM
SF 1186	ID101522579	LODE CLAIM
SF 1187	ID101522580	LODE CLAIM
SF 1188	ID101522581	LODE CLAIM
SF 1189	ID101522582	LODE CLAIM
SF 1190	ID101522583	LODE CLAIM
SF 1191	ID101522584	LODE CLAIM
SF 1192	ID101522585	LODE CLAIM
SF 1193	ID101522586	LODE CLAIM
SF 1194	ID101522587	LODE CLAIM
SF 1195	ID101522588	LODE CLAIM
SF 1196	ID101522589	LODE CLAIM
SF 1197	ID101522590	LODE CLAIM
SF 1198	ID101522591	LODE CLAIM
SF 1199	ID101522592	LODE CLAIM
SF 12	ID101853100	LODE CLAIM
SF 1200	ID101522593	LODE CLAIM
SF 1201	ID101522594	LODE CLAIM
SF 1202	ID101499191	LODE CLAIM
SF 1203	ID101499192	LODE CLAIM
SF 1204	ID101499193	LODE CLAIM
SF 1205	ID101499194	LODE CLAIM
SF 1206	ID101499195	LODE CLAIM
SF 1207	ID101499196	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1208	ID101499197	LODE CLAIM
SF 1209	ID101499198	LODE CLAIM
SF 1210	ID101499199	LODE CLAIM
SF 1211	ID101499200	LODE CLAIM
SF 1212	ID101522595	LODE CLAIM
SF 1213	ID101522596	LODE CLAIM
SF 1214	ID101522597	LODE CLAIM
SF 1215	ID101522598	LODE CLAIM
SF 1216	ID101522599	LODE CLAIM
SF 1217	ID101522600	LODE CLAIM
SF 1218	ID101522786	LODE CLAIM
SF 1219	ID101522787	LODE CLAIM
SF 1220	ID101522788	LODE CLAIM
SF 1221	ID101522789	LODE CLAIM
SF 1222	ID101522790	LODE CLAIM
SF 1223	ID101522791	LODE CLAIM
SF 1224	ID101522792	LODE CLAIM
SF 1225	ID101522793	LODE CLAIM
SF 1226	ID101522794	LODE CLAIM
SF 1227	ID101522795	LODE CLAIM
SF 1228	ID101522796	LODE CLAIM
SF 1229	ID101522797	LODE CLAIM
SF 1230	ID101522798	LODE CLAIM
SF 1231	ID101522799	LODE CLAIM
SF 1232	ID101522800	LODE CLAIM
SF 1233	ID101499380	LODE CLAIM
SF 1234	ID101499381	LODE CLAIM
SF 1235	ID101499382	LODE CLAIM
SF 1236	ID101499383	LODE CLAIM
SF 1237	ID101499384	LODE CLAIM
SF 1238	ID101499385	LODE CLAIM
SF 1239	ID101499386	LODE CLAIM
SF 1240	ID101499387	LODE CLAIM
SF 1241	ID101499388	LODE CLAIM
SF 1242	ID101499389	LODE CLAIM
SF 1243	ID101499390	LODE CLAIM
SF 1244	ID101499391	LODE CLAIM
SF 1245	ID101499392	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1246	ID101499393	LODE CLAIM
SF 1247	ID101499394	LODE CLAIM
SF 1248	ID101499395	LODE CLAIM
SF 1249	ID101499396	LODE CLAIM
SF 125	ID101386610	LODE CLAIM
SF 1250	ID101499397	LODE CLAIM
SF 1251	ID101499398	LODE CLAIM
SF 1252	ID101499399	LODE CLAIM
SF 1253	ID101499400	LODE CLAIM
SF 1254	ID101499749	LODE CLAIM
SF 1255	ID101499750	LODE CLAIM
SF 1256	ID101499751	LODE CLAIM
SF 1257	ID101499752	LODE CLAIM
SF 1258	ID101499753	LODE CLAIM
SF 1259	ID101499754	LODE CLAIM
SF 1260	ID101499755	LODE CLAIM
SF 1261	ID101499756	LODE CLAIM
SF 1262	ID101499757	LODE CLAIM
SF 1263	ID101499758	LODE CLAIM
SF 1264	ID101499759	LODE CLAIM
SF 1265	ID101499760	LODE CLAIM
SF 1266	ID101499761	LODE CLAIM
SF 1267	ID101499762	LODE CLAIM
SF 1268	ID101499763	LODE CLAIM
SF 1269	ID101499764	LODE CLAIM
SF 1270	ID101499765	LODE CLAIM
SF 1271	ID101499766	LODE CLAIM
SF 1272	ID101499767	LODE CLAIM
SF 1273	ID101499768	LODE CLAIM
SF 1274	ID101499769	LODE CLAIM
SF 1275	ID101526722	LODE CLAIM
SF 1276	ID101526723	LODE CLAIM
SF 1277	ID101526724	LODE CLAIM
SF 1278	ID101526725	LODE CLAIM
SF 1279	ID101526726	LODE CLAIM
SF 1280	ID101526727	LODE CLAIM
SF 1281	ID101526728	LODE CLAIM
SF 1282	ID101526729	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1283	ID101526730	LODE CLAIM
SF 1284	ID101526731	LODE CLAIM
SF 1285	ID101526732	LODE CLAIM
SF 1286	ID101526733	LODE CLAIM
SF 1287	ID101526734	LODE CLAIM
SF 1288	ID101526735	LODE CLAIM
SF 1289	ID101526736	LODE CLAIM
SF 1290	ID101526737	LODE CLAIM
SF 1291	ID101499770	LODE CLAIM
SF 1292	ID101499771	LODE CLAIM
SF 1293	ID101499772	LODE CLAIM
SF 1294	ID101499773	LODE CLAIM
SF 1295	ID101499774	LODE CLAIM
SF 1296	ID101499775	LODE CLAIM
SF 1297	ID101499776	LODE CLAIM
SF 1298	ID101499777	LODE CLAIM
SF 1299	ID101499778	LODE CLAIM
SF 13	ID101853101	LODE CLAIM
SF 1300	ID101499779	LODE CLAIM
SF 1301	ID101499780	LODE CLAIM
SF 1302	ID101499781	LODE CLAIM
SF 1303	ID101499782	LODE CLAIM
SF 1304	ID101499783	LODE CLAIM
SF 1305	ID101499784	LODE CLAIM
SF 1306	ID101499785	LODE CLAIM
SF 1307	ID101499786	LODE CLAIM
SF 1308	ID101499787	LODE CLAIM
SF 1309	ID101499788	LODE CLAIM
SF 1310	ID101499789	LODE CLAIM
SF 1311	ID101499790	LODE CLAIM
SF 1312	ID101526738	LODE CLAIM
SF 1313	ID101526739	LODE CLAIM
SF 1314	ID101526740	LODE CLAIM
SF 1315	ID101526741	LODE CLAIM
SF 1316	ID101526742	LODE CLAIM
SF 1317	ID101526743	LODE CLAIM
SF 1318	ID101526744	LODE CLAIM
SF 1319	ID101526745	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1320	ID101526746	LODE CLAIM
SF 1321	ID101526747	LODE CLAIM
SF 1322	ID101526748	LODE CLAIM
SF 1323	ID101526749	LODE CLAIM
SF 1324	ID101526750	LODE CLAIM
SF 1325	ID101526751	LODE CLAIM
SF 1326	ID101526752	LODE CLAIM
SF 1327	ID101526753	LODE CLAIM
SF 1328	ID101526754	LODE CLAIM
SF 1329	ID101526755	LODE CLAIM
SF 133	ID101653506	LODE CLAIM
SF 1330	ID101526756	LODE CLAIM
SF 1331	ID101526757	LODE CLAIM
SF 1332	ID101526758	LODE CLAIM
SF 1333	ID101526759	LODE CLAIM
SF 1334	ID101526760	LODE CLAIM
SF 1335	ID101526761	LODE CLAIM
SF 1336	ID101526762	LODE CLAIM
SF 1337	ID101526763	LODE CLAIM
SF 1338	ID101526764	LODE CLAIM
SF 1339	ID101526765	LODE CLAIM
SF 134	ID101653507	LODE CLAIM
SF 1340	ID101526766	LODE CLAIM
SF 1341	ID101526767	LODE CLAIM
SF 1342	ID101526768	LODE CLAIM
SF 1343	ID101526769	LODE CLAIM
SF 1344	ID101526770	LODE CLAIM
SF 1345	ID101526771	LODE CLAIM
SF 1346	ID101526772	LODE CLAIM
SF 1347	ID101526773	LODE CLAIM
SF 1348	ID101526774	LODE CLAIM
SF 1349	ID101526775	LODE CLAIM
SF 135	ID101653508	LODE CLAIM
SF 1350	ID101526776	LODE CLAIM
SF 1351	ID101526777	LODE CLAIM
SF 1352	ID101526778	LODE CLAIM
SF 1353	ID101526779	LODE CLAIM
SF 1354	ID101526780	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1355	ID101526781	LODE CLAIM
SF 1356	ID101509175	LODE CLAIM
SF 1356	ID101754713	LODE CLAIM
SF 1357	ID101509176	LODE CLAIM
SF 1357	ID101754714	LODE CLAIM
SF 1358	ID101509177	LODE CLAIM
SF 1358	ID101754715	LODE CLAIM
SF 1359	ID101754716	LODE CLAIM
SF 136	ID101653509	LODE CLAIM
SF 1360	ID101754717	LODE CLAIM
SF 1361	ID101754718	LODE CLAIM
SF 1362	ID101754719	LODE CLAIM
SF 1363	ID101754720	LODE CLAIM
SF 1364	ID101756045	LODE CLAIM
SF 1365	ID101756046	LODE CLAIM
SF 1366	ID101756047	LODE CLAIM
SF 1367	ID101756048	LODE CLAIM
SF 1368	ID101756049	LODE CLAIM
SF 1369	ID101756050	LODE CLAIM
SF 137	ID101653510	LODE CLAIM
SF 1370	ID101756051	LODE CLAIM
SF 1371	ID101756052	LODE CLAIM
SF 1372	ID101756053	LODE CLAIM
SF 1373	ID101756054	LODE CLAIM
SF 1374	ID101756055	LODE CLAIM
SF 1375	ID101756056	LODE CLAIM
SF 1376	ID101756057	LODE CLAIM
SF 1377	ID101756058	LODE CLAIM
SF 1378	ID101756059	LODE CLAIM
SF 1379	ID101756060	LODE CLAIM
SF 138	ID101653511	LODE CLAIM
SF 1380	ID101756061	LODE CLAIM
SF 1381	ID101756062	LODE CLAIM
SF 1382	ID101756063	LODE CLAIM
SF 1383	ID101756064	LODE CLAIM
SF 1384	ID101756065	LODE CLAIM
SF 1385	ID101757388	LODE CLAIM
SF 1386	ID101757389	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1387	ID101757390	LODE CLAIM
SF 1388	ID101757391	LODE CLAIM
SF 1389	ID101757392	LODE CLAIM
SF 139	ID101653512	LODE CLAIM
SF 1390	ID101757393	LODE CLAIM
SF 1391	ID101757394	LODE CLAIM
SF 1392	ID101757395	LODE CLAIM
SF 1393	ID101757396	LODE CLAIM
SF 1394	ID101757397	LODE CLAIM
SF 1395	ID101757398	LODE CLAIM
SF 1396	ID101757399	LODE CLAIM
SF 1397	ID101757400	LODE CLAIM
SF 1398	ID101757401	LODE CLAIM
SF 1399	ID101757402	LODE CLAIM
SF 14	ID101853102	LODE CLAIM
SF 140	ID101653513	LODE CLAIM
SF 1400	ID101757403	LODE CLAIM
SF 1401	ID101757404	LODE CLAIM
SF 1402	ID101757405	LODE CLAIM
SF 1403	ID101757406	LODE CLAIM
SF 1404	ID101757407	LODE CLAIM
SF 1405	ID101757408	LODE CLAIM
SF 1406	ID101758731	LODE CLAIM
SF 1407	ID101758732	LODE CLAIM
SF 1408	ID101758733	LODE CLAIM
SF 1409	ID101758734	LODE CLAIM
SF 141	ID101653514	LODE CLAIM
SF 1410	ID101758735	LODE CLAIM
SF 1411	ID101758736	LODE CLAIM
SF 1412	ID101758737	LODE CLAIM
SF 1413	ID101758738	LODE CLAIM
SF 1414	ID101758739	LODE CLAIM
SF 1415	ID101758740	LODE CLAIM
SF 1416	ID101758741	LODE CLAIM
SF 1417	ID101758742	LODE CLAIM
SF 1418	ID101758743	LODE CLAIM
SF 1419	ID101758744	LODE CLAIM
SF 142	ID101653515	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1420	ID101758745	LODE CLAIM
SF 1421	ID101758746	LODE CLAIM
SF 1422	ID101758747	LODE CLAIM
SF 1423	ID101758748	LODE CLAIM
SF 1424	ID101758749	LODE CLAIM
SF 1425	ID101758750	LODE CLAIM
SF 1426	ID101758751	LODE CLAIM
SF 1427	ID101760080	LODE CLAIM
SF 1428	ID101760081	LODE CLAIM
SF 1429	ID101760082	LODE CLAIM
SF 143	ID101653516	LODE CLAIM
SF 1430	ID101760083	LODE CLAIM
SF 1431	ID101760084	LODE CLAIM
SF 1432	ID101760085	LODE CLAIM
SF 1433	ID101760086	LODE CLAIM
SF 1434	ID101760087	LODE CLAIM
SF 1435	ID101760088	LODE CLAIM
SF 1436	ID101760089	LODE CLAIM
SF 1437	ID101760090	LODE CLAIM
SF 1438	ID101760091	LODE CLAIM
SF 1439	ID101760092	LODE CLAIM
SF 144	ID101653637	LODE CLAIM
SF 1440	ID101760093	LODE CLAIM
SF 1441	ID101760094	LODE CLAIM
SF 1442	ID101760095	LODE CLAIM
SF 1443	ID101760096	LODE CLAIM
SF 1444	ID101760097	LODE CLAIM
SF 1445	ID101760098	LODE CLAIM
SF 1446	ID101760099	LODE CLAIM
SF 1447	ID101760100	LODE CLAIM
SF 1448	ID101781425	LODE CLAIM
SF 1449	ID101781426	LODE CLAIM
SF 145	ID101653638	LODE CLAIM
SF 1450	ID101781427	LODE CLAIM
SF 1451	ID101781428	LODE CLAIM
SF 1452	ID101781429	LODE CLAIM
SF 1453	ID101781430	LODE CLAIM
SF 1454	ID101781431	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1455	ID101781432	LODE CLAIM
SF 1456	ID101781433	LODE CLAIM
SF 1457	ID101781434	LODE CLAIM
SF 1458	ID101781435	LODE CLAIM
SF 1459	ID101781436	LODE CLAIM
SF 146	ID101653639	LODE CLAIM
SF 1460	ID101781437	LODE CLAIM
SF 1461	ID101781438	LODE CLAIM
SF 1462	ID101781439	LODE CLAIM
SF 1463	ID101781440	LODE CLAIM
SF 1464	ID101781441	LODE CLAIM
SF 1465	ID101781442	LODE CLAIM
SF 1466	ID101781443	LODE CLAIM
SF 1467	ID101781444	LODE CLAIM
SF 1468	ID101781445	LODE CLAIM
SF 1469	ID101541346	LODE CLAIM
SF 147	ID101653640	LODE CLAIM
SF 1470	ID101541347	LODE CLAIM
SF 1471	ID101541348	LODE CLAIM
SF 1472	ID101541349	LODE CLAIM
SF 1473	ID101541350	LODE CLAIM
SF 1474	ID101541351	LODE CLAIM
SF 1475	ID101541352	LODE CLAIM
SF 1476	ID101541353	LODE CLAIM
SF 1477	ID101541354	LODE CLAIM
SF 1478	ID101541355	LODE CLAIM
SF 1479	ID101541356	LODE CLAIM
SF 148	ID101653641	LODE CLAIM
SF 1480	ID101549361	LODE CLAIM
SF 1481	ID101549362	LODE CLAIM
SF 1482	ID101549363	LODE CLAIM
SF 1483	ID101549364	LODE CLAIM
SF 1484	ID101750697	LODE CLAIM
SF 149	ID101653642	LODE CLAIM
SF 15	ID101853103	LODE CLAIM
SF 150	ID101629117	LODE CLAIM
SF 1500	ID106392630	LODE CLAIM
SF 1501	ID106392629	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 1502	ID106392628	LODE CLAIM
SF 1503	ID106392627	LODE CLAIM
SF 1504	ID106392626	LODE CLAIM
SF 1505	ID106392625	LODE CLAIM
SF 1506	ID106392624	LODE CLAIM
SF 1507	ID106392623	LODE CLAIM
SF 151	ID101629118	LODE CLAIM
SF 152	ID101629119	LODE CLAIM
SF 153	ID101629120	LODE CLAIM
SF 154	ID101629121	LODE CLAIM
SF 155	ID101629122	LODE CLAIM
SF 156	ID101629123	LODE CLAIM
SF 157	ID101629124	LODE CLAIM
SF 158	ID101629125	LODE CLAIM
SF 159	ID101629126	LODE CLAIM
SF 16	ID101853104	LODE CLAIM
SF 160	ID101629127	LODE CLAIM
SF 161	ID101629128	LODE CLAIM
SF 162	ID101629129	LODE CLAIM
SF 163	ID101629130	LODE CLAIM
SF 164	ID101629131	LODE CLAIM
SF 165	ID101629132	LODE CLAIM
SF 166	ID101629133	LODE CLAIM
SF 167	ID101629134	LODE CLAIM
SF 168	ID101629135	LODE CLAIM
SF 169	ID101629136	LODE CLAIM
SF 17	ID101853105	LODE CLAIM
SF 170	ID101629137	LODE CLAIM
SF 171	ID101629138	LODE CLAIM
SF 172	ID101630133	LODE CLAIM
SF 173	ID101630134	LODE CLAIM
SF 174	ID101630135	LODE CLAIM
SF 175	ID101630136	LODE CLAIM
SF 176	ID101630137	LODE CLAIM
SF 177	ID101630138	LODE CLAIM
SF 178	ID101630139	LODE CLAIM
SF 179	ID101630140	LODE CLAIM
SF 18	ID101853106	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 180	ID101630141	LODE CLAIM
SF 181	ID101630142	LODE CLAIM
SF 182	ID101630143	LODE CLAIM
SF 183	ID101630144	LODE CLAIM
SF 184	ID101630145	LODE CLAIM
SF 185	ID101630146	LODE CLAIM
SF 186	ID101630147	LODE CLAIM
SF 187	ID101630148	LODE CLAIM
SF 188	ID101630149	LODE CLAIM
SF 189	ID101630150	LODE CLAIM
SF 19	ID101853107	LODE CLAIM
SF 190	ID101630151	LODE CLAIM
SF 191	ID101630152	LODE CLAIM
SF 192	ID101386612	LODE CLAIM
SF 193	ID101386613	LODE CLAIM
SF 194	ID101386614	LODE CLAIM
SF 195	ID101386615	LODE CLAIM
SF 196	ID101386616	LODE CLAIM
SF 197	ID101386617	LODE CLAIM
SF 198	ID101386618	LODE CLAIM
SF 199	ID101386619	LODE CLAIM
SF 2	ID101851912	LODE CLAIM
SF 20	ID101853108	LODE CLAIM
SF 200	ID101386620	LODE CLAIM
SF 201	ID101386621	LODE CLAIM
SF 202	ID101386622	LODE CLAIM
SF 203	ID101386623	LODE CLAIM
SF 204	ID101386624	LODE CLAIM
SF 205	ID101386625	LODE CLAIM
SF 206	ID101386626	LODE CLAIM
SF 207	ID101386627	LODE CLAIM
SF 208	ID101386628	LODE CLAIM
SF 209	ID101386629	LODE CLAIM
SF 21	ID101853109	LODE CLAIM
SF 210	ID101386630	LODE CLAIM
SF 211	ID101387814	LODE CLAIM
SF 212	ID101387815	LODE CLAIM
SF 213	ID101387816	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 214	ID101387817	LODE CLAIM
SF 215	ID101387818	LODE CLAIM
SF 216	ID101387819	LODE CLAIM
SF 217	ID101387820	LODE CLAIM
SF 218	ID101387821	LODE CLAIM
SF 219	ID101387822	LODE CLAIM
SF 22	ID101853110	LODE CLAIM
SF 220	ID101387823	LODE CLAIM
SF 221	ID101387824	LODE CLAIM
SF 222	ID101387825	LODE CLAIM
SF 223	ID101382352	LODE CLAIM
SF 224	ID101382353	LODE CLAIM
SF 225	ID101382354	LODE CLAIM
SF 226	ID101382355	LODE CLAIM
SF 227	ID101382356	LODE CLAIM
SF 228	ID101382357	LODE CLAIM
SF 229	ID101382358	LODE CLAIM
SF 23	ID101853111	LODE CLAIM
SF 230	ID101382359	LODE CLAIM
SF 231	ID101382360	LODE CLAIM
SF 232	ID101382361	LODE CLAIM
SF 233	ID101382362	LODE CLAIM
SF 234	ID101382363	LODE CLAIM
SF 235	ID101563880	LODE CLAIM
SF 236	ID101563881	LODE CLAIM
SF 237	ID101563882	LODE CLAIM
SF 238	ID101563883	LODE CLAIM
SF 239	ID101563884	LODE CLAIM
SF 24	ID101853112	LODE CLAIM
SF 240	ID101563885	LODE CLAIM
SF 241	ID101563886	LODE CLAIM
SF 242	ID101564803	LODE CLAIM
SF 243	ID101564804	LODE CLAIM
SF 244	ID101564805	LODE CLAIM
SF 245	ID101564806	LODE CLAIM
SF 246	ID101564807	LODE CLAIM
SF 247	ID101564808	LODE CLAIM
SF 248	ID101564809	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 249	ID101564810	LODE CLAIM
SF 25	ID101853113	LODE CLAIM
SF 250	ID101564811	LODE CLAIM
SF 251	ID101564812	LODE CLAIM
SF 252	ID101564813	LODE CLAIM
SF 253	ID101564814	LODE CLAIM
SF 254	ID101564815	LODE CLAIM
SF 255	ID101564816	LODE CLAIM
SF 256	ID101564817	LODE CLAIM
SF 257	ID101564818	LODE CLAIM
SF 258	ID101564819	LODE CLAIM
SF 259	ID101564820	LODE CLAIM
SF 26	ID101853114	LODE CLAIM
SF 260	ID101564821	LODE CLAIM
SF 261	ID101564822	LODE CLAIM
SF 262	ID101564823	LODE CLAIM
SF 263	ID101564824	LODE CLAIM
SF 264	ID101882616	LODE CLAIM
SF 265	ID101882617	LODE CLAIM
SF 266	ID101882618	LODE CLAIM
SF 267	ID101882619	LODE CLAIM
SF 268	ID101882620	LODE CLAIM
SF 269	ID101882621	LODE CLAIM
SF 27	ID101853115	LODE CLAIM
SF 270	ID101882622	LODE CLAIM
SF 271	ID101882623	LODE CLAIM
SF 272	ID101882624	LODE CLAIM
SF 273	ID101882625	LODE CLAIM
SF 274	ID101882626	LODE CLAIM
SF 275	ID101882627	LODE CLAIM
SF 276	ID101882628	LODE CLAIM
SF 277	ID101882629	LODE CLAIM
SF 278	ID101882630	LODE CLAIM
SF 279	ID101882631	LODE CLAIM
SF 28	ID101853116	LODE CLAIM
SF 280	ID101882632	LODE CLAIM
SF 281	ID101882633	LODE CLAIM
SF 282	ID101882634	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 283	ID101882635	LODE CLAIM
SF 284	ID101882636	LODE CLAIM
SF 285	ID101882637	LODE CLAIM
SF 286	ID101883439	LODE CLAIM
SF 287	ID101883440	LODE CLAIM
SF 288	ID101883441	LODE CLAIM
SF 289	ID101883442	LODE CLAIM
SF 29	ID101854313	LODE CLAIM
SF 290	ID101883443	LODE CLAIM
SF 291	ID101883444	LODE CLAIM
SF 292	ID101883445	LODE CLAIM
SF 293	ID101883446	LODE CLAIM
SF 294	ID101883447	LODE CLAIM
SF 295	ID101883448	LODE CLAIM
SF 296	ID101883449	LODE CLAIM
SF 297	ID101883450	LODE CLAIM
SF 298	ID101883451	LODE CLAIM
SF 299	ID101883452	LODE CLAIM
SF 3	ID101851913	LODE CLAIM
SF 30	ID101854314	LODE CLAIM
SF 300	ID101883453	LODE CLAIM
SF 301	ID101883454	LODE CLAIM
SF 302	ID101883455	LODE CLAIM
SF 303	ID101883456	LODE CLAIM
SF 304	ID101883457	LODE CLAIM
SF 305	ID101883458	LODE CLAIM
SF 306	ID101883459	LODE CLAIM
SF 307	ID101883460	LODE CLAIM
SF 308	ID101884252	LODE CLAIM
SF 309	ID101884253	LODE CLAIM
SF 31	ID101854315	LODE CLAIM
SF 310	ID101884254	LODE CLAIM
SF 311	ID101884255	LODE CLAIM
SF 312	ID101884256	LODE CLAIM
SF 313	ID101884257	LODE CLAIM
SF 314	ID101884258	LODE CLAIM
SF 315	ID101884259	LODE CLAIM
SF 316	ID101884260	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 317	ID101884261	LODE CLAIM
SF 318	ID101884262	LODE CLAIM
SF 319	ID101884263	LODE CLAIM
SF 32	ID101854316	LODE CLAIM
SF 320	ID101884264	LODE CLAIM
SF 321	ID101884265	LODE CLAIM
SF 322	ID101884266	LODE CLAIM
SF 323	ID101884267	LODE CLAIM
SF 324	ID101884268	LODE CLAIM
SF 325	ID101884269	LODE CLAIM
SF 328	ID101884272	LODE CLAIM
SF 329	ID101884273	LODE CLAIM
SF 33	ID101854317	LODE CLAIM
SF 330	ID101885064	LODE CLAIM
SF 338	ID101885072	LODE CLAIM
SF 339	ID101885073	LODE CLAIM
SF 34	ID101854318	LODE CLAIM
SF 340	ID101885074	LODE CLAIM
SF 341	ID101885075	LODE CLAIM
SF 342	ID101885076	LODE CLAIM
SF 343	ID101885077	LODE CLAIM
SF 344	ID101885078	LODE CLAIM
SF 345	ID101885079	LODE CLAIM
SF 346	ID101885080	LODE CLAIM
SF 347	ID101885081	LODE CLAIM
SF 348	ID101885082	LODE CLAIM
SF 349	ID101885083	LODE CLAIM
SF 35	ID101854319	LODE CLAIM
SF 350	ID101885084	LODE CLAIM
SF 351	ID101885085	LODE CLAIM
SF 352	ID101885864	LODE CLAIM
SF 353	ID101885865	LODE CLAIM
SF 354	ID101885866	LODE CLAIM
SF 355	ID101885867	LODE CLAIM
SF 356	ID101885868	LODE CLAIM
SF 357	ID101885869	LODE CLAIM
SF 358	ID101885870	LODE CLAIM
SF 359	ID101885871	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 36	ID101854320	LODE CLAIM
SF 360	ID101885872	LODE CLAIM
SF 361	ID101885873	LODE CLAIM
SF 362	ID101885874	LODE CLAIM
SF 363	ID101885875	LODE CLAIM
SF 364	ID101885876	LODE CLAIM
SF 365	ID101885877	LODE CLAIM
SF 366	ID101885878	LODE CLAIM
SF 367	ID101885879	LODE CLAIM
SF 368	ID101885880	LODE CLAIM
SF 369	ID101885881	LODE CLAIM
SF 37	ID101854321	LODE CLAIM
SF 370	ID101885882	LODE CLAIM
SF 371	ID101885883	LODE CLAIM
SF 372	ID101885884	LODE CLAIM
SF 373	ID101886664	LODE CLAIM
SF 374	ID101886665	LODE CLAIM
SF 375	ID101886666	LODE CLAIM
SF 376	ID101886667	LODE CLAIM
SF 377	ID101886668	LODE CLAIM
SF 378	ID101886669	LODE CLAIM
SF 379	ID101886670	LODE CLAIM
SF 38	ID101854322	LODE CLAIM
SF 380	ID101886671	LODE CLAIM
SF 381	ID101886672	LODE CLAIM
SF 382	ID101886673	LODE CLAIM
SF 383	ID101886674	LODE CLAIM
SF 384	ID101886675	LODE CLAIM
SF 385	ID101886676	LODE CLAIM
SF 386	ID101886677	LODE CLAIM
SF 387	ID101886678	LODE CLAIM
SF 388	ID101886679	LODE CLAIM
SF 389	ID101886680	LODE CLAIM
SF 39	ID101854323	LODE CLAIM
SF 390	ID101886681	LODE CLAIM
SF 391	ID101886682	LODE CLAIM
SF 392	ID101886683	LODE CLAIM
SF 393	ID101886684	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 394	ID101886685	LODE CLAIM
SF 395	ID101887464	LODE CLAIM
SF 396	ID101887465	LODE CLAIM
SF 397	ID101887466	LODE CLAIM
SF 398	ID101887467	LODE CLAIM
SF 399	ID101887468	LODE CLAIM
SF 4	ID101851914	LODE CLAIM
SF 40	ID101854324	LODE CLAIM
SF 400	ID101887469	LODE CLAIM
SF 401	ID101887470	LODE CLAIM
SF 402	ID101887471	LODE CLAIM
SF 403	ID101887472	LODE CLAIM
SF 404	ID101887473	LODE CLAIM
SF 405	ID101887474	LODE CLAIM
SF 406	ID101887475	LODE CLAIM
SF 407	ID101887476	LODE CLAIM
SF 408	ID101887477	LODE CLAIM
SF 409	ID101887478	LODE CLAIM
SF 41	ID101854325	LODE CLAIM
SF 410	ID101887479	LODE CLAIM
SF 411	ID101887480	LODE CLAIM
SF 412	ID101650951	LODE CLAIM
SF 413	ID101650952	LODE CLAIM
SF 414	ID101650953	LODE CLAIM
SF 415	ID101650954	LODE CLAIM
SF 416	ID101650955	LODE CLAIM
SF 417	ID101650956	LODE CLAIM
SF 418	ID101650957	LODE CLAIM
SF 419	ID101650958	LODE CLAIM
SF 42	ID101854326	LODE CLAIM
SF 420	ID101651938	LODE CLAIM
SF 421	ID101651939	LODE CLAIM
SF 422	ID101651940	LODE CLAIM
SF 423	ID101651941	LODE CLAIM
SF 424	ID101651942	LODE CLAIM
SF 425	ID101651943	LODE CLAIM
SF 426	ID101651944	LODE CLAIM
SF 427	ID101651945	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 428	ID101651946	LODE CLAIM
SF 429	ID101651947	LODE CLAIM
SF 43	ID101854327	LODE CLAIM
SF 430	ID101651948	LODE CLAIM
SF 431	ID101651949	LODE CLAIM
SF 432	ID101651950	LODE CLAIM
SF 433	ID101651951	LODE CLAIM
SF 434	ID101651952	LODE CLAIM
SF 435	ID101651953	LODE CLAIM
SF 436	ID101651954	LODE CLAIM
SF 437	ID101651955	LODE CLAIM
SF 438	ID101651956	LODE CLAIM
SF 439	ID101651957	LODE CLAIM
SF 44	ID101854328	LODE CLAIM
SF 45	ID101854329	LODE CLAIM
SF 451	ID101427255	LODE CLAIM
SF 452	ID101427256	LODE CLAIM
SF 453 A	ID101748071	LODE CLAIM
SF 456	ID101506653	LODE CLAIM
SF 457	ID101507858	LODE CLAIM
SF 458	ID101507859	LODE CLAIM
SF 459	ID101507860	LODE CLAIM
SF 46	ID101854330	LODE CLAIM
SF 460	ID101507861	LODE CLAIM
SF 461	ID101507862	LODE CLAIM
SF 462	ID101500490	LODE CLAIM
SF 463	ID101500491	LODE CLAIM
SF 464	ID101500492	LODE CLAIM
SF 465	ID101500493	LODE CLAIM
SF 466	ID101500494	LODE CLAIM
SF 467	ID101500495	LODE CLAIM
SF 468	ID101500496	LODE CLAIM
SF 469	ID101500497	LODE CLAIM
SF 47	ID101854331	LODE CLAIM
SF 470	ID101500498	LODE CLAIM
SF 471	ID101500499	LODE CLAIM
SF 472	ID101500500	LODE CLAIM
SF 473	ID101500501	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 474	ID101501735	LODE CLAIM
SF 475	ID101501736	LODE CLAIM
SF 476	ID101501737	LODE CLAIM
SF 477	ID101501738	LODE CLAIM
SF 478	ID101501739	LODE CLAIM
SF 479	ID101501740	LODE CLAIM
SF 48	ID101854332	LODE CLAIM
SF 480	ID101501741	LODE CLAIM
SF 481	ID101501742	LODE CLAIM
SF 482	ID101501743	LODE CLAIM
SF 483	ID101501744	LODE CLAIM
SF 484	ID101501745	LODE CLAIM
SF 485	ID101501746	LODE CLAIM
SF 486	ID101501747	LODE CLAIM
SF 487	ID101501748	LODE CLAIM
SF 488	ID101501749	LODE CLAIM
SF 489	ID101501750	LODE CLAIM
SF 49	ID101854333	LODE CLAIM
SF 490	ID101501751	LODE CLAIM
SF 491	ID101501752	LODE CLAIM
SF 5	ID101851915	LODE CLAIM
SF 50	ID101854334	LODE CLAIM
SF 504	ID101502970	LODE CLAIM
SF 505	ID101502971	LODE CLAIM
SF 506	ID101502972	LODE CLAIM
SF 507	ID101502973	LODE CLAIM
SF 508	ID101502974	LODE CLAIM
SF 509	ID101502975	LODE CLAIM
SF 510	ID101502976	LODE CLAIM
SF 511	ID101502977	LODE CLAIM
SF 512	ID101502978	LODE CLAIM
SF 513	ID101502979	LODE CLAIM
SF 514	ID101502980	LODE CLAIM
SF 515	ID101502981	LODE CLAIM
SF 52	ID101855297	LODE CLAIM
SF 521	ID101504221	LODE CLAIM
SF 522	ID101504222	LODE CLAIM
SF 523	ID101504223	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 524	ID101504224	LODE CLAIM
SF 525	ID101504225	LODE CLAIM
SF 526	ID101504226	LODE CLAIM
SF 527	ID101504227	LODE CLAIM
SF 528	ID101504228	LODE CLAIM
SF 529	ID101504229	LODE CLAIM
SF 53	ID101855298	LODE CLAIM
SF 530	ID101504230	LODE CLAIM
SF 537	ID101504237	LODE CLAIM
SF 538	ID101504238	LODE CLAIM
SF 539	ID101504239	LODE CLAIM
SF 54	ID101855299	LODE CLAIM
SF 540	ID101505437	LODE CLAIM
SF 541	ID101505438	LODE CLAIM
SF 542	ID101505439	LODE CLAIM
SF 543	ID101505440	LODE CLAIM
SF 544	ID101505441	LODE CLAIM
SF 545	ID101505442	LODE CLAIM
SF 546	ID101505443	LODE CLAIM
SF 547	ID101505444	LODE CLAIM
SF 548	ID101505445	LODE CLAIM
SF 549	ID101505446	LODE CLAIM
SF 55	ID101855300	LODE CLAIM
SF 550	ID101505447	LODE CLAIM
SF 551	ID101505448	LODE CLAIM
SF 552	ID101505449	LODE CLAIM
SF 553	ID101505450	LODE CLAIM
SF 554	ID101505451	LODE CLAIM
SF 555	ID101505452	LODE CLAIM
SF 559	ID101505456	LODE CLAIM
SF 56	ID101855301	LODE CLAIM
SF 560	ID101505457	LODE CLAIM
SF 561	ID101505458	LODE CLAIM
SF 562	ID101506654	LODE CLAIM
SF 563	ID101506655	LODE CLAIM
SF 564	ID101506656	LODE CLAIM
SF 565	ID101506657	LODE CLAIM
SF 566	ID101506658	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 567	ID101506659	LODE CLAIM
SF 568	ID101506660	LODE CLAIM
SF 569	ID101506661	LODE CLAIM
SF 57	ID101855302	LODE CLAIM
SF 570	ID101506662	LODE CLAIM
SF 571	ID101506663	LODE CLAIM
SF 572	ID101506664	LODE CLAIM
SF 573	ID101506665	LODE CLAIM
SF 574	ID101506666	LODE CLAIM
SF 575	ID101506667	LODE CLAIM
SF 576	ID101506668	LODE CLAIM
SF 577	ID101506669	LODE CLAIM
SF 578	ID101506670	LODE CLAIM
SF 579	ID101506671	LODE CLAIM
SF 58	ID101855303	LODE CLAIM
SF 582	ID101506674	LODE CLAIM
SF 583	ID101506675	LODE CLAIM
SF 584	ID101507879	LODE CLAIM
SF 585	ID101507880	LODE CLAIM
SF 586	ID101507881	LODE CLAIM
SF 587	ID101507882	LODE CLAIM
SF 588	ID101507883	LODE CLAIM
SF 589	ID101507884	LODE CLAIM
SF 59	ID101855304	LODE CLAIM
SF 590	ID101507885	LODE CLAIM
SF 591	ID101507886	LODE CLAIM
SF 592	ID101507887	LODE CLAIM
SF 593	ID101507888	LODE CLAIM
SF 594	ID101507889	LODE CLAIM
SF 595	ID101507890	LODE CLAIM
SF 596	ID101507891	LODE CLAIM
SF 597	ID101507892	LODE CLAIM
SF 598	ID101507893	LODE CLAIM
SF 599	ID101507894	LODE CLAIM
SF 6	ID101851916	LODE CLAIM
SF 600	ID101504245	LODE CLAIM
SF 601	ID101504246	LODE CLAIM
SF 602	ID101504247	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 603	ID101504248	LODE CLAIM
SF 604	ID101504249	LODE CLAIM
SF 605	ID101504250	LODE CLAIM
SF 606	ID101504251	LODE CLAIM
SF 607	ID101504252	LODE CLAIM
SF 608	ID101504253	LODE CLAIM
SF 609	ID101504254	LODE CLAIM
SF 61	ID101855305	LODE CLAIM
SF 610	ID101504255	LODE CLAIM
SF 611	ID101504256	LODE CLAIM
SF 612	ID101504257	LODE CLAIM
SF 613	ID101504258	LODE CLAIM
SF 614	ID101504259	LODE CLAIM
SF 615	ID101504260	LODE CLAIM
SF 616	ID101504261	LODE CLAIM
SF 617	ID101505459	LODE CLAIM
SF 618	ID101505460	LODE CLAIM
SF 619	ID101505461	LODE CLAIM
SF 62	ID101855306	LODE CLAIM
SF 620	ID101505462	LODE CLAIM
SF 621	ID101505463	LODE CLAIM
SF 622	ID101505464	LODE CLAIM
SF 623	ID101505465	LODE CLAIM
SF 624	ID101505466	LODE CLAIM
SF 625	ID101505467	LODE CLAIM
SF 626	ID101505468	LODE CLAIM
SF 627	ID101505469	LODE CLAIM
SF 628	ID101505470	LODE CLAIM
SF 629	ID101505471	LODE CLAIM
SF 63	ID101385418	LODE CLAIM
SF 630	ID101505472	LODE CLAIM
SF 631	ID101505473	LODE CLAIM
SF 632	ID101505474	LODE CLAIM
SF 633	ID101505475	LODE CLAIM
SF 634	ID101505476	LODE CLAIM
SF 635	ID101505477	LODE CLAIM
SF 636	ID101505478	LODE CLAIM
SF 637	ID101505479	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 638	ID101505480	LODE CLAIM
SF 64	ID101385419	LODE CLAIM
SF 641	ID101506676	LODE CLAIM
SF 642	ID101506677	LODE CLAIM
SF 643	ID101506678	LODE CLAIM
SF 644	ID101506679	LODE CLAIM
SF 645	ID101506680	LODE CLAIM
SF 646	ID101506681	LODE CLAIM
SF 647	ID101506682	LODE CLAIM
SF 648	ID101506683	LODE CLAIM
SF 649	ID101506684	LODE CLAIM
SF 65	ID101855307	LODE CLAIM
SF 650	ID101506692	LODE CLAIM
SF 651	ID101506693	LODE CLAIM
SF 652	ID101506694	LODE CLAIM
SF 653	ID101506695	LODE CLAIM
SF 654	ID101506696	LODE CLAIM
SF 655	ID101506697	LODE CLAIM
SF 656	ID101507901	LODE CLAIM
SF 657	ID101507902	LODE CLAIM
SF 658	ID101507903	LODE CLAIM
SF 659	ID101507904	LODE CLAIM
SF 66	ID101855308	LODE CLAIM
SF 660	ID101507905	LODE CLAIM
SF 661	ID101507906	LODE CLAIM
SF 662	ID101507907	LODE CLAIM
SF 663	ID101507908	LODE CLAIM
SF 664	ID101507909	LODE CLAIM
SF 665	ID101507910	LODE CLAIM
SF 666	ID101507911	LODE CLAIM
SF 667	ID101507912	LODE CLAIM
SF 668	ID101507913	LODE CLAIM
SF 669	ID101507914	LODE CLAIM
SF 67	ID101855309	LODE CLAIM
SF 670	ID101507915	LODE CLAIM
SF 671	ID101507916	LODE CLAIM
SF 672	ID101507917	LODE CLAIM
SF 673	ID101507918	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 674	ID101507919	LODE CLAIM
SF 675	ID101507920	LODE CLAIM
SF 676	ID101507921	LODE CLAIM
SF 677	ID101507922	LODE CLAIM
SF 678	ID101509137	LODE CLAIM
SF 679	ID101509138	LODE CLAIM
SF 68	ID101855310	LODE CLAIM
SF 680	ID101509139	LODE CLAIM
SF 681	ID101509140	LODE CLAIM
SF 682	ID101509141	LODE CLAIM
SF 683	ID101509142	LODE CLAIM
SF 684	ID101509143	LODE CLAIM
SF 685	ID101509144	LODE CLAIM
SF 686	ID101509145	LODE CLAIM
SF 687	ID101509146	LODE CLAIM
SF 688	ID101509147	LODE CLAIM
SF 689	ID101509148	LODE CLAIM
SF 69	ID101855311	LODE CLAIM
SF 690	ID101509149	LODE CLAIM
SF 691	ID101509150	LODE CLAIM
SF 692	ID101509151	LODE CLAIM
SF 693	ID101509152	LODE CLAIM
SF 694	ID101509153	LODE CLAIM
SF 695	ID101509154	LODE CLAIM
SF 696	ID101509155	LODE CLAIM
SF 697	ID101509156	LODE CLAIM
SF 698	ID101509157	LODE CLAIM
SF 699	ID101509158	LODE CLAIM
SF 7	ID101853095	LODE CLAIM
SF 70	ID101855312	LODE CLAIM
SF 700	ID101510359	LODE CLAIM
SF 701	ID101510360	LODE CLAIM
SF 702	ID101510361	LODE CLAIM
SF 703	ID101510362	LODE CLAIM
SF 704	ID101521342	LODE CLAIM
SF 705	ID101521343	LODE CLAIM
SF 706	ID101521344	LODE CLAIM
SF 707	ID101521345	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 708	ID101521346	LODE CLAIM
SF 709	ID101521347	LODE CLAIM
SF 71	ID101385420	LODE CLAIM
SF 710	ID101521348	LODE CLAIM
SF 711	ID101521349	LODE CLAIM
SF 712	ID101521350	LODE CLAIM
SF 713	ID101521351	LODE CLAIM
SF 714	ID101521352	LODE CLAIM
SF 715	ID101521353	LODE CLAIM
SF 716	ID101521354	LODE CLAIM
SF 717	ID101521355	LODE CLAIM
SF 718	ID101521356	LODE CLAIM
SF 719	ID101521357	LODE CLAIM
SF 72	ID101385421	LODE CLAIM
SF 720	ID101521358	LODE CLAIM
SF 721	ID101507895	LODE CLAIM
SF 722	ID101507896	LODE CLAIM
SF 723	ID101507897	LODE CLAIM
SF 724	ID101507898	LODE CLAIM
SF 725	ID101507899	LODE CLAIM
SF 726	ID101507900	LODE CLAIM
SF 727	ID101509115	LODE CLAIM
SF 728	ID101509116	LODE CLAIM
SF 729	ID101509117	LODE CLAIM
SF 73	ID101855313	LODE CLAIM
SF 730	ID101509118	LODE CLAIM
SF 731	ID101509119	LODE CLAIM
SF 732	ID101509120	LODE CLAIM
SF 733	ID101509121	LODE CLAIM
SF 734	ID101509122	LODE CLAIM
SF 735	ID101509123	LODE CLAIM
SF 736	ID101509124	LODE CLAIM
SF 737	ID101509125	LODE CLAIM
SF 738	ID101509126	LODE CLAIM
SF 739	ID101509127	LODE CLAIM
SF 74	ID101855314	LODE CLAIM
SF 740	ID101509128	LODE CLAIM
SF 741	ID101509129	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 742	ID101509130	LODE CLAIM
SF 743	ID101509131	LODE CLAIM
SF 744	ID101509132	LODE CLAIM
SF 745	ID101509133	LODE CLAIM
SF 746	ID101509134	LODE CLAIM
SF 747	ID101509135	LODE CLAIM
SF 748	ID101509136	LODE CLAIM
SF 749	ID101510337	LODE CLAIM
SF 750	ID101510338	LODE CLAIM
SF 751	ID101510339	LODE CLAIM
SF 752	ID101510340	LODE CLAIM
SF 753	ID101510341	LODE CLAIM
SF 754	ID101510342	LODE CLAIM
SF 755	ID101510343	LODE CLAIM
SF 756	ID101510344	LODE CLAIM
SF 757	ID101510345	LODE CLAIM
SF 758	ID101510346	LODE CLAIM
SF 759	ID101510347	LODE CLAIM
SF 760	ID101510348	LODE CLAIM
SF 761	ID101510349	LODE CLAIM
SF 762	ID101510350	LODE CLAIM
SF 763	ID101510351	LODE CLAIM
SF 764	ID101510352	LODE CLAIM
SF 765	ID101510353	LODE CLAIM
SF 766	ID101510354	LODE CLAIM
SF 767	ID101510355	LODE CLAIM
SF 768	ID101510356	LODE CLAIM
SF 769	ID101510357	LODE CLAIM
SF 77	ID101855317	LODE CLAIM
SF 770	ID101510358	LODE CLAIM
SF 771	ID101341592	LODE CLAIM
SF 772	ID101341593	LODE CLAIM
SF 773	ID101341594	LODE CLAIM
SF 774	ID101341595	LODE CLAIM
SF 775	ID101341596	LODE CLAIM
SF 776	ID101341597	LODE CLAIM
SF 777	ID101341598	LODE CLAIM
SF 778	ID101341599	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 779	ID101341600	LODE CLAIM
SF 78	ID101855537	LODE CLAIM
SF 780	ID101341641	LODE CLAIM
SF 781	ID101341642	LODE CLAIM
SF 782	ID101341643	LODE CLAIM
SF 783	ID101504240	LODE CLAIM
SF 784	ID101504241	LODE CLAIM
SF 785	ID101504242	LODE CLAIM
SF 786	ID101504243	LODE CLAIM
SF 787	ID101504244	LODE CLAIM
SF 788	ID101521359	LODE CLAIM
SF 789	ID101521360	LODE CLAIM
SF 79	ID101856493	LODE CLAIM
SF 790	ID101521361	LODE CLAIM
SF 791	ID101521362	LODE CLAIM
SF 792	ID101521363	LODE CLAIM
SF 793	ID101521364	LODE CLAIM
SF 794	ID101521365	LODE CLAIM
SF 795	ID101521366	LODE CLAIM
SF 796	ID101521367	LODE CLAIM
SF 797	ID101521368	LODE CLAIM
SF 798	ID101521369	LODE CLAIM
SF 799	ID101521370	LODE CLAIM
SF 8	ID101853096	LODE CLAIM
SF 80	ID101856494	LODE CLAIM
SF 800	ID101521371	LODE CLAIM
SF 801	ID101521372	LODE CLAIM
SF 802	ID101521373	LODE CLAIM
SF 803	ID101506685	LODE CLAIM
SF 804	ID101506686	LODE CLAIM
SF 805	ID101506687	LODE CLAIM
SF 806	ID101506688	LODE CLAIM
SF 807	ID101506689	LODE CLAIM
SF 808	ID101506690	LODE CLAIM
SF 809	ID101506691	LODE CLAIM
SF 810	ID101521374	LODE CLAIM
SF 811	ID101521375	LODE CLAIM
SF 812	ID101521376	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 813	ID101521377	LODE CLAIM
SF 814	ID101521378	LODE CLAIM
SF 815	ID101521379	LODE CLAIM
SF 816	ID101521380	LODE CLAIM
SF 817	ID101521381	LODE CLAIM
SF 818	ID101521382	LODE CLAIM
SF 819	ID101521383	LODE CLAIM
SF 820	ID101521384	LODE CLAIM
SF 821	ID101521385	LODE CLAIM
SF 822	ID101521386	LODE CLAIM
SF 823	ID101521387	LODE CLAIM
SF 824	ID101521388	LODE CLAIM
SF 825	ID101521389	LODE CLAIM
SF 826	ID101510363	LODE CLAIM
SF 827	ID101510364	LODE CLAIM
SF 828	ID101510365	LODE CLAIM
SF 829	ID101510366	LODE CLAIM
SF 830	ID101510367	LODE CLAIM
SF 831	ID101510368	LODE CLAIM
SF 832	ID101510369	LODE CLAIM
SF 833	ID101510370	LODE CLAIM
SF 834	ID101521390	LODE CLAIM
SF 835	ID101521391	LODE CLAIM
SF 836	ID101521392	LODE CLAIM
SF 837	ID101521393	LODE CLAIM
SF 838	ID101521394	LODE CLAIM
SF 839	ID101521395	LODE CLAIM
SF 840	ID101521396	LODE CLAIM
SF 841	ID101521397	LODE CLAIM
SF 842	ID101521398	LODE CLAIM
SF 843	ID101521399	LODE CLAIM
SF 844	ID101521400	LODE CLAIM
SF 845	ID101521905	LODE CLAIM
SF 846	ID101521906	LODE CLAIM
SF 847	ID101521907	LODE CLAIM
SF 848	ID101510371	LODE CLAIM
SF 849	ID101510372	LODE CLAIM
SF 85	ID101856499	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 850	ID101510373	LODE CLAIM
SF 851	ID101510374	LODE CLAIM
SF 852	ID101510375	LODE CLAIM
SF 853	ID101510376	LODE CLAIM
SF 854	ID101510377	LODE CLAIM
SF 855	ID101510378	LODE CLAIM
SF 856	ID101521908	LODE CLAIM
SF 857	ID101521909	LODE CLAIM
SF 858	ID101521910	LODE CLAIM
SF 859	ID101521911	LODE CLAIM
SF 86	ID101856500	LODE CLAIM
SF 860	ID101521912	LODE CLAIM
SF 864	ID101521916	LODE CLAIM
SF 865	ID101521917	LODE CLAIM
SF 866	ID101521918	LODE CLAIM
SF 867	ID101521919	LODE CLAIM
SF 868	ID101510379	LODE CLAIM
SF 869	ID101510380	LODE CLAIM
SF 87	ID101856501	LODE CLAIM
SF 870	ID101341653	LODE CLAIM
SF 871	ID101341654	LODE CLAIM
SF 872	ID101341655	LODE CLAIM
SF 873	ID101341656	LODE CLAIM
SF 874	ID101341657	LODE CLAIM
SF 875	ID101341658	LODE CLAIM
SF 876	ID101521920	LODE CLAIM
SF 877	ID101521921	LODE CLAIM
SF 878	ID101521922	LODE CLAIM
SF 879	ID101521923	LODE CLAIM
SF 88	ID101856502	LODE CLAIM
SF 880	ID101521924	LODE CLAIM
SF 881	ID101521925	LODE CLAIM
SF 882	ID101521926	LODE CLAIM
SF 883	ID101521927	LODE CLAIM
SF 884	ID101521928	LODE CLAIM
SF 885	ID101521929	LODE CLAIM
SF 886	ID101521930	LODE CLAIM
SF 887	ID101521931	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 888	ID101521932	LODE CLAIM
SF 889	ID101521933	LODE CLAIM
SF 89	ID101856503	LODE CLAIM
SF 890	ID101521934	LODE CLAIM
SF 891	ID101521935	LODE CLAIM
SF 892	ID101521936	LODE CLAIM
SF 893	ID101521937	LODE CLAIM
SF 894	ID101521938	LODE CLAIM
SF 895	ID101521939	LODE CLAIM
SF 896	ID101521940	LODE CLAIM
SF 897	ID101521941	LODE CLAIM
SF 898	ID101521942	LODE CLAIM
SF 899	ID101521943	LODE CLAIM
SF 9	ID101853097	LODE CLAIM
SF 90	ID101856504	LODE CLAIM
SF 900	ID101521944	LODE CLAIM
SF 901	ID101521945	LODE CLAIM
SF 902	ID101521946	LODE CLAIM
SF 903	ID101521947	LODE CLAIM
SF 904	ID101521948	LODE CLAIM
SF 905	ID101521949	LODE CLAIM
SF 906	ID101521950	LODE CLAIM
SF 907	ID101521951	LODE CLAIM
SF 908	ID101521952	LODE CLAIM
SF 909	ID101521953	LODE CLAIM
SF 91	ID101856505	LODE CLAIM
SF 910	ID101521954	LODE CLAIM
SF 911	ID101521955	LODE CLAIM
SF 912	ID101521956	LODE CLAIM
SF 913	ID101521957	LODE CLAIM
SF 914	ID101521958	LODE CLAIM
SF 915	ID101521959	LODE CLAIM
SF 916	ID101521960	LODE CLAIM
SF 917	ID101521961	LODE CLAIM
SF 918	ID101521962	LODE CLAIM
SF 919	ID101521963	LODE CLAIM
SF 92	ID101856506	LODE CLAIM
SF 921	ID101341660	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 922	ID101521964	LODE CLAIM
SF 923	ID101521965	LODE CLAIM
SF 924	ID101525761	LODE CLAIM
SF 925	ID101525762	LODE CLAIM
SF 926	ID101525763	LODE CLAIM
SF 927	ID101525764	LODE CLAIM
SF 928	ID101525765	LODE CLAIM
SF 929	ID101525766	LODE CLAIM
SF 93	ID101856507	LODE CLAIM
SF 930	ID101525767	LODE CLAIM
SF 931	ID101525768	LODE CLAIM
SF 932	ID101525769	LODE CLAIM
SF 933	ID101525770	LODE CLAIM
SF 934	ID101525771	LODE CLAIM
SF 935	ID101525772	LODE CLAIM
SF 936	ID101525773	LODE CLAIM
SF 937	ID101525774	LODE CLAIM
SF 938	ID101525775	LODE CLAIM
SF 939	ID101525776	LODE CLAIM
SF 94	ID101856508	LODE CLAIM
SF 940	ID101525777	LODE CLAIM
SF 941	ID101525778	LODE CLAIM
SF 942	ID101525779	LODE CLAIM
SF 943	ID101525780	LODE CLAIM
SF 944	ID101525781	LODE CLAIM
SF 945	ID101521966	LODE CLAIM
SF 946	ID101521967	LODE CLAIM
SF 947	ID101521968	LODE CLAIM
SF 948	ID101521969	LODE CLAIM
SF 949	ID101521970	LODE CLAIM
SF 95	ID101856509	LODE CLAIM
SF 950	ID101521971	LODE CLAIM
SF 951	ID101521972	LODE CLAIM
SF 952	ID101521973	LODE CLAIM
SF 953	ID101521974	LODE CLAIM
SF 954	ID101521975	LODE CLAIM
SF 955	ID101521976	LODE CLAIM
SF 956	ID101521977	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 957	ID101521978	LODE CLAIM
SF 958	ID101521979	LODE CLAIM
SF 959	ID101525782	LODE CLAIM
SF 96	ID101856510	LODE CLAIM
SF 960	ID101525783	LODE CLAIM
SF 961	ID101525784	LODE CLAIM
SF 962	ID101525785	LODE CLAIM
SF 963	ID101525786	LODE CLAIM
SF 964	ID101525787	LODE CLAIM
SF 965	ID101525788	LODE CLAIM
SF 966	ID101525789	LODE CLAIM
SF 967	ID101525790	LODE CLAIM
SF 968	ID101525791	LODE CLAIM
SF 969	ID101525792	LODE CLAIM
SF 97	ID101856511	LODE CLAIM
SF 970	ID101525793	LODE CLAIM
SF 971	ID101525794	LODE CLAIM
SF 972	ID101525795	LODE CLAIM
SF 973	ID101525796	LODE CLAIM
SF 974	ID101525797	LODE CLAIM
SF 975	ID101525798	LODE CLAIM
SF 976	ID101525799	LODE CLAIM
SF 977	ID101525800	LODE CLAIM
SF 978	ID101521980	LODE CLAIM
SF 979	ID101521981	LODE CLAIM
SF 98	ID101856512	LODE CLAIM
SF 980	ID101521982	LODE CLAIM
SF 981	ID101521983	LODE CLAIM
SF 982	ID101521984	LODE CLAIM
SF 983	ID101521985	LODE CLAIM
SF 984	ID101521986	LODE CLAIM
SF 985	ID101521987	LODE CLAIM
SF 986	ID101521988	LODE CLAIM
SF 987	ID101521989	LODE CLAIM
SF 988	ID101521990	LODE CLAIM
SF 989	ID101521991	LODE CLAIM
SF 990	ID101521992	LODE CLAIM
SF 991	ID101521993	LODE CLAIM

Claim Name	Serial Number	Claim Type
SF 992	ID101521994	LODE CLAIM
SF 993	ID101521995	LODE CLAIM
SF 994	ID101521996	LODE CLAIM
SF 995	ID101521997	LODE CLAIM
SF 996	ID101521998	LODE CLAIM
SF 997	ID101521999	LODE CLAIM
SF 998	ID101522000	LODE CLAIM
SF 999	ID101522497	LODE CLAIM
SFMS 1	ID101732307	MILL SITE
SFMS 10	ID101732316	MILL SITE
SFMS 11	ID101732317	MILL SITE
SFMS 12	ID101732318	MILL SITE
SFMS 13	ID101732319	MILL SITE
SFMS 14	ID101732320	MILL SITE
SFMS 15	ID101732321	MILL SITE
SFMS 16	ID101732322	MILL SITE
SFMS 17	ID101733321	MILL SITE
SFMS 18	ID101733322	MILL SITE
SFMS 19	ID101733323	MILL SITE
SFMS 2	ID101732308	MILL SITE
SFMS 20	ID101733324	MILL SITE
SFMS 21	ID101733325	MILL SITE
SFMS 22	ID101733326	MILL SITE
SFMS 23	ID101733327	MILL SITE
SFMS 24	ID101733328	MILL SITE
SFMS 25	ID101733329	MILL SITE
SFMS 26	ID101733330	MILL SITE
SFMS 27	ID101733331	MILL SITE
SFMS 28	ID101733332	MILL SITE
SFMS 29	ID101733333	MILL SITE
SFMS 3	ID101732309	MILL SITE
SFMS 30	ID101733334	MILL SITE
SFMS 31	ID101733335	MILL SITE
SFMS 32	ID101733336	MILL SITE
SFMS 33	ID101733337	MILL SITE
SFMS 34	ID101733338	MILL SITE
SFMS 35	ID101733339	MILL SITE
SFMS 36	ID101733340	MILL SITE

Claim Name	Serial Number	Claim Type
SFMS 37	ID101733341	MILL SITE
SFMS 38	ID101733342	MILL SITE
SFMS 39	ID101734380	MILL SITE
SFMS 4	ID101732310	MILL SITE
SFMS 40	ID101734381	MILL SITE
SFMS 41	ID101734382	MILL SITE
SFMS 42	ID101734383	MILL SITE
SFMS 43	ID101734384	MILL SITE
SFMS 44	ID101734385	MILL SITE
SFMS 45	ID101734386	MILL SITE
SFMS 46	ID101734387	MILL SITE
SFMS 5	ID101732311	MILL SITE
SFMS 6	ID101732312	MILL SITE
SFMS 7	ID101732313	MILL SITE
SFMS 8	ID101732314	MILL SITE
SFMS 9	ID101732315	MILL SITE
SLOTH 1	ID106307162	LODE CLAIM
SLOTH 2	ID106307163	LODE CLAIM
SLOTH 3	ID106307160	MILL SITE
SLOTH 4	ID106307161	MILL SITE
TSF-A-001	ID105785734	MILL SITE
TSF-A-002	ID105785735	MILL SITE
TSF-A-003	ID105785736	MILL SITE
TSF-A-004	ID105785737	MILL SITE
TSF-A-005	ID105785738	MILL SITE
TSF-A-006	ID105785739	MILL SITE
TSF-A-007	ID105785740	MILL SITE
TSF-A-008	ID105785741	MILL SITE
TSF-A-009	ID105785742	MILL SITE
TSF-A-010	ID105785743	MILL SITE
TSF-A-011	ID105785744	MILL SITE
TSF-A-012	ID105785745	MILL SITE
TSF-A-013	ID105785746	MILL SITE
TSF-A-014	ID105785747	MILL SITE
TSF-A-015	ID105785748	MILL SITE
TSF-A-016	ID105785749	MILL SITE
TSF-A-017	ID105785750	MILL SITE
TSF-A-018	ID105785751	MILL SITE

Claim Name	Serial Number	Claim Type
TSF-A-019	ID105785752	MILL SITE
TSF-A-020	ID105785753	MILL SITE
TSF-A-021	ID105785754	MILL SITE
TSF-A-022	ID105785755	MILL SITE
TSF-A-023	ID105785756	MILL SITE
TSF-A-024	ID105785757	MILL SITE
TSF-A-025	ID105785758	MILL SITE
TSF-A-026	ID105785759	MILL SITE
TSF-A-027	ID105785760	MILL SITE
TSF-A-028	ID105785761	MILL SITE
TSF-A-029	ID105785762	MILL SITE
TSF-A-030	ID105785763	MILL SITE
TSF-A-031	ID105785764	MILL SITE
TSF-A-032	ID105785765	MILL SITE
TSF-A-033	ID105785766	MILL SITE
TSF-A-034	ID105785767	MILL SITE
TSF-A-035	ID105785768	MILL SITE
TSF-A-036	ID105785769	MILL SITE
TSF-A-037	ID105785770	MILL SITE
TSF-A-038	ID105785771	MILL SITE
TSF-A-039	ID105785772	MILL SITE
TSF-A-040	ID105785773	MILL SITE
TSF-A-041	ID105785774	MILL SITE
TSF-A-042	ID105785775	MILL SITE
TSF-A-043	ID105785776	MILL SITE
TSF-A-044	ID105785777	MILL SITE
TSF-A-045	ID105785778	MILL SITE
TSF-A-046	ID105785779	MILL SITE
TSF-A-047	ID105785780	MILL SITE
TSF-A-048	ID105785781	MILL SITE
TSF-A-049	ID105785782	MILL SITE
TSF-A-050	ID105785783	MILL SITE
TSF-A-051	ID105785784	MILL SITE
TSF-A-052	ID105785785	MILL SITE
TSF-A-053	ID105785786	MILL SITE
TSF-A-054	ID105785787	MILL SITE
TSF-A-055	ID105785788	MILL SITE
TSF-A-056	ID105785789	MILL SITE

Claim Name	Serial Number	Claim Type
TSF-A-057	ID105785790	MILL SITE
TSF-A-058	ID105785791	MILL SITE
TSF-A-059	ID105785792	MILL SITE
TSF-A-060	ID105785793	MILL SITE
TSF-A-061	ID105785794	MILL SITE
TSF-A-062	ID105785795	MILL SITE
TSF-A-063	ID105785796	MILL SITE
TSF-A-064	ID105785797	MILL SITE
TSF-A-065	ID105785798	MILL SITE
TSF-A-066	ID105785799	MILL SITE
TSF-A-067	ID105785800	MILL SITE
TSF-A-068	ID105785801	MILL SITE
TSF-A-069	ID105785802	MILL SITE
TSF-A-080	ID105785813	MILL SITE
TSF-A-081	ID105785814	MILL SITE
TSF-A-082	ID105785815	MILL SITE
TSF-A-083	ID105785816	MILL SITE
TSF-A-084	ID105785817	MILL SITE
TSF-A-085	ID105785818	MILL SITE
TSF-A-086	ID105785819	MILL SITE
TSF-A-087	ID105785820	MILL SITE
TSF-A-088	ID105785821	MILL SITE
TSF-A-089	ID105785822	MILL SITE
TSF-A-090	ID105785823	MILL SITE
TSF-A-091	ID105785824	MILL SITE
TSF-A-092	ID105785825	MILL SITE
TSF-A-093	ID105785826	MILL SITE
TSF-A-094	ID105785827	MILL SITE
TSF-A-095	ID105785828	MILL SITE
TSF-A-096	ID105785829	MILL SITE
TSF-A-097	ID105785830	MILL SITE
TSF-A-098	ID105785831	MILL SITE
TSF-A-099	ID105785832	MILL SITE
TSF-A-100	ID105785833	MILL SITE
TSF-A-101	ID105785834	MILL SITE
TSF-A-102	ID105785835	MILL SITE
TSF-A-103	ID105785836	MILL SITE
TSF-A-104	ID105785837	MILL SITE

Claim Name	Serial Number	Claim Type
TSF-A-105	ID105785838	MILL SITE
TSF-A-106	ID105785839	MILL SITE
TSF-A-107	ID105785840	MILL SITE
TSF-A-108	ID105785841	MILL SITE
TSF-A-109	ID105785842	MILL SITE
TSF-A-110	ID105785843	MILL SITE
TSF-A-111	ID105785844	MILL SITE
TSF-A-112	ID105785845	MILL SITE
TSF-A-113	ID105785846	MILL SITE
TSF-A-114	ID105785847	MILL SITE
TSF-A-115	ID105785848	MILL SITE
TSF-A-116	ID105785849	MILL SITE
TSF-A-117	ID105785850	MILL SITE
TSF-A-118	ID105785851	MILL SITE
TSF-A-119	ID105785852	MILL SITE
TSF-A-120	ID105785853	MILL SITE
TSF-A-121	ID105785854	MILL SITE
TSF-A-122	ID105785855	MILL SITE
TSF-A-123	ID105785856	MILL SITE
TSF-A-124	ID105785857	MILL SITE
TSF-A-125	ID105785858	MILL SITE
TSF-A-126	ID105785859	MILL SITE
TSF-A-127	ID105785860	MILL SITE
TSF-A-128	ID105785861	MILL SITE
TSF-A-129	ID105785862	MILL SITE
TSF-A-130	ID105785863	MILL SITE
TSF-A-131	ID105785864	MILL SITE
TSF-A-132	ID105785865	MILL SITE
TSF-A-133	ID105785866	MILL SITE
TSF-A-134	ID105785867	MILL SITE
TSF-A-135	ID105785868	MILL SITE
TSF-A-136	ID105785869	MILL SITE
TSF-A-137	ID105785870	MILL SITE
TSF-A-138	ID105785871	MILL SITE
TSF-A-139	ID105785872	MILL SITE
TSF-A-140	ID105785873	MILL SITE
TSF-A-141	ID105785874	MILL SITE
TSF-A-142	ID105785875	MILL SITE

Claim Name	Serial Number	Claim Type
TSF-A-143	ID105785876	MILL SITE
TSF-A-144	ID105785877	MILL SITE
TSF-A-145	ID105785878	MILL SITE
TSF-A-146	ID105785879	MILL SITE
TSF-A-147	ID105785880	MILL SITE
TSF-A-148	ID105785881	MILL SITE
TSF-A-149	ID105785882	MILL SITE
TSF-A-150	ID105785883	MILL SITE
TSF-A-151	ID105785884	MILL SITE
TSF-A-152	ID105785885	MILL SITE
TSF-A-153	ID105785886	MILL SITE
TSF-A-154	ID105785887	MILL SITE
TSF-A-155	ID105785888	MILL SITE
TSF-A-156	ID105785889	MILL SITE
TSF-A-157	ID105785890	MILL SITE
TSF-A-158	ID105785891	MILL SITE
TSF-A-159	ID105785892	MILL SITE
TSF-A-160	ID105785893	MILL SITE
TSF-A-161	ID105785894	MILL SITE
TSF-A-162	ID105785895	MILL SITE
TSF-A-163	ID105785896	MILL SITE
TSF-A-164	ID105785897	MILL SITE
TSF-A-165	ID105785898	MILL SITE
TSF-A-166	ID105785899	MILL SITE
TSF-A-167	ID105785900	MILL SITE
TSF-A-168	ID105785901	MILL SITE
TSF-A-169	ID105785902	MILL SITE
TSF-A-170	ID105785903	MILL SITE
TSF-A-70	ID105785803	MILL SITE
TSF-A-71	ID105785804	MILL SITE
TSF-A-72	ID105785805	MILL SITE
TSF-A-73	ID105785806	MILL SITE
TSF-A-74	ID105785807	MILL SITE
TSF-A-75	ID105785808	MILL SITE
TSF-A-76	ID105785809	MILL SITE
TSF-A-77	ID105785810	MILL SITE
TSF-A-78	ID105785811	MILL SITE
TSF-A-79	ID105785812	MILL SITE

Claim Name	Serial Number	Claim Type
TSF-B-1	ID105785904	MILL SITE
TSF-B-2	ID105785905	MILL SITE
TSF-B-3	ID105785906	MILL SITE
TSF-B-4	ID105785907	MILL SITE
TSF-C-1	ID105785908	MILL SITE
TSF-C-2	ID105785909	MILL SITE
TSF-C-3	ID105785910	MILL SITE
TSF-C-4	ID105785911	MILL SITE
TSF-D-1	ID105785912	MILL SITE
TSF-D-2	ID105785913	MILL SITE
TSF-D-3	ID105785914	MILL SITE
TSF-D-4	ID105785915	MILL SITE
TSF-E-1	ID105785916	MILL SITE
TSF-E-2	ID105785917	MILL SITE
TSF-E-3	ID105785918	MILL SITE
TSF-E-4	ID105785919	MILL SITE
TSF-E-5	ID105785920	MILL SITE
TSF-E-6	ID105785921	MILL SITE
TSF-F-1	ID106392632	MILL SITE
TSF-F-2	ID106392631	MILL SITE
WHF-01	ID105785922	MILL SITE
WHF-02	ID105785923	MILL SITE
WHF-03	ID105785924	MILL SITE
WHF-04	ID105785925	MILL SITE
WHF-05	ID105785926	MILL SITE
WHF-06	ID105785927	MILL SITE
WHF-07	ID105785928	MILL SITE
WHF-08	ID105785929	MILL SITE
WHF-09	ID105785930	MILL SITE
WHF-10	ID105785931	MILL SITE
WHF-11	ID105785932	MILL SITE
WHF-12	ID105785933	MILL SITE
WHF-13	ID105785934	MILL SITE
WHF-14	ID105785935	MILL SITE
WHF-15	ID105785936	MILL SITE
YP 1	ID101658974	LODE CLAIM
YP 2	ID101658975	LODE CLAIM
YP 3	ID101658976	LODE CLAIM

Claim Name	Serial Number	Claim Type
YP 4	ID101658977	LODE CLAIM
YP 5	ID101658978	LODE CLAIM
YP 6	ID101658979	LODE CLAIM
YP 7	ID101658980	LODE CLAIM
YP 8	ID101658981	LODE CLAIM

### 3.2.3 Stibnite Gold Logistics Facility

On September 9, 2016, IGRCLLC agreed to purchase a fee simple undeveloped 25-acre property in Section 7, Township 14N, Range 5E, Boise Meridian from private interests and closing of the property occurred on October 26, 2016. The property's metallic and non-metallic mineral rights, with the exception of aggregate materials needed for construction purposes on the property were retained by the previous owners.

The property, in an area known locally as Scott Valley, has frontage on the Cascade-Warm Lake Highway and was purchased to serve as a project logistics center. The agreement provides for maintenance of certain pre-existing rights-of-way, easements and rights, none of which would be expected to inhibit use of the property for the intended purposes. PRII applied for a Conditional Use Permit from the Valley County Planning and Zoning Commission for the Scott Valley Logistics Facility which was granted on October 5, 2020.

## 3.3 Royalties, Option Agreements and Encumbrances

### 3.3.1 Option Agreements

On May 3, 2011, a predecessor to Perpetua entered into an option to purchase 27 patented lode claims totaling approximately 485 acres from the J.J. Oberbillig Estate (the Cinnabar Group claims). This agreement was modified in an Amended and Restated Real Property Purchase Agreement effective December 1, 2016. The amended agreement also includes an option on a Right of First Refusal to purchase the surface rights associated with portions of certain patented mill site claims, that J.J. Oberbillig Estate sold to Hecla Mining Corporation under a Real Estate Purchase and Sale Agreement dated effective as of December 30, 2002. Subsection 3.2.1 further discusses the status of these Hecla millsite parcels. The agreement also includes granting of a renewable easement for a communications tower. The option to purchase the Cinnabar Group patented lode claims has annual payments and can be extended at Perpetua's option for an additional 10 years to December 1, 2037, for additional consideration.

On December 10, 2019, a Perpetua Resources subsidiary entered into an option agreement to purchase 3.74 acres from private interest for an electrical switching station site which has a biannual payments of \$2,500 through 2033.

### 3.3.2 Royalty Agreement

Effective May 9, 2013, Perpetua Resources Corp.'s subsidiaries granted a 1.7% NSR royalty on future gold production from the Project properties to Franco Nevada. The royalty does not apply to production of antimony and silver. The royalty agreement applies to all patented and unpatented mineral claims, with the exception of the Cinnabar claim group where PRII holds an option to purchase but would be extend to the Cinnabar claim group were the OTP exercised.

In March 2024, Perpetua, through its subsidiaries, sold Franco-Nevada a 100% royalty on the future payable silver production from the Stibnite Gold Project which would become effective in year seven after commercial production commences and ending upon the completion of the fifteenth calendar year following commercial production.

### 3.3.3 Consent Decrees under CERCLA

Several of the patented lode and mill site claims held by IGRCLLC comprising part of the West End Deposit, and the Cinnabar claims held under an OTP from the Estate of J.J. Oberbillig (Oberbillig Estate) are subject to a consent decree entered by the Oberbillig Estate and the United States in the United States District Court for the District of Idaho (United States v. Estate of J.J. Oberbillig, No. CV 02 451 S LMB (D. Idaho)) in 2003, pertaining to environmental liability and remediation responsibilities with respect to the affected properties described therein. This consent decree provides property access to the regulatory agencies that were party to the agreement and the right to conduct remediation activities under their respective Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) authorities as necessary and required to prevent the release or potential release of hazardous substances. In addition, the consent decree requires that heirs, successors and assignees refrain from activities that would interfere with or adversely affect the integrity of any remedial measures implemented by government agencies.

Certain mineral properties held by IGRCLLC and that portion of the mineral properties acquired from Bradley estate pursuant to the Bradley Mining Agreement (i.e., the Yellow Pine Deposit) are subject to a consent decree entered into by Bradley and the United States in United States v. Bradley Mining Co., No. 3:08 CV 03986 TEH (N.D. Cal.). The consent decree was lodged on February 14, 2012 and approved on April 19, 2012. The consent decree states that if the U.S. Environmental Protection Agency (EPA) or the USDA Forest Service determines that “land/water use restrictions in the form of state or local laws, regulations, ordinances or other governmental controls are needed to implement response activities at the Stibnite Mine Site, ensure the integrity and protectiveness thereof, or ensure non-interference therewith” Bradley Mining or its heirs successors or assigns agreed to cooperate with EPA’s or the Forest Service’s efforts to secure such governmental controls.

To Perpetua Resources’ knowledge, the above-described consent decrees resolved the United States’ lawsuits against the Oberbillig and Bradley entities and EPA is not currently undertaking any enforcement or other legal actions under these consent decrees with respect to the Project site. Further, to Perpetua Resources’ knowledge, all CERCLA response actions required by those consent decrees have been completed and EPA has not ordered the settling parties to undertake any additional remedial activities that remain to be completed.

Perpetua Resources and its subsidiaries cannot ensure it has identified every third-party consent decree or administrative order which may affect the Stibnite Gold Project.

To address remaining historical legacy impacts at the site of the Stibnite Gold Project not addressed in the above referenced consent decrees, and unrelated to either of the foregoing lawsuits and the consent decrees entered into to settle those suits as described above, Perpetua Resources Corporation and its affiliates voluntarily entered into an Administrative Settlement Agreement and Order on Consent (ASAOC) with the EPA and the United States Department of Agriculture, pursuant to CERCLA. Finalized on January 15, 2021, the ASAOC provides for a number of time critical removal actions (early cleanup actions) designed to improve water quality in several areas of the SGP site. Perpetua Resources has filed Removal Action Completion Reports (“RACR”) with the EPA and USDA advising the agencies that the company believes it has completed all work required under Phase 1 of the ASAOC. The federal agencies are currently reviewing the RACR. The ASAOC includes a process under which the Perpetua Resources and the signatory federal agencies will evaluate whether the company, if it elects to do so, may proceed with additional response actions after the Phase 1 work has been certified by the federal agencies as complete. Perpetua Resources has not determined

whether to proceed with any additional work beyond ASAO Phase 1, and the scope of any such potential additional actions and their costs have not yet been determined.

Under CERCLA, a “bona fide prospective purchaser” defense is a legal defense available to an owner, which after conducting appropriate inquiries, establishes that the subject environmental liability occurred before the owner acquired the property and that the owner meets other requirements under CERCLA. Perpetua believes that it qualifies for the “bona fide prospective purchaser” defense under CERCLA, and other CERCLA defenses also may be available to Perpetua Resources with respect to the historic contamination caused by third parties on the Project site but no evaluation of Perpetua’s assertion of this defense has been made by EPA or any court.

### **3.4 Environmental Liabilities**

The Project is located in a historical mining district with extensive and widespread exploration and mining activity, and related environmental effects, spanning over 100 years from the early 1900s until today. For detailed ownership and mine development history in the District, refer to Section 5 of this Report.

Actions by prior operators and government agencies have addressed some of the historical environmental issues at the site, but extensive disturbance and adverse environmental impacts remain. Potential environmental liabilities from legacy operations and activities that could have impacts on the development of the Project are discussed in Section 17 of this Report.

## 4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 4.1 Physiography

The Project site is located within the Salmon River Mountains of Central Idaho 152 road miles northeast of Boise, Idaho (Figure 4-1) within the watershed of the East Fork of the South Fork of the Salmon River (EFSFSR) at an elevation of ~ 6,500 feet (ft). Nearby mountain peak elevations range from 7,800 to 8,900 ft. The land is heavily wooded with fir and pine trees. Large forest fires have burned much of the area in the last two decades.

### 4.2 Climate

The climate is characterized by moderately cold winters and mild summers. Most precipitation occurs as snowfall in the winter and rain during the spring. The local climate allows for year-round operations, as evidenced by historic production and climate information. Weather records indicate that the average precipitation (equivalent rainfall) is approximately 32 inches per year.

### 4.3 Access

The primary existing ground access to the Project area is known as the Johnson Creek Route (Figure 4-1) and includes the following segments:

- Boise to Cascade – Highway 55 (77.4 mi);
- Cascade to Landmark – two lane, paved Warm Lake Road (35.6 mi);
- Landmark to Yellow Pine – single lane, unpaved Johnson Creek Road (25.3 mi); and
- Yellow Pine to Stibnite – single lane, unpaved Stibnite Road (14 mi).

The Johnson Creek Route measures 75 mi from Cascade to Stibnite and is closed in the winter months due to snow unless plowed. Alternatively, the South Fork Route provides year-round access to the Project site because it maintains a lower elevation profile. The route follows Warm Lake Road before turning north on the South Fork Road and then turning east onto the East Fork Road towards Yellow Pine and on to the Project site via Stibnite Road. The distance from Cascade to the Project site is approximately 96 mi along this alternate South Fork Route.

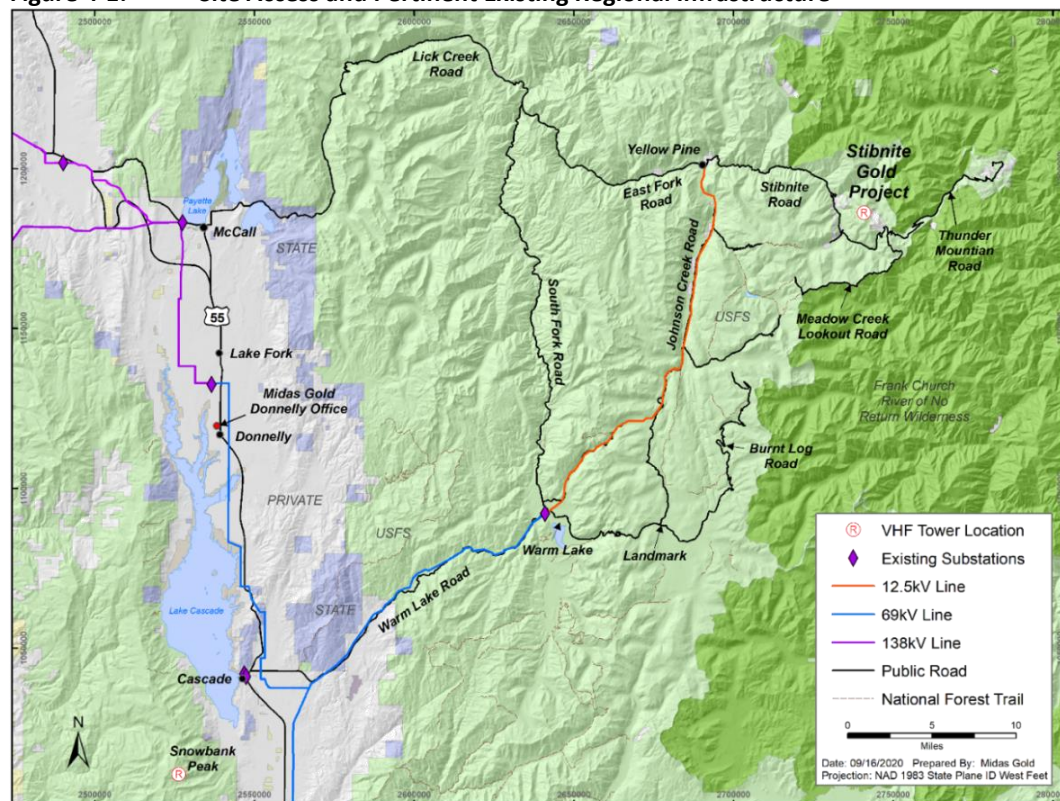
Another route available in snow-free months starts by travelling east on Lick Creek Road near McCall, Idaho, towards Yellow Pine and onto Stibnite (the Lick Creek Route). The distance from McCall to Stibnite along the Lick Creek Route is 67 mi, and approximately 94 mi from Cascade to Stibnite via McCall.

During operations, an existing road route (the Burntlog Route) will undergo upgrades and additions and become the primary means of site access once connected to the Project's existing road network.

## 4.4 Electrical Power

The nearest powerline is located along Johnson Creek Road, roughly 8 mi west of Stibnite (Figure 4-1). The powerline along Johnson Creek Road provides 12.5 kV distribution power to local residents along the route and the village of Yellow Pine but would be insufficient to support a mining operation. To support operations related to the Project, powerline infrastructure would need to be installed/upgraded from the main regional Idaho Power Company (IPCo) substation at Lake Fork to the Project site. A description of the proposed powerline upgrade is addressed in Section 15 of this Report.

**Figure 4-1: Site Access and Pertinent Existing Regional Infrastructure**



## 4.5 Water Supply

The Idaho Department of Water Resources (IDWR) has granted Perpetua Resources water supply rights for the SGP, including rights with respect to both the Project site and off-site facilities. Table 4-1 summarizes the water rights held by Perpetua Resources under the IDWR authorizations.

Perpetua Resources filed a water rights application package with the IDWR in October 2021. The application package included applications for the transfer of four existing water rights and applications for new rights for 9.6 cfs for industrial purposes and 600-acre ft annual storage, 0.2 cfs for drinking water at the worker housing facility, 0.06 cfs for drinking water at the logistics facility, and 0.04 cfs for the Burntlog Maintenance Facility (Table 4-1). IDWR granted the

water right application for the Burntlog Maintenance Facility (77-14381) and the Stibnite Gold Logistics Facility (66-24089) on February 13, 2024, without protest (Table 4-1).

After protests were filed with respect to Perpetua Resources' then remaining water rights applications, IDWR on January 24, 2025, issued a final order granting additional water rights (see Table 4-1) that were the subject of those applications, including industrial diversion rights and user rights. These water rights granted by IDWR in January 2025 included conditions, including, among other things, conditions that establish minimum stream flows in Meadow Creek and the EFSFSR. These conditions would limit the diversion and appropriation rates available to Perpetua Resources.

In aggregate, Perpetua Resources holds 17 water rights approvals from IDWR as of the end of 2025. These water rights include various domestic, commercial, industrial, and irrigation uses. The water rights are subject to various conditions and requirements under Idaho law and the approvals of IDWR.

**Table 4-1: Water Rights Permits**

Water Right Permit No.	Owner	Beneficial Use	Source	Facility	Diversion Rate (cfs)	Annual Volume (acre-feet)
77-14381	PRII	Industrial Domestic	Groundwater	Burntlog Maintenance Facility	0.04	-
66-24089	PRII	Commercial Domestic	Groundwater	Stibnite Gold Logistics Facility	0.04	-
77-14377 (Includes 77-7141 <sup>1</sup> )	PRII	Domestic	Groundwater	Worker Housing Facility	0.2	28.0
77-14378 (Includes 77-7122 <sup>1</sup> , 77-7285 <sup>1</sup> , & 77-7293 <sup>1</sup> )	PRII	Industrial Diversion to Storage Industrial Storage Industrial from Storage Water Quality Improvement Storage	Groundwater EFSFSR	Yellow Pine Pit dewatering Hangar Flats Pit dewatering West End Pit dewatering Ore Processing Facility	9.6	600
72-00149, 72-00150, 72-04031, 72-04032, 72-04033, 72-04034, 72-10065, & 72-16273	PRII	Water Rights Mitigation	Morgan Creek & Salmon River	Morgan Creek Mitigation Property	10.75	138.8
77-14379	PRII	Domestic	Groundwater	Truck Shop and Ore Processing Facility	0.06	-

Notes: 1. Previously existing water rights transferred to new consolidated water rights, while preserving priority dates.

## 4.6 Labor, Supplies and Services

Labor for the construction and operation of the Project would be available locally and within the surrounding region. Yellow Pine, which is the nearest town, is located approximately 14 road miles west of the Project. It has a population of approximately 60 people during the summer months, up to 40 in the winter, and limited services such as two restaurants, and a few lodging facilities. The nearby Valley County towns of McCall, Donnelly, and Cascade and surrounding areas have a combined population of several thousand people with many diverse services available.

It is anticipated that a workforce of an estimated 1,052 employees and contractors will be required in the construction phase, and a sustaining workforce of an estimated 675 employees will be required in operations. Skilled miners, mining professionals, local laborers, trades persons and equipment operators would be identified from within Valley County and adjacent Adams and Idaho counties with additional workers sourced throughout Idaho and adjacent states if necessary.

Perpetua Resources is proactively partnering with local higher-education institutions to prepare for future hiring campaigns that emphasize building a local workforce during operations. Perpetua Resources also intends to partner with construction contractors to hire key talent to continue into operations.

Supplies and services would be acquired from the local community when possible. Many specialized supplies are available in the Boise area. Some supplies and services would have to come from the surrounding region and beyond. Most types of equipment and supplies are transportable to the Boise area by rail or the US Interstate Highway system.

## 5 HISTORY

Two major periods of mineral exploration, development and operations have occurred in the Stibnite Mining District (the District). The first period of activity commenced in the mid-1920s and continued into the 1950s; it involved the mining of gold, silver, antimony, and tungsten mineralized materials by both underground and, later, open-pit mining methods. Mining claims associated with the Meadow Creek Mine and Yellow Pine Mine (first staked in 1914 and 1923, respectively) were developed and many patented during this period by various interests. Ownership was consolidated by two major landowners who controlled most of the land within the Stibnite Mining District (District). The eastern part was partially consolidated by the Oberbillig family interests and the western part of the District was controlled by the Bradley family interests.

Bradley production was initially from the underground Meadow Creek Mine (ca 1927 to 1937) and later from the larger Yellow Pine underground and subsequently open pit mine (1937 to 1952). The former mill and smelter were subsequently dismantled, and the Stibnite town site abandoned completely in 1958.

During World War II and the Korean War, this District is estimated to have produced more than 90% of the U.S.' antimony and approximately 50% of the U.S.' tungsten; materials that were used in munitions, steelmaking, flame retardants, and for other purposes. Mining of these strategic minerals was considered so critical that the U.S. government subsidized the mining activity, managed site operations, and allowed military time to be served at the mine site. Estimated production during this period totaled an estimated 0.53 Moz of gold, 88 Mlbs of antimony and 13.6 Mlbs of contained tungsten.

The second period of major activity in the District started with exploration activities in the early 1970s and was followed by open-pit mining and heap leaching from 1982 to 1997. Operators who conducted exploration and/or mineral extraction during this era included, in chronological order, Louisiana Land and Exploration Company, Canadian Superior Mining (U.S.) Ltd. (Superior), El Paso Mining and Milling (El Paso), Rancher's Exploration Company (Ranchers), Twin Rivers Exploration, MinVen Corporation (MinVen), Pioneer Metals Corporation (Pioneer), Hecla Mining Company (Hecla), Barrick Gold Corporation (Barrick, formerly American Barrick Resources), Stibnite Mine Inc. (SMI), and Dakota Mining Company (Dakota). Gold production during this period totaled an estimated 0.45 Moz Au.

Both the East Fork of the South Fork of the Salmon River and its tributary, Meadow Creek have been severely impacted by past mining activity. Additional impacts related to extensive forest fires and the failure of an earthen dam on "Blowout Creek", a tributary of Meadow Creek, have compounded the mining-related impacts and have increased soil erosion and adversely impacted water quality in the District.

### 5.1 Past Exploration and Development

There have been two major periods of exploration, development, and operations in the District corresponding to the historical mining periods in the early 1900s through the 1950s and from the early 1970s through the mid-1990s. The history of development and mining in the District is summarized in numerous publications and additional references therein including: Larsen and Livingston (1920); Schrader and Ross (1926); White (1940); Cooper (1951); Hart (1979);

Waite (1996); and Mitchell (1995; 2000) and various unpublished reports and documents. Much of the information contained in the text below is taken from these published sources and from unpublished company records. Details of the historical exploration drilling at Stibnite are provided in Section 7 of this Report.

The mining history of the region began in 1894 when the Caswell brothers began a sluice box operation in Monumental Creek in what is now known as the Thunder Mountain Mining District, located east of Stibnite. During the Thunder Mountain gold rush, many prospectors passed through the area now known as the Stibnite-Yellow Pine District, discovering mercury, antimony, silver, and gold. No work of any significance was completed until around 1917, when the World War I demand for mercury led to the development of several properties east of the main Project area (Larsen and Livingston, 1920; Schrader and Ross, 1926). The first period of large-scale development commenced in the mid-1920s and continued into the 1950s; it involved the mining of gold, silver, antimony, and tungsten mineralized materials by both underground and, later, open pit mining methods.

The second period of major activity in the District started with exploration activities in 1974 and was followed by open pit mining and seasonal on-off heap leaching and one-time heap leaching from 1982 to 1997, with ore provided by multiple operators from a number of locations and processed in adjacent heap leaching facilities.

Between these periods of development, numerous prospects were discovered and explored using soil sampling, rock sampling, trenching, drilling, geophysical methods, and geology. Several of these prospects were developed into successful mining operations.

### **5.1.1 Hangar Flats Deposit**

Gold and antimony mineralization were discovered in what is now called the Hangar Flats area around 1900. Albert Hennessy staked the first claims here in 1914. Initial prospecting and development attempts focused on outcropping gold-silver-antimony mineralization, principally in the Meadow Creek area. By the mid-1920s, Albert Hennessy and his partners, who included J.J. Oberbillig, established the Meadow Creek Silver Mines Company (MCSM) and carried out intermittent, but considerable underground development work on what became known as the Meadow Creek Mine.

Homestake Mining Company (Homestake) optioned the property and conducted sampling and metallurgical investigations during this period, but decided not to complete a purchase of the property after initial metallurgical investigations indicated that they were unable to process the complex gold-antimony ores (Mitchell, 2000).

In 1921, MCSM was superseded by United Mercury Mines, and by the mid-1920s, the Meadow Creek Mine area was consolidated under Bradley interests, and the mine was systematically explored and developed on six levels with numerous drifts, crosscuts, raises, winzes, and stopes. It subsequently produced gold, silver, and antimony from sulfide ores, which were milled on site from 1928 through 1938. Mine workings were systematically mapped and sampled, and exploration drilling (from both the surface and underground) was carried out to guide the mine development. About 25,426 ft of underground workings were developed in the Meadow Creek Mine, while substantial additional drilling was completed during this period. The Meadow Creek Mine produced gold, silver, and significant quantities of antimony between 1928 and 1937.

In 1937, the Meadow Creek Mine was shut down and production shifted to the development of the Yellow Pine Deposit in 1938. From 1943 to 1945, additional core drilling was completed in the mine after operations had ceased. A small amount of tungsten mineralized material was reportedly mined during this period from two levels of the mine that were not caved or flooded (Cooper, 1951).

From 1951 through 1954, the Defense Minerals Exploration Administration (DMEA) carried out an underground exploration program immediately north of the Meadow Creek Mine (Mitchell, 2000). Through the DMEA program, Bradley developed approximately 4,900 ft of underground workings on three levels (Mitchell, 2000) in the area immediately north of the Hangar Flats Deposit. Systematic mapping and sampling of the workings were carried out with the mining of bulk samples that were collected at roughly 5 to 10 ft intervals. Drilling of 27 core holes totaling 13,488 ft from underground stations was also carried out. Detailed drill logs and systematic assaying were well documented.

In the late 1970s, Ranchers leased property interests in the District from Bradley and completed a large soil grid over the trace of the Meadow Creek Fault system, including the area adjacent to the old Meadow Creek Mine. Ranchers' work outlined several large gold-in-soil anomalies over the old mine site, along the trace of the Meadow Creek Fault system, and north several kilometers to the Yellow Pine Deposit. Ranchers completed some trenching, but no drilling on the anomalies in this area; instead, they focused their work on the Yellow Pine and Homestake deposits (Mitchell, 2000).

In the late 1980s, Hecla acquired Ranchers' interests and conducted trenching and ground geophysical surveys, as well as drilling 27 shallow reverse circulation (RC) holes in the historical Meadow Creek Mine area. Their trenching and RC drilling outlined a broad, but ill-defined zone of gold mineralization above the old workings and along strike to the north, as well as under the old Meadow Creek mill and smelter complex along the base of the hill (where the old Meadow Creek adits were located). Subsequently, Hecla constructed a heap-leach pad over a portion of the main mineralized area due to the need for a location to leach the oxide ores from the Homestake area of the Yellow Pine Deposit.

### 5.1.2 Yellow Pine Deposit

The first claims were staked in the Yellow Pine Deposit by prospector Albert Hennessy in 1923, who formed the Great Northern Mines Company with J. L. Niday. In 1929, the claims were optioned to F. W. Bradley's Yellow Pine Mining Company which drove the Monday and Cinnabar tunnels on opposing sides of the valley. Minor underground, open cut exploration, and open-cut development occurred in the late 1920s through 1938. Gold, silver and antimony were produced commercially from the Yellow Pine Deposit starting in 1938, with the addition of tungsten in 1941 with continuous production from 1938 to 1952. Underground operations were initiated in 1941 after the discovery of high-grade tungsten beneath the open pit. This development was spurred on based on systematic exploration and development drilling in the Yellow Pine and Homestake areas between 1933 and 1952 by Bradley and the United States Bureau of Mines (USBM) during several drilling campaigns. These drilling programs were initiated due to the demand for antimony, after the U.S. Government declared antimony a strategic metal (The Strategic Minerals Act of 1939), and the discovery of significant tungsten by U.S. Geological Survey (USGS) geologist Donald E. White, who was studying USBM drill core from the district in 1941. Based on available compiled records, production from underground and open pit operations during this time period is approximated at 4MT containing 350k oz gold and 80mlbs antimony.

Little work was completed after operations shut down in 1952 until the 1970s when Ranchers and its successor, Hecla, conducted extensive drilling campaigns on the deposit. Hecla completed a prefeasibility study focused on mining of the Yellow Pine deposit in 1987 (Brackebusch, 1987). Barrick optioned the property in 1995 in a joint venture with Hecla and completed additional drilling and metallurgical test work before dropping the option. Hecla relinquished its control of the property back to the Bradley estate interests after closure and reclamation of the oxide operations at the Homestake pit in the late 1990s (Mitchell, 2000).

### 5.1.3 West End Deposit

Gold mineralization was first discovered along the West End Fault by Bradley interests in the late 1930s working with USBM staff conducting strategic minerals investigations. Bradley's exploration focused on the replacement of reserves at their Yellow Pine mining operation. Subsequent work by the USGS outlined a large multi-element soil anomaly (Leonard, 1973) that led to systematic follow-up by Superior and its successors.

A modern era of exploration and development stretched from the mid-1970s to the late-1990s, prompted primarily by the rise in gold prices and the development heap-leach oxide gold recovery methods (Mitchell, 2000). Superior conducted geological, geophysical, and geochemical investigations from 1974 to 1977 to evaluate the potential for heap-leach oxide gold in the West End and adjacent Stibnite deposit (now collectively known as West End). Five heap-leach pads were constructed, and a 2,000 to 3,000 st/d oxide mining operation began in 1982. Open-pit mining at the West End Mine and heap-leach processing was conducted by Superior until 1984 when ownership of the deposit changed hands when Mobil Oil purchased Superior Oil. The West End mine did not operate in 1985, however heap leach processing of previously mined material continued throughout 1985 (Mitchell, 2000).

Pioneer purchased the mine from Mobil in 1986 with financing assistance from The Mining Finance Corporation and Twin Rivers Minerals, which owned 25% of the West End Pit and 18% of Pioneer's stock (Mitchell, 2000). Pioneer became the operator of the West End mine and continued to explore and produce until 1991. From 1991, ownership of the West End open-pit mine and processing facilities changed hands from Pioneer to Pegasus Gold Corporation (Pegasus), and then to MinVen (later changed to Dakota). During this time, the mining and exploration activities in the area continued under MinVen's subsidiary company, Stibnite Mine Inc. (SMI). SMI continued to conduct sporadic drilling and development of the West End pit, including a small area on the east side of the West End Deposit known as the Stibnite pit, and a small pit approximately 1.5 miles to the southeast known as the Garnet Pit, into the late-1990s. Between 1982 and 1997, crushed oxide material from the West End pits was placed in the Upper Meadow Creek valley after being leached, neutralized, and rinsed (Mitchell, 2000) in an area now commonly referred to as the Spent Ore Disposal Area (SODA). Some spent ore was also used during reclamation as backfill in the Garnet pit and on some former access and haul roads during 1998 - 2000 reclamation by state and federal agencies.

## 5.2 Environmental Legacy

Both the East Fork of the South Fork of the Salmon River and its tributary Meadow Creek have been impacted by past mining activity by third parties unrelated to Perpetua Resources. Those historic mining, milling, and processing activities created numerous legacy impacts, including underground mine workings, multiple open pits, development rock dumps, tailings deposits, heap leach pads, spent heap leach ore piles, a mill and smelter site, three town sites, camp sites, a ruptured water dam (with its associated erosion and downstream sedimentation), haul roads, an abandoned water diversion tunnel, an airstrip, and other disturbances.

Extensive forest fires have compounded the human-created impacts and have increased soil erosion and impacted water quality. Both the main stem of Meadow Creek and its East Fork tributary have been severely impacted by past mining activity.

The East Fork of Meadow Creek, locally known as “Blowout Creek”, is today one of the largest sources of sediment for this part of the Salmon River. “Blowout Creek” got its name from a water dam that failed in 1965 with a washout that scarified an erosional channel and drained the meadow and the productive wetlands above. The erosional and dewatering effects continue today, with sediment being flushed downstream choking the spawning grounds of Meadow Creek and the EFSFSR.

The EFSFSR, a branch of the Salmon River headwaters, currently runs through the old Yellow Pine pit (sometimes referred to locally as the “Glory Hole”). First mined in the late 1930s and abandoned in the late 1950s, the pit has since filled with river water and sediment and formed a lake. While recreationists currently camp on the old mine benches within the open pit and catch fish in the un-reclaimed pit lake, anadromous and local fish populations have not been able to migrate upstream from this point since 1938.

## 6 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

Bedrock in the region can be subdivided into several groups based on age, lithology, and stratigraphic relationships. In a broad sense, rock sequences in the region can be subdivided into those that are part of the pre-Cretaceous metasedimentary “basement,” the Cretaceous Idaho Batholith, Tertiary intrusions and volcanics, and Quaternary unconsolidated sediments and glacial materials. The Project is situated along the eastern edge of the Idaho Batholith, on the western edge of the Thunder Mountain caldera complex and within the Central Idaho Mineral Belt.

### 6.1 Geological Setting Alteration and Mineralization

Large, north-south striking, steeply dipping fault structures exhibiting pronounced gouge and multiple stages of brecciation occur in the District and are often associated with east-west and northeast-southwest trending splays and dilatant structures. Many of the District’s structural features exhibit evidence for pre- syn- and post- mineralization movement. The Yellow Pine and Hangar Flats deposits are hosted primarily by intrusive phases of the Idaho Batholith along the Meadow Creek Fault Zone (MCFZ), as shown on Figure 6-1. The West End Deposit is hosted primarily by Neoproterozoic to Paleozoic carbonate and siliciclastic metasedimentary rocks of the Stibnite roof pendant along the West End Fault Zone (WEFZ) (Figure 6-2).

Mineralization and alteration in the District are associated with multiple hydrothermal alteration events occurring through the Paleocene and early Eocene epochs. Mineralization occurs in numerous locations throughout the District in medium- to coarse-grained, felsic to intermediate intrusive host rocks and typically occurs as disseminated replacement mineralization within structurally prepared dilatant zones or adjacent to district- and regional-scale fault zones. Mineralization also occurs in association with sheeted veins, stockworks, endoskarns, and complex polymictic breccias. In the metamorphosed sedimentary rocks, mineralization occurs in association with dense fracture zones in structurally prepared sites and as stratiform manto-style replacements in reactive carbonate and calcareous siltite and schist units, as well as in cross-cutting vein arrays, breccia veins and dikes, and jasperoids (quartz-replaced carbonates).

Main-stage gold mineralization and associated potassic alteration typically occurs in structurally prepared zones in association with very fine-grained disseminated arsenical pyrite ( $\text{FeS}_2$ ) and, to a lesser extent, arsenopyrite ( $\text{FeAsS}$ ), with gold almost exclusively in solid solution in these minerals. Antimony-tungsten mineralization is associated with silicification and brecciation resulting in stibnite ( $\text{Sb}_2\text{S}_3$ ) veining and distinctive black matrix breccias within discrete structural zones. A later stage of mineralization crosscutting early disseminated styles and primarily effecting rocks of the Stibnite roof pendant is associated with epithermal quartz-adularia-carbonate veins. Carbonates, primarily iron-magnesium-rich calcite and ankerite, along with potassium-rich illite (“sericite”) and to a lesser extent chlorite and smectite clays are common alteration assemblages peripheral to the pervasive potassium feldspar and sericite alteration in the cores of the intrusive hosted deposits or in late structural zones.

Figure 6-1: Bedrock Geology of the West Side of the Stibnite Mining District

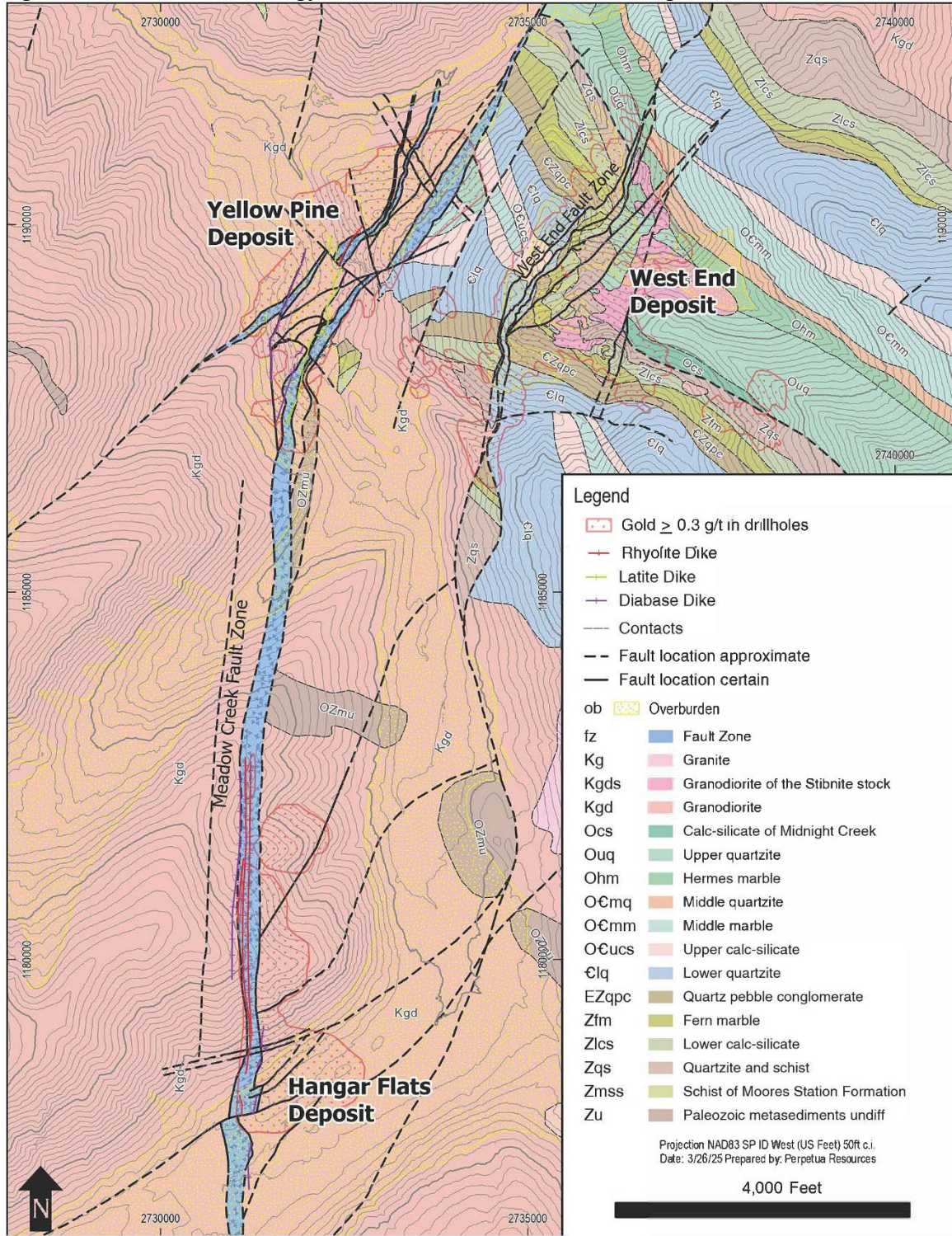
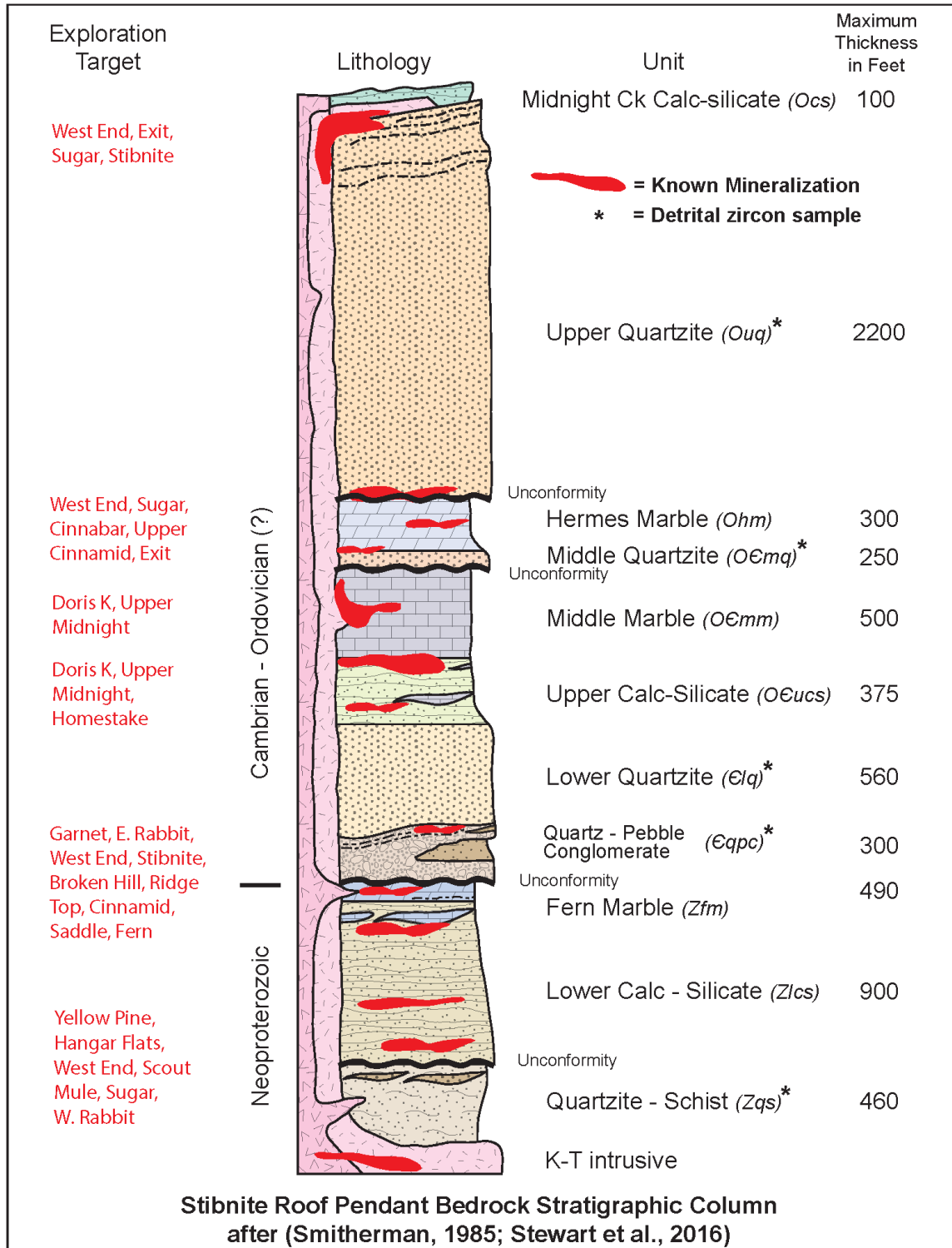


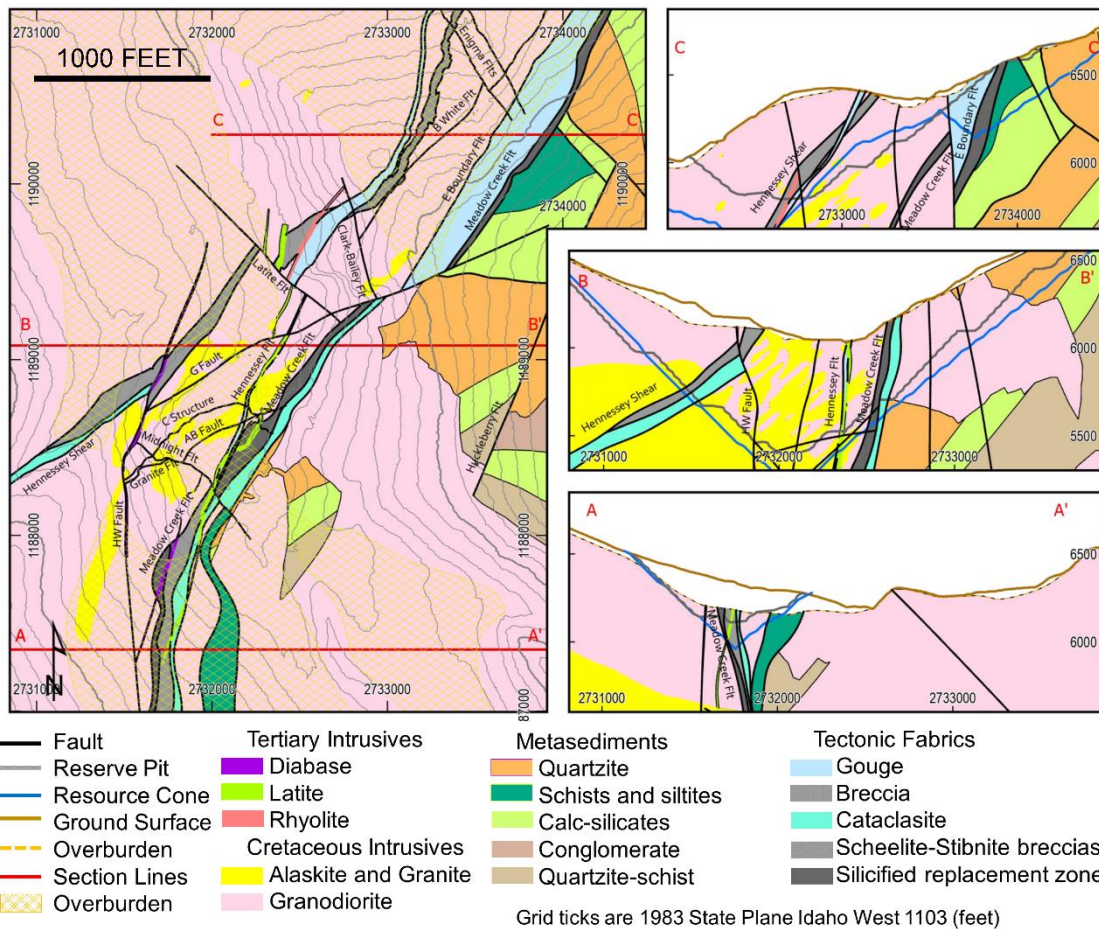
Figure 6-2: Stibnite Roof Pendant Stratigraphy



### 6.1.1 Yellow Pine Deposit

Mineralization in the Yellow Pine Deposit is structurally controlled and localized by the northerly striking MCFZ and by conjugate splay or cross structures (Figure 6-3). The deposit shows metal zonation with gold mineralization occurring throughout the deposit footprint, with antimony and tungsten primarily in the central and southern portions of the deposit (Figure 6-4). Most of the mineralization in the deposit occurs west of the MCFZ and east of the Hidden fault zone. The geometry, width and continuity of precious metals mineralization changes along strike in the deposit in conjunction with a bend in the MCFZ and its intersection with the Hidden fault zone. To the south, gold and antimony mineralization occur within a breccia zone of the MCFZ. The width of mineralization ranges from 80 ft to 165 ft, extends for over 800 ft along strike, and is open at depth in this area.

Figure 6-3: Yellow Pine Geological Model

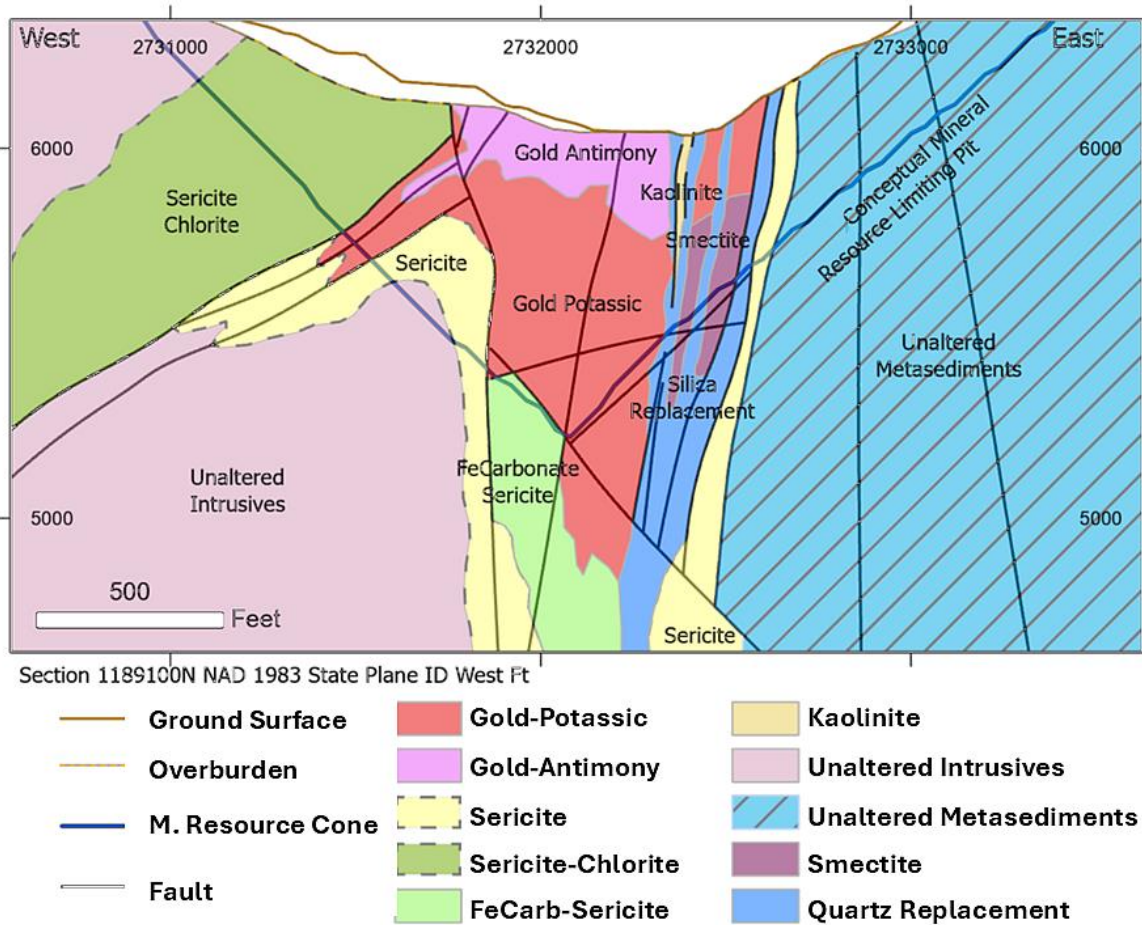


In the central region of the deposit, between 1,188,200N and 1,189,600N, mineralization is broadly disseminated over a width of 500 ft east of the Hanging Wall fault and west of the post-mineralization Hennessey fault, except where Hennessey fault has offset the western part of the mineralization to the north (Figure 6-4). Gold and antimony mineralization in the central region of the deposit are bounded to the south by a complex fault network. The width of

mineralization in the central area of the Yellow Pine deposit ranges from 165 ft to over 650 ft wide, over 1,400 ft of strike length and extends down dip over 1,200 ft.

Mineralization in the northern Homestake area of the Yellow Pine deposit ranges from 80 to 150 ft thick and extends for over 800 ft along strike and down dip. Mineralization occurs as a tabular body in the hanging wall of the Hidden fault/Clark Tunnel structure. The tabular zone steepens to the west and is truncated to the west against the East Boundary fault, a gouge zone within the MCFZ. Directly east of the MCFZ gouge, is a silicified fault corridor which is moderately mineralized in the Homestake area. Gold mineralization also occurs within the metasediments at Homestake, where both disseminated and vein-hosted gold occurs within the upper Calc-Silicate and Middle Marble formations.

**Figure 6-4: Yellow Pine Mineralized Zone and Generalized Alteration Zonation**



### 6.1.2 Hangar Flats Deposit

Mineralization in the Hangar Flats Deposit is entirely intrusive hosted and is localized in and along the flanks of the MCFZ. The highest grades of gold, silver, and antimony occur within sub-vertical, north-plunging, tabular to pipe-like breccia bodies formed at the intersection of the main north-south structural features and shallowly northwest-dipping dilatant splay structures (Figure 6-5). These mineralized breccia zones range from 16 ft to over 330 ft in true thickness and can be traced several hundred feet down dip. Disseminated replacement style gold mineralization occurs throughout the MCFZ and eastern footwall in higher-grade tabular breccia zones. Disseminated gold mineralization also occurs as shallowly dipping tabular bodies along the northwest dipping splay structures, which pinch out to the east away from the main MCFZ. Alteration zonation is similar to that developed in the Yellow Pine deposit, but more tightly constrained to structures (Figure 6-6).

Figure 6-5: Geological Model for the Hangar Flats Deposit

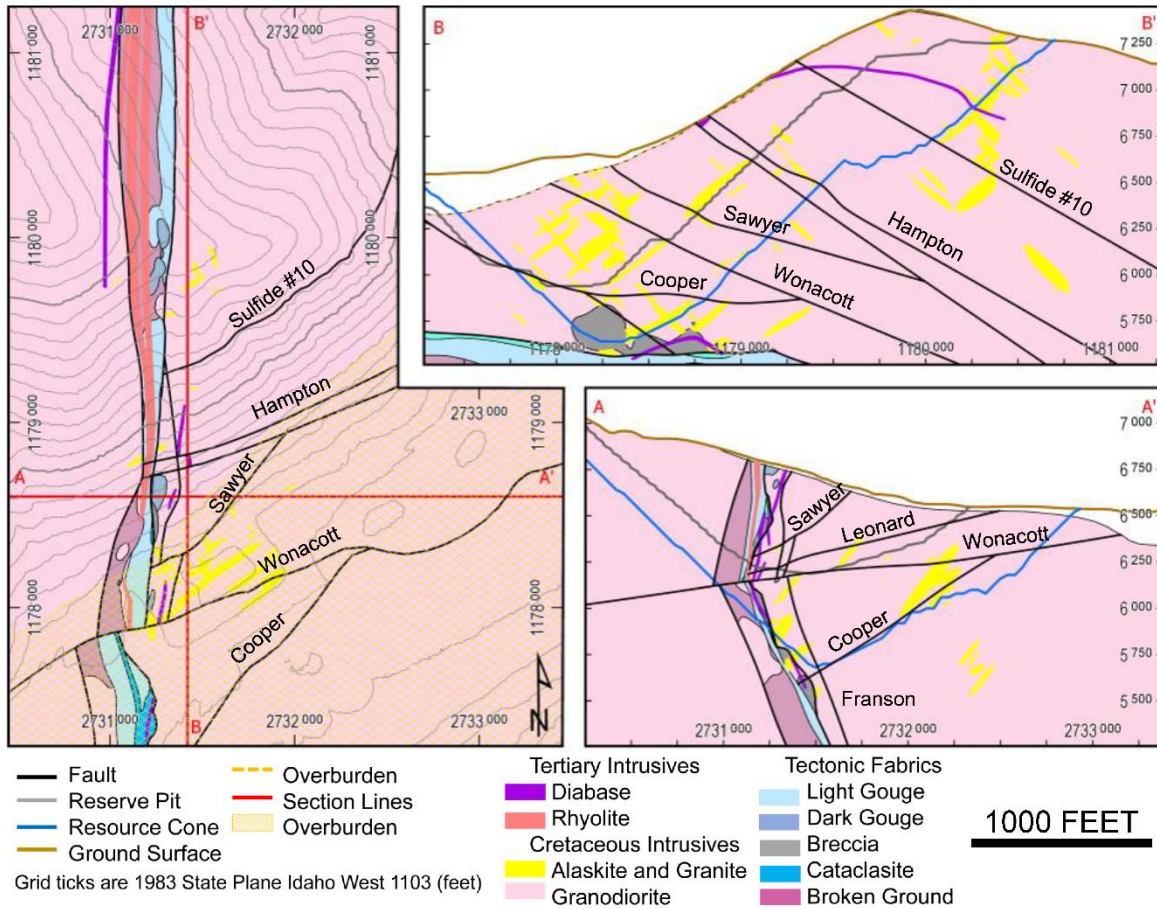
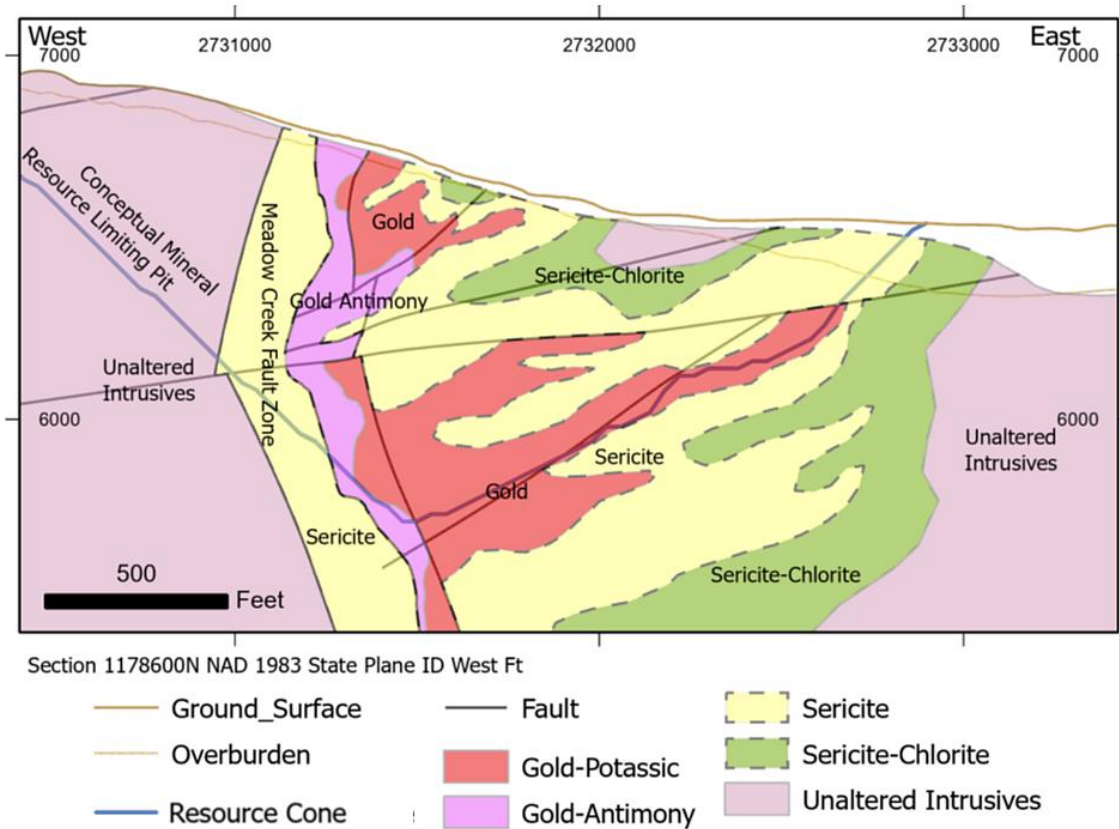


Figure 6-6: Hangar Flats Mineralized Zone and Generalized Alteration Zonation

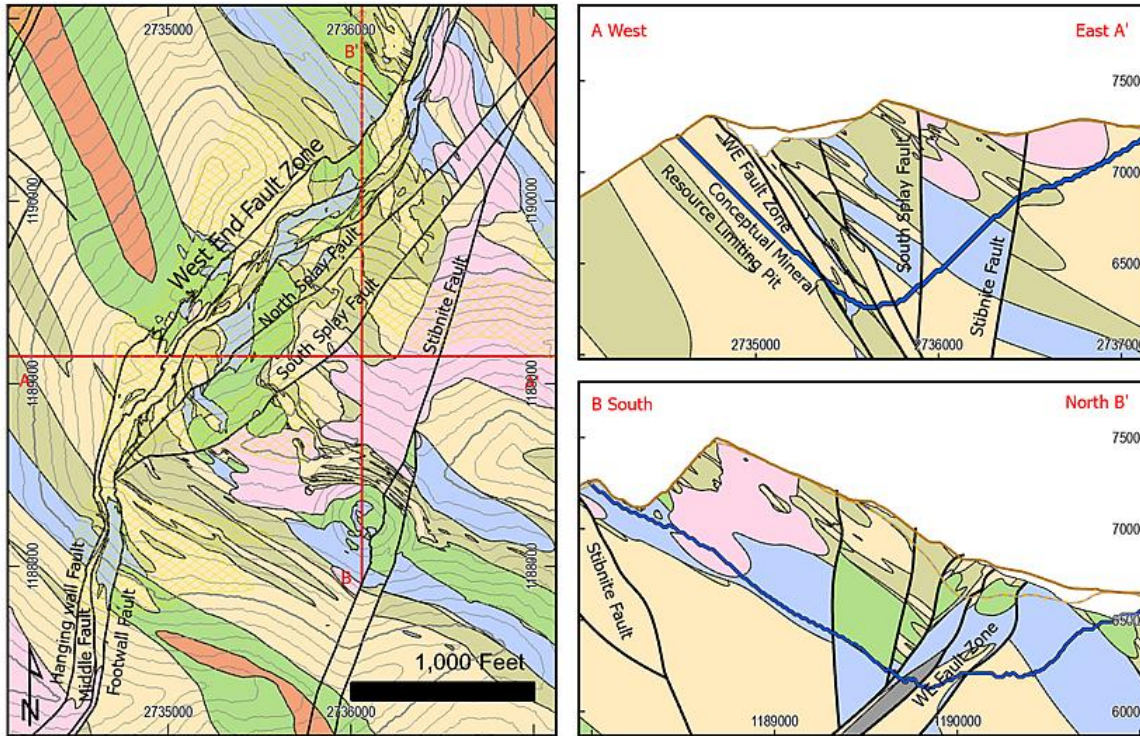


### 6.1.3 West End Deposit

Mineralization in the West End Deposit is structurally and stratigraphically controlled. Within the WEFZ, gold mineralization occurs within silicified breccia zones, sheeted quartz-adularia vein arrays and as replacement style mineralization situated where the northwest striking, northeast dipping calc-silicate and schistose units intersect the WEFZ (Figure 6-7). Alteration is dominated by sulfide replacement of iron-bearing mineral phases in favorable metasedimentary rocks and associated with quartz-potassium feldspar replacement and quartz-adularia-carbonate-sulfide veining (Figure 6-8). These mineralized zones occur as stacked ellipsoidal bodies plunging along the intersection of favorable lithologic units and faults zones and as tabular bodies extending along bedding (Figure 6-5). Mineralization also occurs as fracture filling within siliciclastic sequences and other less favorable lithologic units. True widths of these bodies range from 50 ft to over 330 ft. Drilling by Perpetua Resources has intersected gold mineralization associated with the WEFZ well below the historic pit bottom – as deep as 1,300 ft below the original ground surface - where mineralization was exposed prior to mining. The hanging wall of the WEFZ tends to exhibit relatively more dilatant and dispersed structures relative to the footwall and, therefore, is more significantly mineralized. Open-space-fill quartz veins and silicified breccias are typical within higher-grade zones of mineralization. The degree of oxidation in the West End Deposit is a function of both depth and proximity to faults and fractures. Both pervasive and fracture hosted oxidation is common throughout the deposit to depths of approximately 300 ft below the pre-mining topographic surface. Discrete zones of pervasive oxidation occur below this depth in the vicinity of the WEFZ and subsidiary

structures. Oxidation is interpreted to have resulted from both infiltrating precipitation and from deep-seated circulation of meteoric fluids through structural zones.

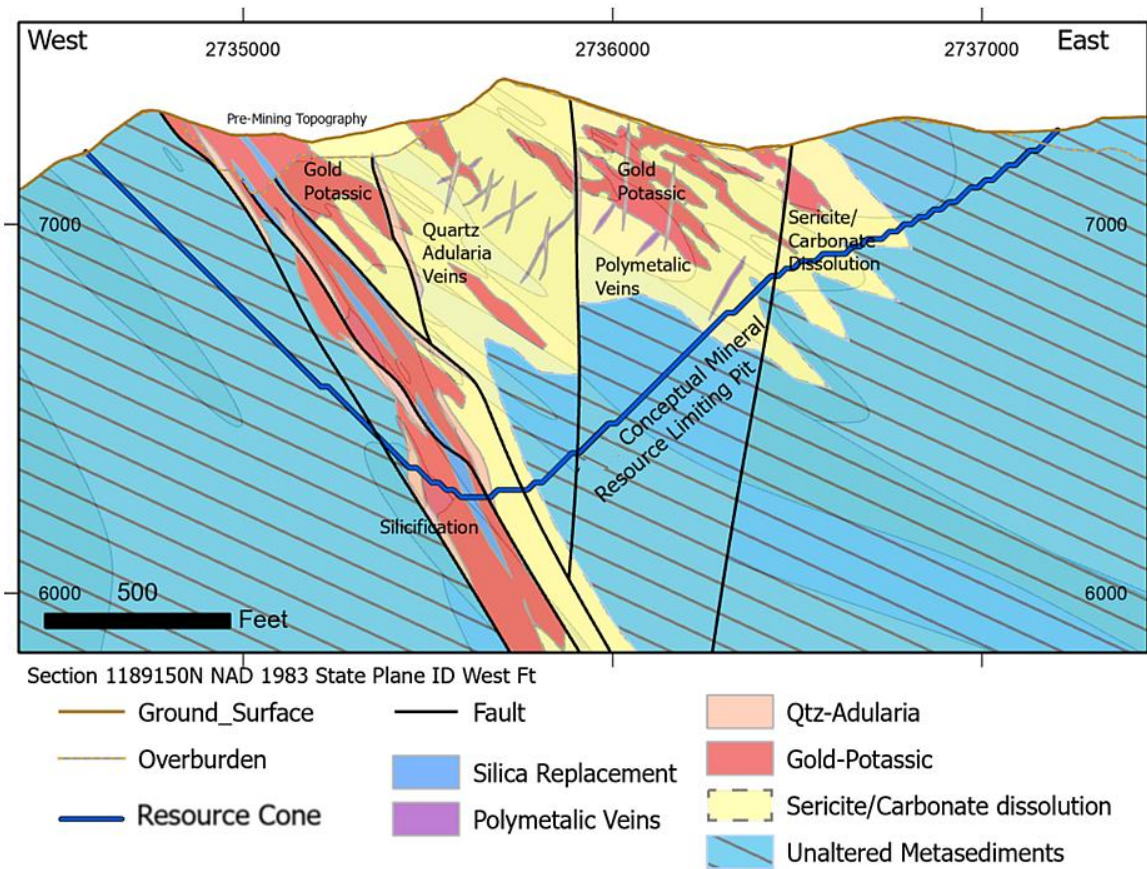
Figure 6-7: Geological Model for the West End Deposit



Spatial Reference: NAD 1983 State Plane Idaho West 1103 ft  
c.i. 50ft

- |                  |               |              |
|------------------|---------------|--------------|
| — Ground_Surface | Granodiorite  | Dolomite     |
| — Overburden     | Hermes Marble | Schist       |
| — Resource Cone  | Middle Marble | Calcsilicate |
| — Fault          | Quartzite     | Breccia      |

Figure 6-8: West End Mineralized Zone and Generalized Alteration Zonation



## 6.2 Deposit Types

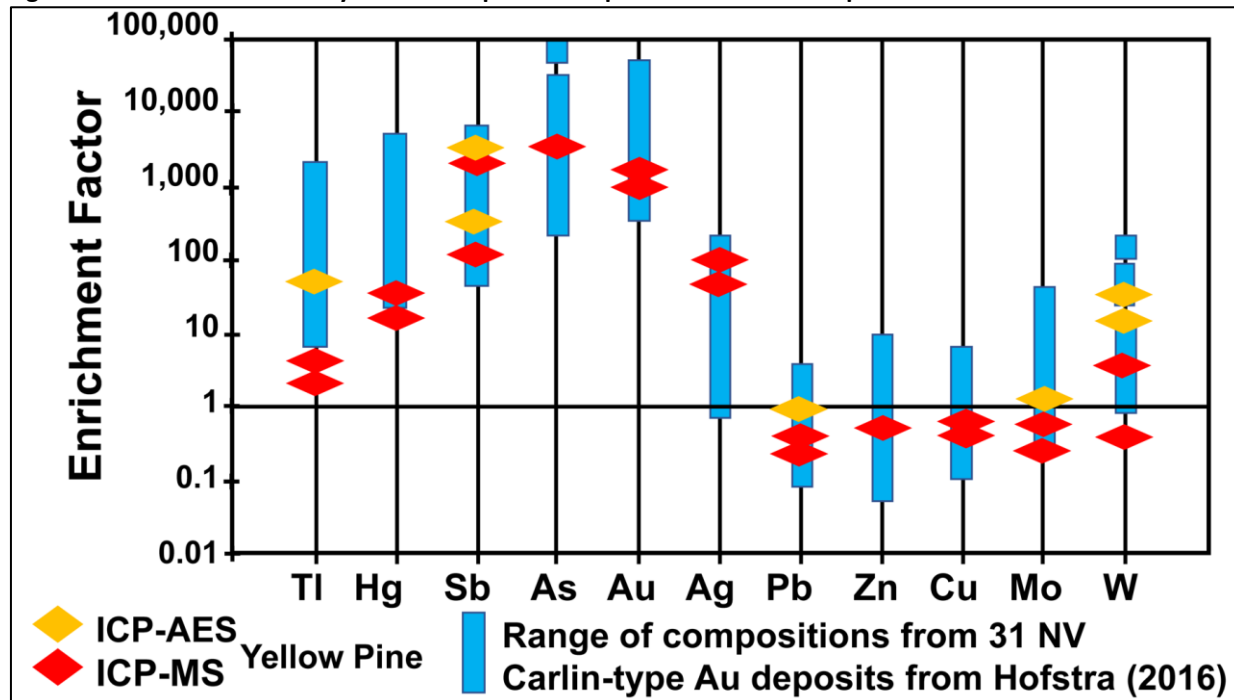
Gold-antimony-silver-tungsten deposits of the Stibnite Mining District (the District) are not readily categorized based on a single genetic deposit model due to complexities associated with multiple overprinting mineralization events and uncertainties regarding sources of mineralizing hydrothermal fluids. Early workers attributed the mineralization to the Idaho Batholith (Schrader and Ross, 1926); to hot springs associated with igneous intrusions (Thomson, 1919); to the Thunder Mountain caldera (Larsen and Livingston, 1920); to Tertiary dikes and small stocks (Bell, 1918; Thomson, 1919); or to both the batholith (gold and antimony) and the volcanics (mercury) (Currier 1935). Workers in the early 1970s considered some of the mineralization to be similar in style to deposits in the Yellow Jacket Co-Cu-Au belt farther east and attributed the precious metal mineralization to iron formations associated with what were interpreted as metavolcanics rocks (Jayne, 1977). Cookro (1985) attributed the tungsten to Cretaceous skarns. Cookro et al. (1987) noted isotopic signatures that suggested an igneous or metamorphic origin likely of Late Cretaceous age but also noted the potential for overprinting Tertiary mineralization. Criss et al. (1983; 1991) noted associations between Tertiary intrusions and meteoric dominated epithermal systems including Yellow Pine. Bookstrom et al. (1998) attributed the various metals in the District to a variety of deposit types including distal disseminated gold, Au-Ag and mixed metal veins, simple antimony veins, disseminated antimony, quartz-scheelite veins and breccia deposits, mixed metal skarns and hot springs mercury. Konyshov (2020) noted similarities to the reduced intrusive systems in the Tintina Belt, specially Donlin Creek. Others have noted similarities to Carlin-type systems and reduced intrusion gold deposits (Dail et al., 2015; Dail, 2016; Hofstra et al., 2016) and orogenic gold to antimony-gold bearing Carlin-like systems in China (Dail, 2014; Gillerman et al., 2019b). The complicated paragenesis and prolonged extent of mineralizing events in the area spanning tens of millions of years preclude application of a single genetic model.

A generalized model for the earliest disseminated gold-arsenic replacement mineralization event could involve assimilation of reduced metals-enriched black shales in ascending magmas with subsequent differentiation of metal enriched volatile phases and passage of those fluids into the shallow crustal environment along regional, deep-seated structures. In southeast Idaho, Hall et al. (1978) and McIntyre et al. (1976) noted scavenging of metals from Paleozoic rocks by magmatic and meteoric fluids associated with both Cretaceous and Tertiary granites in a 145-km long by 15-45-km wide belt of metalliferous Neoproterozoic and Paleozoic units known as the Idaho Black Shale Belt. These rocks are not present in the District but do occur directly along strike and may be present at depth beneath the District (Dail, 2015; Gillerman et al., 2019; Wintzer, 2019). The Bayhorse area stratigraphic succession, which includes the Idaho Black Shale Belt, is interpreted to be at least partly correlative to the Paleozoic sediment package at Stibnite (Yonkee et al., 2015; Lewis et al., 2014) and Neoproterozoic to Ordovician carbonate and siliciclastic sequences in north Idaho and eastern Washington also may be correlative. Geochemical and isotopic associations imply hydrothermal cells scavenged at least some metals from older strata not exposed in the District or immediate area including some with derivation from Archean crust or protoliths. Gillerman et al., (2014; 2019) reported Pb isotopic values from Stibnite ore minerals that included a component derived from Archean crustal sources. Wintzer (2019) compared the common lead signature of rocks and ores in the metalliferous Black Shale sequence in southeast Idaho to ores and minerals in the District and there is a close correlation providing evidence for magmatic assimilation and/or deep circulation of hydrothermal fluids to deep crustal levels where rocks with these lead isotopic signatures may be present. Taylor et al. (2007) used strontium and neodymium isotope data to draw similarities between southeast Idaho Neoproterozoic to Paleozoic sediment isotopic signatures and those of the Atlanta lobe of the batholith, inferring these sediments were assimilated into the batholith. In the Idaho Panhandle, Rosenberg and Wilkie (2016) reported an isotopic link between Late Cretaceous-Early Paleocene hydrothermal systems and buried Archean crust in Snowbird-type fluorite deposits

contemporaneous with extensional faulting and intrusion of the Bitterroot lobe of the Idaho Batholith, suggesting assimilation of the shale belt may have occurred along much of the length of the Cretaceous accretionary margin.

Isotopic and petrochemical characteristics that suggest hydrothermal fluids may have been sourced from reduced magmas that incorporated older metasedimentary rocks during crustal ascension (Gillerman et al, 2019). However, there are no known intrusive rocks of the same age in the District or area. Fluid chemistry, mineralogy, timing and tectonic setting of this mineralization event is consistent with the gold deposition mechanism proposed by Muntean et al. (2011) for formation of Carlin-type gold deposits (CTGDs), in which magmas formed due to asthenospheric upwelling during Tertiary slab delamination and underwent a mid-crustal fractionation process preferentially incorporating copper into a monosulfide solid solution and generating residual gold-rich magmas. Fluids resulting from volatile saturation during magma ascent underwent additional segregation in which gold, sulfur and arsenic are concentrated in the vapor phase and iron partitions into the brine phase allowing significant mass transport of gold in vapor while precluding pyrite precipitation. Subsequent mixing of the vapor with meteoric water, reaction of acidic gold-rich fluids with carbonate minerals and scavenging of iron from host rocks results in deposition of gold in rimmed arsenian pyrite and arsenopyrite over broad regions of disseminated mineralization characteristic of both Carlin-type and Stibnite deposits. Host rock lithologies differ from CTGDs, but tectonic setting on the passive Paleozoic margin, absence of causative intrusions, fluid chemistry, depth of formation, overall geochemical relationships (Figure 6-9), transtensional to extensional structural associations and timing of mineralization relative to Laramide slab delamination are compellingly similar.

Figure 6-9: Geochemistry of CTGD Deposits Compared to SGP-Area Deposits

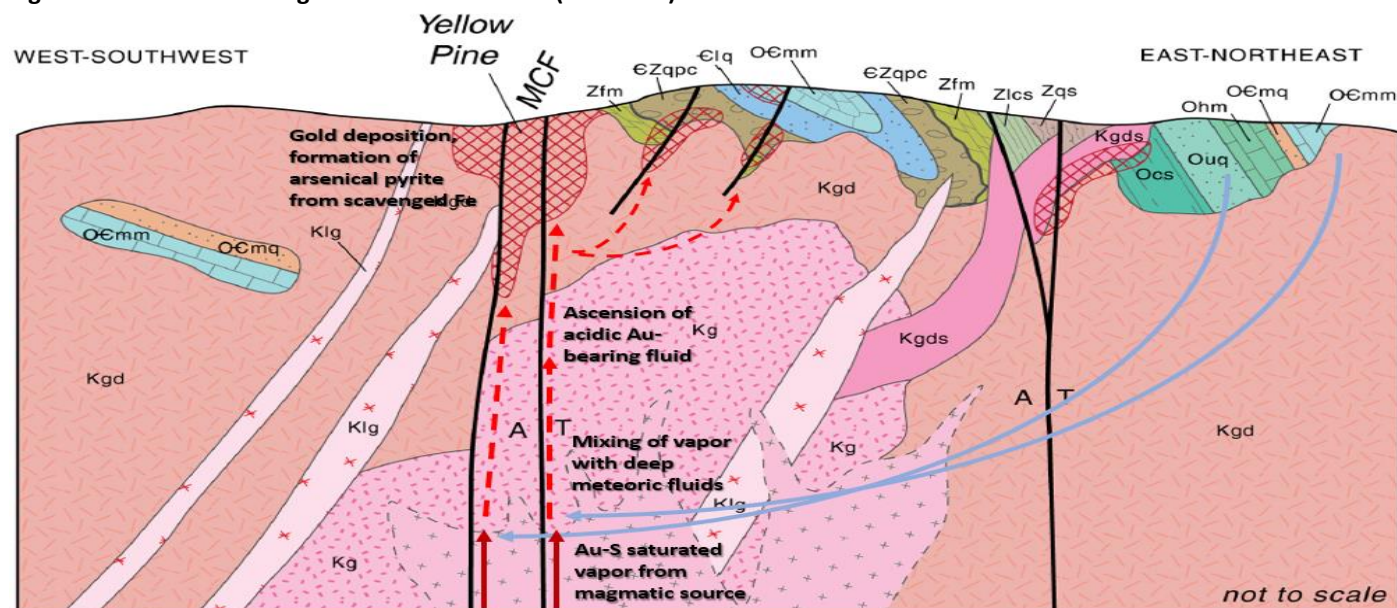


Source: Modified from Hofstra, A. 2016.

The earlier gold-arsenic mineralization event was overprinted by younger, lower temperature Sb-W mineralization and, subsequently, epithermal gold mineralization associated with quartz-adularia-carbonate veins. The Sb-W deposits of the Stibnite Mining District share similarities with other Au-Sb-W deposits in Spain, Portugal, Bolivia and China, as described by Dail (2014; 2016) and Gillerman et al. (2019) to include associations with major shear zones, Paleozoic host rocks (especially carbonate sequences), quartz and carbonate gangue mineralogy, and low temperatures of formation. Based on similar ages, the epithermal vein mineralization, and possibly the Sb-W mineralization, resulted from circulation of meteoric fluids driven by shallow Eocene intrusions in an extensional environment.

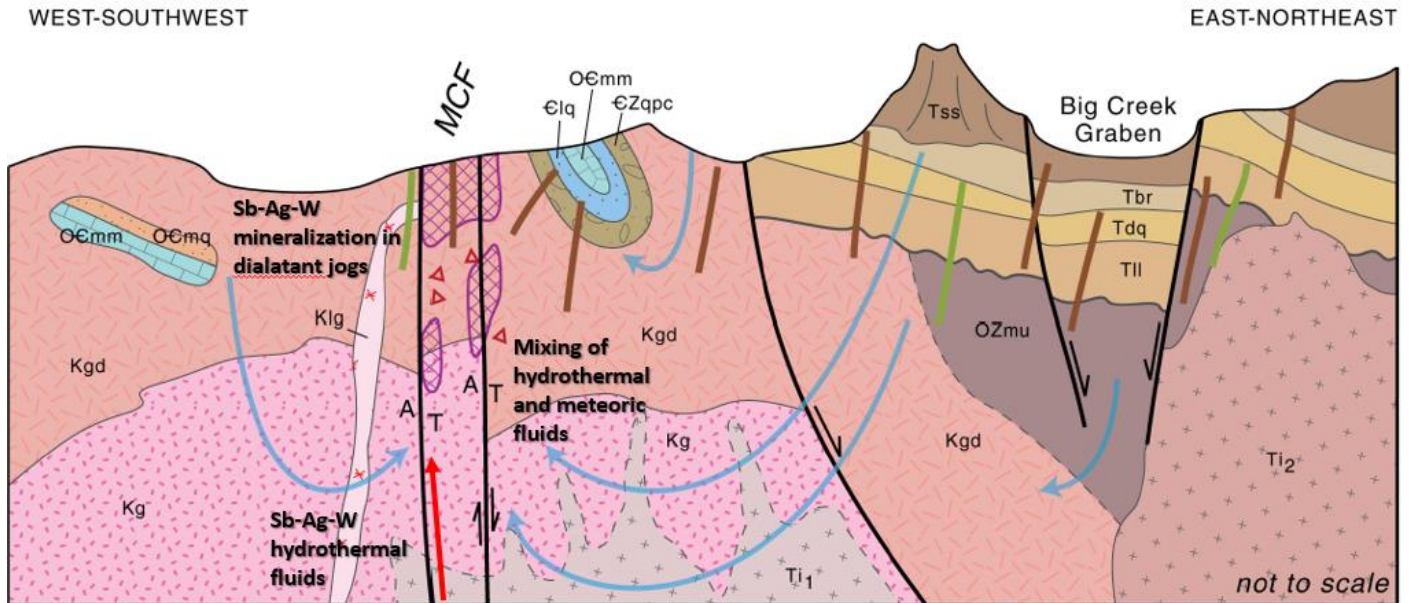
A schematic of the geologic setting for the various deposits and exploration prospects is shown on Figure 6-10 to Figure 6-12. These figures (modified from Gillerman et al. (2019b)) illustrate the spatial relationships of each major deposit type, the intrusion(s), and the associated hydrothermal systems over time.

**Figure 6-10: Main Stage Gold Mineralization (70-65 Ma)**



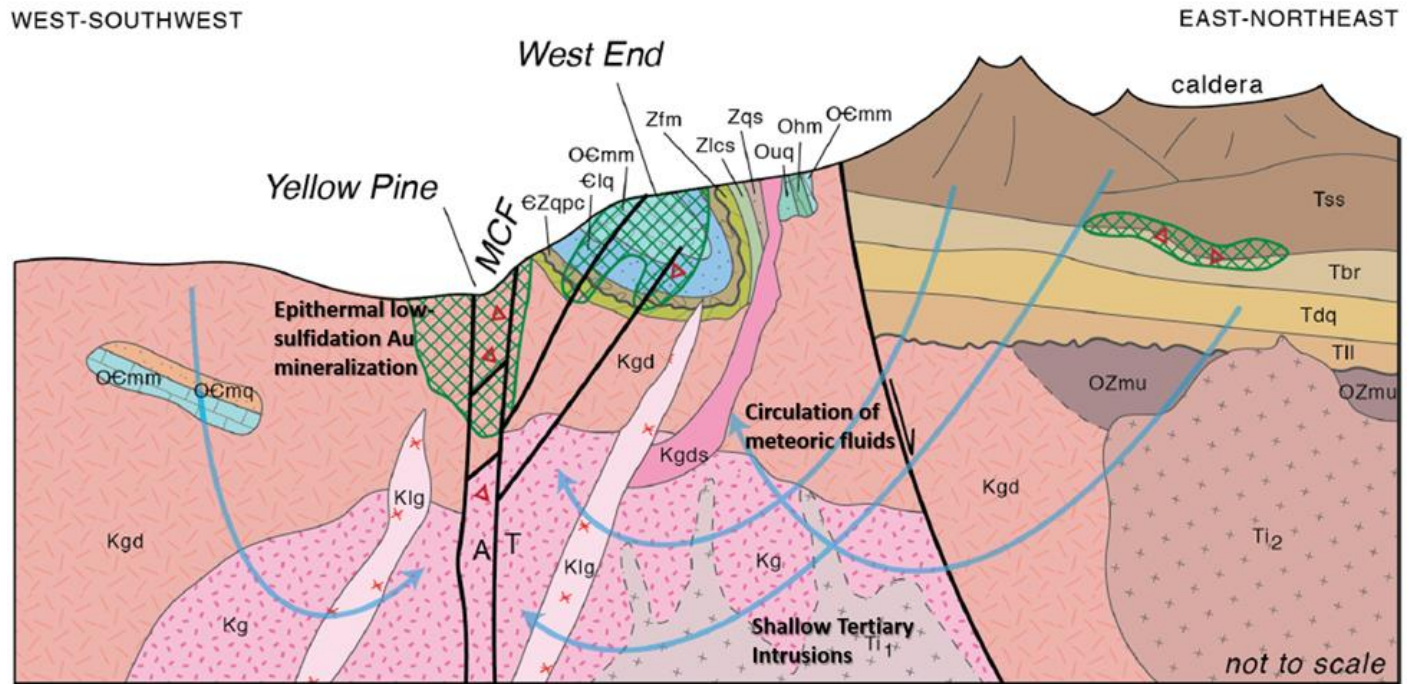
Source: Modified from Gillerman et al, 2019b.

**Figure 6-11: Antimony-Tungsten Mineralization**  
WEST-SOUTHWEST



Source: Modified from Gillerman et al, 2019b.

**Figure 6-12: Epithermal Gold Mineralization Stage (~50-38 Ma)**  
WEST-SOUTHWEST



Source: Modified from Gillerman et al, 2019b.

## 7 EXPLORATION AND DRILLING

The District has been the subject of exploration and development activities for over 100 years, yet much of the area remains poorly explored due to its remote location, poor level of outcrop and extensive glacial cover. Perpetua Resources has reliable records for several thousand historical drill holes (exclusive of blast holes) totaling nearly 450,000 ft. Other historical drilling campaigns are known to have occurred, but were poorly documented, and that information is not tabulated in this Report.

In addition to the historical drilling, Perpetua Resources has completed extensive exploration work over the last decade that has included: geophysics; rock, soil and stream sampling and analysis; geologic mapping; mineralogical and metallurgical studies; and extensive drilling campaigns. Since 2009, Perpetua Resources has completed over 775 drill holes totaling over 375,000 ft. Details of the various drilling campaigns and methods are described in Section 7.5.

This newer data has been integrated with datasets from previous operators and provides a comprehensive toolkit for future exploration. These efforts have led to the identification of over 75 prospects with varying levels of target support. These prospective areas include targets within, under and adjacent to existing deposits; bulk mineable prospects along known or newly identified mineralized trends; high-grade underground targets and early-stage greenfield prospects and conceptual targets based on geophysics or geologic inference. Details of some of the more promising targets are summarized herein.

**Exploration targets include conceptual geophysical targets, geochemical targets from soil, rock and trench samples, and results from widely spaced drill holes; as a result, the potential size and tenor of the targets are conceptual in nature. There has been insufficient exploration to define mineral resources on these prospects and this data may not be indicative of the occurrence of a mineral deposit. Such results do not provide assurance that further work will establish sufficient grade, continuity, metallurgical characteristics and economic potential to be classed as a category of mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability.**

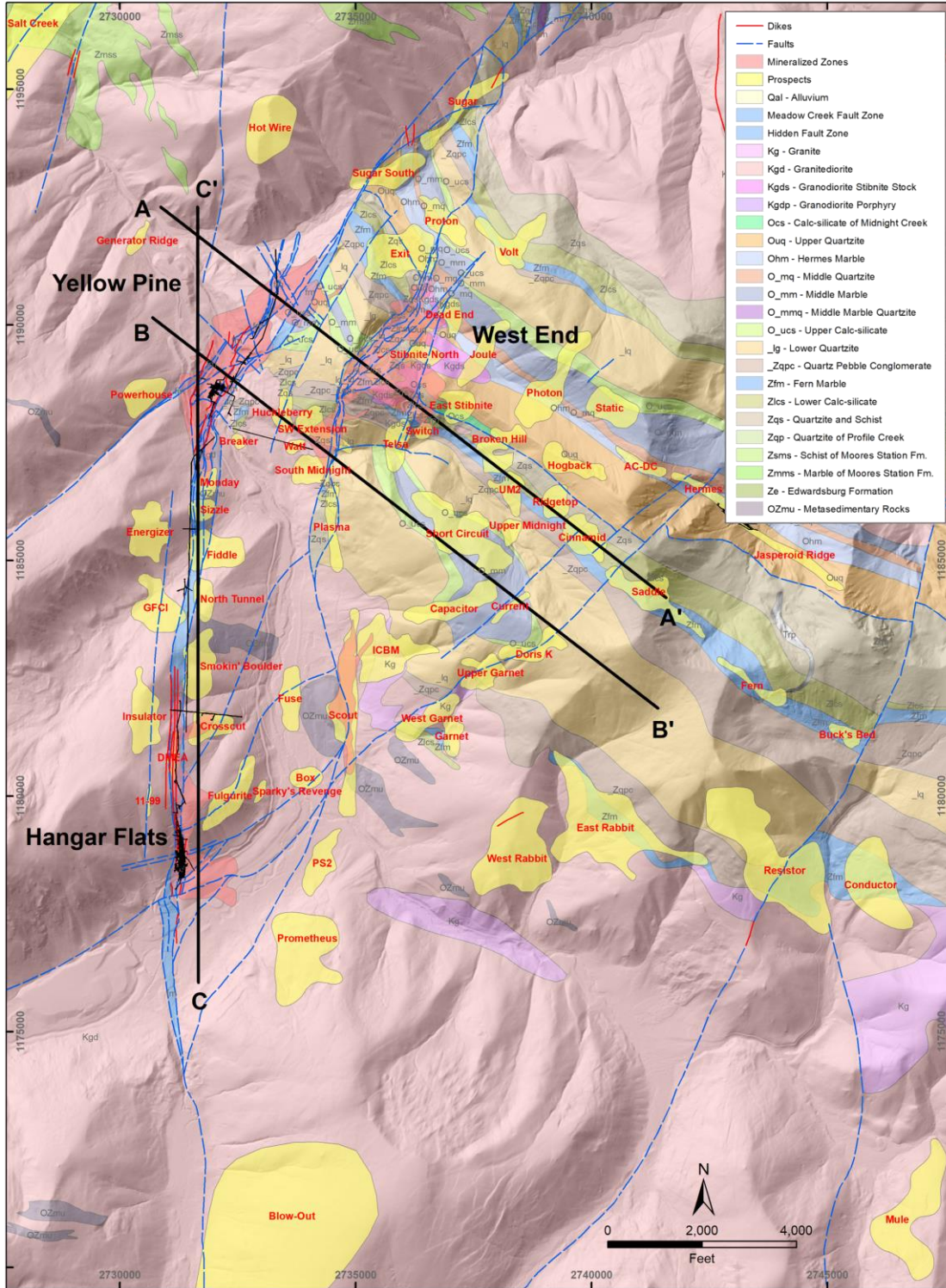
### 7.1 Exploration Potential

Numerous prospects have been discovered during exploration and development activities in the Stibnite Mining District (District) over the past 100 years using a variety of methods; some of these prospects were developed into mines while others remain undeveloped. Besides pit expansion possibilities around and below the three main deposits (Yellow Pine, Hangar Flats, and West End), other exploration targets may one day warrant consideration for development if they can be proven viable after additional exploration, environmental, socio-economic, metallurgical, engineering, and other appropriate studies and following any required permitting. Perpetua Resources has developed an extensive pipeline of over 70 discrete high-potential exploration targets within the core of the District, but much of the District and land position is poorly explored even today after over 100 years of activity in the area. Besides extensive drilling campaigns, exploration work by Perpetua Resources has included collection and gold- and multi-element analyses of approximately 300 -80 mesh stream sediment samples; approximately 5,000 -80 mesh soil samples; approximately 2,500 rock chip samples; collection and analyses of a 595 line-mile airborne electromagnetic (EM) and aeromagnetics survey; induced polarization and resistivity surveys along 13 lines, totaling 13 line-miles; Self Potential

(SP) surveys along 6 lines totaling 4.23 line-miles; and controlled-source audio-frequency magnetotellurics (CSAMT) surveys along 13 lines totaling 31 line-miles. These geochemical and geophysical surveys were integrated with extensive historical operator exploration data to generate and further define exploration targets.

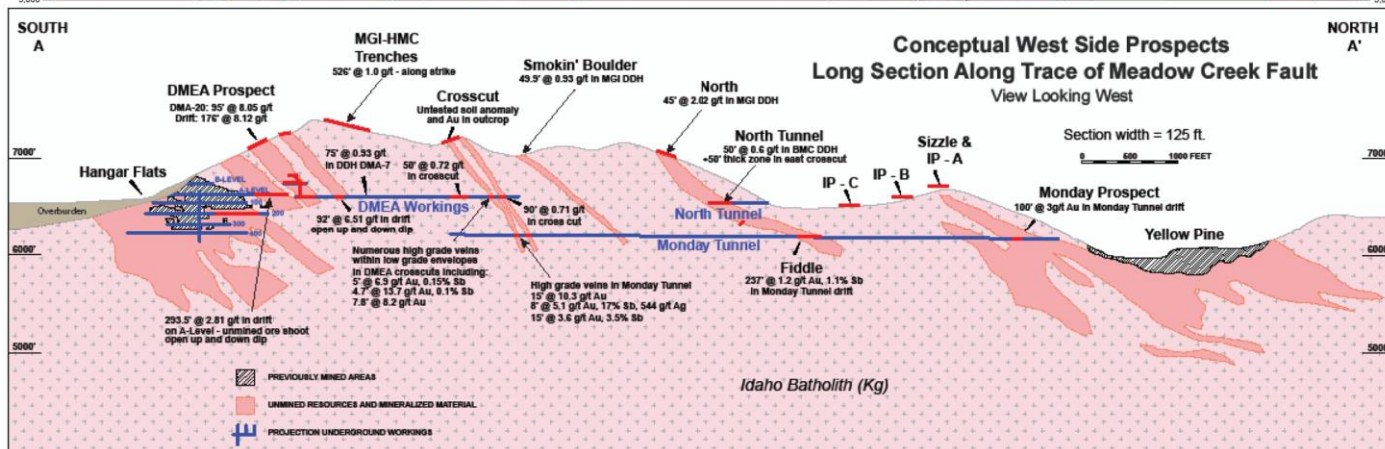
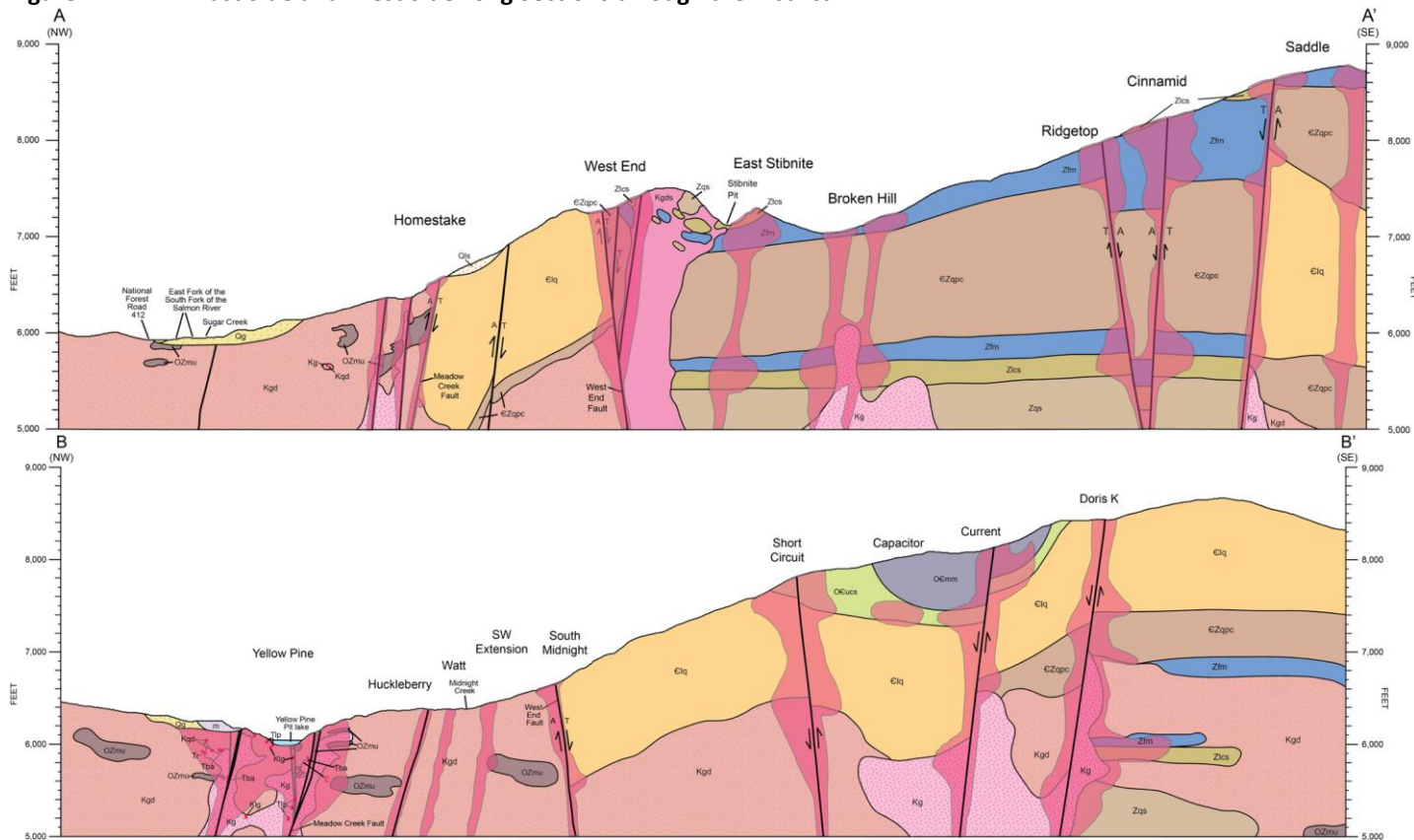
Some of the more significant prospects are summarized below and shown on a simplified geologic map (Figure 7-1) modified from Stewart et al. (2016). Conceptualized cross sections through the east side and west sides of the District are provided as Figure 7-2. See Section 6 of this Report for details on the District geological setting and additional details on deposit types and models.

Figure 7-1: Prospects and Conceptual Long Sections on Generalized Geology



Source: Geology modified from Stewart et al, 2016. Grid: 1983 Idaho State Plane West (feet).

Figure 7-2: East Side and West Side Long Sections through the District



Note: Cross sections modified from Wintzer, 2019 and Perpetua Resources. Unit name abbreviations and color scheme same as Figure 7-1. Red hatch areas represent conceptualized zones of alteration and mineralization.

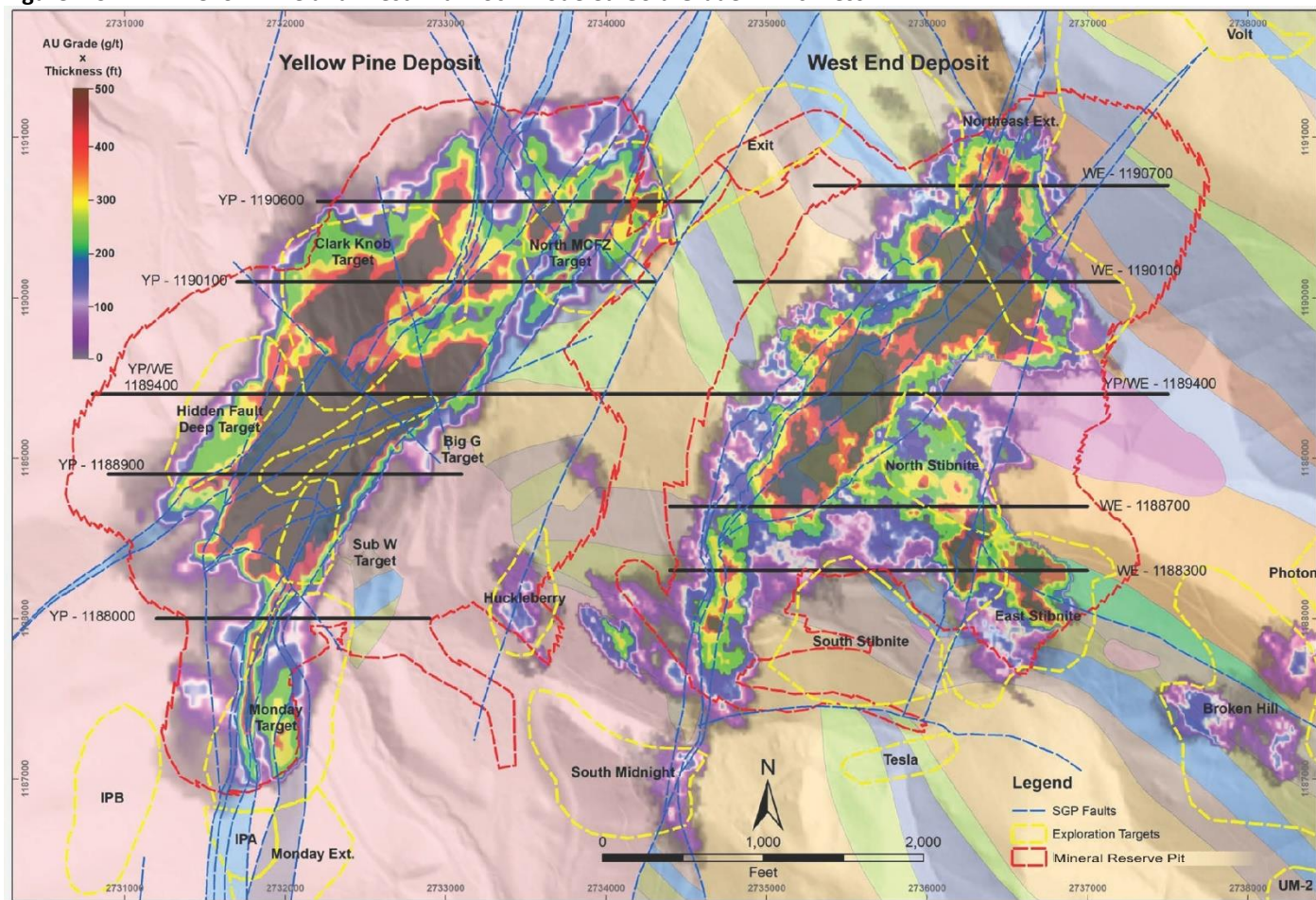
## 7.2 Exploration Methods

Perpetua Resources, its predecessors, and historical operators and owners have used a variety of techniques to evaluate the mineral potential of the Stibnite District. These techniques include geologic mapping, stream sediment and rock chip sampling, geophysical surveys, petrological and mineralogical research, trenching and drilling.

## 7.3 Potential for Expansion of The Yellow Pine, Hangar Flats and West End Deposits

All three major deposits with reported Mineral Resources (Section 11 of this Report) remain open to expansion and this potential is described in the following sections subject to the caveats for exploration prospects noted previously in this section. Mineralized material occurs between, beneath, and laterally around both the mineral reserve pits and conceptual mineral resource cones for all three deposits. A map showing the reserve pit limits used for the TRS and some of these opportunities at the Yellow Pine deposit and West End deposits is provided in Figure 7-3. Any such expansion, to the extent not included in Perpetua Resources' approved Plan of Operations or other federal or state permits, may be subject to additional requirements. Before proceeding with any such expansion, Perpetua Resources would evaluate and comply with any environmental review and/or permitting requirements applicable to the expansion.

**Figure 7-3: Yellow Pine and West End Block Modeled Gold Grade x Thickness**



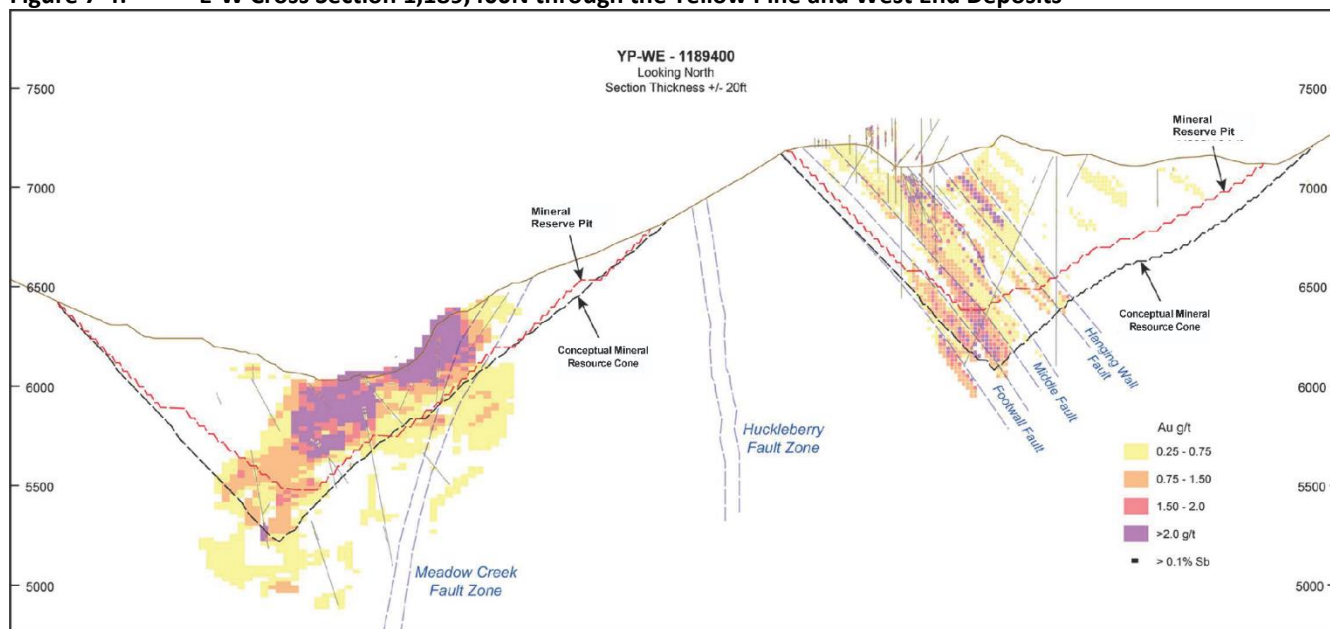
Note: Grade x thickness calculated by summing Conceptual Mineral Resource block grades to the existing ground surface datum.

### 7.3.1 Yellow Pine

The Yellow Pine Deposit is open at depth and along strike in the north, northeast, and southwest directions along the Meadow Creek Fault Zone (MCFZ) and subsidiary structures. Targets are defined by mineralized holes drilled by both Perpetua Resources and pre-Perpetua Resources operators. The area between the two deposits is also poorly tested and is mostly covered with talus, but mineralization is known to exist along the Huckleberry Fault Zone (Figure 7-4) and presents a promising but poorly evaluated target. Highlights of some of the other targets in and around the Yellow Pine deposit are discussed below.

Other targets associated with the Yellow Pine deposit include the Monday Tunnel, Hidden Fault Deep, Big G, North Meadow Creek Fault, Clark Knob, and Sub W targets.

**Figure 7-4: E-W Cross Section 1,189,400N through the Yellow Pine and West End Deposits**



The Monday Tunnel Target on the continuation of the MCZF south of the main Yellow Pine Deposit has been the subject of underground exploration and limited drilling by the U.S. Bureau of Mines and Bradley Mining Company in the 1940s-1950s and more recently by Perpetua Resources. Mineralization is relatively narrow and steeply dipping and occurs in intrusive rocks along and within the MCFZ and metasedimentary rocks east of the fault but is covered beneath a relatively thick (100-200 ft) veneer of glacial materials.

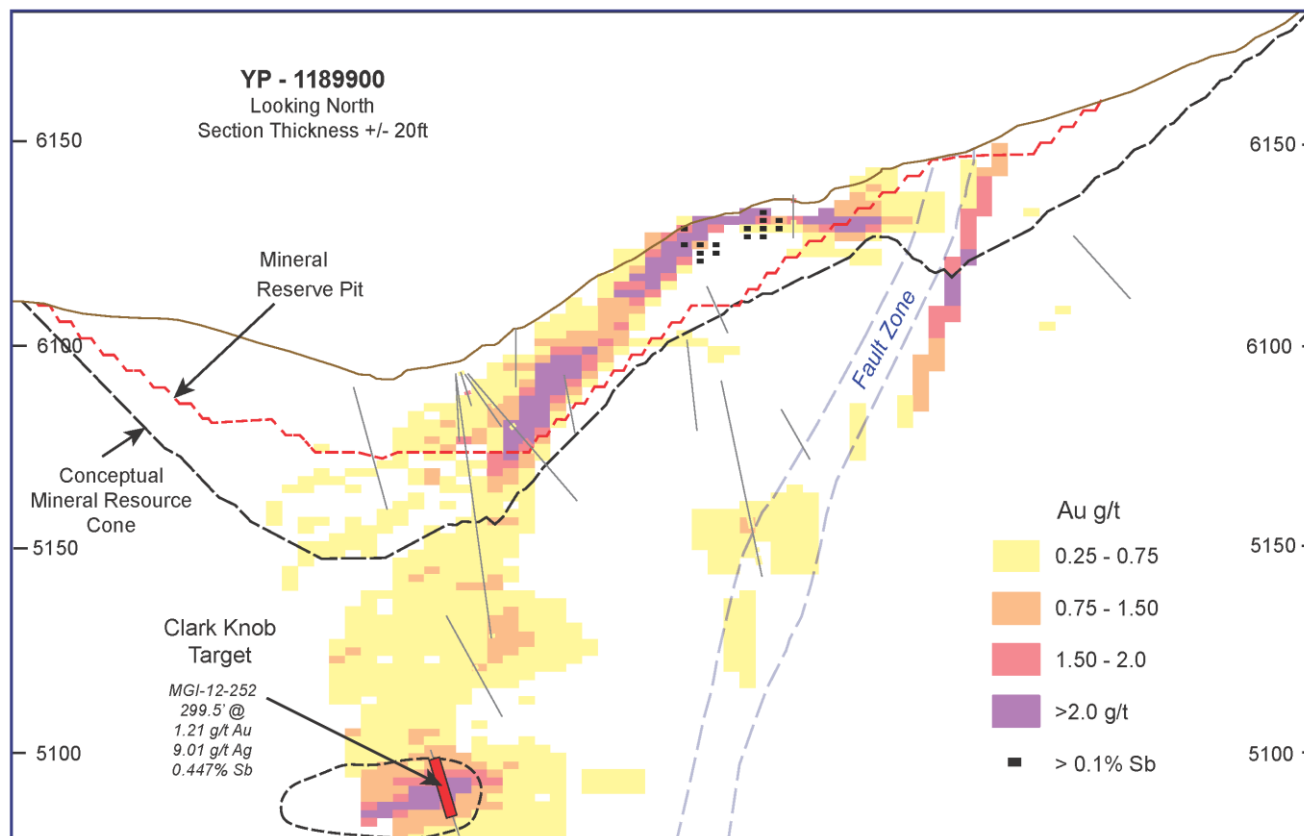
The Hidden Fault Deep Target is located at the northwest edge of the Yellow Pine Deposit (Figure 7-3) along the trace of the Hidden Fault Zone (HFZ). The target is supported by three Perpetua Resources holes covering an area approximately 1,100 ft (NE-SW) by 450 ft (NW-SE) over a range of 5,185 to 5,900 ft in elevation. The HFZ is poorly defined away from the main pit area, likely has had post-mineral movement, but remains open to the southwest and down dip.

The Big G Target comprises a northeast-trending zone 1,050 ft long by 500 ft wide lying along the trace of the G-Fault at depth and contains some promising intercepts (Figure 7-3). The G-Fault is a structure originally mapped underground and in the open pit during the Bradley era and is interpreted to be a mineralized structure that underwent post-mineralization movement.

The North Meadow Creek Fault Target lies on the northeast side of the Yellow Pine deposit and is defined by fifteen Perpetua Resources and several pre-Perpetua Resources drill holes (Figure 7-3). The zone is bounded on the northwest by the East Boundary Fault and extends across an elongated ellipsoidal target area to the northeast and southwest. Mineralization is hosted in intrusive rocks west of the MCFZ and within metasedimentary rocks and intrusives east of the fault. The MCFZ exhibits post-mineralization displacement with the latest movement likely having a right-lateral sense of displacement. This post-mineralization movement has attenuated mineralization, forming lenses that vary in grade depending upon the amount of mineralized rock versus unmineralized rock caught up in the structural zone.

The Clark Knob Target consists of a large ovoid area located beneath and along the flanks of the northwestern end of the Yellow Pine Mineral Reserve pit and contains a large number of drill holes that encounter mineralization. Mineralization has been intersected down-dip of the intervals within the mineral reserve pit both within the conceptual mineral resource cone and below it (Figure 7-3 and Figure 7-5).

**Figure 7-5: E-W Cross Section 1,189,900N through the Clark Knob Target**



Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

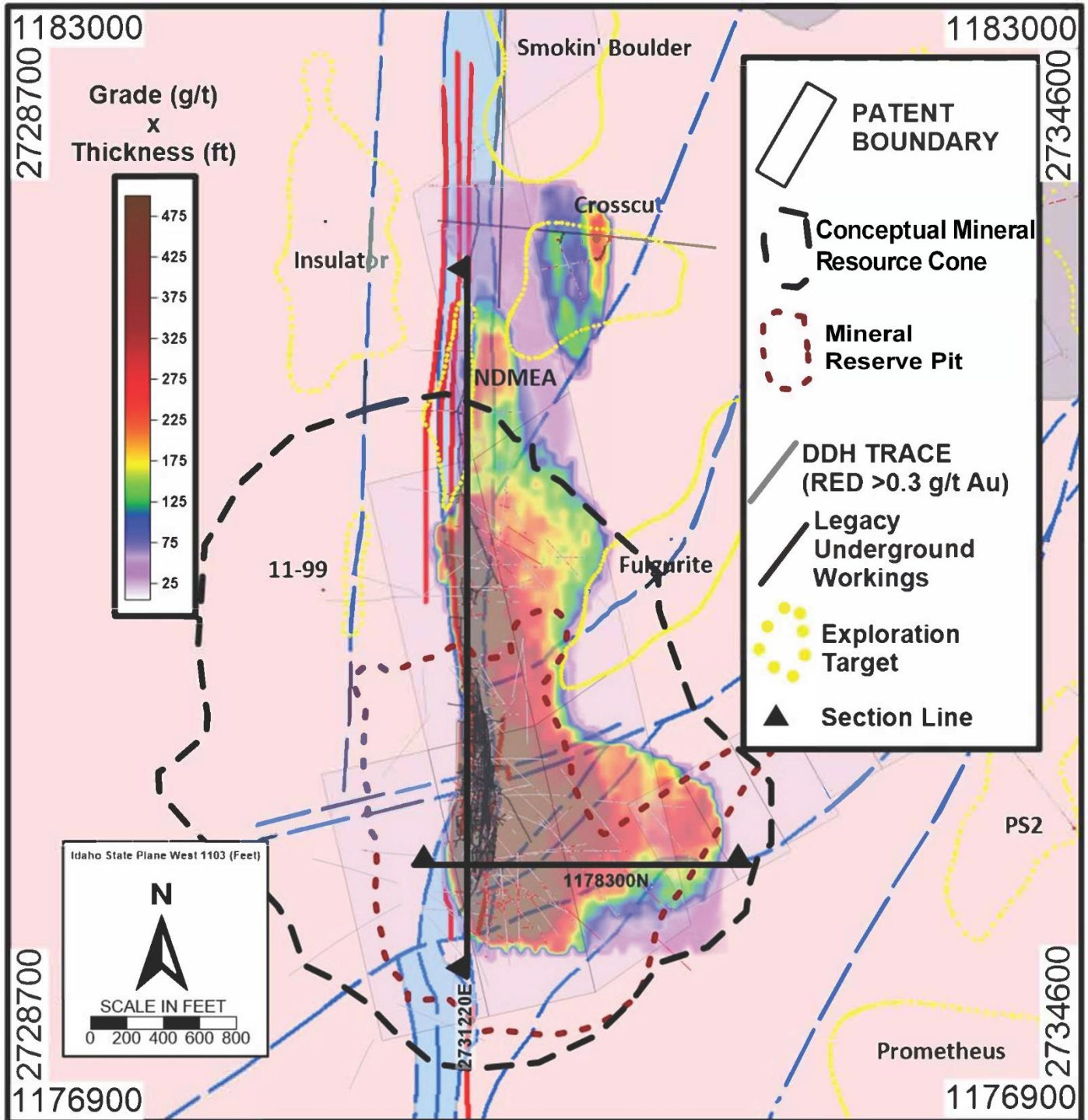
The Sub W Target consists of the area beneath the former Yellow Pine pit and Mineral Reserve pit at depth and contains several intercepts in an area approximately 650 ft (NE-SW) by 300 ft (NW-SE) over elevations ranging between 5,000 and 5,700 ft (Figure 7-3).

### 7.3.2 Hangar Flats

The Hangar Flats Deposit is located along the MCFZ and the intersection of a series of subsidiary or splay faults that trend east-northeast and northeast and dip to the northwest. A corridor more than 3,000 ft long north, east, and west of the main deposit is inadequately drill tested outside of the known deposit (Figure 7-6). Targets associated with the Hangar Flats deposit include Hangar Flats Deep, DMEA, 11-99, and HF East targets (Figure 7-7 and Figure 7-8).

Historical sampling and production records from the former Meadow Creek Mine define the Hangar Flats Deep (HFD) Target, a zone of high-grade gold antimony mineralization in a 30- to 330-ft-wide corridor along the western boundary of the MCFZ that remains open along strike and down dip. This was historically called the “West Ore Body” by Cooper (1951) and was never mined by previous underground mining operations. Figure 7-7 shows several drill holes, which intersected multiple high-grade intercepts, some containing several percent antimony and highly anomalous tungsten values within broad zones of gold mineralization that represent a portion of this body of mineralized material.

Figure 7-6: Plan Map Showing the Hangar Flats Expansion Targets



The DMEA target lies beneath the northern part of the Hangar Flats Mineral Reserve Pit and was initially discovered in the early 1950s by USBM and Bradley during underground exploration under the federally sponsored Defense Mineral Exploration Administration program. The MCFZ is poorly tested over a distance of at least several thousand feet beyond the DMEA prospect, which has been explored by a single drift driven along the eastern side of the MCFZ fault trace in this target area. The underground workings were extensively mapped and sampled in the 1950s and indicate the presence of northeast-trending high-grade vein systems. A large zone of mineralization was sampled perpendicular to the MCFZ by pre-Perpetua Resources underground channel sampling, which produced a length-weighted average gold grade of 6.5 g/t over 92 ft (1.56 g/t over 300 ft).

A geotechnical hole (MGI 11 099), drilled west of the Hangar Flats deposit in 2011 intercepted a previously unidentified zone of high-grade gold-antimony mineralization that cut 152 ft, averaging 1.34 g/t Au, 12 g/t Ag, 0.65% Sb. The intercept was at considerable depth downhole and the hole terminated in mineralization. Surface examination above the intercept did not disclose any altered or mineralized rocks at the surface. Mineralization appears open and possibly extends along strike, down dip, and possibly up dip from the drill intercept, based on airborne geophysical surveys (magnetics and EM), CSAMT, and interpretation of oriented core data. However, given that the intercept is in a single hole, the trend of the zone is uncertain.

**Figure 7-7: E-W Cross Section 1,178,300N through the Hangar Flats Deep Target**

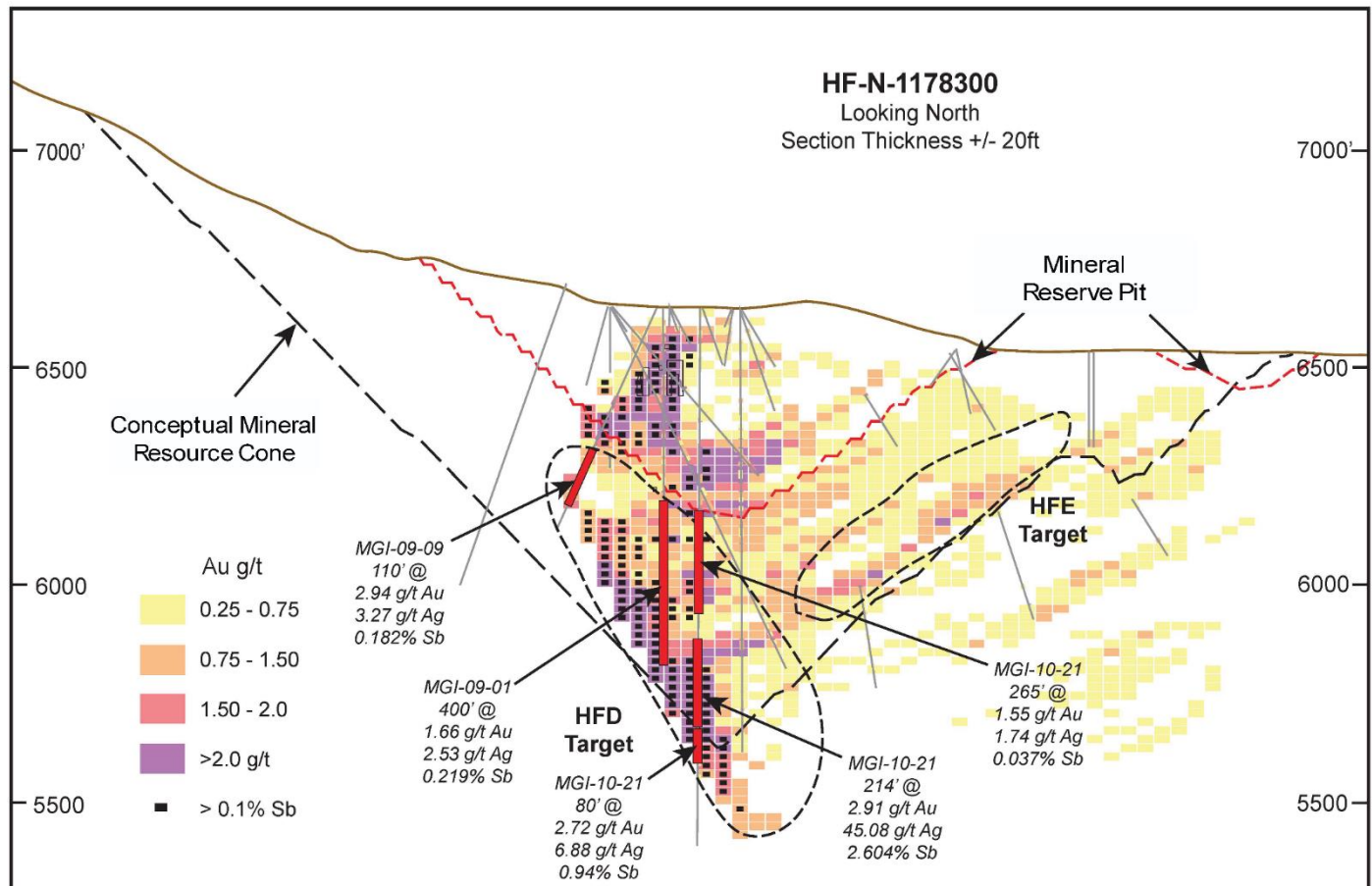
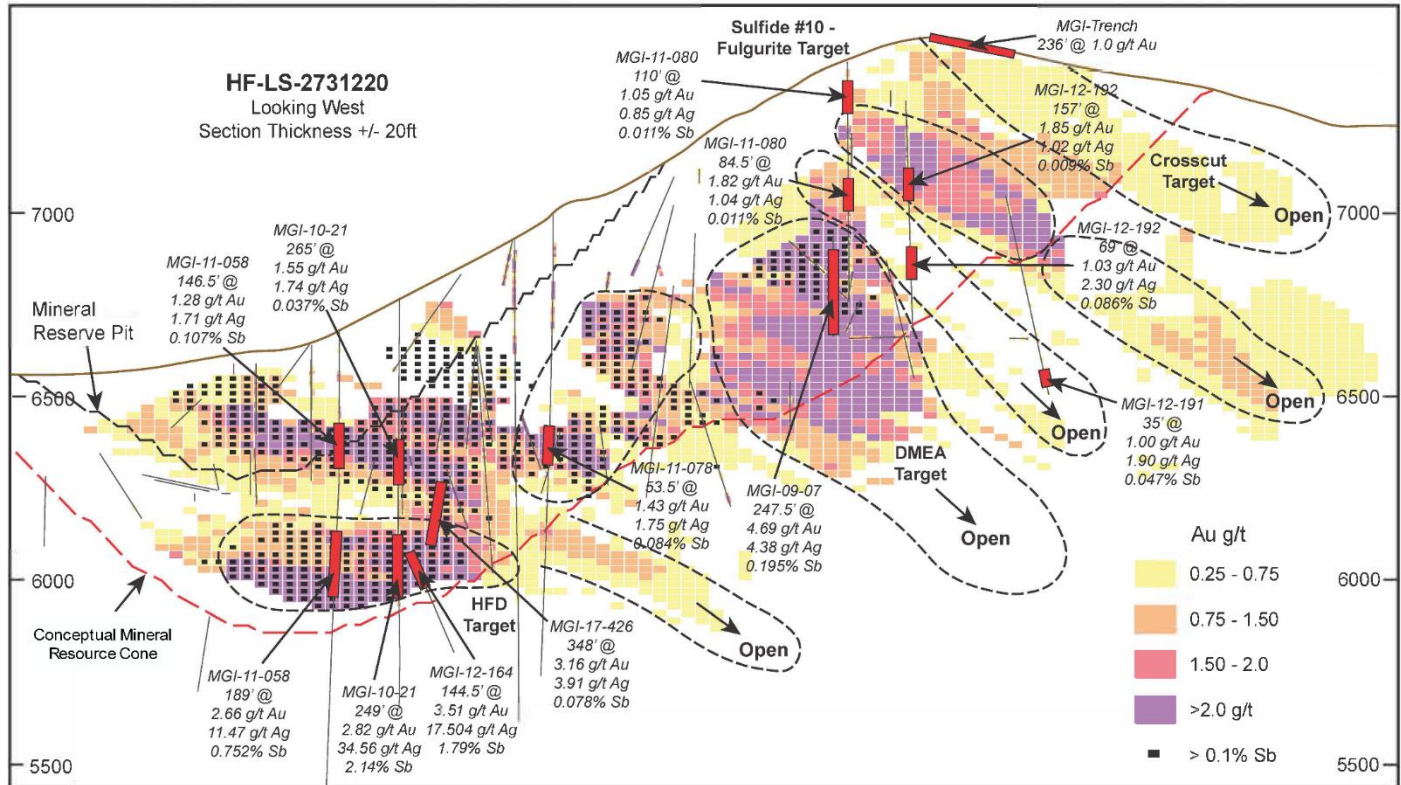


Figure 7-8: N-S Long Section 2,731,220E through the Hangar Flats Deposit



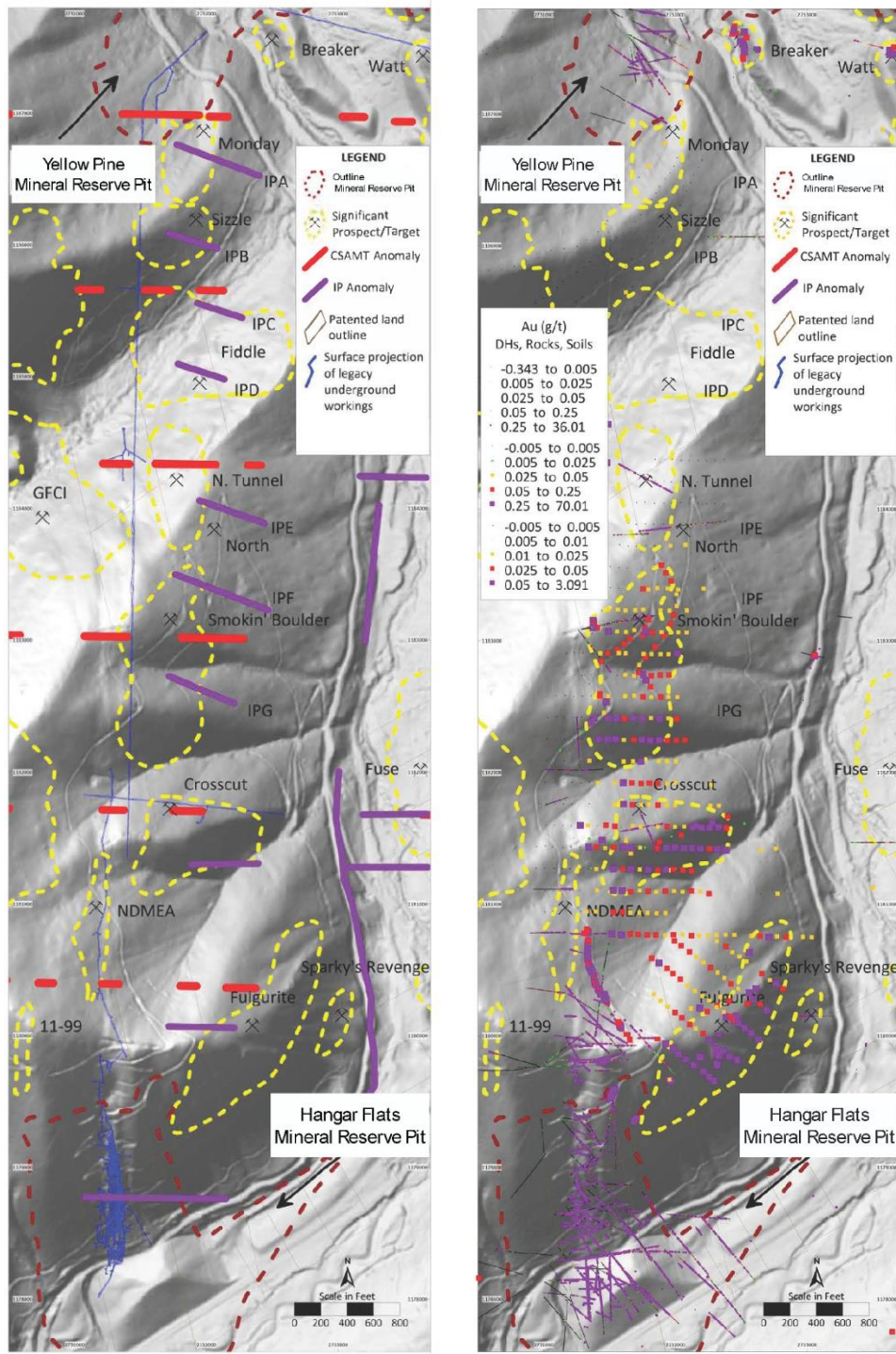
Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

A large area east of the Hangar Flats Deposit, the HF East Target, has only limited drill testing and there are several large structures (Wonacott, Leonard, and Hampton faults) that could potentially be mineralized along their traces northeast along strike and up dip from the deeper zones intersected in the main deposit area along the MCFZ. Fan drilling in 2009-2010 and historical DMEA-sponsored drilling under the airstrip confirms the northeast striking and northwest dipping low-angle faults extend beneath the valley bottom to the northeast and are at least locally mineralized (Figure 7-6).

### 7.3.3 MCFZ Trend

The MCFZ trend consists of a ~2-mile long north-south string of prospects aligned along the MCFZ and associated cross structures. The Hangar Flats Deposit lies at the southern end with the Yellow Pine Deposit at the northern end. The major prospects along this trend are shown in Figure 7-2 and Figure 7-9. Targets include the Monday Tunnel (Section 7.3.1) and the DMEA Tunnel (Section 7.3.2) at either end of the zone. Other targets include North Tunnel and Smokin' Boulder. Conceptual targets north and northeast of the Hangar Flats deposit include at least four stacked mineralized zones known as the Sparky's Revenge, Fulgurite, NDMEA, and Crosscut prospects that are northeast striking, shallow to moderately northwest-dipping, and altered (Figure 7-9). There are several other targets along the western side of the MCFZ and at depth, that are defined by geophysical interpretation and geologic inference.

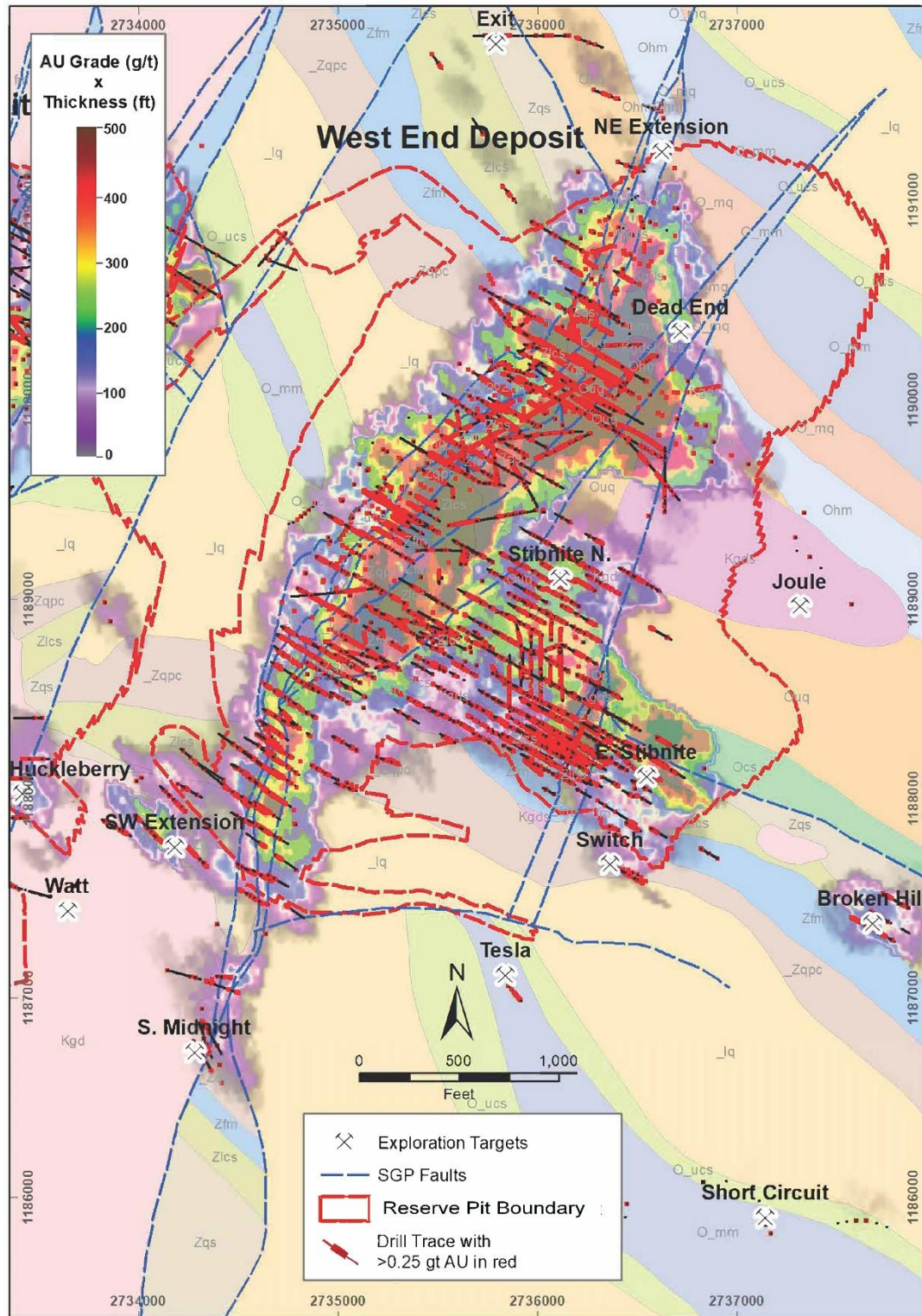
Figure 7-9: Plan Map of MCFZ Prospects, Geophysical Anomalies (l) and Geochemical Anomalies (r)



#### 7.3.4 West End

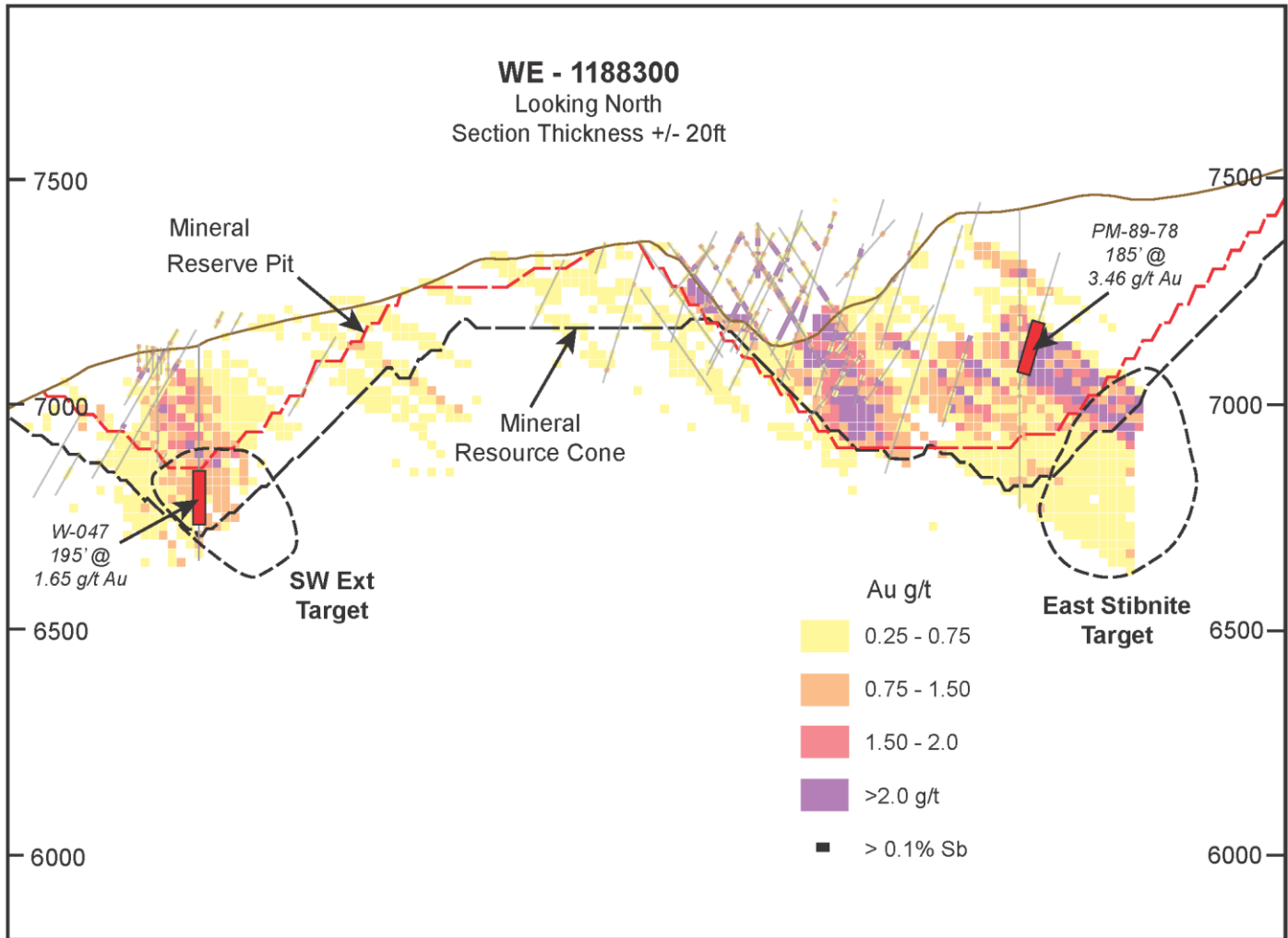
There is potential to expand the West End Deposit at depth down-dip and along strike to the northeast and southwest, peripheral to the proposed West End Mineral Reserve pit. Most of the upper parts of the deposit that were previously mined were in oxidized or transitional materials and, in some cases, legacy operators only utilized cyanide-leach gold assay methods even when the holes intersected sulfide-bearing materials. This was the same for most of the prospects peripheral to the conceptual Mineral Resource pit, as described below. This could result in under-reporting of grades in these target areas and within zones of the West End Deposit itself. Some of the peripheral targets include Exit and Dead End targets on the northern end of the reserve pit; the Stibnite North, Tesla, and Switch targets to the southeast; and the South Midnight and Southwest Extension targets to the south and southwest (Figure 7-10). The Joule prospect is located east of the resource pit and is defined by soil, rock chip, and geophysical anomalies, but has never been drilled.

Figure 7-10: Significant West End Drill Intercepts and Expansion Targets



The West End deposit is open down-dip along nearly its entire strike length (Figure 7-11). The target consists of a poorly explored area 330 ft wide and extending approximately 2,100 ft along strike beneath the Mineral Reserve Limiting Pit.

**Figure 7-11: E-W Cross Section 1188300N of the West End SW Extension and East Stibnite Targets**



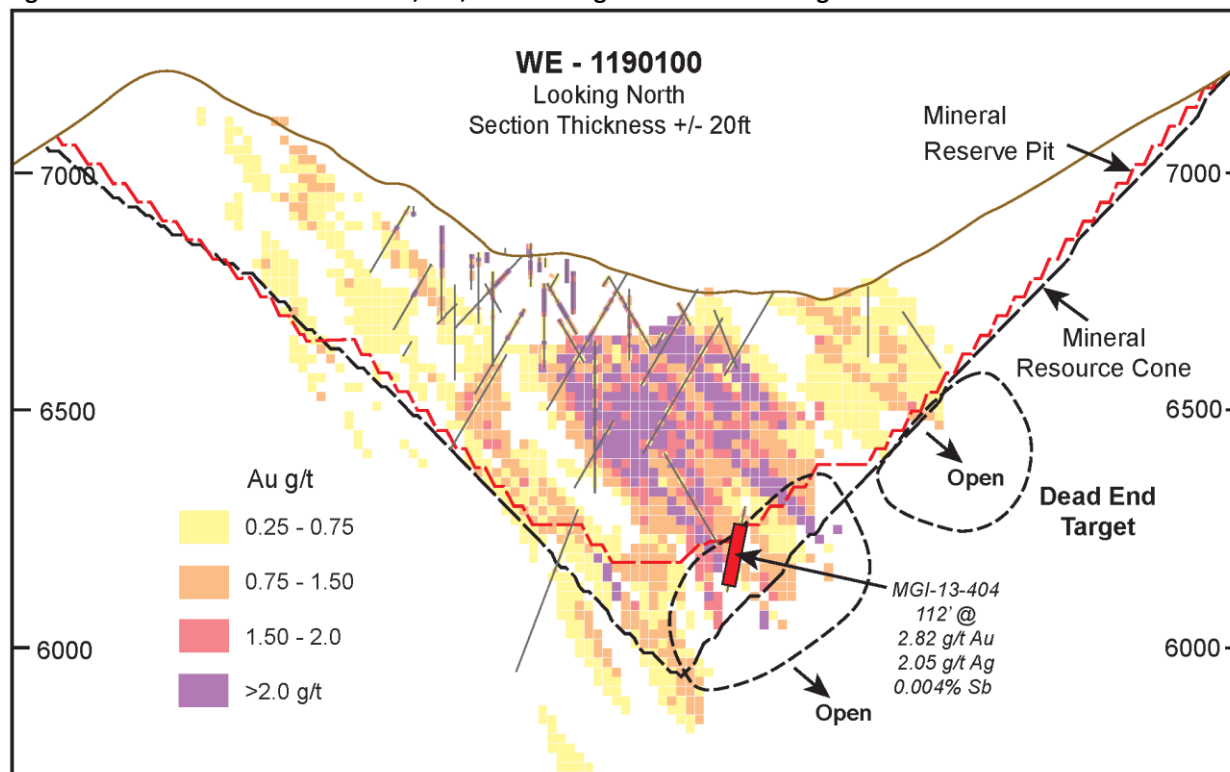
Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

The Dead End Fault Target lies below and along the northeast flank of the West End Mineral Reserve near the former NE Extension pit. Mineralization in the NE Extension pit is hosted within the Hermes Marble and the Stibnite Stock and is composed of dense quartz-adularia vein stockworks and sheeted vein arrays, biotite replacement by illite and sulfides, and polyolithic breccias in a series of steeply dipping northeast striking faults.

The Stibnite North target is defined by Perpetua Resources and Pioneer Metals drill holes (Figure 7-13). Mineralization may continue down-dip and along strike within favorable faults and lithologies extending past the Mineral Reserve Limiting Pit. Limited outcrop exposures in old, partially backfilled roadcuts indicate the presence of abundant gold-bearing, quartz-adularia-sulfide veins. Structural analysis of the limited outcrop and drill data here suggests a

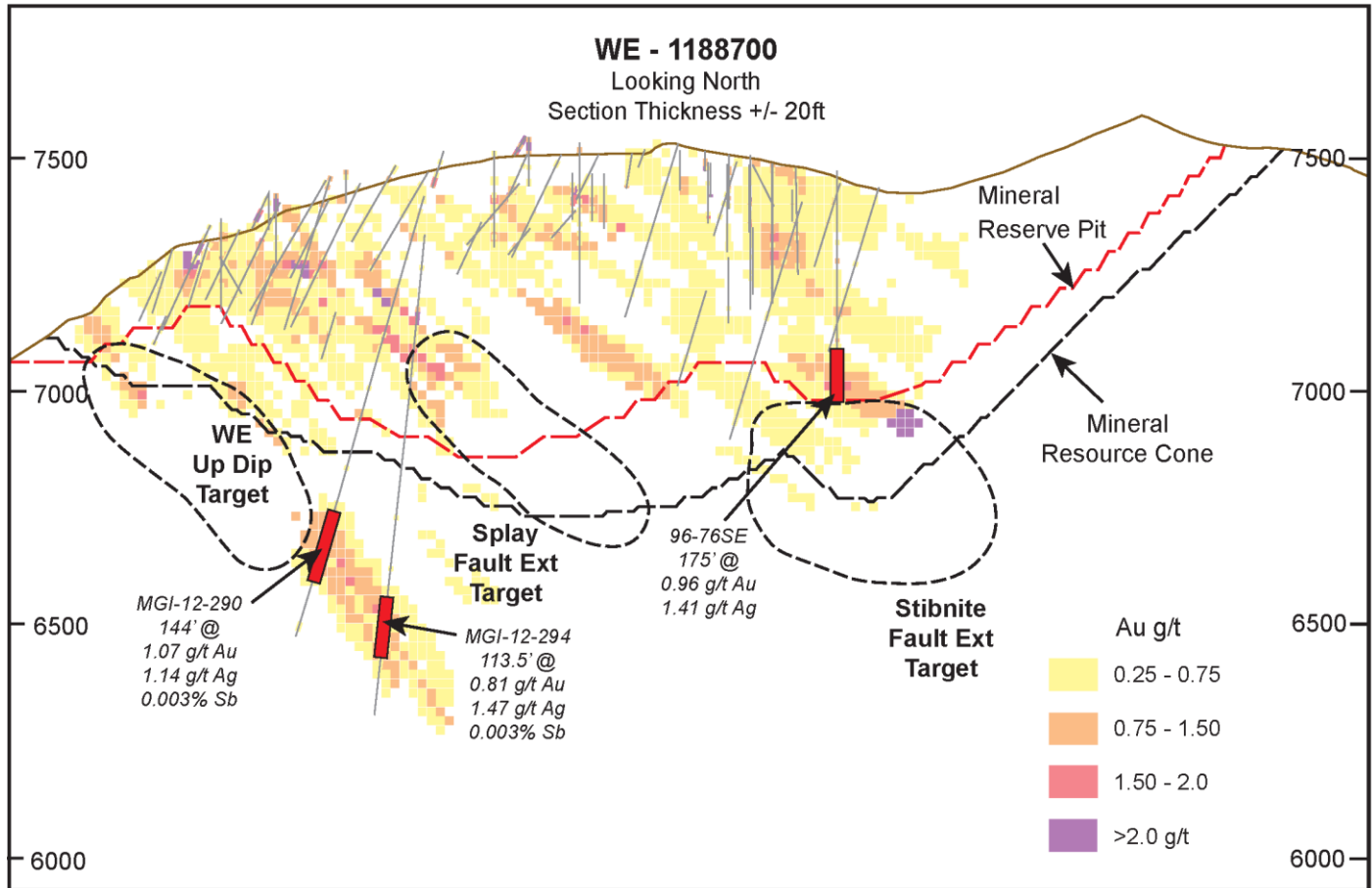
northeast-striking vein swarm that is steeply dipping to vertical. That vein swarm intersects the lower calc-silicate sequence directly beneath the resource pit. The Ag:Au ratios in drill intercepts are consistent with the presence of these vein systems, which tend to have higher ratios than those in mineralization from the main West End Deposit.

Figure 7-12: E-W Cross Section 1,190,100N through the Dead End Target



Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

Figure 7-13: E-W Cross Section 1,188,700N through the Splay and Stibnite North Targets

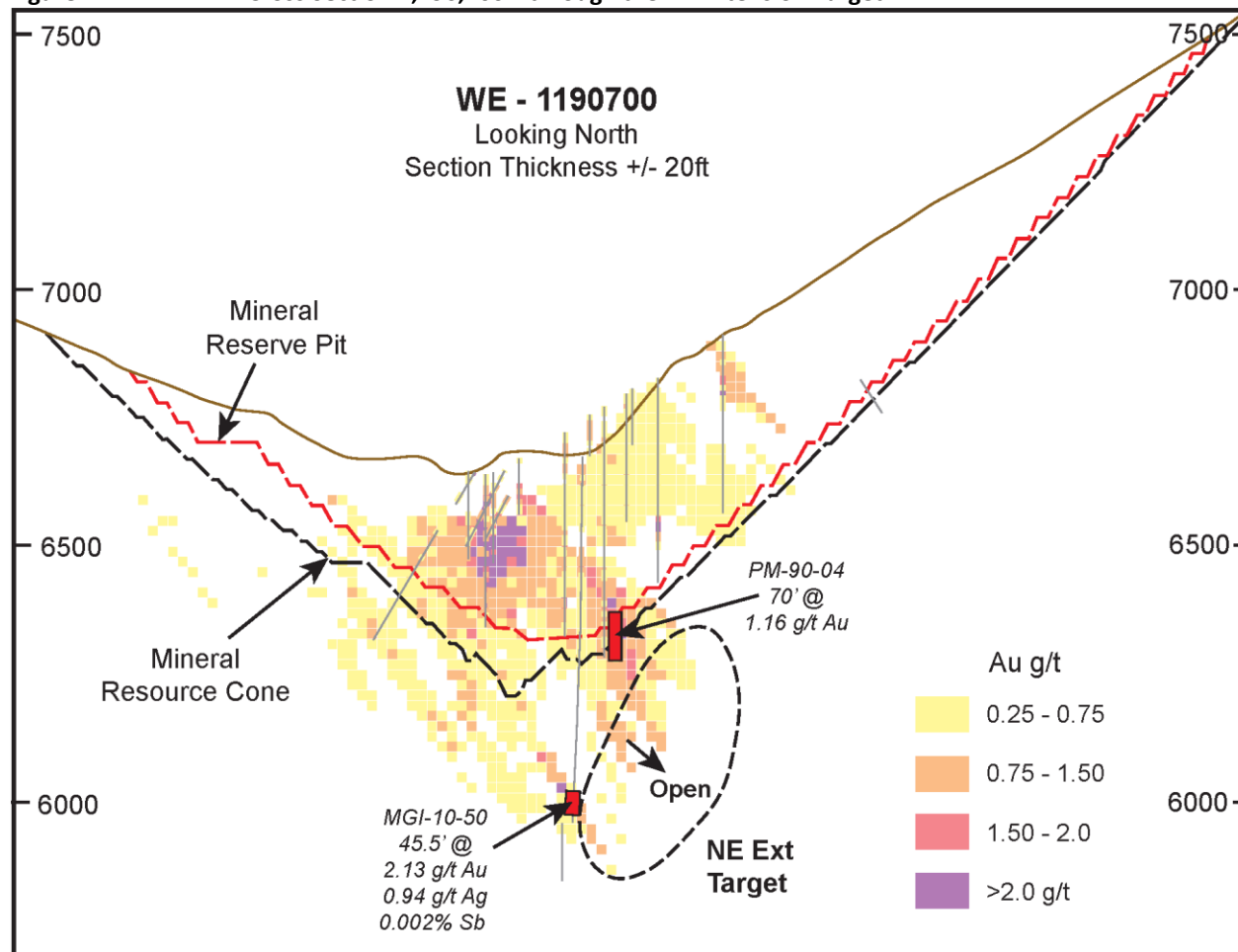


Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

The Exit Target is located northwest of the main West End Fault Zone and includes an extension of the fault to the east northeast. The area is identified by a strong surface soil and rock chip gold anomaly over an area of approximately 950 ft by 1,600 ft. Canadian Superior identified an apparently continuous zone of gold mineralization over 360 ft in outcrop within a distinctive sequence of magnetite schist and phyllite that averages 0.72 g/t gold in chip samples from road cuts (unpublished Canadian Superior maps and records).

The Exit target is adjacent to and northwest of NE Extension target (Figure 7-14) which is located within and along the extension of the fault northeast of the former West End Pit. A conceptual target composed of the Exit and NE Extension zones generally trends northwest-southeast within favorable stratigraphic units where they cut northeast and north-south structural features similar in style to mineralization in the adjacent West End Pit. The target is located beneath and beyond the boundaries of the former open pit.

Figure 7-14: E-W Cross Section 1,190,700N through the NE Extension Target



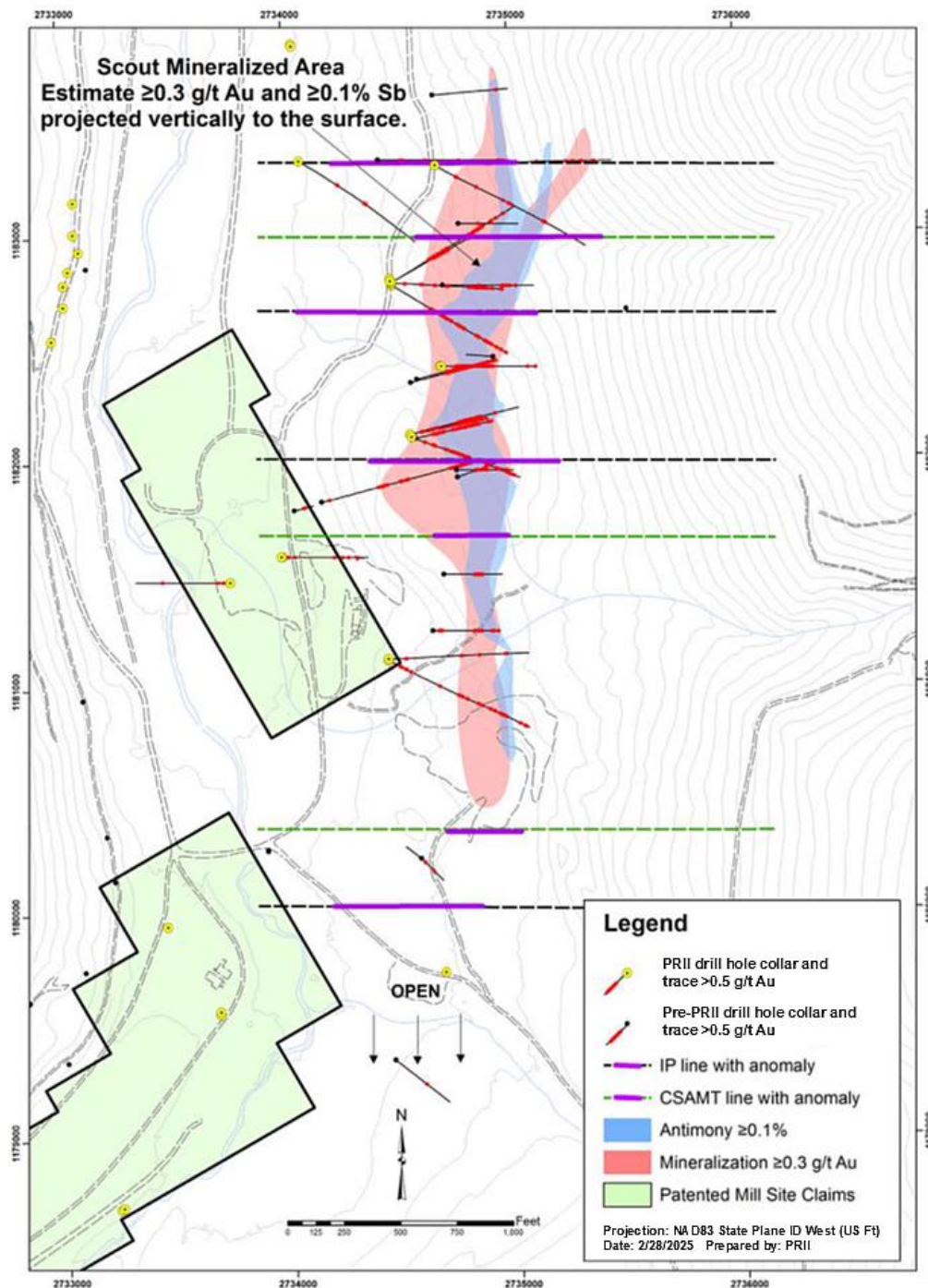
Note: Potential mineralization shown here may be partially included within the Conceptual Mineral Resource Cone as discussed in Section 11 of this TRS.

## 7.4 Potential Underground Mining Prospects

Several prospects and targets have been defined in the District that exhibit potential for discovery of deposits amenable to underground mining subject to the caveats for exploration prospects noted previously in this section. These prospects are located on the east side of the valley and are distinct from those discussed in connection with the MCFZ. The more significant prospects that have been identified are presented below and include Scout, Garnet, Upper Midnight, Doris K, and Fern.

Scout is a potentially underground-mineable Au Ag Sb exploration prospect discovered in the 1930s by Bradley interests and further evaluated during Strategic Minerals investigations in the 1940s and 1950s (Figure 7-15). Detailed exploration by other operators followed between early 1970s and mid-1990s and included IP, VLF electromagnetic surveys, mapping, drilling, and resource estimation. Pre-Perpetua Resources drilling includes 18 holes totaling 6,912 ft. Perpetua Resources work includes IP and CSAMT surveys, mapping, rock and stream sediment sampling, and completion of 28 drill holes totaling 15,859 ft.

Figure 7-15: Plan Map of the Scout Prospect

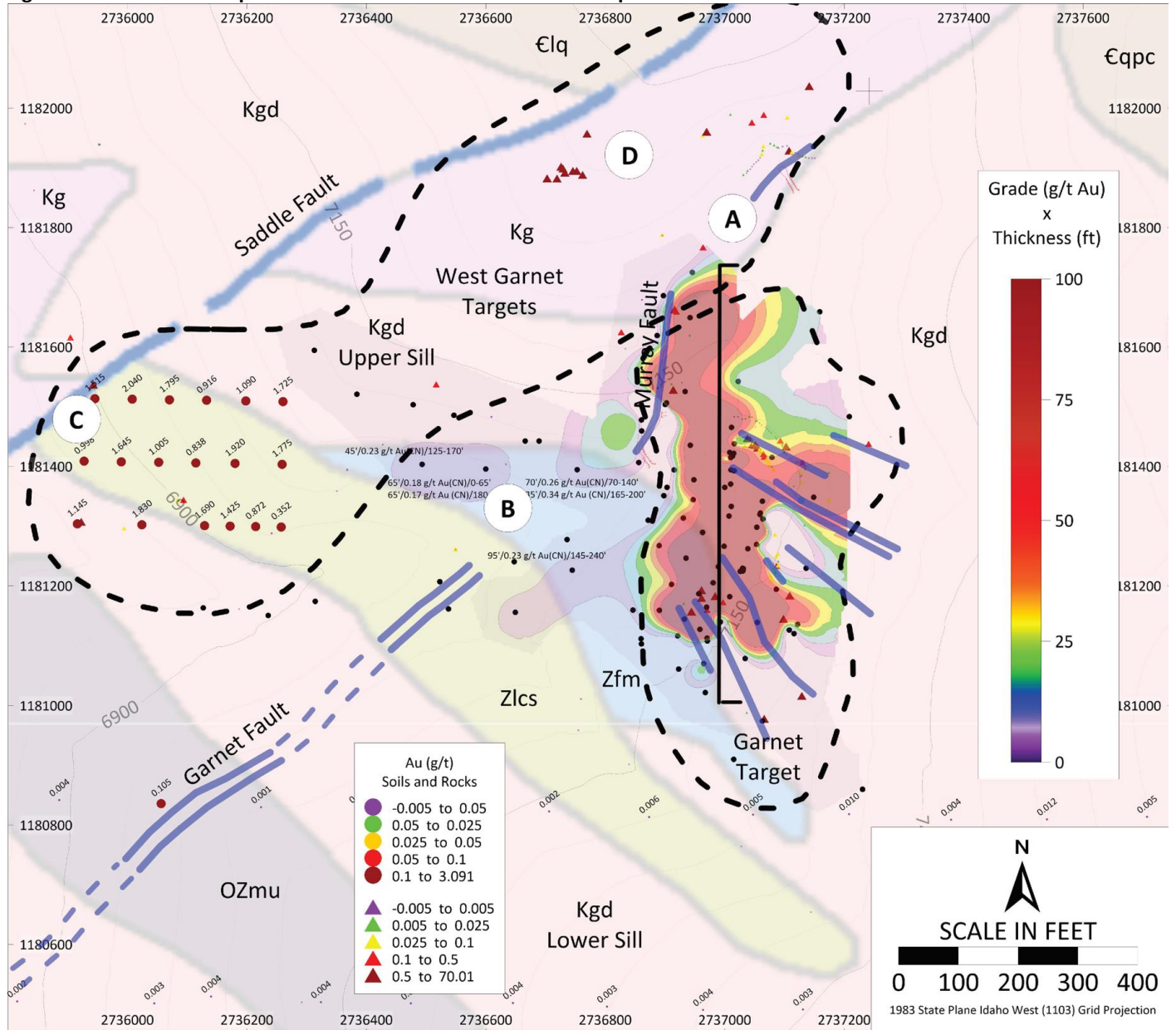


The Garnet prospect is the site of past underground exploration in the 1920s-30s and a later open pit in the 1990s. The prospect was known in the 1920s as the Murray Prospect when at least two, short underground adits were excavated on antimony-tungsten-gold occurrences (Cooper, 1951). In the 1940s the prospect was briefly examined by the Bradley

interests for antimony and tungsten, but there was minimal work and no reported development during that era. The former underground prospects located to the northwest of the Garnet Creek drainage were reported to have been reopened as dozer cuts in the 1960s and produced and shipped minor amounts of hand-cobbed antimony ore (<100 tons) by the Oberbillig interests from large stibnite veins exposed in the now collapsed and mined out Murray Prospect upper adit (Savage, 1963). The prospect is a potential underground exploration target, but there is a remote possibility of an open pit target as well. Steep slopes likely would impede economic development of an open pit of any significant size for mineralization identified to date due to the interpreted geometry which plunges into the hillside.

There are several targets in and around the former Garnet open pit (Figure 7-16). Mineralization is open down dip of previously mined mineralization hosted within the Fern marble unit (A on Figure 7-16). Much of the past drilling did not penetrate the lower calc-silicate or was not assayed due to sulfide content since the 1970s-1980s drilling was targeting cyanide-leachable oxide ores. Specifically, the intersection of the lower calc-silicate unit, a favorable host sequence elsewhere in the District, and the GCFZ is mostly untested and a promising target (B in Figure 7-16). Holes drilled to the south and west of the open pit were too shallow to have tested that intersection, as were holes to the north. A low resistivity, high chargeability feature at the projected depth and location of the interpreted mineralized body was identified in both an east-west 1976 El Paso frequency-domain EM line approximately 150 ft north of the pit and 2011 Perpetua Resources time-domain IP line, Crowley 1, approximately 450 ft north of the pit.

Figure 7-16: Plan Map of Grade x Thickness at the Garnet Prospect

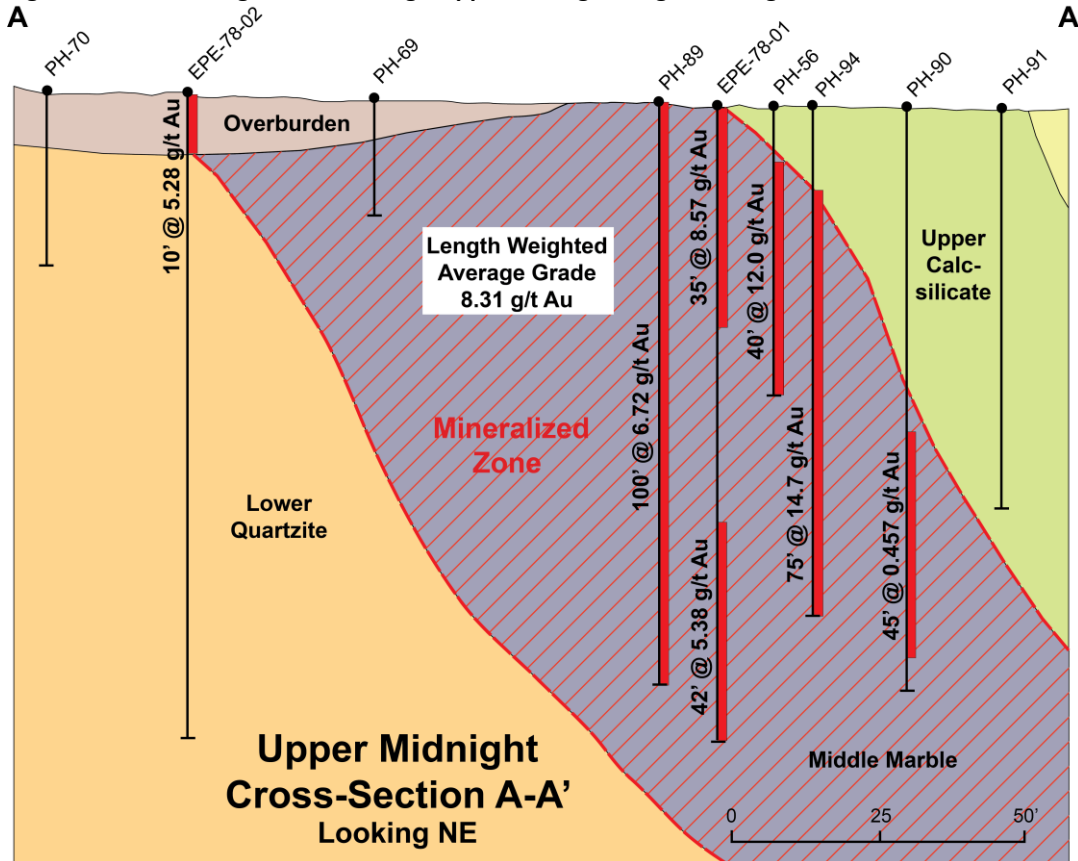


Note: Grade x thickness calculated using all data and includes mined out material within the former open pit. Data gridded and summed using inverse distance squared and a 25 ft x 25 ft grid and smoothed. Grades below lower detection limit given zero value and data includes cyanide and fire assay analyzed samples. Gridding did not utilize pit blast hole data. Geologic unit symbology same as on Figure 7-1.

The Upper Midnight prospect is located north-northeast and northeast of the Garnet Prospect. It was originally identified prior to World War II and briefly examined for the prospect's antimony potential by the Bradley interests in the 1950s. The prospect was re-discovered in the early 1970s when El Paso and Superior sampled and defined numerous large gold in soil and rock chip anomalies in the immediate area of the WWII era prospects. In 1976, sampling of a black carbonate outcrop at Upper Midnight returned high-grade gold assays (>40 g/t), which were followed up by

air track, core, and RC drilling that confirmed the presence of a small, poorly defined, but high-grade mineralized zone. Subsequent drilling campaigns included 2,349 ft in 28 shallow core, RC, and air track percussion holes but did not adequately test the down-dip extent or strike extensions of this zone, which appears to be approximately 60 ft thick (true width) with a length-weighted average gold grade within the mineralized zone of 8.33 g/t (Figure 7-17).

Figure 7-17: Long Section through Upper Midnight Target looking Northeast



The Doris K prospect has been known since at least the mid-1920s when it was known as the Doris K #3 prospect (Schrader and Ross, 1926). It was reported to be a high-grade gold-silver-antimony occurrence that was exposed in hand-dug cuts in the 1920s over a 15 ft by 100 ft area with much of the material reportedly averaging over 70% stibnite. Mineralization was described as trending parallel to stratigraphy (northwest striking) with an unmineralized quartzite hanging wall and a mineralized, vuggy, quartz-altered carbonate footwall. Savage (1963) reported that the Oberbillig interests processed some of the antimony-bearing material from this prospect at the United Mercury Mine Mill on Johnson Creek in 1963, but the amount and grade of material removed and processed is unknown. In the 1970s, both El Paso and Canadian Superior conducted soil and rock sampling in the area with one roadcut averaging 2.6 g/t gold over 25 ft within a 90-150-ft wide by 450-ft long roughly north-south breccia body.

High-grade gold occurrences in the Fern area have been known since 1903 (Bell, 1918) when prospectors examined the area during the Thunder Mountain gold rush. Placer mining for gold was attempted around the turn of the century but apparently was unsuccessful. Mercury exploration, development, and minor production (approximately 40 flasks) occurred intermittently from 1917 to the 1920s over a vertical distance of approximately 1085 ft (Larsen and Livingston, 1920; Schrader and Ross, 1926). In the 1940s, the USBM conducted mercury exploration, including extensive trenching (USBM, 1943a, 1943b). In the 1950s, additional trenching was completed under the DMEA program. In the early 1960s, additional sampling, trenching, and drilling of 5 holes totaling 1,503 ft were completed under an Office of Mineral Exploration (OME) contract.

## 7.5 Drilling

The Project area, including the three main deposits, has been drilled by numerous operators, totaling 825,964 ft in 2,864 drill holes, of which Perpetua Resources drilled 778 holes totaling over 376,389 ft since 2009 (Table 7-1). Methods have varied by operator, time period, and deposit across the District. Methods have included air track, auger, churn, both surface and underground core, RC, rotary, sonic, percussion holes, and cone penetration tests. Perpetua Resources employed a variety of drilling methods including core, reverse circulation (RC), auger, and sonic throughout the District, but with the primary method being core. This section presents a discussion on pre-Perpetua Resources drilling followed by a discussion of Perpetua Resources drilling.

**Table 7-1: Pre-Perpetua Resources and Perpetua Resources Drilling by Mineralized Area**

Mineralized Area	Pre-Perpetua Drilling		Perpetua Drilling		Total Drilling	
	# Holes	Feet	# Holes	Feet	# Holes	Feet
Yellow Pine	770	148,545	287	170,150	1,057	318,695
Hangar Flats	117	30,631	183	127,463	300	158,094
West End	889	208,039	61	40,933	950	248,972
Historical Tailings	26	1,554	65	5,945	91	7,499
Scout	18	6,912	28	15,859	46	22,771
Other	266	53,624	154	16,039	420	69,663
<b>Totals</b>	<b>2,086</b>	<b>449,305</b>	<b>778</b>	<b>376,389</b>	<b>2,864</b>	<b>825,694</b>

Notes: 1. Sums may not all total due to rounding.

Pre-Perpetua Resources drilling was completed in conjunction with several surface and underground mining operations. Perpetua Resources drilling has been conducted for the purposes of exploration, mineral resource definition, metallurgy, and geotechnical engineering. The location of each mineralized area, along with their associated drill hole collars for both Perpetua Resources and pre-Perpetua Resources drilling, can be found on Figure 7-18.

The Yellow Pine mineralized area has been drilled by 10 operators over the past 80 years and the total Yellow Pine database comprises approximately 318,695 ft of drilling in 1,057 holes. Drilling employed a variety of methods including core, RC, rotary, and air track. The pre-Perpetua Resources drilling was primarily performed in conjunction with surface and underground mining operations.

The Hangar Flats mineralized area has been drilled by six operators over the past 90 years totaling approximately 158,094 ft of drilling in 300 holes. Drilling employed a variety of methods including surface and underground core, RC, rotary, and sonic. Much of the pre-Perpetua Resources drilling was performed in conjunction with underground mining operations.

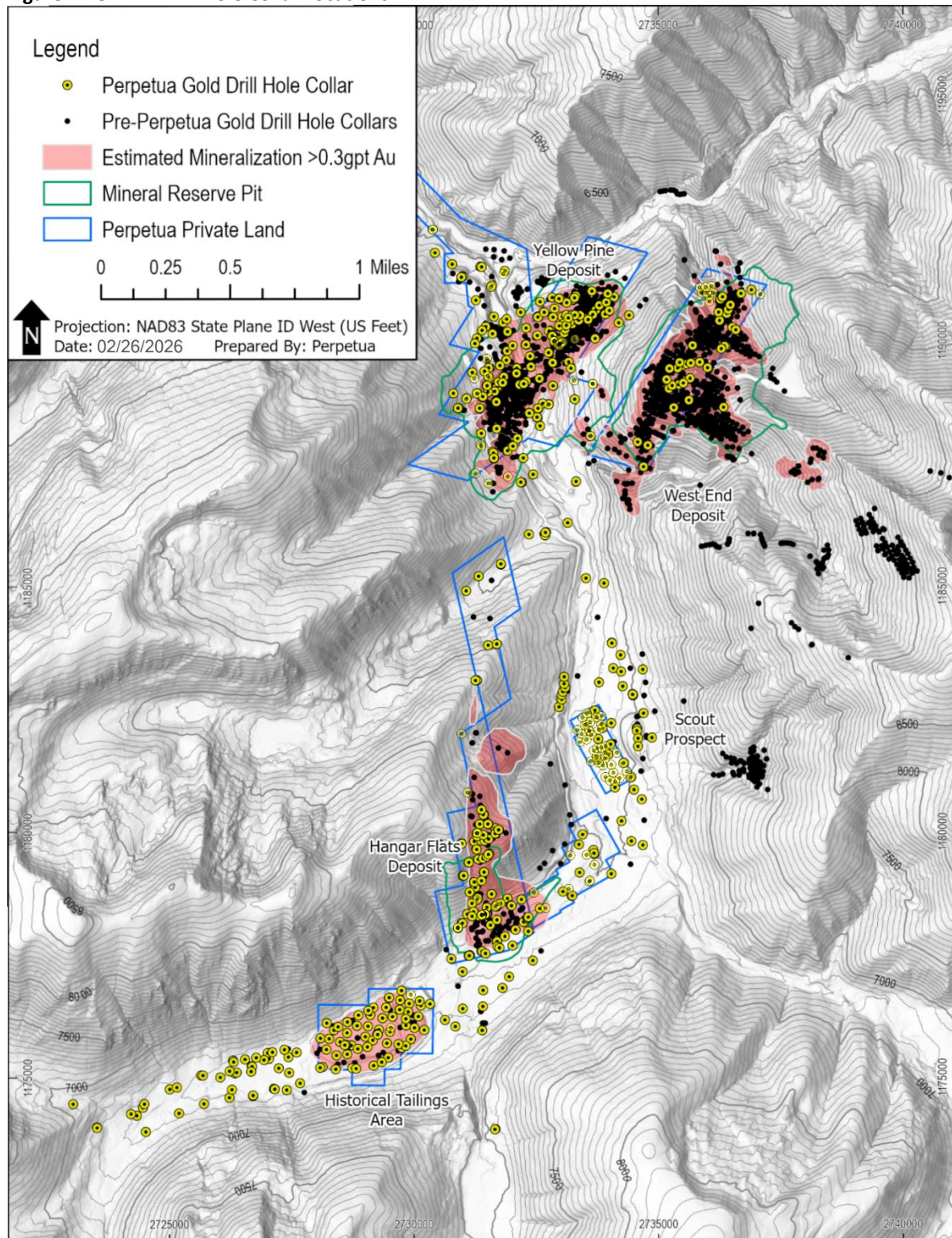
The West End mineralized area has been drilled by six operators over the past 80 years and the total West End database comprises approximately 248,972 ft of drilling in 950 holes. Drilling employed a variety of methods including core, RC, rotary, and air track. The pre-Perpetua Resources drilling was primarily performed in conjunction with surface mining operations.

The Historical Tailings area has been drilled by 2 operators over the past 25 years and the total Historical Tailings database comprises approximately 7,499 ft of drilling in 91 holes. Drilling employed a variety of methods including RC, sonic, and auger. Pre-Perpetua Resources drilling was conducted for well construction.

The Scout prospect has been drilled by 5 operators over the past 65 years and the total Scout database comprises approximately 22,771 ft of drilling in 46 holes. Drilling employed a variety of methods including core, RC, and air track. All drilling at Scout has been conducted as exploration drilling or geotechnical investigations.

Project-wide drill holes in the mineralized areas were drilled on a variety of orientations to intersect north-, northeast, and northwest-striking structural features which control mineralization. Less than one-third of exploration and mineral resource development drillholes were drilled vertically.

Figure 7-18: Drill Hole Collar Locations



### 7.5.1 Pre-Perpetua Resources Drilling

The extent and data quality of pre-Perpetua Resources drilling varies significantly by drilling campaign and operator. Table 7-2 shows the pre-Perpetua Resources drilling by year and type.

**Table 7-2: Pre-Perpetua Resources Drill Holes**

Year	Operator	Type	Holes	Feet
1929	Bradley	Core	10	5,586
1939	USBM	Core	6	1,331
1940	Bradley	Core	286	60,887
	USBM	Core	46	14,758
1945	Bradley	Churn	1	101
1946	Bradley	Core	18	3,661
1947	Bradley	Core	6	1,621
1948	Bradley	Core	8	3,169
1949	Bradley	Core	2	870
1950	Bradley	Core	3	825
		Churn	9	1,386
1951	Bradley	Core	15	4,761
		Churn	6	272
1952	Bradley	Core	1	371
	USBM	Core	4	1,141
1953	Bradley	Core	8	3,874
	USBM	Core	8	2,528
1954	Bradley	Core	5	2,235
		Churn	10	894
	USBM	Core	11	1,752
1955	Bradley	Core	4	1,448
	USBM	Core	4	357
1973	Ranchers	Core	6	820
	Twin River	Core	5	1,396
1974	El Paso	Core	10	2,509
		Rotary	1	200
1975	El Paso	Core	20	4,803
	Superior	Core	2	607

Year	Operator	Type	Holes	Feet
1976	El Paso	Core	11	2,526
		RC	24	2,198
	Superior	Core	17	6,661
		RC	12	1,080
1977	Superior	Air Track	62	5,140
		Core	24	6,618
1978	El Paso	RC	7	741
	Superior	Air Track	127	11,129
		RC	19	2,548
		Rotary	66	11,635
1981	El Paso	Air Track	35	1,660
		RC	8	2,000
	Superior	Rotary	9	1,750
1982	Ranchers	Core	63	12,194
	Superior	Air Track	34	1,543
1983	Ranchers	Rotary	26	5,580
	Superior	RC	44	10,921
		Rotary	29	3,422
1984	Ranchers	Core	9	1,193
		RC	55	7,845
	Superior	RC	15	4,433
1986	Pioneer	Air Track	4	275
		Percussion	5	845
		RC	40	7,865
		Rotary	7	1,808
1987	Hecla	RC	29	1,080
	Pioneer	Air Track	8	470
		RC	73	16,110
		Rotary	7	1,100
1988	Hecla	Auger	5	134
		RC	68	14,519
		Test Pit	15	158
	Pioneer	RC	49	20,560
1989	Hecla	Core	2	593
		RC	38	5,050
	Pioneer	RC	79	32,930

Year	Operator	Type	Holes	Feet
1990	Pioneer	RC	46	15,135
1991	Pioneer	RC	32	11,610
	SMI	RC	71	2,167
1992	Barrick	Core	14	11,427
		RC	3	1,655
	Pioneer	RC	57	17,175
1994	SMI	Auger	12	769
1995	SMI	Core	4	668
		RC	24	8,160
1996	SMI	Core	3	1,136
		RC	112	32,448
1997	SMI	RC	68	16,480
<b>Totals</b>			<b>2,086</b>	<b>449,304</b>

The availability of pre-Perpetua Resources drilling data has varied by operator, time period, and deposit. Perpetua Resources has reviewed and incorporated all pertinent and available data into its databases. Incorporated data include geologic logs, drilling recovery, assay values, surface and down-hole surveys, and relevant Quality Assurance/Quality Control (QA/QC) measures.

Geologic logging associated with pre-Perpetua Resources drilling varied in format between past operators. General logging procedures utilized paper logs including both visual logs and written observations. Characteristics recorded included core, cuttings and sludge recovery, lithology, alteration, pertinent mineralogy, sulfide percentage, oxide percentage/intensity, structures, and assay values such as gold, silver, antimony, and tungsten.

Drilling recovery varied by era of drilling. Early drilling by Bradley and USBM had poor recovery due to the drilling technology of the time. Core recovery from later operators, however, was much better with Pioneer, Hecla, and Superior showing moderate recovery (averages in the 60-70% range), El Paso and Ranchers showing better recovery (averages in the 70-80% range), and Barrick exceeding 90% recovery.

Data for QA/QC programs were available from some pre-Perpetua Resources operators and are discussed in further detail within Section 11 of this Report and data applicability to gold resources is discussed in Section 11 of this Report.

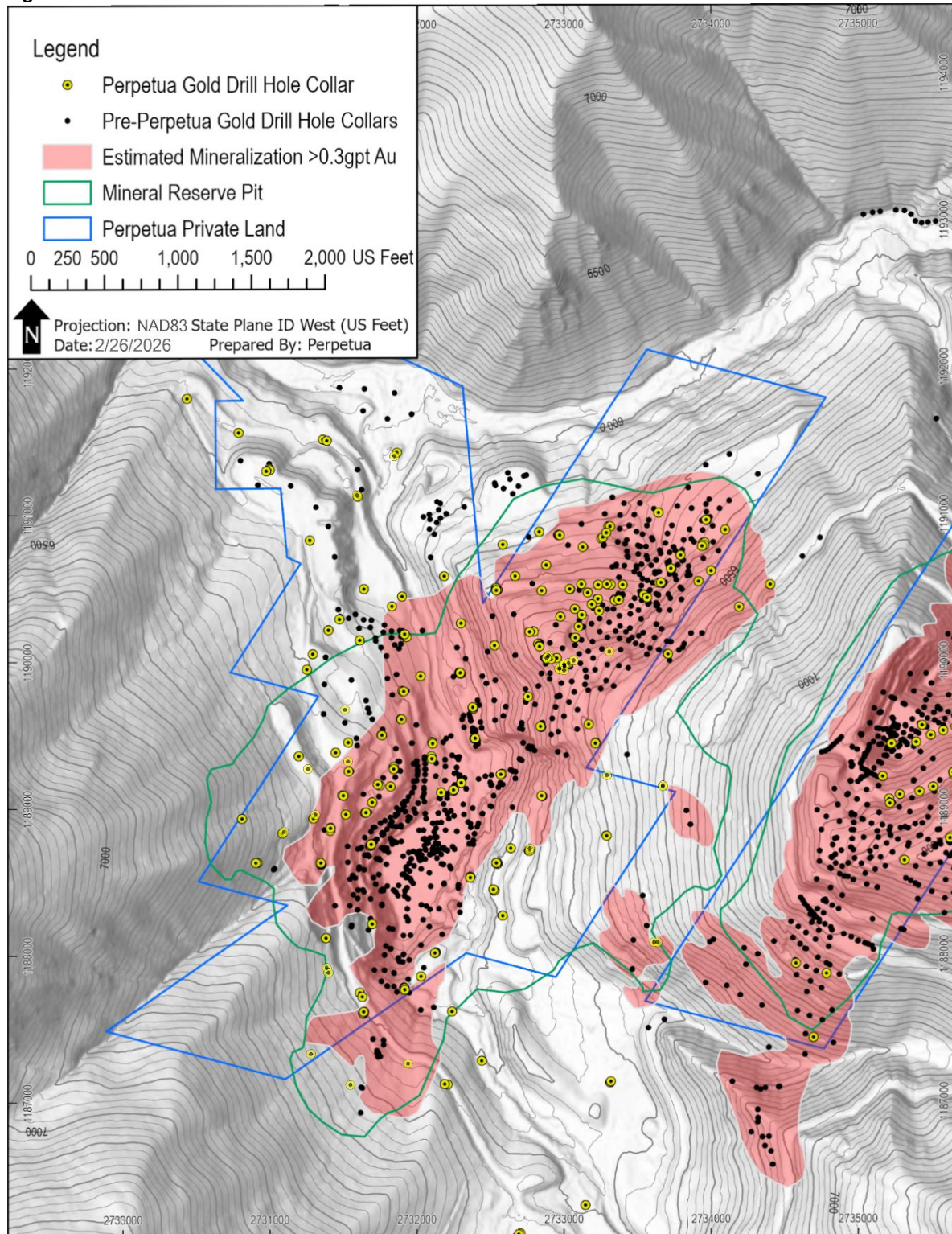
#### 7.5.1.1 Yellow Pine

Pre-Perpetua Resources drilling within the Yellow Pine mineralized area was conducted with multiple methods by a number of different companies (see Figure 7-19). The historical Bradley and USBM drilling (conducted prior to 1955) used conventional core drills of the time to drill AX, EX and BX sized core. The Hecla, Superior, Ranchers and Barrick drilling used wire line core drills with core sizes similar to Perpetua Resources, including PQ, HQ, and NQ. The RC drilling was conducted with buggy, track, and truck mounted drills under dry and wet drilling conditions. The RC drill typically used a down hole hammer with a 5.5 inch bit. Samples were collected by both a center return bit and an above-hammer interchange, and then traveled up the center of the drill string so that minimal contamination could occur. Typically,

only a short section of casing was required. According to existing drill logs, operators began plugging their drill holes in the mid-1980s, prior to that time there was no hole-abandonment remediation required for previous drilling.

The operation was an active mine during parts of the drilling and the drill logs, plan maps, and sections illustrate the surveying standards that existed at the time of exploration, development, and mining activity. Historical files do not always describe in detail the methods used for locating holes, however, many survey records from pre-Perpetua Resources drilling do exist, are well preserved, and were utilized to construct the drill hole database. In addition, a considerable number of survey control points, old adits and shafts, and pre-Perpetua Resources drill hole collars were located by Perpetua Resources and included in its surveys, providing increased confidence in the location of pre-Perpetua Resources data including drill holes.

Figure 7-19: Yellow Pine Drill Hole Collar Locations

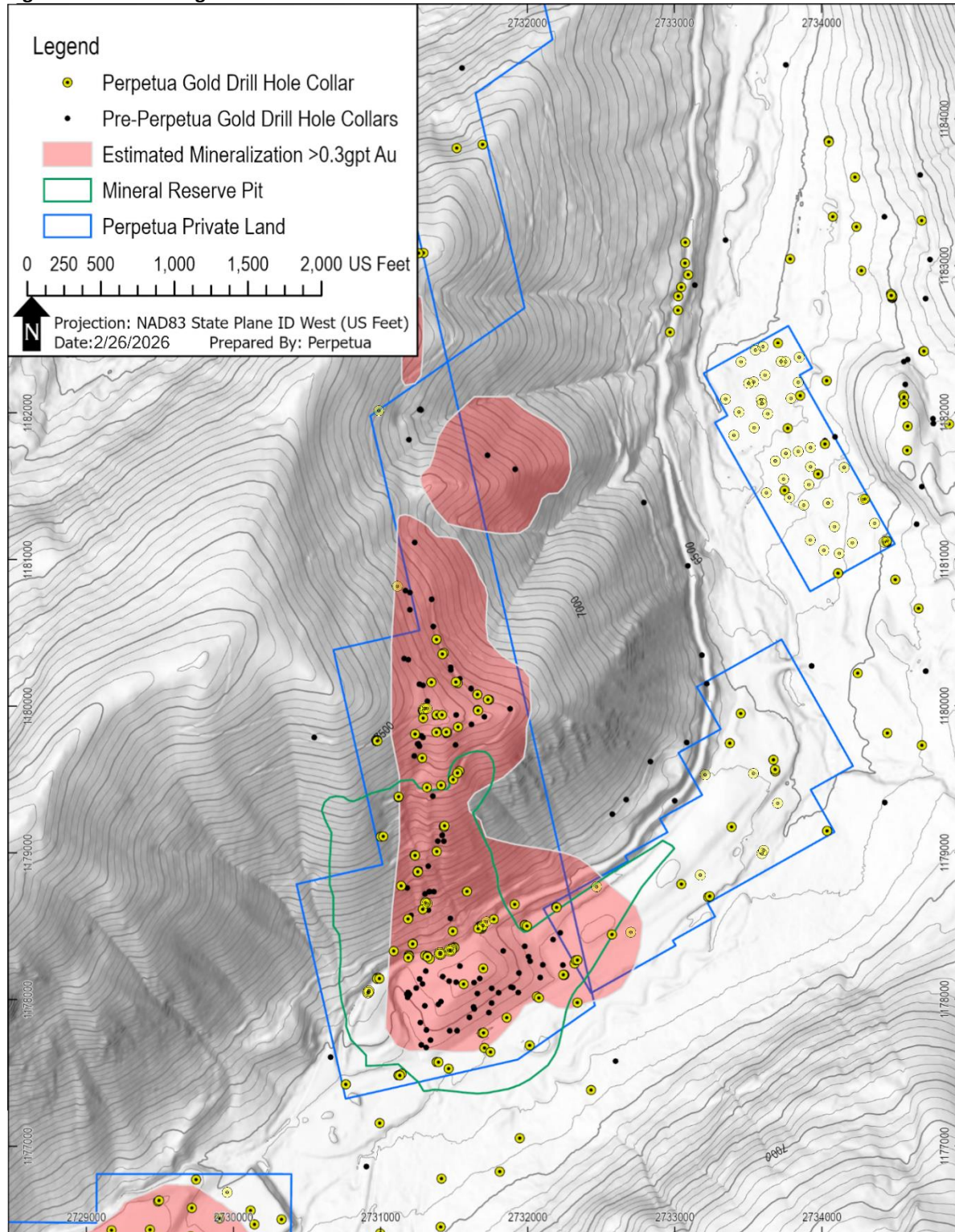


### 7.5.1.2 Hangar Flats

Pre-Perpetua Resources drilling within the Hangar Flats mineralized area was conducted with multiple methods by a number of different companies (see Figure 7-20). Most pre-Perpetua Resources drilling was conducted prior to 1960. Known drill core sizes utilized by pre-Perpetua Resources operators included AX, EX, BX and NX and were reduced as drilling conditions required. Typically, only a short section of casing was required. According to existing drill logs, operators began plugging their drill holes in the mid 1980's, prior to that time there was no hole-abandonment remediation required.

The drill logs, plan maps, and sections illustrate the surveying standards that existed at the time of exploration, development, and mining activity. Many survey records from previous drilling and underground development work by Bradley, as well as later campaigns under contract to the Defense Minerals Exploration Administration (DMEA) do exist, are well preserved, and were utilized to digitize the historical underground development workings and catalog drill data. Several of the older 1940's drill hole collars are still preserved and were surveyed and found to be within 3-6 ft of their expected locations, however, most collars were typically not preserved. Most of the later generation of drill holes, completed by Hecla in the area during the late 1980's, were located and surveyed in 2009 and 2010 and were found to be accurate to within 10-20 in.

Figure 7-20: Hangar Flats Drill Hole Collar Locations

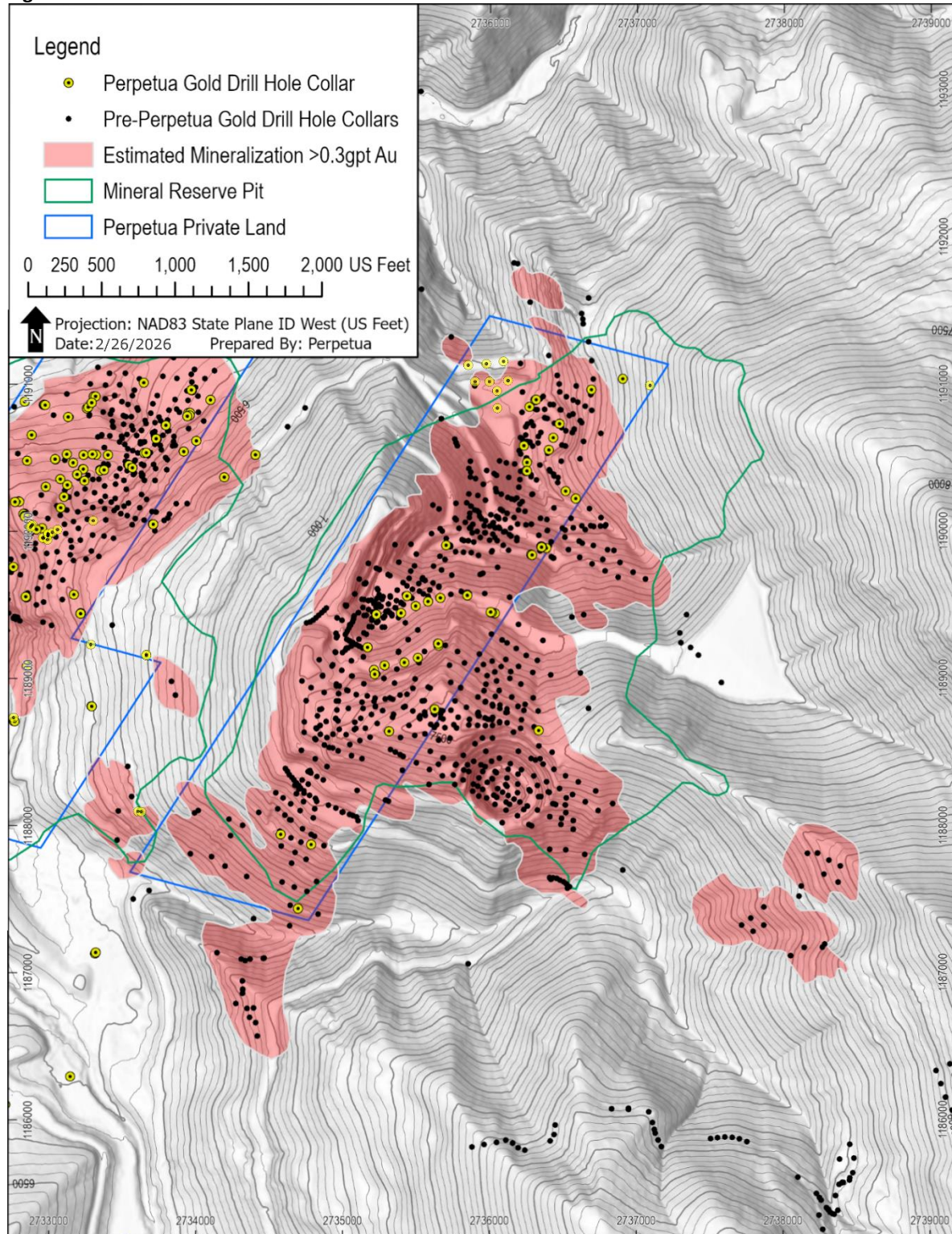


### 7.5.1.3 West End

Pre-Perpetua Resources drilling within the West End mineralized area was conducted with multiple methods by many different companies, all of which were reputable industry operators or contractors (Figure 7-21). Most of the drilling was conducted in the 1970's and 1980's. Core drilling was much less common than RC and Air Track drilling, consisting of about 10% of drillholes mostly completed in the 1970's. The RC drilling was conducted with buggy, track, or truck mounted drills under dry and wet drilling conditions. The RC drills typically used a down hole hammer with a 5.5-inch bit. Samples were collected by both a center return bit and an above-hammer interchange, and then traveled up the center of the drill string so that minimal contamination could occur. Typically, the overburden in the mineralized area was very thin, and only a short section of casing was required. According to existing drill logs, operators began plugging their drill holes in the mid 1980's, prior to that time there was no hole-abandonment remediation required for previous drilling.

Historically, a drill location was first laid out by the mine surveyors with a specified easting and northing, and then a drill pad was constructed. After the pad was completed, the collar point was re-established. Original surveyor's records for most of the pre-Perpetua Resources drill holes are well preserved, and surveyed coordinates were verified against logs, as well as the dataset used in the mineral resource models. Pre-Perpetua Resources drill hole collars were typically not preserved due to post-drilling mining operations in the area, but some collars have been located by Perpetua Resources in its surveys and found to be accurate to within 3-15 ft. with some exceptions.

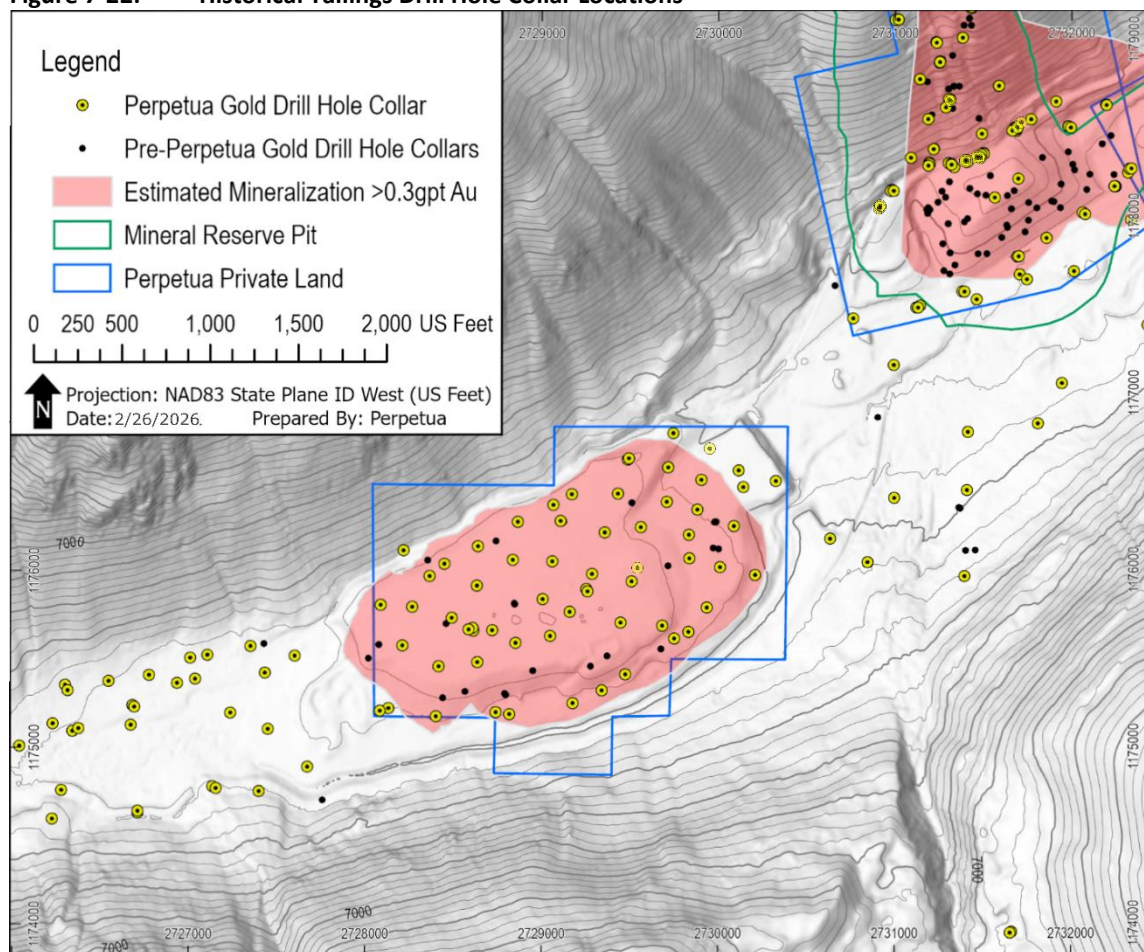
Figure 7-21: West End Drill Hole Collar Locations



### 7.5.1.4 Historical Tailings

Pre-Perpetua Resources drilling within the Historical Tailings area was conducted primarily for water quality monitoring purposes (Figure 7-22). Stibnite Mines Inc. is the only known pre-Perpetua Resources operator to have drilled in this area and they used both RC (in 1996) and auger (in 1994) drilling techniques.

**Figure 7-22: Historical Tailings Drill Hole Collar Locations**



### 7.5.1.5 Scout

Pre-Perpetua Resources drilling in the Scout area was conducted with multiple methods by many different companies. Bradley generally drilled AX, EX and BX core in the 1940's and 50's while Pioneer and El Paso drilled BQ, BX, NX, and HQ in the 1990's and 1970's respectively. According to existing drill logs the overburden thickness in this area is significant and, in some instances, operators were forced to abandon drill holes due to collapsing conditions. There was no hole-abandonment remediation required at the time of the previous drilling.

Historical files do not always describe in detail the methods used for locating holes, but conventional survey methods tied to existing ground control were typically utilized. However, the drill logs, plan maps, and sections illustrate the standards that existed at the time of exploration. Some of the pre-Perpetua Resources hole collars are still preserved and were surveyed and found to be within 3-6 ft of their expected locations. Most collars were not preserved.

#### 7.5.1.6 Pre-Perpetua Resources Coordinates and Grid Conversions

Three common local mine grids were used for surveying hole locations by pre-Perpetua Resources operators: the Bradley, Ranchers, and Hecla grids. Some other grids were occasionally used, but they were able to be converted into one of the three main grid systems. Each of the three grid systems had a known conversion into Idaho State Plane West with NAD27 Datum.

Perpetua Resources has used two separate methods for grid conversion from historical coordinate systems. From the Project inception until 2013, coordinates were converted by first converting historical coordinates into the Hecla grid, then into Idaho State Plane (NAD27). Standard reprojection techniques with GIS software were used. In 2013, Perpetua Resources contracted Russell Surveying, Inc., a licensed and registered professional surveyor in Idaho to create conversions from various grid systems directly into NAD83 UTM coordinates. These conversions provided the basis for GIS coordinate systems in the historic grids that can be projected into any modern coordinate system and vice-versa accurately. These GIS coordinate systems provide the current conversion method for pre-Perpetua Resources grid coordinates to 1983 Idaho State Plane (feet).

#### 7.5.2 Perpetua Resources Exploration Drilling

Perpetua Resources drilling is detailed in Table 7-3. Core and RC drilling was primarily conducted by Perpetua Resources for mineral resource definition and geotechnical data collection. Air lift and sonic drilling were conducted for monitoring wells and bedrock depth determination. Auger drilling was conducted for geotechnical investigation of unconsolidated material and resource definition of historical tailings. Cone penetrometer tests were performed for geotechnical investigation of unconsolidated materials.

**Table 7-3: Drilling by Area Completed by Perpetua Resources**

Hole Type	Year	# Holes	Feet
<b>Yellow Pine</b>			
Air Lift	2012-2018	3	414
Auger	2015-2026	10	923
Core	2011-2026	208	138,346
RC	2011-2024	56	29,317
Sonic	2011-2012	10	1,150
<b>Totals</b>		<b>287</b>	<b>170,150</b>
<b>West End</b>			
Air Lift	2012-2013	3	962
Core	2010-2025	35	29,408

Hole Type	Year	# Holes	Feet
RC	2011-2012	15	9,310
Sonic	2024-2025	8	1,253
<b>Totals</b>		<b>61</b>	<b>40,933</b>
<b>Hangar Flats</b>			
Air Lift	2012	6	948
Cone-Penetrometer Test (CPT)	2017	5	5
Core	2009-2025	130	98,105
RC	2012-2025	36	37,105
Sonic	2011-2012	6	1,390
<b>Totals</b>		<b>183</b>	<b>127,463</b>
<b>Historical Tailings</b>			
Air Lift	2012	1	60
Auger	2013-2017	52	4,596
CPT	2017	2	2
Sonic	2011-2017	8	1,067
RC	2019-2025	2	220
<b>Totals</b>		<b>65</b>	<b>5945</b>
<b>Scout</b>			
Core	2012-2013	16	11,319
RC	2011-2012	5	4,310
Sonic	2011	7	230
<b>Totals</b>		<b>28</b>	<b>15,859</b>
<b>Non-Resource Areas (e.g., Planned Infrastructure Sites)</b>			
Air Lift	2012	6	756
Auger	2013-2018	106	5,183
Core	2010-2017	14	7,776
CPT	2017	7	7
RC	2012	9	1,481
Sonic	2012	16	992
<b>Totals</b>		<b>154</b>	<b>16,039</b>

Notes: 1. Not all totals may sum due to rounding.

At Yellow Pine, drilling was conducted in a wide range of orientations with approximately 80-160 ft spacing within the deposit. Drillholes are typically oriented to the southeast, south or northwest and inclined steep to moderately. This orientation provides an oblique angle of intersection between the predominant orientation of mineralization and the drill hole.

At Hangar Flats, drilling was conducted in a wide range of orientations with approximately 100-210 ft spacing. The holes typically bear to the south through west and are moderately inclined on average. The drilling that is oriented to the south and southeast intercepts the northeast trending mineralization at a preferable orientation near true thickness. The drilling oriented approximately easterly that is targeting the subvertical north-south trending mineralization commonly intercepts the mineralization at an oblique angle.

At West End, most drill holes are arranged in parallel at 65-100 ft spacing on section lines and inclined steeply to the northwest along parallel sections 100 ft apart. The mineralization is interpreted to follow two main orientations controlled by both the fault planes and stratigraphy, of which the drill holes intercept at a variety of angles.

In the Historical Tailings, drilling has defined a flat-lying zone of fine-grained mine tailings of potentially economic grade. Drilling was completed with an auger rig using vertical holes with approximately 230 ft spacing which crosscut the tailings perpendicular to the body. Intercepts are considered nearly true thickness.

At Scout, drilling is widely spaced (approximately 275-400 ft) and is oriented to the east to drill across the main mineralized zone to obtain true thickness.

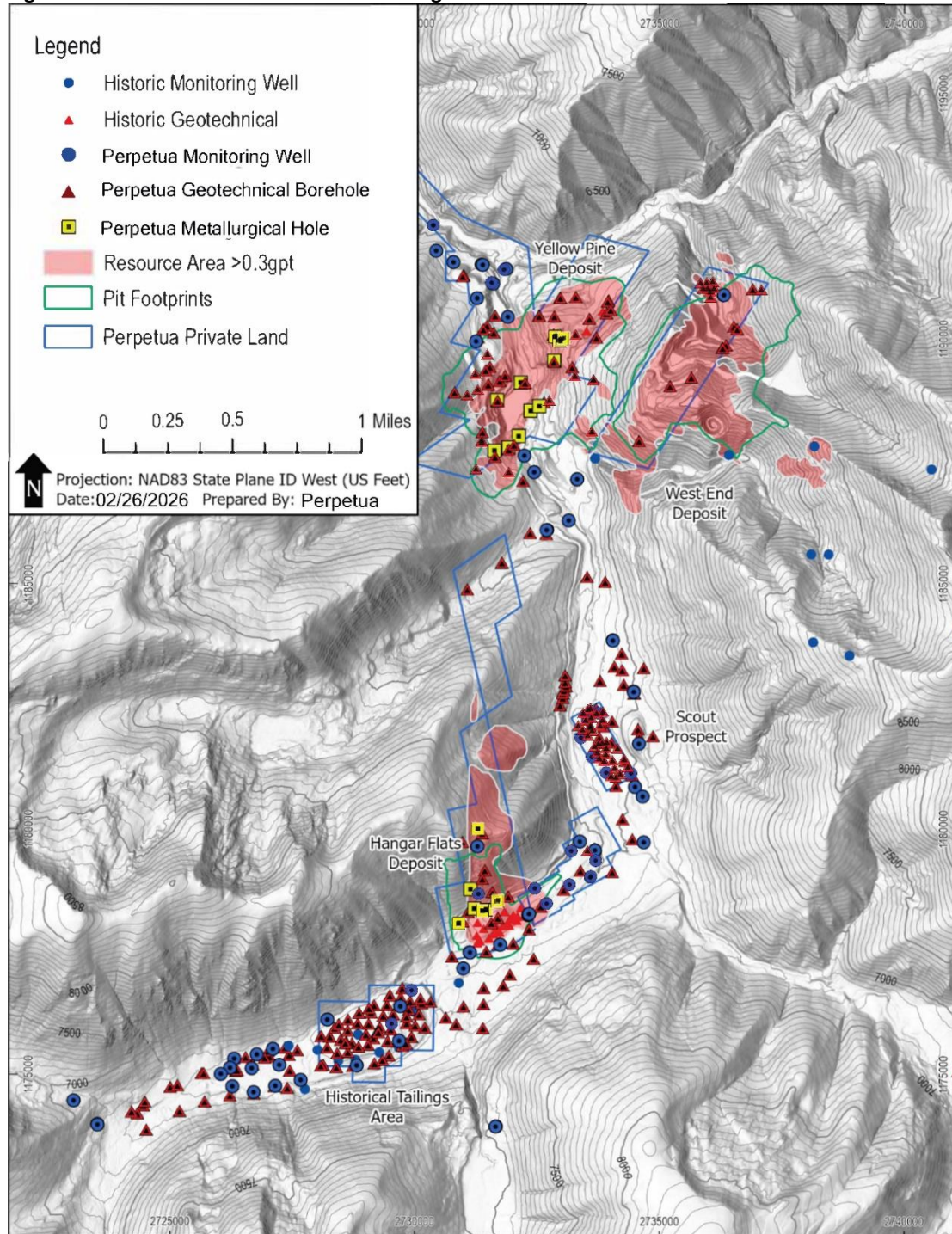
### 7.5.3 Site Characterization Drilling

Numerous drilling campaigns have been conducted on the site for purposes other than resource exploration and definition. These programs included monitoring well installation, geotechnical investigations such as infrastructure site evaluation, and environmental monitoring (Figure 7-23). Several of the previous operators conducted geotechnical and hydrological drilling for various purposes and many of their records still exist. The existing geotechnical data has been used by Perpetua Resources for initial planning purposes and several of the previous wells are still being utilized for water supply and monitoring purposes.

Seventy-two core drillholes were drilled with tooling to collect oriented structural data. Core in split tubes was logged for geotechnical purposes by a geologist at the rig or in the core shack. These drill holes were also utilized for resource estimation and geologic modeling. Numerous non-resource holes were drilled for geotechnical analysis in soils for environmental or infrastructure site planning purposes. These drill holes included auger, sonic, core, and cone penetration test methods. Some of these holes were usable in resource estimation and geologic modeling but most were not drilled within resource areas. For example, holes around the Historical Tailings area generate data for site condition evaluation beneath the potential tailings storage facility. Other areas with drilling for site condition investigation include the potential mine camp site, the potential mill site, the potential development rock stockpile sites, and the potential diversion tunnel site. Between 2024-2025, an additional sixty geotechnical boreholes were completed for pit stability analysis, foundation investigations, planned road and bridge abutment evaluations and other ancillary purposes.

Some historic drillholes for purposes such as geotechnical investigation and water monitoring have surviving records. The current drilling database contains 25 pre-Perpetua Resources water monitoring wells which were drilled by SMI in the mid-90's, generally in the area currently known as Historic Tailings. Sixteen auger drillholes were commissioned in 1988 by Hecla for geotechnical investigation purposes, but not water monitoring, on the area currently known as the Hecla Heap. Hecla also drilled 2 geotechnical core holes at Yellow Pine in 1989 which have surviving geotechnical records.

Figure 7-23: Site Characterization Drilling



#### 7.5.4 Metallurgical Drilling

Perpetua Resources drilled 15 core holes in PQ core size to provide metallurgical sampling material. Quartered core from these holes was assayed for use in mineral resource estimation, typically half-core was submitted or retained for metallurgical work, and the remaining quarter-core was archived in the Perpetua Resources core storage facilities.

Additionally, core samples were taken from 302 other drill holes to be used for metallurgical testing. These holes were generally drilled with HQ core (except the Historical Tailings, which were drilled via hammer-sampler auger) and were selected to generate representative samples for metallurgical programs such as variability testing, flotation cell testing, and pilot plant testing. A total of 30 PQ and HQ core holes were drilled between 2023-2025 for the collection of metallurgical samples in support of the Department of Defense Ordnance Technology Consortium (DOTC) initiatives. Sites where borehole samples for metallurgical testing were completed are provided in Figure 7-23.

### 7.6 Drilling Data Collection

#### 7.6.1 Geologic Logging

Geologic logging performed by Perpetua Resources utilized paper log sheets in 2009-2010 and digital logging methods from 2011-present. In 2009 and 2010, geologic logging on paper was completed onsite after core was received from the drillers. Logs included both visual and written observations recording lithology, alteration, pertinent mineralogy, sulfide percentage, oxide intensity, and structures. These paper logs were digitally captured after the 2009 and 2010 field seasons.

In 2011-2017, preliminary core logging was completed on site and detailed logging was completed at the core logging facilities in Valley County. Preliminary geological logging performed at Stibnite after core was received from drillers identified general geology and alteration for hole-tracking and daily reporting purposes. Subsequent detailed geologic logging was conducted using Microsoft Access digital logging forms. Pertinent geologic observations were digitally recorded including recovery, rock quality, lithology, alteration, mineralization, and structures. The Microsoft Access form was also used to record sample intervals and basic header information including azimuth, inclination, survey coordinates, logging geologist, drilling contractor, etc. Once logging was completed for a hole, the completed log was added to Perpetua Resources' Microsoft Access database after data verification. All logging was completed on-site beginning in 2017 and is located onsite at present.

Reverse circulation chip logging in 2011 and 2012 was completed using paper logs either at the drill rig or at the Stibnite core facility. These paper logs were later entered digitally using Microsoft Access® logging forms and the logs were added to the database.

#### 7.6.2 Drilling Recovery

In general, both RC and core recovery were good for all drilling completed by Perpetua Resources. Core recovery averaged 90.5%, and RC recovery was good to excellent. Whenever the RC drilling encountered voids, recovery suffered significantly, and if it could not be regained, the hole was terminated.

Numerous studies and statistical evaluations have been performed by Perpetua Resources staff testing the relationship between recovery and grade across the Project for both pre-Perpetua Resources drilling and recent drilling conducted by Perpetua Resources. No meaningful relationship could be found.

Cyclicity issues were identified within a small number of the RC holes drilled by Perpetua Resources. Individual intervals were analyzed and those showing cyclicity were flagged for omission in mineral resource modeling. Problematic intervals were only identified and flagged in a small number of RC holes which were all drilled in 2011 and, as a result, these holes were excluded from and not considered material for the Mineral Resource estimation.

### **7.6.3 Rock Quality Designation**

Rock Quality Designation (RQD) is a measure of naturally occurring fractures in a rock and was calculated when possible as part of the standard core logging procedures. RQD was measured as the sum of all complete core fragments with lengths greater than 3.9 in (10 cm) in a given core run with > R1 hardness value (will not crumble under a firm blow with the point of a geologic hammer) over the length of the core run. Lengths were measured along the centerline of the core, ignoring fault gouge or other low competency material and paying close attention to mechanical breaks from drillers boxing the core, as these are not naturally occurring fractures. Standard industry practice for RQD measurements and analysis are that they are performed on-site and do not require laboratory analysis or quality assurance and quality control measures.

### **7.6.4 Drill Hole Collar Surveys**

During the Perpetua Resources drilling programs, drill sites were located using handheld Global Positioning System (GPS) receivers. Drill hole orientations were calculated based on actual drill collar locations to ensure that holes were properly oriented. Alignment stakes were set and drill alignments surveyed using conventional survey tools or in some cases a Brunton style compass.

Once holes were completed, the collar was marked with a cement cap containing a steel pin attached to a steel chain extending above ground surface with a tag identifying the drill hole number. Over the course of Perpetua Resources' drilling programs, these collars were either surveyed by a professional surveyor or an onsite geologist using a backpack GPS unit. Approximately 75% of drillholes collars were surveyed by a professional surveyor.

### **7.6.5 Down Hole Surveys**

Down hole surveys were performed on core holes using various survey instruments including an acid etch clinometer, tropari or, for Perpetua Resources drilling programs, a Reflex EZ-Shot tool to measure deviation from the collared orientations. Surveys were generally taken every 200 ft down hole with some exceptions due to lost or collapsed holes.

Survey values were received from drill contractors on paper logs and were captured in a master spreadsheet for entry into the drilling database. Magnetic declination corrections were applied by the drilling database manager prior to database import. Declination corrections were modified at least annually based on changing magnetic declination, sourced from the NOAA.

### 7.6.6 Sample Length and True Thickness

Sample length was a set value for the RC (5 ft) and auger drilling (5 10 ft within spent ore material, 2 ft within tailings). For core drilling, sample length was determined by the geological relationships observed in the core and was generally 5-7.5 ft. Changes in lithology and mineralization were used as sample breaks, and regular sample intervals were used within lithologic units and intervals of similar mineralization intensity.

Based on the wide range of drill hole orientations, many of the intercept lengths do not represent true thickness of mineralization. In general, at Hangar Flats and West End the drill hole intercept length is greater than the true thickness of mineralization. In the southern and northern areas of Yellow Pine, where mineralization occurs as discrete zones, the drill hole intercept length is generally greater than the true thickness. In the central region of the Yellow Pine deposit where mineralization is broadly disseminated, intercept lengths are equal to, or greater than true thickness.

### 7.6.7 Core, Cuttings, Reject and Pulp Storage

Core and cuttings were received by Perpetua Resources personnel from the drilling contractors and remained under supervision until shipped to Perpetua Resources's core logging facility in Valley County, ID. Once at the facility, core and cuttings were stored within the building and supervised during the workday and locked when vacant (nights and weekends). After core was logged and sampled, the remaining halved core was stored within Perpetua Resources' warehouses, or behind a secured chain-link fenced compound at the Cascade warehouse. Rejects were stored in the same locations. Once pulps were received back from the assay labs, they were stored by Perpetua Resources. Rejects are stored inside of the chain-link fence at the warehouse in Cascade. All storage locations remain locked when no Perpetua Resources personnel are present. In Cascade, both the fence and the warehouse remain locked.

## 7.7 Drill Hole Data Validation

Perpetua Resources and its contractors have completed numerous validations to assess the accuracy of the historical drill hole data and evaluate what data sets are appropriate for estimation of mineral resources. Christopher Dail, C.P.G., the issuer's internal QP for geological technical information, directed and reviewed these validations throughout his involvement with the Project, allowing for confidence in the quality of legacy data. Perpetua Resources and previous operators on the property have conducted extensive confirmation drilling programs that provide the basis for statistical and graphical inter-campaign drill hole data validations. Statistical validations completed in 2014 included paired sample analysis, comparison of de-clustered population statistics, panel comparisons and block kriging using different data sets. Prior to statistical validation, data from some drillhole campaigns were deemed unreliable and were removed from the database used for Mineral Resource estimation in Section 11 of this Report.

The review indicates that post-1973 drilling in the Yellow Pine, Hangar Flats and West End deposits generally show overall good agreement with Perpetua Resources drilling and between pre-Perpetua Resources campaigns, with certain exceptions. Pre-1953 USBM drilling and Bradley Mining Company surface drilling also compare well to Perpetua Resources and other post-1973 drilling campaigns for gold. Underground drilling generally shows a moderate high bias as compared to Perpetua Resources drilling, as do antimony assays in the Hangar Flats and Yellow Pine deposits. Observed bias in legacy underground drilling campaigns was attributed to orientation bias and structural controls on mineralization rather than analytical or sampling bias.

Perpetua Resources completed mineral resource sensitivity studies to further quantify the potential impact of use or exclusion of various drillhole information. Sensitivities for Yellow Pine in 2014, as previously discussed in the PFS, found only a 4% increase in contained gold using all drillhole data when compared to using only post 1973 data. Similar magnitude changes were observed when excluding Hecla drillhole data for estimation of mineral resources in the Homestake area of the Yellow Pine deposit. Mineral resource sensitivities in 2018, using updated geological models, indicated <4% change for Yellow Pine and <3% change for Hangar Flats by excluding pre-Perpetua Resources data. These sensitivity results are well within acceptable limits for validation of legacy drillhole information and the use of legacy drillhole information in estimation of mineral resources.

Cyclicity issues were identified within a small number of the RC holes drilled by Perpetua Resources. Individual intervals were analyzed and those showing cyclicity were flagged for omission in mineral resource modeling. Problematic intervals were only identified and flagged in a small number of RC holes which were all drilled in 2011 and, as a result, these holes were excluded from mineral resource estimation.

## 7.8 Drill Hole Database

Perpetua Resources' drill hole database used for Mineral Resource Estimation, is stored as an SQL database in Hexagon Minesight Torque™ and contains collar locations stored as NAD83 State Plane feet grid coordinates, drill hole orientations with downhole surveys, assay intervals with gold and silver analyses by fire assay and/or cyanide soluble assay, other geochemical assays including antimony and sulfur, geologic intervals with rock types, core recovery information, and core density measurements. The most common assay lengths are approximately 5 ft long, with the majority of assays between 3 ft and 7 ft in length. The drill hole database contains 1,843 specific gravity measurements, collected on core samples using a water immersion method and verified with independent, third party laboratory measurements.

### 7.8.1 Yellow Pine Drill Hole Database

The Yellow Pine area was explored for gold and antimony by numerous operators, up to and including Perpetua Resources between 2011 and 2017. The Yellow Pine deposit was previously in production in the 1930s 1950s from the Bradley Pit area, while the Homestake area was in production in the late 1980s. The drill hole database contains data for 1,016 separate drill holes representing a mixture of pre 1953 and modern drilling programs. Historical data (i.e. pre-Perpetua Resources) accounts for approximately 48% of the drill hole database by footage, as previously described (Section 7). Multiple statistical validations were completed to assess the quality of the historical drill hole data, as discussed in the PFS. A significant number of historical holes were removed from the dataset used for resource estimation including holes missing critical supporting information, holes with long downhole composited assays, air-track drill holes, R.C. holes showing evidence for cyclicity, and all historical pre 1953 drill holes in the northeast Homestake area of the deposit. In addition, certain historical holes were removed from the estimate which appeared to be mis-located or otherwise erroneous based on improved understanding of controls on mineralization.

For the Yellow Pine deposit, gold, antimony and silver mineral resources were estimated in addition to oxidation intensity and a suite of geochemical concentrations. Table 7-4 shows the number of drill holes and estimation composites utilized in the estimate for the primary commodities, which illustrates that the metal values for gold, antimony, and silver were not consistently analyzed for all sample intervals throughout the various historical drilling campaigns nor were all drillholes deemed to have reliable information for all elements.

**Table 7-4: Drill Hole Data Used in the Yellow Pine Mineral Resource Estimate**

Company	Gold			Antimony			Silver		
	# Holes	# Samples	Feet	# Holes	# Samples	Feet	# Holes	# Samples	Feet
Barrick	17	2,538	12,817	14	2,164	10,932	-	-	-
Bradley	107	4,056	20,650	70	2,380	12,087	7	212	1,078
El Paso	1	52	258	1	52	258	1	52	258
Hecla	68	2,282	11,582	-	-	-	58	1,954	9,929
Perpetua	223	28,510	143,748	223	28,454	143,465	223	28,686	144,651
Pioneer	2	86	435	-	-	-	-	-	-
Ranchers	145	4,660	23,649	54	2,150	10,900	-	-	-
Superior	16	384	1,951	-	-	-	-	-	-
USBM	50	2,714	13,758	50	2,602	13,195	-	-	-
<b>All</b>	<b>629</b>	<b>45,282</b>	<b>228,848</b>	<b>412</b>	<b>37,802</b>	<b>190,836</b>	<b>289</b>	<b>30,904</b>	<b>155,915</b>

## 7.8.2 Hangar Flats Drill Hole Database

The database for the Hangar Flats deposit contains data for 260 separate drill holes representing both historical and modern drilling programs, as previously described in Section 10 of this Report. The drill holes were reviewed, and certain drill holes were not considered for use in mineral resource estimation, including air-track, rotary, and pre-collar drill holes, as well as historical drilling where the methods were questionable or documentation lacking.

Gold and antimony were mined from the Hangar Flats deposit by the Bradley Mining Company from 1928 to 1938 and the deposit was later explored by Bradley in the 1940s, the United States Bureau of Mines from 1951-1954, the Hecla Mining Company from 1988 to 1989, and by Perpetua Resources beginning in 2009, as discussed in Section 10 of this Report. The majority of sampling used in the mineral resource estimate for Hangar Flats is from Perpetua Resources drilling completed primarily from 2009 to 2012. Data from pre-1940s Bradley operations includes exploration drill holes and underground drift samples and was used solely for construction of the geologic model due to uncertainty regarding sampling and analytical methods. Post 1940s Bradley drillholes, United States Bureau of Mines exploration drillholes and drillholes by Hecla were used for mineral resource estimation as this drillhole data is well documented, has been validated by Perpetua Resources drilling and is deemed reliable.

For the Hangar Flats deposit, gold, antimony and silver mineral resources were estimated in addition to oxidation intensity and a suite of geochemical concentrations. Table 7-5 shows the number of drill holes and sample intervals utilized in the estimate for the primary commodities, and illustrates that the metal values for gold, antimony, and silver were not consistently analyzed for all sample intervals throughout the various historical drilling campaigns nor were all drillholes deemed to have reliable information for all elements. Note that samples outside of the domains are not tabulated here as they were not used in estimation of gold, silver, or antimony.

**Table 7-5: Drill Hole Data Used in the Hangar Flats Mineral Resource Estimate**

Company	Gold			Silver			Antimony		
	# Holes	# Samples	Feet	# Holes	# Samples	Feet	# Holes	# Samples	Feet
Bradley	28	856	4,491	0	0	0	19	407	2,176
Hecla	22	701	3,505	22	684	3,420	0	0	0
Perpetua	114	14,703	74,872	114	14,717	74,949	60	3,817	19,247
USBM	22	632	3,149	0	0	0	0	0	0
<b>All</b>	<b>186</b>	<b>16,892</b>	<b>86,017</b>	<b>136</b>	<b>15,401</b>	<b>78,369</b>	<b>79</b>	<b>4,224</b>	<b>21,423</b>

Note: Drill hole information includes un-sampled intervals. Data outside of estimation domains is excluded from tabulation.

### 7.8.3 West End Drill Hole Database

The West End deposit was explored from 1978-1996 by multiple operators and was previously in production as a heap leach operation during the 1980s and 1990s. The West End drill hole database consists of 943 holes drilled using various methods, as previously described in Section 10. The database consists of collar locations in State Plane grid coordinates, drill hole orientations with downhole surveys, assay intervals with gold and silver analyses by fire assay and/or cyanide soluble assay, geologic intervals with rock types, core recovery information and specific gravity measurements. Certain drill holes were not considered reliable for use in mineral resource estimation, including rotary and air-track drill holes, and other unreliable holes flagged by Perpetua Resources. After removal of selected drill holes and non-bedrock intervals, the final database used for estimation of total gold mineral resources contained 674 drill holes. Approximately 78% of the assay records have gold fire assays (AuFA) and 75% have cyanide soluble gold assays (AuCN). Only Perpetua Resources, Canadian Superior Mining Ltd. (Superior) and Stibnite Mines Inc. (SMI) drill holes were assayed for silver, with the latter exclusively assayed for cyanide soluble silver.

**Table 7-6: Drill Hole Data Used in the West End Mineral Resource Estimate**

Company	Gold Fire Assay			Gold Cyanide Assay			Silver		
	# Holes	# Samples	Meters	# Holes	# Samples	Meters	# Holes	# Samples	Meters
El Paso	1	18	30	0	0	0	0	0	0
Perpetua	53	6,020	11,499	52	5,148	9,872	53	6,020	11,499
Pioneer	336	21,313	32,498	336	21,281	32,449	136	6,947	10,586
SMI	118	6,851	10,431	118	6,851	10,431	118	6,851	10,431
Superior	163	6,573	11,626	132	2,850	6,196	71	2,642	5,448
Twin River	3	160	256	0	0	0	0	0	0
<b>All</b>	<b>674</b>	<b>40,935</b>	<b>66,340</b>	<b>638</b>	<b>36,130</b>	<b>58,948</b>	<b>378</b>	<b>22,460</b>	<b>37,964</b>

Note: Drill hole information excludes samples within overburden and includes un-sampled intervals.

Drill holes in the West End deposit form an irregular grid and are primarily vertical or oriented on 120-degree azimuths. Mean drill hole spacing is approximately 40 m above 2,100 m elevation increasing to 70 m near the base of the drill pattern at 1,900 m elevation.

#### 7.8.4 Historical Tailings Drilling Database

The drill hole database, for the Historical Tailings Deposits contains collar locations surveyed in UTM grid coordinates, drill hole orientations with downhole surveys, assay intervals with gold, antimony, and silver analyses by fire assay and/or cyanide soluble assay, geologic intervals with material types and in situ density measurements. The database contained data for 73 separate drill holes representing a mixture of historic and modern drilling programs. Some drill holes were not assayed and only used for the establishment of the upper and lower boundaries of the tailings and some drill holes did not intercept tailings material. Only Perpetua Resources drill holes were used in the mineral resource estimates discussed in Section 11 of this Report. Drill holes are primarily hollow-stem auger holes completed in 2013 with some sonic drill holes completed in 2012. Samples not intersecting tailings material were removed from the data set utilized for estimation, as summarized in Table 7-7 which illustrates that the metal values for gold, antimony, and silver in Perpetua Resources drill holes were consistently analyzed for all sample intervals throughout the dataset utilized for estimation. All drill holes are vertical, and the average drill hole spacing is approximately 60 m oriented along a grid rotated to an azimuth of 23 degrees.

**Table 7-7: Drill Hole Data Utilized in the Historical Tailings Mineral Resource Estimate**

Element	# Holes	# Assays	Meters
Gold	41	540	339
Antimony	41	540	339
Silver	41	540	339

## 8 SAMPLE PREPARATION, ANALYSES, AND SECURITY

This section provides an overview of the sample preparation, analyses, and security procedures used by Perpetua Resources; where available, similar information is also provided for pre-Perpetua Resources activities.

Sample preparation and analyses programs have been undertaken by the operators and vintages of drill campaigns. This section summarizes the verification work and practices employed by each of the operators by year. The Qualified Person (QP) believes that the sample collection, preparation, analysis and security for all Perpetua Resources drilling are consistent with industry standards and best practices supporting their use in mineral resource and mineral reserve estimation as detailed in this study.

### 8.1 Sampling Methods

Throughout the last 90 years, multiple drilling and sampling methods have been used across the district by pre-Perpetua Resources operators as well as Perpetua Resources. Sampling methods and quality control measures have varied based on the era and the type of drilling.

#### 8.1.1 Pre-Perpetua Resources Sampling

Drilling on site has utilized industry standard methods for sampling. Early operators utilized methods with small core diameters that required tripping out to recover the core samples. To achieve enough mass to assay, dehydrated drill cuttings and muds (sludge) were combined with the recovered core as was appropriate during that era. Modern era core drilling shifted to larger core size and the use of wireline methods allowing sample recovery without tripping out the drill stem between runs. Reverse Circulation (RC) drill holes were drilled under both wet and dry conditions and samples were collected from a cyclone or similar splitter. Sample lengths were generally 5 ft in length, although many sample intervals were selected based on changes in lithology or changes in intensity of alteration and mineralization. Few documents have survived to describe sample preparation methods and little to no chain of custody records for previous operators are available.

#### 8.1.2 Reverse Circulation Drill Sampling

Perpetua Resources RC holes were cased into competent bedrock and drilled wet. Samples were collected every five feet and holes flushed and cleaned between samples with water and drilling products. Sampled material was collected from a cyclone splitter into plastic totes. A flocculent was added if necessary and, after settling, the excess clear water was decanted off and the remaining sample was poured into labeled sample bags. QA/QC samples were inserted at the drilling rig by the attending geologist and typically included 1 certified standard, 1 blank and 1 cyclone splitter reject every 20th sample. (i.e., every 100 ft). Sample bags were placed into larger rice bags which were placed into bulk storage sacks and transported to Valley County facilities for shipping to the laboratory. Pre-numbered bar codes were utilized for sample tracking by both Perpetua Resources and the recipient lab.

### 8.1.3 Core Drill Sampling

From the beginning of the core drilling program in 2009, core was generally sampled on 5 ft intervals with sample breaks made at significant changes in lithology or intensity of alteration and/or mineralization. An exception is a period in 2012 when sample intervals for core were varied based on the logging geologist's interpretation of the intensity of mineralization such that if core was mineralized, samples were selected in 6.5 ft lengths; if core was not mineralized samples were selected in 7.5 ft lengths. The core logging geologist marked the core with a lumber crayon to provide a line for the core sawyer to split veins and joints into representative halves. Half of the cut core was placed into canvas sample bags, which were placed into labeled rice bags, and then placed into bulk storage sacks for shipment to the laboratory. Typically, sampling was conducted in batches of 50 samples including 2 certified standards, 2 blanks, and 2 quarter core duplicates. Pre-numbered bar codes were utilized for sample numbering. In a few cases, drill hole intervals from twinned holes were composited to produce large bulk samples for metallurgical test work, and in those cases individual sample intervals were not analyzed, but the composites were analyzed.

### 8.1.4 Sonic and Auger Drill Sampling

Sonic drilling samples were collected by the drilling contractor and placed into plastic sleeves which were set into cardboard boxes. This material was sampled in a manner similar to drill core samples.

Mineral resource definition in the unconsolidated Historic Tailings within the Spent Ore Disposal Area (SODA) was conducted with a hollow stem auger drilling method. Auger drilling utilized a split tube and samples were divided in half by the geologist. Material was composited into 10 ft samples within the SODA material and 2 ft samples within the tailings material and then placed into canvas sample bags. The other half of the tailings samples were retained and placed in wooden core boxes. In the Historic Tailings, at least one sample from 35 of the 42 drill holes was taken as a Shelby sample for specific gravity and particle size analysis. The geologist inserted one standard and one blank into the sample set for each hole within the tailings. The split tube was washed thoroughly between samples to prevent cross contamination. Sampling of auger material in non-tailings drillholes was conducted in a similar fashion except samples were collected based on split tube recovery rather than composited depending on material type.

## 8.2 Security and Chain of Custody

All samples were kept under direct supervision of Perpetua Resources staff and its contractors or within locked facilities. Changes in custody were documented with signed and dated Chain of Custody (COC) forms.

RC and auger samples were bagged at the drill rig and prepped for shipment to the assay lab under supervision of the rig geologist. RC and auger samples were shipped to the Valley County logging facility in bulk storage bags accompanied by a signed COC form detailing drill hole numbers, footages, sample numbers, and the shipment date.

Drill core was picked up at the drill rig by the site geologist while performing the daily rig inspections. After inspecting the core boxes for errors, a COC form was completed documenting the transfer of core from the rig to the Stibnite core shack. Often the initial COC would be documented on the driller's daily log and included the box numbers, footages, date, and geologist's name and signature. At the core shack, a summary log was completed to verify and record box numbers, footages, lithology, mineralization and other rock characteristics. Upon completion of the summary log, the core was prepared for shipping to the Valley County logging facility by Perpetua Resources staff or contractors. When

shipped, core was accompanied by a signed COC form detailing the hole numbers, footages, box numbers, and shipment date.

Once the core or samples were received at the Valley County facility, the receiver checked the COC for errors and stored the core for future logging/sampling in a secured site which was locked when no personnel were present. Once detailed logging and sampling of core was complete, the samples were prepped for shipping, bagged in rice bags, and sealed with tamper proof security tape. From 2015 to present, most of these steps were conducted at on-site facilities and samples were transported to Valley County facilities ready for shipment to the assay lab. Each shipment was accompanied by another COC form to the assay lab. Upon receipt, the lab then verified that the security tape was undisturbed and completed the COC form and any discrepancies noted and the shipper notified and corrections made as necessary and recorded by both the lab, the shipper and the client.

### 8.3 Density

In 2010, Perpetua Resources sent 61 samples from the 2009 and 2010 drilling campaign to ALS Chemex Labs, Ltd. (ALS) for density determination using a paraffin wax coating. Beginning in 2011, density measurements for core material were determined using in-house hydrostatic weighing. Measurements were collected by Perpetua Resources geologists on approximately 0.5 ft core intervals every 50 200 ft downhole, or within different lithologic units, totaling 3,318 intervals. Four hundred seventy-eight (14% of the 3,318) of these density samples were also submitted to ALS for density determination with paraffin wax coating. ALS results compared to measurements by Perpetua Resources showed a root mean squared coefficient of variation (RMS CV; a statistical tool routinely used to determine precision through using the quadratic mean of the relative standard deviation for each pair) of 0.988%, indicating there was no significant difference (assuming a value of zero means perfect measurement duplication) between the in-house measurements and third-party, independent certified lab results for density.

For the unconsolidated material within the Historic Tailings, 35 samples were sent to Strata Geotechnical Testing Laboratories in Boise, ID for density determination using the ASTM D2937 method. This method involves collecting an in situ sample using a drive cylinder with a known volume, weighing the sample, and calculating the density of the collected material.

### 8.4 Analytical Labs and Methods

There is little documentation of the sample preparation, analysis, and security for most samples from pre-Perpetua Resources operators. The United States Bureau of Mines (USBM) utilized a government laboratory and analyzed drill core and sludge using a conventional 30 g fire assay pre-concentration method followed by gravimetric analysis. Other operators used several assay laboratories (both for primary and check assays) with CN leach assays followed by atomic absorption (AA) for oxide mineralization and conventional fire assay techniques for sulfide mineralization. Bradley drilling sludge samples were analyzed using conventional fire assay techniques in company-owned Yellow Pine and Boise laboratories. Table 8-1 shows the various analytical labs used by different operators. The various analytical methods utilized at various laboratories by pre-Perpetua Resources operators had different lower detection limits, upper reporting limits and sensitivities which are documented in the company's database and archives.

**Table 8-1: Off-Site Assay Laboratories Used by Pre-Perpetua Resources Operators**

Laboratory	Location	Operator	Year
T.S.L. Laboratories Limited	Spokane, WA, USA	El Paso	1973, 1978
		Superior	1975-1978, 1981
Union Assay	Salt Lake City, UT, USA	Ranchers	1973, 1975-1978 1982, 1984
Bondar Clegg	BC, Canada	Superior	1976
	North Vancouver, BC, Canada	SMI	1995-1996
Rocky Mountain Geochemical Corp.	Midvale, UT, USA	Superior	1976-1977
	Reno, NV, USA	Ranchers	1983-1984
Monitor Geochemical Laboratory	Elko, NV, USA	Superior	1978
Hazen Research	Golden, CO, USA	Ranchers	1982
Peter Mack	Wallace, ID, USA	Ranchers	1982
South Western Assayers and Chemists	Tucson, AZ, USA	Ranchers	1982
Mountain States Research and Development	AZ, USA	Ranchers	1982-1984
Silver Valley	Osburn, ID, USA	Superior	1983
Hunter	Sparks, NV, USA	Pioneer	1986-1988
ALS Chemex Labs Inc.	N. Vancouver, BC, Canada	Hecla	1989
		Barrick	1992
SVL Analytical Inc.	Kellogg, ID, USA	SMI	1997

#### 8.4.1 Assay Laboratories

Perpetua Resources utilized multiple laboratories for assay, check assay, and metallurgical work in both the US and Canada. All labs were certified ISO 17025 or 9001. Table 8-2 summarizes the assay laboratories used by Perpetua Resources for sample analysis from 2009 to present. A total of four labs have been used in the United States and Canada for primary and check assays. Perpetua Resources has utilized the same primary lab, currently known as ALS Global, for the entirety of the Stibnite Gold Project.

**Table 8-2: Analytical Laboratories Used by Perpetua Resources**

Laboratory	Location	Certification/ Accreditation	Use
ALS Global (ALS)	Elko, Reno, and Winnemucca, NV, USA. Vancouver, BC, Canada	ISO 17025:2005 ISO 9001:2008	Primary Lab 2009-Present
American Analytical Services (AAS)	Osburn, ID, USA	ISO 17025	Check Assays
Inspectorate	Reno, NV, USA	ISO 9001:2008	Check Assays Cyanide Gold Assays
SGS Canada, Inc.	Vancouver, BC, Canada	CAN-P-1579 17025:2005	Check Assays Cyanide Gold Assays

## 8.4.2 Metallurgical and Geochemical Laboratories

Table 8-3 summarizes the laboratories used by Perpetua Resources for feasibility study analysis. A total of thirteen labs have been used in the United States and Canada for metallurgical and geochemical testing in preparation for feasibility.

**Table 8-3: Metallurgical and Geochemical Testing Laboratories Used by Perpetua Resources**

Laboratory	Location	Certification/Accreditation	Use
SGS Canada, Inc.	Burnaby, BC, Canada	CAN-P-1579, CAN-P-1587, CAN-P-4E (ISO/IEC 17025:2005)	Metallurgical Testing
SGS Australia	Malaga, WA, Australia	ISO 9001:2015	Metallurgical Testing
Pocock Industrial, Inc.	Salt Lake City, UT, USA	Not Certified	Metallurgical Testing
McClelland Laboratories	Sparks, NV, USA	EPA ID #: NV00933	Geochemical Testing
Western Environmental Testing Laboratory	Sparks, NV, USA	EPA ID #: NV000925	Geochemical Testing
AuTec Innovative Extractive Solutions Ltd. (AuTec)	Vancouver, BC, Canada	Not Certified	Metallurgical Testing
CESL Limited	Richmond, BC, Canada	Not Certified	Metallurgical Testing
Blue Coast Research	Parksville, BC, Canada	Not Certified	Metallurgical Testing
CSIRO	Waterford, WA, Australia	Not Certified	Metallurgical Testing
FLSmith USA Inc.	Midvale, UT, USA	Not Certified	Metallurgical Testing
Surface Science Western	London, ON, Canada	ISO 9001:2015	Metallurgical Testing

## 8.5 Sample Preparation and Analysis

Perpetua Resources samples were received and weighed by the primary assay lab. Core samples were prepared based on laboratory specifications which involved crushed to 70% passing a ¼ inch mesh (6 mm) and drying at a maximum of 140 degrees Fahrenheit (60 degrees Celsius). Dried material was split and pulverized to 70% passing No. 10 mesh, split again, and pulverized to 85% passing No. 200 mesh. Material passing through the No. 200 mesh was then run with four primary analytical techniques.

Multi-element analysis entailed a 4-acid digestion followed by inductively coupled plasma atomic emission spectroscopy (ICP AES) for 33 elements. Every 20th sample was digested in aqua regia followed by an inductively coupled plasma mass spectrometry (ICP MS) finish for 51 elements with a fluorine add-on. Arsenic had a 5 parts per million (ppm) lower detection limit and a 10,000 ppm upper reporting limit. Samples reporting > 10,000 ppm As were re-analyzed by using a digestion in 75% aqua regia followed by an ICP-AES finish with a lower detection limit of 0.01% and an upper reporting limit of 60%. Antimony had a 5.0 ppm lower detection limit and a 10,000 ppm upper reporting limit. Samples reporting values > 500 ppm Sb were re-analyzed using 0.9 g sample added to 9.0 g Lithium Borate flux and fused in an auto fluxer. A disc was prepared from the melt and analyzed using X-ray fluorescence (XRF) spectroscopy with a lower detection limit of 0.01% (100 ppm) and an upper reporting limit of 50%. SGS check assays submitted in 2017 tested an alternate antimony assay method of sodium peroxide fusion with an ICP finish. Statistical comparison of XRF and this new ICP method did not show an appreciable difference in results. Sulfur had a 0.01% lower

detection limit and a 10% upper reporting limit. Samples reporting values > 2% S were re-analyzed by using a 0.01 – 0.1 g sample in a Leco sulfur analyzer using an Infrared (IR) detection system with a 0.01% lower detection limit and a 50% upper reporting limit. Mercury analysis changed in 2015 from an aqua regia digestion and cold vapor AAS finish to an aqua regia digestion with mass-spec finish. Mercury values in excess of 100 ppm require an aqua regia digestion with ICP finish.

All gold assays were performed using a 30 g fire assay charge followed by an atomic absorption spectroscopy finish with a 0.005 ppm lower reporting limit and a 10 ppm upper reporting limit. Samples reporting values > 6 ppm were re-analyzed using a 30 g fire assay charge followed by a gravimetric finish with a 0.05 ppm lower reporting limit and a 1,000 ppm upper reporting limit. Samples reporting values >10 ppm were analyzed by metallic screen method with a 0.05 ppm lower reporting limit and a 1,000 ppm upper reporting limit.

Silver was analyzed via the initial multi-element ICP-AES analysis with a 0.5 ppm lower detection limit and a 100 ppm upper reporting limit. Samples reporting values > 10 ppm Ag were reanalyzed using an ICP AES or AA finish with a 1.0 ppm lower detection limit and a 1,500 ppm upper reporting limit. Samples reporting values > 750 ppm Ag were reanalyzed using a 50 g fire assay charge followed by a gravimetric finish with a 5 ppm lower detection limit and a 10,000 ppm upper reporting limit.

In some cases, during large diameter drilling for bulk metallurgical sampling a portable XRF unit was utilized to screen materials for compositing prior to shipment to metallurgical and analytical laboratories. Although useful from a bulk sample grade perspective, these types of samples were excluded from use in mineral resource models due to their size and nature of the samples.

## **8.6 Quality Assurance and Quality Control**

Perpetua Resources exercised strict and rigorous QA/QC protocols throughout the different drilling campaigns from 2009 to 2025. Periodically, these protocols were assessed for adequacy and improved accordingly. Pre-Perpetua Resources operators conducted various QA/QC programs for both their drilling and mine assay operations but not all records of QA/QC measures have survived to be reviewed by Perpetua Resources. However, Section 8.6.1 details the records that Perpetua Resources has collected and catalogued.

### **8.6.1 QA/QC Pre-Perpetua Resources**

Pre-Perpetua Resources operators had varying QA/QC programs, but not all records have survived. Historical reports indicate that Bradley used duplicates and standards as QA/QC measures at Hangar Flats, but exact insertion rates are unknown. QA/QC data which are available from existing records are detailed in Table 8-4 for each operator by deposit.

**Table 8-4: Pre-Perpetua Resources QA/QC Measures and Insertion Rates**

Company	Deposit	Check <sup>2</sup>	Reject <sup>3</sup>	Rerun <sup>4</sup>	Standard	Blank	Totals <sup>1</sup>
Pioneer	West End	1.74%	5.54%	0.07%	8.67%	-	16.02%
SMI	West End	2.00%	-	2.56%	1.27%	0.35%	6.18%
Superior	West End	10.57%	-	0.56%	1.25%	-	12.38%
Pioneer	Yellow Pine	-	-	-	18.35%	-	18.35%
Ranchers	Yellow Pine	4.42%	6.44%	-	-	-	10.86%
Superior	Yellow Pine	1.19%	-	-	-	-	1.19%
Barrick	Yellow Pine	3.88%	-	-	-	-	3.88%

Notes: 1. Percentage insertion rates stated are based on QA/QC analyses recovered from historical files and are likely not comprehensive. 2. Check assays were performed at third-party laboratories. 3. Rejects consisted of a combination of sample rejects and sludge samples run at internal and third-party laboratories. 4. Rerun assays were performed at internal laboratories.

### 8.6.2 QA/QC by Perpetua Resources (2009-2018)

Perpetua Resources exercised strict and rigorous QA/QC protocols throughout the different drilling campaigns and retained independent qualified persons to review and help improve QA/QC procedures. Current procedures include insertion of standards (both certified and in-house customized), blanks, and duplicate samples into the sample stream to ensure confidence in external lab results. In addition, coarse rejects were re-labeled and sent to the primary lab for assay to test splitting and comminution practices. Pulp material was also sent to other laboratories for cross-comparison. Finally, the primary lab analyzes pulp duplicates internally, which are reviewed by Perpetua Resources and included in the QA/QC analysis. Table 8-5 shows the insertion rates of various QA/QC measures used in Perpetua Resources drilling since project commencement. The various QA/QC measures are described in detail in the following sections.

**Table 8-5: Perpetua Resources QA/QC Measures and Insertion Rates**

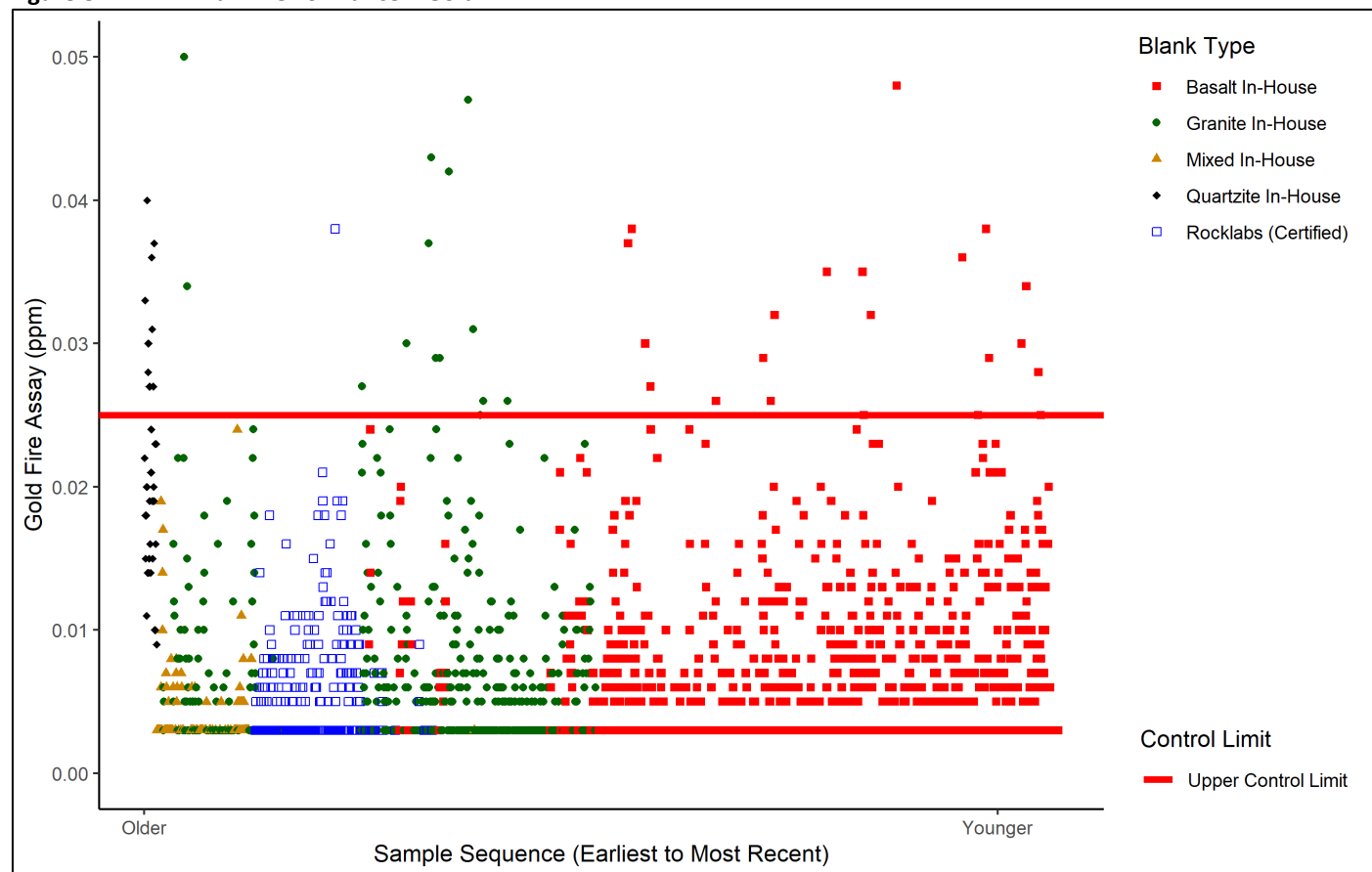
Deposit	Assays	Blank	Standard	Field Duplicates	Pulp Duplicates	Check	Reject	Totals
Yellow Pine	25,347	4.6%	5.2%	4.5%	5.0%	5.5%	1.5%	26.3%
Hangar Flats	19,246	4.5%	5.0%	4.3%	6.3%	2.4%	1.7%	24.2%
West End	6,251	4.5%	4.2%	4.5%	6.5%	3.5%	2.0%	25.2%
Historical Tailings	990	2.3%	5.8%	0.0%	4.7%	4.7%	0.0%	17.5%
Scout	2,341	4.8%	3.9%	4.8%	5.1%	0.9%	1.6%	21.1%

### 8.6.3 Blanks QA/QC

Perpetua Resources used a total of 2,493 blanks in the sample stream, 318 of which were certified (Figure 8-1). Noncertified in-house blanks were composed of locally sourced, unmineralized quartzite, basalt, or granite.

Gold grades of 0.025 ppm Au were selected as a control limit for blanks based on background cross-contamination observed following spike samples. Upon evaluation, blanks reporting values below 0.025 ppm Au, a limit consistent with assay lab protocols, were considered satisfactory. Treatment of non-satisfactory samples is discussed in Section 11.7.8 of this Report. Certified blanks reported all but 1 value under this limit and non-certified blanks reported 97.5% of values under this limit.

**Figure 8-1: Blank Performance – Gold**



#### 8.6.4 Standard Reference Materials QA/QC

Insertion rate of standards typically exceeded 5% for drilling within all deposits. Perpetua Resources used a total of 1,705 certified gold standards, 1,044 non-certified gold standards, and 565 certified antimony standards (Figure 8-2, Figure 8-3). Some antimony standards were not certified at the time of use but subsequently received certification.

Upon evaluation, standards reporting within two standard deviations of the expected value were considered satisfactory. Standards were flagged for evaluation when reporting between two and three standard deviations from the expected value and flagged as failed when reporting over three standard deviations. Standards flagged for evaluation were re-run on a case-by-case basis, while the procedures for standards flagged as failed are described in Section 8.6.8. Certified gold standards reported 91.5% of values within satisfactory limits, non-certified gold standards

reported 90% of values within satisfactory limits, and certified antimony standards reported 94.5% of values within satisfactory limits.

**Figure 8-2: Certified Gold Standards**

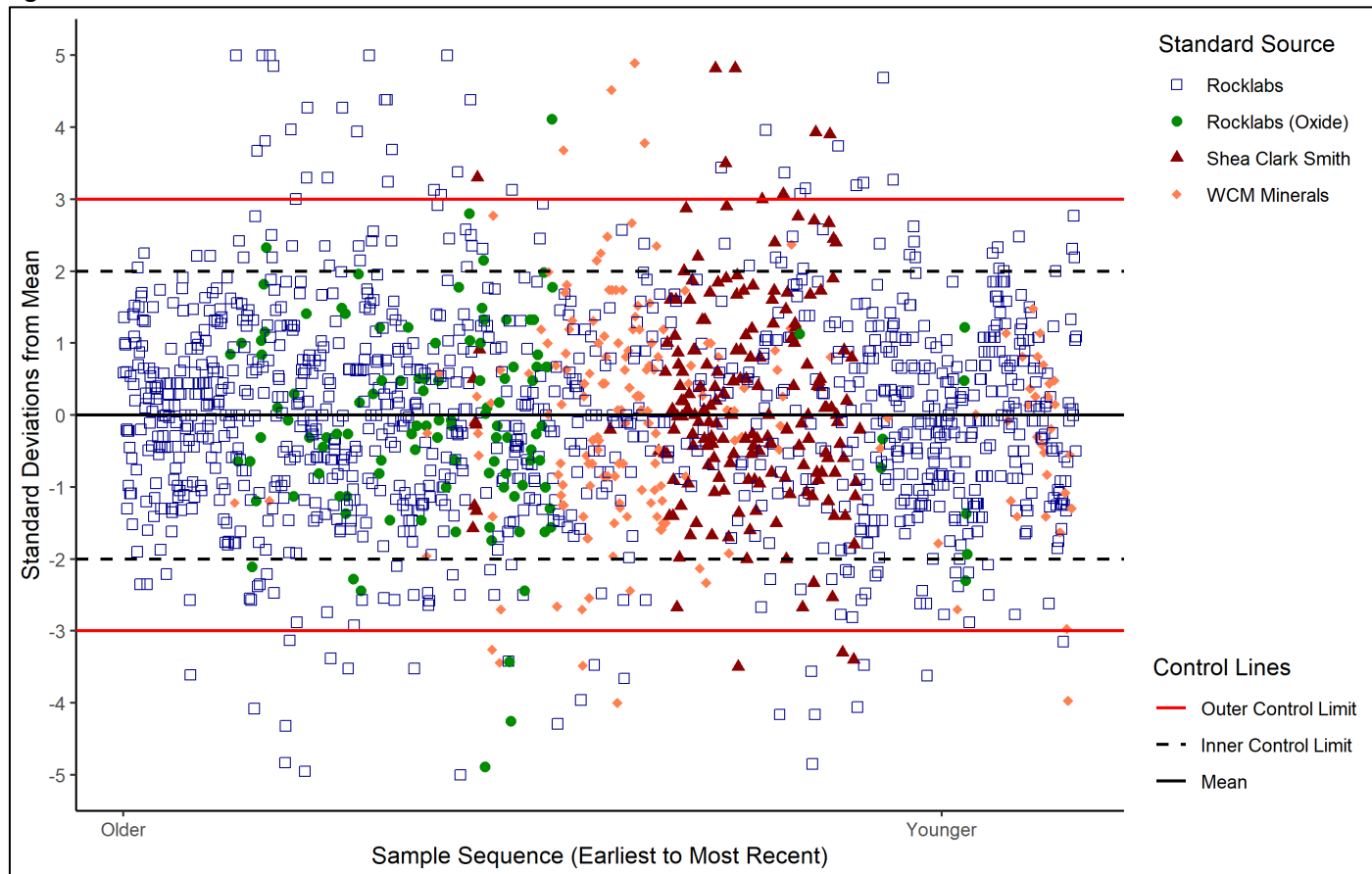
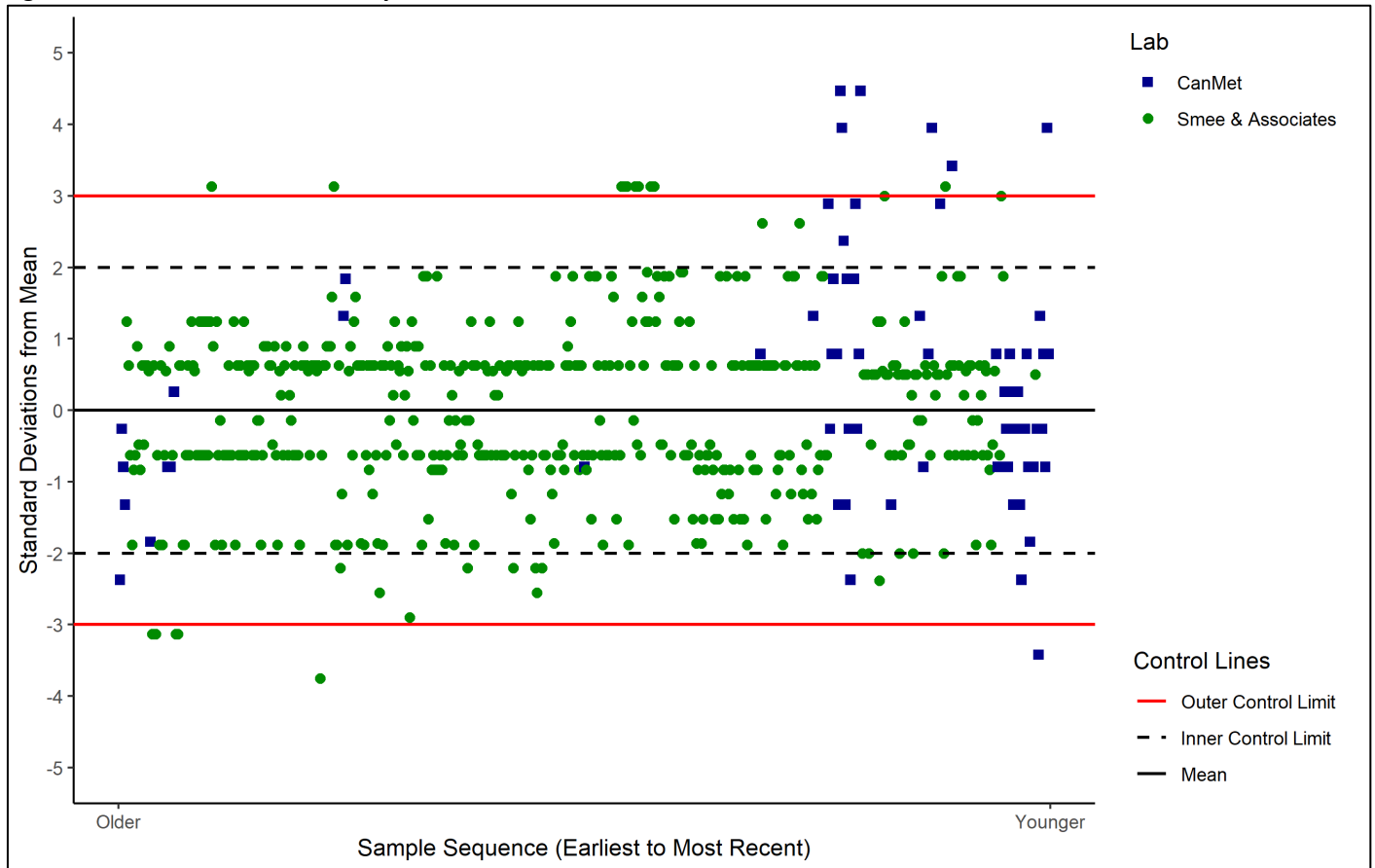


Figure 8-3: Certified Antimony Standards

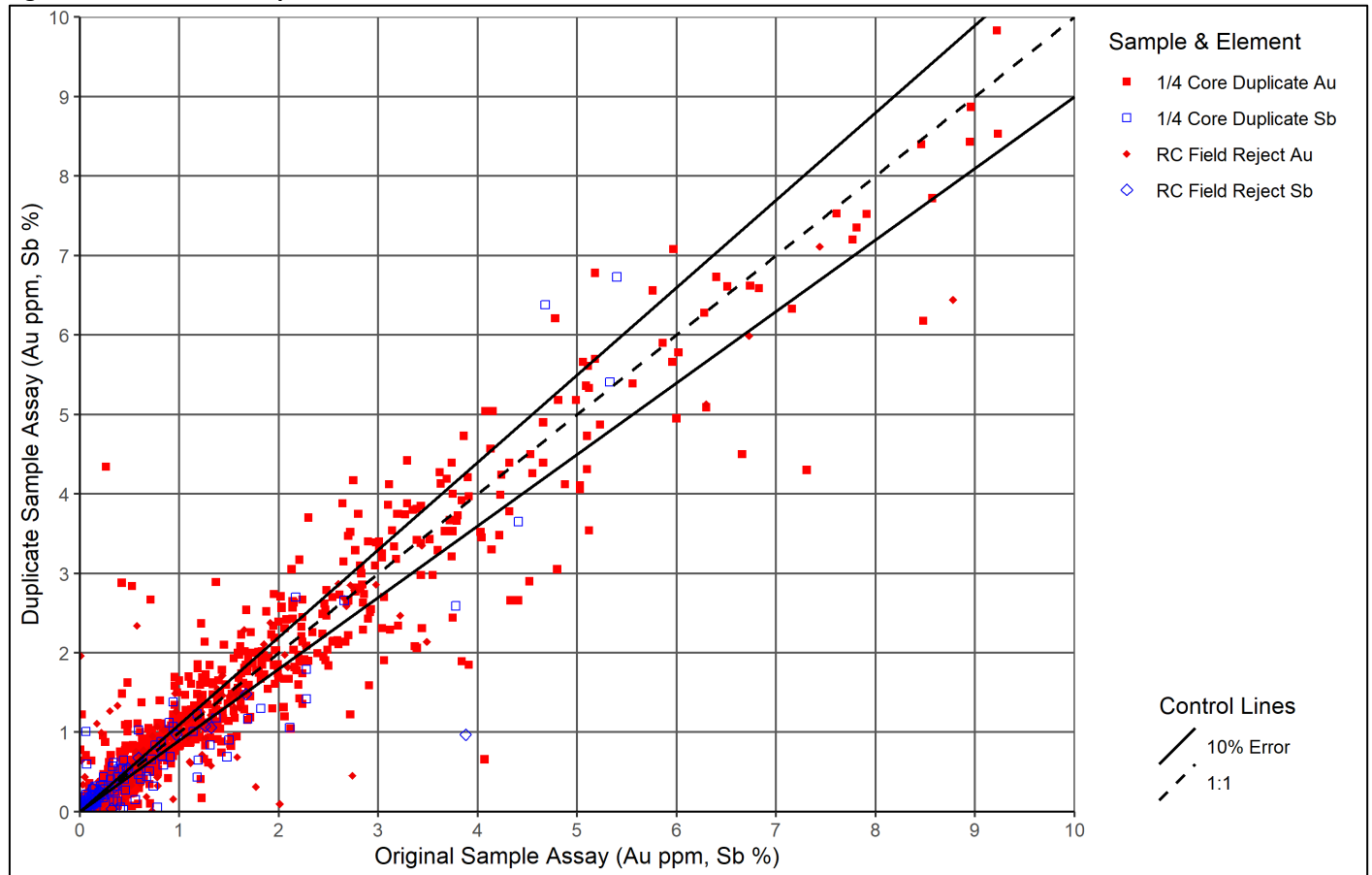


### 8.6.5 Field Duplicates QA/QC

Perpetua Resources generated 1,880 quarter core duplicates from core holes of which 1,115 were above 0.025 ppm by gold fire assay and 130 were above 0.05% antimony. Reproducibility for quarter core duplicates was fair for both gold and antimony with an RMS CV of 26% for gold and 37% for antimony however, the correlation coefficients for both are excellent at 0.97 (i.e., 1 is perfect). In addition, removal of outliers significantly improves the RMS CV.

Perpetua Resources generated a total of 536 RC field rejects of which 365 were above 0.025 ppm by gold fire assay, and 19 were above 0.05% antimony. Reproducibility for RC field rejects was poor to fair for both gold and antimony with an RMS CV of 23.5% for gold and 18.8% for antimony, respectfully. Figure 8-4 shows a scatter plot of both field duplicate types. The correlation coefficient for the gold trendline is 0.88 and 0.33 for antimony, the latter being impacted by a limited number of analyses and by outliers.

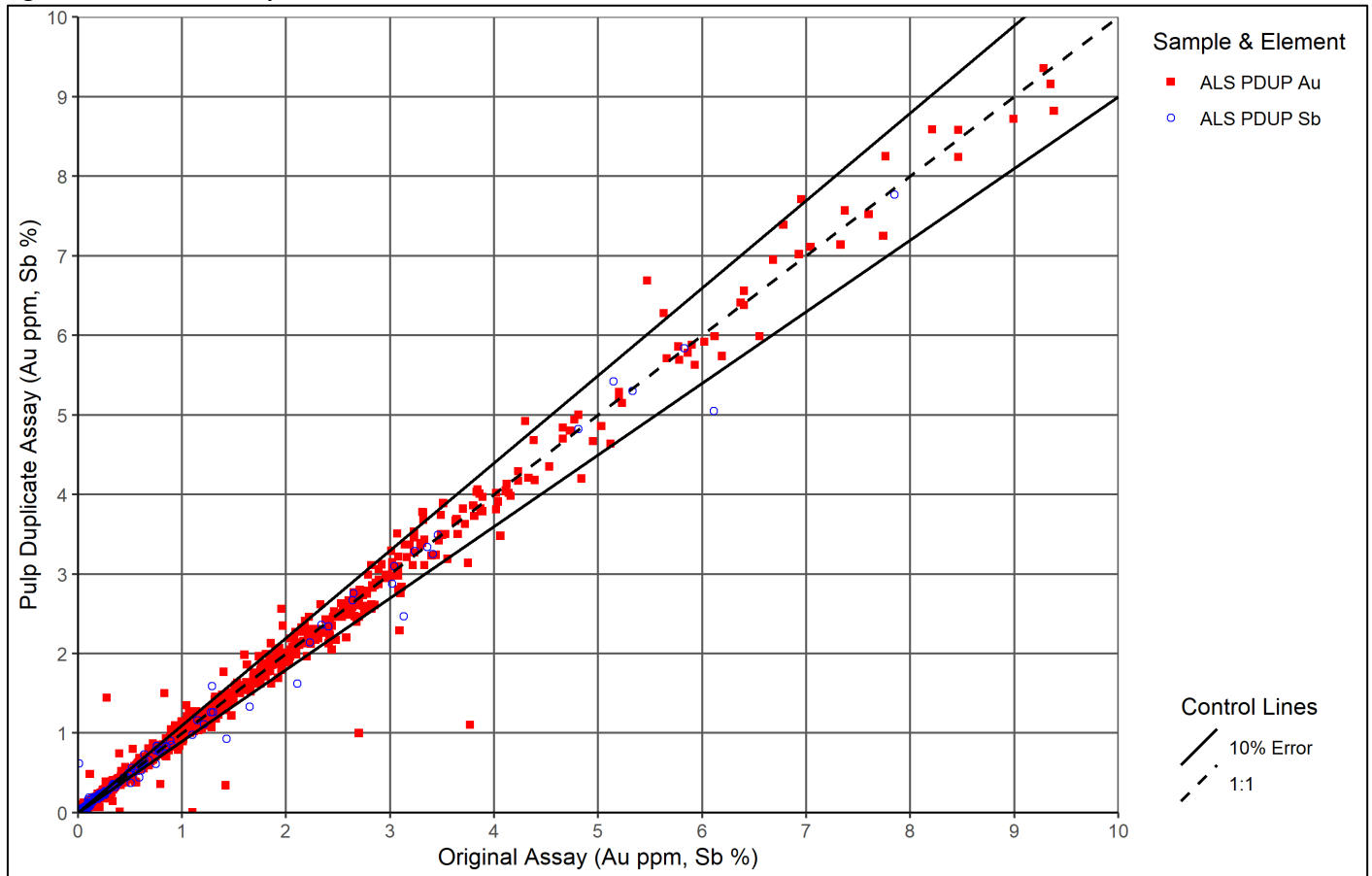
Figure 8-4: Field Duplicates



### 8.6.6 Pulp Duplicates QA/QC

ALS prepared one pulp duplicate for every twenty samples submitted. A total of 3,414 pulp duplicates were produced and assayed of which 1,788 were above 0.025 ppm for gold and 165 were above 0.05% antimony. Reproducibility for pulp duplicates was excellent for gold with an RMS CV of 8.7% and reproducibility was good to moderate for antimony with an RMS CV of 11.9%. Figure 8-5 shows scatter plots of the original assay values versus the pulp duplicate values.

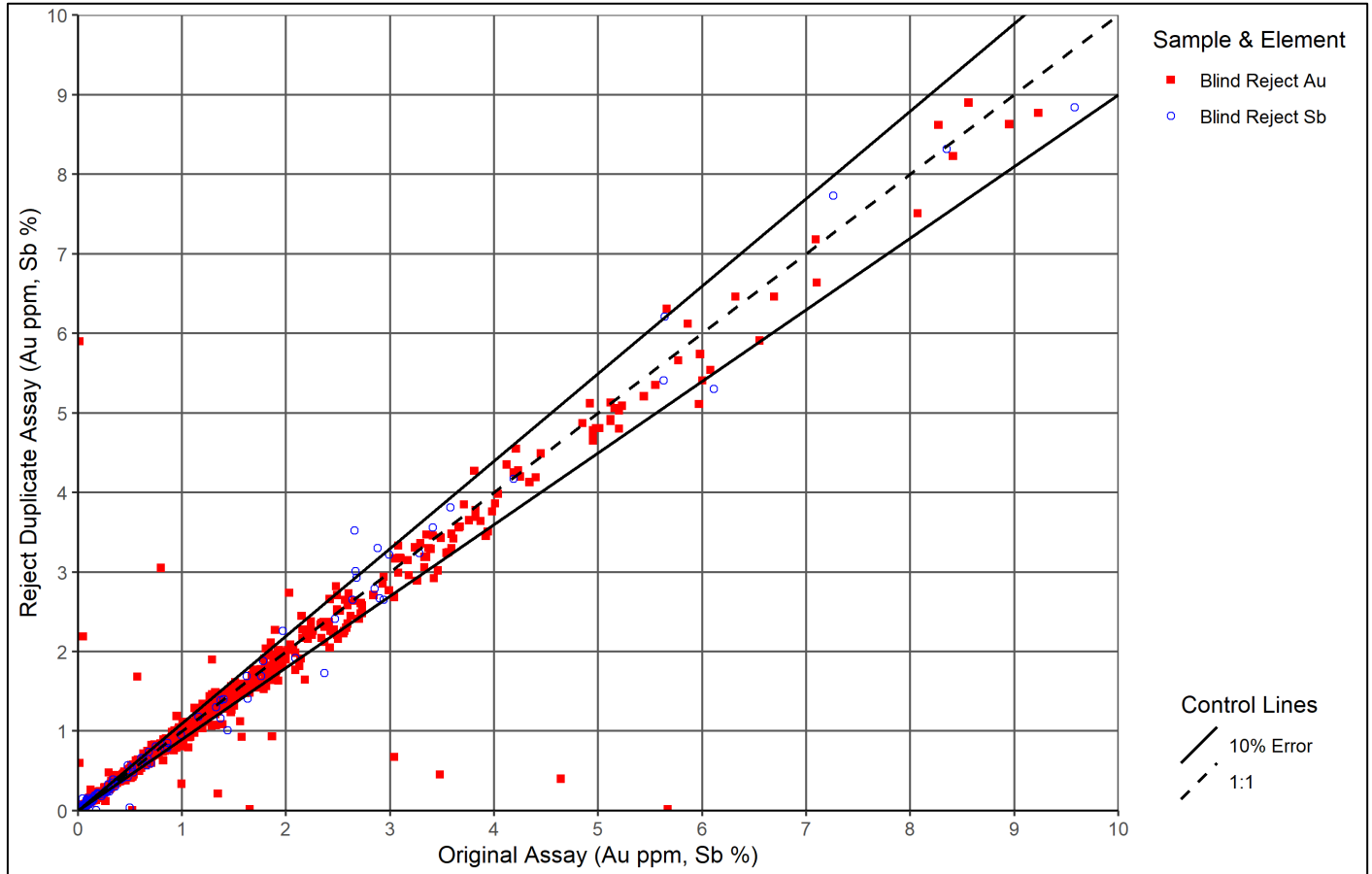
Figure 8-5: ALS Pulp



### 8.6.7 Check Assays QA/QC

Perpetua Resources re-submitted 853 rejects with new sample numbers to ALS for assay to test for reproducibility and consistency (blind rejects). Out of the submitted rejects, 786 were above 0.025 ppm by gold fire assay and 118 were above 0.05% antimony by XRF. Within these parameters, the RMS CV for gold was 12.4% and the RMS CV for antimony was 10.4%, both values showing acceptable reproducibility. A scatterplot of these values is shown on Figure 8-6.

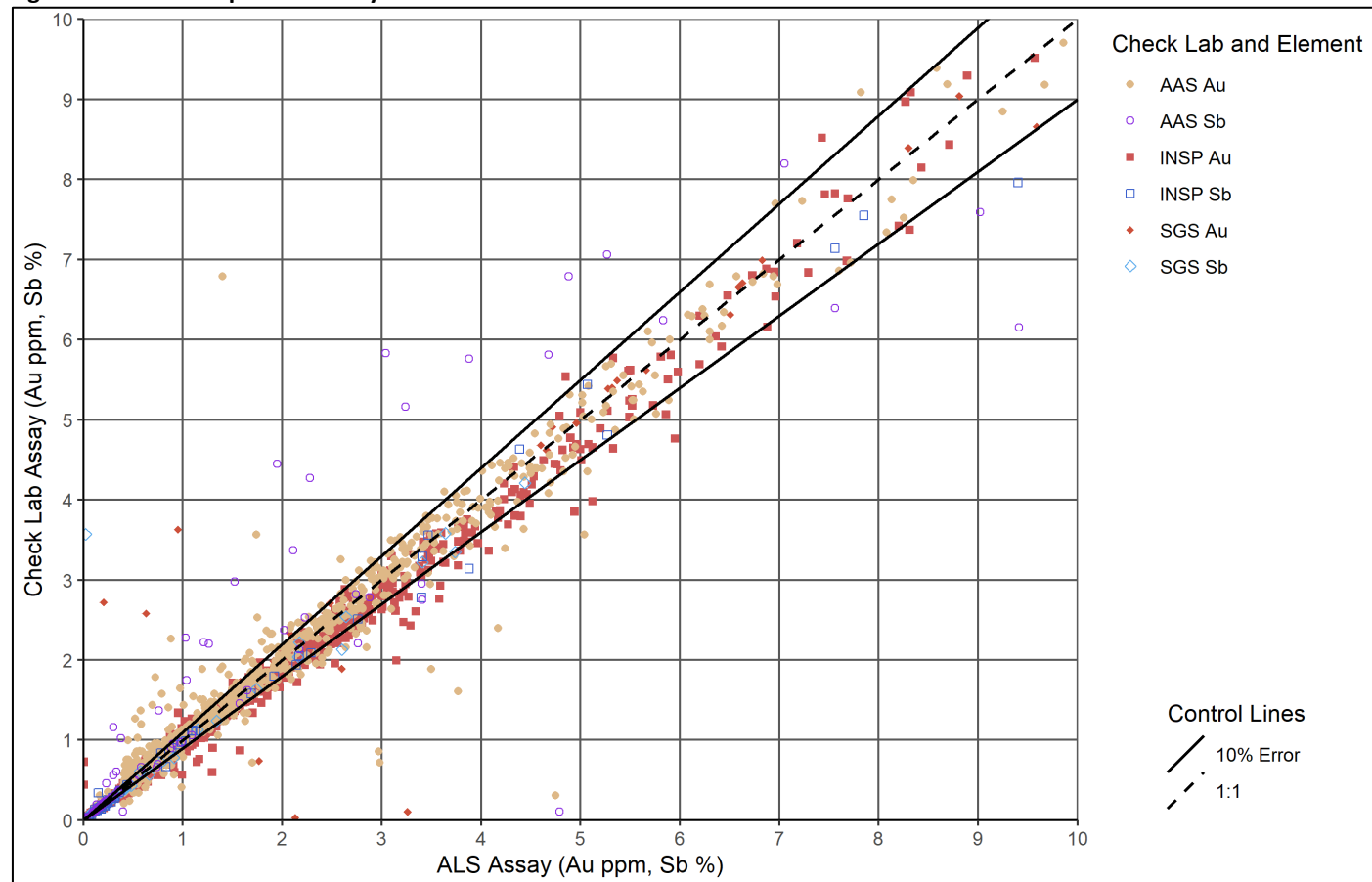
Figure 8-6: Blind Rejects Assays



Pulps were submitted to three different ISO certified laboratories for umpire assays as a cross-check of ALS performance including: American Assay Labs, Inspectorate, and SGS. A total of 1016 pulps were submitted to Inspectorate for gold fire assay of which 988 were above 0.025 ppm. The average percent difference between the Inspectorate assay and the reported ALS assay was -4.57%. Of these samples, 125 were also assayed for antimony of which 63 exceed 0.05% antimony. The average percent difference between ALS and Inspectorate antimony assays for these samples was -4.41%. A total of 1,031 pulps were submitted to AAS for gold fire assay of which 908 were above 0.025 ppm. Eighty-five samples were assayed for antimony that exceeded 0.05%. The average percent difference between the AAS assay and the reported ALS assay was 4.49% for gold and 21.84% for antimony. Removal of sample outliers (absolute percent difference more than 75%) reduces the average antimony difference to 6.88%. Discrepancies are attributed to sample numbering issues at the check lab.

SGS analyzed 177 samples of which 62 were assayed for gold only and 115 were assayed for gold and antimony. One hundred sixty-two samples were above 0.025 ppm gold and 43 samples were above 0.05% antimony. The average percent difference between the SGS assay and the reported ALS assay for gold was 1.08% and for antimony was -3.95%. Figure 8-7 shows the QQ plot of umpire laboratory check assays of pulps.

Figure 8-7: Pulp Check Assays



### 8.6.8 Work Order Evaluation and Corrective Actions

Assay shipments containing drill samples, duplicates, standards and blanks are grouped as work orders, typically containing 50 samples total. Beginning in 2012 and retroactively, each standard and blank within ALS work orders was systematically evaluated using the criteria discussed in Sections 8.6.3 and 8.6.4. If a work order was flagged as questionable, the failed standards or blanks were re-assayed along with the 5 samples sequentially above and below the failure. Some work orders required assay revisions and others contained results that were confirmed by re-assay. When necessary, ALS would re-issue revised certificates and the Perpetua Resources database was updated accordingly. Table 8-6 summarizes the total and revised work orders over the Project to date.

Table 8-6: Work Orders and Revisions by Year

Year	Work Orders	Flagged Work Orders	Flagged Work Order Proportion	Work Orders with Original Results Confirmed	Revised Work Orders
2009-2014 (PEA & PFS)	678	104	15%	75	29
2014-2018 (FS)	32	2	6%	0	2

## 8.7 Conclusions

It is the opinion of the QP that the sample collection, preparation, analysis and security for all Perpetua Resources drilling are consistent with appropriate methods for disseminated gold–antimony–silver deposits:

- Perpetua Resources drill programs included insertion of blank, duplicate and standard reference material samples;
- Perpetua Resources QA/QC program results do not indicate any problems with the analytical programs or procedures;
- Perpetua Resources data are subject to validation, which includes checks on lithology data, mineralization/alteration data, sample numbers, and assay data. The checks are appropriate and consistent with industry standards;
- Independent data audits have been conducted, and indicate that the sample collection and database entry procedures are acceptable; and
- All core has been catalogued and stored in secure designated areas and is appropriately safeguarded against weather.

Where historical data are available, sample collection, preparation, analysis, and security for pre-Perpetua Resources drill programs, are generally considered to have used accurate methods for disseminated gold–antimony–silver deposits but can only be partially verified with appropriate supporting QA/QC results. The QP is of the opinion that the quality and reliability of the sample collection methods, sample security protocols, sample preparation and gold, antimony, and silver analytical data from the pre-Perpetua Resources drilling programs are sufficient to support their use in mineral resource and mineral reserve estimation with the exception of certain holes flagged and determined to be unreliable due to lack of supporting data, poor sample quality, lack of survey control, inappropriate analytical methods or reporting limits or obvious bias. Furthermore, the QP is of the opinion that the quality of the gold, antimony, and silver analytical data from Perpetua Resources drill programs is sufficiently reliable to support their use in mineral resource and mineral reserve estimation with the exception of certain reverse circulation holes that are flagged for exclusion due to cyclicity issues. These assumptions of validity are based on various reviews including analysis and inspection of original drill logs, assay certificates, statistical validations, assessment of geological continuity between pre-Perpetua Resources and Perpetua Resources drill holes, density of drilling, available pre-Perpetua Resources operator laboratory check assays and standards and inter-hole continuity.

## 9 DATA VERIFICATION

### 9.1 Introduction

Data verification programs have been undertaken by numerous independent consultants as well as Perpetua Resources personnel. This section summarizes the verification work and practices employed for both historical and current data. The Qualified Person (QP) responsible for sections 11 and 12 of this Report, Christopher Dail, C.P.G., believes that the datasets are validated and verified sufficiently to support their use in mineral resource and mineral reserve estimation for each of the respective deposits.

The QP made multiple site visits to Perpetua Resources' SGP site in Valley County, and other facilities in Ada County, Idaho, between 2009 and 2025. The most recent visit was in December 2025.

The offices, core logging, and storage facilities have been maintained well and have been clean, well-organized, and provide suitable work space for logging, sample management and archival of technical records. Records for drill and other media sample collection, chain of custody, analytical work and databases are well organized and archived for each stage of the logging and sampling process. All methods and processes adhere to industry standards and best practices and no issues were identified.

During multiple site visits from 2009-2025, inspections of the workshops, offices, reclaimed drill sites, the Yellow Pine, Hanger Flats and West End mineral resource areas along with the outcrops, historical drill collars, and areas of potential disturbance for potential future mining operations have been examined by the QP. Routine site visits have also included multiple visits to the village of Yellow Pine, Idaho, which is the populated area most likely to be affected by any potential mining operation, along with the surrounding environments.

### 9.2 Perpetua Resources Data Reviews

Perpetua Resources' professional personnel have constructed and maintained the drillhole and geologic solids databases in-house since project inception. A database specialist is supervised by senior geology staff who is responsible and accountable for all data stored in the drillhole database computer directories. Perpetua Resources has updated and revised the drillhole database on numerous occasions.

Perpetua Resources and its contractors have conducted numerous audits of manual inputs of pre-Perpetua Resources drillhole information from original paper log copies. In house audits completed by Perpetua Resources geologists include a 100% audit of drillhole collar locations (March, 2013), a 5% audit of pre-Perpetua Resources assay records (January, 2013), a 100% audit of gold assays and lithology records for the West End Deposit (April, 2013) and a 100% audit of USBM assay records for the Yellow Pine Deposit (May, 2013). In addition, Perpetua Resources routinely electronically verifies assay records in the drillhole database against original electronic laboratory certificates for Perpetua Resources drilling. Independent contractors completed a 1% audit of pre-Perpetua Resources assay records against the original paper log copies and a 5% audit of Perpetua Resources assay records against PDF lab certificates

(February, 2014) and a 100% electronic audit of Perpetua Resources Yellow Pine assay records against original electronic lab certificates as well as a 100% audit of post-PFS drillhole data in 2018.

### 9.3 Historical Drillhole Data

Perpetua Resources and its contractors have completed numerous validations to assess the accuracy of the historical drillhole data and evaluate what data sets are appropriate for the estimation of mineral resources. The QP has directed and reviewed these validations throughout his involvement with the Project, allowing for confidence in the quality of legacy data. Perpetua Resources and previous operators on the property have conducted extensive confirmation drilling programs that provide the basis for statistical and graphical inter-campaign drillhole data validations. Statistical validations completed in 2014 included paired sample analysis, comparison of de-clustered population statistics, panel comparisons and block kriging using different data sets. Prior to statistical validation, data from some drillhole campaigns were deemed unreliable and were removed from the database used for mineral resource estimation in Section 11 of this Report.

The review indicates that post-1973 drilling in the Yellow Pine, Hangar Flats and West End deposits generally show overall good agreement with Perpetua Resources drilling and between pre-Perpetua Resources campaigns, with certain exceptions. Pre-1953 USBM drilling and Bradley Mining Company surface drilling also compare well to Perpetua Resources and other post-1973 drilling campaigns for gold. Underground drilling generally shows a moderate high bias as compared to Perpetua Resources drilling, as do antimony assays in the Hangar Flats and Yellow Pine deposits. Observed bias in legacy underground drilling campaigns was attributed to orientation bias and structural controls on mineralization rather than analytical or sampling bias.

Perpetua Resources completed mineral resource sensitivity studies to further quantify the potential impact of use or exclusion of various drillhole information. Sensitivities for Yellow Pine in 2014, as previously discussed in the PFS, found only a 4% increase in contained gold using all drillhole data when compared to using only post 1973 data. Similar magnitude changes were observed when excluding Hecla drillhole data for the estimation of mineral resources in the Homestake area of the Yellow Pine deposit. Mineral resource sensitivities in 2018, using updated geological models, indicated <4% change for Yellow Pine and <3% change for Hangar Flats by excluding pre-Perpetua Resources data. These sensitivity results are well within acceptable limits for validation of legacy drillhole information and the use of legacy drillhole information in the estimation of mineral resources.

### 9.4 Database Verification

Perpetua Resources employs multiple electronic verification measures to regularly validate the database for accuracy in addition to the periodic manual verifications. Interval verification tools are run to check for intervals that are overlapping or out of sequence. Digital assay data received from the primary assay laboratory are imported directly into the database and then manually verified against lab certificates. Assay data in the database are periodically verified against a master assay spreadsheet and original laboratory analytical reports to prevent assay value errors. Furthermore, sample number ranges are examined for unreasonable differences that may indicate sample switches or typing errors.

## 9.5 Conclusions

The datasets employed for use in the mineral resource estimates are a mix of historical data and current, modern data. There is always a concern with respect to validity of the historical data. Extensive validation and verification must be performed in order to ensure that the historical data may be relied upon. The QP has directed and reviewed extensive validation and verification studies along with procedures performed by external consultants and by Perpetua Resources in order to ensure the validity of the mineral resource estimates. The methods and procedures entailed detailed analysis and resulted in subsets of data being excluded.

In the opinion of the QP, the data and results are valid based on the site visits and inspection of all aspects of the Project, including methods and procedures used. It is the opinion of the QP that all work, procedures, and results have adhered to best practices and industry standards. Perpetua Resources employs competent professionals that adhere to industry best practices and standards. The QP notes that Perpetua has numerous third parties conducting due diligence and the authors of prior technical reports (SRK, 2011; SRK, 2012; M3, 2021; M3, 2022) collected duplicate samples and did not identify any material concerns with Perpetua's sample procedures, logging, QA and QC protocols, and data management.

It is the opinion of the QP that the data used for estimating the current mineral resources for the Yellow Pine, Hanger Flats, West End and Historical Tailings deposits is adequate for this stage of development and may be relied upon to report the Mineral Resources and Mineral Reserves contained in this Report.

## 10 MINERAL PROCESSING AND METALLURGICAL TESTING

Previous phases of mineral process and metallurgical testing were conducted and reported in conjunction with the NI 43-101 PEA (SRK, 2012) and NI 43-101 PFS (M3, 2014) studies. Additional testing included development of composites for variability testing, grinding characterization (Sun, 2017), mineralogical characterization (Palko, 2011a; 2012a; and 2012b), flotation variability testing, grind optimization, production of concentrates for hydrometallurgical testing, cyanide leaching of flotation tailings, and hydrometallurgical testing. The hydrometallurgical testing included batch autoclave pressure oxidation (POX) testing, *in situ* acid neutralization, continuous POX pilot testing, neutralization testing, arsenic stability investigation, and detoxification. All these studies are documented in detail in the 2021 TRS, 2022 TRS update and studies referenced therein.

More than 100 technical metallurgical reports and memoranda have been issued from ten years of testing on the Stibnite Gold Project. The key reports supporting the hydrometallurgical component of the study are listed later in this section. Table 10-1 is a listing of the more important reports that provided background data to the sections on mineral processing and alternative treatment of process products. Additional reports are referenced within these as well as in the 2021 TRS and 2022 TRS update.

**Table 10-1: Stibnite Project Metallurgical Testing**

Year	Laboratory	Project Number	Title/Subject
2011	Blue Coast Metallurgy	PJ025	Hangar Flats Gold Department Study / mineralogy
2011	Blue Coast Metallurgy	PJ025	West End Gold Department Study / mineralogy
2012	Blue Coast Metallurgy	PJ025	Yellow Pine Gold Department Study / mineralogy
2012	SGS Canada (Burnaby)	50146-001 part A	Comminution Characteristics of Samples from the Golden Meadows Project / comminution data
2012	SGS Canada (Burnaby)	50146-001 part B	Recovery of Gold and Antimony from Golden Meadows Project Samples – Master Composites / mineralogy data
2013	SGS Canada (Burnaby)	50146-001 part C	Recovery of Gold and Antimony from Golden Meadows Project Samples – Variability Composites / mineralogy data
2013	Kingston Process Met	P1319	Sb Concentrate Treatment / thermal treatment of stibnite concentrates
2013	SGS Canada (Lakefield)	14129-001	Recovery of Gold from Historic Golden Meadows Tailings Deposit / scoping study for reprocessing of historic tailings
2014	SGS Canada (Burnaby)	50146-002 part 1	Master Composites Final Report / grind and reagent optimization, flotation flowsheet confirmation, environmental testing
2014	SGS Canada (Burnaby)	50146-002 part 2	Variability Composites Final Report / confirmatory variability flotation, early production flotation, oxide-transition study
2014	SGS Canada (Burnaby)	50146-002 part 3	Auxiliary Testwork / bulk stibnite con production, scoping flotation tailings leach study, whole ore and tailings leach development study
2014	SGS Canada (Lakefield)	13880-001 part 2	Recovery of Sb from Golden Meadows Stibnite Concentrate / scoping antimony leach – electrowinning study
2014	SGS Canada (Lakefield)	13880-004	Sb Leach EW LCT / locked cycle antimony leach EW program

Year	Laboratory	Project Number	Title/Subject
2014	SGS Canada (Lakefield)	14129-002	Historic Tailings Development / mineralogy, flotation, leaching program
2015	Kemetco	I1405-BCM	Antimony Leach and Recovery / leach of stibnite concentrates and recovery of sodium antimonate product
2017	Blue Coast Research	PJ5197	Diagnostic Program Report / amenability of lithologic rock type samples to flotation and cyanidation, comparative BWi program
2017	Blue Coast Research	PJ5208	Pilot Plant Report / production of concentrate and tailings for further testing
2017	Blue Coast Research	PJ5231	Flotation Cleaning Pilot Plants Report / production of additional concentrate for POX piloting campaigns
2017	Blue Coast Research	PJ5250	Shippable Concentrate Program / flotation program to investigate production of saleable gold concentrates
2017	SGS Canada (Burnaby)	50146-005 part 1	Grindability Testing on Samples from the Stibnite Gold Project / Comminution
2018	Blue Coast Research	PJ5197	Variability Program Final Report / response of lithologic rock type composites to standardized flotation and leaching flowsheets
2018	SGS Canada (Burnaby)	50146-005 part 2	Flotation Optimization / grind and reagent optimization for FS design, locked cycle testing of final flowsheet conditions
2018	SGS Canada (Burnaby)	50146-005 part 3	Auxiliary Testing / bulk low Sb concentrate production for POX testing, concentrate cleaning studies
2018	SGS Canada (Burnaby)	50146-008	Concentrate Production for POX Variability / concentrate production based on mining sequences for kinetic POX testing in Australia

## 10.1 Process Flowsheet Development

Process mineralogical studies supporting the 2012 PEA and 2014 PFS indicate that gold in all three deposits is hosted in pyrite/arsenian pyrite and arsenopyrite and is predominantly refractory to direct cyanidation. However, discrete free gold is present in oxidized portions of the West End Deposit, which is amenable to cyanide recovery. Antimony in the Yellow Pine and Hangar Flats deposits occurs predominantly as stibnite and is typically coarse-grained when occurring at head grades greater than 0.1% antimony. Selective antimony flotation can be used to produce a saleable antimony concentrate prior to flotation of the sulfide concentrate for POX.

Considerable testing during the 2012 PEA and 2014 PFS studies was conducted on samples from the Yellow Pine, Hangar Flats and West End deposits that supported a process flowsheet entailing bulk sulfide flotation to maximize recovery of gold to a sulfide concentrate amenable to treatment by POX for materials assaying less than 0.1% antimony. For materials with antimony above this level, a selective antimony flotation process would be used to first produce a shippable antimony concentrate leaving a second, gold-bearing bulk sulfide rougher concentrate to be floated from the antimony flotation tailings. Some of the oxidized West End ores are free milling, and an ore leaching process was developed to treat these materials. Other West End materials are transitional (mixed oxide and sulfide), and a combination flotation and tailings leach process was developed to treat this material. Testing was also conducted on samples of the Historical (Bradley) tailings. This work showed the Historical Tailings could be processed using the same flowsheet most likely as a blend with fresh sulfide ores.

## 10.2 Comminution and Flotation Studies

Comminution testing, including 31 JK Drop Weight and SMC tests, 35 Bond Ball Mill Work Indices, 21 Bond Rod Mill Work Indices, 19 Crusher Work Indices and 16 Abrasion Indices have been conducted on samples from the Project. In addition, comparative work index tests were completed on 12 (10 lithological rock type samples and 2 Yellow Pine composites) samples. Another fifty of the lithological rock type samples had estimated work index values calculated using a combination of discharge p80 and a regression formula based on the 12 comparative and 4 other, known BWi, samples. These data show the ores to be amenable to SAG milling and the Bond Ball Mill work index to a closing size of 150 microns, averages 13.5 kilowatt-hours per metric tonne (kWh/t), as shown in Table 10-2.

**Table 10-2: Grinding Characterization Results**

Test	Units	No. of Tests	Yellow Pine		No. of Tests	Hangar Flats		No. of Tests	West End	
			Avg.	75th Percentile		Avg.	75th Percentile		Avg.	75th percentile
<b>JK Drop Weight SAG Testing</b>										
A x b	N/A	1	103.5	n/a	1	123.2	n/a	1	63.4	n/a
Ta	N/A	1	0.68	n/a	1	1.5	n/a	1	0.37	n/a
<b>SMC Testing</b>										
A x b	N/A	10	93.6	17.5	10	159.0	105.2	8	50.0	37.6
Ta	N/A	10	0.93	0.84	10	1.61	1.00	8	0.49	0.37
<b>Crusher and Mill Index Testing</b>										
Crusher WI	kWh/t	7	5.7	6.1	7	6.0	7.0	5	9.6	12.5
Abrasion Index	N/A	6	0.21	0.25	5	0.19	0.22	3	0.24	0.31
Bond Rod Mill WI	kWh/t	9	11.2	11.3	7	10.5	10.8	5	13.9	15.0
Bond Ball Mill WI @ 150µm	kWh/t	7	13.7	14.1	7	13.3	13.6	7	13.0	13.5
Bond Ball Mill WI @ 100µm	kWh/t	5	16.2	16.4	5	16.0	17.1	5	16.2	16.4
Comparative BWI @ 100µm	kWh/t	8	14.2	15.0	1	12.5	n/a	3	11.3	12.1
Estimated BWI @ 100µm	kWh/t	30	14.4	15.0	5	12.5	13.1	15	12.7	13.6

The flotation testwork conducted following the NI 43-101 2014 PFS focused on optimizing the flotation reagents and primary grind to produce bulk sulfide flotation concentrates suitable for pressure oxidation and a saleable antimony concentrate. Six master composites were subjected to different treatment schemes varying the dosage of activators, depressants and collectors to economically optimize the dosage of each of the key flotation reagents (Table 10-3).

**Table 10-3: Reagent Dosage by Feed Type (in g/t)**

Circuit	Reagent	High Antimony		Low Antimony		
		Yellow Pine	Hangar Flats	Yellow Pine	Hangar Flats	West End
Grinding	Sodium cyanide	35	35	-	-	-
	Lime	200	225	-	-	-
	Copper Sulphate	-	-	100	100	100
Sb Conditioning	Lead nitrate	200	250	-	-	-
	Cytec 3418A	15	10	-	-	-
Antimony Rougher Flotation	Cytec 3418A	-	-	-	-	-
	MIBC	20	25	-	-	-
Antimony Cleaner Flotation	Sodium cyanide	20	20	-	-	-
	Cytec 3418A	-	4	-	-	-
	Lead nitrate	-	20	-	-	-
	MIBC	-	-	-	-	-
Bulk Sulfide Conditioning	Copper Sulphate	120	100	-	-	-
	PAX	65	60	35	35	35
	Aero 3477	-	-	10	10	-
Bulk Sulfide Rougher Flotation	PAX	135	90	90	90	90
	Copper Sulphate	30	-	-	-	-
	Aero 3477	-	-	40	40	-
	MIBC	35	15	45	25	-
Bulk Sulfide Cleaner Conditioning	Copper Sulphate	-	-	-	-	50
Bulk Sulfide Cleaner Flotation	PAX	-	-	-	-	60
	Aero 3477	-	-	-	-	-
	MIBC	-	-	-	-	-

Concentrate upgrading was deemed necessary in West End to reduce the carbonate to sulfur ratio to near 1.0 in order to ensure autothermic conditions in the autoclave. Cleaner flotation testing of the West End rougher concentrate successfully upgraded the sulfur concentration from 3-4% to >7% with gold losses of 3-7% while maintaining a carbonate to sulfur ratio  $\leq 1.0$ . An extensive trade-off testing program identified the optimal residence times and optimal grind size — 80% passing 85 microns — was based on replicate batch testing, with confirmation batch and locked cycle tests at optimal reagent and grind conditions then conducted on the master composites (Table 10-4).

**Table 10-4: Grind Size and Residence Times**

Circuit	Reagent	High Antimony		Low Antimony		
		Yellow Pine	Hangar Flats	Yellow Pine	Hangar Flats	West End
Grinding, 80% passing size (microns)		85	85	85	85	85
<b>Residence times (minutes)</b>						
Sb Conditioning	Lead nitrate	3	2	-	-	-
	Cytec Aerophine® 3418A	1	1	-	-	-
Sb Rougher Flotation		2	2	-	-	-

Circuit	Reagent	High Antimony		Low Antimony		
		Yellow Pine	Hangar Flats	Yellow Pine	Hangar Flats	West End
Sb Cleaner 1 Conditioning	Sodium cyanide	1	1	-	-	-
	Lead nitrate	-	1	-	-	-
	Cytec Aerophine® 3418A	-	1	-	-	-
Sb Cleaner 1		2	2	-	-	-
Sb Cleaner 2 Conditioning	Sodium cyanide	1	1	-	-	-
	Lead nitrate	-	1	-	-	-
<b>Residence times (minutes)</b>						
	Cytec Aerophine® 3418A	-	1	-	-	-
Sb Cleaner 2		2	2	-	-	-
Bulk Sulfide Conditioning	Copper Sulphate	3	2	In grind	In grind	In grind
	PAX/Aero® 3477	1	1	1	1	1
Bulk Sulfide Float	Rougher flotation	31	29	31	31	31
Bulk Sulfide Float	Cleaner flotation	-	-	-	-	20

Two flotation pilot plant runs on 4,157kg and 2,415 kg of available low Sb sulfide material from 85% Yellow Pine and 15% Hangar Flats were conducted to generate material for autoclave testwork at AuTec and CESL in Vancouver, BC Canada. The first pilot included rougher flotation and targeted a 5.0% sulfur grade in concentrate, while the second pilot targeted cleaner concentrate achieving a target 7.5% sulfur grade. A high antimony pilot plant on 1,066kg of high Sb feed was also undertaken to produce a bulk stibnite concentrate for SLS and downstream processing testwork. Remaining bulk sulfide concentrates (Conc 1-2, 10) after these programs were forwarded to SGS Malaga, Australia for POX and neutralization batch and pilot plant programs (POX with kinetic sampling capabilities) and follow-on geochemical testing.

A bulk flotation program was executed at SGS in Burnaby, BC Canada to produce concentrates for hydrometallurgical POX and downstream processing (neutralization, cyanide leaching, and arsenic stabilization) variability testing at SGS in Malaga, Australia (Gajo, 2018). In this program, rougher flotation was first used to make concentrates targeting the 5.0% sulfur content from five Yellow Pine and Hangar Flats feed composites. Preliminary POX testing indicated that a higher sulfur content would be required, so these rougher concentrates were taken from freezer storage and upgraded through cleaner flotation to the ~7.5% sulfur target. Three West End and one West End-Hangar Flats blend composites were subject to cleaner flotation with products kept as separate kinetic cleaner concentrates in order to allow blending to varying carbonate to sulfur ratios in POX testing. Estimated recoveries are included but should be used with caution as cleaner flotation was conducted several months after rougher flotation and some cleaner recoveries were poor on the likely tarnished rougher concentrates. Subsamples of rougher and cleaner tailings were also sent for ultimate geochemical analyses on simulated plant tailings.

**Table 10-5: Flotation Concentrate Sample Assays for POX Variability Testing**

Description	SGS #	Mass	Au (g/t)	Sulfur (%)	CO3 (%)	Au Recovery To Conc
Yellow Pine Years 0-3 Low Sb	Conc 3	5.1	16.9	8.8	3.9	89
Yellow Pine Years 0-3 High Sb	Conc 4	5.8	12.8	8.1	3.2	74
Yellow Pine Years 4+ Low Sb	Conc 5	9.0	20.8	9.7	4.9	93

Description	SGS #	Mass	Au (g/t)	Sulfur (%)	CO <sub>3</sub> (%)	Au Recovery To Conc
Hangar Flats Remote from Meadow Creek Fault (HFO)	Conc 6	10.0	11.9	8.9	2.4	91
Hangar Flats Meadow Creek Fault Zone (HFFZ)	Conc 7	6.3	9.5	7.6	2.6	83
West End Blend High, 35% Low Carbonate – 65% High Carbonate (WEBH)	Conc 8	3.7	21.4	16.4	8.9	78
West End Blend High, 35% Low Carbonate – 65% High Carbonate (WEBH)	Conc 9	5.9	16.6	11.3	10.8	79
Yellow Pine/Hangar Flats Pilot Sample (5208)	Conc 10	552	11.1	7.6	3.5	92
West End Blend High, 35% Low Carbonate – 65% High Carbonate (WEBH)	Conc 11- Cln 2-1	27.8	23.4	16.2	9.33	79
	Conc 11-Cln 2-2	16.6	11.9	6.00	12.4	
	Conc 11-Cln 2-3	6.5	3.7	1.35	1.0	
Hangar Flats/West End blend 2, 43% HFO, 7% HFFZ, 18% WE low carbonate, 32% WE high carbonate (HFWE-B2)	Conc 12 Cln 1-1	29.4	16.6	13.0	5.88	86
	Conc 12 – Cln 1-2	17.3	8.04	4.20	7.45	
	Conc 12 – Cln 1-3	11.0	2.29	1.04	7.87	
West End Blend Medium, 58% Low Carbonate – 42% High Carbonate (WEBM)	Conc 13 – Cln 2-1	0.88	31.7	21.8	6.96	82
	Conc 13 Cln 2-2	0.37	23.1	13.9	8.95	
	Conc 13 Cln 2-3	0.14	10.9	4.91	11.6	
West End Blend Low, 67% Low Carbonate – 33% High Carbonate (WEBL)	Conc 14 – Cln 2-1	0.61	32.7	24.2	5.82	80
	Conc 14 – Cln 2-2	0.40	20.9	13.0	8.82	
	Conc 14 – Cln 2-3	0.12	9.36	4.49	11.3	

Additional test work focused on cyanide leaching of flotation concentrates and flotation tailings and whole ore leaching of West End oxides (SGS, 2014 part 3; SGS, 2018 parts 2 & 3; BCR, 2018). The cyanide leaching conclusions were that cyanide leaching of rougher tailings from West End transition (mixed sulfide and oxide) material was economically beneficial. Leach testing of rougher tailings from Yellow Pine and Hangar Flats did not produce an economic benefit. Similarly, flotation of West End oxide material with minor gold-bearing sulfide contents did not produce an economic benefit over whole-ore leaching.

During studies to support preparation of the 2022 TRS, one variability study was conducted to assess whether there are geologically identifiable rock types that systematically yield different metallurgy when standardized flotation and leaching protocols were applied in order to yield comparative results. Sixty-two variability composites were developed to represent the major lithological and alteration material blends to be processed from the three deposits during different project periods. Lithological controls were not found to impart significant variability on gold recoveries with the exception of clay-rich fault gouge and transitional materials. A second variability program applied standardized flotation tests with cyanidation of rougher and cleaner flotation tails to fifty-four sulfide and transition composites from the three deposits, and assessed fifty-seven additional West End sub-composites for amenability to recovery of gold by cyanidation. Test work confirmed that lowest recoveries in Yellow Pine and Hangar Flats were found in the fault materials, for the West End and West End-Hangar Flats blends, lower sulfur content and fault material also had adverse effects on flotation. For the West End transitional materials, flotation and POX treatment has a greater economic benefit up to approximately 75% AuCN/AuFA—ratios higher than that would be processed by whole-ore leaching. Studies between 2011-2013 evaluation of methods to reprocess historical tailings by combining them with early production Yellow Pine material showed that historical tailings can be blended with Yellow Pine feed at a rate up to 15% of total feed, resulting in reduction of the grinding work index by 10-14% (Gajo, 2014b).

West End sulfide material is refractory while transition material has a significant cyanide-leachable gold content. Sulfide material will be processed by flotation, concentrate POX and cyanide leaching of the concentrate. Transition material will be treated similarly except that the flotation tailings will also be leached. Oxide material will be whole ore leached with cyanide after crushing and grinding and will bypass flotation. Metallurgical predictions for West End are based on cyanide leachability and on a target concentrate carbonate to sulfur ratio of 1.3:1, as the presence of excessive carbonate in the concentrate inhibits autothermic oxidation and associated gold recovery in the autoclave.

### 10.3 Hydrometallurgical Studies

Batch and pilot plant testwork for the POX and neutralization processes were completed at AuTec (Vancouver, Canada), CESL (Vancouver, Canada) and SGS (Malaga, Australia). These tests were performed on various concentrates derived from ore samples that represent parts of the deposits and mill feed over the life of mine.

Description and documentation for the test programs are included in Table 10-6.

**Table 10-6: Stibnite Project Hydrometallurgical Testing**

Year	Laboratory	Title/Subject
2017	AuTec	Batch Pressure Leach Testwork (Le, 2017a).
2017	AuTec	Pre-Autoclave Pilot Batch Testwork (Le, 2017b).
2017	AuTec	Continuous Pressure Oxidation and Cyanidation on Two Midas Gold Project Concentrate (Ahern, et al., 2017).
2017	AuTec	Solid Liquid Separation Testwork on Pilot Plant Feed and Discharge (Pocock Industrial, 2017).
2017	CESL	Stibnite Gold Project Total Oxidative Leach (TOL) Bench Program (CESL, 2017).
2017	AuTec	POX Discharge Diagnostic Leach Program (Le & Erwin, 2017).
2018	AuTec	Stibnite and West End POX Testwork (Erwin, 2018).
2018	SGS Australia	POX Batch Test (Lima, 2018c).
2018	SGS Australia	Pilot POX Test Program (Lima, 2018c).

Year	Laboratory	Title/Subject
2018	SGS Australia	Neutralization Batch Test (Lima, 2018a).
2018	SGS Australia	Pilot Neutralization Test (Lima, 2018a).
2018	SGS Australia	Geochemical Batch Test Program (Lima, 2018d).
2020	SGS Australia	Batch Test Program – arsenic destabilization identification (SGS Minerals Metallurgy, 2020).

The objective of this 2020 testwork program was to (a) identify under what conditions the arsenic was destabilized in the downstream processing of the pressure oxidation residues, and, (b) establish the impact on the downstream processes after pressure oxidation leach on the solute values especially mercury, arsenic and antimony.

The following process steps were examined during the hydrometallurgical testing programs:

- Rheology testing of concentrate, POX discharge and hot acid cure discharge
- Pressure oxidative leach (POX);
- Corrosion coupon analyses
- Thickening and filtration testing of the POX discharge slurry;
- Partial and full *In-situ* acid neutralization (ISAN);
- Atmospheric Arsenic Precipitation (AAP);
- Slurry neutralization;
- Thickening and filtration testing of the neutralized slurry;
- Cyanide leach / Carbon-in-Leach (CIL);
- Continuous cyanide detox;
- Blending of cyanide detox residue and flotation tailings; and
- Synthetic Precipitation Leaching Procedure (SPLP) testing of combined tailing slurries.

The early batch tests were undertaken at AuTec on a blended concentrate (20% flotation mass pull to yield a sulfide concentrate assaying 5.6% S and blended down to 5.0% with tailings) in March 2017 (Le, 2017a) with the following outcomes:

- The Stibnite Gold concentrate was amenable to acid pressure oxidation at 220°C and a retention time of approximately 60 minutes. After a hot acid cure and CIL, the gold recoveries were 95 to 98%. The recovery of silver was between 1 and 12%.
- Optimized leach feed densities appeared to be in the range of 30-35% for all concentrates.
- The concentrate P80 was 46 µm and 50% of the gold was present in the fractions finer than 25 µm.
- Arsenic in the pressure leach residues was not stable and leached in the hot acid cure step.

- In CIL, the average cyanide consumption was 1.14 kg/t, and lime addition was 7.2 kg/t.

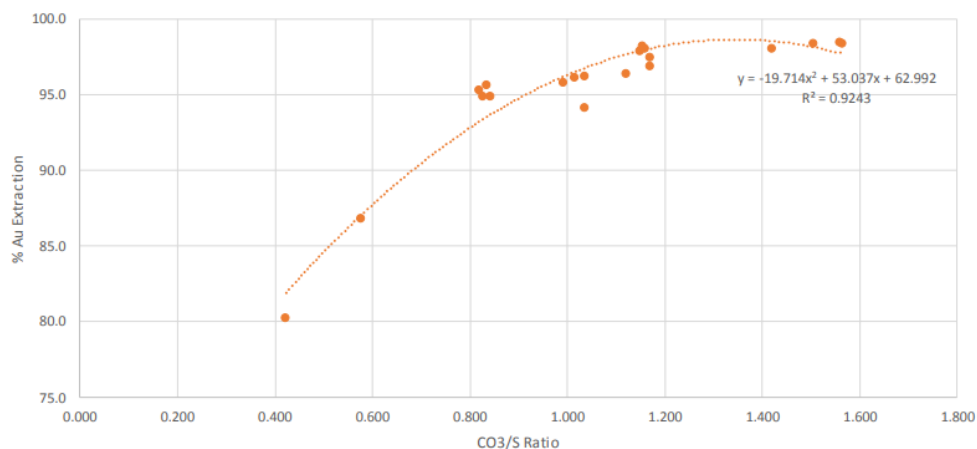
Pressure oxidation tests were also undertaken at CESL and at SGS to investigate neutralization of acid inside the autoclave, or “*in-situ* acid neutralization” (ISAN) to reduce the formation of jarosite and basic iron sulfate thereby increasing the liberation of leachable gold. Neutralization of acid inside the autoclave was accomplished by adding ground limestone in the POX feed to control free acid and sulfate concentrations and limit the formation of jarosite and basic iron sulfate. The objective was to increase ferric concentrations to enhance the formation of scorodite and lower sulfate concentrations to inhibit the formation of pitticite (an unstable arsenic compound). The SGS tests confirmed consistent gold recoveries in the range of 96.5-99.0%.

Standard environmental stability tests were conducted to address the concern associated with pressure oxidation of arsenic-bearing sulfide materials, which is a measure of the composition and stability of arsenic species in the discharge. The U.S. Environmental Protection Agency (EPA) Synthetic Precipitation Leaching Procedure (SPLP) is the accepted method for estimating the adsorption-desorption potential of metals in non-landfill waste solids or soils. SPLP testing of POX residues confirmed additional benefits from ISAN, with SPLP arsenic concentrations decreasing with increasing CO<sub>3</sub>/S mass ratios to about 1.25 or higher. The CO<sub>3</sub>/S ratio, which reflects the magnitude of limestone added, did not appear to affect the silver CIL recovery.

The continuous POX pilot plant was undertaken at SGS Malaga during the period of November 20-26, 2017. The test feed concentrate was generated from low-antimony samples from the Yellow Pine and Hangar flat deposits. The testing was conducted in a 22-liter autoclave with four compartments at a feed rate of 4-6 kg/h and a nominal residence time of 75 minutes. The operating parameters were the same as those established in previous batch tests, but with varying levels of limestone additions to the feed to achieve a range of gross CO<sub>3</sub>/S ratios. The autoclave residue was treated by hot acid cure (HAC) and neutralized prior to cyanide leaching. HAC was bypassed at higher CO<sub>3</sub>/S ratios because the acid content in the slurry was too low to warrant this step.

Figure 10-1 shows the effect of varying gross CO<sub>3</sub>/S ratio (in situ + applied) on CIL gold extraction. The results show increasing gold extraction at higher CO<sub>3</sub>/S ratios up to a value of 1.2; further increases in CO<sub>3</sub>/S ratio appeared to have minimal effect. Increasing the CO<sub>3</sub>/S ratio also appears to favor lower arsenic SPLP values and hence improved arsenic stability in the leach residues. Quantitative mineralogy on the pilot autoclave solids suggested that iron was precipitated as iron (III) hydroxide (or ferrihydrite), and arsenic was precipitated predominantly as scorodite, a stable arsenic product.

Figure 10-1: Effect of Varying Gross CO<sub>3</sub>/S Ratio on CIL Gold Extraction



## 10.4 Arsenic Stability Studies

In the initial metallurgical pilot test work conducted at AuTec, the arsenic in the pressure leach residues was unstable, possibly because of the preferential formation of pitticite over scorodite. In subsequent metallurgical testing at SGS, the stability of arsenic improved with increases in the CO<sub>3</sub>/S ratio to as high as 1.6. The alkalinity in the limestone was postulated to have reduced the propensity for the formation of hydroxy-sulfate compounds, such as basic ferric sulfate and jarosite, and released iron to form ferrihydrite that was able to sequester arsenic as a more stable mineral, such as scorodite. However, subsequent environmental geochemical testing completed on commingled flotation and detoxified cyanide leach tailings from confirmation bulk/batch POX testing at SGS indicated that arsenic was destabilized at some point downstream of the POX process.

A testing program was conducted at SGS in April 2020 to establish how and where the destabilization of arsenic occurred. This program included both partial and total ISAN POX tests with a terminal free acid of 8 to 13 mg/L of H<sub>2</sub>SO<sub>4</sub>, atmospheric arsenic precipitation (AAP), and a two-step neutralization procedure. The AAP process precipitates iron and arsenic slowly at an elevated temperature (92°C) by progressively adding limestone to achieve a pH of approximately 2 with a retention time of 4 to 5 hours. Test results suggested that under these conditions, a stable scorodite precipitate (FeAsO<sub>4</sub>·2H<sub>2</sub>O) formed.

Arsenic removal to levels of approximately 5 mg/L from the partial ISAN autoclave discharge slurries were achieved with the atmospheric arsenic precipitation and required the following conditions:

- Temperatures above 90 °C;
- Aqueous iron-to-arsenic ratios in excess of 2:1;
- Graded pH profile of between 1.2 and 2 over approximately four agitated tanks;
- Retention time of approximately 4-5 hours; and

- The stability of the atmospheric arsenic precipitation residue from the SPLP arsenic result was very acceptable at 0.28 mg/L.

Batch neutralization tests were conducted on the AAP discharge at two discrete pH regions: neutralization to pH 5 with limestone followed by neutralization to pH 10 with lime. The results show that the slurry temperature during the pH 5 neutralization step has no impact on arsenic stability; however, during the pH 10 neutralization step for slurry temperatures greater than 45°C arsenic destabilization was likely to occur. The destabilization was postulated to be related to the increasing free hydroxyl activity with increasing temperature, causing a reaction between the free hydroxyl ions and the remaining pyrite. SPLP testing confirmed that reducing the neutralization temperature of the pH 5 slurry to 45°C prior to raising the pH to 10 minimized this reaction.

Consequently, the flowsheet includes a two-step neutralization circuit, with a cooling circuit between the neutralization steps. Slurry Cooling Towers are included in the design for cooling the slurry prior to the pH 10 neutralization step. No slurry cooling testwork has been done; however, testwork for this circuit should be considered prior to project implementation. The process conditions for neutralization are provided in Table 10-7.

**Table 10-7: Process Conditions in Neutralization**

Parameters	Units	Neutralization Stage pH	Value
Temperature	°C	5	≤ 80
		10	≤ 45
Reagent	-	5	Middle Marble Limestone
		10	Lime
Retention Time	h	5	≤ 0.5
		10	~ 1.0 Note 1
Slurry SG	% solids	Feed to Neutralization	~41.2
		5	~ 45.1
		10	~ 45.5
Slurry Cooling Drift Loss	%	5	~ 0.002
Solids	kg/h	5	~14
Evaporation	t/h	5	~26
Cooling Range	°C	5	~15 (estimate)
Terminal Temperature	°C	5	~60

Note 1: Controlled Adjustment required.

Activated carbon (CIL) was employed in the batch cyanide leach tests where the gold recovery was required. Arsenic values from SPLP of washed CIL residue generally exceed the “cut off” value of 2.0 mg/L thus confirming that the destabilization of arsenic that commenced in the pH 10 neutralization is persistent in CIL. Table 10-8 summarizes the CIL testwork data and results.

**Table 10-8: Summary of CIL Testwork**

Parameters	Units	Value
Sodium Cyanide	kg/t dry feed	1.19
Oxygen	kg/t dry feed	0.96
Lime (Ca(OH) <sub>2</sub> )	kg/t dry feed	21.2
Water Dilution to Achieve 40% solids	t/h	~ 64
Gold Recovery	%	96.7 - 98.4
Silver Recovery	%	3 - 27
Temperature	°C	~ 40
pH at 24hr	-	9.5 - 9.8
Feed SG	% Solids	40%

Batch continuous cyanide detox tests were employed. Samples were taken after 4 turnovers had been achieved. The cyanide detox testwork results are summarized in Table 10-9.

**Table 10-9: Summary of Cyanide Detox Testwork**

Parameters	Units	Value
Sodium Metabisulfite (Over-Stoichiometric)	%	10
Dissolved Oxygen Concentration	ppm	16 – 29
Lime Addition (Ca(OH) <sub>2</sub> )	kg/t dry solid feed	0.021 – 0.042
Temperature	°C	36 – 40
pH	-	8.6 – 8.9
Retention Time	min	18 – 26

The cyanide detox slurry was blended with concentrator tailings thickener underflow and the blend was examined for arsenic stability. The cyanide detox residue from a single pressure oxidation test (POX 5 CIL Detox residue) was submitted to a “kinetic” SPLP program to identify whether time had any impact on the stability of the residue. The residue was stored below its supernatant at 20°C. The results of these tests are provided in Table 10-10 and Table 10-11.

**Table 10-10: Kinetic SPLP of POX 5 CIL Detox Residue**

Parameters	Units	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Arsenic, As	mg/L	3.28	3.60	3.75	3.88	3.44	3.62	3.44
Mercury, Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Antimony, Sb	mg/L	<0.1	<0.1	0.016	0.035	0.013	0.018	0.018

**Table 10-11: Kinetic SPLP of POX 5 CIL Detox Residue Blended with Tailings**

Parameters	Units	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Arsenic, As	mg/L	0.41	0.46	0.46	0.59	0.46	0.46	0.47
Mercury, Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Antimony, Sb	mg/L	<0.1	<0.1	0.173	0.276	0.208	0.32	0.33

The assay values suggest that there may be some destabilization of antimony. However, the SPLP arsenic in the Detox Residue blended with tailings does not indicate cause for concern.

## 10.5 Hydrometallurgical Recovery

Test data using the FS flowsheet has been generated on gold (pyrite/arsenopyrite) concentrates from composite samples of the following ore types and blends:

- Yellow Pine High Antimony (Con 4);
- Yellow Pine Low Antimony (Con 3, Con 5);
- Hangar Flats Low and High Antimony (Con 6, Con 7);
- West End Sulfide/Transition (Con 8, Con 9, Con 11, Con 13, Con 14) sent as individual kinetic concentrates in order to investigate carbonate to sulfur ratio effects on the POX process;
- Blended Composite consisting of 85% Yellow Pine and 15% Hangar Flats (Con 1 (advance 7%S), Con 2 (advance 7.5%S), Con 10); and
- Blended composite representing periods of blended Hangar Flats/West End production (Con 12).

A series of options for the prediction of hydrometallurgical recoveries have been considered:

- Option 1: Average all the data, weighted evenly.
- Option 2: Average of all data, weighted evenly, excluding Con 8. All subsequent options excluded Con 8.
- Option 3: Projected recoveries for each ore type/source reflected average result from the relevant tests.
- Option 4: Projected recoveries for each ore type/source reflected average result from the relevant tests except Yellow Pine Low Sb (blend of Yellow Pine and Hangar Flats), where the pilot plant result alone was used.
- Option 5: Only the pilot plant result was used.

Option 4 was adopted for forecasting the extraction of gold to solution for the project metallurgical forecast. The pertinent input data and chosen recoveries are shown in Table 10-12.

Downstream processing steps (carbon absorption, desorption and refining) all incur small gold losses. Using the previously assumed parameter, these have been assumed to add up to 0.8% for both gold and silver. Accordingly, recovery to doré from leach solution has been assumed to be 99.2%.

No testing was done on concentrate from re-flotation of Bradley Tailings material, so it is assumed that the POX recovery will be the same as for Yellow Pine low Sb material.

**Table 10-12: Input Data and Chosen POX-CIL Recoveries**

Metal	Ore Source/Type	Composite	Individual Recoveries, %	Selected Recovery, %	Notes
Gold	YP yr 0-3 High Sb	Con 4	96.7	96.0	Con 4 recovery, carbon and solution losses assumed to be 0.8%
	85% YP/15% HF	Con 1	97.9	96.7	
	85% YP/15% HF	Con 2	98.2		

Metal	Ore Source/Type	Composite	Individual Recoveries, %	Selected Recovery, %	Notes	
	YP yr 0-3 Low Sb	Con 3	95.2		Average of pilot plant (98.1%) and average of batch tests on different composites (96.8%). Carbon and solutions losses assumed to be 0.8%	
	YP yr 4+ Low Sb	Con 5	95.8			
	85% YP/15% HF	Con 10	98.1			
		HF outside fault zone	Con 6	96.9	96.5	Average recovery (97.3%), carbon losses of 0.8%
		HF fault zone	Con 7	97.6		
		50:50 HF:WE	Con 12	98.0	97.6	Average recovery, excluding Con 8, carbon losses 0.8%
		WE High Carbonate	Con 8	90.3		
		WE High Carbonate	Con 9	98.4		
	WE High Carbonate	Con 11	98.8			
Silver	YP yr 0-3 High Sb	Con 4	0.0	0.0		
	85% YP/15% HF	Con 1	1.1	2.3	Average recovery	
	85% YP/15% HF	Con 2	3.7			
	YP yr 0-3 Low Sb	Con 3	2.7			
	YP yr 4+ Low Sb	Con 5	2.8			
	85% YP/15% HF	Con 10	1.2	0.4	Average recovery	
	HF outside fault zone	Con 6	0.2			
	HF fault zone	Con 7	0.6			
	50:50 HF:WE	Con 12	1.6	5.9	Average recovery	
	WE High Carbonate	Con 8	1.7			
	WE High Carbonate	Con 9	7.1			
	WE High Carbonate	Con 11	13			

Based on the above-described rationale, Table 10-13 provides the metallurgical projections that have been adopted for the study.

**Table 10-13: Summarized Metallurgical Forecast Algorithms**

Ore Body	Ore Type	Product	Parameter	Metallurgy Forecast Algorithms
Yellow Pine	High Antimony	Antimony Con	Au Recovery into Sb Concentrate	$3.40 \times \text{Sb grade} + 0.0089$
			Ag Recovery into Sb Concentrate	$73.39 \times \text{Sb grade} + 0.022$
			Sb Recovery in Sb Concentrate	$11.89 \times \text{Sb grade} + 0.83$
			Sb Concentrate Grade	65.0%
	Low Antimony	Doré	Au Flotation/POX/CIL Recovery (for 6.5% S con)	$(7.94 \times \text{pyritic S grade} + 0.836) \times 0.960$
			Ag Flotation/POX/CIL Recovery (for 6.5% S con)	0.0%
			Sulfide Sulfur Flotation Recovery (for 6.5% S con)	$21.20 \times \text{pyritic S grade} + 0.621$
	Low Antimony	Doré	Au Flotation/POX/CIL Recovery (for 6.5% S con)	90.7%
			Ag Flotation/POX/CIL Recovery (for 6.5% S con)	0.6%
		Sulfide Sulfur Flotation Recovery (for 6.5% S con)	96.1%	

Ore Body	Ore Type	Product	Parameter	Metallurgy Forecast Algorithms
Hangar Flats	High Antimony	Antimony Con	Au Recovery into Sb Concentrate	$6.82 \times \text{Sb head grade} + 0.002$
			Ag Recovery into Sb Concentrate	52.8%
			Sb Recovery in Sb Concentrate	$11.00 \times \text{Sb head grade} + 0.80$
			Sb Concentrate Grade	54.1%
	Low Antimony	Doré	Au Flotation/POX/CIL Recovery (for 6.5% S con)	86.6%
			Ag Flotation/POX/CIL Recovery (for 6.5% S con)	0.1%
		Sulfide Con	Sulfide Sulfur Flotation Recovery (for 6.5% S con)	79.4%
		Doré	Au Flotation/POX/CIL Recovery (for 6.5% S con)	88.9%
			Ag Flotation/POX/CIL Recovery (for 6.5% S con)	0.2%
Sulfide Con	Sulfide Sulfur Flotation Recovery (for 6.5% S con)	95.3%		
West End	Oxide	Doré	Au Direct CIL Recovery	$(0.916 \times \text{CN/FA} + 0.0120) \times 0.992$
		Doré	Ag Direct CIL Recovery	$(0.411 \times \text{CN/FA} + 0.256) \times 0.992$
	Sulfide and Transition	Doré	Au Flotation/POX/CIL Recovery (to 1.3 CO <sub>3</sub> /S Con)	$(-0.867 \times \text{CN/FA} + 0.997) \times 0.976$
		Doré	Ag Flotation/POX/CIL Recovery (to 1.3 CO <sub>3</sub> /S Con)	$(-0.809 \times \text{CN/FA} + 0.959) \times 0.009$
		Sulfide Con	Sulfide Sulfur Flotation Recovery (to 1.3 CO <sub>3</sub> /S Con)	$-0.294 \times \text{CN/FA} + 0.989$
		Doré	Au Flotation Tailings CIL Recovery, Low CN/FA	$(1.767 \times \text{CN/FA} + 0.162) \times 0.992$ for CN/FA < 0.31
		Doré	Au Flotation Tailings CIL Recovery, High CN/FA	$(0.451 \times \text{CN/FA} + 0.549) \times 0.992$ for CN/FA > 0.31
		Doré	Ag Flotation Tailings CIL Recovery	60.9%
Bradley Tailings	Low Antimony	Doré	Au Flotation/POX/CIL Recovery	67.7%
		Doré	Ag Flotation/POX/CIL Recovery	0.2%
		Sulfide Con	Sulfide Sulfur Flotation Recovery	74.0%

## 10.6 QP Opinion on Data Accuracy

Metallurgical testwork and associated analytical procedures were performed by recognized testing facilities, and the tests performed were appropriate to the mineralization type. Samples selected for testing were representative of the various types and styles of mineralization in the Stibnite deposits. Samples were selected from a range of depths within the deposit. Sufficient samples were taken so that tests were performed on sufficient sample mass.

In the opinion of the QP, the sample representativity, nature of tests undertaken, and the data obtained is adequate for the purposes used in this Report.

## 11 MINERAL RESOURCE ESTIMATES

### 11.1 Introduction

The Mineral Resource Statement presented herein represents a mineral resource evaluation prepared in accordance with the mining property disclosure rules specified in Regulation S-K subpart 1300 (S-K 1300) promulgated by the U.S. Securities and Exchange Commission (SEC). This evaluation includes Mineral Resource estimates for the Project's three lode gold deposits: Yellow Pine, Hangar Flats and West End, and reports the Mineral Resource Estimate for the Historical Tailings deposit.

This section describes the mineral resource estimation methodology and summarizes the key assumptions. In the opinion of Christopher Dail, C.P.G., Qualified Person, the mineral resource estimates reported herein are a reasonable representation of the mineral resources found within the Project at the current level of sampling. The mineral resources were estimated in accordance with §§229.1300 through 229.1305 (subpart 229.1300 of Regulation S-K). The Mineral Resources reported herein supersede and replace the Mineral Resources disclosed publicly (Perpetua, 2018; M3, 2020; M3, 2022), which should no longer be relied upon. It is important to note that mineral resources that are not mineral reserves do not have demonstrated economic viability. Mineral resource estimates do not account for mine-ability, selectivity, mining loss and dilution. These mineral resource estimates include "Inferred mineral resources" (as defined in S-K 1300) that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of inferred mineral resources could be upgraded to "Indicated mineral resources" (as defined in S-K 1300).

The mineral resource evaluation reported herein for Yellow Pine, Hangar Flats, West End and the Historical Tailings deposit is current as of the date of this Report. The Mineral Resource Statements supersede prior statements but were developed based on the same underlying geological and geostatistical analyses as that in the 2020 Feasibility Study Technical Report (M3, 2020). The mineral resource evaluation herein supersedes earlier mineral resource estimates completed for Perpetua Resources including:

- Technical Report on Mineral Resources for the Golden Meadows Project (SRK, 2011).
- Preliminary Economic Assessment Technical Report for the Golden Meadows Project Idaho (SRK, 2012).
- Preliminary Feasibility Study Technical Report for the Stibnite Gold Project (M3, 2014).
- Amended Preliminary Feasibility Study Technical Report for the Stibnite Gold Project (M3, 2019).
- Feasibility Study Technical Report for the Stibnite Gold Project (M3, 2021)
- S-K 1300 Technical Report Summary for the Stibnite Gold Project, as amended as of June 2022 (M3, 2022)

The mineral resource estimates were prepared by qualified third-party independent consultants and reviewed and verified by Christopher Dail, C.P.G., the Qualified Person for the mineral resource estimates for the Project. Perpetua Resources' field work on the Project from 2009-2025, including drilling, was carried out under the supervision of

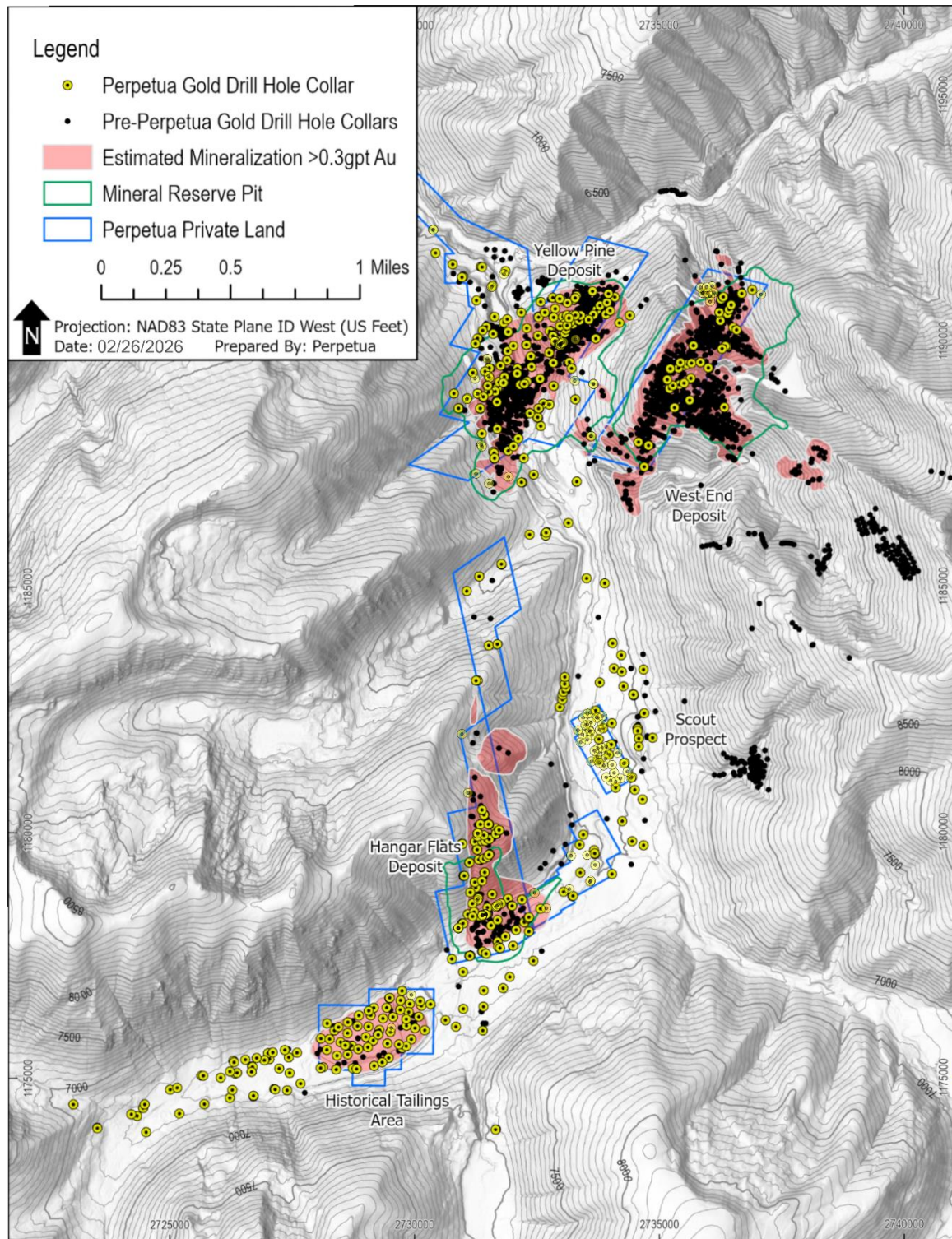
Christopher Dail, C.P.G., Richard Moses, C.P.G., Austin Zinsser, SME-Registered Member, and Kent Turner who were Perpetua's staff or consultants and responsible for certain aspects of the programs during the periods they were employed by Perpetua Resources.

The general mineral resource estimation methodology for all deposits involved the following procedures:

- generation of geological models and review of structural controls on mineralization;
- database verification and validation;
- data exploration, compositing and evaluation of outliers;
- construction of estimation domains for gold, antimony and silver;
- spatial statistics;
- block modeling and grade interpolation;
- mineral resource classification and validation;
- assessment of "reasonable prospects for eventual economic extraction"; and
- preparation of the mineral resource statement.

The drillhole database and data utilized in the Mineral Resource Estimate is discussed in Section 7 of this Report. Detailed mineral resource evaluation methodologies are presented in Sections 11.2 (Yellow Pine), 11.3 (Hangar Flats), 11.4 (West End), and 11.5 (Historical Tailings) of this Report. An assessment of reasonable prospects for eventual economic extraction and mineral resource statements, including that for the Historical Tailings, are presented in Sections 11.7 and 11.9 of this Report. Figure 11-1 shows a plan view of the Stibnite Gold Project area along with drillhole locations and deposits that are the subject of the resource estimation reported herein.

Figure 11-1: Plan Map of the Stibnite Gold Project Area Showing Drillhole Locations and Deposits



## 11.2 Yellow Pine

### 11.2.1 Mineral Resource Estimation Procedures

The Yellow Pine Mineral Resource estimate is based on the validated drillhole database, interpreted digital geologic model, digitized as-built data of historical workings, and LiDAR topographic data. The geologic modeling and estimation of mineral resources was completed primarily using commercial three-dimensional block modelling and mine planning software Hexagon Minesight™ MS3D Version 15.10.

### 11.2.2 Geologic Modeling

The Yellow Pine Mineral Resource estimate is based on a generalized geologic model consisting of major rock types, major structures, surfaces, and historical underground workings and pit bottom surfaces as depicted in Section 6 of this Report. In addition, oriented core drilling completed in 2016-2017, re-logging of key fault zones from core photos and integration of structural data, legacy data sets and drillhole geochemistry have allowed for a detailed 3D structural interpretation of the Yellow Pine deposit. These data sets were integrated into the detailed geological model first using GIS software to capture and geo-reference historical spatial data and then using Hexagon MineSight™ MS3D to construct geological boundaries through sectional and implicit modeling methods to incorporate logging information, geochemistry and oriented core data. Geological surface TINs were generated from digitized polylines using MineSight's surface interpolation tools and subsequently trimmed manually against fault surfaces based on the deformation sequence for the deposit.

### 11.2.3 Controls on Mineralization

As discussed in Section 6 of this Report, mineralization in the Yellow Pine deposit is structurally controlled and localized by the northerly striking MCFZ and by north striking gently west dipping conjugate splay or cross structures associated with the MCFZ. The majority of mineralization in the deposit occurs west of the MCFZ and east of the Hidden Fault Zone (HFZ), a wide, moderately northwest dipping fault and fracture zone. To the south, gold mineralization occurs within a breccia zone of the MCFZ bounded to the east by post-mineralization gouge of the MCFZ and bounded to the west by the pre-gold mineralization ductile breccia zone. In the central region of the deposit, between 1188200N and 1189600N, mineralization is primarily disseminated and occurs east of the Hanging Wall Fault (HWF) and west of the post-mineralization Hennessey Fault, except where Hennessey Fault has offset the western part of the orebody to the north. Gold and antimony mineralization in the central region of the deposit are bounded to the south against the C-structure/granite fault, a normal fault which is locally offset by the northwesterly striking Midnight Fault. In the northern Homestake area of the deposit, mineralization occurs in the hanging wall of the Hidden Fault/Clark tunnel structure and is truncated against the East Boundary Fault, a historically mapped gouge zone within the MCFZ occurring directly east of a silicified fault corridor which is moderately mineralized in the Homestake area. Gold mineralization also occurs within the metasediments at Homestake, where both disseminated and vein hosted gold occurs within the upper-calc silicate and Middle Marble formations. These complex relationships between faults and mineralization were applied towards construction of estimation domains in the Yellow Pine Mineral Resource Estimate.

The geologic model also includes solids representing minor late-stage dikes; numerous adits, drifts and underground development workings; and surfaces representing current and pre-mining topography; and the current top-of bedrock

surface. The surface representing the top of bedrock was digitized from drillhole data and from 1950s and 1990s engineering drawings depicting the historical Bradley pit and Homestake pit bottoms prior to backfilling. Perpetua Resources drilling has confirmed the pit-bottom in the Homestake area and the location of legacy underground workings. Drillholes drilled from barges through the pit lake by the Rancher’s Exploration Company (Ranchers) have confirmed the Yellow Pine pit-bottom as captured from engineering drawings and the adjacent pit benches confirmed by comparison of legacy engineering drawings to modern topographic survey data.

#### 11.2.4 Exploratory Data Analysis and Data Preparation

Exploratory data analysis and graphical data review was performed on raw assays within 39 geological solids to aid in construction of appropriate geostatistical estimation domains. Quantitative data analysis included generation of descriptive statistics, box plots, histograms, log-probability plots, and analysis of multivariate relations. The data was also reviewed relative to surfaces representing historical underground and surface mining. Data preparation included assignment of numeric values to samples assaying below detection limits (generally 1/2 detection limit or lower for legacy data) and to intervals which were selectively un-assayed. In addition, samples sourced from non-bedrock materials, including those from backfilled pits and waste rock dumps, were removed from the dataset.

#### 11.2.5 Estimation Domain Modeling

The current Yellow Pine Mineral Resource estimate is based on the definition of geostatistical estimation domains within the current geological model. The gold estimate utilized sixteen estimation domains; six primary mineralized domains and ten secondary domains. Gold mineralization occurs in all domains, but 77% of assays greater 0.3 g/t Au occur within the primary domains. The estimation domains consist of 3D geological solids representing discrete fault zones, fault blocks, and lithologic units including metasedimentary formations and intrusive dikes (Table 11-1). The large number of domains was deemed appropriate due to the structural complexity of the deposit and distribution of gold within the geological model, especially in order to represent the truncation of mineralization across post-mineralization fault boundaries. The principal gold domains include the mineralized silicified breccia corridor of the southern MCFZ (D3), the Hennessey Shear/Hidden Fault Zone (D5) consisting of silicified breccia and post mineralization gouge, broadly disseminated mineralization occurring in fault bounded blocks of the Central Yellow Pine (D6) and Hennessey fault block (D7), the Homestake deposit area including the hanging wall of the Clark Tunnel structure/northern extension of the Hidden Fault west of the “East Boundary Fault” (D11), and the silicified breccia zone of the northern MCFZ (D12) at the contact with the metasediments. The secondary domains generally have lower gold grades and include the post-mineralization gouge zones of the MCFZ, rhyolite and latite dike solids, three groups of contiguous metasedimentary formations, strongly altered but lower-gold-grade fault blocks occurring below primary gold domains and hanging wall zones occurring west of the ore-body (as shown in Table 11-1 and Figure 11-2).

**Table 11-1: Yellow Pine Gold Estimation Domains and Descriptions**

Domain Number	Name	Category	Lithology	Description
1	W Intrusives	Secondary Domain	Mixed intrusives	Primarily chloritic altered intrusives with diorite at depth bounded to the east by the MCFZ and north by the HCSZ.
2	S_YP_SiO2_Bx	Secondary Domain	Silicified Breccia	Silicified breccia zone with high sulfide content but low gold and arsenic.

Domain Number	Name	Category	Lithology	Description
3	S_YP_Au-Sb-Bx	Primary Domain	Silicified Breccia	Silicified breccia corridor of the MCFZ in southern YP bounded by gouge to the east and gold-barren breccia to the west. Midnight fault is northern boundary.
4	E Intrusives	Secondary Domain	Intrusives, schist, diorite	Mixed lithologies cut by steeply dipping anastomosing gouge fault strands of the MCFZ.
5	Hennessey Shear	Primary Domain	Breccia, Gouge, Rubble	Hennessey shear zone in which significant gold occurs within post-mineralization gouge zones and rubble zones in the footwall bounded to the east by Domain 6.
6	Central YP	Primary Domain	Mixed intrusives	Disseminated mineralization within the central YP area bounded to south by Midnight and Granite faults, bounded to east by Hennessey Fault and to north by latite fault NW; includes the diabase dike.
7	Hennessey	Primary Domain	Mixed intrusives	Bounded to the west by the Hennessey fault and to the east by gouge of the MCFZ. Includes silicified breccias of the MCFZ in central YP. Lower contact is a geochemical boundary marked by abrupt drop in gold grades but no appreciable change in sulfur or arsenic.
8	MCFZ Gouge	Secondary Domain	Gouge and cataclasite	Gouge and foliated cataclasite of the MCFZ, local mineralized materials entrained.
9	Lower Hennessey	Secondary Domain	Mixed intrusives	Weakly mineralized block of rock beneath Hennessey domain, east of Hennessey Fault and west of MCFZ gouge
10	Hidden Hanging Wall	Secondary Domain	Mixed intrusives	The hanging wall of the Hennessey Creek and Hidden Fault zones characterized by weak chloritic to sericitic alteration
11	Homestake	Primary Domain	Mixed intrusives	Homestake domain includes the northern Hennessey fault zone gouge and the northern Hidden fault breccia corridor, as well as the hanging wall of the Clark tunnel fault zone. Domain is bounded to the east by the East-boundary fault zone, part of the MCFZ gouge corridor.
12	Hmstk SiO <sub>2</sub> Bx	Primary Domain	Silicified Breccia	Narrow zone of breccia in the MCFZ between sediments and gouge of the east boundary fault zone. Contains elevated calcium and has low arsenic/gold ratio.
13	Lower Homestake	Secondary Domain	Mixed intrusives	Material beneath Homestake. Sericite-pyrite-arsenopyrite alteration.
14	UCS-SCH-QZ	Secondary Domain	Schist, calc-schist, quartzite and breccia	Significant gold mineralization occurs within upper-calc-silicate and schist packages east of MCFZ within hinge zone of stibnite syncline.
15	E Sediments	Secondary Domain	Metaseds and granodiorite sill	Sediments outside of domain 14.
16	Dikes	Secondary Domain	Latite and Rhyolite	Dikes within the deposit but excluding the Diabase.

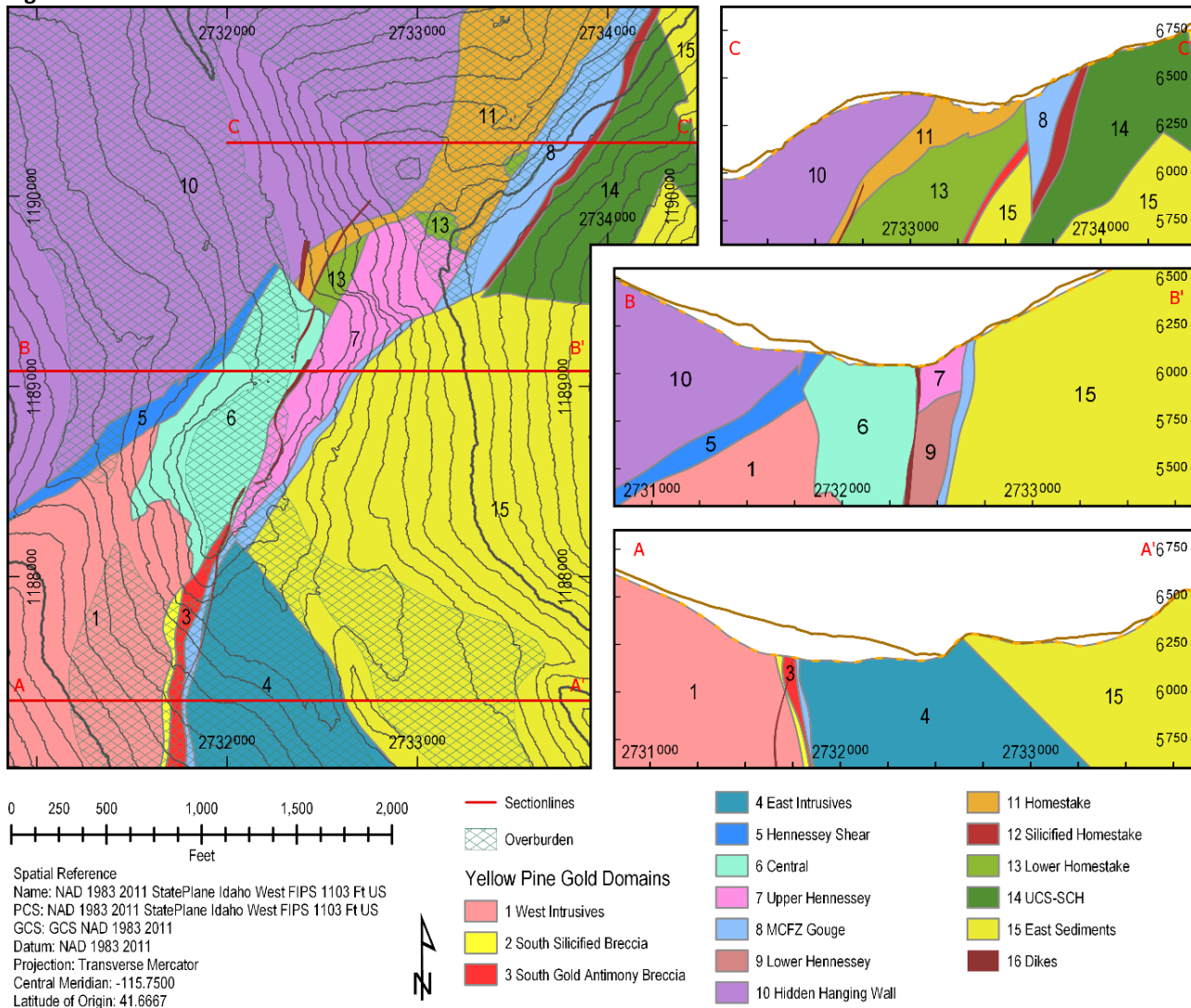
Antimony mineralization is controlled by many of the same structures as gold mineralization but is more spatially restricted, occurring primarily south of 1,189,100N with some additional mineralization associated with the Clark Tunnel fault. The northern boundary of the antimony domain was defined using indicator kriging and the southern boundaries are defined by the same structures that control gold mineralization. Bradley Mining Company data was excluded from the 0.01% indicator kriging shell definition due to low precision of antimony assays in this data set.

Silver estimation domains were based on a combination of the antimony domains and gold domains discussed above as high-grade silver occurs preferentially in regions of stibnite mineralization. The deposit was divided into four silver

domains: silver domains 2 and 3 correspond to the Southern- and Clark Tunnel antimony domains respectively, silver domain 1 comprises other regions of the primary gold ore domains, and silver domain 4 makes up the rest of the deposit. Use of a similar estimation plan for both antimony and silver was selected to help maintain the multivariate relationship between the primary economic metals in the deposit.

An oxide shell was constructed to encompass the oxidized region of the deposit and contains the majority of samples with cyanide recoverable gold, primarily located in the Homestake area.

**Figure 11-2: Yellow Pine Estimation Domains**



### 11.2.6 Compositing

Gold, antimony and silver were composited downhole on 10 ft intervals with composite lengths adjusted to break at gold estimation domain boundaries and to eliminate residual short composites. The 10 ft composite length is an even

multiple of the 5 ft average sample length and is also appropriate for estimation into 20 ft bench height blocks. The majority of samples in the deposit average 5 ft but some campaigns used longer samples outside of mineralized zones. Composites were assigned to estimation domains by tagging within the 3D domain solids in MS3D.

### 11.2.7 Composite Statistics and Capping

Descriptive statistics, histograms and probability plots were generated for ten-foot composites within each estimation domain for both clustered and declustered composites. Outliers were identified using log probability plots and were also reviewed spatially in MS3D. For gold, capping grades of 12 g/t Au within Domains 6,7 and 11; and 7 g/t Au within other domains were selected. Capping grades of 8% antimony and 100 g/t silver were selected within the main antimony shell with 10 g/t silver applied elsewhere. Capped grade statistics are presented for comparative purposes in Table 11-2 through Table 11-5 but outliers in the estimation plan are handled employing a 40 ft range restriction on high-grade composites rather than through explicit capping.

**Table 11-2: Descriptive Statistics for Primary Gold Domain Composites (g/t Au)**

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Au_Dom3	raw composites	407	1.42	1.41	0.99	6.77	2.26	1.04	0.24	n/a	0.0%
	capped + declus		1.22	1.31	1.07	6.77	1.93	0.75	0.16		
Au_Dom5	raw composites	602	1.29	1.38	1.07	11.68	2.05	0.93	0.13	7	0.9%
	capped + declus		1.13	1.24	1.09	7	1.89	0.69	0.08		
Au_Dom6	raw composites	4774	2.39	1.79	0.75	20.31	3.2	2.15	1.21	12	0.5%
	capped + declus		2.11	1.89	0.89	12	2.95	1.81	0.69		
Au_Dom7	raw composites	1602	2.09	2.22	1.06	18.24	3.23	1.28	0.42	12	0.6%
	capped + declus		1.64	1.91	1.16	12	2.48	0.87	0.25		
Au_Dom11	raw composites	3058	1.57	2.07	1.32	21.66	2.18	0.78	0.19	12	1.4%
	capped + declus		1.4	1.9	1.35	12	1.85	0.63	0.17		
Au_Dom12	raw composites	195	0.85	1.55	1.83	14.4	1.08	0.36	0.07	7	4.9%
	capped + declus		0.78	1.16	1.49	7	1.11	0.41	0.07		

**Table 11-3: Descriptive Statistics for Low Grade Secondary Gold Domain Composites (g/t Au)**

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper Quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Au_Dom1	raw composites	2182	0.21	0.59	2.82	7.94	0.13	0.02	0	7	0.0%
	capped + declus		0.24	0.63	2.97	7	0.17	0.03	0		
Au_Dom2	raw composites	88	0.28	0.73	2.58	3.94	0.21	0.01	0	n/a	0.0%
	capped + declus		0.3	0.68	2.28	3.94	0.29	0.02	0		
Au_Dom4	raw composites	366	0.22	0.31	1.38	2.82	0.32	0.12	0.04	n/a	0.0%
	capped + declus		0.24	0.33	1.37	2.82	0.34	0.12	0.04		

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper Quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Au_Dom8	raw composites	1032	0.43	0.76	1.79	9.47	0.49	0.2	0.04	7	2.3%
	capped + declus		0.43	0.76	1.75	7	0.49	0.2	0.04		
Au_Dom9	raw composites	239	0.46	0.83	1.81	6.34	0.49	0.22	0.08	n/a	0.0%
	capped + declus		0.54	1.07	1.97	6.34	0.5	0.22	0.08		
Au_Dom10	raw composites	2944	0.19	0.42	2.21	6.08	0.17	0.05	0.01	n/a	0.0%
	capped + declus		0.2	0.42	2.09	6.08	0.19	0.06	0.01		
Au_Dom13	raw composites	3996	0.21	0.51	2.47	8.87	0.18	0.06	0.01	7	0.0%
	capped + declus		0.21	0.46	2.16	7	0.21	0.07	0.01		
Au_Dom14	raw composites	831	0.47	1.21	2.6	17.02	0.4	0.15	0.04	7	10.4%
	capped + declus		0.43	0.88	2.06	7	0.4	0.14	0.04		
Au_Dom15	raw composites	1028	0.14	0.36	2.64	4.54	0.1	0.02	0	n/a	0.0%
	capped + declus		0.14	0.35	2.46	4.54	0.12	0.03	0.01		
Au_Dom16	raw composites	215	0.42	0.77	1.82	4.68	0.53	0.08	0	n/a	0.0%
	capped + declus		0.44	0.87	1.98	4.68	0.43	0.06	0		

**Table 11-4: Descriptive Statistics for Antimony Composites (% Sb)**

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper Quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Sb_Dom0	raw composites	13455	0.014	0.094	6.742	3.89	0.03	0.02	0.001	n/a	0.0%
	capped + declus		0.013	0.095	7.108	3.89	0.003	0.002	0.001		
Sb_Dom2	raw composites	5240	0.359	0.96	2.677	14.9	0.27	0.02	0.003	8	1.7%
	capped + declus		0.281	0.796	2.736	8	0.17	0.006	0.002		
Sb_Dom3	raw composites	206	0.534	1.492	2.796	15.12	0.48	0.12	0.02	8	6.7%
	capped + declus		0.362	0.774	2.139	8	0.353	0.093	0.02		

**Table 11-5: Descriptive Statistics for Silver Composites (g/t Ag)**

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper Quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Ag_Dom1	raw composites	2671	1.43	3	2.1	85.71	1.77	0.7	0.25	10	15.2%
	capped + declus		1.34	1.69	1.26	10	1.73	0.7	0.25		
Ag_Dom2	raw composites	2408	4.66	12.02	2.58	152.34	3.17	1.72	0.75	100	1.7%
	capped + declus		4.05	10.16	2.51	100	2.79	1.38	0.51		
Ag_Dom3	raw composites	199	9.27	37.78	4.07	457.5	6.05	2.98	1.79	20	32.3%
	capped + declus		4.1	4.76	1.16	20	4.71	2.52	1.42		

Domain	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Upper Quartile	Median	Lower Quartile	Capping Grade	Metal Removed
Ag_Dom4	raw composites	10174	0.5	1.63	3.29	99.92	0.31	0.25	0.25	7	7.8%
	capped + declus		0.47	0.67	1.42	7	0.35	0.25	0.25		

### 11.2.8 Spatial Statistics

Semi-variogram models were generated for gold, antimony, silver and cyanide gold recovery ratio (oxidation) to determine spatial continuity and to guide search ellipse orientations and anisotropies. Experimental variograms were generated in GSLIB software for the primary gold, antimony and silver estimation domains. Variograms were not modeled for secondary domains or for the Clark tunnel antimony shell. Gold mineralization typically displays greatest continuity parallel to northeasterly striking fault zones while antimony and silver show maximum continuity along northwesterly striking antimony vein arrays. Oxidation follows the historical topographic surface. Gold variogram models typically have a nugget of 10-18%, a short-range structure achieving 60% of the sill at a distance of approximately 40 to 50 ft and a maximum range of 130-295 ft.

### 11.2.9 Block Model Parameters and Grade Estimation

The block model mineral resource estimate for Yellow Pine was developed with block dimensions of 40 x 40 x 20 ft with coordinates defined in Table 11-6. Blocks were discretized into a 4 x 4 x 2 array of points during estimation.

**Table 11-6: Block Model Definition for Yellow Pine**

Deposit	Dimension (ft)			Origin (ft) <sup>1</sup>			Number of Blocks			Rotation
	X	Y	Z	X	Y	Z	X	Y	Z	
Yellow Pine	40	40	20	2,729,740	1,185,700	4,500	155	170	152	0

Notes: 1. Lower left hand block model corner, NAD83 ID State Plane West feet.

The Yellow Pine drillhole database contains 1,843 core density measurements within an average density of 2.63 g/cc. Average density values were calculated for each gold estimation domain after removal of outliers and assigned to the block model.

A multiple percent model was used for the Yellow Pine deposit to accurately capture discrete regions of mineralization occurring within some narrow geological zones and to also allow for accurate forecasting of mining dilution under different extraction scenarios. The volume of each block occurring within each of the 16 gold domains was calculated and stored in the model as a percentage. For the blocks occurring within multiple domains, blocks were assigned a domain code and percentage for both a primary gold domain and a secondary gold domain based on majority by volume. Gold grade estimates were then stored in two fields, primary and secondary, to allow accurate reporting of partial block in-situ resources as well as full block diluted grades. Blocks were assigned to silver and antimony domains by majority.

Gold, antimony and silver were estimated using ordinary kriging or inverse distance squared interpolation. Generally, blocks were estimated using a two-pass search strategy with approximately 2/3 estimated in the first pass and the remaining estimated in the second pass within the ore domains. The estimates used hard boundary conditions with

only samples in an estimation domain used to inform blocks in that domain. Ordinary kriging was used to estimate grades in the five primary gold domains, the primary antimony shell and the four silver domains. Inverse distance squared was used for the remaining gold domains. The first gold estimation pass range was generally based on the ranges of the variogram model, approximately 100-200' for the primary direction with the second pass expanded to twice the range of the first pass. A minimum of three octants and five composites was required in the first pass with octant requirements relaxed in additional passes. Densely drilled domains had a maximum of three composites per hole with more composites allowed in other domains. The inverse distance searches either increased the search ellipse range or decreased the octant requirements in subsequent passes to control grade extrapolation away from data and estimate an appropriate number of blocks. Capping was applied in the software using a range limiting method with uncapped samples allowed up to a maximum distance of 40' (one block) and capping grades of 8 or 12 g/t Au applied after that. This method was selected to adequately capture local high grade in the deposit, which was often clustered, while limiting the extrapolation of higher grade beyond reasonable distances. Figure 11-3 and Figure 11-4 show a plan view of the Yellow Pine block model for gold and antimony, respectively.

Figure 11-3: Yellow Pine Gold Block Model

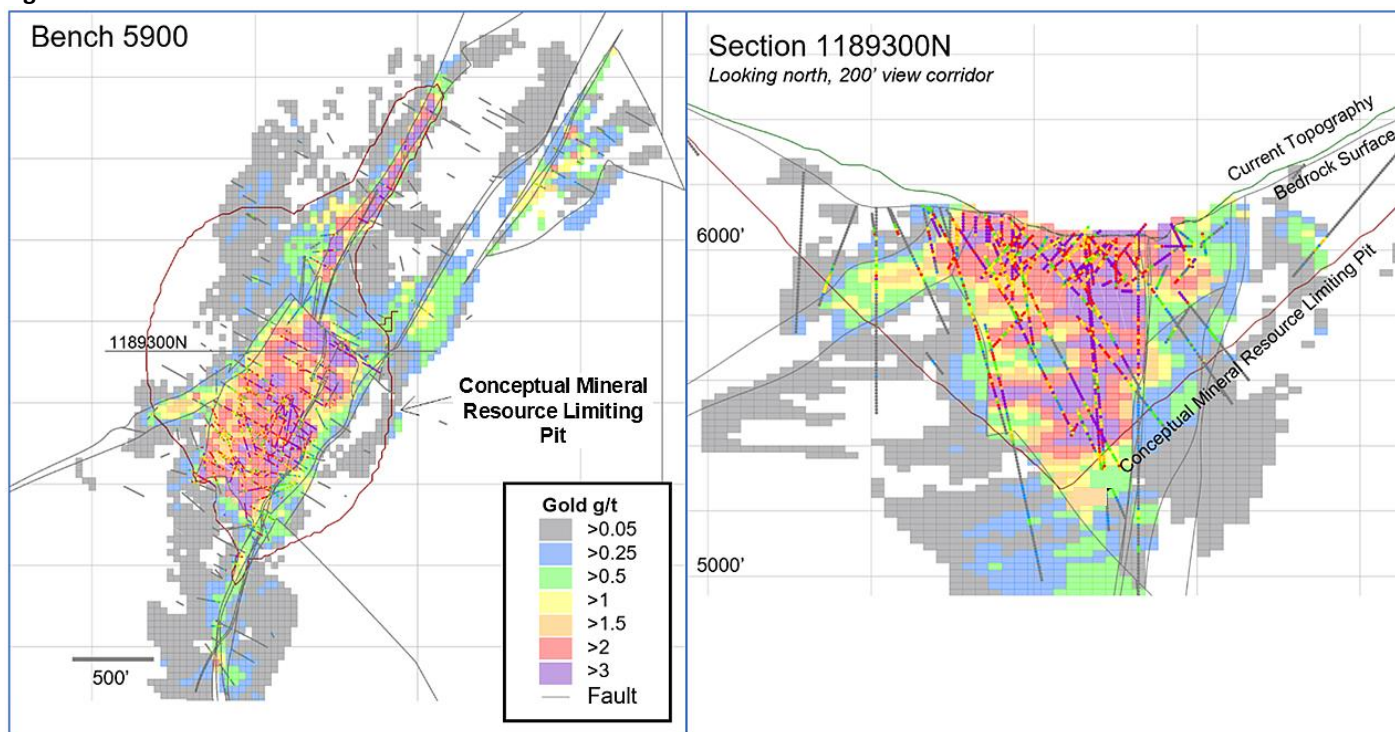
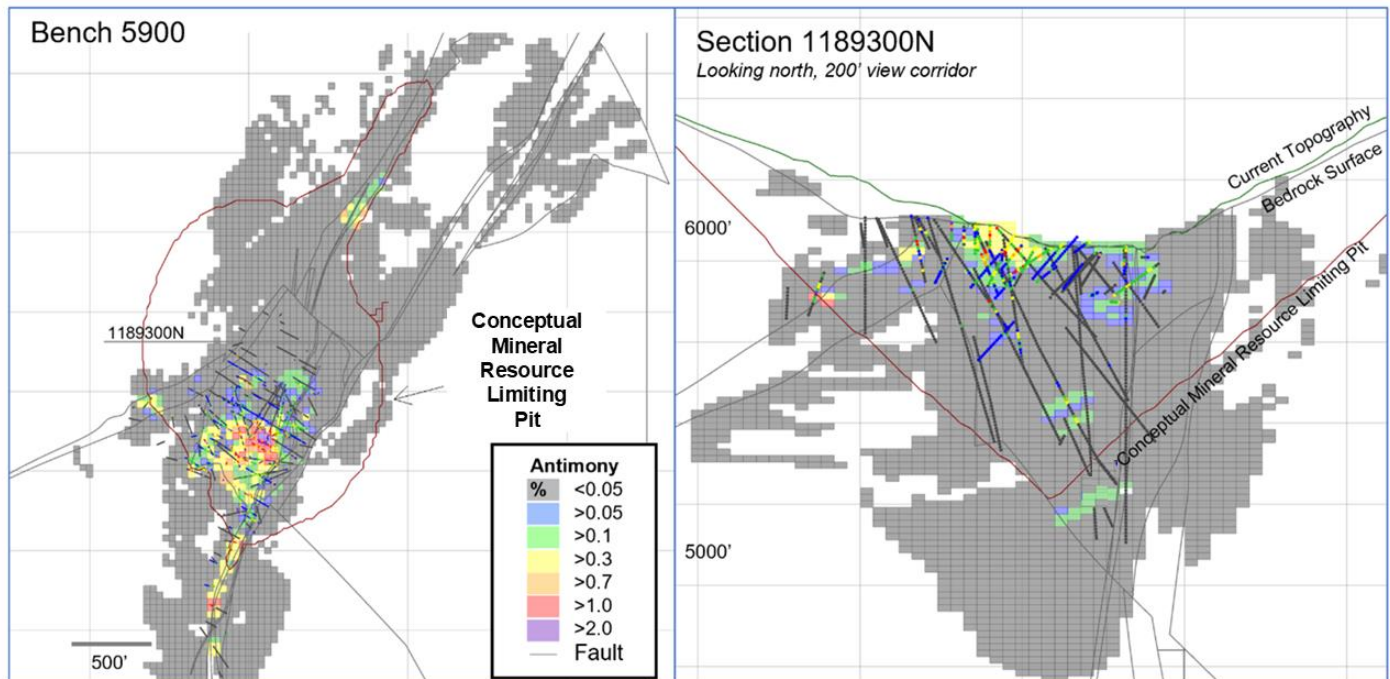


Figure 11-4: Yellow Pine Antimony Block Model



### 11.2.10 Block Model Validation

The block model for Yellow Pine was validated by completing a series of graphical inspections, bias checks, sensitivity studies, comparison to prior estimates and reconciliation against historical production records. Graphically, the model was validated by visually comparing the composites to estimated block grades on plan and section views. Global bias was assessed through comparison of average declustered composite grades and block grades for each estimation domain. Multiple model sensitivities were run to assess the impact of historical data on the estimate, selection of capping grades, kriging search neighborhood and choice of interpolation method. Exclusion of the pre-1953 drillhole data results in a 2.2% reduction in mineralized tonnage with no appreciable reduction in gold grade at a 0.75 g/t Au cutoff grade, reported within a conceptual pit shell. Other sensitivities showed similar magnitude changes to the Yellow Pine Mineral Resource.

### 11.2.11 Geochemical Estimates

In addition to gold, antimony and silver, a suite of estimates of geochemical element concentrations were prepared to support geo-metallurgical and geo-environmental engineering. Additional elements estimated include sulfur, arsenic, mercury, iron, calcium, magnesium and potassium which were all analyzed for Perpetua Resources drillholes. The estimation methodology generally followed that used for the commodities consisting of data exploration, domain definition, block estimation and model validation. Elements were composited into the same 10' intervals as used for gold and were estimated using either ordinary kriging or inverse distance interpolation. Capping was not warranted as geochemical elements are typically more normally distributed than the precious metals and underestimation of deleterious elements poses a risk to the project. A summary of the estimates is provided below:

- Arsenic and sulfur were estimated within six estimation domains broadly similar to those used for gold, segregating regions of hydrothermal alteration from less altered rock units. Arsenic and sulfur were estimated using ordinary kriging. The sulfur estimate was limited to pyritic sulfur with stibnite sulfur calculated from the antimony block estimate. Intrusive host rock lithology was also used to correct for variations in sulfur grade observed between granodiorite and more felsic intrusives.
- Mercury was estimated within four domains based on a modified antimony shell, southern MCFZ, Homestake area and elsewhere. Mercury was estimated using inverse distance cubed interpolation to capture observed short range variability of the late stage overprinting mercury mineralization event.
- Calcium, magnesium and iron were estimated within nine estimation domains generally constructed to honor lithologic units including clastic vs carbonate metasediments, fault zones, and intrusive rocks. These elements were estimated using inverse distance cubed interpolation.
- Potassium shows only minor variability throughout the deposit and was estimated using ordinary kriging within a single estimation domain. The resultant model adequately captures the potassic alteration zonation associated with the main stage gold mineralization event as well as variations within the metasediments.

### 11.3 Hangar Flats

#### 11.3.1 Mineral Resource Estimation Procedures

The Hangar Flats Mineral Resource estimate is based on the validated drillhole database, interpreted three-dimensional geological model, digitized as-built data of historical workings, and LiDAR topographic data. The geologic modeling was completed using the commercially available software Seequent Leapfrog Geo 4.3. The estimation of mineral resources was completed using commercial three-dimensional block modelling and mine planning software Hexagon Minesight™ MS3D Version 15.10.

#### 11.3.2 Geologic Modeling

The Hangar Flats Mineral Resource estimate is based on a generalized geologic model consisting of major rock types, pre- and post-mineralization structures and post-mineralization tertiary dikes. Modeling was conducted using both sectional and implicit modeling methods to guide surface construction and incorporate legacy underground mapping information captured in GIS. Tertiary dike rocks; rhyolite and diabase, cut gold mineralization and were modeled as sets of dikes striking north-south oriented sub-vertically to allow for accurate estimates of mining dilution. Unconsolidated overburden consisting of till, alluvium, and backfilled ground, were modeled using data from drilling and field observations.

The most important control on mineralization in the Hangar Flats deposit is the Meadow Creek Fault Zone (MCFZ) which is a wide, northerly striking, right lateral shear zone with zones of clay gouge and silicified breccias which forms the western boundary mineralization within the deposit. Modeling of the shear zone focused on defining discontinuous blocks of highly mineralized breccia and quartz monzonite adjacent to and entrained in the anastomosing clay gouge zones. The gouge itself was subdivided into three units, post-mineralization light colored gouge, foliated cataclasite, and sulfidic dark colored gouge. The plutonic rocks are divided into a felsic alaskite and a slightly more intermediate quartz monzonite. These rocks were distinguished from one another through geologic logging and geochemical

classification and modeled using implicit modeling techniques. Mineralization in the Hangar Flats deposit is controlled primarily by the north-south trending MCFZ which has been mapped in underground mining of the Meadow Creek Mine (MCM) and the DMEA Tunnel. The secondary control of mineralization is a series of northeast trending structures that splay from or cut the MCFZ and dip moderately to the northwest. These structures have provided ground preparation and served as conduits for mineralized fluids. Three series of faults were modeled, north-south faults parallel to the MCFZ, northeast striking shallowly dipping splay structures, and northeast striking post-mineralization faulting.

### 11.3.3 Controls on Mineralization

The MCFZ is the principal structure controlling mineralization. The eastern mineralized corridor of the MCFZ varies in width from about 100 to 250 ft. Gold mineralization and antimony mineralization form elongate ore shoots adjacent to the eastern boundary of the MCFZ at the intersections of the MCFZ and numerous low angle structures.

Mineralization occurs as north-plunging breccias and shoots of massive stibnite antimony mineralization, sulfide biotite replacements, and stockworks of quartz-sulfide veining. Mineralization to the east is in northeast striking, moderately northwest dipping structures that are interpreted as splays of the MCFZ with gold and silver mineralization in quartz-sulfide veins and sulfide biotite replacements. Late-stage faulting locally offsets the MCFZ. The MCFZ changes from dipping nearly vertical in the north to dipping 45 degrees east to the south across the Wonacott fault, a major northeasterly striking structure. The geometry and spatial extents of mineralization on the west side of the MCFZ are uncertain due to low density of drilling.

### 11.3.4 Exploratory Data Analysis and Data Preparation

Exploratory data analysis and graphical data review were performed on raw assays within ten geological solids to aid in construction of appropriate geostatistical estimation domains. Quantitative data analysis included generation of descriptive statistics, box plots, histograms, log-probability plots, and analysis of multivariate relations. The data was also reviewed relative to surfaces representing historical underground and surface mining. Data preparation included assignment of numeric values to samples assaying below detection limits (generally 1/2 detection limit or lower for legacy data) and to intervals which were selectively un-assayed. In addition, samples sourced from non-bedrock materials, including those from backfilled pits and waste rock dumps, were removed from the dataset.

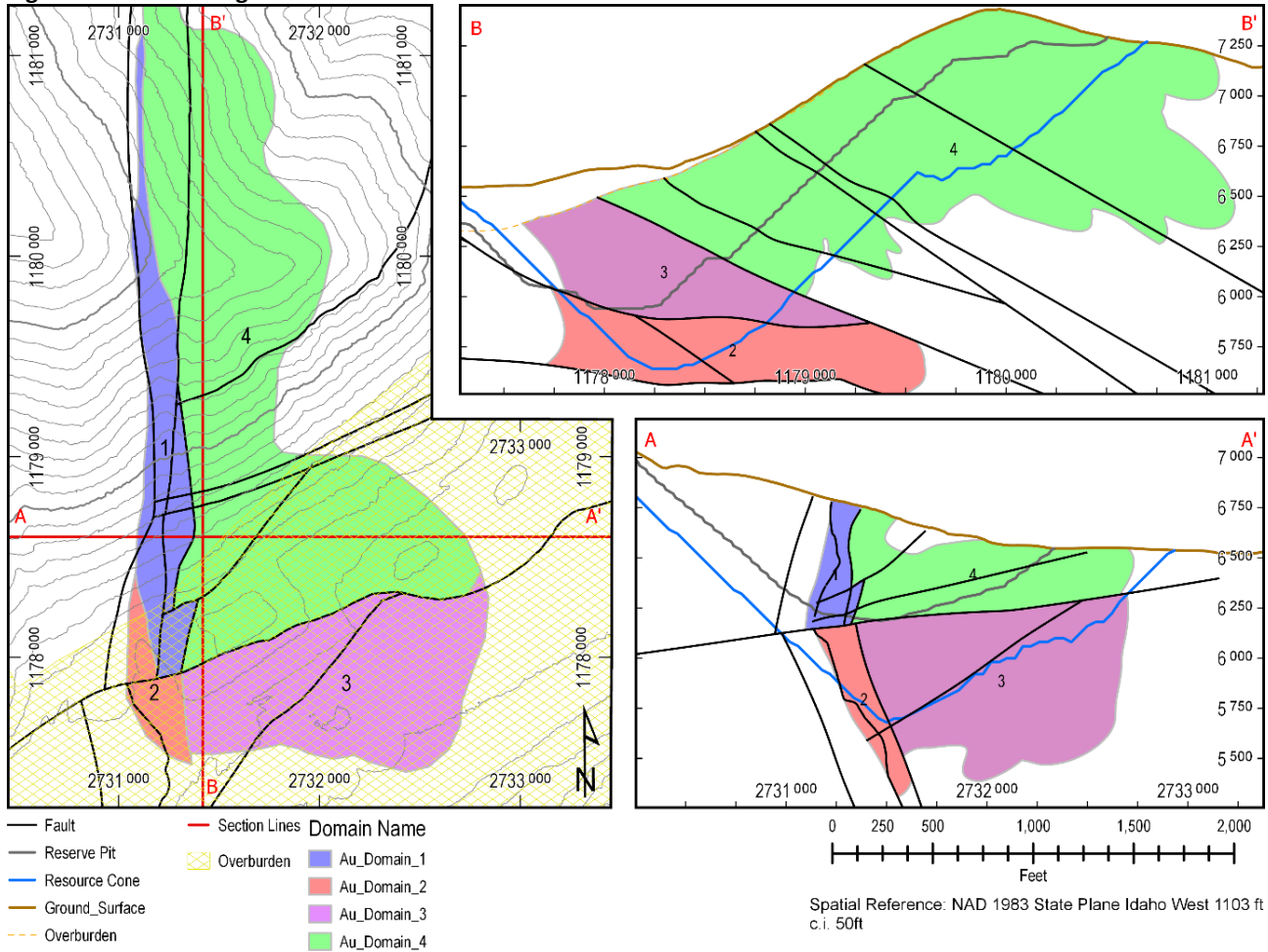
### 11.3.5 Estimation Domain Modelling

The Hangar Flats estimation domains are based on the major fault zones and fault units in the geological model as well as grade shells constructed using indicator kriging methods. Four estimation domains were defined for gold within the 0.1 g/t grade shell; D1 is the MCFZ structural corridor between the north striking Franson Fault a MCFZ gouge in the hanging wall of the Wonacott Fault; D2 is the MCFZ structural corridor in the footwall of the Wonacott Fault; D3 is the footwall of the Wonacott Fault, east of D2 and D4 is the hanging wall of the Wonacott Fault east of D1. The antimony estimation domains use the same structural boundaries as gold but are constrained within a 0.05% antimony grade shell that is less extensive than the gold and silver mineralization. The silver estimation domains are the same as those used for the gold estimate. Oxidation in the deposit is primarily controlled by depth below the ground surface and two domains were constructed by defining two areas with different topographic slopes; northeast versus south. See Table 11-7 and Figure 11-5.

**Table 11-7: Gold & Antimony Estimation Domain Codes**

Domain Number	Name	Category	Lithology	Description
1	Au_Domain_1 Sb_Domain_1	NS Trending	Intrusives & faulted rocks	Domain 1 is located between the Franson Fault and the approximate eastern margin of the MCF gouge. The southern boundary is the Wonacott Fault that cuts and displaces the mineralization. This zone nearly encompasses the historical Meadow Creek Mine. Mineralization is oriented NS with moderately plunging shoots with a minor axis in the EW direction. This area is limited with a 0.1 gpt grade shell for Au or 0.05% for Sb.
2	Au_Domain_2 Sb_Domain_1	NS Trending	Intrusives & faulted rocks	Domain 2 is located between the Frylock Fault and the approximate eastern margin of the MCF gouge. The northern boundary is the Wonacott Fault and the south boundary is a 0.1 gpt grade shell Au or 0.05% for Sb. Mineralization in this domain strikes north-south and plunges north.
3	Au_Domain_3 Sb_Domain_1	NE Trending	Quartz Monzonite & Alaskite	Domain 3 is bounded to the west by the Frylock Fault and the north by the Wonacott Fault. The rest of the boundary is a 0.1 gpt shell Au or 0.05% for Sb. The mineralization strikes northeast and dips northwest.
4	Au_Domain_4 Sb_Domain_4	NE Trending	Quartz Monzonite & Alaskite	Domain 4 is bounded on the west by both the MCF gouge zone and the Franson Fault. The southern boundary is the Wonacott Fault. The remainder is defined by a 0.1 gpt shell Au or 0.05% for Sb. The mineralization strikes northeast and dips northwest.
0	Au_Domain_0	Unmineralized	Intrusives & faulted rocks	This domain is primarily unmineralized and encompasses all of the area of the model outside of the other gold domains and below the ground surface.

**Figure 11-5: Hangar Flats Estimation Domains**



### 11.3.6 Compositing

Gold, antimony and silver were composited downhole on 10 ft intervals with composite lengths adjusted to break at gold estimation domain boundaries and to eliminate residual short composites. The 10 ft composite length is an even multiple of the 5 ft average sample length and is also appropriate for estimation of 20 ft bench height blocks. The majority of samples in the deposit average 5 ft but some campaigns used longer samples outside of mineralized zones. Composites were assigned to estimation domains by tagging within the 3D domain solids in MS3D.

### 11.3.7 Composite Statistics and Capping

To mitigate risk associated with use of high-grade statistical outliers, capping grades were selected for each estimation domain after declustering and weighting raw composite data. Capping grade was evaluated through log probability

plots and analysis of contained metal within deciles and centiles, following the Parrish Method (Parrish, 1997). Both methods yielded similar results and final composite capping levels are shown in Table 11-8 through Table 11-10.

**Table 11-8: Descriptive Statistics for Gold Domain Composites (g/t Au)**

Gold	Data set	Number	Mean	Std Dev	Coeff Var	Max	Lower Quartile	Median	Upper Quartile	Capping Grade	Metal Removed
Au_Domain_1	raw composites	1,344	1.74	2.08	1.19	15.53	0.19	0.98	2.62	10	0.46%
	declustered		1.52	1.93	1.27	15.53	0.19	0.98	2.62		
	capped + declus		1.51	1.90	1.26	10.00	0.19	0.98	2.62		
Au_Domain_2	raw composites	780	1.18	1.45	1.23	8.16	0.10	0.66	1.65	7.5	0.14%
	declustered		1.13	1.42	1.25	8.16	0.10	0.66	1.65		
	capped + declus		1.13	1.41	1.25	7.50	0.10	0.66	1.65		
Au_Domain_3	raw composites	2,216	0.79	1.22	1.53	14.09	0.05	0.28	1.04	7.5	0.81%
	declustered		0.61	1.07	1.75	14.09	0.05	0.28	1.04		
	capped + declus		0.61	1.02	1.69	7.50	0.05	0.28	1.04		
AU_Domain_4	raw composites	4,390	0.35	0.73	2.11	8.71	0.02	0.09	0.32	7.5	0.26%
	declustered		0.37	0.78	2.12	8.71	0.02	0.09	0.32		
	capped + declus		0.37	0.77	2.10	7.50	0.02	0.09	0.32		

**Table 11-9: Descriptive Statistics for Silver Domain Composites (g/t Ag)**

Silver	Data set	Number	Mean	Std Dev	Coeff Var	Max	Lower Quartile	Median	Upper Quartile	Capping grade	Metal Removed
Au_Domain_1	raw composites	1172	11.21	108.89	9.71	3160.00	0.48	1.80	4.13	150	45%
	declustered		12.54	120.54	9.61	3160.00	0.48	1.80	4.13		
	capped + declus		6.15	19.13	3.11	150.00	0.48	1.80	4.13		
Au_Domain_2	raw composites	668	8.52	30.54	3.58	381.95	0.43	1.35	3.70	150	10%
	declustered		8.78	32.54	3.71	381.95	0.43	1.35	3.70		
	capped + declus		7.63	23.38	3.06	150.00	0.43	1.35	3.70		
Au_Domain_3	raw composites	2112	1.11	2.45	2.21	65.96	0.25	0.46	1.25	7	5.4%
	declustered		0.91	1.98	2.17	65.96	0.25	0.46	1.25		
	capped + declus		0.86	1.08	1.26	7.00	0.25	0.46	1.25		
Au_Domain_4	raw composites	3990	0.82	5.90	7.20	238.18	0.25	0.25	0.53	7	25%
	declustered		0.87	5.27	6.09	238.18	0.25	0.25	0.53		
	capped + declus		0.61	0.94	1.54	7.00	0.25	0.25	0.53		

**Table 11-10: Descriptive Statistics for Antimony Domain Composites (% Sb)**

Antimony	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Lower Quartile	Median	Upper Quartile	Capping Grade	Metal Removed
Sb_Domain_1	raw composites	1114	0.34	0.91	2.63	9.13	0.01	0.02	0.25	4	10.76%
	declustered		0.31	0.90	2.94	9.13	0.01	0.02	0.25		

Antimony	Data Set	Number	Mean	Std Dev	Coeff Var	Max	Lower Quartile	Median	Upper Quartile	Capping Grade	Metal Removed
	capped + declus		0.27	0.69	2.50	4.00	0.01	0.02	0.25		
Sb_Domain_2	raw composites	618	0.54	1.98	3.65	25.54	0.00	0.01	0.14	7	19.32%
	declustered		0.54	2.00	3.72	25.54	0.00	0.01	0.14		
	capped + declus		0.43	1.22	2.81	7.00	0.00	0.01	0.14		
Sb_Domain_3	raw composites	442	0.16	0.37	2.22	3.50	0.01	0.03	0.17	2	8.44%
	declustered		0.19	0.44	2.32	3.50	0.01	0.03	0.17		
	capped + declus		0.17	0.34	2.00	2.00	0.01	0.03	0.17		
Sb_Domain_4	raw composites	75	0.17	0.48	2.79	2.62	0.00	0.00	0.07	0.7	47.49%
	declustered		0.20	0.53	2.62	2.62	0.00	0.00	0.07		
	capped + declus		0.11	0.19	1.80	0.70	0.00	0.00	0.07		

### 11.3.8 Spatial Statistics

Semi-variogram models were generated for gold, antimony, and silver in GSLIB software for the primary gold, antimony and silver estimation domains. Continuity of gold, silver, and antimony mineralization in domains 1 and 2 is typically greatest parallel to the north-south, steeply dipping orientation of the MCFZ. Other domains show greatest continuity along NE to EW striking, shallowly to moderately NW dipping trends, parallel to north-easterly faults. Variogram models typically reach the sill at a range of 140-250 ft and obtain 60% of the sill at distances of approximately 40 ft.

### 11.3.9 Block Model Parameters and Grade Estimation

The Mineral Resource Estimate for Hangar Flats was developed with block dimensions of 40 x 40 x 20 ft with coordinates defined in Table 11-11. The selected block size is approximately 30% of the median spacing of Perpetua Resources drillholes and is consistent with conceptual mining bench heights. Blocks were discretized into a 4 x 4 x 2 array of points during estimation.

**Table 11-11: Block Model Definition for Hangar Flats**

Deposit	Dimension (ft)			Origin (ft) <sup>1</sup>			Number of Blocks			Rotation
	X	Y	Z	X	Y	Z	X	Y	Z	
Hangar Flats	40	40	20	2,729,000	1,176,700	5,140	112	152	138	0

Note: 1. Lower left hand block model corner, NAD83 Datum Idaho State Plane West (feet).

The Hangar Flats drillhole database contains 917 bulk density measurements from MGI drill core. Most measurements were made by PRII on core samples using a hydrostatic weighting method with approximately 10% verified by an outside laboratory using a wax coating water immersion method. Density variations were observed within rock types and associated with mineralization. Density was estimated using inverse distance squared interpolation within 500 ft of samples or assigned the mean density for the rock type, found in Table 11-12.

**Table 11-12: Density Assignment Values for Hangar Flats Rock Types**

Rock Type	Sample Count	Mean $\rho$ (g/cc)	Std Dev
Alaskite	44	2.61	0.033
Breccia	34	2.66	0.123
Cataclasite	18	2.63	0.057
Dark Gouge	12	2.56	0.058
Diabase	17	2.63	0.078
Fault Material	18	2.65	0.028
Light Gouge	42	2.53	0.053
Quartz Monzonite	691	2.63	0.043
Overburden	-	1.75*	-
Rhyolite	16	2.54	0.029
Rubble	25	2.62	0.028

A multiple percent model was used for the Hangar Flats block model to account for percentage of unmineralized materials (dikes & overburden) contained in each block. Blocks were assigned to domains based on majority by volume.

The Hangar Flats Mineral Resource Estimate was completed for gold, antimony and silver using the estimation domains and shells discussed previously. Gold was estimated within the four estimation domains discussed above. Blocks were estimated using a three-pass search strategy to achieve an appropriate degree of smoothing. The gold estimate used a mixture of hard and soft boundaries based upon contact plot analysis to limit grade extrapolation into unmineralized areas. Ordinary kriging was used to estimate gold and required a minimum of five composites in the first pass with a maximum of two composites for each octant. Subsequent passes relaxed the sample requirements and increased the search ranges. The first estimation pass major axis range of 200 ft was based on the variogram range and appropriate for the average drillhole spacing. The second pass used a maximum search range to 350 ft with a final estimation pass range of 500 ft. The orientation and anisotropy of the search ellipses was based on observed continuity of mineralization and variography. The estimation for silver used the same search parameters as those for gold. Antimony was estimated similarly but with reduced search ranges of 100, 200, and 300 ft, consistent with lower continuity of antimony mineralization. The ratio of cyanide recoverable gold to total gold was estimated to model degree of oxidation using a single pass inverse distance interpolation in each of the two domains discussed above. The search ellipses in each domain were aligned parallel to the general topographic surface and had a maximum range of 500 ft. Figure 11-6 and Figure 11-7 show a section and plan view of the Hanger Flats block model for gold and antimony, respectively.

Figure 11-6: Hangar Flats Gold Block Model

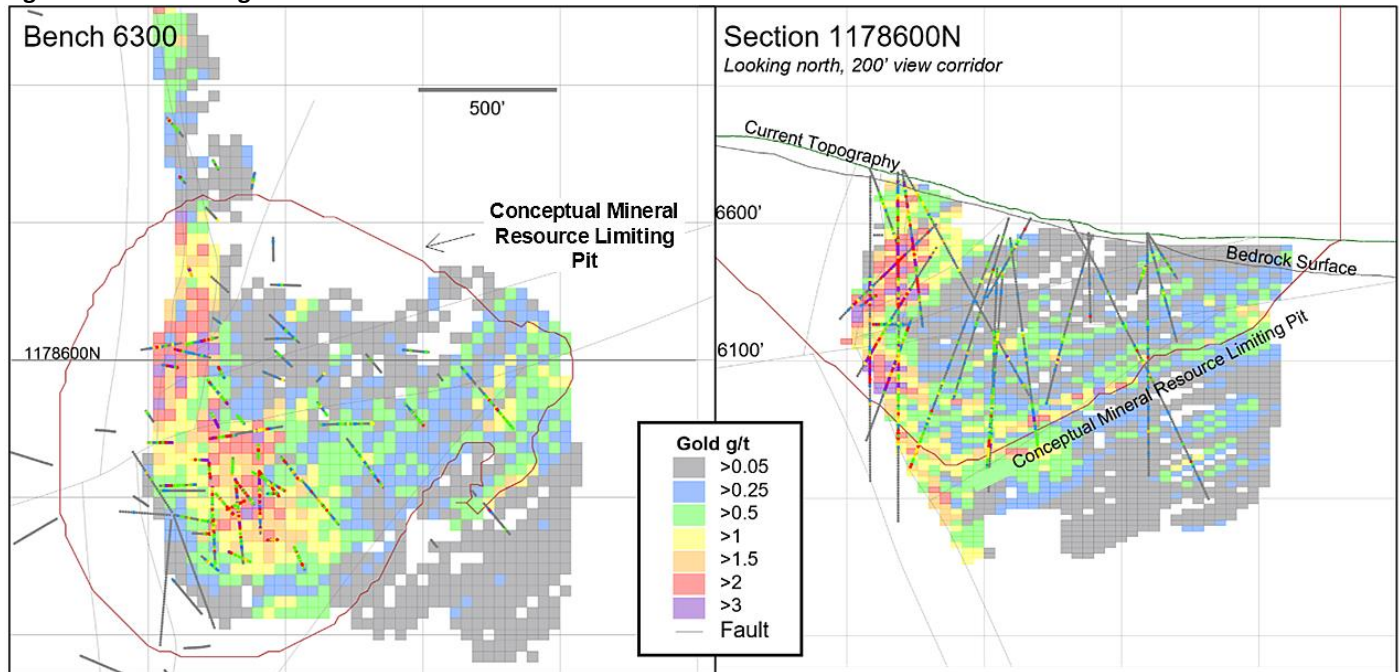
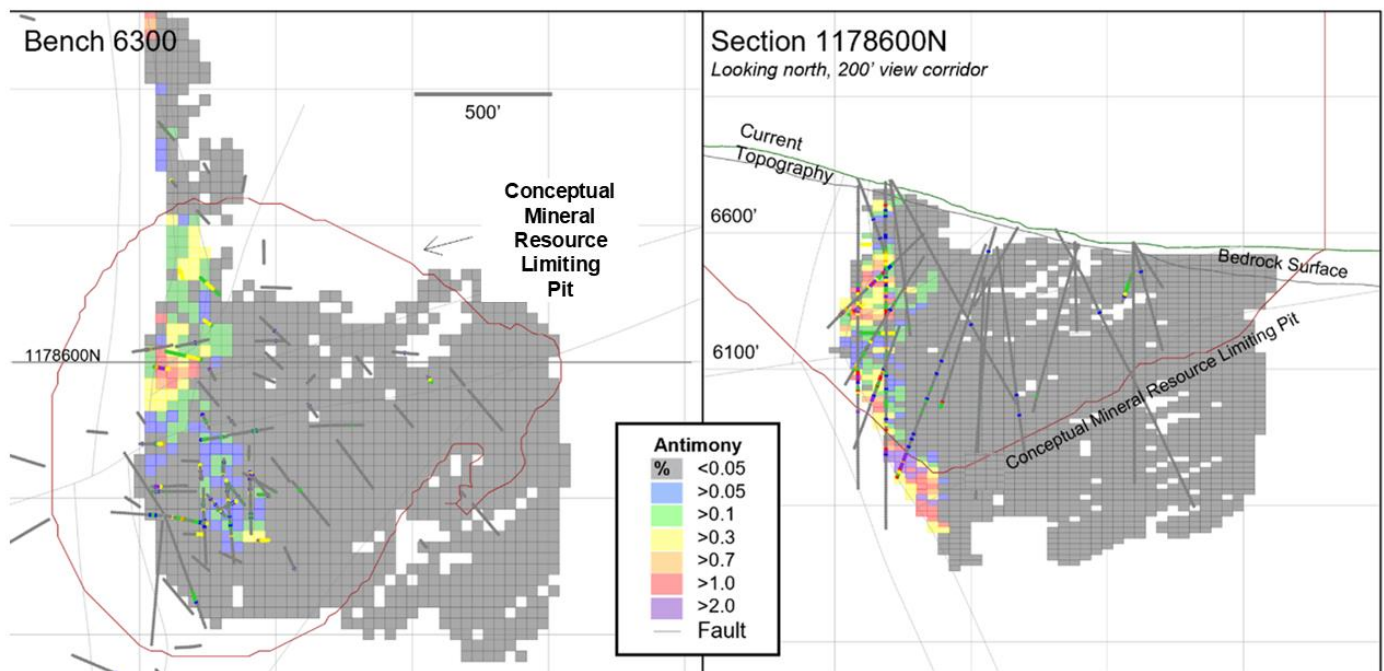


Figure 11-7: Hangar Flats Antimony Block Model



### 11.3.10 Block Model Validation

The block model for Hangar Flats was validated using graphical inspections, statistical comparisons, sensitivity studies, and bias checks. Graphically, the model was compared to sample composites displayed in 3D and in various sectional orientations. Descriptive statistics and plots for gold and antimony were compared with declustered statistics for each domain to assess global bias. Swath Plots were produced and inspected for local bias between composites, kriged blocks and nearest neighbor declustered block grades. Various sensitivities were run to assess the impact of estimation methods, capping grades, and sample requirements. Model sensitivities using un-capped gold composites produced a 0.4% increase in gold ounces and inverse distance cubed interpolation produced a 3.4% increase in gold ounces as reported within a conceptual pit shell.

### 11.3.11 Geochemical Estimates

In addition to gold, antimony and silver, a suite of estimates of geochemical element concentrations were prepared to support geo-metallurgical and geo-environmental engineering. Additional elements estimated include sulfur, arsenic, mercury, iron, calcium, magnesium and potassium which were all analyzed for Perpetua Resources drillholes. The estimation methodology generally followed that used for the commodities consisting of data exploration, domain definition, block estimation and model validation. Elements were composited into the same 10 ft intervals as used for gold and were estimated using either ordinary kriging or inverse distance interpolation. For all estimates, sample selection was restricted to composites occurring within the same geological solid as the block estimated. Capping was not warranted as geochemical elements are typically more normally distributed than the precious metals and underestimation of deleterious elements poses a risk to the project. A summary of the estimates is provided below:

- Pyritic sulfur grade was estimated into blocks using ordinary kriging within the five gold domains. Pyritic sulfur was calculated for composites by subtracting out sulfur associated with stibnite. Stibnite sulfur was calculated from the estimated antimony block estimate and total sulfur grade was calculated as the sum of pyrite sulfur and stibnite sulfur. This methodology mitigates risk for metallurgical forecasting associated with disparate search strategies for sulfur and antimony.
- The elements arsenic, calcium, mercury, potassium, and sodium were estimate in five gold domains described above using either ordinary kriging or inverse distance squared interpolation using a four-pass strategy. The gold domains appropriately segregate hydrothermally altered rocks from the rest of the country rock which is the primary control on the distribution of mobile cations and deleterious metals in the deposit. Search orientations were derived from the gold estimate to best maintain the multivariate relationships observed in the samples.
- Aluminum, iron, and magnesium grades were estimated using ordinary kriging in a single domain across the deposit in two estimation passes.
- Estimates were constrained to 1,000 ft from their nearest composite. Un-estimated blocks for all elements were assigned a mean average value for the rock for the geologic solid “rock type”.

## 11.4 West End

### 11.4.1 Mineral Resource Estimation Procedures

The West End Mineral Resource estimation is based on the validated and verified drillhole database, interpreted lithologic units, interpreted fault structures, and LiDAR topographic data. The geologic model was constructed using ARANZ Leapfrog® Geo software (Leapfrog®). The estimation of mineral resources was completed utilizing Vulcan™ resource modeling software.

### 11.4.2 Geologic Modeling

The West End Mineral Resource Estimate is based on a generalized geologic model consisting of major rock types, major structures, LiDAR topography, historical topography and historical pit bottom surfaces. The deposit occurs in an overturned sequence of steeply dipping Proterozoic to Paleozoic metasediments comprising the Stibnite Roof Pendant. The meta-sedimentary rocks are intruded by quartz-monzonite and granitic stocks. Mineralization occurs within fault zones, principally the southeast dipping WEFZ; as well as disseminated within preferential lithologic hosts. As discussed in Section 7 of this Report, lithologic formations consist of quartzite, quartz-pebble conglomerate, interbedded quartzite and schist, limestones, dolomitic marble, and calc-silicate rocks and range in thickness from 230 – 590 ft.

The West End Geological Model was generated using compilations of various historical data sets from 1980s and 1990s operators including bench mapping, CAD cross sections, blast hole assays, pit-bottom as-built surfaces, as well as incorporation of additional mapping and sampling completed by Perpetua Resources in 2015-2017, and allowed for construction of a detailed 3D structural interpretation of the West End deposit. These data sets were integrated using Leapfrog software to geo-rectify, code and merge historical maps and sections with exploration drilling to generate the 3D geological model solids. The resulting geological model reasonably captures the geological complexity of the deposit, which has undergone numerous ductile and brittle deformation events. The geological model consists of eight lithologic units and seven fault surfaces, as well as pre- and post-mining topographic and bedrock surfaces. Modeling of the deposits over time has changed as additional geological, alteration and structural data became available. There have been no material changes in the West End geological model since the 2022 TRS.

### 11.4.3 Controls on Mineralization

Gold mineralization in the West End deposit occurs within all lithostratigraphic units with higher-grade mineralization preferentially occurring in the schist and calc-silicate lithologies as well as within silicified fault breccias of the WEFZ. Gold mineralization is associated with both disseminated sulfide replacement mineralization and with silica alteration occurring as quartz-veinlets, stockworks and zones of silica flooding. Gold also occurs along oxidized fractures and broadly disseminated within fracture zones and within intrusive units where gold is associated with sulfide-sericite alteration. Gold is concentrated along and adjacent to the WEFZ and its subsidiary structures; with mineralized drillholes observed crossing the modeled hanging wall and footwall with no apparent disruptions in gold grade. Silver mineralization within the deposit is generally low-grade and erratic. Silver mineralization is locally elevated within the WEFZ. Significant antimony mineralization is not recognized in the West End deposit.

The oxidation level in the deposit is of moderate and variable depth, with pervasive oxidation occurring at shallow levels, preferentially within certain lithologic units, and locally at deeper elevations between strands of the WEFZ and along splay structures. Significant zones of transition material are not recognized.

#### 11.4.4 Exploratory Data Analysis and Data Preparation

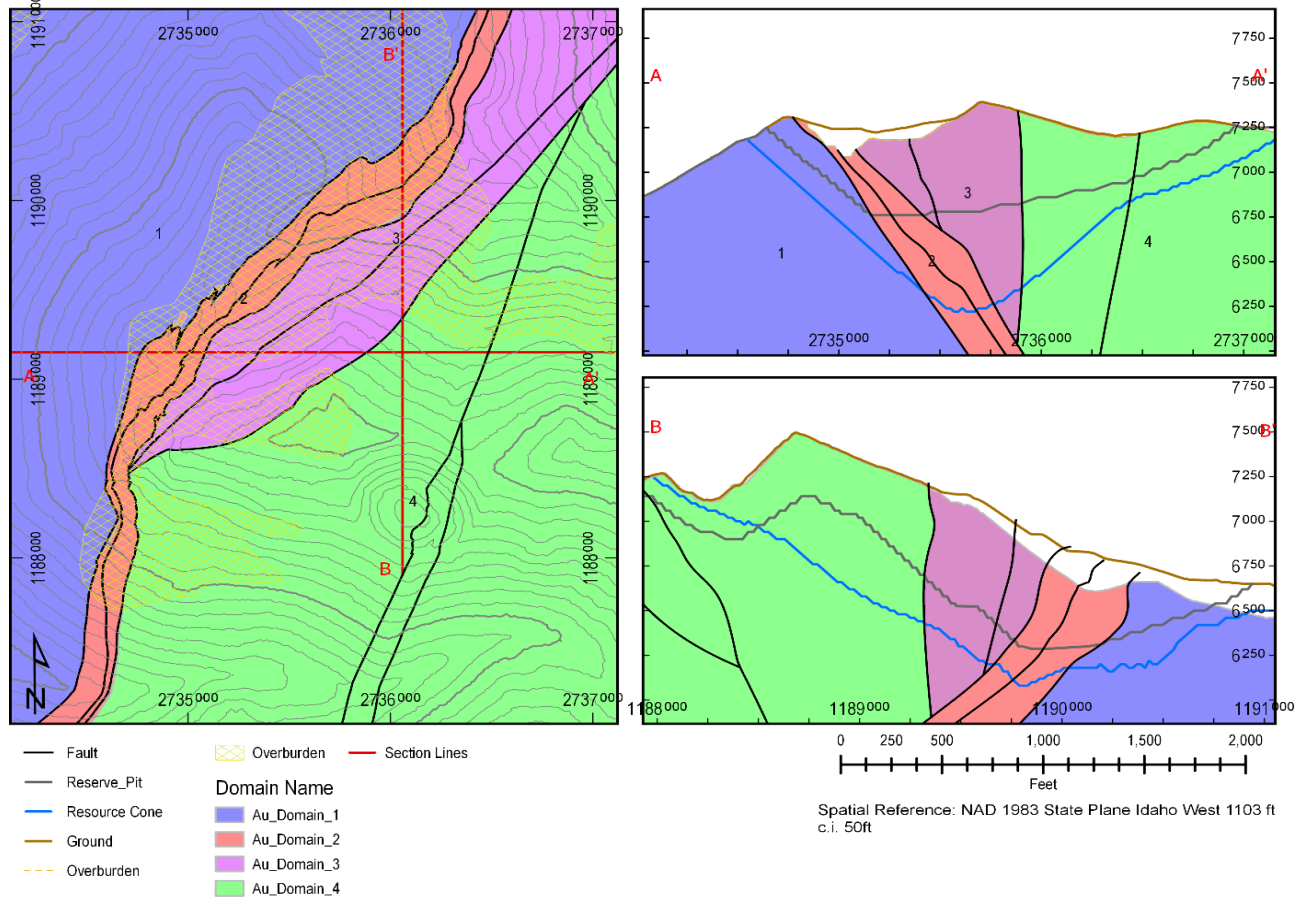
Exploration drilling in the West End deposit was conducted by multiple operators using multiple drilling and assaying methods. Detection limits for gold are quite variable, depending on the drilling campaign and assay lab used. Detection limits were adjusted to values equal to half the detection limit; levels well below those of economic interest. Some historical operators selectively used fire assays within the sulfide zones where sulfide mineralization was observed, resulting in an apparent high bias because higher-grade intervals were preferentially assayed. To address this, a new variable was created (Au\_Final) combining AuFA if available, and AuCN if not, ensuring that an assay is available for every interval in holes containing partial fire assay data. While this treatment is somewhat conservative, it affects a relatively small subset of drillholes in a restricted area of the deposit and as such will not result in over-estimation of in situ mineral resources based on selective spot assaying of higher-grade intervals. Similar to the treatment of partial gold assays, a new variable Ag\_Final was created combining fire assay and cyanide soluble silver assays for use in silver estimation.

Lithology imparts a significant control on the distribution of gold mineralization within the West End deposit. For statistical evaluation and Mineral Resource Estimation, the data was assigned to three lithologic groups with similar grade distributions. The calc-silicates, breccia and schistose lithologies are assigned to lithology group 1; the quartzites, including that of the quartz-pebble conglomerate formation to lithology group 2; and the Fern Dolomite and Granite to lithology group 3. Very little gold and silver mineralization is recognized outside of these lithologies within the Middle Marble and Hermes carbonates.

#### 11.4.5 Estimation Domain Modeling

In addition to the lithology groups discussed above, four structural domains were defined based on the preferred orientation of mineralization being either parallel to lithology units or to fault structures. The structural domains are based on the footwall and hanging wall of the WEFZ, as well as the eastern splay fault, which shows up to 200 ft of apparent displacement of stratigraphy. Mineralization in the WEFZ (domain 2) occurs parallel to the main structure. Mineralization within the other structural domains occurs parallel to bedding within favorable lithologic units. The resultant grade estimate was therefore conducted within 12 separate estimation domains based on three lithology groups and four structural domains (see Figure 11-8).

**Figure 11-8: West End Structural Domains**



### 11.4.6 Capping and Compositing

The original drillhole sample assay values were assessed for statistical outliers using log probability plots. Gold capping levels were chosen independently for each of the lithology groups. The silver capping levels did not vary between the lithologic groups. Capping grades for samples within each lithology group are provided in Table 11-13.

**Table 11-13: Capping Grades for Samples**

Metal	Lith Group	Assay Type	Capping Grade	# Samples Capped	Minimum Capped Grade (g/t)	Maximum Capped Grade (g/t)	% of Metal Lost to Capping
Au	1	Total Fire & CN	23	6	23.1	26.4	0.06
		Fire	23	6	23.1	26.4	0.06
		CN Soluble	15	6	15.6	17.6	0.10
	2	Total Fire & CN	13	12	13.7	18.9	0.45
		Fire	13	12	13.7	18.9	0.43
		CN Soluble	7	12	7.1	14.1	0.66
	3	Total Fire & CN	15	7	16.1	28.2	0.70
		Fire	15	7	16.1	28.2	0.70
		CN Soluble	13	6	13.3	27.9	0.77
Ag	1	Total Fire & CN	17	7	18.6	154.3	3.20
	2	Total Fire & CN	17	12	17.1	70.3	1.60
	3	Total Fire & CN	17	12	17.7	54.5	2.50

Gold, silver, and cyanide soluble gold and silver were composited downhole on 10 ft intervals with no breaks at lithologic contacts. The 10 ft composite length is an even multiple of the average (mode) 5 ft sample length and is also appropriate for estimation of 20 ft bench height blocks. Descriptive statistics for capped composites are provided in Table 11-14 through Table 11-17.

**Table 11-14: Descriptive Statistics for West End Capped Total Gold Composites**

Lith Group	Count	Mean	Std	Median	Upper Quartite	Max	CV
1	9864	0.91	1.56	0.31	1.08	22.28	1.71
2	6208	0.68	1.16	0.26	0.72	15.43	1.70
3	6228	0.49	0.90	0.21	0.54	21.94	1.85

**Table 11-15: Descriptive Statistics for West End Cyanide Capped Gold Composites**

Lith Group	Count	Mean	Std	Median	Upper Quartite	Max	CV
1	8329	0.53	1.06	0.15	0.52	15.00	1.99
2	5224	0.41	0.75	0.17	0.40	8.33	1.84
3	5417	0.34	0.68	0.15	0.36	14.17	2.01

**Table 11-16: Descriptive Statistics for West End Capped Total Silver Composites**

Lith Group	Count	Mean	Std	Median	Upper Quartite	Max	CV
1	4920	1.18	1.76	0.43	1.43	17.00	1.50
2	3645	1.01	1.68	0.38	1.10	17.00	1.67
3	3237	1.20	1.93	0.41	1.41	17.00	1.60

**Table 11-17: Descriptive Statistics for West End Cyanide Capped Silver Composites**

Lith Group	Count	Mean	Std	Median	Upper Quartile	Max	CV
1	1551	0.69	1.49	0.22	0.66	16.46	2.17
2	729	0.69	1.64	0.26	0.62	17.00	2.35
3	1354	0.55	1.29	0.19	0.46	17.00	2.36

#### 11.4.7 Spatial Statistics

Semi-variogram models were generated for gold and silver for each lithology group to determine spatial continuity of mineralization for use in block estimation. Gold variogram models typically have a nugget of 25-35% and a maximum range of approximately 60 ft, reaching 60% of the sill at a range of 15 to 20 ft. Silver variogram models typically have a nugget of 15-30% and a maximum range of 135-195 ft reaching 60% of the sill at a range of 15-25 ft.

#### 11.4.8 Block Model Parameters and Grade Estimation

The West End block model used for mineral resource estimation was developed with 20 x 20 x 20 ft blocks (Table 11-18). This block size is smaller than the 40 x 40 x 20 ft blocks used for the Yellow Pine and Hangar Flats deposits and was selected to allow for accurate estimation of mineralized tonnage within narrow geological units. This method was selected in lieu of the multiple percent model approach used for Yellow Pine and Hangar Flats block models.

**Table 11-18: Block Model Definition for West End**

Deposit	Dimension (m)			Origin (ft) <sup>1</sup>			Number of Blocks			Rotation
	X	Y	Z	X	Y	Z	X	Y	Z	
West End	20	20	20	2732700	1185400	5680	290	370	116	0

Note: 1. Lower left hand block model corner, NAD83 Idaho State Plane West feet

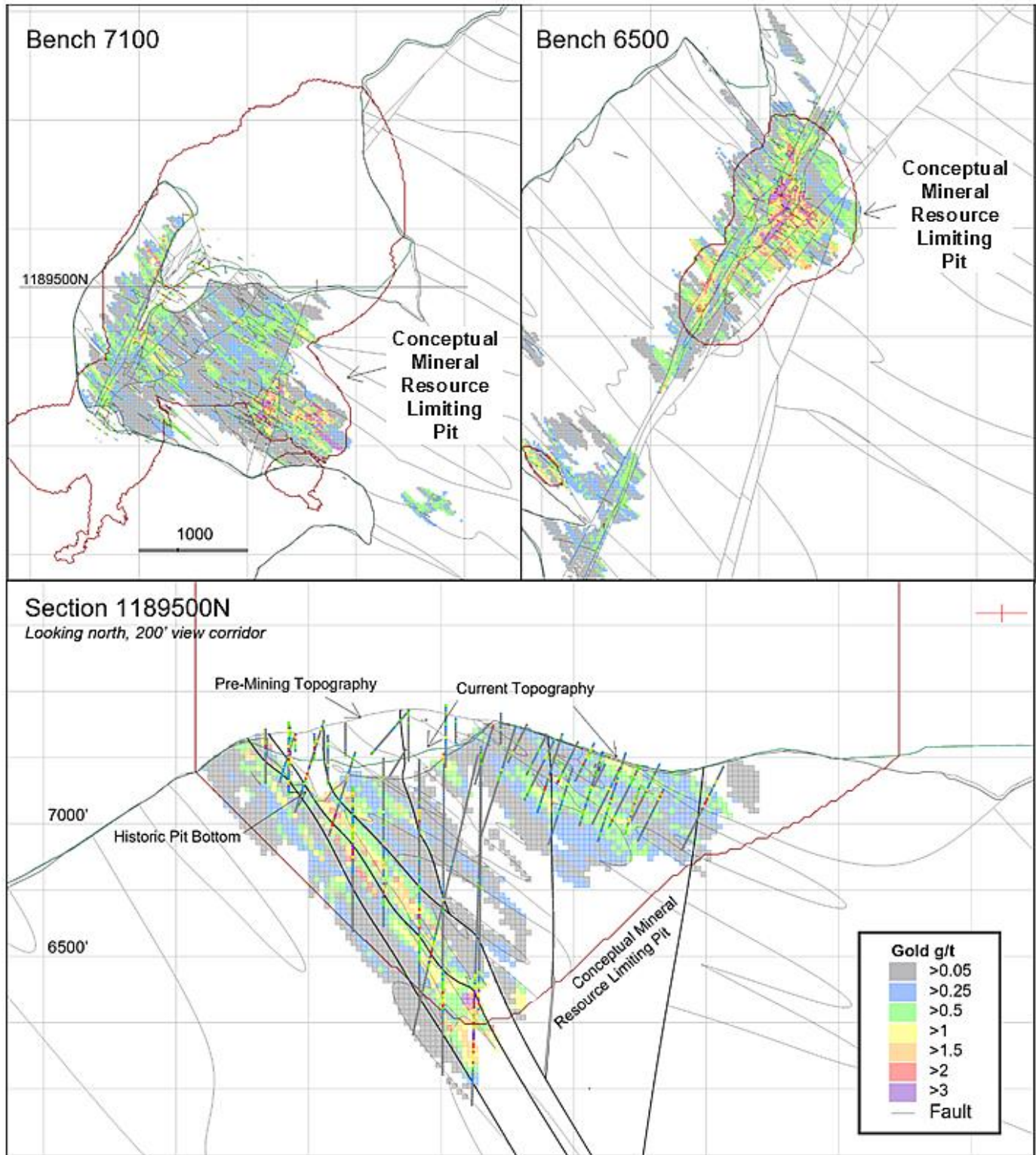
The drillhole database contains 166 density measurements from the primary lithologic units, the majority of which were determined onsite using the water immersion method, with a number of independent third-party measurements completed offsite using the same methodology. Because of the relatively small number of density measurements, density values were averaged for each lithologic unit and assigned to the geologic model after removal of outliers, as summarized in Table 11-19.

**Table 11-19: Density Assignment Values for West End Lithologic Units**

Rock Model Unit	Bulk Density (g/cm <sup>3</sup> )
Breccia	2.50
Quartzite	2.61
Schist	2.70
Upper & Lower Calc-Silicate	2.75
Fern Marble	2.78
Middle Marble	2.80
Hermes Marble	2.78
Stibnite Stock	2.61
Overburden	1.75

Total gold, cyanide soluble gold and silver were estimated using ordinary kriging with estimation domains based on the lithology groups and structural domains discussed above. Lithology groups served as hard boundaries for sample selection. The grade estimations for all metals in all domains, utilize a three-pass sample search strategy with each pass searching longer distances than the previous. The first estimation pass used an anisotropic search ellipse with a maximum range of 150 ft which was expanded to 250 and 300 ft in subsequent passes. Estimation was limited to those blocks within 225 ft of the closest composite. As discussed previously, the model is subdivided into four search domains. Domains 1, 3 and 4 all use static search orientations which are aligned parallel to the average strike and dip of the lithologic layering. Search domain 2 represents the West End Fault Zone where a dynamic search orientation was used based on the average strike and dip of the overlying, Hanging Wall Fault and the underlying, Foot Wall Fault. All estimations require a Min/Max of 3/16 samples respectively, and utilize a minimum of two drill holes and a maximum of 2 samples per octant. A high-grade composite restriction was also applied in certain parts of the model to prevent excessive grade extrapolation into sparsely drilled areas of the deposit. Figure 11-9 shows plan and section views of the West End block model for gold.

Figure 11-9: West End Gold Block Model



#### 11.4.9 Block Model Validation

The block model for West End was validated by completing a series of graphical inspections, bias checks, comparison to prior estimates and reconciliation against historical production records. Graphically, the interpolated block grades were visually checked on sections, plan views and in 3-D for comparison to the composite assay grades. The general model estimation parameters were reviewed to evaluate the performance of the model with respect to supporting data including the number of composites used, number of drillholes used, average distance to samples used, and the number of blocks estimated in each pass. Global and local bias was assessed through comparison of estimated block grades to the composite sample data and by construction of swath plots at 50 m spacing across the deposit. The final validation compared the grade estimate within the material which was historically mined to the accumulated production data from that mining period.

#### 11.4.10 Geochemical Estimates

In addition to gold, cyanide gold and silver, a suite of estimates of geochemical element concentrations were prepared to support geo-metallurgical and geo-environmental engineering. Additional elements estimated included sulfur, arsenic, mercury, iron, calcium, sodium, magnesium and potassium. These elements were analyzed for Perpetua Resources drillholes but are only rarely analyzed in legacy holes, which comprise the majority of drillholes in the deposit.

- Sulfur and arsenic, for which data is limited, generally correlate with gold and were estimated within three domains using collocated co-kriging incorporating the gold block model as the secondary variable used to guide the estimate in areas with sparse Perpetua Resources drilling. This method reproduced the multivariate gold-arsenic-sulfur relationships observed in the composite data with total gold and oxide gold respectively.
- The major cations (Fe, Ca, Na, Mg and K) are primarily controlled by metasedimentary lithology and were estimated within domains based on lithology solids using inverse distance squared interpolation.
- Elevated mercury occurs along north-easterly striking splay structures and was estimated using inverse distance cubed interpolation within a single domain.

### 11.5 Historical Tailings

#### 11.5.1 Mineral Resource Estimation Procedures

The historical tailings mineral resource estimate is based on the drillhole database, geologic model of tailings, and LiDAR topographic data. The geologic modeling and estimation of mineral resources was completed using the commercial three-dimensional block modelling and mine planning software packages Geovia GEMS™ 6.6 and Micromine™ version 14; geostatistical analysis was completed using Isaaks & Co.'s SAGE2001™ software package.

#### 11.5.2 Geologic Modelling

The Historical Tailings were hydraulically deposited within the Meadow Creek Valley from the 1930s through the 1950s; the tailings were generated from the Bradley Mining Company sulfide flotation milling operations. The tailings were

later overlain by spent heap leach ore from the 1980s through the 1990s heap leach operations. The tailings deposit is up to 18 m thick, with an average thickness of 6 m; the overlying spent ore material is up to 23 m thick, with an average thickness of 11 m. These relationships are depicted graphically in Section 12 of this Report. Tailings material was wire-framed based on drillhole intercepts, modern LiDAR and orthographic photos, and historic engineering drawings and airborne photos. The total volume of the tailings wireframe is 1,925,923 m<sup>3</sup>.

### 11.5.3 Estimation Domain Modelling

The tailings solid serves as the only estimation domain utilized in the mineral resource estimate. Descriptive statistics for raw assays within the tailings solid are presented in Table 11-20. The drillholes were drilled on a quasi-regular grid and there is no evidence of data clustering in high- or low-grade areas. Higher-grade material shows northwest trends which shift location vertically, consistent with presumed deposition in tailings beaches during historical operations.

**Table 11-20: Raw Assay Statistics for the Historical Tailings**

Statistic	Width (m)	Au	Sb	Ag
Count	540	540	540	540
Mean	0.63	1.191	0.173	3.08
Standard Deviation	0.27	0.527	0.117	2.70
Range	2.90	4.636	0.996	41.75
Minimum	0.15	0.054	0.0045	0.25
Lower Quartile	0.61	0.813	0.090	1.80
Median	0.61	1.088	0.169	2.80
Upper Quartile	0.61	1.395	0.237	3.80
Maximum	3.05	4.690	1.000	42.00
CV	0.42	0.44	0.68	0.88
95% Percentile	0.61	2.211	0.360	5.81
98% Percentile	1.52	2.704	0.440	7.04
99% Percentile	1.83	2.960	0.473	7.50

### 11.5.4 Compositing

Samples were composited on intervals of 0.61 m and 1.52 m, of which the 0.61 m composites were determined to exhibit a more regular distribution of composite lengths and were selected for estimation. Gold, antimony and silver were composited downhole within the tailings solid. The composited data yields a histogram with a moderately skewed distribution and very few samples with a grade <0.6 g/t Au.

### 11.5.5 Evaluation of Outliers

To evaluate potential risk associated with use of high-grade statistical outliers, potential capping grades were assessed using log-probability plots and by analysis of contained metal in deciles and centiles, following the Parrish Method (Parrish, 1997). These results indicate no cap for gold, a cap of 0.6% for antimony and 10 g/t for silver. Descriptive statistics for capped composites are presented in Table 11-21. Note that compositing of the longer sample intervals to 0.61 m yielded more composites than raw assays.

**Table 11-21: Historical Tailings Descriptive Statistics for Capped Composites**

Statistic	Au	Sb_Cap	Ag_Cap
Count	568	568	568
Mean	1.183	0.173	2.98
Standard Deviation	0.488	0.104	1.52
Minimum	0.34	0.0045	0.5
Median	1.089	0.167	2.8
Maximum	4.69	0.6	10
CV	0.412	0.598	0.51
95% Percentile	2.127	0.34	5.8
98% Percentile	2.392	0.414	6.81
99% Percentile	2.701	0.458	7.33

### 11.5.6 Statistical Analysis and Spatial Correlation

Correlogram models were developed using the SAGE2001™ software package to guide the search ellipse and establish spatial correlation and sample weighting for the estimate. Correlograms demonstrate low nugget effect with effective ranges close to the drillhole spacing and confirm the northwest anisotropy and stratified nature of the deposit. The correlogram is summarized in Table 11-22.

**Table 11-22: Correlogram Models for the Historical Tailings**

Metal	Ellipse Axes Azimuth/Plunge(1)			Nugget C0	Sill C1	Ranges a1 (m)			Type
	1st	2nd	3rd			1st	2nd	3rd	
Au	327/2	57/-2	106/87	0.028	0.972	82	50	3	Exp
Sb	336/1	66/-5	76/85	0.02	0.98	133	41	5	Exp
Ag	131/1	41/7	228/83	0.001	0.999	142	63	6	Exp

Notes: 1. Negative plunge is downward.

### 11.5.7 Block Model Parameters and Grade Estimation

Due to the unconsolidated and stratiform nature of the tailings material, the block model is defined assuming selective mining methods with excellent grade control. Block dimensions are 15.24 x 15.24 x 1.524 m (50 x 50 x 5 ft) with location summarized in Table 11-23. Blocks located partially within the solid were assigned a percent value for reporting purposes.

**Table 11-23: Historical Tailings Block Model Definition**

Deposit	Dimension (m)			Origin <sup>1</sup>			Number of Blocks			Rotation
	X	Y	Z	X	Y	Z	X	Y	Z	
Historical Tailings	15.24	15.24	1.524	630,007	4,972,007	1,982	68	48	40	0

Notes: 1. Block centroid, NAD83 Zone 11N Datum.

The Historical Tailings resource was estimated using ordinary Kriging in a single pass using a search ellipse and sample weighting established by the correlogram models discussed above. Samples were limited to a maximum of 3 per

drillhole, increasing the influence of samples from neighboring drillholes. Search ellipse and sample selection parameters are summarized in Table 11-24. Density was estimated from 35 Shelby tube samples of the tailings material; the average dry density of the deposit was calculated to be 1.504 g/cm<sup>3</sup>.

**Table 11-24: Summary of Estimation Parameters for the Historical Tailings**

Description	Au	Sb	Ag
Method	OK	OK	OK
Principal Axis Azimuth / Plunge	325/0	330/0	310/0
int. Axis Azimuth / Plunge	055/0	60/0	40/0
Minor Axis Azimuth / Plunge	0/-90	0/-90	0/-90
Principle Axis Search Distance (m)	175	220	200
Major / Int / Minor Axis	1 / 0.66 / 0.1	1 / 0.5 / 0.1	1 / 0.5 / 0.1
Search Type	Open	Open	Open
Comp Restrictions	Hard	Hard	Hard
Maximum Comps/sector	N/A	N/A	N/A
Minimum Comps	1	2	3
Minimum # Holes	N/A	N/A	N/A
Maximum Comps / Hole	3	3	3
Maximum Comps	12	12	12

### 11.5.8 Block Model Validation

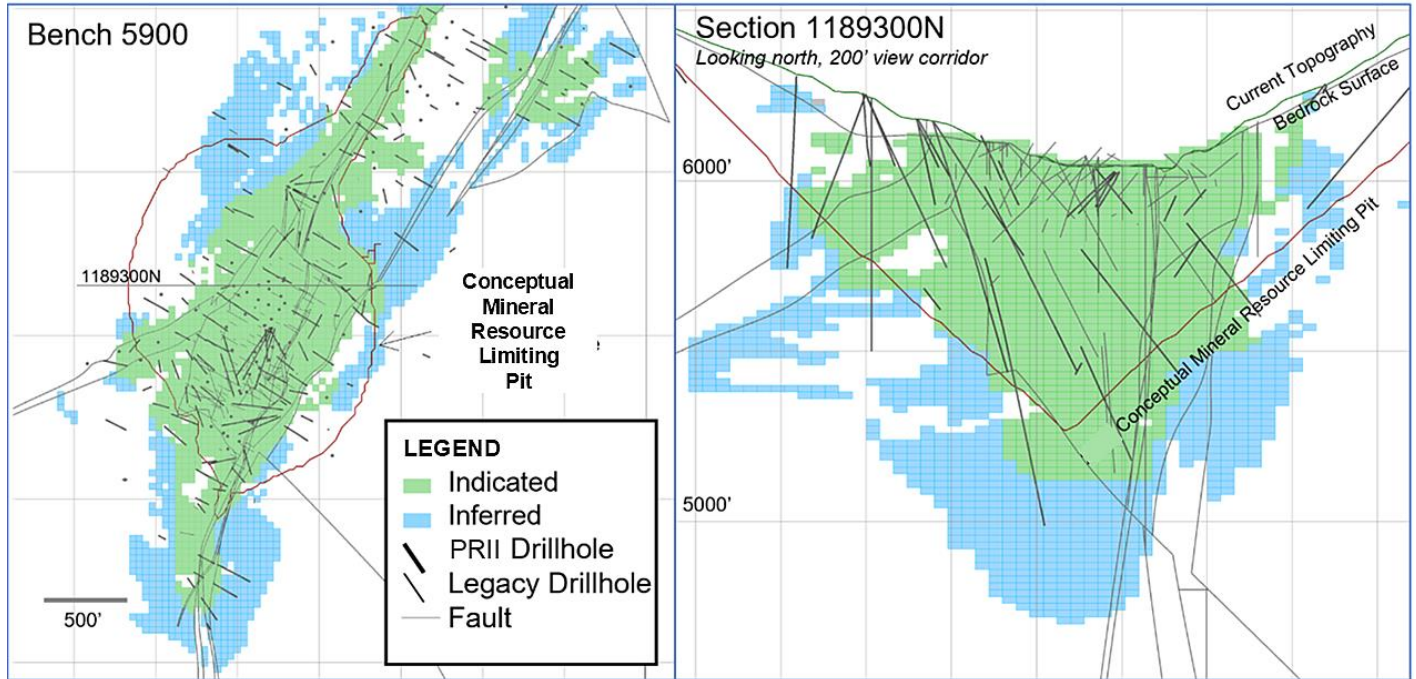
The block model for the Historical Tailings was validated by completing a series of graphical inspections, bias checks and reconciliation with historic production records. The block estimates and block percentages were reviewed visually relative to the composite grades and the tailings wireframe. Global bias was assessed by comparison of the Kriged estimate to the nearest neighbor estimate and showed a 3.5% variance. Local bias was assessed by way of a swath plot in the Z direction. Relative to the nearest neighbor estimate, the Kriged estimate displays local low bias on upper-level benches, proximal to very high-grade composites in three different drillholes. The results of the Kriged model are generally consistent with estimates of metals reporting to the tailings calculated as the difference between historical mill-feed grade and recovered metal from historical Bradley Mining Company production records.

### 11.6 Mineral Resource Classification

Mineral Resources are classified under the categories of Indicated and Inferred in accordance with §229.1302(d)(1)(iii)(A) (Item 1302(d)(1)(iii)(A) of Regulation S-K). Mineral resource classification for gold was based primarily on drillhole spacing and on continuity of mineralization. Antimony and silver are not classified separately and are reported based on gold classification. Indicated resources were defined as those with an average distance to three drillholes of less than 120 ft at Yellow Pine and 100 ft at Hangar Flats. Indicated resources at the West End were defined as those with an average drillhole spacing of less than 100 ft and meeting additional requirements. Final resource classification shells were manually constructed on sections to smooth the classification categories. The drillhole spacing used to define indicated resources in Yellow Pine and Hangar Flats was independently validated by a drillhole spacing study assessing theoretical grade uncertainty under different drillhole patterns. This study indicates that a drillhole

spacing of 120 ft reduces annual uncertainty to  $\pm 15\text{-}20\%$  and that a drillhole spacing of 50 ft reduces quarterly uncertainty to  $\pm 15\text{-}20\%$  with 90% confidence. See Figure 11-10 through Figure 11-12.

**Figure 11-10: Mineral Resource Classification for Yellow Pine**



**Figure 11-11: Mineral Resource Classification for Hangar Flats**

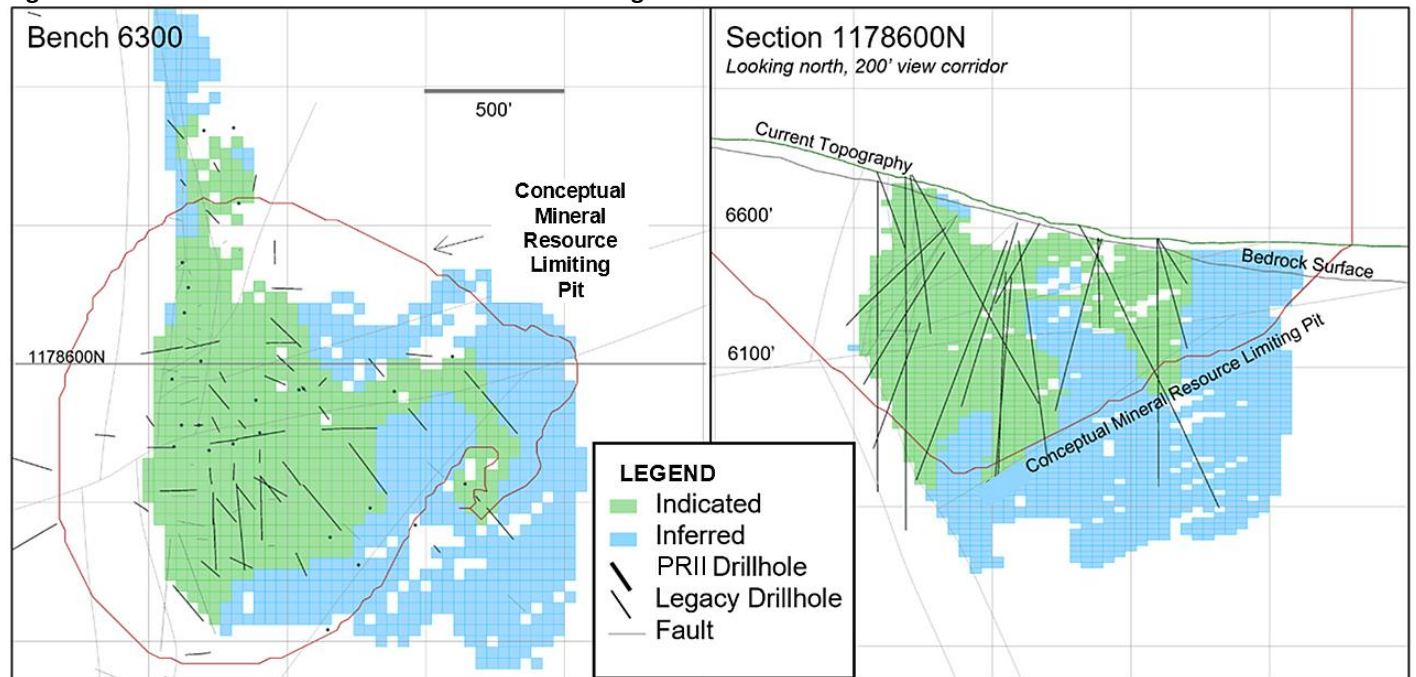
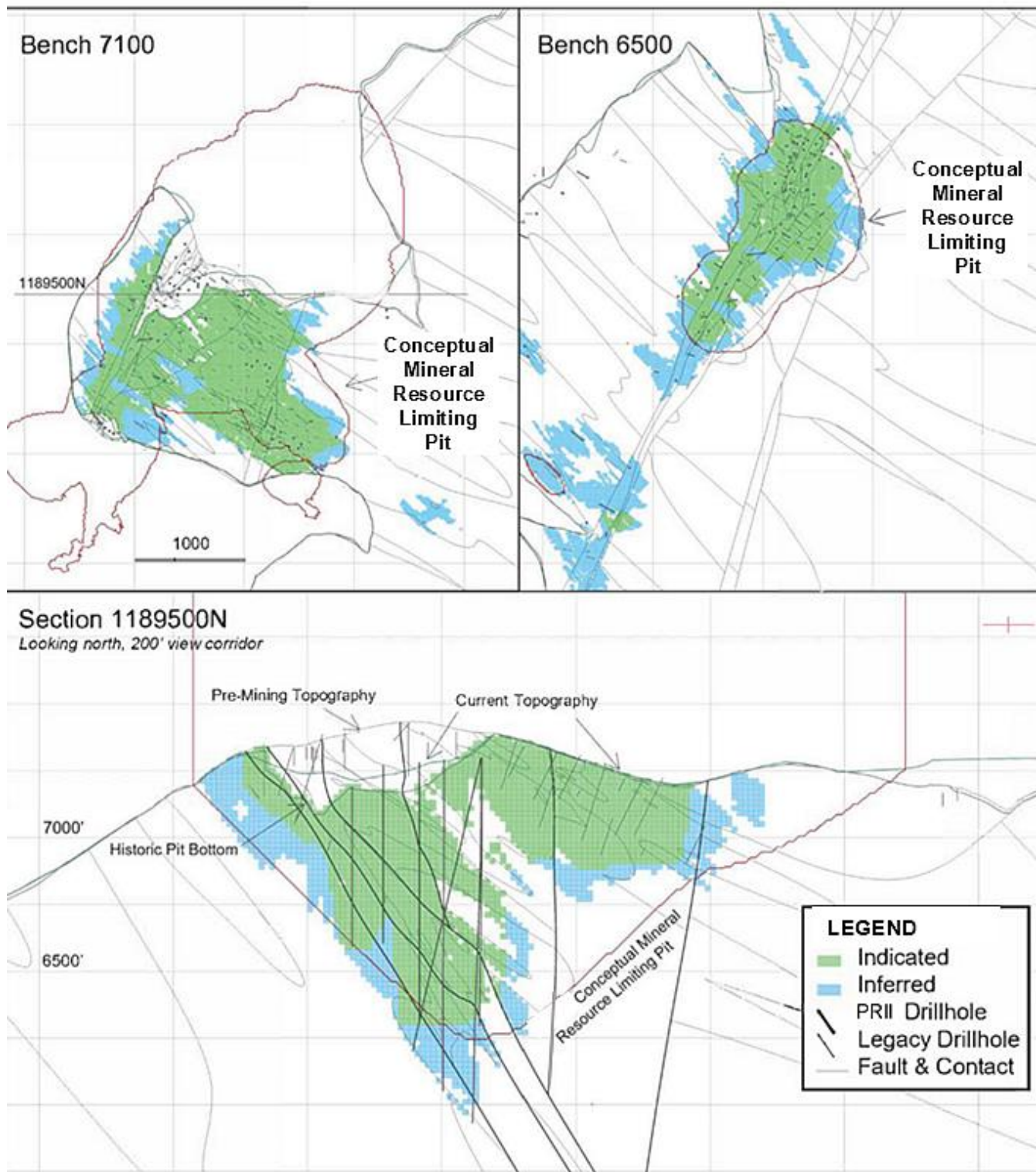


Figure 11-12: Mineral Resource Classification for West End



Confidence criteria used to guide the mineral resource classification for the Historical Tailings mineral resource includes kriging variance and anisotropic minimum distance to the nearest composite. Final classification was assigned by digitizing contours around blocks with Kriging variance >0.66 and minimum distance >60 m for the gold estimate, to define areas of inferred classification. The inferred blocks are primarily located on the southern and western margins of the tailings solid where drill data is sparse.

## 11.7 Discussion Of Cut-Off Grade and Reasonable Prospect of Eventual Economic Extraction

S-K 1300 requires that Mineral Resources have “reasonable prospects for eventual economic extraction” requiring that mineralization meet certain grade and material volume thresholds under reasonable production and recovery scenarios at reasonable cut-off grades. The potential for eventual economic extraction was assessed using an open-pit optimization Pseudoflow algorithm in MineSight® Version 15.10 software. Input parameters were developed on the basis of advanced cost estimates, metallurgical recoveries indicated by bench and pilot scale testwork and from feasibility level design engineering studies, as shown in Table 11-25.

As discussed in Section 12 of this Report, the QP determined that it remained appropriate to continue to use 2021 operating cost estimates and corresponding commodity price assumptions for purposes of mining and pit shell design parameters and continues to provide a reasonable basis for establishing that the Project is economically viable.

**Table 11-25: Pit Optimization Parameters by Deposit**

Economic Parameters	Units	Yellow Pine & Hangar Flats	West End
Mining Cost - Waste	\$/tonne mined	2.00	2.00
Mining Cost - Ore	\$/tonne mined	2.00	2.00
Ore Type Classification	-	-	Value Based
Oxide Processing Cost	\$/tonne mined	-	7.20
Oxide Au Recovery	%	-	R*92.75%+1.22%
Transition Processing Cost	\$/tonne mined	-	12.28
Transition Au Recovery	%	-	92.37%-R*8.93%
Sulfide Processing Cost	\$/tonne milled	10.69	10.69
Sulfide Au Recovery	%	93%	96.42%-R*84.72%
Dore Transport Cost	\$/oz Au	1.15	1.15
Dore Refining Cost	\$/oz Au	1.00	1.00
G&A and Rehabilitation Cost	\$/tonne milled	4.00	4.00
Pit Slopes	degrees	36-46	36-46
Au Payability	%	99.5	99.5
Au Selling Price - Base Case	\$/oz	1,500	1,500
Mining dilution	%	0	0
Mining recovery	%	100	100
NSR Royalty on Au	%	1.7	1.7

Note: The term “R” used in the West End metallurgical recovery formulas refers to the fraction of free, or cyanide soluble, gold in each block. The value is estimated by dividing the cyanide soluble gold assay estimate by the fire assay gold estimate (for each block).

Assumptions used to derive the cut-off grades and define the resource-limiting pits were estimated to meet the S-K 1300 requirement for mineral resource estimates to demonstrate “reasonable prospects for eventual economic extraction” and vary from those used to limit the Mineral Reserves reported herein. The \$1,500/oz gold selling price was selected based on the three-year trailing average at the time of resource reporting and is below the current spot and trailing average gold prices. Based on these parameters, cut-off grades for Hangar Flats, West End and Yellow Pine were calculated to be approximately 0.40 g/t Au and an open pit oxide cut-off grade of approximately 0.35 g/t Au.

Because of the flat and shallow geometry of the Historical Tailings deposit, and due to potential use of the overlying material in conceptual construction scenarios, economic criteria were not assessed using a pit optimization. Instead, cost estimates for removing the overlying SODA material were compared to potential revenue from processing the tailings material and were shown to be positive.

### 11.8 Mineral Resource Statements

Mineral resources presented herein comply with guidelines of S-K 1300. The mineral resources reported in Table 11-26 to Table 11-32, inclusively, are contained entirely within conceptual pit shells developed from the parameters discussed above. Based on these parameters, cut-off grades for Hangar Flats, West End and Yellow Pine were calculated based on a \$1,500/oz gold selling price and a \$20/oz silver selling price, which resulted in an open pit sulfide cut-off grade of approximately 0.40 g/t Au and an open pit oxide cut-off grade of approximately 0.35 g/t Au. Only mineral resources above these cut-offs and within the mineral resource-limiting pits are reported and, as such, mineralization falling below this cut-off grade or outside the mineral resource-limiting pit is not reported, irrespective of the grade. Mineral Resources are inclusive of Mineral Reserves, except where otherwise stated. Mineral Resources were calculated consistent with internal controls and quality assurances as discussed in Sections 8 and 9.

**Table 11-26: Consolidated Mineral Resource Statement for the Stibnite Gold Project at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Indicated</b>							
Yellow Pine	56,445	1.67	3,025	2.10	3,820	0.09	115,022
Hangar Flats	28,065	1.37	1,239	3.20	2,884	0.15	90,925
West End	60,963	1.00	1,956	1.25	2,449	0.00	0
Historical Tailings	2,687	1.16	100	2.86	247	0.17	9,817
<b>Total Indicated</b>	<b>148,159</b>	<b>1.33</b>	<b>6,320</b>	<b>1.97</b>	<b>9,400</b>	<b>0.07</b>	<b>215,764</b>
<b>Inferred</b>							
Yellow Pine	8,021	0.85	219	0.59	153	0.00	62
Hangar Flats	17,021	1.00	548	2.30	1,259	0.09	32,146
West End	26,895	0.97	837	1.06	918	0.00	0
Historical Tailings	191	1.13	7	2.64	16	0.16	662
<b>Total Inferred</b>	<b>52,128</b>	<b>0.96</b>	<b>1,611</b>	<b>1.40</b>	<b>2,345</b>	<b>0.03</b>	<b>32,870</b>

Notes: **1.** All Mineral Resources have been estimated in accordance with S-K 1300. **2.** Mineral Resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a Mineral Resource. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. These Mineral Resource estimates include Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is also no certainty that these inferred Mineral Resources will be converted to the Indicated category through further drilling, or into Mineral Reserves once economic considerations are applied. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely. **3.** Open-pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open-pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **4. IMPORANT: Mineral Resources are inclusive of Mineral Reserves.**

**Table 11-27: Consolidated Mineral Resource Statement for the Stibnite Gold Project at the end of the fiscal Year 2025 based on \$1,500/oz gold, EXCLUSIVE OF RESERVES**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Indicated</b>							
Yellow Pine	8,598	1.11	307	1.44	397	0.018	3,405
Hangar Flats	19,803	1.30	825	3.34	2,128	0.146	63,673
West End	15,133	0.76	369	0.91	445	-	-
Historical Tailings	0	-	0	-	0	-	0
<b>Total Indicated</b>	<b>43,534</b>	<b>1.07</b>	<b>1,501</b>	<b>2.12</b>	<b>2,970</b>	<b>0.07</b>	<b>67,078</b>
<b>Inferred</b>							
Yellow Pine	8,021	0.85	219	0.59	153	0	62
Hangar Flats	17,021	1	548	2.3	1,259	0.09	32,146
West End	26,895	0.97	837	1.06	918	0	0
Historical Tailings	191	1.13	7	2.64	16	0.16	662
<b>Total Inferred</b>	<b>52,128</b>	<b>0.96</b>	<b>1,611</b>	<b>1.4</b>	<b>2,345</b>	<b>0.03</b>	<b>32,870</b>

Notes: **1.** All Mineral Resources have been estimated in accordance with S-K 1300. **2.** Mineral Resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a Mineral Resource. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. These Mineral Resource estimates include Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is also no certainty that these inferred Mineral Resources will be converted to the Indicated category through further drilling, or into Mineral Reserves once economic considerations are applied. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely. **3.** Open pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **4. IMPORANT: Mineral Resources are Exclusive of Mineral Reserves.**

The Yellow Pine and Hangar Flats deposits contain zones with substantially elevated antimony-silver mineralization, defined as containing greater than 0.1% antimony, relative to the overall mineral resource. The existing Historical Tailings Mineral Resource also contains elevated concentrations of antimony. These higher-grade antimony zones are reported separately in Table 11-28 to illustrate the potential for antimony production from the Project and are contained within the overall mineral resource estimates reported herein. Antimony zones are reported only if they lie within gold mineral resource estimates.

**Table 11-28: Antimony Sub-Domains Consolidated Mineral Resource Statement at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Indicated</b>							
Yellow Pine	9,569	2.27	697	5.33	1,639	0.51	108,306
Hangar Flats	6,771	2.08	453	8.22	1,790	0.57	85,509
Historical Tailings	2,687	1.16	100	2.86	247	0.17	9,817
<b>Total M&amp;I</b>	<b>19,027</b>	<b>2.04</b>	<b>1,250</b>	<b>6.01</b>	<b>3,677</b>	<b>0.49</b>	<b>203,632</b>
<b>Inferred</b>							
Yellow Pine	12	1.16	0	2.52	1	0.20	52
Hangar Flats	1,312	2.32	98	15.59	658	1.08	31,274
Historical Tailings	191	1.13	7	2.64	16	0.16	662
<b>Total Inferred</b>	<b>1,515</b>	<b>2.16</b>	<b>105</b>	<b>13.86</b>	<b>675</b>	<b>0.96</b>	<b>31,988</b>

Notes: **1.** Antimony mineral resources are reported as a subset of the total mineral resource within the conceptual pit shells used to constrain the total mineral resource in order to demonstrate potential for economic viability; mineralization outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. **2.** Open-pit antimony sulfide mineral resources are reported at a cut-off grade 0.1% antimony within the overall 0.40 g/t Au cut-off. **3. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

**Table 11-29: Yellow Pine Mineral Resource Statement Open Pit Oxide + Sulfide at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Oxide<sup>1</sup></b>							
Indicated	1,593	0.91	47	1.02	52	0.00	133
Total M&I <sup>2</sup>	1,593	0.91	47	1.02	52	0.00	133
Inferred <sup>3</sup>	23	0.69	1	0.54	0	0.00	0
<b>Sulphide<sup>1</sup></b>							
Indicated	54,852	1.69	2,978	2.14	3,768	0.10	114,889
Total M&I <sup>2</sup>	54,852	1.69	2,978	2.14	3,768	0.10	114,889
Inferred <sup>3</sup>	7,998	0.85	218	0.59	152	0.00	62

Notes: **1.** Mineral resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated. All figures are rounded to reflect the relative accuracy of the estimate. **2.** Open-pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **3. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

**Table 11-30: Hangar Flats Mineral Resource Statement Open Oxide + Sulfide at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Oxide<sup>1</sup></b>							
Indicated	490	0.80	13	1.14	18	0.00	0
Inferred <sup>3</sup>	154	0.62	3	0.98	5	0.00	0
<b>Sulphide<sup>1</sup></b>							
Indicated	27,575	1.38	1,226	3.23	2,866	0.15	90,925
Inferred <sup>3</sup>	16,867	1.01	545	2.31	1,254	0.09	32,146

Notes: **1.** Mineral resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated. All figures are rounded to reflect the relative accuracy of the estimate. **2.** Open-pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **3. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

**Table 11-31: West End Mineral Resource Statement Open Pit Oxide + Sulfide at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Oxide<sup>1</sup></b>							
Indicated	26,809	0.78	672	1.21	1,045	0.00	0
Inferred <sup>3</sup>	8,734	0.74	209	1.04	292	0.00	0
<b>Sulphide<sup>1</sup></b>							
Indicated	34,154	1.17	1,284	1.28	1,403	0.00	0
Inferred <sup>3</sup>	18,161	1.08	628	1.07	626	0.00	0

Notes: **1.** Mineral resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability; mineralization lying outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated. All figures are rounded to reflect the relative accuracy of the estimate. **2.** Open pit sulfide Mineral Resources are reported at a cut-off grade of 0.40 g/t Au and open pit oxide Mineral Resources are reported at a cut-off grade of 0.35 g/t Au. **3. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

**Table 11-32: Historical Tailings Mineral Resource Statement Open Pit Sulfide at the end of the fiscal Year 2025 based on \$1,500/oz gold**

Classification	Tonnage (000s)	Gold Grade (g/t)	Contained Gold (000s oz)	Silver Grade (g/t)	Contained Silver (000s oz)	Antimony Grade (%)	Contained Antimony (000s lbs)
<b>Sulfide<sup>1</sup></b>							
Indicated	2,687	1.16	100	2.86	247	0.17	9,817
Inferred	191	1.13	7	2.64	16	0.16	662

Notes: **1.** Mineral resources are reported in total above cut-off since all the spent heap leach ore stacked on top of the tailings would be removed for construction purposes and the tailings fully exposed. Mineral resources are not mineral reserves and do not have demonstrated economic viability. These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated. All figures are rounded to reflect the relative accuracy of the estimate. **2. IMPORANT Mineral Resources are inclusive of Mineral Reserves.**

### 11.9 Discussion Uncertainty to the Mineral Resource Estimate, Classification, and Reasonable Prospects of Economic Extraction

The Qualified Person has placed primary emphasis on the identification and mitigation of risks to reduce uncertainty, acknowledging that such uncertainties are inherent and must be systematically addressed. Areas of potential uncertainty were reviewed such as sampling and drilling methods, data processing, geological interpretation and modeling, estimation methods and criteria, and cut-off grades along with relevant assumptions including metal prices, mining costs and metallurgical recoveries.

Key to this assessment was the support for an extensive program to validate and verify the historic sample data in order to rely upon it for the purpose of the resource estimation but also to eliminate data that posed a potential risk. Due to the strategy described above, the use of the historic data was identified by the Qualified Person and was sufficiently mitigated and reduced to satisfy the Qualified Person of its validity and for use within the resource estimation process.

Interpretation and modelling of geological data are a subjective process. The reliability of a resource estimate is substantially affected by several factors. Firstly, it should be noted that the information that is the source of the resource estimate is imprecise due to the fact that relatively small samples are used to estimate into very large volumes. As a result, there are inherent uncertainties in the accumulation, interpretation and analysis of data for which the estimations are based. Furthermore, the methods and data used for estimating resources are often indirect and analogical rather than direct or deductive. The Qualified Person, tasked with estimating the resources is required to apply industry standard principles, methods and procedures, to make numerous unbiased judgements based on their educational background, professional training, integrity and professional experience. The extent and significance of the judgements that are made are sufficient to render resource information inherently imprecise. However, the methods employed, and models created followed industry accepted practices and were based on the extensive history and knowledge of the property to the extent that the risk from an interpretation and modelling perspective is not considered significant for the use herein.

The Qualified Person does consider data processing and estimation risks within the estimation strategy, and as such risk mitigation techniques are employed as standard practice such as QA/QC of the data and the employment of

multiple estimation techniques as a check and balance toward identifying red-flags and risks. In addition, standard validation and verification techniques are employed on the post-processed models to ensure the ‘reasonableness’ of the resource estimates.

Mineral resource classification for gold was based primarily on drillhole spacing and on continuity of mineralization. The drillhole spacing used was independently validated by a drillhole spacing study assessing theoretical grade uncertainty under different drillhole patterns. This study indicates that a drillhole spacing of 120 ft reduces annual uncertainty to  $\pm 15\text{-}20\%$  and that a drillhole spacing of 50 ft reduces quarterly uncertainty to  $\pm 15\text{-}20\%$  with 90% confidence. Geological uncertainty was mitigated for in Mineral Resource classification by accounting for geological structures with potential to increase uncertainty.

S-K 1300 requires that Mineral Resources have “reasonable prospects for eventual economic extraction” which was assessed using an open-pit optimization as discussed in Section 11.7.

The QP is confident that the issues that were identified in the course of this study, and previous studies, have been adequately addressed and do not pose notable or significant risks. The level of uncertainty is appropriate and commensurate to the classification attributed to them as that of indicated and inferred resources which is a judgment of not only continuity but uncertainty.

Except as discussed in this Report, to the knowledge of the Qualified Person, there are no environmental, permitting, legal, title, taxation, marketing, political or other factors that would affect the resource estimates specifically.

### **11.10 Conclusions**

It is the opinion of the Qualified Person that the Mineral Resource Estimates for the Yellow Pine, Hanger Flats, West End and Historical Tailings deposits reported herein were prepared using industry standards and best practices by qualified professionals and, therefore, such Mineral Resource estimates are reasonable and may be relied upon for public reporting and for estimating Mineral Reserves.

## 12 MINERAL RESERVE ESTIMATES

### 12.1 Introduction

This section describes the Mineral Reserve estimation methodology, summarizes the key assumptions used, and presents the Mineral Reserve estimates for the Project.

Mineral Reserves are defined in the S-K 1300 Definitions (adopted October 31, 2018) as *“an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.”* S-K 1300 further states that this study must *“include the qualified person’s detailed evaluation of all applicable modifying factors to demonstrate the economic viability of the mining property or project”* and defines Modifying Factors as *“the factors that a qualified person must apply to indicated and measured mineral resources and then evaluate in order to establish the economic viability of mineral reserves. These factors include, but are not restricted to: Mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors. The number, type and specific characteristics of the modifying factors applied will necessarily be a function of and depend upon the mineral, mine, property, or project.”*

This section focuses on the processes used to ensure that the Mineral Reserve estimate accounts for the primary modifying factors (i.e., technical and financial parameters related to mining and processing; economic value considering reasonable investment and marketing assumptions) while other sections in this Report focus on detailed analyses of the remaining modifying factors (i.e. legal, social, and environmental factors; permitting requirements, etc.). The final Economic Analysis of the Mineral Reserves, presented in Section 19 of this Report, confirms the economic viability of the Reserves presented in this section.

The Project design – including mining methods, mine sequencing, processing and recovery, and infrastructure – discussed in this Section 12 and following Sections 13 - 15, are consistent with the 2021 modified mine plan (also called ModPRO 2), which is discussed in Section 17 of this Report. The 2021 modified mine plan was approved by USFS in its Final Record Decision issued in January 2025. That plan also forms the basis of Perpetua Resources Plan of Operations approved by USFS in October 2025 and other federal and state permits and approvals for the Project.

The Qualified Person considers the Mineral Reserve estimates reported in this TRS to be a reasonable representation of the Mineral Reserves within the Project at the current level of analysis. The QP has reviewed the risks, opportunities, conclusions, and recommendations summarized in Section 23 of this Report and the analyses of the remaining modifying factors in this Report and he is not aware of any unique conditions that would put the Stibnite Gold Project Mineral Reserve at a higher level of risk than any other North American developing project.

### 12.1.1 Estimation Methodology

The Mineral Reserves estimate equates to the mill feed schedule as presented in Section 13 of this Report. The general mine planning sequence to produce the mill feed schedule consisted of an ultimate pit limit analysis, pit shell selection, ultimate pit designs, internal pit phase design, mining sequence schedule, and mill feed optimization. Section 12 of this Report includes a description of the reserve estimation process through ultimate pit design. Section 13 of this Report includes the remaining processes requisite to schedule mill feed and estimate Mineral Reserves. The mine planning process followed to estimate Mineral Reserves is summarized in Table 12-1.

**Table 12-1: Mineral Reserve Estimation Process**

Mineral Reserve Estimation Process	Process Inputs	Process Outputs	Section
Ultimate Pit Limit Analysis (UPLA)	Geologic resource block model Pit slope geotechnical limits Mining cost estimates Process cost estimates Metallurgical forecast algorithms Metal sell price estimate Metal sell costs (incl. royalties) Discount rate	Nested pit shells	12.2
Ultimate Pit Shell Selection	Nested pit shells	Guidance pit shells for ultimate pit design	12.3
Ultimate Pit Design	Guidance pit shells for ultimate pit design Pit design parameters (i.e. road width & grade, bench height & face angle)	Ultimate pit designs (defining extent of mined material included in Reserve Estimate)	12.4
Pit Shell-to-Design Reconciliation Analysis	Selected guidance pit shells Ultimate pit designs	Pit shell-to-design reconciliation	12.5
Dilution & Mining Losses	Geologic resource block model	Diluted resource block model	12.2.2
Cut-off Grade Analysis	Diluted resource block model	Cut-off grade methodology	12.6
Reserve Estimation	Diluted resource block model Cut-off grade methodology	Preliminary Reserve Estimate	12.7
Internal Pit Phase Analysis	Ultimate pit designs Nested pit shells	Ultimate pit phase designs	13.2
Mine Sequence Analysis	Ultimate pit phase designs Production fleet equipment alternatives Mine production rates by fleet and activity Mill feed quantity and quality requirements	Fleet alternative analysis Strategic mine plan	13.3
Mine Development Plan	Strategic mine plan (incl. bench access schedule) Construction material requirements	Mine development and pre-stripping schedule Development fleet schedule	13.4
Stockpile Strategy Analysis	Strategic mine plan Process costs and metallurgical forecast algorithms Stockpile rehandle cost estimate Site layout incl. stockpile location options	Strategic stockpile schedule including capacity by ore type and grade class	13.5

Mineral Reserve Estimation Process	Process Inputs	Process Outputs	Section
DRSF Strategy Analysis	Strategic mine plan Strategic stockpile schedule	DRSF and stockpile design and schedule	13.6
Mill Feed Optimization	Strategic mine plan DRSF and stockpile schedule	Mill feed schedule Final Reserve Estimate	13.7
Mine Production Schedule Analysis	Strategic mine plan Mine development schedule Fleet alternative analysis	Mine production schedule Load & haul equipment schedule Drill & blast schedule Production support fleet schedule	13.8
Mine Consumables Estimate	Mine production schedule Drill & blast schedule Equipment consumables rates (i.e. fuel, tires, GET)	Mine consumables schedule	13.9
Maintenance Estimation	Mine production schedule Equipment rebuild and replacement schedule Preventive maintenance schedule Equipment parts life estimates	Equipment maintenance schedule Mine maintenance equipment schedule	13.10
Staffing Estimation	Mine production schedule Equipment maintenance schedule	Mine operations staff schedule Mine maintenance staff schedule Mine management staff schedule	13.11
Capital and Operating Cost Estimation	Equipment schedules Equipment cost vendor quotes Equipment maintenance schedule Mine consumables schedule Staffing schedules	Capital and operating cost schedule	13.12
Ultimate Pit Limit Analysis Validation	Capital and operating cost schedule	UPLA Validation	13.12.3

### 12.1.2 Mineral Reserves Summary

A summary of the Mineral Reserves for the Project is shown in Table 12-2. Detailed Mineral Reserves are presented in Section 12.7.

**Table 12-2: Summary of Mineral Reserves**

Deposit	Gold Cut-off (3)	Tonnage	Average Grade			Total Contained Metal		
			Gold	Antimony	Silver	Gold	Antimony(5)	Silver
<b>Imperial Units</b>	<b>(oz/st)</b>	<b>(kst)</b>	<b>(oz/st)</b>	<b>(%)</b>	<b>(oz/st)</b>	<b>(koz)</b>	<b>(klbs)</b>	<b>(koz)</b>
<i>Yellow Pine – Probable (1)</i>	0.013	52,742	0.052	0.106	0.065	2,718	111,617	3,423
Hangar Flats – Probable (1)	0.014	9,107	0.046	0.150	0.083	414	27,252	756
West End – Probable (1)	0.014	50,519	0.031	-	0.040	1,587	-	2,004
Historical Tailings – Probable (1)	0.011 (4)	2,962	0.034	0.166	0.084	100	9,817	247
<b>Probable Mineral Reserves (2)</b>		<b>115,330</b>	<b>0.042</b>	<b>0.064</b>	<b>0.056</b>	<b>4,819</b>	<b>148,686</b>	<b>6,431</b>
<b>Metric Units</b>	<b>(g/t)</b>	<b>(kt)</b>	<b>(g/t)</b>	<b>(%)</b>	<b>(g/t)</b>	<b>(t)</b>	<b>(t)</b>	<b>(t)</b>
<i>Yellow Pine – Probable (1)</i>	0.46	47,847	1.77	0.106	2.23	84.5	50,629	106.5
Hangar Flats – Probable (1)	0.49	8,262	1.56	0.150	2.85	12.9	12,361	23.5
West End – Probable (1)	0.49	45,830	1.08	-	1.36	49.3	-	62.3
Historical Tailings – Probable (1)	0.39 (4)	2,687	1.16	0.166	2.86	3.1	4,453	7.7
<b>Probable Mineral Reserves (2)</b>		<b>104,625</b>	<b>1.43</b>	<b>0.064</b>	<b>1.91</b>	<b>149.9</b>	<b>67,443</b>	<b>200.0</b>

Notes: **1.** Deposit does not have a measured mineral resource. Reporting uses only an indicated mineral resource. **2.** Metal prices used for Mineral Reserves: \$1,600/oz Au, \$20.00/oz Ag, \$3.50/lb Sb (see Section 16 for metal price selection basis). **3.** Gold cut-off values are approximated due to application of the Net Smelter Return cut-off methodology as explained in Section 12.2.9. **4.** The Historic Tailings mineral resource was estimated using a composite of drill hole data to establish average mineral grades for the entire deposit. Therefore, the cut-off value provided is an approximate break-even cut-off grade. **5.** Antimony recovery is expected from the High Sb Sulfide ore only and contains 132,031 klbs (59,888 t) of Sb.

## 12.2 Ultimate Pit Limit Analysis

Ultimate pit limit optimization and phase analysis (UPLA) was performed by a third-party consultant utilizing Geovia Whittle™ version 4.7 using the Pseudoflow algorithm option. The QP reviewed that optimization and phasing analysis and concurs with the analysis and results. This section describes the optimization inputs. Pit limit optimization analysis results and pit shell selection is presented in Section 12.3 of this Report.

The Pseudoflow algorithm performs the same function as the traditional Lerchs-Grossman (LG), however, by structuring the UPLA as a maximum flow problem, the Pseudoflow algorithm can arrive at exactly the same solution in a fraction of the time. In either approach, Whittle™ applies approximate costs and recoveries along with approximate open pit slope criteria to establish theoretical economic breakeven pit geometries (pit shells). The resulting pit geometries should be considered as approximate as they do not assure pit bench access or bench working space requirements. The primary result of the incremental pit geometries (nested pit shells) is the relative change in pit size and estimated increase in total pit value. This provides guidance for designing detailed ultimate pit designs and identifying potential mining phases to bring forward value in the mining sequence.

### 12.2.1 Geologic Resource Block Model

The Qualified Person, Christopher Dail, C.P.G., reviewed the mineral resource block models that were prepared by a third-party consultant used in the Mineral Reserve estimate and considers them appropriate for use in calculation of reserves after application of applicable modifying factors described herein. The models comprise parameters that

describe lithology, in-situ density, resource classification, ore and waste percentage, oxidation, and metal grades, as explained in detail in Section 11 of this Report.

For mine planning purposes, the block model dimensions for individual blocks should correspond to an increment of proposed mining bench height. Bench height has a potentially significant impact on project value due to the relationship between bench height, grade dilution, mine operating cost, mine production rates, and processing cost. A bench height trade-off analysis was conducted to evaluate bench heights ranging from 10 to 50 ft in 10-foot increments.

Based on the analysis, 40-foot benches result in a 9% mining cost reduction with a slight increase in ore dilution and processing cost as compared to 20-foot benches. Therefore, a bench height of 20 ft for ore zones and 40 ft for waste zones was selected as the most economical way to mine the deposits. These bench heights will allow optimizing productivity in waste zones while maintaining ore selectivity in ore zones to reduce potential grade dilution.

Based on the bench height trade-off analysis, a block model with uniform block dimensions of 40 x 40 x 20 ft representing the selective mining unit (SMU) was created for each deposit using the resource block model as detailed in Section 11 of this Report. Only blocks classified as indicated were used in the Mineral Reserve estimate. Blocks classified as inferred were reclassified as waste with zero payable metal content. The modified mineral resource block model is hereafter referred to as the reserve block model.

### 12.2.2 Ore Dilution

For this study, dilution has been defined as “material that is below the cut-off grade or value but is intentionally or inadvertently mined and must be considered in Mineral Reserve estimates because it dilutes the average grade estimate and increases the volume mined”. Dilution can be classified as either internal or external. Internal dilution occurs within a mining block in which pockets of material below cut-off grade cannot be removed selectively during the digging operation. External dilution typically occurs because of blasting which causes material movement and mixing of ore and waste along mining block boundaries (Figure 12-1).

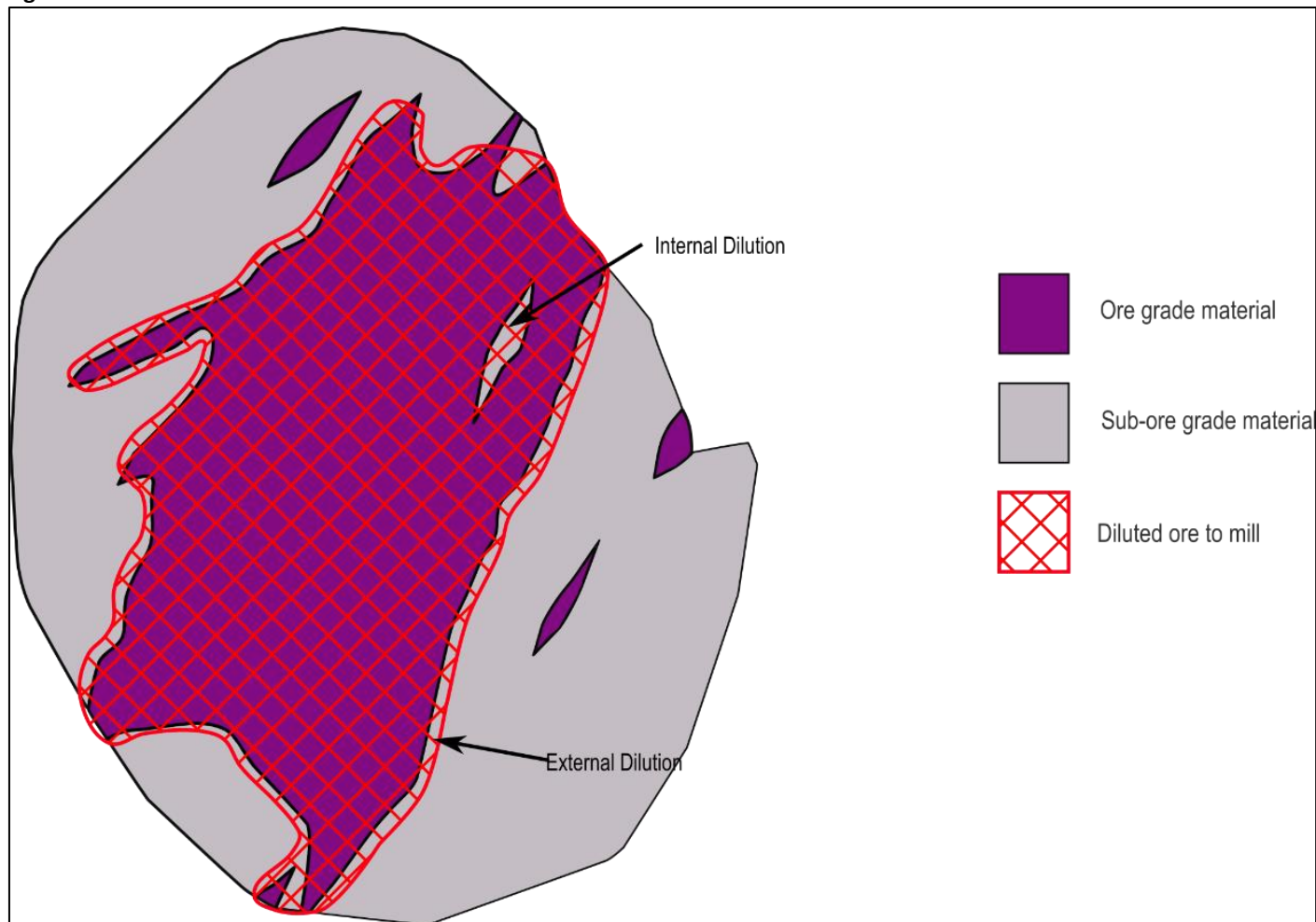
Internal dilution was estimated in the reserve block model by averaging metal content within each 40 x 40 x 20-foot block provided in the resource block model. Both the Yellow Pine and Hangar Flats resource block models were modeled using an ore percent approach to estimate the amount of waste within a single block with dimensions 40 x 40 x 20 ft. The West End resource block model was estimated on a whole block basis using 20 x 20 x 20-foot blocks to account for narrow geological controls as discussed in Section 11. Internal dilution at West End was estimated by consolidating the blocks, i.e., re-blocking the model into 40 x 40 x 20-foot blocks.

Additionally, ore type designation dilution was estimated by applying an algorithm to identify blocks with an ore-type classification that did not match at least 30% of the adjacent 8 horizontal blocks. These blocks were reclassified to match the predominant adjacent ore classification. This resulted in some blocks being reclassified from ore to waste, waste to ore, and one ore-type classification to another, e.g., oxide ore reclassified as low antimony ore.

An external dilution study was conducted to estimate dilution occurring along ore block boundaries between adjacent blocks. The study consisted of approximating ore control mining boundaries on 20-foot benches and estimating dilution based on strict mining adherence to the boundaries. Resulting from this study, a 10% dilution boundary for each block

was applied to estimate external dilution resulting from blasting. This equates to an 8-foot mixing zone which is approximately half the distance between blasthole spacing. This degree of dilution would result in an approximately 3% increase in ore mined with a loss of approximately 2% gold mass for an effective grade dilution of 5%. To account for this, a mining dilution factor of 5% was input to the Whittle™ pit limit analysis.

Figure 12-1: Internal and External Dilution



### 12.2.3 Overall Pit Slope Angles

Overall pit slope angles and sectors were provided by the Project geotechnical consultant STRATA, Inc. (STRATA, 2018) for all three open pits as shown on Figure 12-2, Figure 12-3, and Figure 12-4. Slope sectors were coded into the block model prior to importing into Whittle™.

Figure 12-2: Yellow Pine Overall Pit Slope Angles

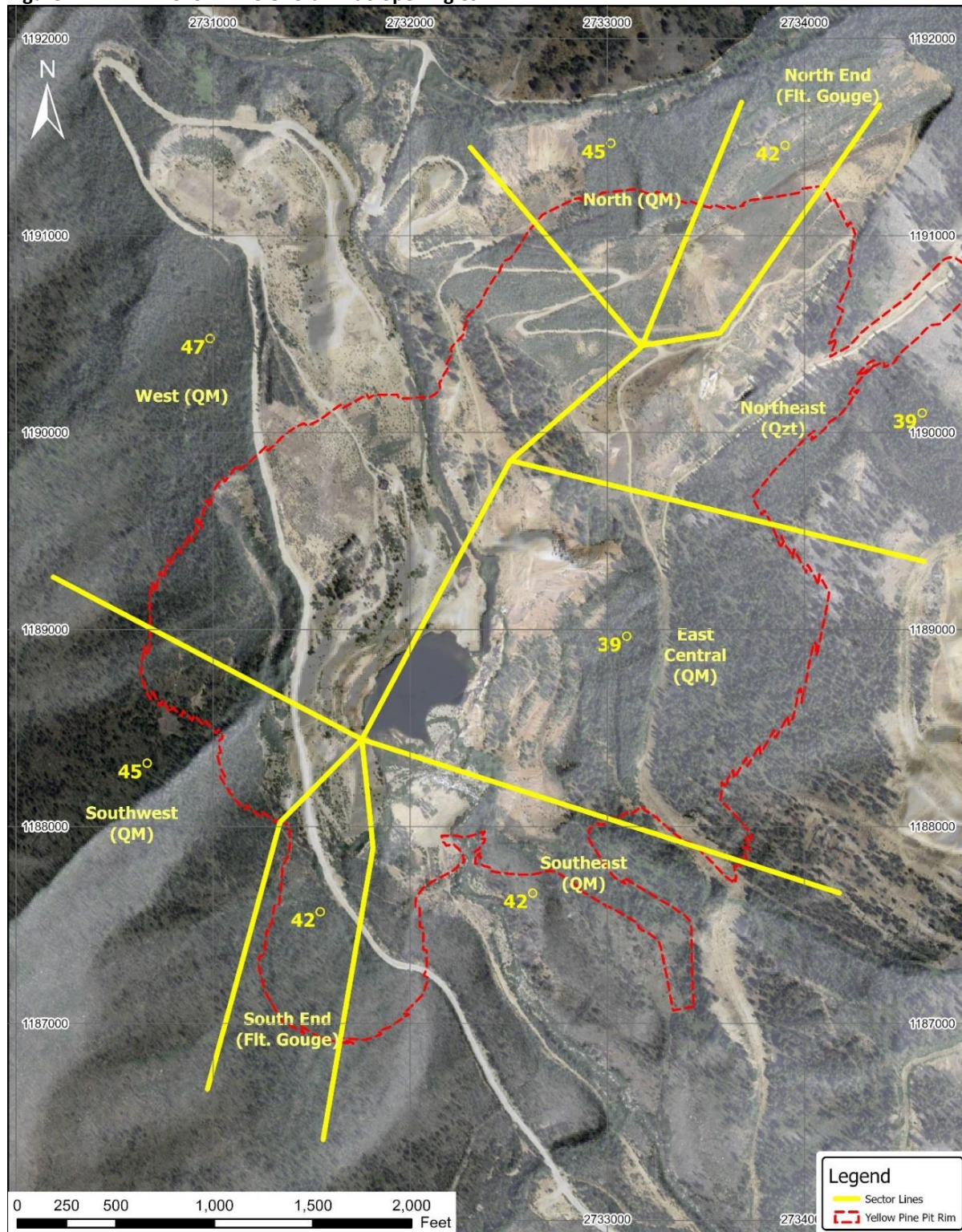


Figure 12-3: Hangar Flats Overall Pit Slope Angles

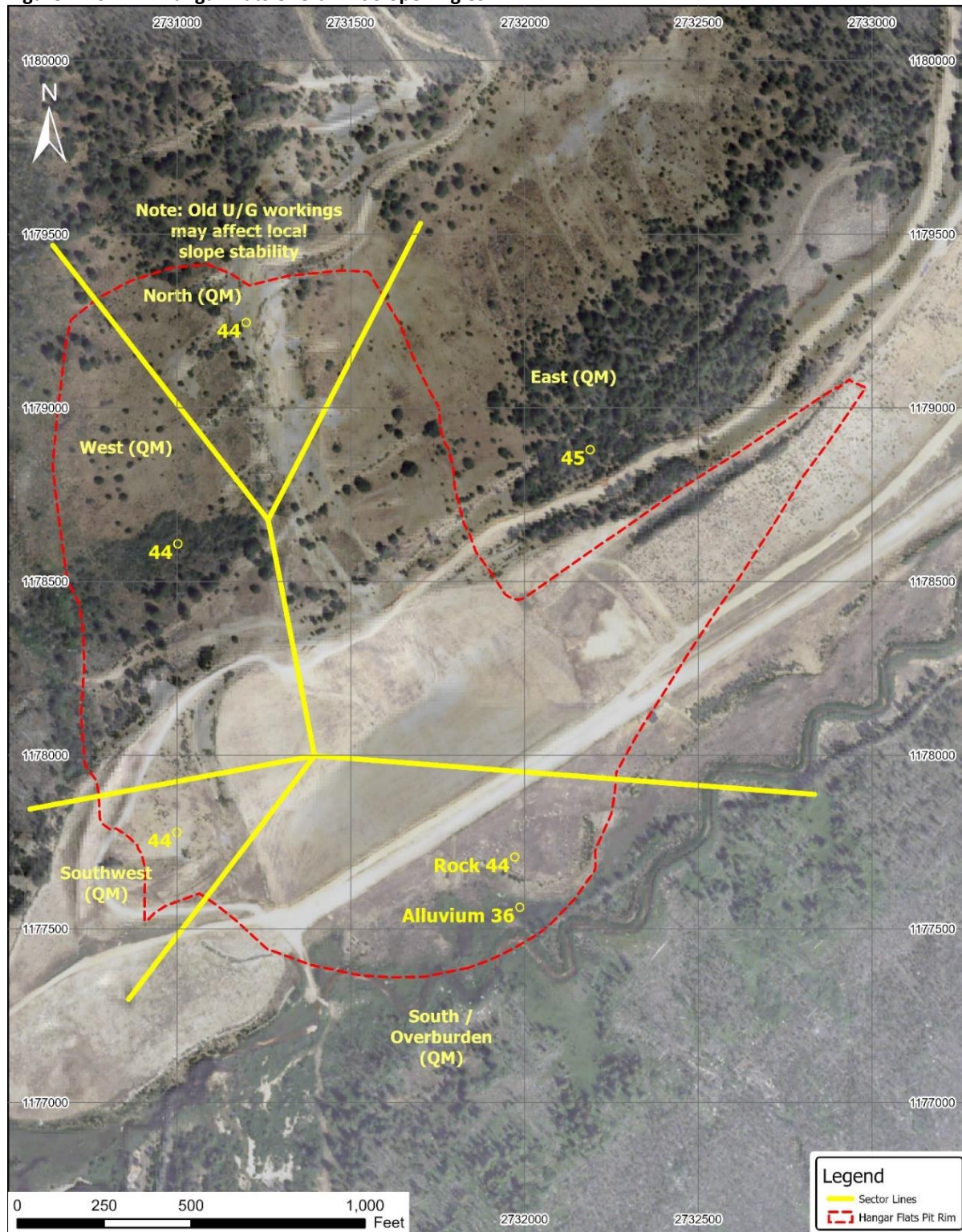
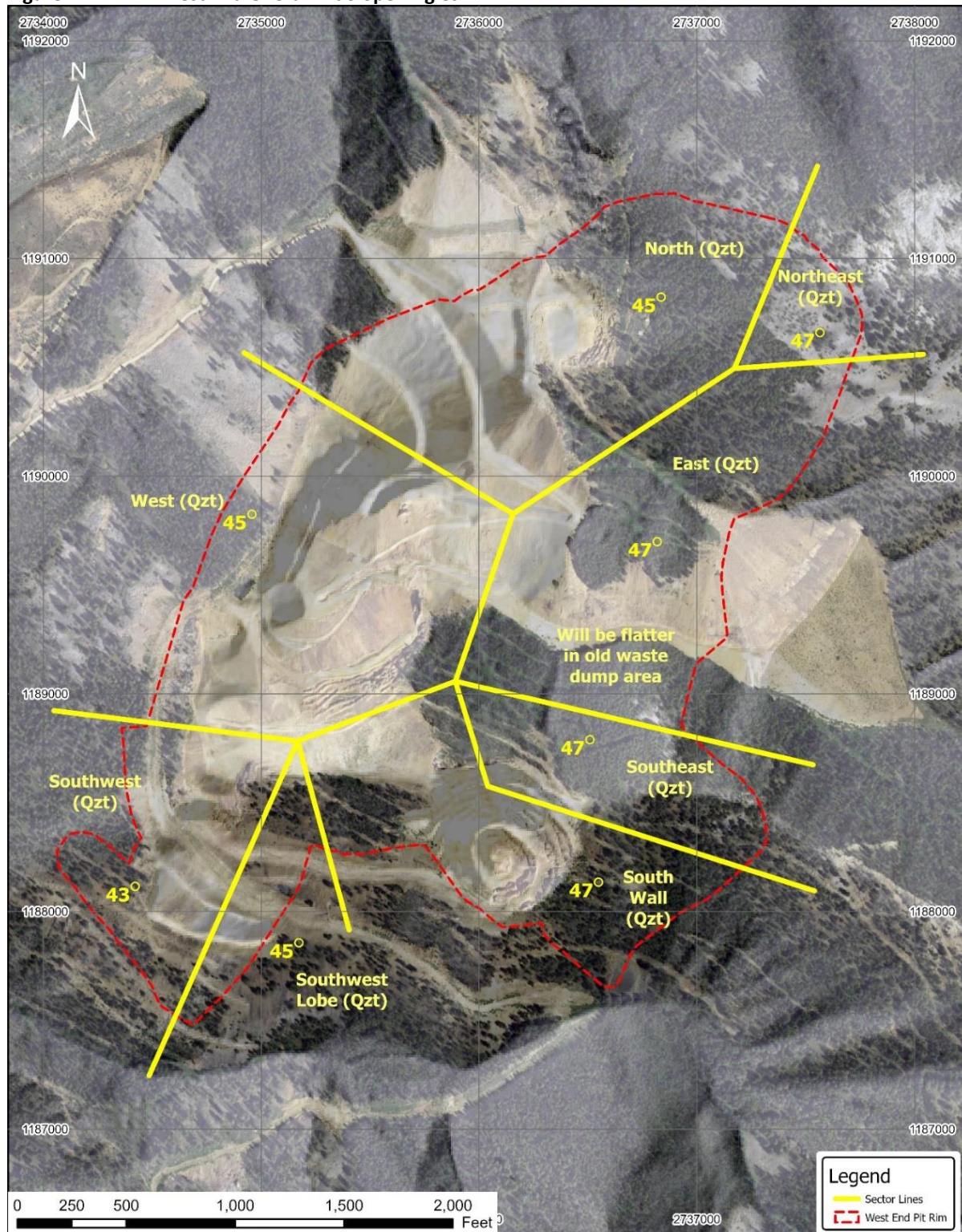


Figure 12-4: West End Overall Pit Slope Angles



#### 12.2.4 Mining Method and Mining Costs

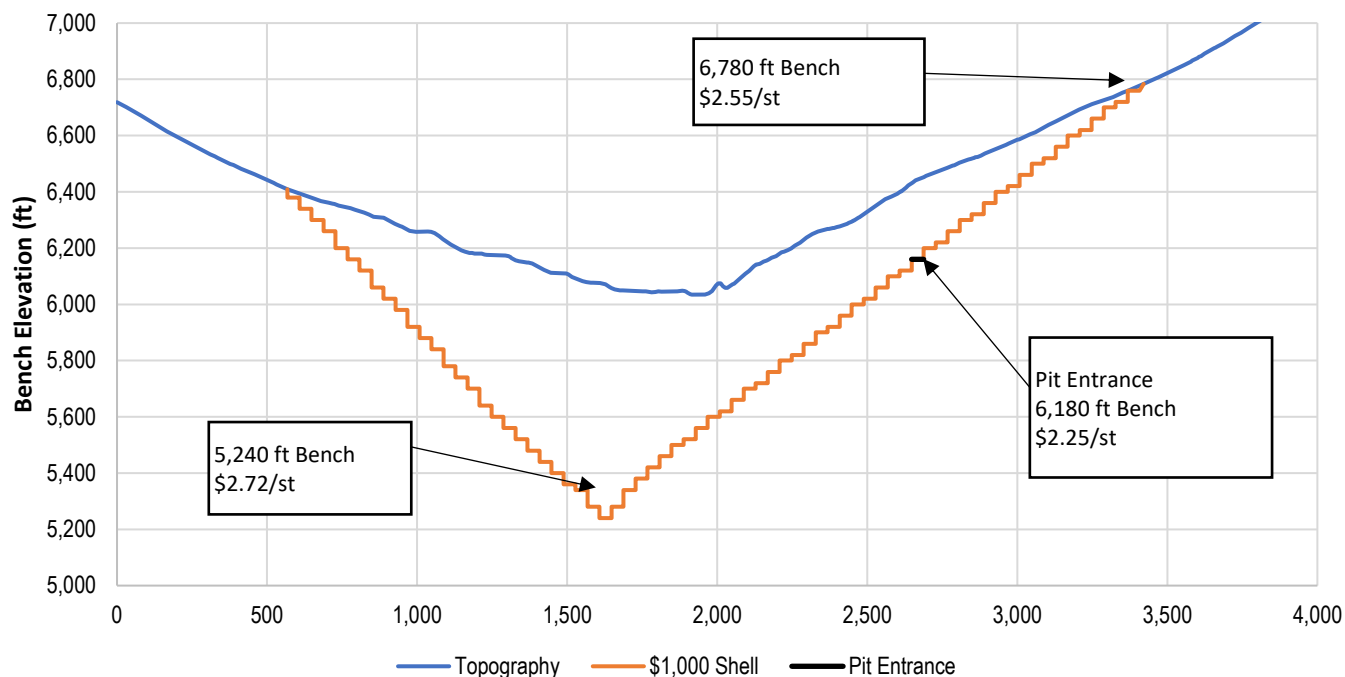
Conventional owner-operated truck and shovel open-pit mining methods were selected as the most viable mining method for the deposits at this time. Mining costs used for the pit limit analysis are based on calculations using first principles cost buildup based on equipment requirements, labor estimates, and updated consumables price quotes at the time these reserves were first reported in 2021. Consistent with the 2022 TRS, mining costs comprise pit and dump operations, delivery of the ore to the crusher or stockpiles and waste to the DRSFs, road maintenance, mine supervision, and mining-related technical services. While one mining cost is presented, a range of mining costs was evaluated to test the sensitivity of the UPLA to mining cost parameters and concluded that the selected ultimate pit limits were not highly sensitive to operating costs within the expected accuracy (+/- 25%).

As an example, Yellow Pine mining cost per ton for the \$1,000 shell ranges from \$2.72 at the bottom bench (elevation 5,240 ft) to \$2.25 at the pit rim entrance (elevation 6,180 ft) to \$2.55 at the highest bench (elevation 6,780 ft) as shown on Figure 12-5.

A reference mining cost of \$2.25/st plus an incremental cost of \$0.01 per 20-foot bench both below and above the pit rim (entrance) were applied to each pit individually in the 2022 TRS. This incremental cost was added to benches below the pit rim to account for additional haulage cost when hauling from the pit loaded. Due to the site topography, the incremental bench cost was added for benches above the pit rim to account for access road development to upper pit benches and decreased mining efficiency on smaller benches within the pit upper reaches.

The QP notes that the mining cost estimate presented in Sections 18 and 19 of this Report increased as compared to the corresponding costs in the 2022 TRS. Cost increases were primarily due to sector-wide inflation, advancements in engineering, permitting and contracting. Similarly, updated equipment operating cost estimates, labor estimates, and additional mine development costs added to account for in-pit production access in steep terrain. Considering increases operating cost estimates since the 2022 TRS, the QP performed and reviewed internal analyses to consider the impact of increasing operating costs on cut-off grades and pit shell designs. This analysis considered a variety of operating cost scenarios and as previously determined, pit shell designs remained relatively insensitive to operating cost changes. The QP has also considered the impact of increasing metal prices in its internal analyses and noted that metal prices and operating costs are negatively correlated and result in partially offsetting effects for the purposes of pit shell design. The QP notes that the various scenarios assessed showed no material changes to the pit shell designs published in the 2022 TRS, and continue to accurately reflect Perpetua's permitted, proposed mine plan. Accordingly, the QP determined that the combination of 2021 operating cost estimates and corresponding gold price assumption (\$1,600) derive similar mining and pit shell design parameters as those described in Section 19 of this report and continues to provide a reasonable basis for establishing that the Project is economically viable.

Figure 12-5: Yellow Pine Mining Cost by Bench Elevation



### 12.2.5 Metallurgical Recoveries Forecast Algorithms

Metallurgical recovery functions and costs were applied to gold, silver, and antimony as presented in Section 10. The pit limit analysis was performed on gold recovery only to ensure the ultimate pit geometries would not be dependent on silver or antimony value. Silver and antimony recoveries were incorporated into the mine schedule once the ultimate pit designs were completed, as discussed in Section 12.4.

### 12.2.6 Process Costs, Selling Costs, Payability, and Royalties

Each unit of mined material from the three pits and historical tailings was classified into one of six ore type designations as shown in Table 12-3. The designation corresponds to the highest Net Smelter Return (NSR) value as further discussed in Section 12.2.9. Process and selling costs applied in the UPLA are shown in Table 12-4 and are based on the Recovery Methods detailed in Section 14 of this Report and cost estimates utilized during the most recently published mineral reserve calculation, as presented in the 2022 TRS, which are presented in Table 12-4 below. The QP reviewed a sensitivity analysis performed by a third-party consultant of the UPLA relative to process costs and concluded that the selection of an ultimate shell is not highly sensitive to operating costs. Given the relative lack of sensitivity to operating costs, the QP has determined that the combination of 2021 operating cost estimates and corresponding gold price assumption (\$1,600) derive similar mining and pit shell design parameters as those described in Section 19 of this report.

**Table 12-3: Ore Type Designation**

Ore Type	Description	Deposit Occurrence
Low Sb Sulfide Ore	Only a gold-bearing sulfide concentrate would be produced and processed onsite through POX and cyanide leaching.	All Deposits
High Sb Sulfide Ore	An antimony concentrate would be produced followed by a gold-bearing sulfide concentrate. The sulfide concentrate would be processed onsite through pressure oxidation (POX) and cyanide leaching.	Yellow Pine, Hangar Flats
Oxide Ore	Gold would be recovered through whole ore cyanide leaching.	West End
Low Sb Transitional Ore	A gold-bearing sulfide concentrate would be produced and processed onsite through POX and cyanide leaching. Additional gold would be recovered through cyanide leaching of the tailings.	West End
Historical Tailings Sulfide Ore	Processed concurrent with both High Sb Sulfide Ore and Low Sb Sulfide Ore sourced from the open pits	Historical Tailings
Waste	Material not meeting the NSR cut-off value.	All Deposits

**Table 12-4: Ore Process Costs, Selling Costs, Payabilities, and Royalties**

Cost Item	Unit	Cost
<b>Ore Processing</b>		
Oxide	\$/st ore	10.74
Low Sb Sulfide	\$/st ore	13.65
High Sb Sulfide	\$/st ore	15.65
Low Sb Transitional	\$/st ore	14.64
Historical Tailings Sulfide	\$/st ore	9.99
G&A	\$/st ore	4.55
Reclaim Cost	\$/st ore	1.03
<b>Payability*</b>		
Au in Sb Concentrate	%	15-25
Sb in Sb Concentrate	%	85.0
Ag in Sb Concentrate	%	45.0
Au in Doré	%	99.9
Ag in Doré	%	98.0
<b>Transportation, Refinement &amp; Royalty</b>		
Sb Concentrate	\$/wet st	75
Au in Doré	\$/paid oz	2.15
Ag in Doré	\$/paid oz	1.65
Royalties - gold	% net of smelter Au	1.7
Royalties - silver	% net of smelter Ag	100

### 12.2.7 Metal Selling Prices

A suite of nested pit shells for each deposit was generated using revenue factors that reflected a gold selling price ranging from \$100 to \$2,000 per troy ounce in \$50 increments. The nested pit shells generated using the Pseudoflow algorithm in Geovia Whittle™ represent the optimal pit shell geometry based on undiscounted cash flow. Each nested pit shell is then evaluated using the estimated metal sell price. The gold price used in the nested shell evaluation was \$1,600 per troy ounce. Current metal prices are higher than \$1,600 per troy ounce used in this analysis with the weekly average for the 5-year period preceding the effective date of this Report of approximately \$2,275 per troy ounce. The lowest value during this period was \$1,645 per troy ounce and the value used is considered a conservative approach given high volatility in prices over the 5-year period used as a price guideline. Antimony and silver value were not included in the pit limit analysis to prevent their value from influencing the pit design and provides additional conservatism that de-risks the dependence of the project on revenues from those metals.

Sensitivity analyses were performed on both the Yellow Pine pit and Hangar Flats pit to assess the potential impact silver and antimony could have on pit geometry. The pit shell size increase resulting from either addition of silver, antimony, or the combined value was insignificant as compared to pit shells calculated using only gold value.

#### 12.2.8 Discount Rate

S-K 1300 specifies that “a pre-feasibility study must include an economic analysis that supports the property’s economic viability as assessed by a detailed discounted cash flow analysis or other similar financial analysis.” For the ultimate pit limit analysis, an annual discount rate of 10% was applied using a high-level scheduling algorithm in the Whittle™ “Pit by Pit Graph” and choosing the ultimate pit limit based on an incremental analysis of the discounted NPV generated by that schedule. The QP notes the final Economic Analysis of the Project Reserves is presented in Section 19 and uses an after-tax discount rate of 5% for the purposes of calculating the discounted cash-flow NPV calculation of the consolidated project and continues to provide a reasonable basis for establishing that the Project is economically viable. The elevated discount rate for pit limit analysis accounts for the difference between before and after-tax analysis and the higher level of uncertainty in the pit limit analysis inputs relative to the final Project evaluation in Section 19.

#### 12.2.9 Block Value Calculation

A Net Smelter Return (NSR) cut-off methodology was adopted to calculate block value and ore type due to the polymetallic nature of the ore deposits and separate process streams with unique process costs. The Net of Process Revenue (NPR), defined as NSR less process plant operating expenditures (OPEX) and general and administrative costs (G&A), was calculated on a block-by-block basis in dollars per ton of ore to estimate the value of a block for each available process stream. Mining costs are not included in the calculation of NPR because it will be approximately the same for an ore block regardless of process stream designation. The potential process stream designations used to define each block ore type are explained in [and are based on the Recovery Methods detailed in Section 14 and cost estimates utilized during the most recently published mineral reserve calculation, as presented in the 2022 TRS. The QP reviewed a sensitivity analysis performed by a third-party consultant of the UPLA relative to process costs and concluded that the selection of an ultimate shell is not highly sensitive to cost.

For the pit limit analysis, antimony and silver are assumed to have no value therefore, the high antimony sulfide ore process stream is effectively unavailable due to the process cost associated with producing an Sb concentrate with no Sb value. In effect, the pit limit analysis evaluated the project based on on-site gold processing only. Once the pit is designed, silver and antimony NPR are calculated on a block-by-block basis and included in the reserve estimate. An example of NPR calculation and block ore type classification determination is shown in Table 12-5.

**Table 12-5: Sample Block Value Calculation**

Resource Block Model – Sample Block Values							
Block Mass	2,617 st	-	-	-	-	-	
	<b>Grade</b>	<b>Contained Metal</b>			<b>Transport Cost</b>	<b>Sell Price</b>	
Au	2.35 gpt	179 oz			\$8.00 /oz	\$1,600 /oz	
Sb	0.20%	10,416 lb			\$175 /st conc.	\$3.50 /lb	
Ag	2.45 gpt	187 oz			\$0.50 /oz	\$20 /oz	
<b>High Sb Sulfide Ore Doré Revenue</b>				<b>Low Sb Sulfide Ore Doré Revenue</b>			
	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	
Doré Recovery	88.36%	0.0%	0.0%	90.70%	0.0%	0.6%	
Doré Recovered Metal	158.3 oz	0 lb	0.0 oz	162.5 oz	0 lb	1.1 oz	
Doré Payability	99.0%	0.0%	0.0%	99.0%	0.0%	95.0 %	
Doré Payable Metal	156.7 oz	0 lb	0.0 oz	160.9 oz	0 lb	1.1 oz	
Doré Metal Value	\$250,729	\$0	\$0	\$257,373	\$0	\$21	
	\$250,729	-	-	\$257,395	-	-	
<b>High Sb Sulfide Ore Sb Concentrate Revenue</b>				<b>Low Sb Sulfide Ore Sb Concentrate Revenue</b>			
	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	
Sb Con Recovery	1.57%	85.4%	16.8%	N/A			
Sb Con Contained Metal	2.8 oz	8,891 lb	31.4 oz				
Sb Con Metal Payability	20.0%	68.0%	45.0%				
Sb Con Payable Metal	0.6 oz	6,046 lb	14.1 oz				
Sb Con Metal Value	\$898	\$21,162	\$282				
Total Sb Con Metal Value	\$22,342	-	-	0\$	-	-	
<b>High Sb Sulfide Ore Net Smelter Return (NSR)</b>				<b>Low Sb Sulfide Ore Net Smelter Return (NSR)</b>			
	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	<b>Au</b>	<b>Sb</b>	<b>Ag</b>	
Net Smelter Payable Metal	157.3 oz	6,046 lb	14.1 oz	160.9 oz	0 lb	1.1 oz	
Net Smelter Metal Sell Value	\$251,628	\$21,162	\$282	\$257,373	\$0	\$21	
Total Net Smelter Value	\$273,071	-	-	\$256,107	-	-	
Sb Con Mass	-	6.84 st	-	-	n/a	-	
Transport & Refinement Cost	\$1,254	\$1,197	%0	\$1,287	n/a	\$1	
Net Smelter Return	\$270,621	-	-	\$256,107	-	-	
<b>High Sb Sulfide Ore Net of Process Revenue (NPR)</b>				<b>Low Sb Sulfide Ore Net of Process Revenue (NPR)</b>			
	<b>Total</b>	<b>-</b>	<b>-</b>	<b>Total</b>	<b>-</b>	<b>-</b>	
Ore Processing Unit Cost	\$13.96 /st	-	-	\$12.17 /st	-	-	
Ore Processing Cost	\$36,533	-	-	\$31,849	-	-	
G&A Cost	\$9,081	-	-	\$9,081	-	-	
Royalties (1.7% Au NSR)	\$4,278	-	-	\$4,375	-	-	
Net of Process Revenue	\$220,729	-	-	\$210,802	-	-	
Net of Process Unit Rev	\$84.34 /st	-	-	\$80.55 /st	-	-	
Block Ore Designation	High Sb Sulfide since the unit NPR is greater than Low Sb Sulfide						

## 12.3 Ultimate Pit Limit Shell Selection

To determine the extents of the ultimate pit limits for the Project, an analysis of incremental pit shells (i.e. “nested shells”) was conducted using the inputs discussed previously in this section. Discussion of nested pit shells in this section is limited to selecting shells for ultimate pit designs. There is further discussion in Section 13 of this Report regarding internal pit phase design as it relates to nested pit shells.

The cash flow analyses for nested pit shells were performed by a third-party consultant using Whittle™ software and were reviewed by the QP. The analyses produce two discounted values for each nested shell often referred to as “Best Case” and “Worst Case”. The “Worst Case” values are calculated for each pit shell as if the shell is mined in its entirety bench-by-bench without internal phasing. This delays access to higher-grade ore and reduces NPV as compared to a phased mining approach. The “Best Case” values are calculated sequentially from the smallest to largest pit shell, where each shell represents an internal pit phase. Each pit shell increment is scheduled as if the prior shell has already been mined and processed allowing for the pit to advance downward quickly and access higher-value ore and increased NPV. The actual mining sequence is likely to be in-between these two scenarios, including internal phases while maintaining large enough benches for consistent mine productivity.

Nested pit shell cash flow analysis for all three pits was performed on a suite of shells ranging in gold sell price between \$100/oz to \$2,000/oz in increments of \$50/oz.

### 12.3.1 Yellow Pine Pit Shell Selection

The Yellow Pine maximum discounted value shells for the “worst case” and “best case” are \$950 and \$1,550; respectively (see Figure 12-6). The incremental change in discounted pit value (NPV) and strip ratio between these two shells is gradual which implies the value of Yellow Pine is not highly sensitive to the selection of a specific shell. Whittle™ allows for a third, Specified Case, however, due to the nature of the deposit, the “nested” shells did not accurately represent the likely mining sequence so “directional” shells were ultimately chosen to guide internal phases as discussed in Section 13.2.1.

To properly analyze and select an ultimate pit within the range specified above, a third-party consultant performed an incremental analysis of each subsequent pit to determine the point where the additional mining no longer adds significant value (see Figure 12-7). This analysis utilizes an “incremental return” which is approximated as the incremental change in discounted value divided by the incremental change in discounted total costs. The resulting incremental return can be compared to the project minimum acceptable rate of return (MARR, 10%) to determine when incremental additions no longer generate significant value. As the actual value is recognized to be between the best- and worst-case scenarios, the consultant chose to use a weighted average return to reflect the likely results of a realistic schedule. Due to the topography at the site, the worst-case is highly unlikely as it begins mining at the top of the mountain, neglecting the accessible ore in the bottom of the valley. With this in mind, the average was weighted at 75% of the best-case and only 25% of the worst-case and \$1,250 was chosen as its average return (12.5%) was the last incremental return above the MARR. The QP considers this approach appropriate and applicable for the pit selection utilized for this analysis.

Figure 12-6: Yellow Pine Nested Pit Shell Discounted Value

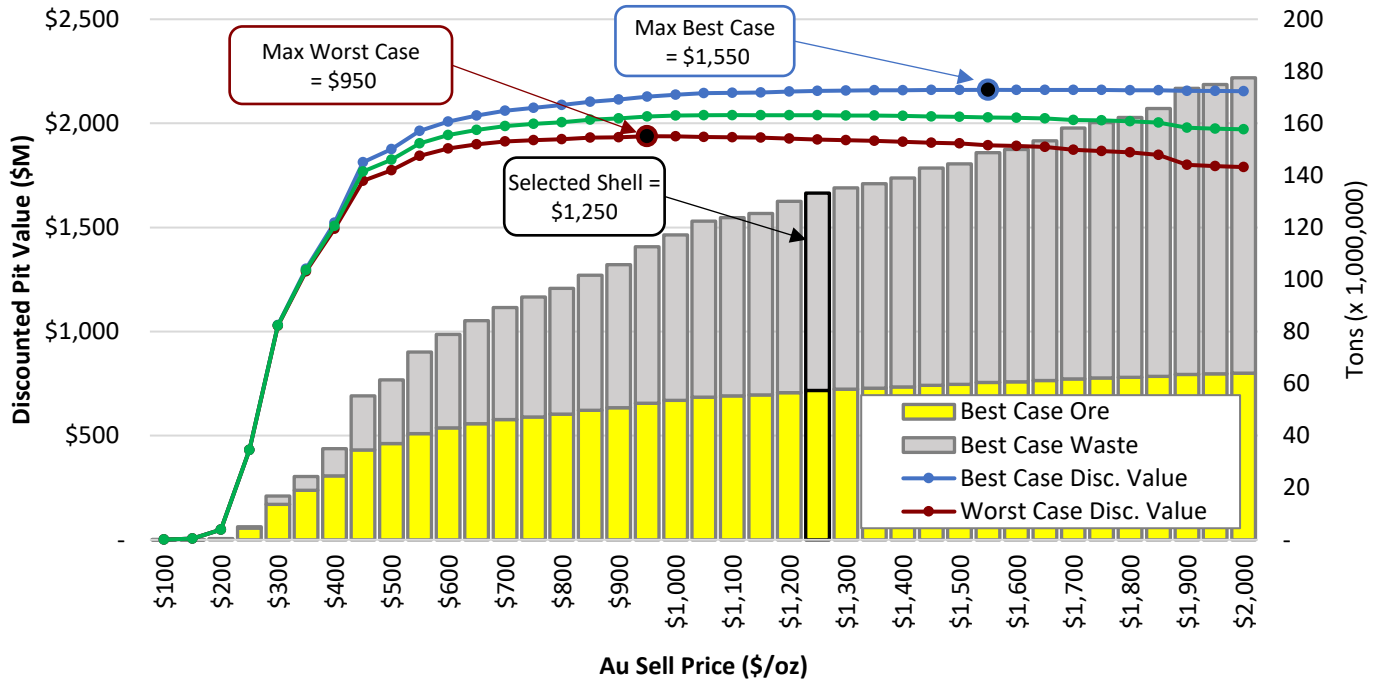
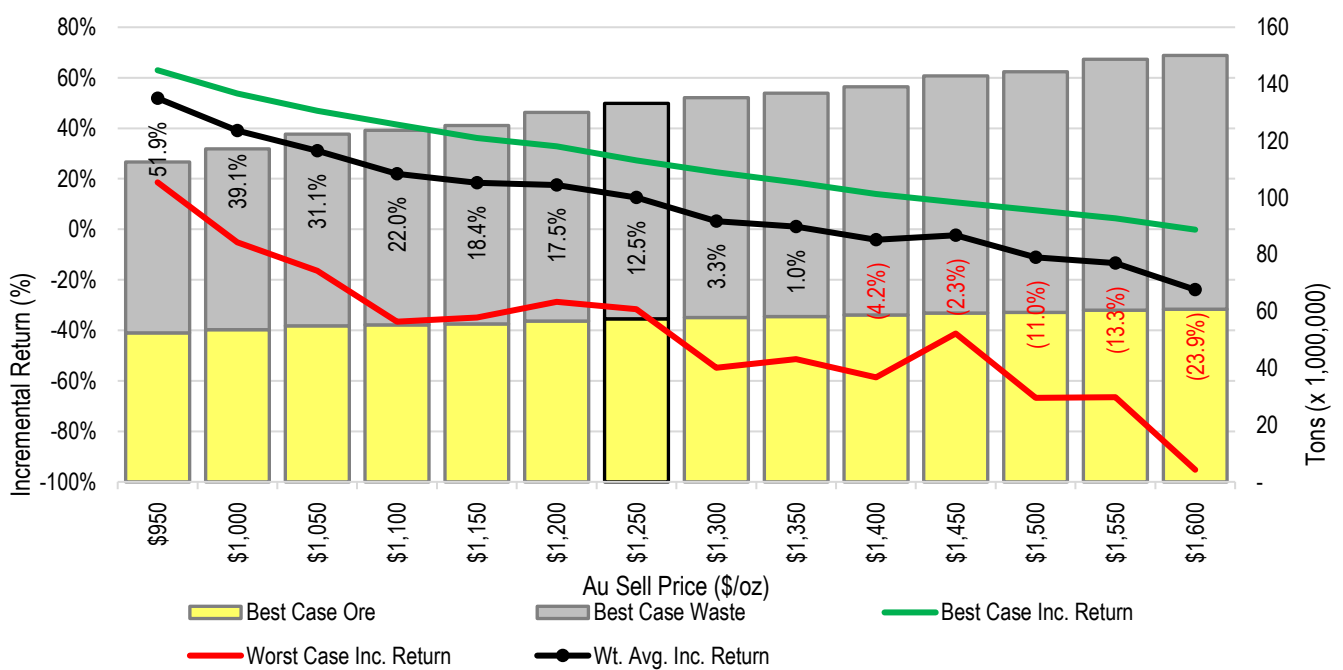


Figure 12-7: Yellow Pine Nested Pit Shell Incremental Return



### 12.3.2 Hangar Flats Pit Shell Selection

For the Hangar Flats deposit, a similar analysis to Yellow Pine resulted in an ultimate pit between \$1,100 and \$1,600 with an incremental analysis suggesting \$1,150 be chosen as the ultimate pit (see Figure 12-8). However, upon review, this “large” Hangar Flats pit presented a number of technical challenges, risks, and costs associated with mining through the extensive historical underground workings and development of a haul road from the Fiddle Creek basin to access its upper benches. Based upon a mine sequence analysis, the project team selected a much smaller footprint for the initial Hangar Flats pit (\$750 shell). As this shell (Figure 12-9) may be an internal phase of a larger Hangar Flats pit it allows for additional study of the true costs associated with a potential layback and a better understanding of the operational requirements of mining through the historical workings.

**Figure 12-8: Hangar Flats Nested Pit Shell Discounted Value**

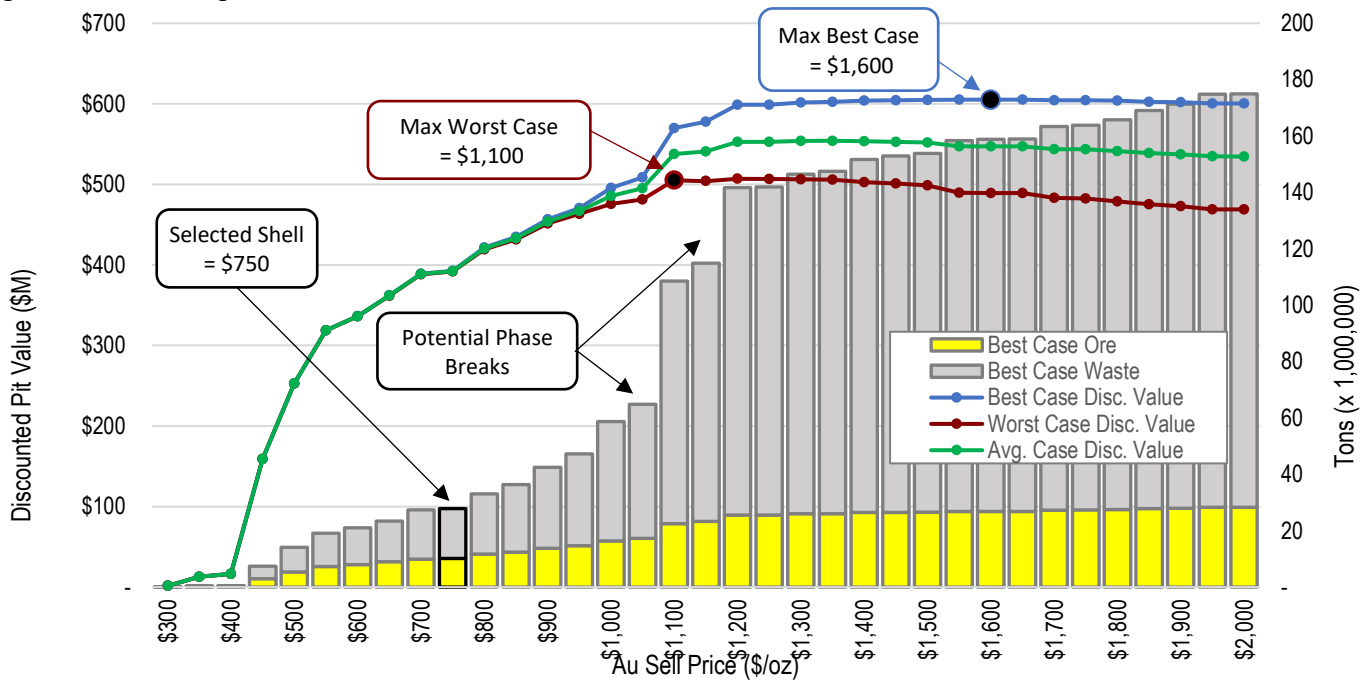
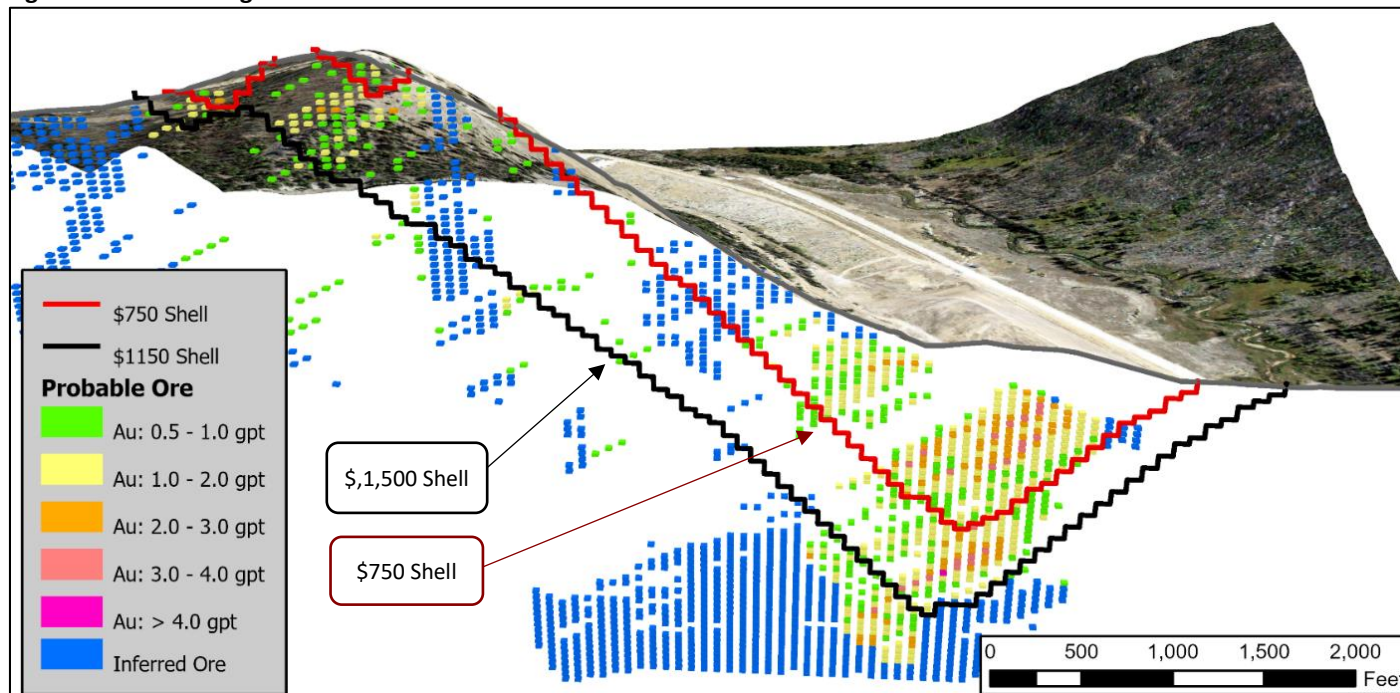


Figure 12-9: Hangar Flats Nested Pit Shell Cross-Section



### 12.3.3 West End Pit Shell Selection

Similar to Yellow Pine, the incremental pit shell changes in discounted value and strip ratio are relatively gradual without any substantial incremental change between the maximum values for worst-case and best-case, as shown in Figure 12-10.

Reviewing the incremental return, as discussed in the Yellow Pine Pit Shell Selection, results in an ultimate pit selection of \$1,300 for West End that has an incremental return of 10.9% as shown in Figure 12-11.

Figure 12-10: West End Nested Pit Shell Discounted Value

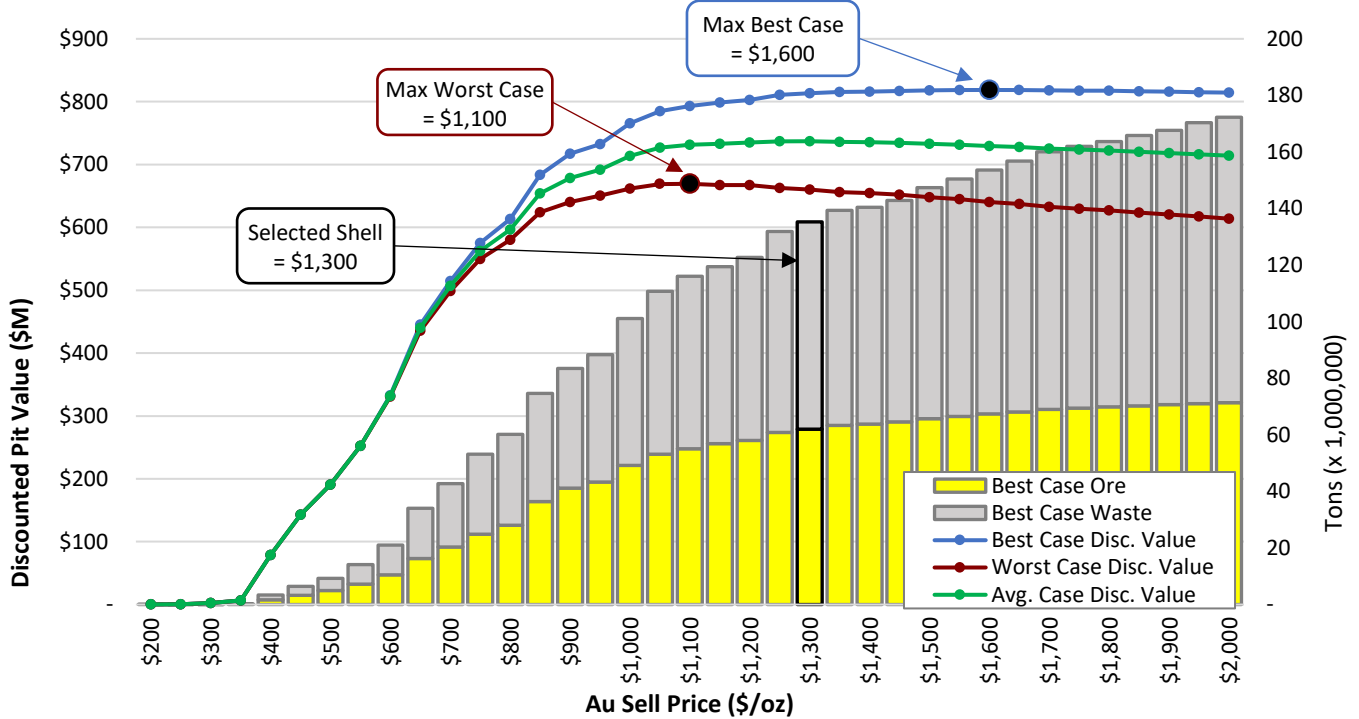
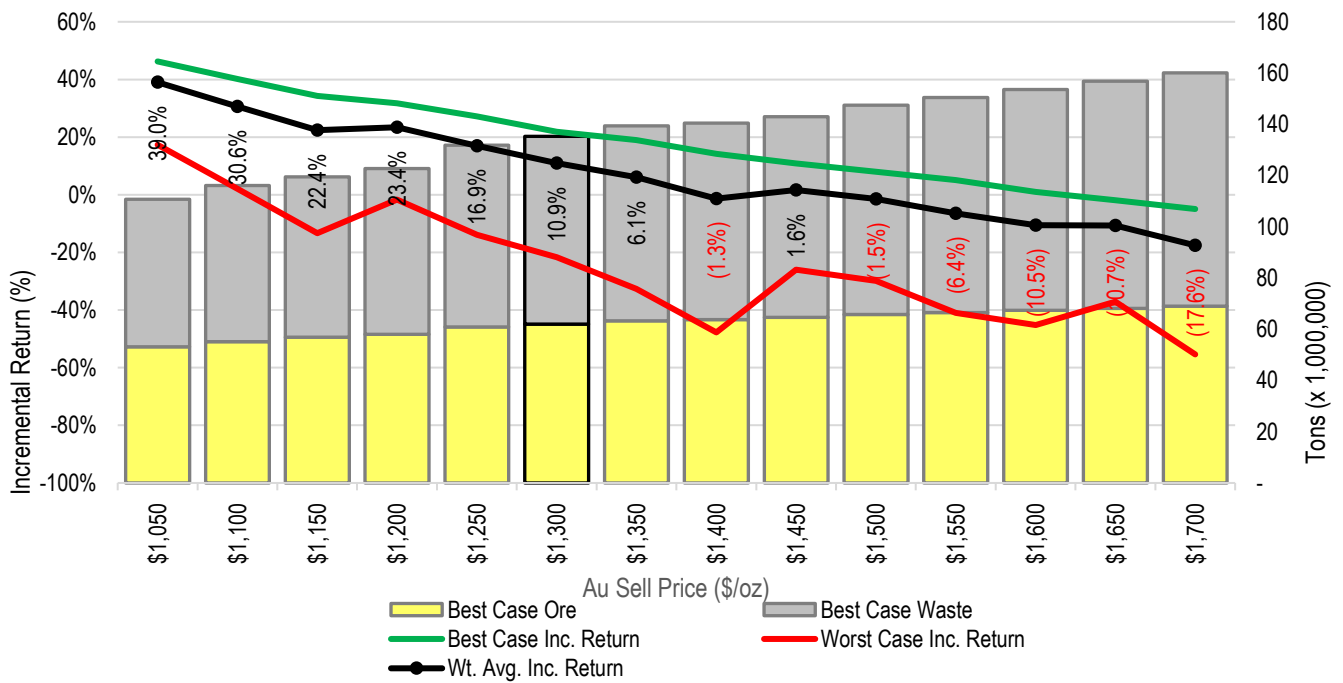


Figure 12-11: West End Nested Pit Shell Incremental Return



## 12.4 Ultimate Pit Designs

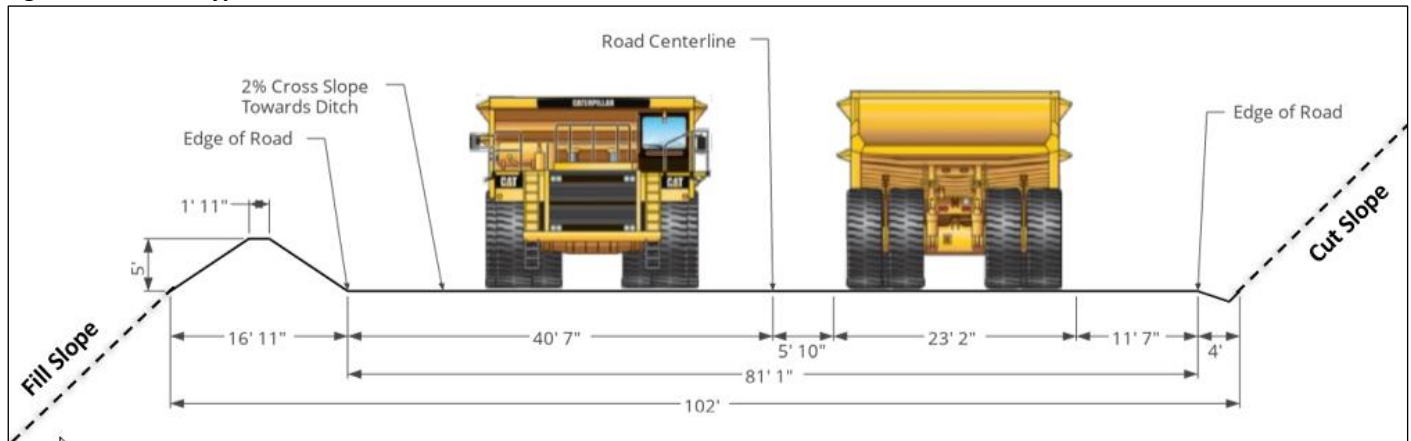
### 12.4.1 Pit Design Parameters

The ultimate pit design for each pit was based on the selected pit shells and the pit design parameters summarized in Table 12-6. Note that geotechnical parameters were provided by STRATA (STRATA, 2018) and further analysis is recommended in Section 23 of this Report, some of which was initiated in late 2025 and is ongoing, to reduce the geotechnical risk associated with these Mineral Reserves. Figure 12-12 presents a typical haul road cross-section that illustrates the 150-t class haul truck running surface design parameter.

**Table 12-6: Pit Design Parameters**

Design Parameter	Value	Comment
Bench Height	20 ft 40 ft	Single bench ore mining Double bench waste mining; final pit configuration
Bench Face Angle	63° 45°	Bedrock Alluvium
Catch Bench Width	20 ft	-
Inter-ramp Angle	36° to 47°	-
150t Truck Ramp Width (2-Lane)	102 ft	Including berm and ditch (Figure 12-12)
45t Truck Ramp Width (2-Lane)	50 ft	Including berm and ditch
150t Truck Running Surface	81.1 ft	3.5 x truck operating width
Safety Berm Height	5 ft	½ truck tire height
Safety Berm Width	16.9 ft 1.9 ft	Width at base Berm top
Road Ditch Width	4 ft	-
Maximum Ramp Gradient	10% 12%	150t Haul Trucks 45t Articulated Trucks
Minimum Road Bend Radii	64 ft	-
Minimum Production Fleet Bench Width	250 ft	Benches less than 250 ft wide are mined with the development (45t haul truck) fleet

Figure 12-12: Typical Haul Road Cross-Section

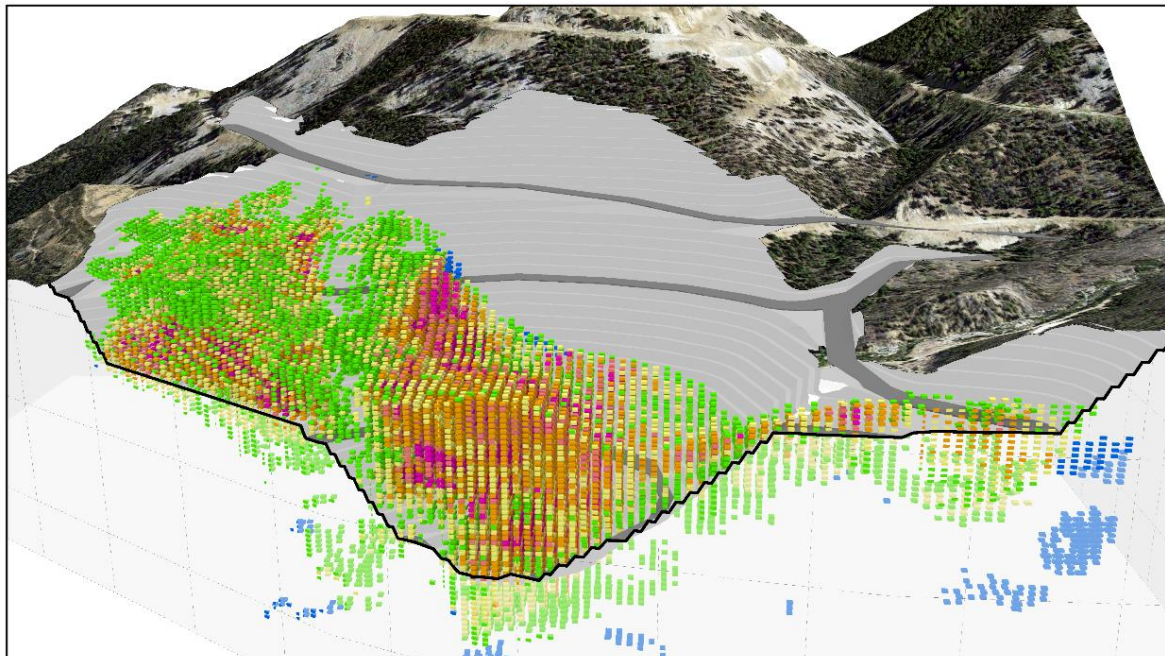
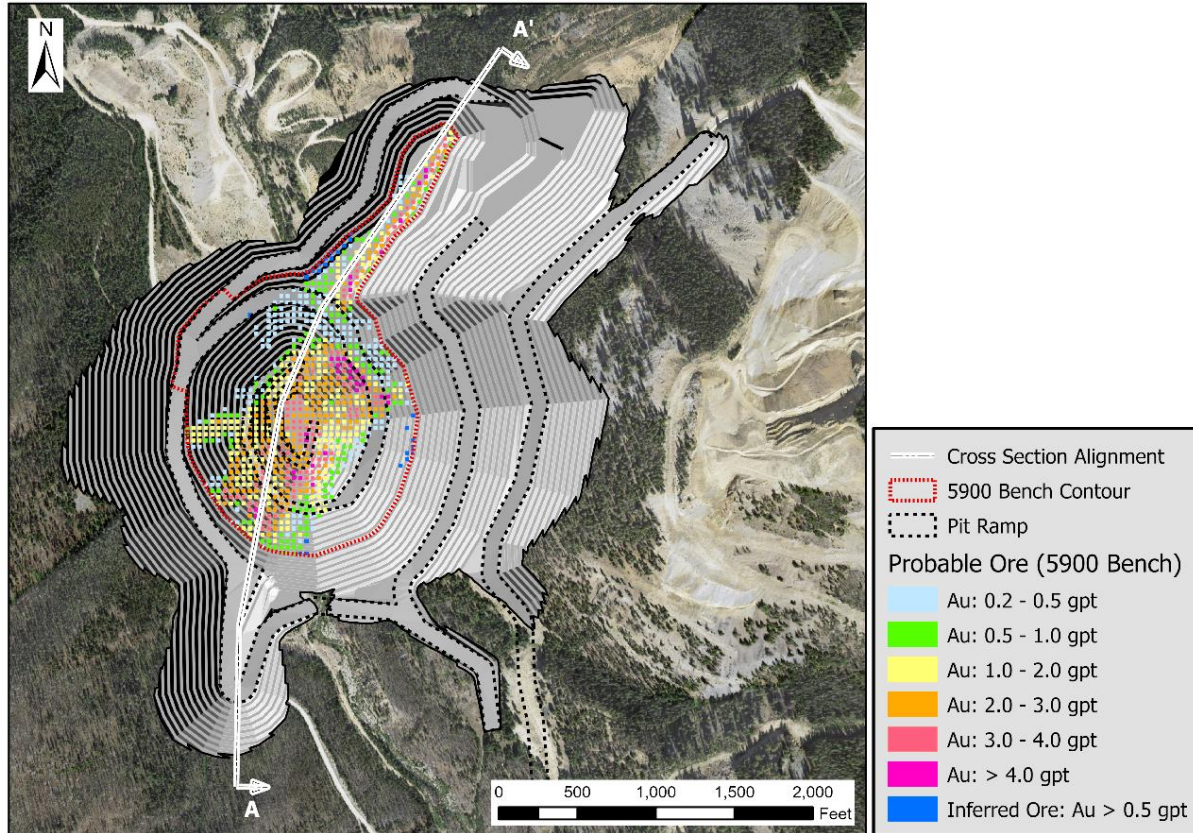


#### 12.4.2 Yellow Pine Ultimate Pit Design

The \$1,250 shell was used as a guide for the Yellow Pine ultimate pit design. The pit design deviates from the shell in the following locations as shown in Figure 12-13 and Figure 12-17:

- upper west wall to accommodate the West End Haul Road used to access West End Pit resulting in additional waste;
- south lobe to accommodate the access ramp switchback resulting in reduced access to ore under the ramp; and
- the north lobe (Homestake area) due to limited mine equipment working width to reach the narrow shell bottom following steeply dipping ore resulting in reduced access to ore.

Figure 12-13: Yellow Pine Mineral Reserves and Mineralized Material

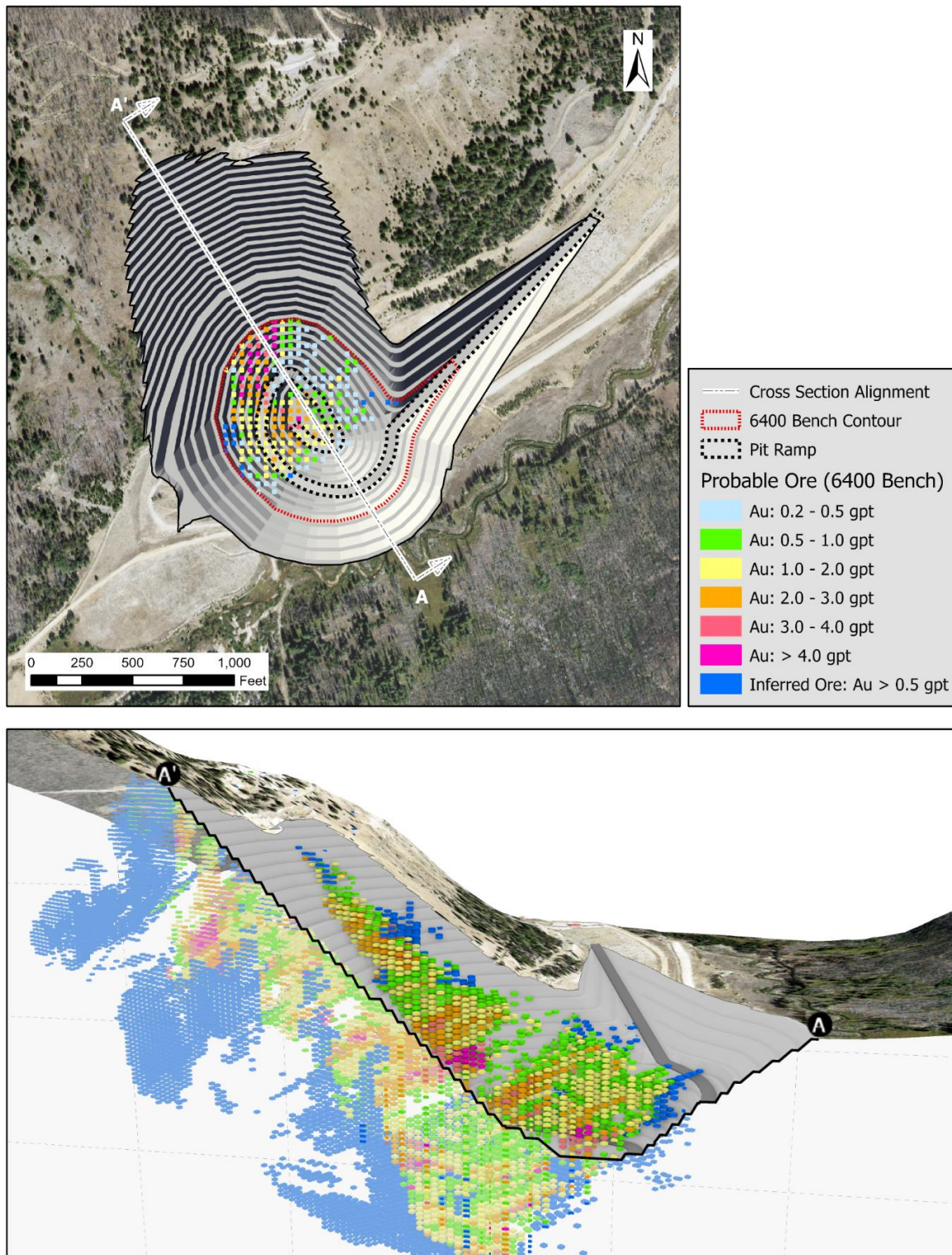


### 12.4.3 Hangar Flats Ultimate Pit Design

The \$750 shell was used as a guide for the Hangar Flats ultimate pit design. The pit design deviates from the shell in the following locations as shown in Figure 12-14 and Figure 12-18:

- slot cut ramp access resulting in additional waste primarily in the alluvium;
- in-pit ramp forcing the ultimate pit limit to extend beyond the shell resulting in additional waste and access to high-value ore at the bottom of the shell;
- limited haul ramp access from the valley floor to upper NW reaches of the shell due to steep topography resulting in the NW portion of the pit highwall designed inside of the shell; and
- a single highwall catch bench widened approximately halfway up the NW highwall to accommodate potential local geotechnical instability resulting from historical underground workings.

Figure 12-14: Hangar Flats Mineral Reserves and Mineralized Material

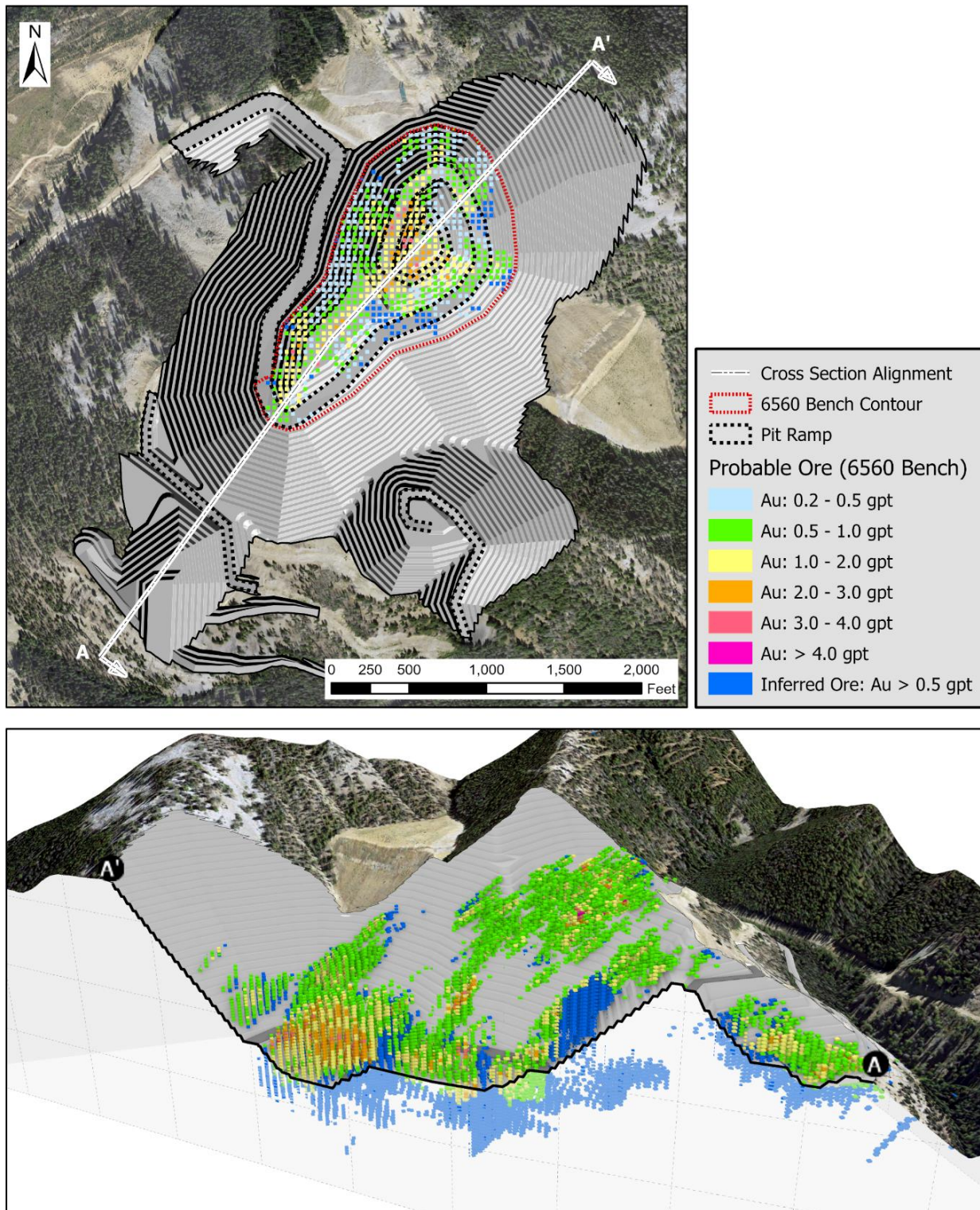


#### 12.4.4 West End Ultimate Pit Design

The \$1,300 shell was used as a guide for the West End ultimate pit design. The pit design deviates from the shell in the following locations as shown in Figure 12-15 and Figure 12-19:

- In-pit ramp forcing the ultimate pit limit to extend beyond the shell resulting in additional waste and access to high-value ore at the bottom of the shell; and
- mining equipment access and working width required in the NE portion of the pit to allow access to the limestone deposit for on-site lime generation.

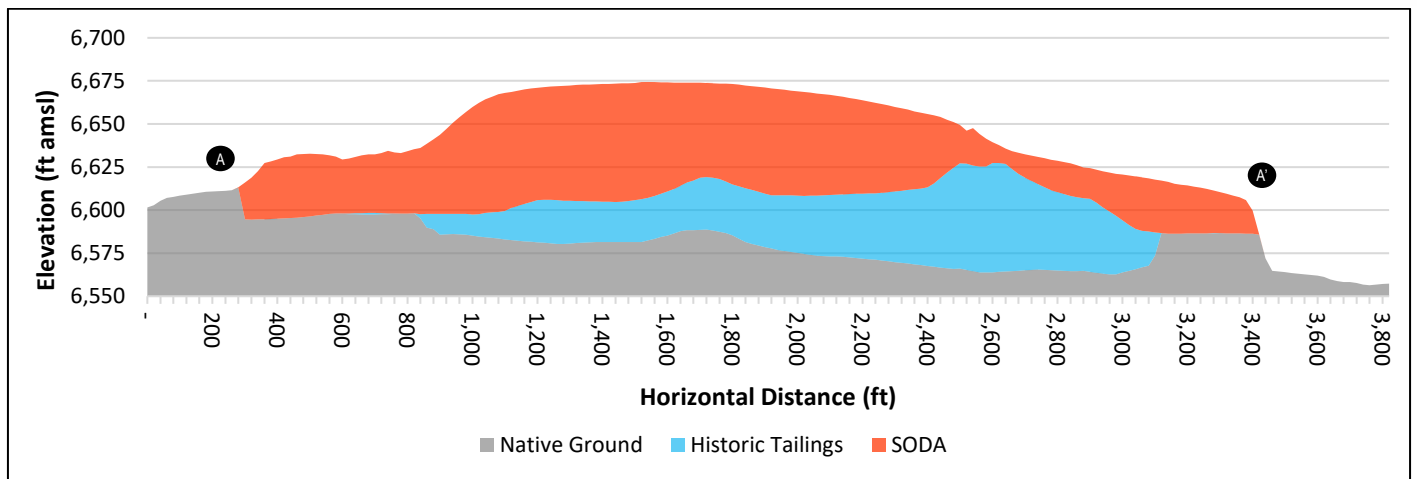
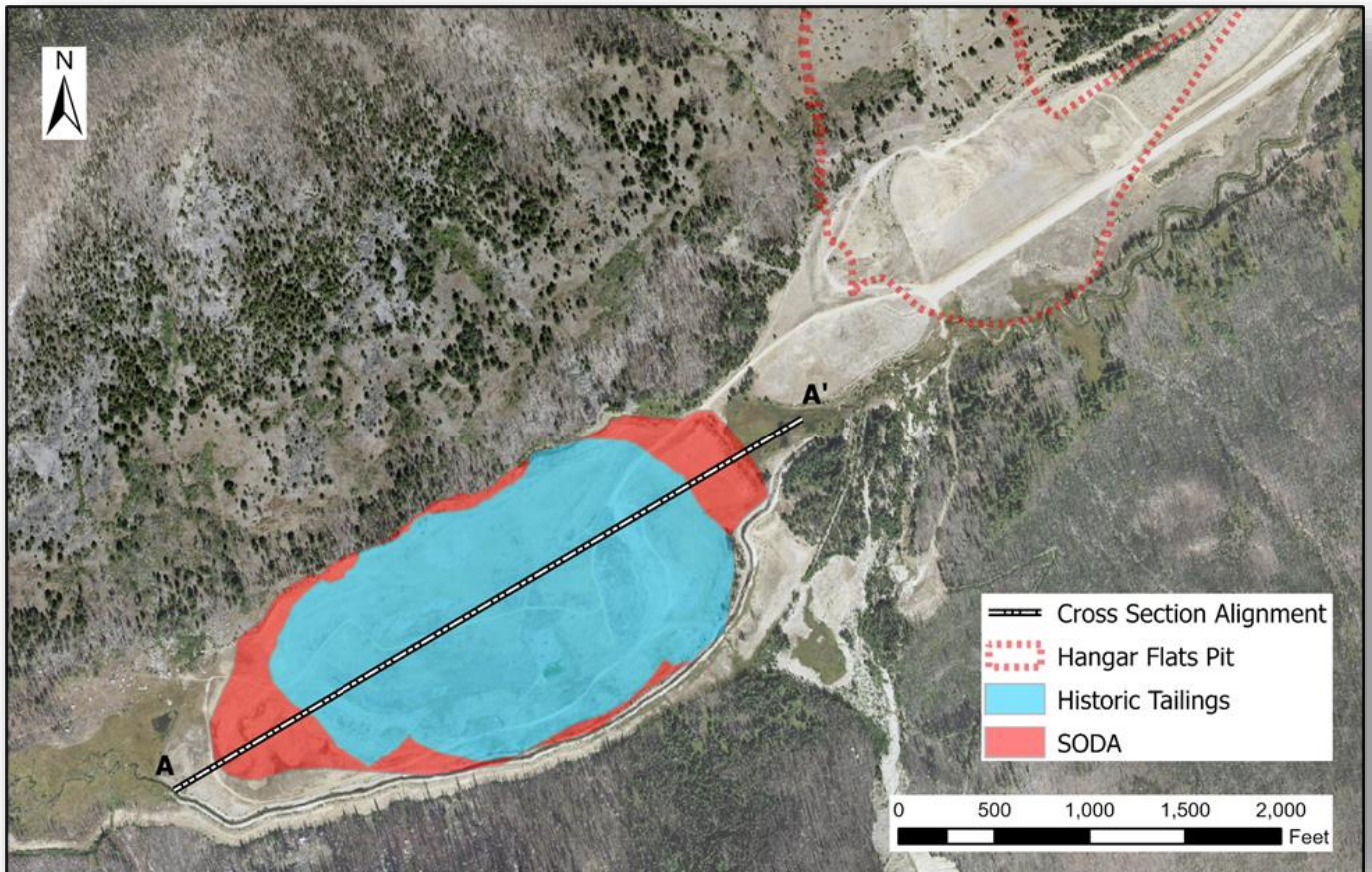
Figure 12-15: West End Mineral Reserves and Mineralized Material



#### 12.4.5 Historical Tailings

The Historical (Bradley) Tailings are located below the Spent Ore Disposal Area (SODA) southwest of the Hangar Flats open pit and partially within the planned development rock storage facility footprint (Figure 12-16). Metallurgical test results show that the contained gold in the Bradley Tailings produces an economic benefit when fed to the process plant concurrent to primary ores. Therefore, the Bradley Tailings are planned to be mined and processed through the mill and are included in the Mineral Reserve.

Figure 12-16: Historical Tailings Mineral Reserves and Mineralized Material



Note: Vertical axis exaggerated

## 12.5 Pit Shell to Ultimate Design Reconciliation

A shell-to-design reconciliation was completed to ensure the design process honored the ultimate pit limit analysis. For all three pit designs, development rock beyond the selected shell extent is included in the ultimate pit design to accommodate pit haul ramps. Summary reconciliation results are shown in Table 12-7 and cross-section comparisons are shown in Figure 12-17, Figure 12-18, and Figure 12-19.

**Table 12-7: Pit Shell to Pit Design Comparison**

<b>Yellow Pine</b>	<b>Total (kt)</b>	<b>Ore (kt)</b>	<b>Waste (kt)</b>	<b>Au (koz)</b>	<b>Sb (klb)</b>	<b>Ag (koz)</b>	<b>Au (gpt)</b>	<b>Sb (%)</b>	<b>Ag (gpt)</b>
\$1,250 Shell	133,211	51,009	82,202	2,868	118,514	2,868	1.75	0.105	2.24
Pit Design	146,275	47,836	98,439	2,733	106,413	3,420	1.78	0.101	2.22
<b><i>Pit to Shell Variance (%)</i></b>	<b><i>9.8</i></b>	<b><i>(6.2)</i></b>	<b><i>19.8</i></b>	<b><i>(4.7)</i></b>	<b><i>(10.2)</i></b>	<b><i>(7.0)</i></b>	<b><i>1.6</i></b>	<b><i>(4.3)</i></b>	<b><i>(0.8)</i></b>
<b>Hangar Flats</b>	<b>Total (kt)</b>	<b>Ore (kt)</b>	<b>Waste (kt)</b>	<b>Au (koz)</b>	<b>Sb (klb)</b>	<b>Ag (koz)</b>	<b>Au (gpt)</b>	<b>Sb (%)</b>	<b>Ag (gpt)</b>
\$750 Shell	27,825	9,068	18,757	471	32,674	904	1.62	0.163	3.10
Pit Design	28,783	8,261	20,523	418	27,238	759	1.57	0.150	2.86
<b><i>Pit to Shell Variance (%)</i></b>	<b><i>3.4</i></b>	<b><i>(8.9)</i></b>	<b><i>9.4</i></b>	<b><i>(11.4)</i></b>	<b><i>(16.6)</i></b>	<b><i>(16.1)</i></b>	<b><i>(2.7)</i></b>	<b><i>(8.5)</i></b>	<b><i>(7.9)</i></b>
<b>West End</b>	<b>Total (kt)</b>	<b>Ore (kt)</b>	<b>Waste (kt)</b>	<b>Au (koz)</b>	<b>Sb (klb)</b>	<b>Ag (koz)</b>	<b>Au (gpt)</b>	<b>Sb (%)</b>	<b>Ag (gpt)</b>
\$1,300 Shell	135,210	45,068	90,142	1,604	-	2,004	1.11	-	1.38
Pit Design	177,761	48,859	131,902	1,612	-	2,011	1.09	-	1.36
<b><i>Pit to Shell Variance (%)</i></b>	<b><i>31.5</i></b>	<b><i>(1.8)</i></b>	<b><i>46.3</i></b>	<b><i>(0.5)</i></b>	<b><i>-</i></b>	<b><i>0.4</i></b>	<b><i>(1.3)</i></b>	<b><i>-</i></b>	<b><i>(1.4)</i></b>
<b>All Open Pits</b>	<b>Total (kt)</b>	<b>Ore (kt)</b>	<b>Waste (kt)</b>	<b>Au (koz)</b>	<b>Sb (klb)</b>	<b>Ag (koz)</b>	<b>Au (gpt)</b>	<b>Sb (%)</b>	<b>Ag (gpt)</b>
Shells	296,246	105,145	191,101	4,943	151,188	6,584	1.95	0.065	1.95
Pit Designs	352,819	101,956	250,863	4,762	133,651	6,190	1.89	0.059	1.89
<b><i>Pit to Shell Variance (%)</i></b>	<b><i>19.1</i></b>	<b><i>(3.0)</i></b>	<b><i>31.3</i></b>	<b><i>(3.7)</i></b>	<b><i>(11.6)</i></b>	<b><i>(6.0)</i></b>	<b><i>(3.0)</i></b>	<b><i>(8.8)</i></b>	<b><i>(3.0)</i></b>

Figure 12-17: Yellow Pine Pit Shell to Ultimate Design Reconciliation

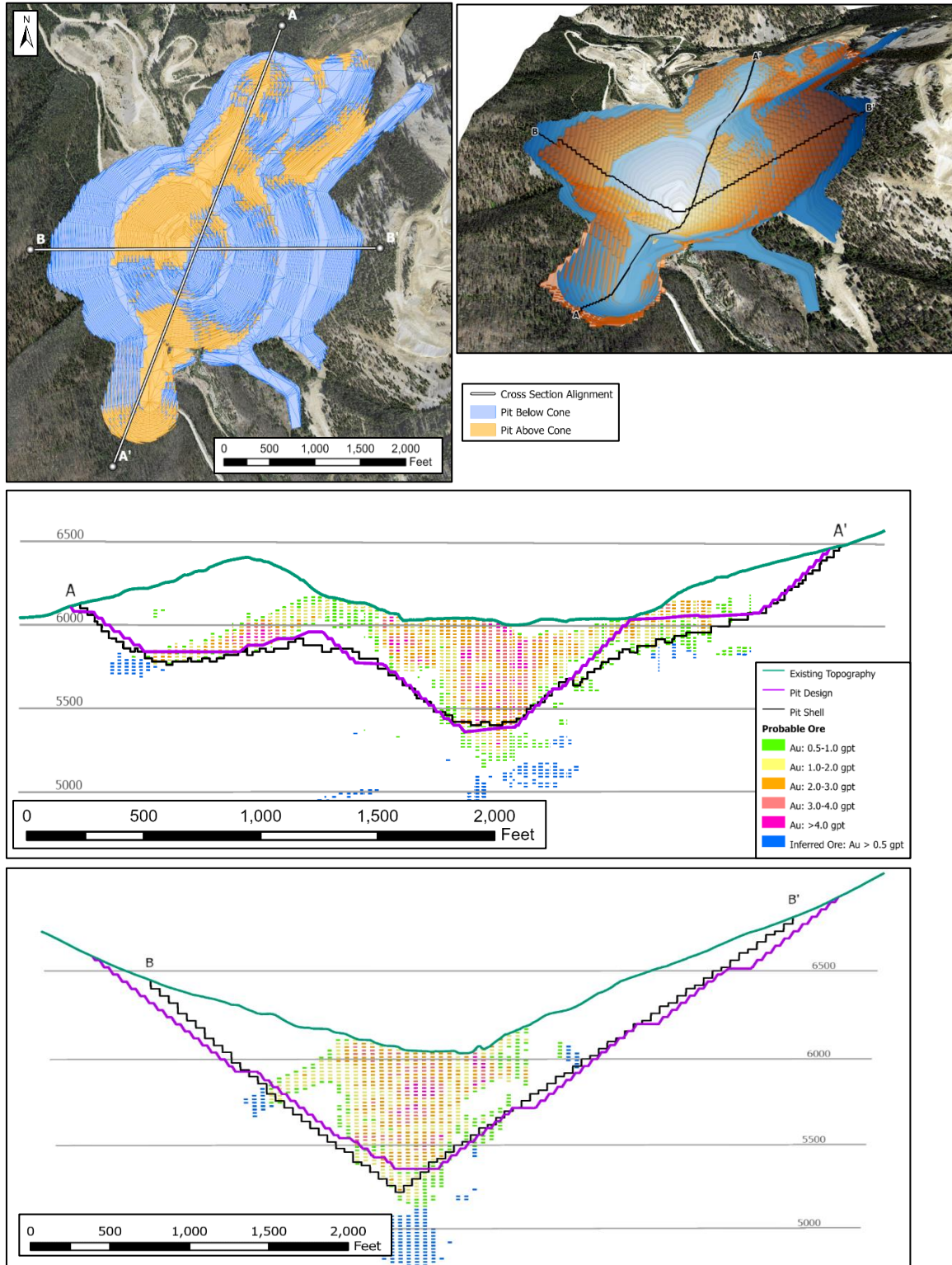


Figure 12-18: Hangar Flats Pit Shell to Ultimate Design Reconciliation

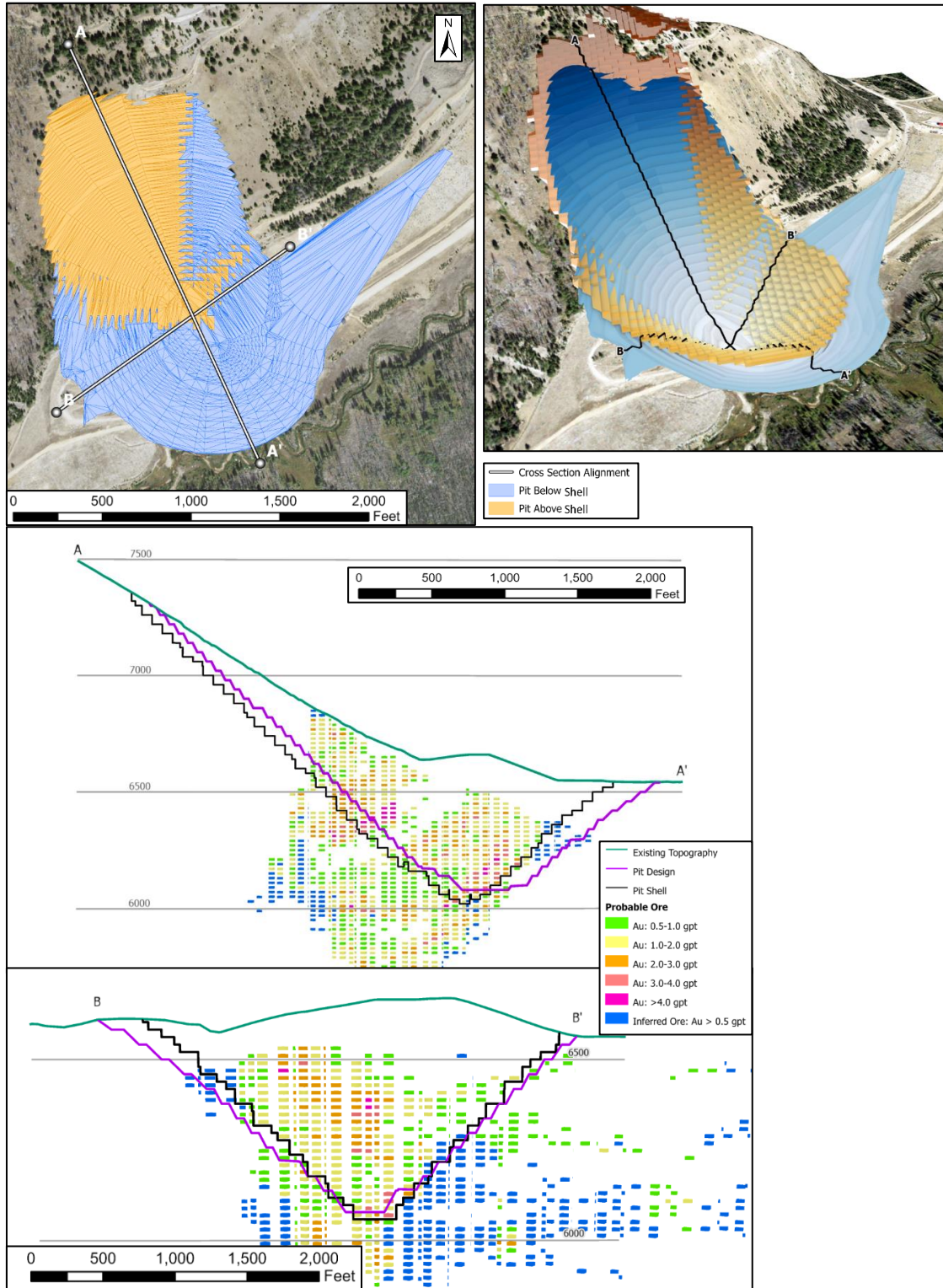
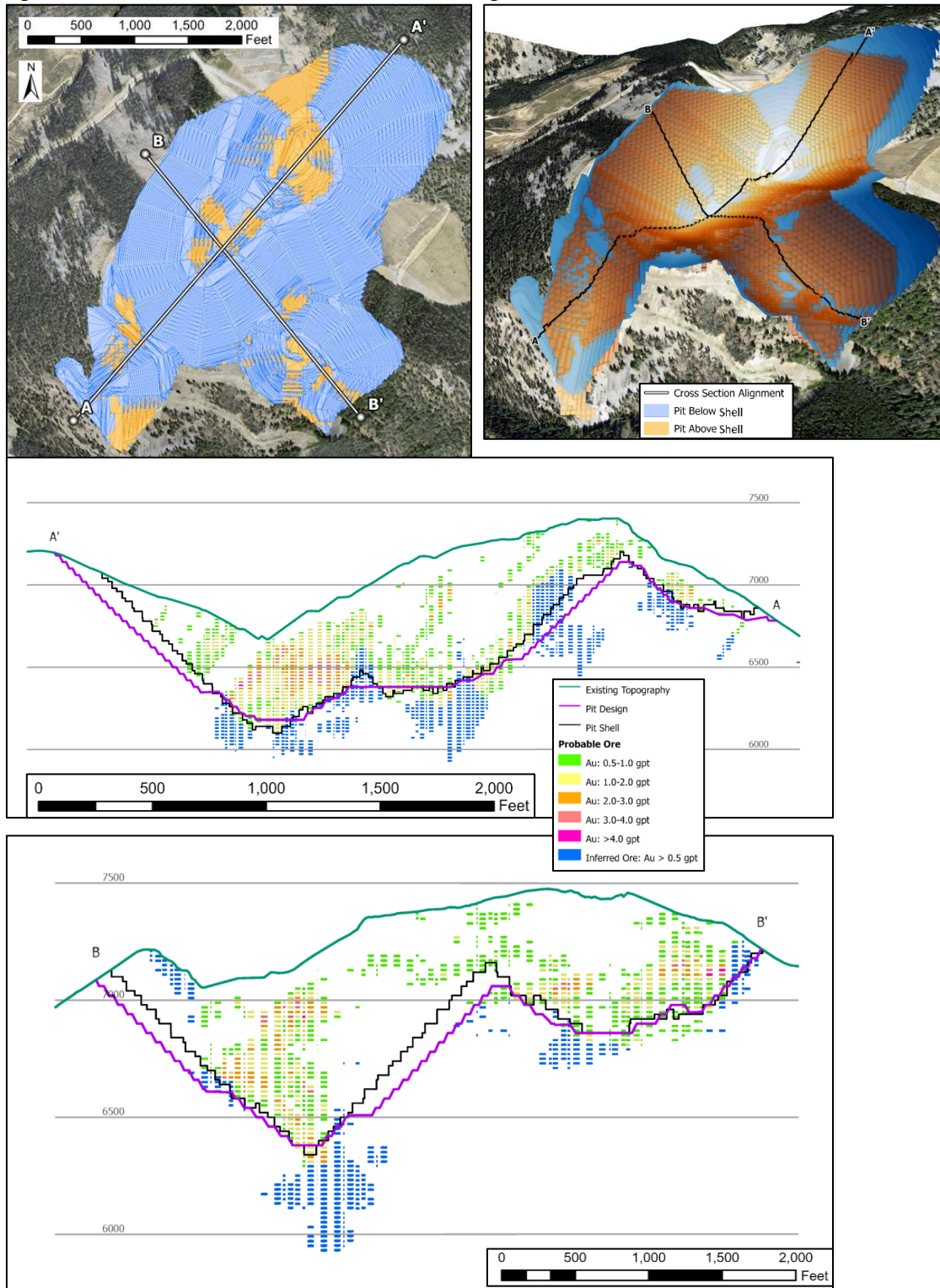


Figure 12-19: West End Pit Shell to Ultimate Design Reconciliation



## 12.6 Cut-Off Grade and Resource Ore Type Classification

Initial mine planning was performed using the ultimate pit designs and break-even cut-off values on a block-by-block basis using the parameters and cost assumptions in Sections 12.4, 12.5 and 12.6. This resulted in the ore mining rate exceeding the mill throughput rate unless either the mining rate was significantly reduced, or substantial stockpiles could be established to accept the lower value ore. Reducing the mining rate would defer access to higher-value ore and, all else equal, would subsequently reduce the project NPV. Stockpile capacity is limited by steep terrain and the intent to restrict site disturbance. Therefore, an optimal mineral reserve cut-off strategy was developed using elevated cut-off values in the mine schedule to maximize recoverable metal and efficiently utilize the available stockpile capacity. This cut-off strategy enabled a practical mining rate that improved project value by processing higher value ore earlier in the mill feed schedule. The life-of-mine cut-off values remain unchanged from those in the 2022 TRS and are shown in Table 12-8. The approximate variable cut-off values over time identified in the mineral reserve cut-off strategy analyses are shown on Figure 12-20 and Figure 12-21. Cost assumptions used to calculate cut-off values were validated once the final mine schedule was developed as presented in Section 13.12.3 of this Report.

Cut-off values in this TRS incorporate long-term stockpiles into the mine plan and targets the highest grade available ore is processed throughout the mine life and extends the mill life by approximately 2 years beyond termination of mining activities.

Ore type classification for the three open pits was determined on a block-by-block basis by calculating the block NPR value for each potential process stream designation (i.e., high Sb sulfide, low Sb sulfide, oxide, low Sb transitional) and classifying the block ore type by whichever process stream designation had the highest potential value. The Historical Tailings will be processed concurrently with ore sourced from the open pits during the first four years of operations. Therefore, the Historical Tailings ore type classification is proportional to the open pit ore type classification during the first four years of operations since the Historical Tailings will accompany the open pit ore process stream designation.

**Table 12-8: Life-of-Mine Cut-off Values**

Deposit	Net of Process Revenue Cut-off (\$/st)	Approximate Equivalent Gold Cut-off (gpt)
Yellow Pine	5.18	0.46
Hangar Flats	5.31	0.49
West End	3.68	0.49
<b>Open Pit Average</b>	<b>4.52</b>	<b>0.48</b>
Historical Tailings	4.52	0.39

Figure 12-20: Approximate Gold Cut-off by Schedule Year

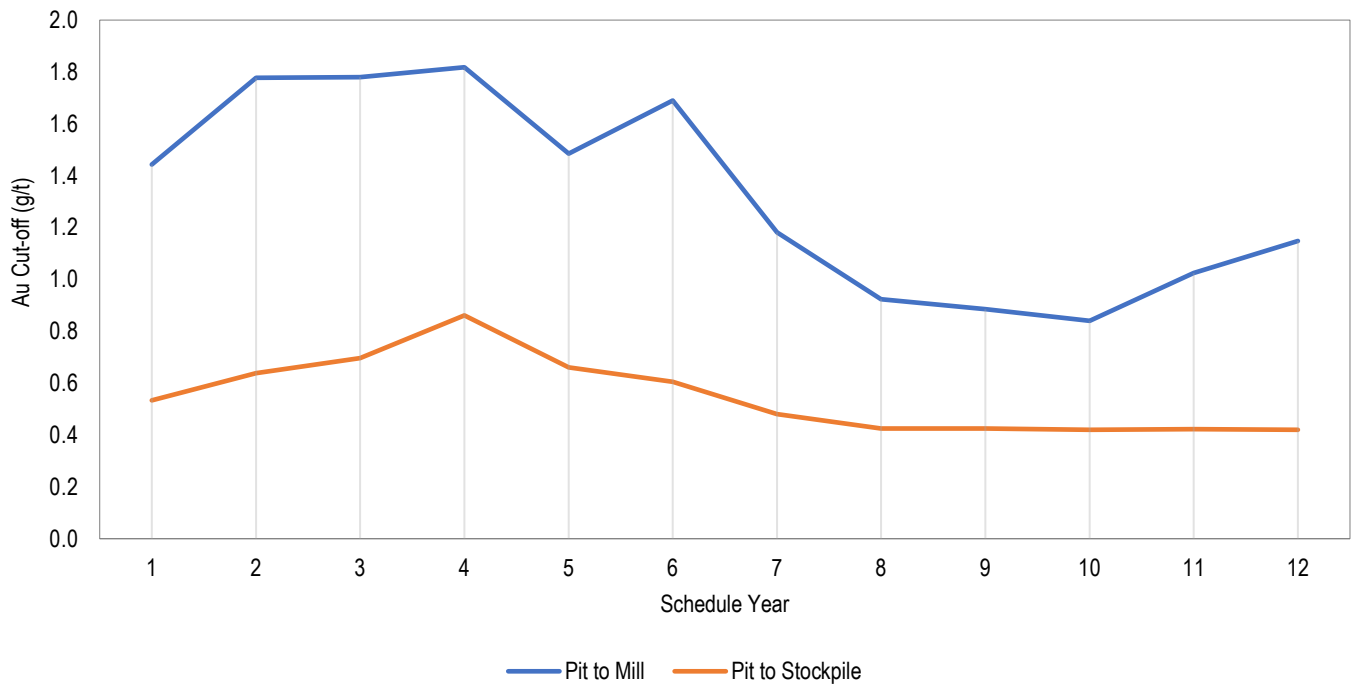
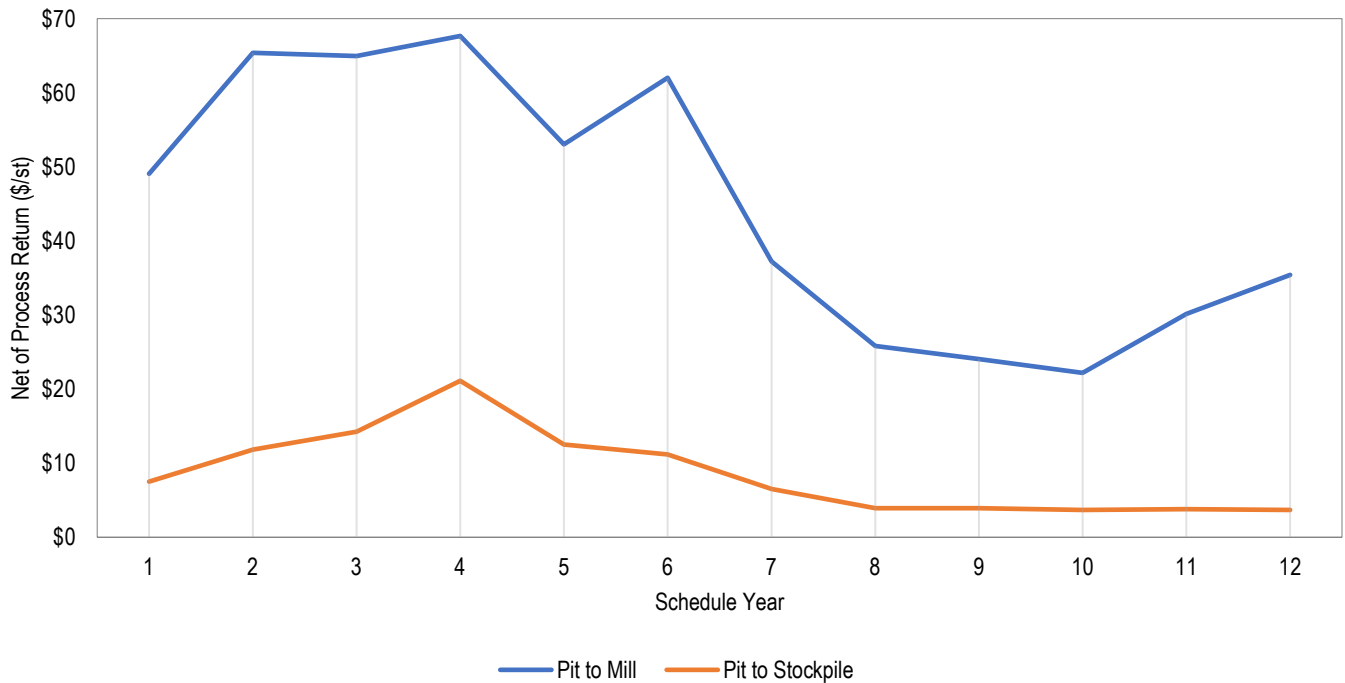


Figure 12-21: Approximate NPR Cut-off by Schedule Year



## 12.7 Mineral Reserve Estimate

The Stibnite Gold Project Mineral Reserves are presented in Table 12-9 and Table 12-10 from the reference point of delivery to the processing plant. Risk factors considered when estimating reserves included pit geotechnical criteria, declining metal prices, lower metallurgical recoveries, and potential for increased operating costs. Geotechnical risk is primarily associated with the Hangar Flats pit due to historic underground workings near the proposed highwall and loose alluvial material intersecting the upper portion of the pit design. This risk has been mitigated by incorporating a widened catch bench approximately halfway up the pit highwall and significantly reducing the pit size as compared to the size suggested from the UPLA as explained in Section 12.3.2. A third-party consultant performed sensitivity analyses of the UPLA relative to process costs, operating costs, and metal prices and concluded that the selection of an ultimate shell is not highly sensitive to these modifying factors. The QP reviewed this analysis and concurs with the consultant's analysis. Pit designs are based on pit shells using gold only, therefore de-risking the dependence of the Project on revenues from antimony and silver. The QP notes that the various scenarios assessed showed no material changes to the pit shell designs published in the 2022 TRS, and continue to accurately reflect Perpetua's permitted, proposed mine plan, and, therefore, the combination of 2021 operating cost estimates and corresponding gold price assumption (\$1,600) derive similar mining and pit shell design parameters as those described in Section 19 of this Report and continues to provide a reasonable basis for establishing that the Project is economically viable. Further discussion of risks that could affect the economic potential of the Project is provided in Section 22 of this Report.

**Table 12-9: Probable Mineral Reserves Summary (Imperial Units) at the end of the fiscal Year 2025 based on \$1,600/oz gold**

Deposit	Tonnage	Average Grade			Total Contained Metal		
		Gold	Antimony	Silver	Gold	Antimony(4)	Silver
Imperial Units	(kst)	(oz/st)	(%)	(oz/st)	(000s oz)	(000s lb)	(000s oz)
<b>Yellow Pine</b>							
Low Sb Sulfide – Probable	41,463	0.049	0.009	0.045	2,047	7,859	1,881
High Sb Sulfide – Probable	11,279	0.060	0.460	0.137	671	103,758	1,543
<b>Yellow Pine Probable Mineral Reserves</b>	<b>52,742</b>	<b>0.052</b>	<b>0.106</b>	<b>0.065</b>	<b>2,718</b>	<b>111,617</b>	<b>3,423</b>
<b>Hangar Flats</b>							
Low Sb Sulfide – Probable	5,696	0.039	0.018	0.048	223	2,104	273
High Sb Sulfide – Probable	3,411	0.056	0.369	0.141	191	25,148	483
<b>Hangar Flats Probable Mineral Reserves</b>	<b>9,107</b>	<b>0.046</b>	<b>0.150</b>	<b>0.083</b>	<b>414</b>	<b>27,252</b>	<b>756</b>
<b>West End</b>							
Oxide – Probable	5,235	0.016	-	0.025	83	-	133
Low Sb Sulfide – Probable	16,801	0.039	-	0.038	649	-	635
Transitional – Probable	28,483	0.030	-	0.043	855	-	1,236
<b>West End Probable Mineral Reserves</b>	<b>50,519</b>	<b>0.031</b>	<b>-</b>	<b>0.040</b>	<b>1,587</b>	<b>-</b>	<b>2,004</b>
<b>Historical Tailings (2)</b>							
Low Sb Sulfide – Probable	2,019	0.034	0.166	0.084	68	6,692	169
High Sb Sulfide – Probable	943	0.034	0.166	0.084	32	3,125	79
<b>Historical Tailings Probable Mineral Reserves</b>	<b>2,962</b>	<b>0.034</b>	<b>0.166</b>	<b>0.084</b>	<b>100</b>	<b>9,817</b>	<b>247</b>
<b>Probable Mineral Reserves</b>							
Oxide – Probable	5,235	0.016	-	0.025	83	-	133
Low Sb Sulfide – Probable	65,980	0.045	0.013	0.045	2,988	16,656	2,958
High Sb Sulfide – Probable	15,632	0.057	0.422	0.135	894	132,031	2,104
Transition – Probable	28,483	0.030	-	0.043	855	-	1,236
<b>Total Probable Mineral Reserves (3)</b>	<b>115,330</b>	<b>0.042</b>	<b>0.422</b>	<b>0.056</b>	<b>4,819</b>	<b>148,686</b>	<b>6,431</b>

Notes: **1.** Mineral Reserves are reported from the reference point of delivery to the processing plant. These reserves are subject to variable metallurgical recoveries for gold, silver, and antimony depending on the host rock, process flowsheet, and product (i.e., doré bullion or antimony concentrate). The average recoveries into bullion are 87% for gold and 13% for silver. The average recoveries into antimony concentrate are 68% for antimony, 0.1% for gold, and 2% for silver. **2.** Historical Tailings ore type classification is proportional to the pit-sourced mill feed during Historical Tailings processing. **3.** Metal prices used for Mineral Reserves: \$1,600/oz Au, \$20.00/oz Ag, \$3.50/lb Sb. **4.** Antimony recovery is expected from High Sb Sulfide ore only and contains 132,031 klbs of Sb.

**Table 12-10: Probable Mineral Reserves Summary (Metric Units) at the end of the fiscal Year 2025 based on \$1,600/oz gold**

Deposit	Tonnage	Average Grade			Total Contained Metal		
		Gold	Antimony	Silver	Gold	Antimony <sup>(3)</sup>	Silver
Metric Units	(kt)	(g/t)	(%)	(g/t)	(t)	(t)	(t)
<b>Yellow Pine</b>							
Low Sb Sulfide – Probable	37,615	1.69	0.009	1.56	63.7	3,565	58.5
High Sb Sulfide – Probable	10,232	2.04	0.460	4.69	20.9	47,064	48.0
<b>Yellow Pine Probable Mineral Reserves</b>	<b>47,847</b>	<b>1.77</b>	<b>0.106</b>	<b>2.23</b>	<b>84.5</b>	<b>50,629</b>	<b>106.5</b>
<b>Hangar Flats</b>							
Low Sb Sulfide – Probable	5,167	1.34	0.018	1.65	6.9	954	8.5
High Sb Sulfide – Probable	3,095	1.92	0.369	4.85	5.9	11,407	15.0
<b>Hangar Flats Probable Mineral Reserves</b>	<b>8,262</b>	<b>1.56</b>	<b>0.150</b>	<b>2.85</b>	<b>12.9</b>	<b>12,361</b>	<b>23.5</b>
<b>West End<sup>(1)</sup></b>							
Oxide – Probable	4,749	0.54	-	0.87	2.6	-	4.1
Low Sb Sulfide – Probable	15,242	1.33	-	1.30	20.2	-	19.7
Transitional – Probable	25,839	1.03	-	1.49	26.6	-	38.5
<b>West End Probable Mineral Reserves</b>	<b>45,830</b>	<b>1.08</b>	<b>-</b>	<b>1.36</b>	<b>49.3</b>	<b>-</b>	<b>62.3</b>
<b>Historical Tailings<sup>(1)</sup></b>							
Low Sb Sulfide – Probable	1,832	1.16	0.166	2.86	2.1	3,036	5.2
High Sb Sulfide – Probable	855	1.16	0.166	2.86	1.0	1,417	2.4
<b>Historical Tailings Probable Mineral Reserves</b>	<b>2,687</b>	<b>1.16</b>	<b>0.166</b>	<b>2.86</b>	<b>3.1</b>	<b>4,453</b>	<b>7.7</b>
<b>Probable Mineral Reserves</b>							
Oxide – Probable	4,749	0.54	-	0.87	2.6	-	4.1
Low Sb Sulfide – Probable	59,856	1.55	0.013	1.54	92.9	7,555	92.0
High Sb Sulfide – Probable	14,181	1.96	0.422	4.61	27.8	59,888	65.4
Transitional – Probable	25,839	1.03	-	1.49	26.6	-	38.5
<b>Total Probable Mineral Reserves<sup>(2)</sup></b>	<b>104,625</b>	<b>1.43</b>	<b>0.064</b>	<b>1.91</b>	<b>149.9</b>	<b>67,443</b>	<b>200.0</b>

Notes: **1.** Historical Tailings ore type classification is proportional to the pit-sourced mill feed during Historical Tailings processing. **2.** Metal prices used for Mineral Reserves: \$1,600/oz Au, \$20.00/oz Ag, \$3.50/lb Sb. **3.** Antimony values are reported only for ore scheduled in the mine plan that is classified as High Sb Sulfide. **4.** Mineral Reserves are reported from the reference point of delivery to the processing plant. These reserves are subject to variable metallurgical recoveries for gold, silver, and antimony depending on the host rock, process flowsheet, and product (i.e., doré bullion or antimony concentrate). The average recoveries into bullion are 87% for gold and 13% for silver. The average recoveries into antimony concentrate are 68% for antimony, 0.1% for gold, and 2% for silver. **5.** All numbers have been rounded in above table and may not sum correctly.

## 13 MINING METHODS

### 13.1 Introduction

The Stibnite Gold Project mine plan consists of mining three primary mineral deposits and re-mining the Historical Tailings using conventional open-pit shovel and truck mining methods. The open-pit shovel and truck mining method was selected as it is a proven method previously used on this property. The method is best for lower-grade deposits where bulk methods, like shovel and truck mining, reduce the overall mining costs, and the mining of four separate deposits utilizes the flexibility of shovel and truck mining. The mining operation will deliver 8.05 million short tons (st) of oxide and sulfide mineralized ore to the crusher per year (nominally 22,050 st per day). Geotechnical inputs for the mine design can be found in Section 12.2.3 of this Report and hydrological parameters are found in Section 15.9 of this Report.

Ore from the three open pits, Yellow Pine, Hangar Flats, and West End, will be sent to either the crusher located near the processing plant or one of several ore stockpiles located throughout the Project site. The Historical Tailings will be trucked to a re-pulping facility adjacent to the tailings deposit and hydraulically transferred to the process plant grinding circuit via a re-pulping facility. Most of the development rock from the three open pits will be sent to one of five destinations: the TSF embankment, the TSF Buttress, the Yellow Pine open pit backfill, the Hangar Flats open pit backfill, and the West End open pit backfill as shown on Figure 13-1. A small portion of the development rock will be used in various development projects, especially during pre-production as further discussed in Section 13.4. A summary of the ore tonnage by process route and waste tonnage from each of the primary deposits and the Historical Tailings is provided in Table 13-1.

The general sequence of open-pit mining is Yellow Pine first, Hangar Flats second, and West End last. This sequence generally progresses from mining the highest value ore to lowest value ore and accommodates backfilling the Yellow Pine and Hangar Flats open pits with material mined from West End open pit, thereby accelerating concurrent reclamation and restoration of the EFSFSR. The Historical Tailings will be mined and processed during the first four years of operation concurrent with mining ore from the Yellow Pine open pit.

The mine planning methodology applied the following general procedures:

- designing ultimate pits designs (Section 12.4);
- designing internal pit phases for each open pit (Section 13.2);
- developing the strategic mine plan (Section 13.3);
- scheduling mine development work and incorporating it into the strategic mine plan (Section 13.4);
- designing and scheduling stockpiles and development rock storage facilities (Section 13.6);
- optimizing the process ore feed schedule (Section 13.7);
- scheduling a detailed mine plan (13.8);

- developing equipment maintenance and consumables schedules (Section 13.9 & 13.10);
- developing staffing schedules (13.11);
- estimating the mine capital cost and operating cost schedule (Section 13.12); and
- performing an ultimate pit limit analysis validation (Section 13.12.3).

Figure 13-1: Sitewide Mining Related Features

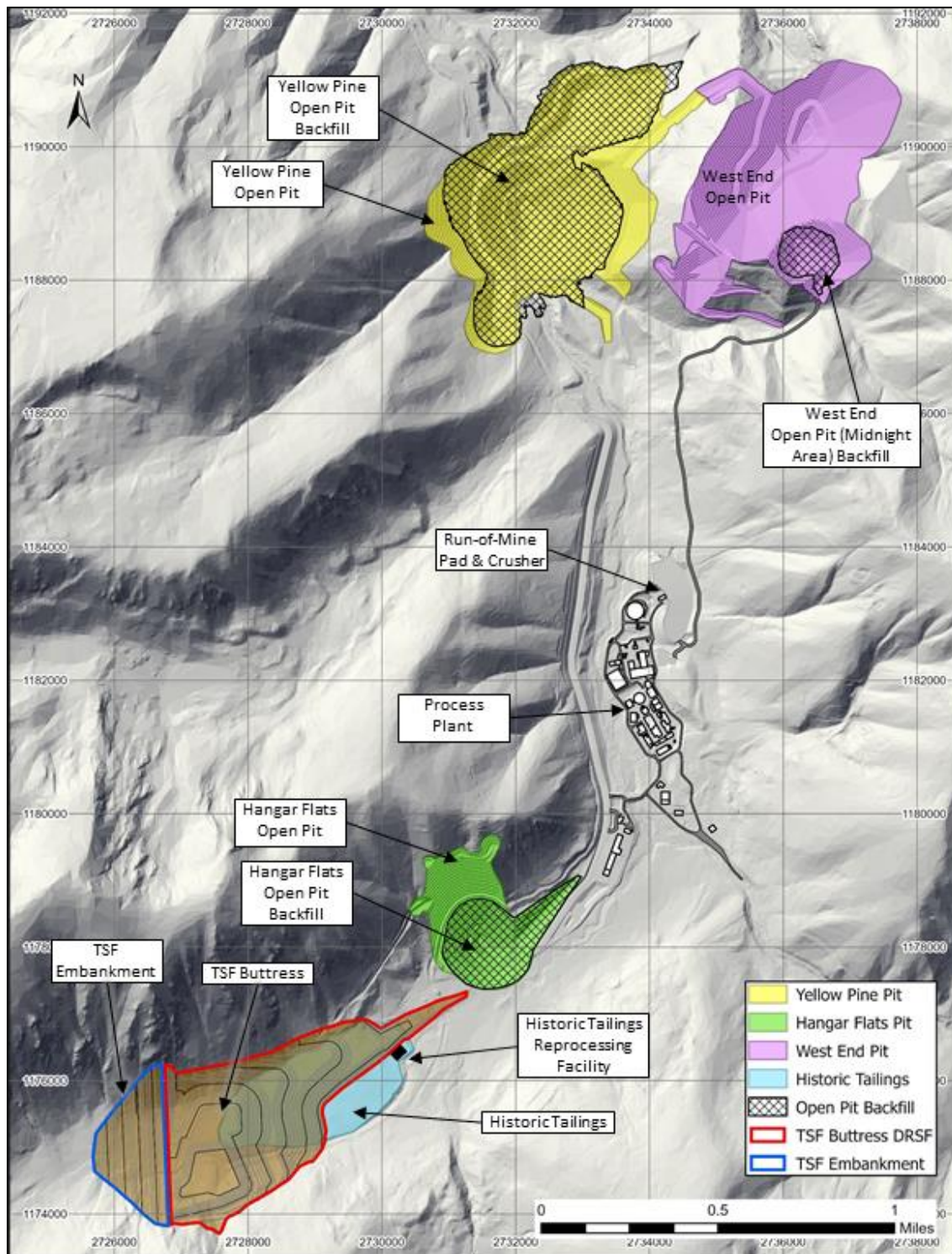


Table 13-1: Summary of Mine Plan Ore Type and Tonnage by Deposit

Deposit & Ore Type	Tonnage (000s)	Average Grade			Total Contained Metal		
		Gold (g/t)	Antimony (%)	Silver (g/t)	Gold (000s oz)	Antimony (klbs)	Silver (000s oz)
<b>Yellow Pine</b>							
Low Sb Sulfide	37,615	1.69	0.009	1.56	2,047	7,859	1,881
High Sb Sulfide	10,232	2.04	0.460	4.69	671	103,758	1,543
<b>Total Ore</b>	<b>47,847</b>	<b>1.77</b>	<b>0.106</b>	<b>2.23</b>	<b>2,718</b>	<b>111,617</b>	<b>3,423</b>
Development Rock	99,666	-	-	-	-	-	-
Total Tonnage	147,512	-	-	-	-	-	-
Strip Ratio	2.08	-	-	-	-	-	-
<b>Hangar Flats</b>							
Low Sb Sulfide	5,167	1.34	0.018	1.65	223	2,104	273
High Sb Sulfide	3,095	1.92	0.369	4.85	191	25,148	483
<b>Total Ore</b>	<b>8,262</b>	<b>1.56</b>	<b>0.150</b>	<b>2.85</b>	<b>414</b>	<b>27,252</b>	<b>756</b>
Development Rock	20,066	-	-	-	-	-	-
Total Tonnage	38,328	-	-	-	-	-	-
Strip Ratio	2.43	-	-	-	-	-	-
<b>West End</b>							
Oxide	4,749	0.54	-	0.87	83	-	133
Low Sb Sulfide	15,242	1.33	-	1.30	649	-	635
Transitional	25,839	1.03	-	1.49	855	-	1,236
<b>Total Ore</b>	<b>45,830</b>	<b>1.08</b>	<b>-</b>	<b>1.36</b>	<b>1,587</b>	<b>-</b>	<b>2,004</b>
Development Rock	134,031	-	-	-	-	-	-
Total Tonnage	179,861	-	-	-	-	-	-
Strip Ratio	2.92	-	-	-	-	-	-
<b>Historical Tailings</b>							
Low Sb Sulfide	1,832	1.16	0.166	2.86	68	6,692	169
High Sb Sulfide	855	1.16	0.166	2.86	32	3,125	79
<b>Total Ore</b>	<b>2,687</b>	<b>1.16</b>	<b>0.166</b>	<b>2.86</b>	<b>100</b>	<b>9,817</b>	<b>247</b>
Development Rock <sup>1</sup>	5,218	-	-	-	-	-	-
Total Tonnage	7,905	-	-	-	-	-	-
Strip Ratio	1.94	-	-	-	-	-	-
<b>All Deposits</b>							
Oxide	4,749	0.54	-	0.87	83	-	133
Low Sb Sulfide	59,856	1.55	0.013	1.54	2,988	16,656	2,958
High Sb Sulfide	14,181	1.96	0.422	4.61	894	132,031	2,104
Transitional	25,839	1.03	-	1.49	855	-	1,236
<b>Total Ore</b>	<b>104,625</b>	<b>1.43</b>	<b>0.064</b>	<b>1.91</b>	<b>4,819</b>	<b>148,686</b>	<b>6,431</b>
Development Rock	258,980	-	-	-	-	-	-
Total Tonnage	363,605	-	-	-	-	-	-
Strip Ratio	2.49	-	-	-	-	-	-

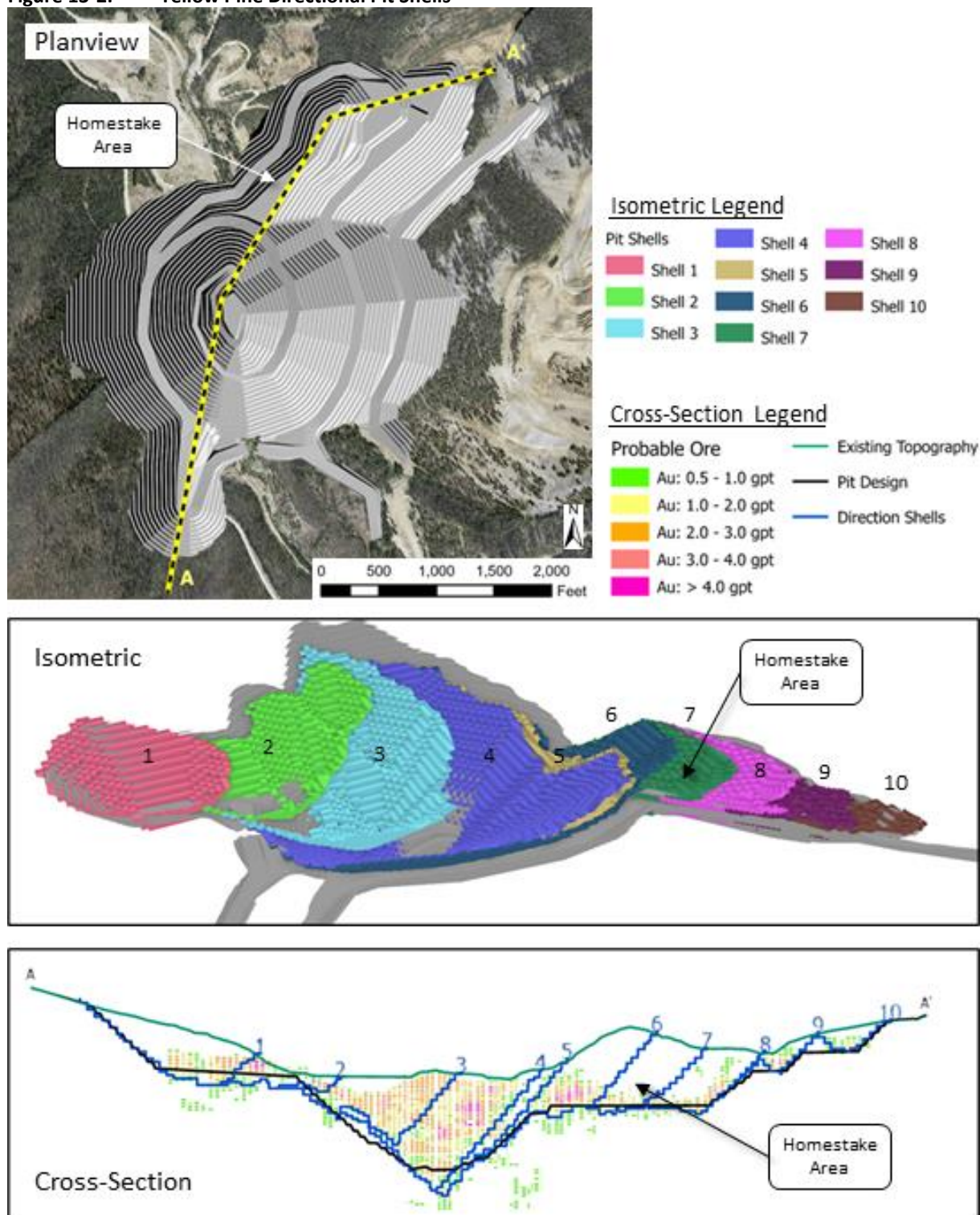
## 13.2 Open Pit Phase Design

The purpose of designing phases within the ultimate pit designs is to balance development rock stripping and ore access, bring higher-value ore forward in the mine schedule, guide detailed mine scheduling, allow for concurrent backfilling of pits and facilitate concurrent reclamation and restoration. The open pit phase designs were based on the nested pit shells generated in the Ultimate Pit Limit Analysis described in Section 12.2 of this Report. Phase designs include all interim in-pit access roads to develop each phase and allowance for adequate equipment operating requirements.

### 13.2.1 Yellow Pine Pit Phase Design

In addition to the nested pit shells produced in the Ultimate Pit Limit Analysis (UPLA), a suite of directional pit shells was generated for the Yellow Pine deposit to identify potential for mining the main portion of Yellow Pine first and the northern Homestake area last (Figure 13-2). This phasing sequence allows for accelerated access to high-value ore deep in the central Yellow Pine deposit and provides for a short development rock haul from the Homestake area to the Yellow Pine pit backfill to reduce haulage cost.

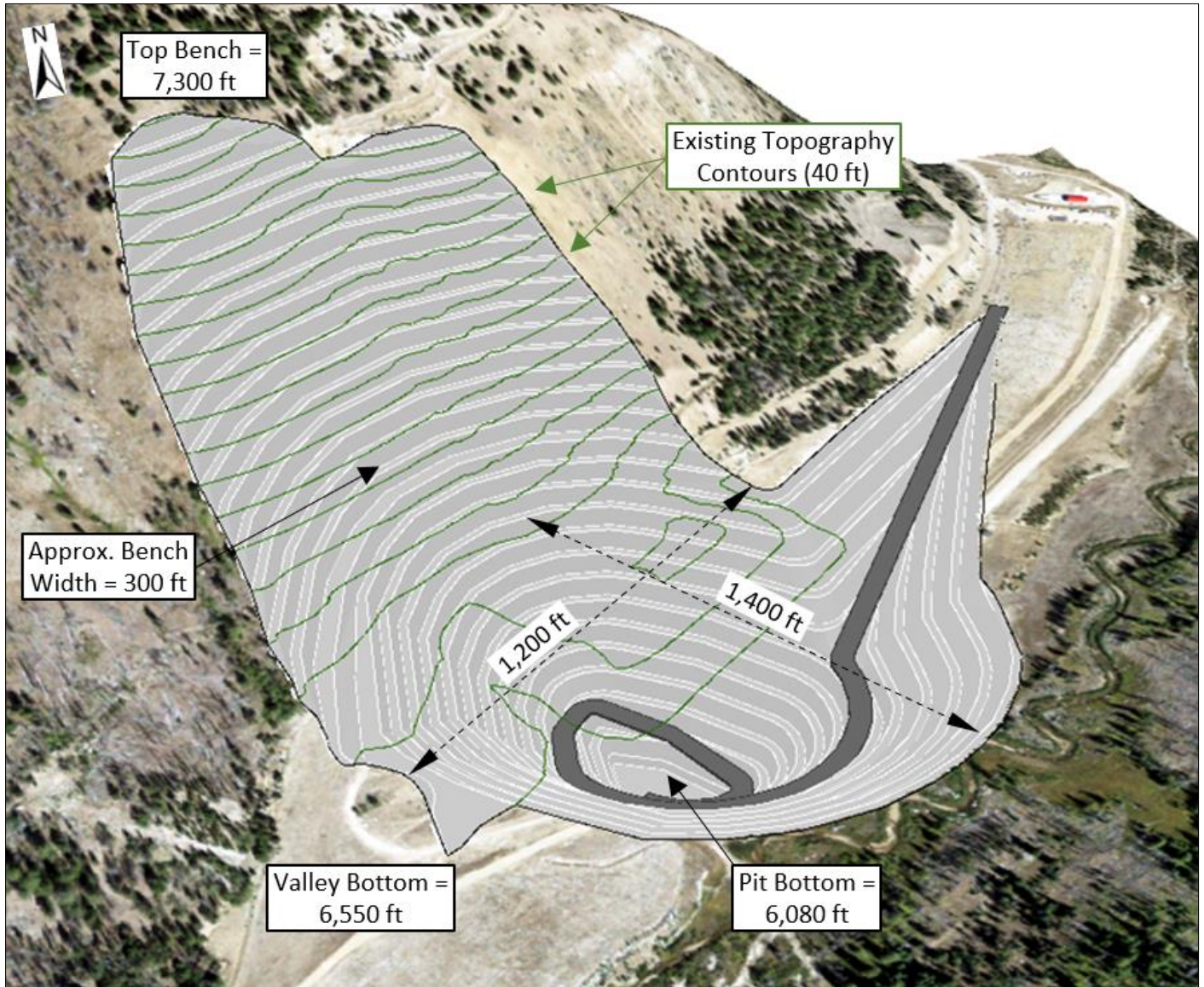
Figure 13-2: Yellow Pine Directional Pit Shells



### 13.2.2 Hangar Flats Pit Phase Design

The Hangar Flats pit design consists of a single phase due to its small size and steep topography which requires a top-down mining approach. An internal phase within Hangar Flats would likely result in very narrow bench widths in the northwest highwall causing significantly reduced mining production rates (Figure 13-3). Additional discussion regarding the Hangar Flats open-pit geometry alternatives is provided in Section 13.3.2

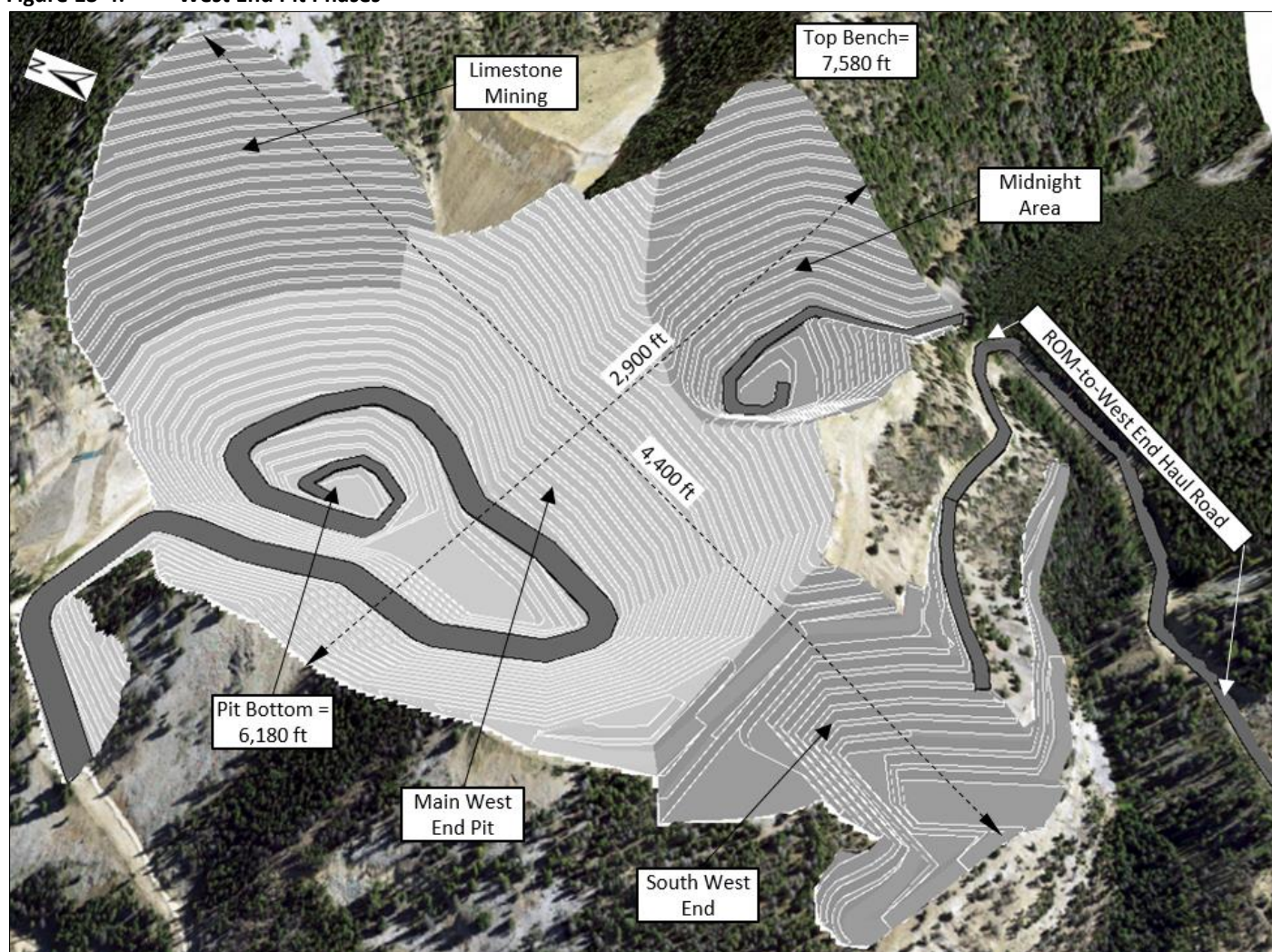
Figure 13-3: Hangar Flats Pit Design



### 13.2.3 West End Pit Phase Design

Four pit phases were designed for the West End pit: (1) Middle Marble limestone mining, (2) Midnight area pit production, (3) South West End pit production, and (4) Main West End pit production as shown on Figure 13-4. Mining limestone from the Middle Marble geologic unit located in the northeast portion of the West End open pit is required for the lime kiln to produce lime used in ore processing. The Midnight Area phase sequence is primarily driven by when access is available for backfilling this area using development rock produced in the Main West End phase. The South West End phase is accessible via the ROM-to-West End Haul Road and can be mined independently of the Main West End phase. The Main West End phase does not benefit significantly from additional phasing due to the homogeneous nature of the ore body.

Figure 13-4: West End Pit Phases

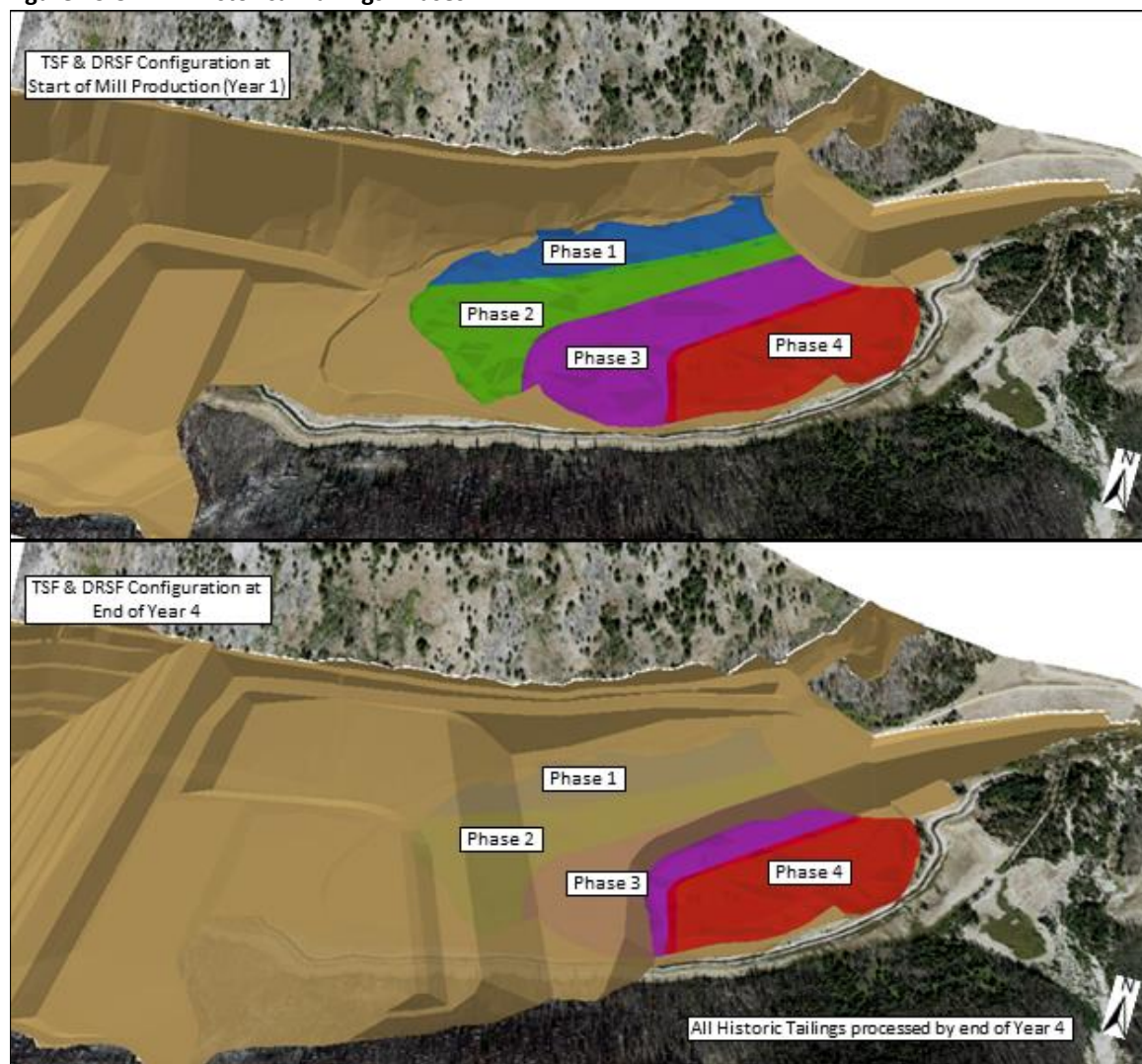


### 13.2.4 Historical Tailings Phase Design

Approximately 3 million tons of Historical Tailings from processing ore in the World War II era underlie spent heap leach material. The spent material will be removed and used as construction material for the TSF exposing the Historical Tailings. The 2,687 kt of Historical Tailings will be excavated and hauled by truck to a nearby handling facility where it would be screened, re-pulped, and pumped to the grinding circuit.

For mine planning purposes, the Historical Tailings resource is modeled with constant grade and value throughout the deposit. Therefore, phasing the Historical Tailings is not influenced by advancing access to higher value ore but instead by the need to accommodate construction of adjacent facilities and avoid costs associated with double handling of the material. The Historical Tailings are planned to be excavated and processed during the first 4 years of mill operation as shown on Figure 13-5.

Figure 13-5: Historical Tailings Phases



### 13.3 Mine Sequence Analysis

The mine sequence analysis consisted of evaluating various combinations of mining sequence, pit design alternatives, fleet alternatives, and mining production rates to optimize project value and produce a strategic mine plan. The strategic mine plan was then used as a blueprint for detailed mine planning including stockpile optimization, equipment scheduling, equipment cost estimating, development rock storage facility scheduling, mill feed optimization, and the life-of-mine production schedule. The primary objectives for the mine sequence analysis included:

- Identify most favorable Hangar Flats open pit geometry;
- evaluate mine production ramp-up and peak production rate alternatives;
- maximize access to high-value ore early in the mine life for increased project value;
- identify optimal mine production fleet criterion;
- maximize mine production equipment productivity and utilization;
- balance development rock stripping and access to ore;
- ensure consistent ore feed to the process plant throughout the mine life;
- provide pit-sourced material to construction projects as needed particularly during construction;
- ensure project objectives and constraints are achieved such as backfilling the Yellow Pine and Hangar Flats Pits;
- support concurrent reclamation and restoration; and
- generate a period-based (monthly prior to Year 3 and quarterly after) mine production schedule.

#### 13.3.1 Process Facility Mined Material Requirements

There are four general types of mined material that affect the mining sequence and mining production rate:

- Run-of-mine (ROM) sulfide ore - Since all material to be processed during the first few years of operation is sulfide ore from the Yellow Pine open pit, the process plant throughput ramp-up schedule is based on ROM sulfide ore.
- ROM oxide ore - Substantial quantities of oxide ore are not encountered until the West End open pit is in full production. Therefore, a direct cyanide leaching circuit is planned to be operational starting in Year 7. High-value oxide ore mined prior to Year 7 will be stockpiled and rehandled to the crusher once the circuit is operational.
- Historical tailings – Historical tailings are scheduled to be processed during the first four years of mill operations to allow for the advancing construction of the TSF Buttress and because the tailings add Project value without displacing ROM ore.

- Limestone – Limestone from the Middle Marble geologic formation will be mined and used directly as crushed limestone or processed in a lime kiln to provide the lime necessary to increase the pH of solutions and slurries as needed for processing sulfide ore.

The process plant, at full production capacity, is designed to process 8.05 million tons per year of ROM ore via the crusher and an additional 0.916 million tons per year of historical tailings. Process plant ROM ramp-up to full production is scheduled to occur during the first 3 years of operation and Historical Tailings ramp-up occurs during the first year of operation as shown on Figure 13-6. The ore processing schedule for mineralized material by ore type is shown on Figure 13-7.

**Figure 13-6: Process Plant Throughput Ramp-Up Schedule**

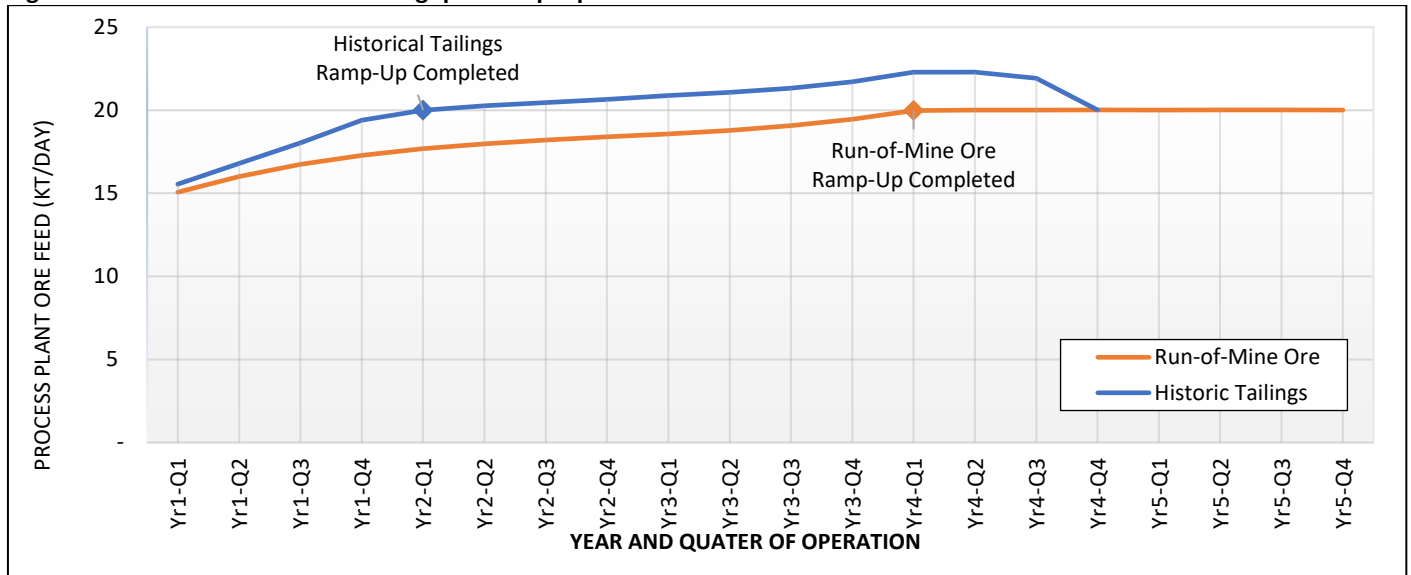
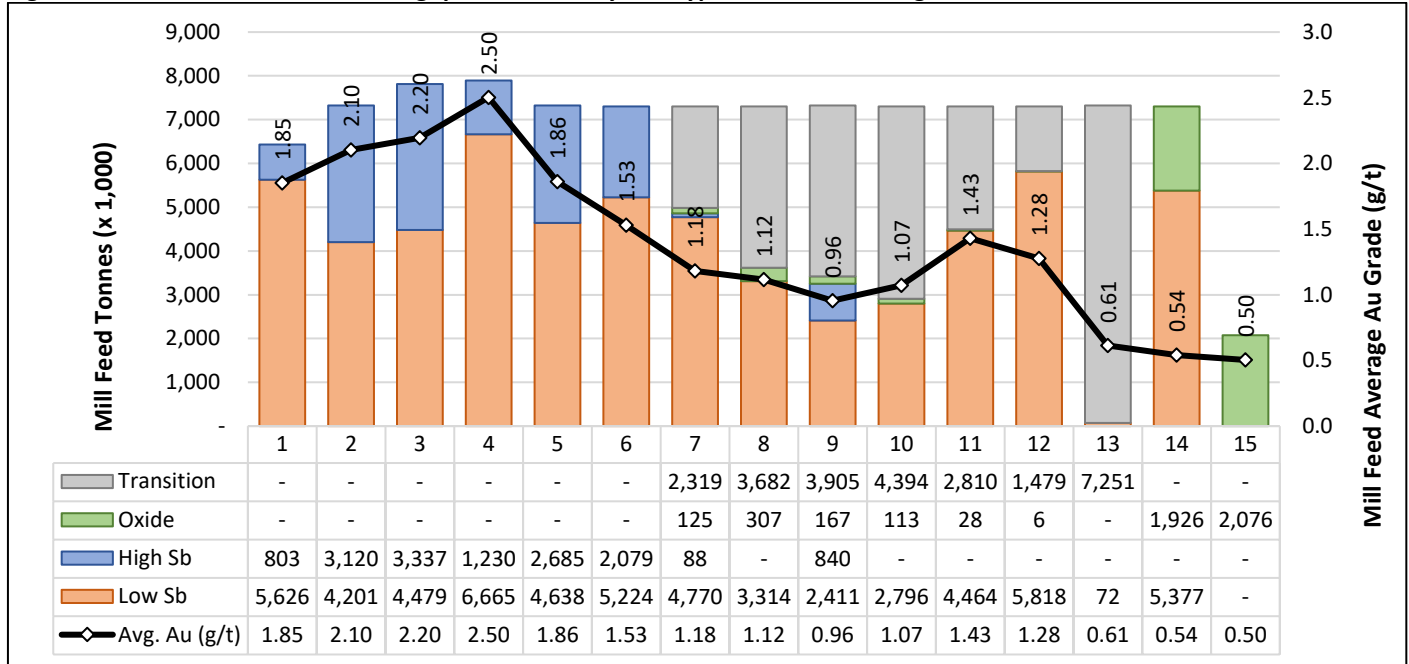


Figure 13-7: Process Plant Throughput Schedule by Ore Type, Year, and Average Grade

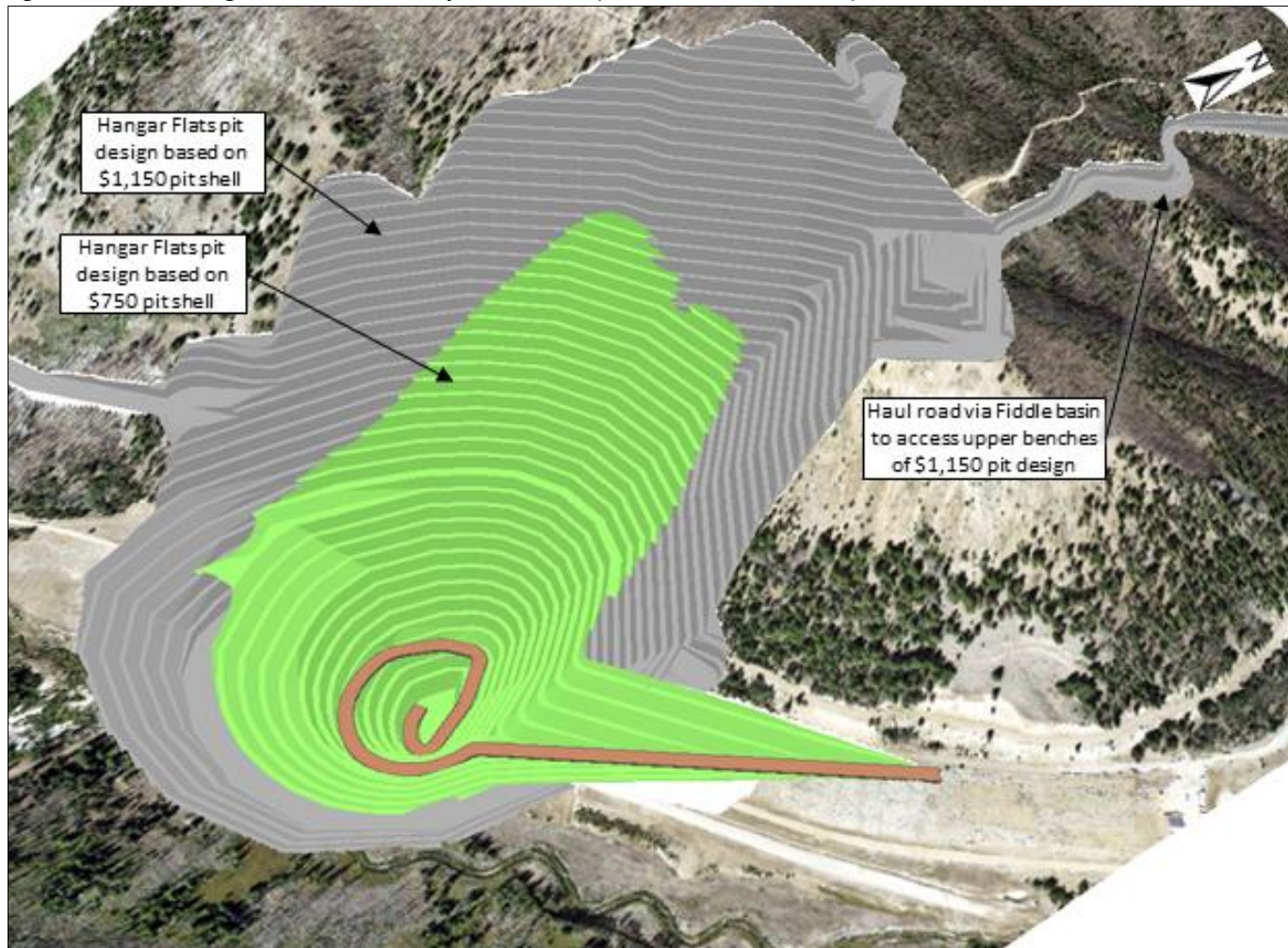


### 13.3.2 Alternative Pit Geometry Evaluation

Alternative pit geometries based on pit shells may warrant evaluation in the mine sequence analysis if the nested pit shells for a deposit do not clearly identify the most suitable shell to use as guidance for the ultimate pit design. This can provide additional information beneficial to selecting the appropriate pit shell to be used in the ultimate pit design. Hangar Flats was the only deposit identified as having potential for higher value and less risk by evaluating pit designs outside the range of pit shells identified as optimal from the Ultimate Pit Limit Analysis.

Several Hangar Flats pit designs were evaluated, including a single-phase pit based on the \$1,150/oz Au pit shell, a small single-phase pit based on the \$750/oz Au pit shell, and a phased design incorporating both pit shells as shown on Figure 13-8. The single-phase design based on the \$750/oz Au pit shell was selected to reduce costly access to upper benches, lower strip ratio, reduce project footprint, reduce the quantity of development rock generated and therefore the size of the DRSFs, allow elimination of the Fiddle DRSF, reduce closure cost, and reduce potentially detrimental effects on sitewide water management.

Figure 13-8: Hangar Flats Pit Geometry Alternatives (\$750/oz Au Pit Selected)



### 13.3.3 Mine Production Rates

Evaluating mine production rates is essential to determine the duration of the mine life, duration of the process plant life (dependent on stockpile capacity), ore access schedule, and mining equipment fleet requirements. Mine production rate determination objectives included:

- balancing ore and development mining to maintain optimal process plant ore feed;
- accessing higher value ore earlier in the schedule while minimizing stockpile development and/or excessively elevating cut-off values;
- deferring development mining cost;
- minimizing stockpile rehandle cost;

- supporting concurrent pit backfilling and thereby accelerating concurrent reclamation and restoration;
- deferring equipment purchase capital cost;
- minimizing equipment capital and operating cost;
- scheduling a gradual fleet size ramp-up at start of operations;
- avoiding production fluctuations to maintain consistent staffing levels; and,
- providing adaptability in mine plan execution.

A suite of scenarios combining incremental production rates ranging from 28 to 48 million tons per year, Hangar Flats pit design alternatives, and variable production ramp-up schedules were evaluated to meet the objectives listed above. An approximate mine production rate of 34 million tons per year was selected based on stated objectives and Project value estimates.

#### 13.3.4 Mine Production Fleet Equipment Selection

The Project mine production fleet is typical for an open pit hard rock mine consisting of loading equipment (i.e., hydraulic shovels and wheel loaders), haul trucks, blast hole drills, and large dozers. The selected production fleet is the basis for mine production rates, detailed mine production schedules, and subsequent cost schedules.

Haul truck selection considerations included mine production rate, haul distance and profile, maneuverability, and fleet versatility to service multiple concurrent loading areas. Four haul truck size classes were considered in the production equipment fleet alternative analysis: 100-ton, 150-ton, 200-ton, and 250-ton. Based on a mine production rate of 34 million tons per year and an average round-trip haul distance of 6 miles, the number of trucks required for haul fleets consisting of 100-ton, 150-ton, 200-ton, and 250-ton trucks would be 24, 16, 12, and 10; respectively.

The 100-ton class haul truck was considered due to the maneuverability and versatility well suited for developing haul roads and operating productively on the narrow benches expected during open pit development. Although the 100-ton class haul truck could be effective for mine development work, they would be inefficient for production mining in the open pits once roads are established and initial benches developed. Therefore, the 100-ton class haul truck was eliminated from further evaluation and a separate development fleet was chosen to perform mine development, concurrent reclamation, and construction projects as described in Section 13.3.5.

The 250-ton class haul truck fleet size was also rejected for further analysis due to the estimated production inefficiency resulting from allocating a fleet of only 10 trucks to three concurrent loading areas (e.g. Yellow Pine open pit, Hangar Flats open pit, and a stockpile). A haulage simulation comparing 150-ton and 200-ton class haul trucks identified 150-ton class haul trucks as the best alternative due to the greater flexibility to serve multiple loading units and increased productivity offsetting added labor cost.

Loading equipment selection considerations included production rate, bench height, hydraulic shovel versus wheel loader, mobility, material selectivity, haul truck compatibility, and operational workspace requirements.

Hydraulic shovels were selected as the primary pit production loading equipment instead of wheel loaders because:

- the three open pits are mined sequentially allowing for loading equipment to remain in each pit for long durations reducing the need for mobility;
- narrow benches in some portions of the open pits favor hydraulic shovels which require less operational workspace;
- hydraulic shovels typically have a shorter truck loading cycle time than wheel loaders which contributes to increased fleet productivity;
- hydraulic shovels have greater material selectivity which reduces potential ore dilution;
- equipment longevity and mechanical availability; and
- optional configuration (i.e. backhoe or shovel) for safe and productive operation on varied bench heights.

Hydraulic shovels with either 22-yd<sup>3</sup> or 28-yd<sup>3</sup> buckets are well-suited to load 150-ton class haul trucks. The approximate number of bucket-passes calculated to load a 150-ton class haul truck by 22-yd<sup>3</sup> and 28-yd<sup>3</sup> bucket hydraulic shovels is 5 and 4; respectively. A loading simulation was performed to compare productivity between 22-yd<sup>3</sup> and 28-yd<sup>3</sup> bucket hydraulic shovels including different material types and loading conditions anticipated throughout the mine life. The simulation projected a reduction in loading time of approximately 18,000 hours over the LOM for the 28-yd<sup>3</sup> bucket hydraulic shovel as compared to the 22-yd<sup>3</sup> bucket. Although the capital cost of the larger 28-yd<sup>3</sup> bucket hydraulic shovel is more than the 22-yd<sup>3</sup>, the improved loading productivity and potential reduction in truck wait-time contributes to better Project economics. Two 28-yd<sup>3</sup> bucket hydraulic shovels were selected as the primary loading equipment matched to a fleet of 150-ton class haul trucks. One of the hydraulic shovels would be configured as a face shovel and the other as a backhoe to increase loading flexibility depending on bench height and workspace conditions. In addition to the two hydraulic shovels, a 28-yd<sup>3</sup> wheel loader is included in the production fleet to support loading during hydraulic shovel maintenance and loading stockpiled ore from various locations throughout the mine site as needed.

Rotary blasthole drills will be used for pit production drilling. Drills were selected primarily based on the ability to single-pass drill to a depth required for a 40-foot bench and drill hole diameter ranging from 6<sup>1/2</sup> inches to 10<sup>5/8</sup> inches. An average of five production drills with approximately 70,000-pound pulldown force are included in the production fleet as further detailed in Section 13.8.3.

Large dozers will be required to support hydraulic shovels and maintain development rock storage facilities. An average of five concurrently operating 600 horse-power dozers are included in the production fleet as further detailed in Section 13.8.4.

### 13.3.5 Mine Development Fleet Equipment Selection

The development fleet for the Project is defined as the primary mining equipment used to construct haul roads, develop initial benches for production fleet mining, mine in-pit locations too confined for the production fleet, support various projects (e.g. TSF rind fills, water management ponds), and support concurrent reclamation. The development fleet is effectively a smaller version of the production fleet consisting of articulated haul trucks, excavators, loaders, surface drills, and medium size dozers.

### 13.3.6 Auxiliary, Maintenance, and Administrative Equipment Fleets

The additional equipment required to support the mine production fleet and mine development fleet are split into the following three fleets:

- Auxiliary Fleet – equipment primarily used to support production fleet;
- Maintenance Fleet – equipment used by maintenance department; and,
- Administrative Fleet – equipment used primarily by mine management departments.

A summary of mining equipment is listed by fleet in Table 13-2.

**Table 13-2: Summary of Mining Equipment by Fleet**

Equipment Type	Equipment Class	Approximate Number of Operating Units
<b>Mine Production Fleet</b>		
Shovel	28 yd <sup>3</sup>	2
Large Wheel Loader	16 yd <sup>3</sup>	3
Haul Truck	150 ton	20
Production Blasthole Drill	50 ft single pass, 70k lb pulldown	6
Large Dozer	600 Hp	5
<b>Mine Development Fleet</b>		
Excavator	5 yd <sup>3</sup>	3
Wheel Loader	8 yd <sup>3</sup>	3
Articulated Truck	45-ton ADT	12
Track Mounted Drill	3.5 – 5.0-inch diameter hole	2
Medium Dozer	215 Hp	3
<b>Auxiliary Fleet</b>		
Motor Grader	18 ft blade, 300 Hp	3
Large Water Truck	13k gallon, 100 ton Rigid Body	1
Medium Water Truck	9k gallon, 45 ton ADT	1
Small Water Truck	2.5k gallon Medium Duty Truck	1
ANFO Truck	8 ton ANFO capacity	1
Stemming Truck	15 yd <sup>3</sup>	1
Rock Spreader	100-ton capacity	1
Lowboy Trailer	100-ton capacity	1
Light Tower	20 kW, 29 ft extension	11
Wheel Loader	Cat 966	2
<b>Maintenance Fleet</b>		
Large Fuel & Lube Truck	100 ton Rigid Body	2
Small Fuel & Lube Truck	45 ton ADT	1

Equipment Type	Equipment Class	Approximate Number of Operating Units
Mechanics Truck	35k lb chassis	2
Tire Service Truck	58/85-57 tire capacity	1
Flatbed Truck	Class 6 chassis	1
Forklift	6,000 lb lift capacity	2
Telehandler	11,000 lb lift capacity	1
<b>Administrative Fleet</b>		
Pickup Truck (4x4)	1500 Crew Cab	22
Man Van (4x4)	12-person capacity	5
Dispatch System	High precision GPS on production fleet	n/a
Mining Training Simulator	n/a	1

### 13.3.7 Strategic Mine Plan

The product of the mine sequence analysis is a strategic mine plan that defines the sequence of mining best suited to meet the objectives listed in the beginning of Section 13.3 and project-specific criteria including:

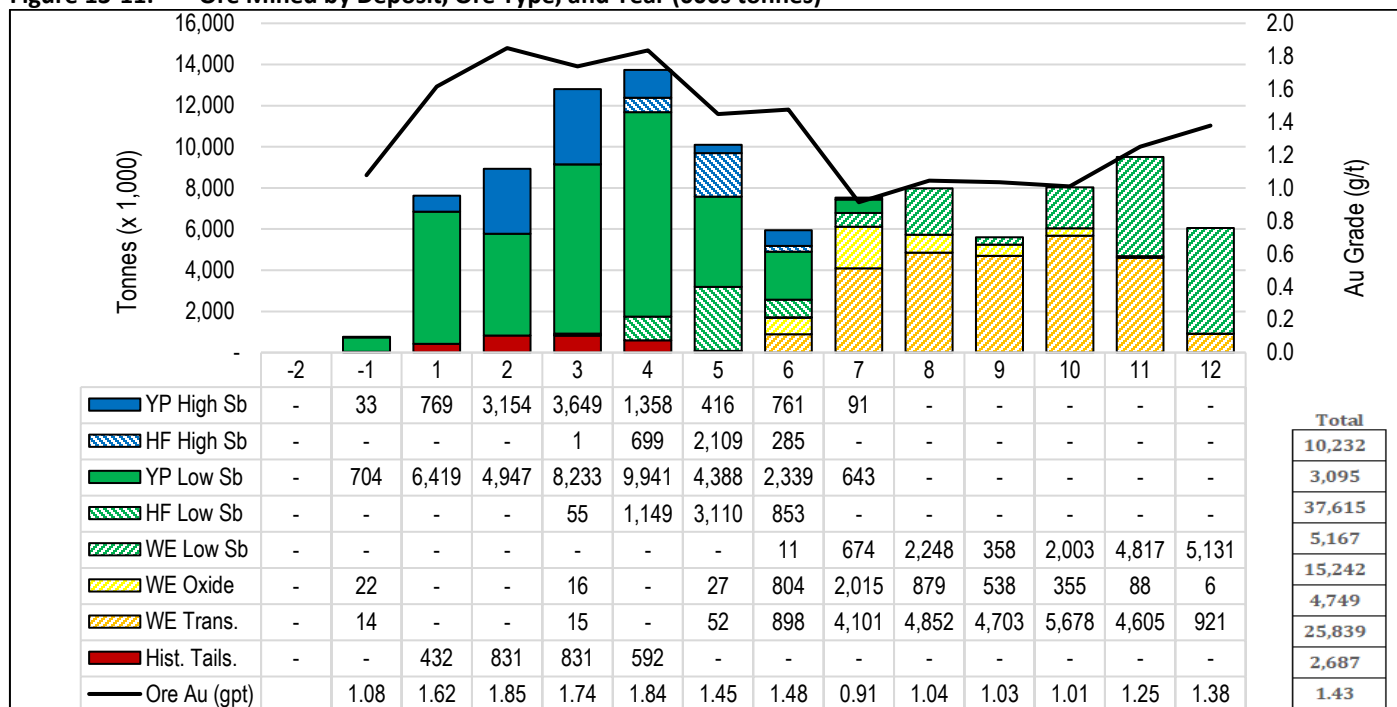
- Backfill Yellow Pine open pit to support concurrent restoration of the original gradient of the EFSFSR;
- concurrent backfill Hangar Flats open pit to approximate the original valley elevation and gradient;
- concurrent backfill the Midnight area within the West End open pit;
- avoid concurrent mining of Yellow Pine and Hangar Flats open pit below valley elevation to reduce overlapping water management requirements;
- access the Middle Marble formation in West End early and stockpiling limestone prior to processing ore;
- construct growth medium stockpile bases from suitable in-pit glacial till; and
- deliver material required for TSF construction and other construction related projects.

The strategic mine plan is used to evaluate stockpile strategy, DRSF construction sequencing, mill feed optimization and guide the development of a mine production schedule.

To develop the strategic mine plan, each pit phase was split into cuts and assigned a mining fleet and production rate based on the fleet and type of mining activity. An example set of cuts for the Yellow Open pit is shown in Table 13-3. This methodology facilitated evaluating multiple mining sequences, pit geometries, equipment alternatives, and production rates with appreciable detail to determine the most favorable strategic mine plan. Each scenario included expected production delays due to road construction, bench operating limitations, drilling and blasting for bench access, periods of excessive average haul distance, and common factors such as equipment mechanical availability. The most favorable mine plan consisted of a Hangar Flats pit design based on the \$750/oz Au pit shell, a production fleet based on 28-yd<sup>3</sup> hydraulic shovels matched to 150-ton class haul trucks, a development fleet based on 45-ton class articulated trucks, and a general mining sequence as shown on Figure 13-9. Material mined by deposit and year is shown on Figure 13-10. Ore mined by deposit and ore type is shown on Figure 13-11.



**Figure 13-11: Ore Mined by Deposit, Ore Type, and Year (000s tonnes)**



Note: Values shown on Figure 13-11 are the result of the mine production schedule as presented in Section 16.8.

### 13.4 Mine Development Plan

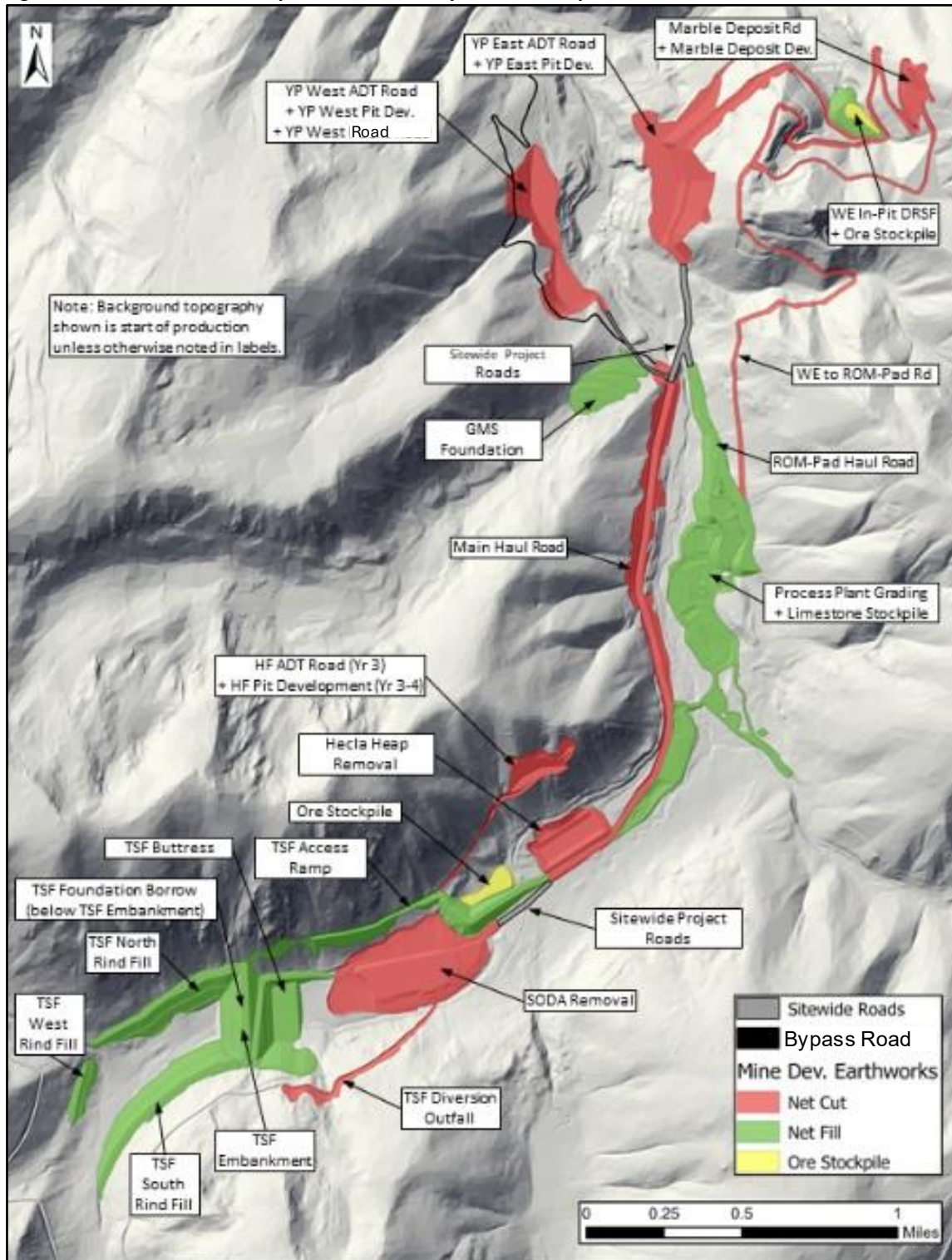
The mine development plan consists of scheduling open-pit development and sitewide construction activities that will be performed by the mining fleet equipment and staff. These activities include:

- constructing initial sitewide haul roads;
- constructing in-pit roads to access initial mine production working benches;
- pre-stripping and developing pit benches for the mine production fleet;
- mining upper benches within the Yellow Pine open pit as needed for the through-site access road;
- accessing and mining the Middle Marble formation to stockpile sufficient limestone prior to processing ore;
- mining, hauling, and placing fill material for TSF construction;
- supporting various sitewide construction activities; and,
- constructing growth media stockpile foundations.

The mine development plan was created using first principal calculations for drilling, blasting, loading, and hauling equipment requirements and activity scheduling. Example calculations are provided in Table 13-7, Section 13.8.2. This

schedule was then incorporated into the equipment maintenance estimate, staffing estimate, and cost estimate. A summary of activities captured in the mine development plan are shown on Figure 13-12.

Figure 13-12: Mine Development Plan Activity Location Map



### 13.5 Ore Stockpile Strategy Analysis

A feature of the mine plan is the use of long-term ore stockpiles. The primary benefit of ore stockpile capacity is increased potential to optimize process ore feed value throughout the mine life, improve long term closure by processing lower grade ore that could otherwise become a source of metal leaching in the DRSFs, and support pit phasing and therefore concurrent backfilling and restoration activities. This is particularly significant during the first half of the mine life when Yellow Pine high value ore is mined at a rate greater than process plant throughput capacity. If stockpile capacity is not available, either the period-based cut-off value must increase resulting in ore converted to waste, or the mining rate reduced to align with process plant throughput capacity resulting in deferred access to high-value ore deeper in the open pit. The addition of long-term ore stockpiles allows for relatively high value ore mined from Yellow Pine open pit to be stockpiled and made available to process when lower value ore is being mined in West End open pit.

The principal objective of the ore stockpile strategy was to increase Project value by stockpiling ore with higher value than is available later in the mine plan. Additional objectives include:

- reducing peak mining rates particularly when pre-stripping West End and concurrently mining Hanging Flats and Yellow Pine open pits;
- stabilize mining rates by providing additional options to source ore for processing;
- provide operational ore blending and campaigning flexibility including deferral of oxide ore processing;
- support optimal utilization of the mineral resource while reducing low grade ore being sent to the DRSFs where it is more likely to be a source of metal leaching than once it is converted to tailings, metals extracted and neutralized and stored in a lined facility;
- reduce Project risk related to open pit ore production disruptions;
- extend process plant life while increasing Project value;
- increase Project value opportunity if metal sell prices increase; and,
- incorporate stockpile designs into DRSF layout to facilitate reclamation and minimize additional ground disturbance resulting from ore stockpiles.

The ore stockpile strategy analysis consisted of using the strategic mine plan and assigning each unit of material mined a value-based grade bin designation. An optimized mill feed schedule including stockpile rehandle cost was then created assuming unlimited stockpile capacity and segregation by grade bin and ore type (i.e. ten grade bins for each of the four open pit ore types). This mill feed schedule represents a best-case scenario but is unachievable due to geographical constraints and being operationally impracticable. Using this schedule as a guide, multiple iterations of DRSF design, DRSF sequencing, and stockpile design were evaluated to approximate the best-case scenario as described in Section 13.6.

### 13.6 DRSF and Stockpile Analysis

The DRSF and stockpile analysis was an iterative process of designing and sequencing both DRSFs and ore stockpiles in combination to augment project value by advancing higher value ore feed to the mill and abate operating costs associated with haulage and stockpile rehandle. The outcome of this analysis is DRSF designs, DRSF construction sequence, ore stockpile designs and calculated ore type and grade for use in the mill feed optimization. Development rock from the three open pits is planned to be sent to five different permanent destinations over the mine life consisting of: the TSF embankment and rind fills; the TSF Buttress; the mined-out Yellow Pine open pit; the mined-out Hangar Flats open pit; and the Midnight area within the mined-out West End open pit. In addition to these five areas, other destinations will receive development rock from the three open pits including a temporary ore stockpile base within the West End open pit, a foundation for stockpiling growth medium and recovered seed bank material, a reclamation materials stockpile located on the TSF Buttress, and miscellaneous projects such as road fills and ore stockpile foundations.

Ore from the three open pits is planned to be delivered to either the crusher as direct feed for processing, short-term stockpiles located on the ROM pad, or long-term stockpiles located primarily on the TSF Buttress and Hangar Flats open pit backfill. The locations of waste and ore destinations are shown on Figure 13-13. The waste destination schedule is shown on Figure 13-14.

Figure 13-13: DRSF and Stockpile Locations

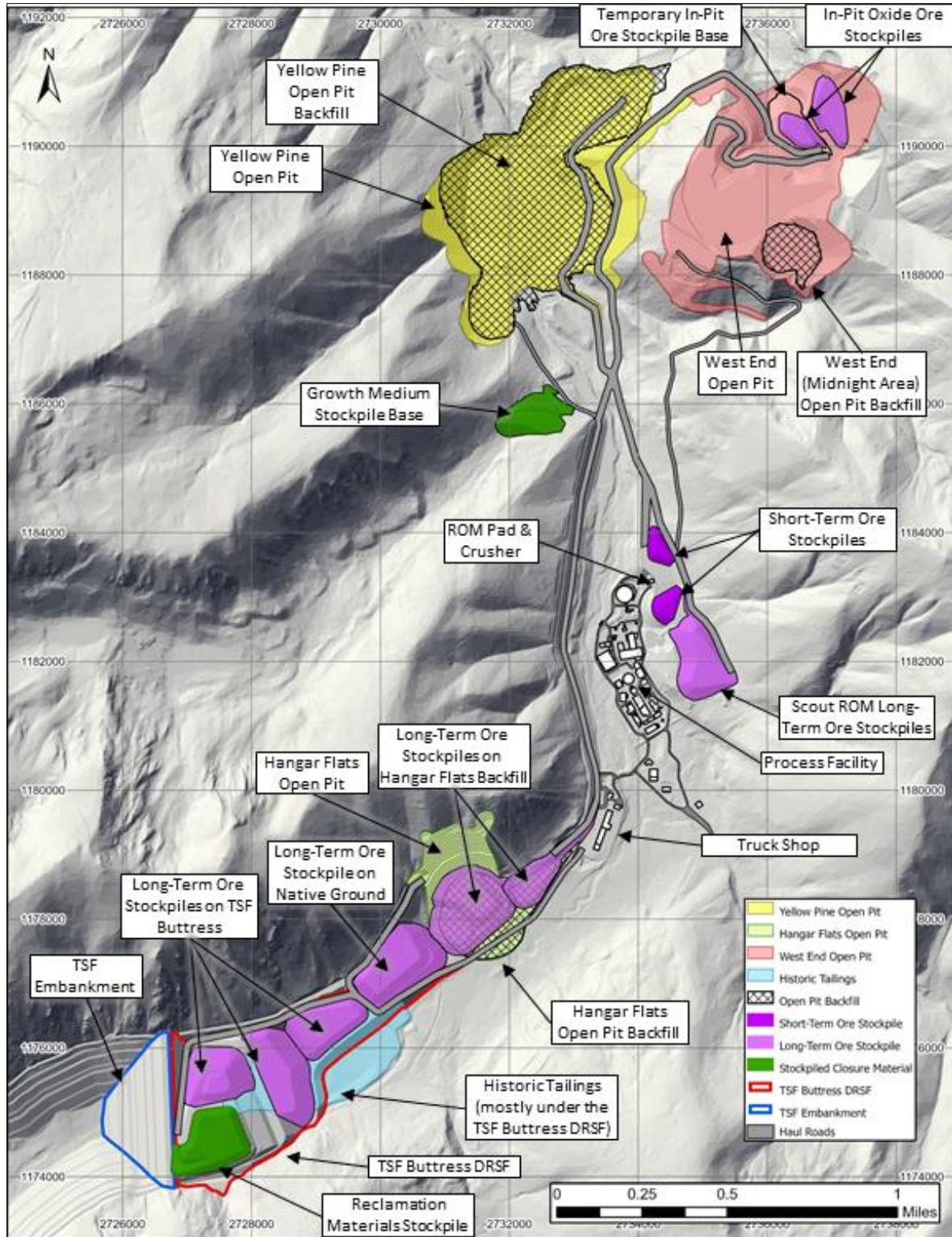
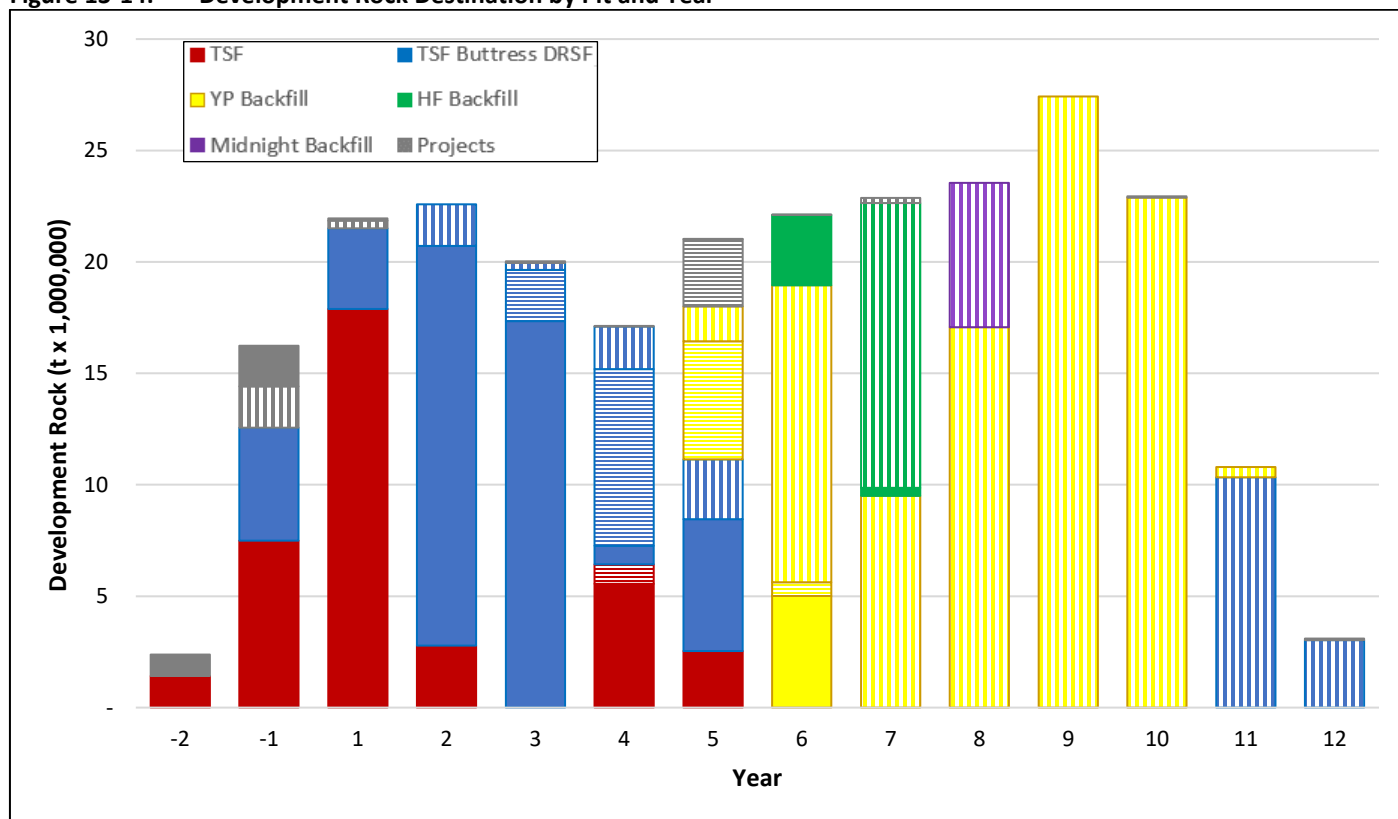


Figure 13-14: Development Rock Destination by Pit and Year



### 13.7 Mill Feed Optimization

A mill feed optimization was conducted using the strategic mine plan and stockpile schedule to ensure the highest value ore available is processed and to create the final mill feed schedule. The optimization consisted of scheduling ore routing from pit-to-mill, pit-to-stockpile, and stockpile-to-mill on a monthly period until the end of Year 2 and then on a quarterly period for the remainder of the process plant life. This methodology was applied to identify suitable timing for constructing the oxide ore processing circuit and calculating ore load and haul requirements for input into the mine production schedule analysis. The final mill feed schedule is the basis for reporting Mineral Reserve Estimates as provided in Section 12 of this Report.

Opportunity to increase Project value during the mill feed optimization was primarily driven by maximizing stockpile ore value available for process during periods when in-pit ore is lower in value than stockpiled ore. It was an iterative process of scheduling variable stockpile cut-off values by ore type while considering incremental cost between ore directly fed to process from an open pit versus rehandling ore from stockpiles to process. The outcome of this process defined each stockpile ore quantity, ore type, cut-off value, average value and grade, and stockpile duration. Ore processed by year and source is shown on Figure 13-15. Long-term ore stockpile progression is shown on Figure 13-16.

Figure 13-15: Ore Processed by Year and Source

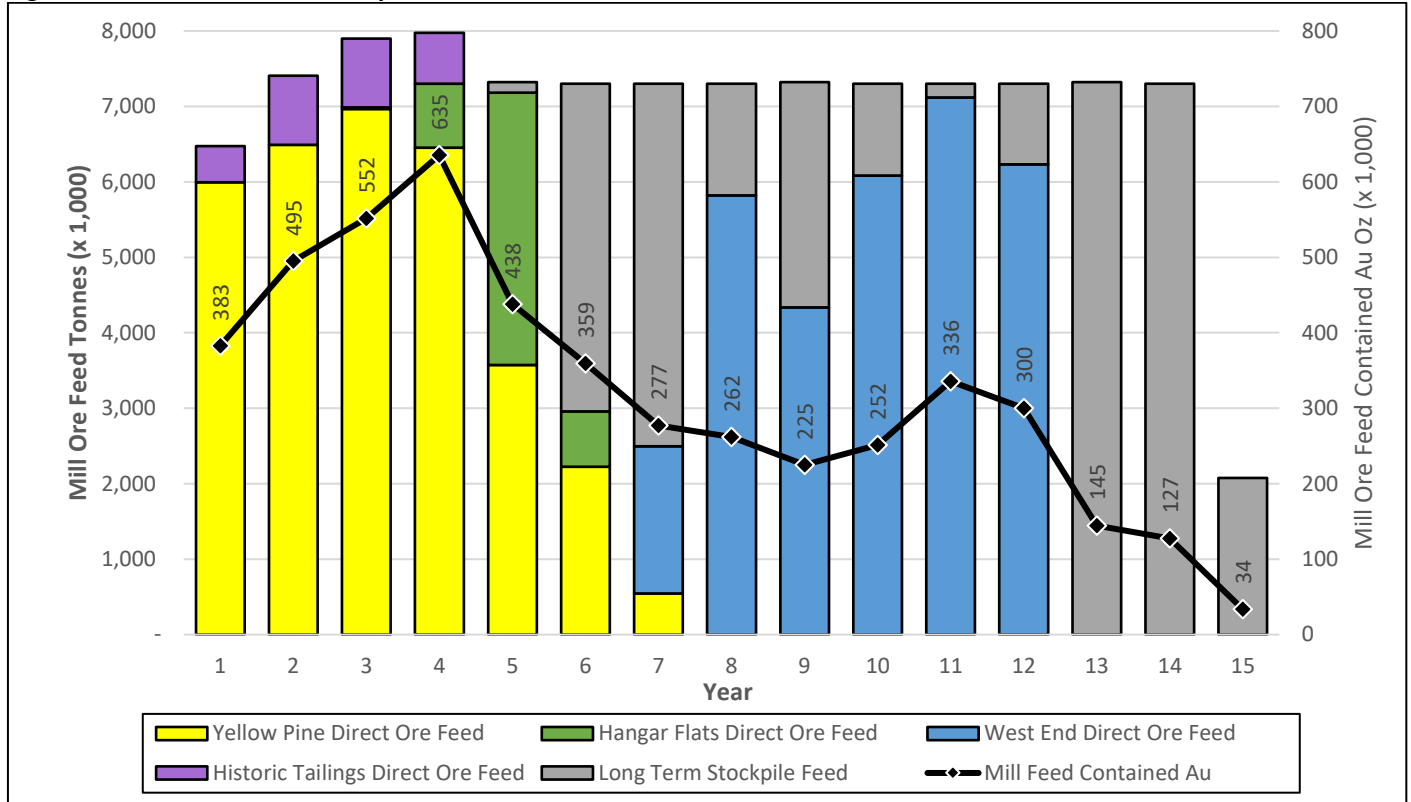
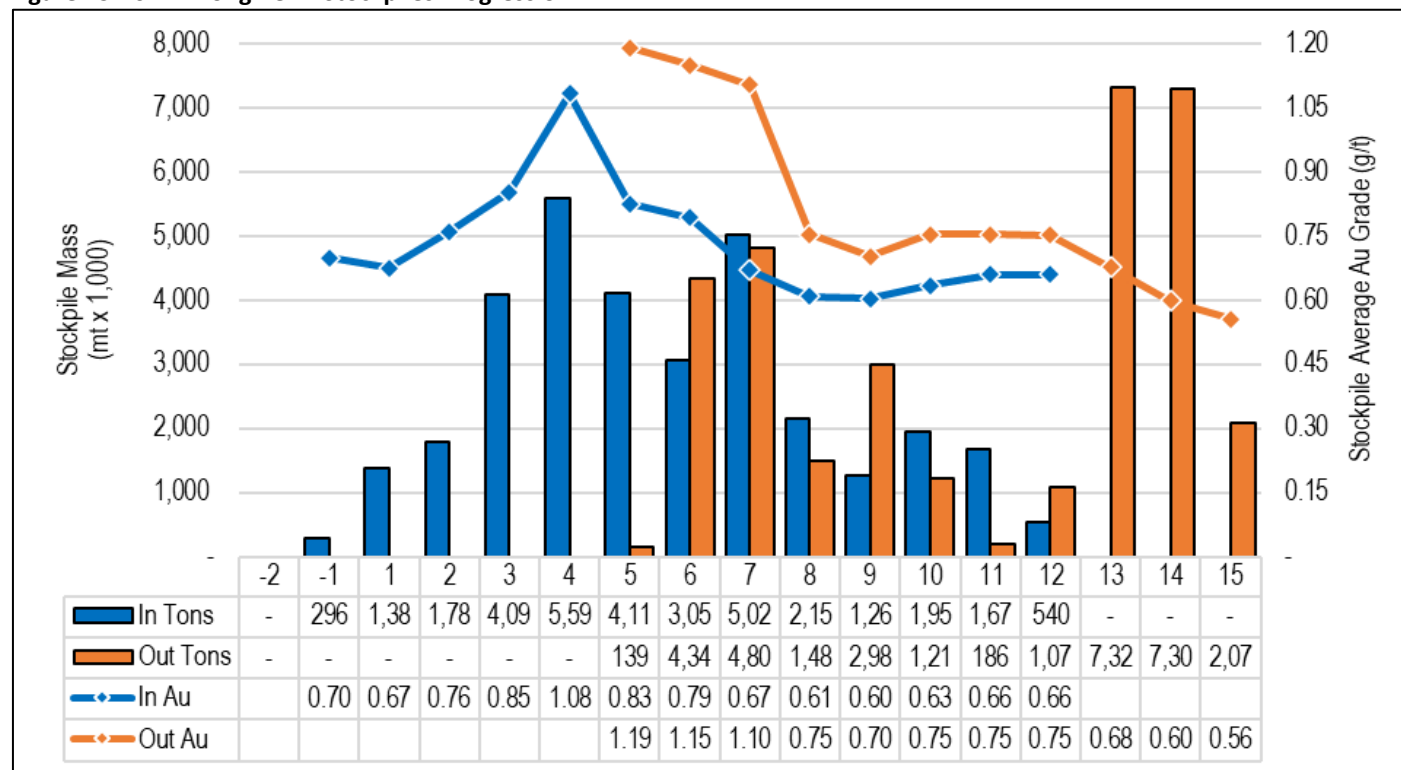


Figure 13-16: Long-Term Stockpiles Progression



Notes: 1. Higher stockpile grade output during years 5-7 as compared to years -1-4 is achieved by grade segregation within the stockpile facility during early years.

### 13.8 Mine Production Schedule Analysis

The mine production schedule analysis consisted of creating a detailed period based mine schedule derived from the strategic mine plan, mine development schedule, mill feed schedule, and DRSF and stockpile schedule. It is an aggregation of these schedules into a single schedule with the addition of equipment requirement calculations to generate the final mine production schedule used to estimate equipment requirements, equipment purchase schedule, and the mining operating expenditure schedule.

#### 13.8.1 Work Schedule

Mining is scheduled for 365 days per year and 2 shifts per day of 12 hours duration each. A summary of equipment operator working time and delays are provided in Table 13-3.

**Table 13-3: Summary of Equipment Operator Working Time**

Shift and Rotation Duration		Stated Period	
Calendar Hours (Hrs per Year)		8,760	
Shift Count (Shifts per Day)		2	
Shift Count (Shift per Year)		730	
Shift Duration (Hrs per Day)		12	
Rotation Duration (Days per Rotation)		14	
Rotation Count (Rotations per Year)		26	
Working Time Delays		Stated Period	Per Year (hours)
Weather Delay (Hrs per Year)		240	240
Lunch Break (Hrs per Shift)		1.00	730
Morning Break (Hrs per Shift)		0.25	183
Afternoon Break (Hrs per Shift)		0.25	183
Safety Meeting (Hrs per Rotation)		2.00	52
Shift Change Delay (Hrs per Rotation)		2.00	52
<b>Total Delay (Hrs per Shift)</b>		<b>1.97</b>	<b>1,440</b>

### 13.8.2 Load and Haul

Mine production loading is planned predominantly with 28-yd<sup>3</sup> hydraulic shovels supported by a 28-yd<sup>3</sup> wheel loader. Mine development loading is planned with 5-yd<sup>3</sup> excavators supported by 8-yd<sup>3</sup> wheel loaders. A summary of mining activity, loading equipment, hauling equipment, and drilling equipment is provided in Table 13-4.

**Table 13-4: Mining Equipment by Mining Activity**

Mining Activity	Loading Equipment	Hauling Equipment	Drilling Equipment	Dozer Support Equipment
Mine Access Road Construction	5-yd <sup>3</sup> Excavator	45-ton Articulated Truck	track mounted drill <sup>4</sup>	215 Hp Dozer
Mine Production Bench Development	8-yd <sup>3</sup> Wheel Loader	45-ton Articulated Truck	track mounted drill	215 Hp Dozer
Mine Production	28-yd <sup>3</sup> Hydraulic Shovel	150-ton Haul Truck	blasthole drill <sup>5</sup>	600 Hp Dozer
Pit Bottom Production <sup>1</sup>	8-yd <sup>3</sup> Wheel Loader	45-ton Articulated Truck	track mounted drill	215 Hp Dozer
South West End Pit Phase	8-yd <sup>3</sup> Wheel Loader	45-ton Articulated Truck	track mounted drill	215 Hp Dozer
Limestone Mining	8-yd <sup>3</sup> Wheel Loader	45-ton Articulated Truck	track mounted drill	215 Hp Dozer
Stockpile Rehandle	28-yd <sup>3</sup> Wheel Loader	150-ton Haul Truck	n/a	600 Hp Dozer
Construction Borrow	28-yd <sup>3</sup> Wheel Loader	150-ton Haul Truck	n/a	600 Hp Dozer
General Project Work	8-yd <sup>3</sup> Wheel Loader	45-ton Articulated Truck	track mounted drill	215 Hp Dozer
Concurrent Reclamation <sup>2</sup>	5-yd <sup>3</sup> Excavator	45-ton Articulated Truck	n/a	600 Hp Dozer
Closure Reclamation <sup>3</sup>	16-yd <sup>3</sup> Wheel Loader	150-ton Haul Truck	n/a	600 Hp Dozer
	5-yd <sup>3</sup> Excavator	45-ton Articulated Truck		215 Hp Dozer

Notes: **1.** Pit Bottom Production: The bottom benches of all three open pits are planned to be mined with the development fleet to access high-value ore accessible to the larger production fleet. **2.** Concurrent Reclamation: Some concurrent reclamation will be performed using the 28-yd<sup>3</sup> wheel loader and 150-ton haul trucks dependent on project suitability and equipment availability. **3.** Closure Reclamation: Large-scale reclamation projects are planned for the production fleet concurrent with the development fleet. **4.** 3.5 - 5.0-inch diameter hole track mounted drill. **5.** 61/2 - 105/8-inch diameter, 50 ft single-pass 70k lb pulldown blasthole drill.

Loading and hauling calculations for the mine production schedule consisted of pairing loading equipment to hauling equipment by fleet and mining task to estimate production rates. Production rates were calculated on first principal assumptions including: bucket capacity; truck bed capacity; material densities; fill factor; cycle time; truck spot time; face cleanup delay; mechanical availability over the machine life; usage, tramming; haul profiles; expected haul delays; and sitewide speed limits. Prior to estimating production rates all haulage routes for each source-to-destination were delineated and a suite of approximately 600 haulage routes were simulated to estimate travel load time, return time, truck bunching delay, and truck wait-to-load based on various loading equipment, hauling equipment, and fleet size.

Mining cut shapes were generated manually for each period to meet the scheduling objectives identified in the strategic mine plan, mill feed schedule, DRSF sequence, and stockpile designs. The load and haul calculations were performed for each ore type within a cut for each period in the mine schedule (i.e., monthly through the end of year 2 and quarterly after). The load and haul schedule includes equipment operating hours and required units by period and equipment type as summarized on Figure 13-17, Figure 13-18, and Figure 13-19.

**Figure 13-17: Haul Truck and Articulated Truck (ADT) Unit Count**

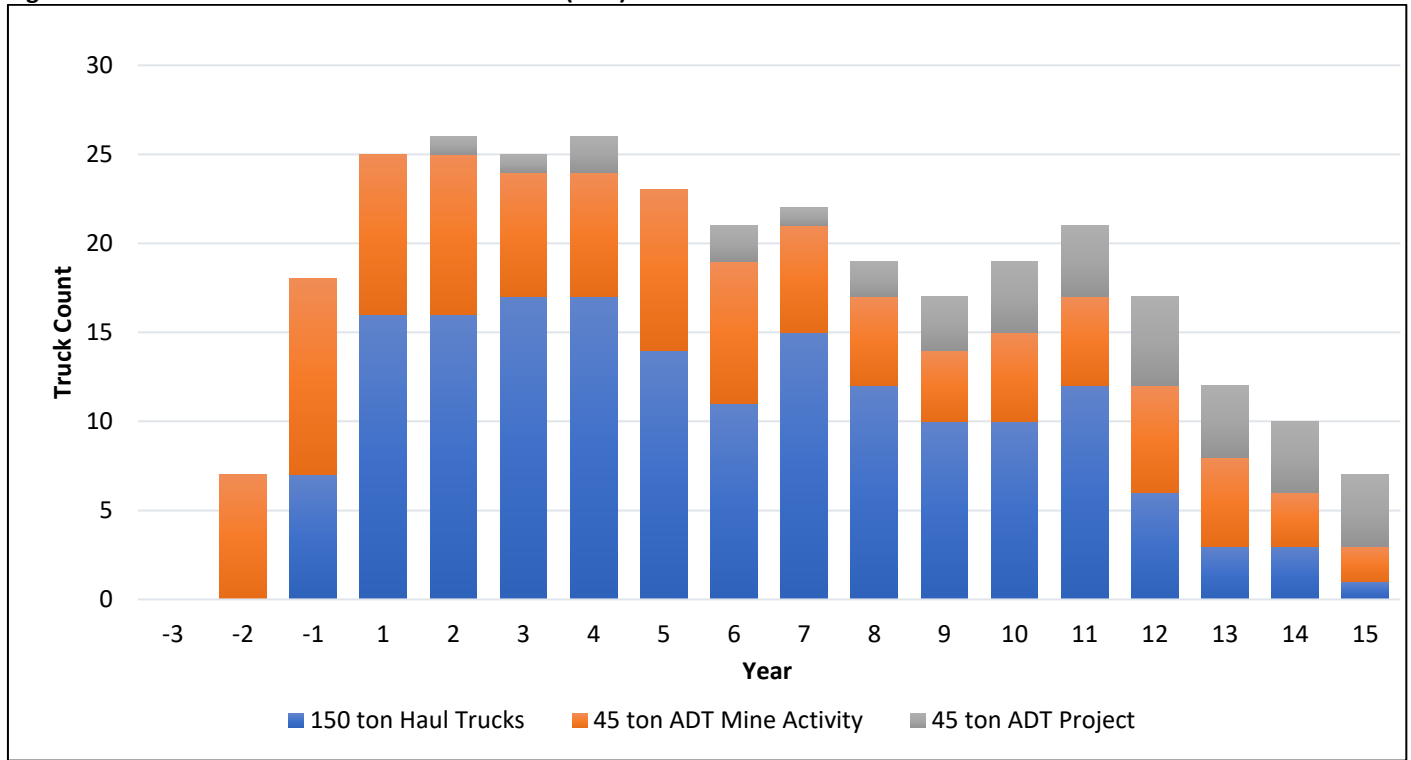


Figure 13-18: Mine Production and Development Loading Unit Count

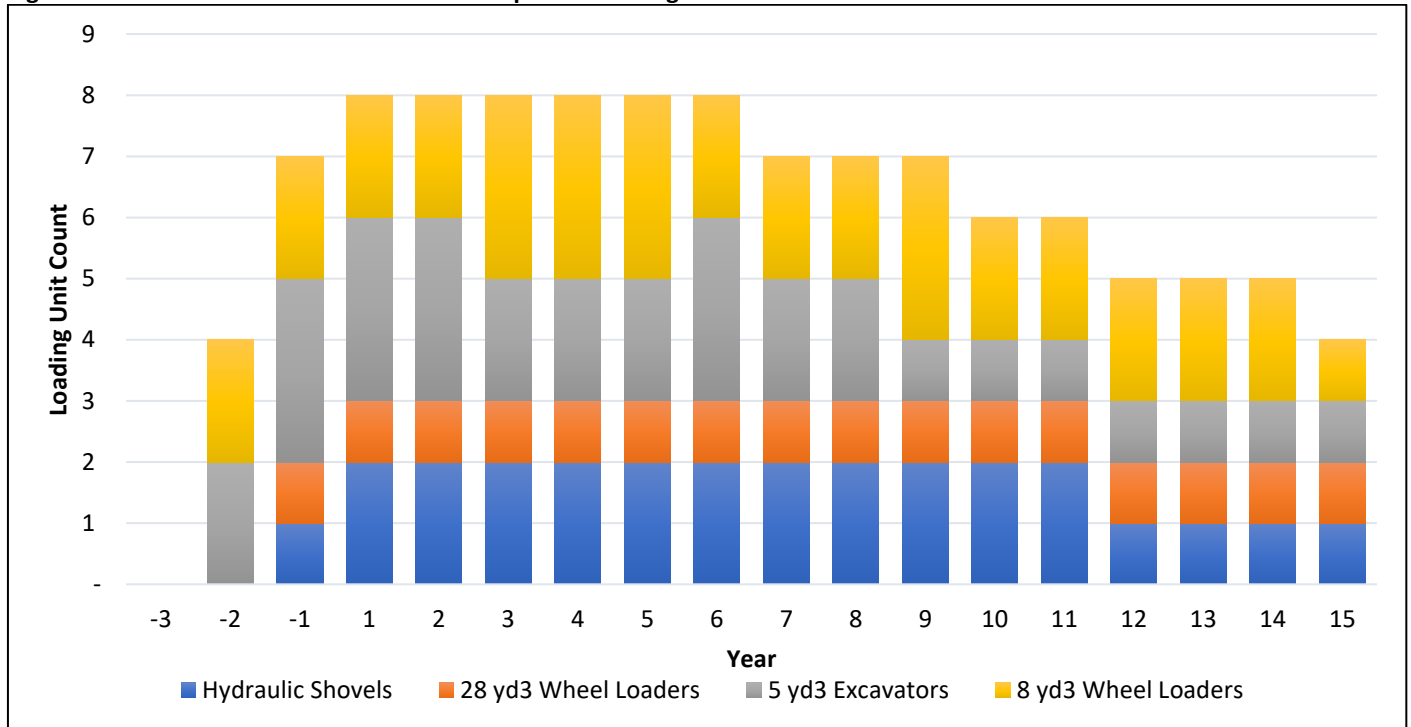
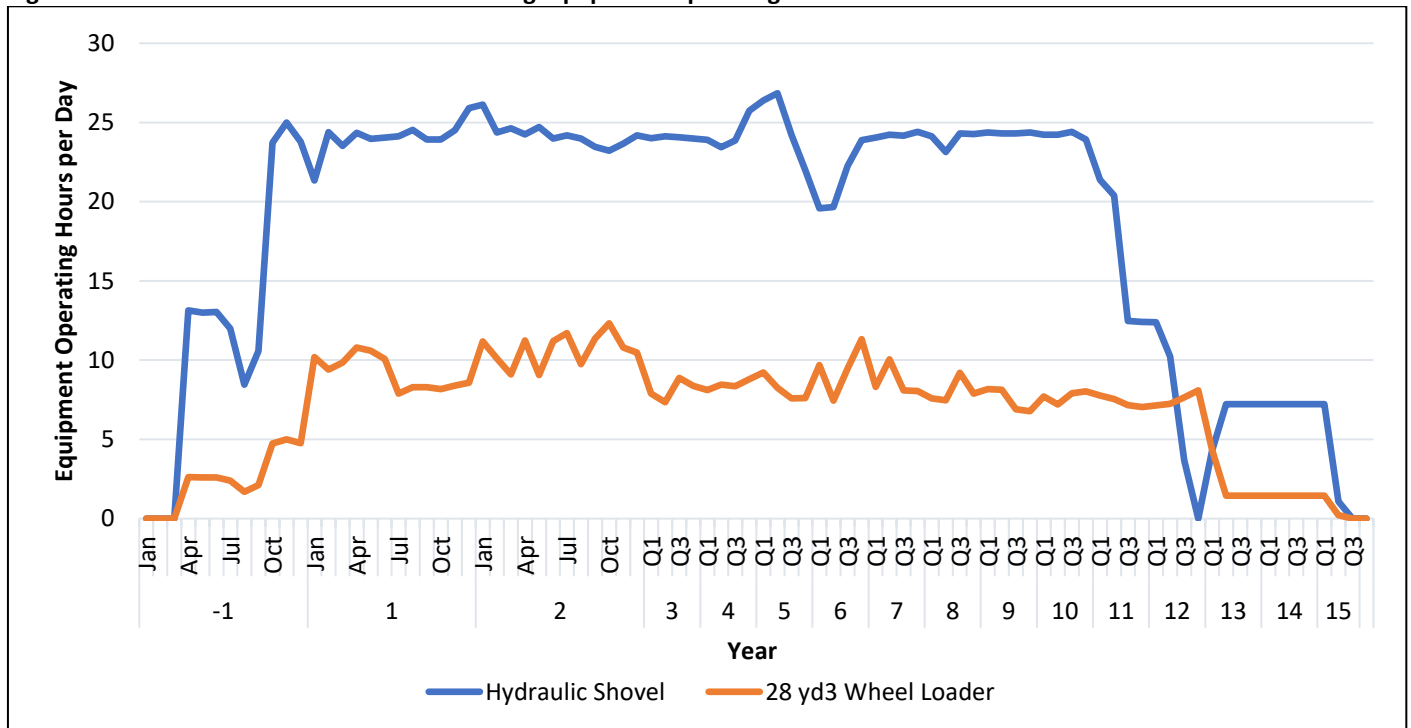


Figure 13-19: Mine Production Fleet Loading Equipment Operating Hours



### 13.8.3 Drill and Blast

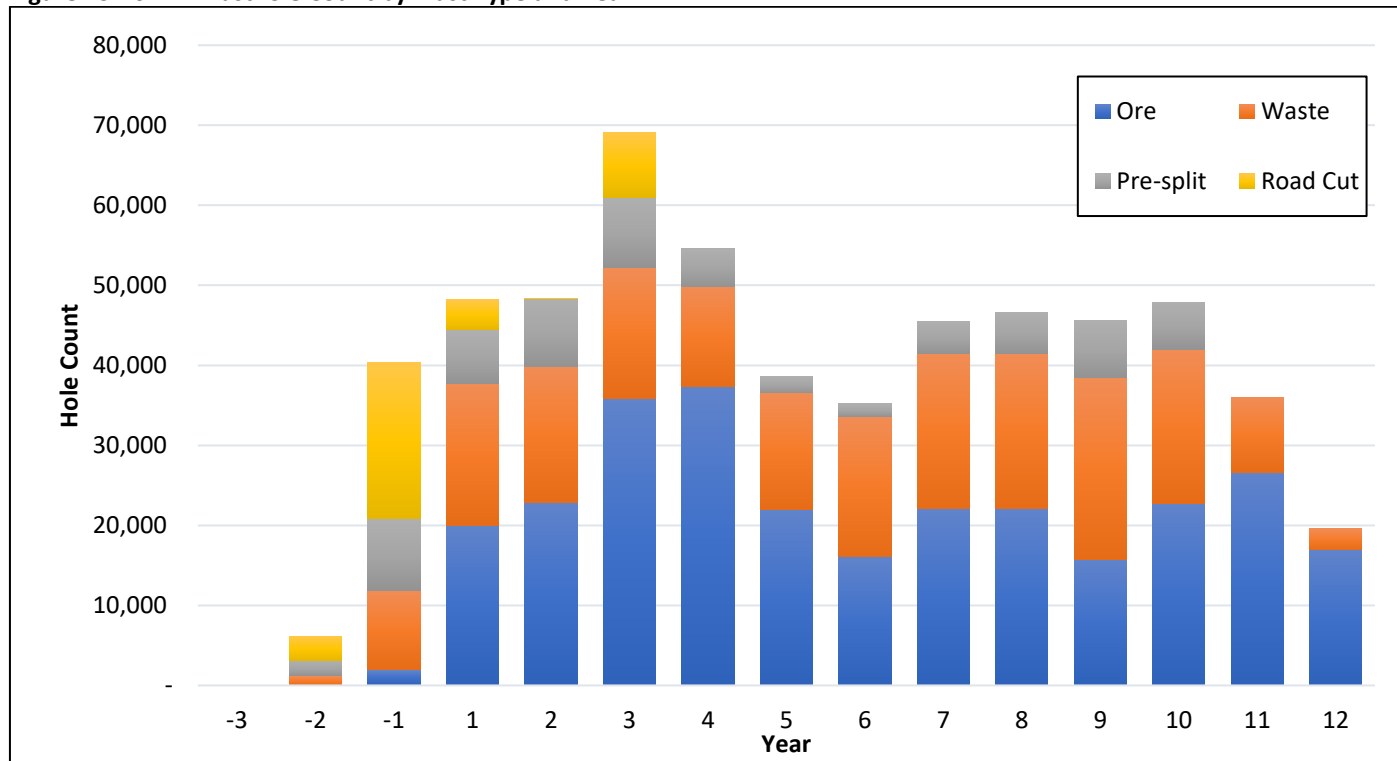
Drilling and blasting requirements were estimated based on the following four general types of blasting: ore blasting, waste blasting, highwall pre-splitting, and road development as shown in Table 13-5. Pre-splitting is a controlled blasting technique to create shear planes along the pit highwall to promote pit highwall stability and maintain pit design compliance during production mining. A commercial explosive and blasting systems provider is planned to be contracted to provide and manage ammonium nitrate-fuel oil mixtures (ANFO), emulsion, and blasting accessories. The explosives contractor will also provide and manage the explosive plant and mixing equipment. Scheduled blasthole count by year is shown on Figure 13-20.

**Table 13-5: Drill and Blast Pattern by Blast Type**

Item	Ore <sup>1</sup>	Waste	Road Cut <sup>2</sup>	PreSplit <sup>3</sup>
Life of Mine Qty	101,327 kst	237,103 kst	5,162 kst	1,161,766 yd <sup>2</sup>
Average ANFO Blend <sup>4</sup>	30/70	30/70	50/50	30/70
Redrills	2%	2%	8%	2%
Secondary Holes	2%	5%	15%	0%
Secondary Depth (ft)	15.0	30.0	6.0	n/a
ANFO Spillage	2%	2%	5%	5%
Stemming Spillage	5%	5%	8%	5%
Average Hole Count per Blast	350	350	150	100
Bench Height (ft)	20	40	8	40
Blast Hole Diameter (in)	6.75	8.00	3.50	3.50
Burden x Spacing (ft)	14 x 16	18 x 21	8 x 12	4
Sub-drill (ft)	3.0	4.0	2.0	0
Stemming (ft)	10.0	13.0	4.0	2.0
Base Charge (ft)	11.0	19.0	6.0	20.8
Deck Stemming (ft)	2.0	12.0	-	19.8
Powder Factor (lb/st)	0.52	0.39	0.68	5.16 lb/yd <sup>2</sup>

Notes: **1.** Ore and waste tons include bedrock material only. Overburden is assumed to be dozer ripped and loaded without the need for blasting. **2.** Road cuts include road construction and initial pit bench development to create benches with sufficient room to operate production blasthole drills effectively. **3.** Pit and road highwall will only be pre-split for highwall above planned backfill elevation. Pre-split calculations based on 70-degree angled holes. **4.** Based on average ANFO / emulsion blend estimated from degree of moisture expected in blastholes prior to loading explosives.

Figure 13-20: Blasthole Count by Blast Type and Year



#### 13.8.4 Maintenance and Auxiliary Equipment

The maintenance and auxiliary equipment were selected based on production fleet size, development fleet size, open pit geometries, and the number of concurrent projects, pits, and DRSFs in operation. A list of maintenance and auxiliary equipment is provided in Table 13-2.

#### 13.8.5 Mine Sequence Drawings

The Project terrain comprises steep-walled valleys and, as a result, initial haul road access to the upper benches of the open pits will require significant effort to pioneer roads and develop initial mining benches. Construction of these roads is planned prior to production mining. Designs of the initial access roads and other necessary external haul roads are shown on the time sequence plans presented on Figure 13-21 to Figure 13-26, inclusively.

Figure 13-21: Annual Mine Progression – End of Year -1 (Pre-Production)

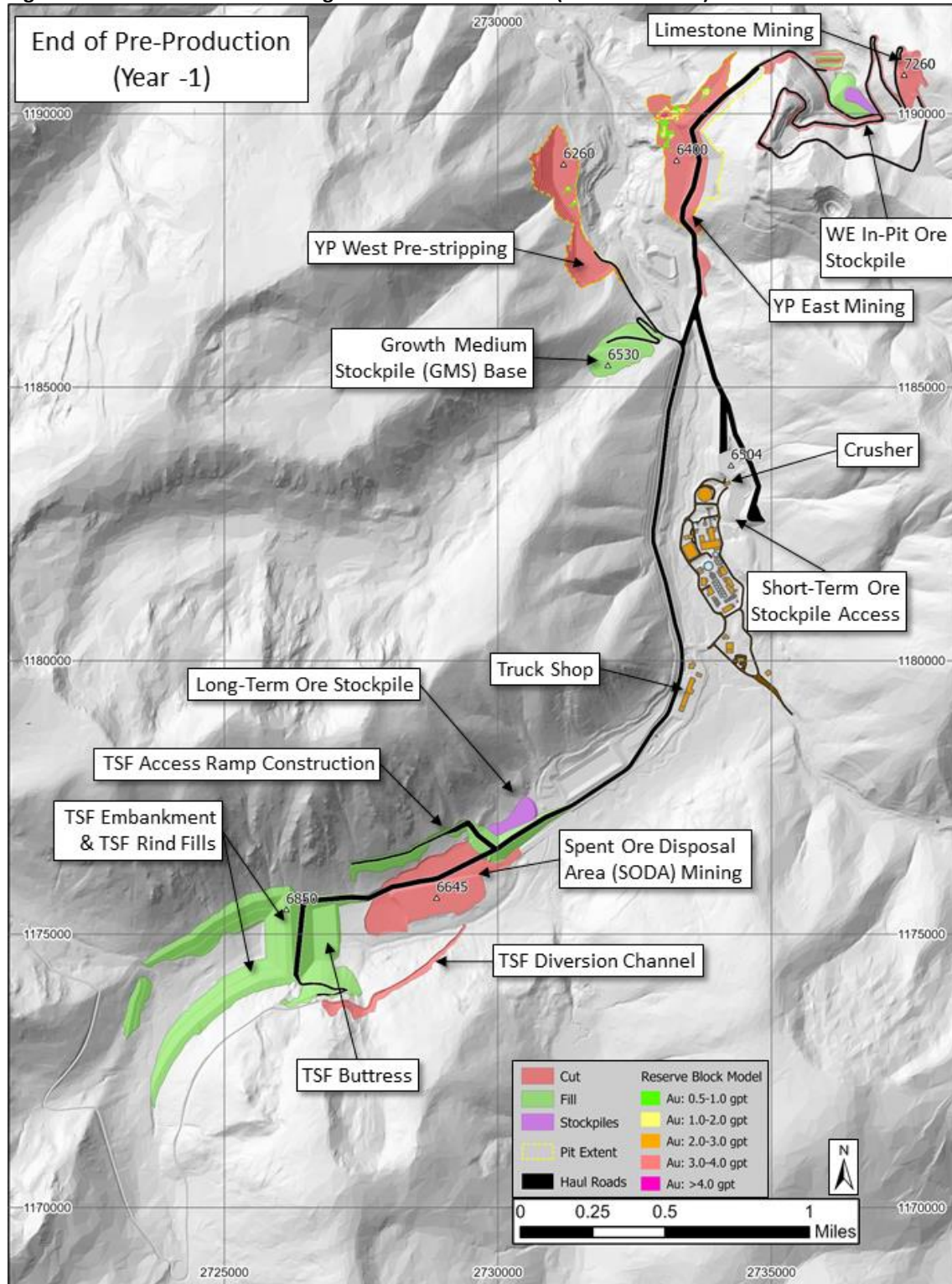


Figure 13-22: Annual Mine Progression – End of Year 3

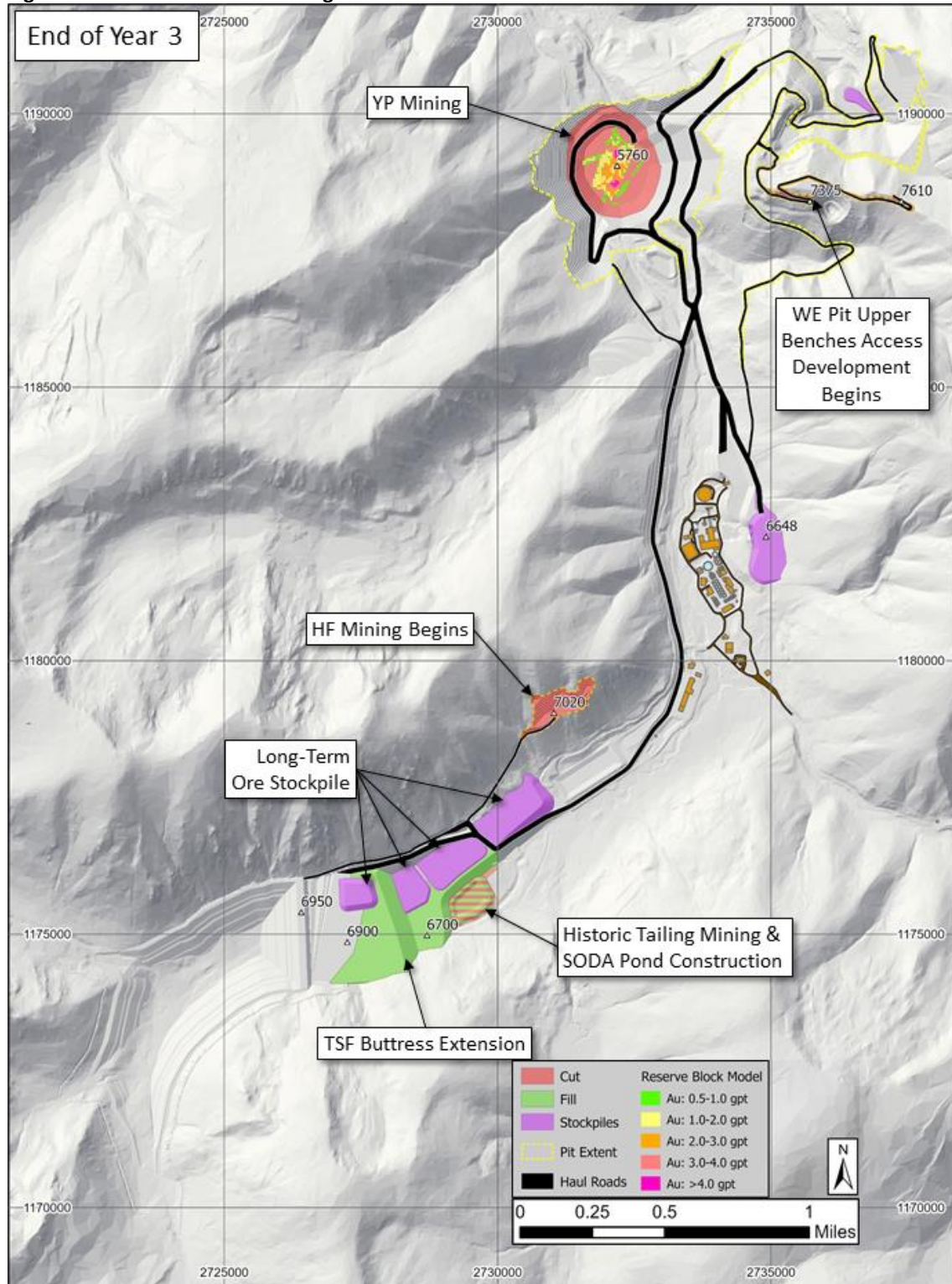


Figure 13-23: Annual Mine Progression – End of Year 5

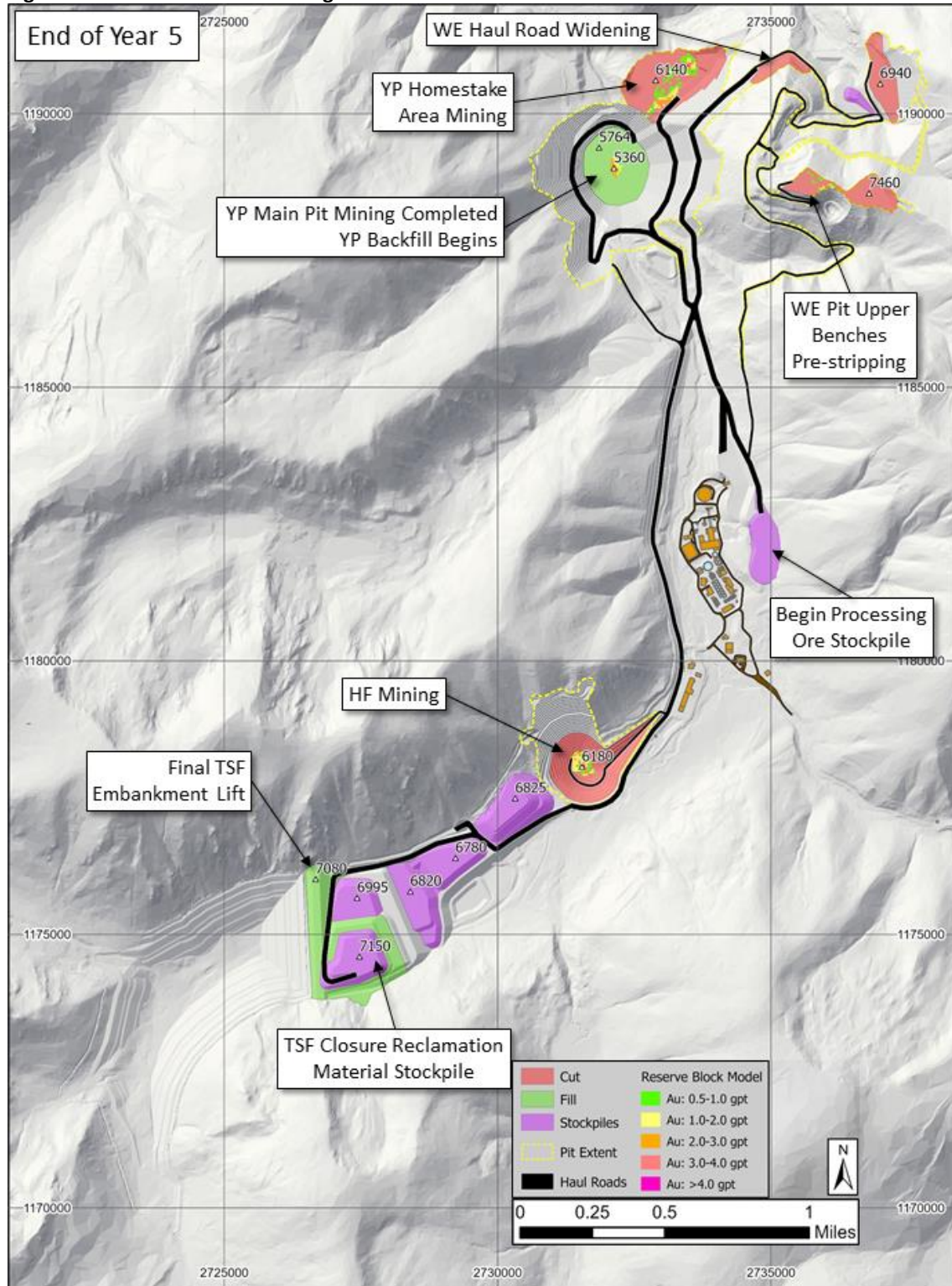


Figure 13-24: Annual Mine Progression – End of Year 8

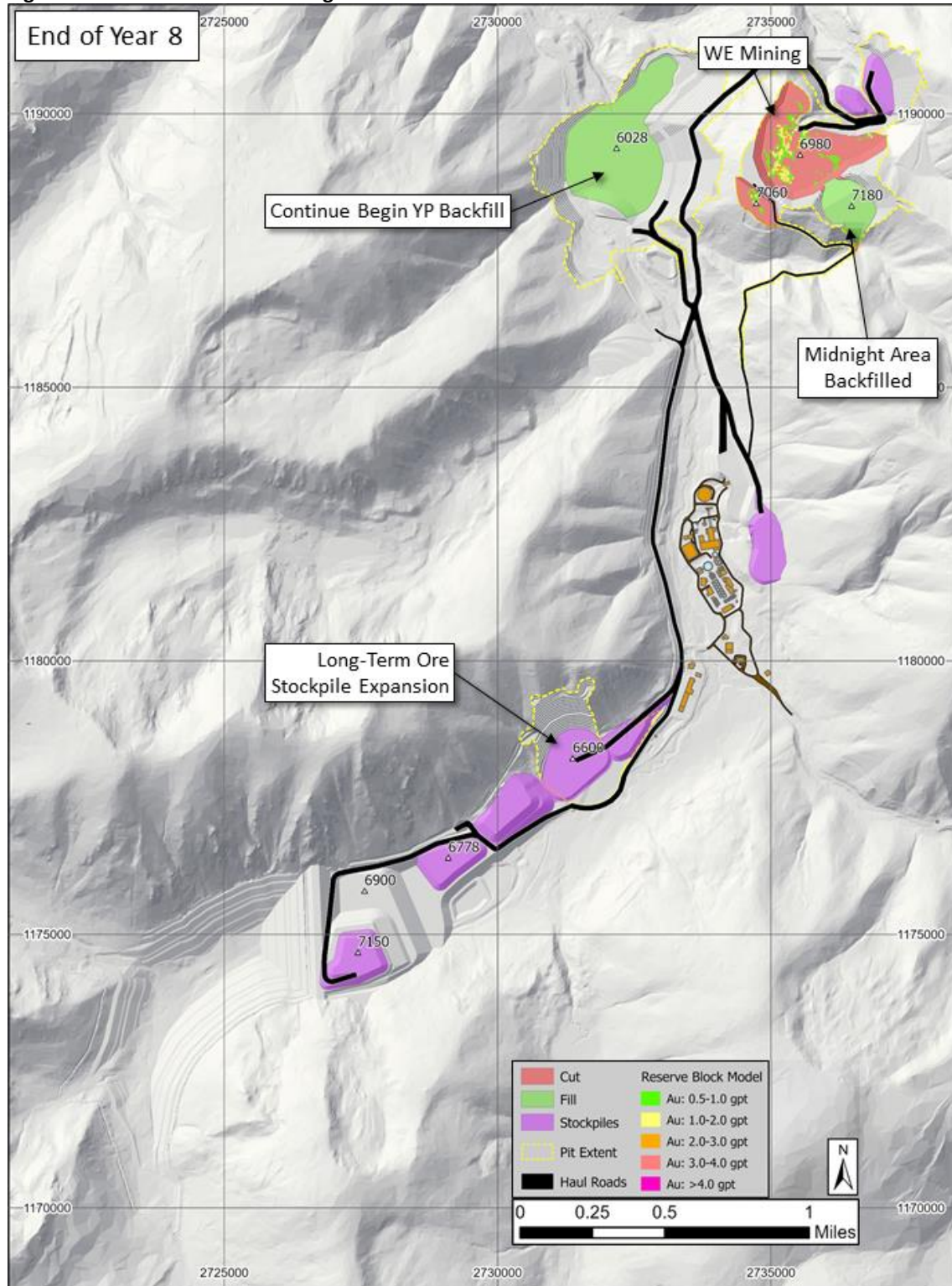


Figure 13-25: Annual Mine Progression – End of Year 10

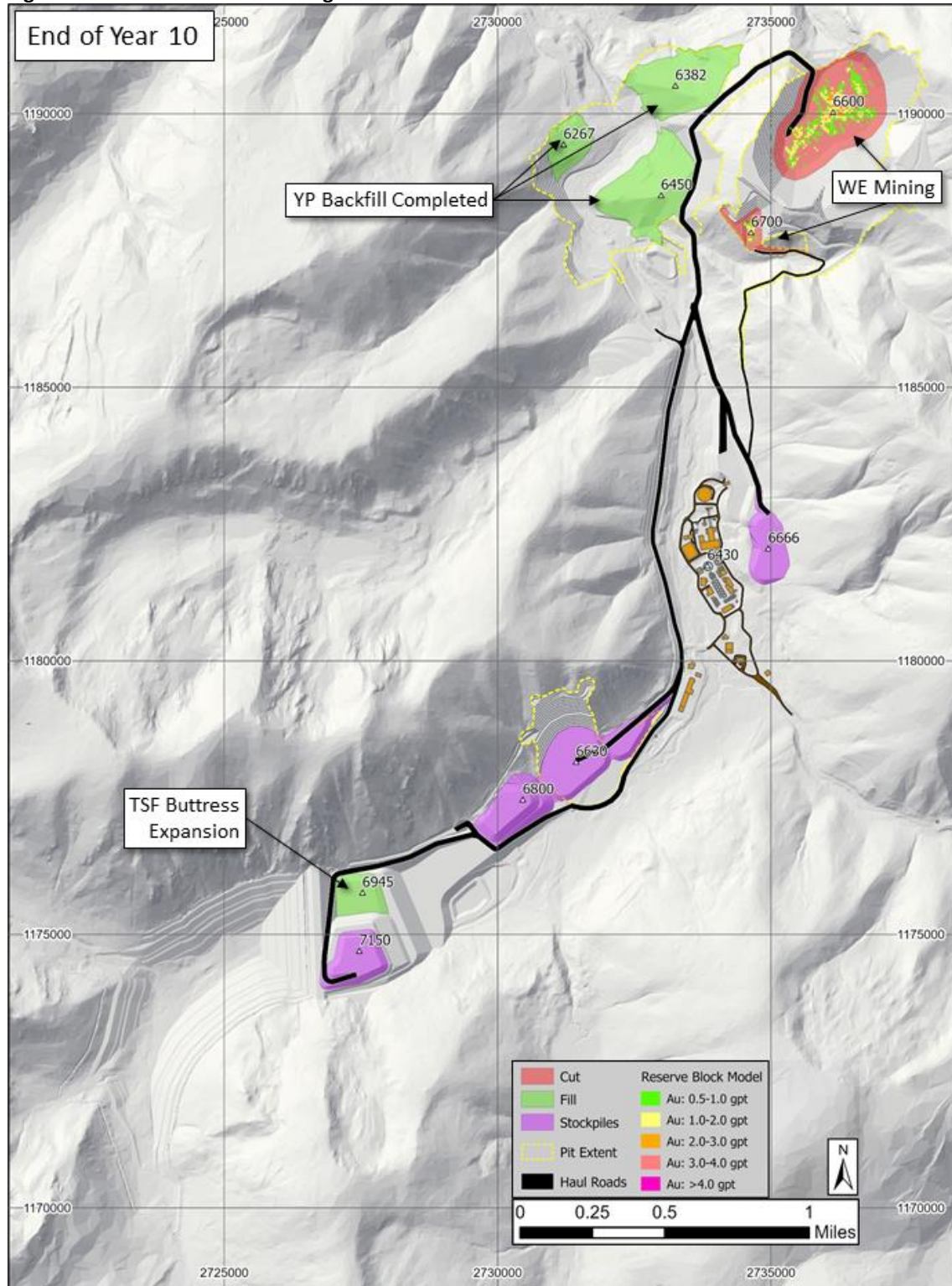
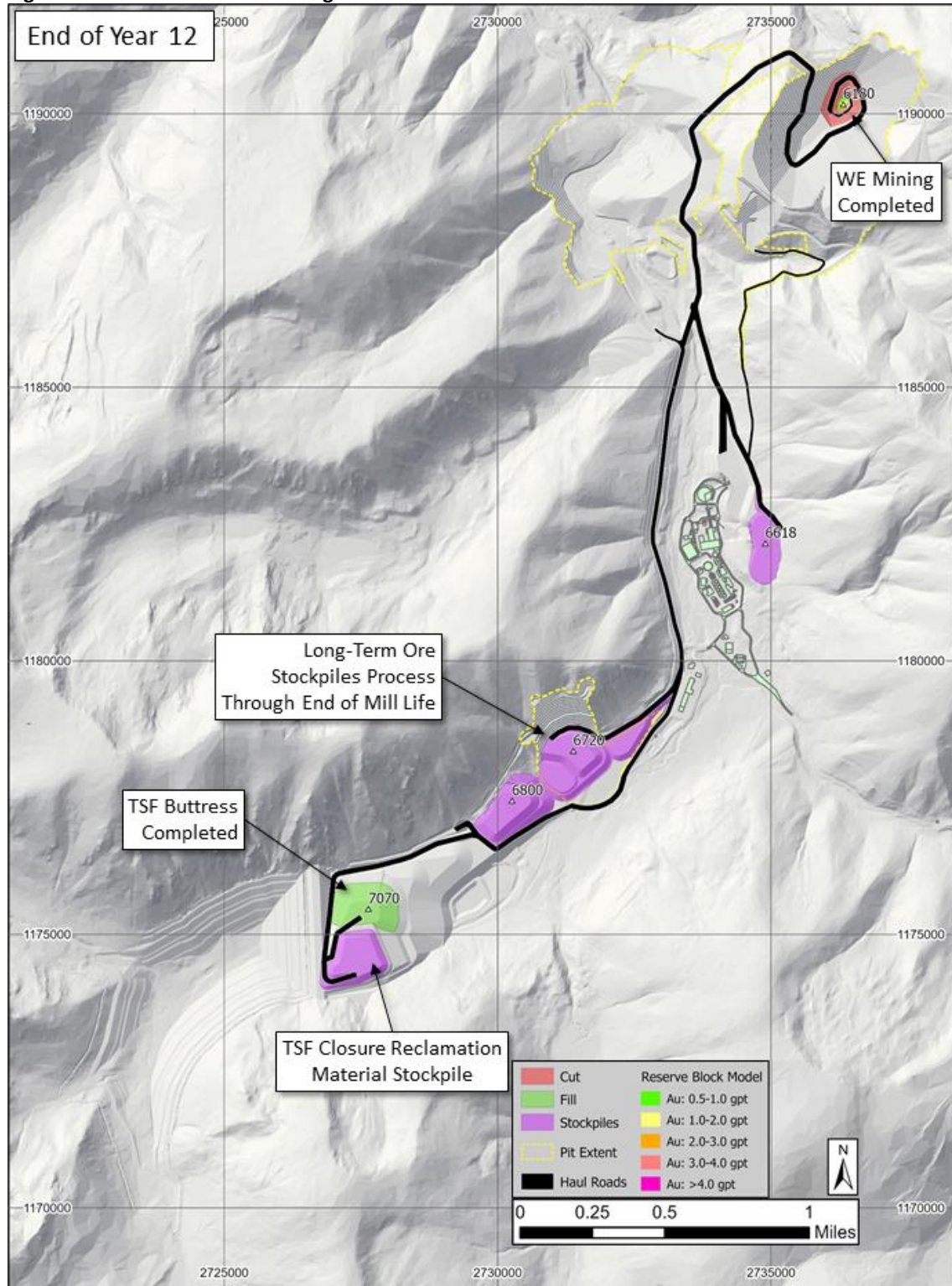


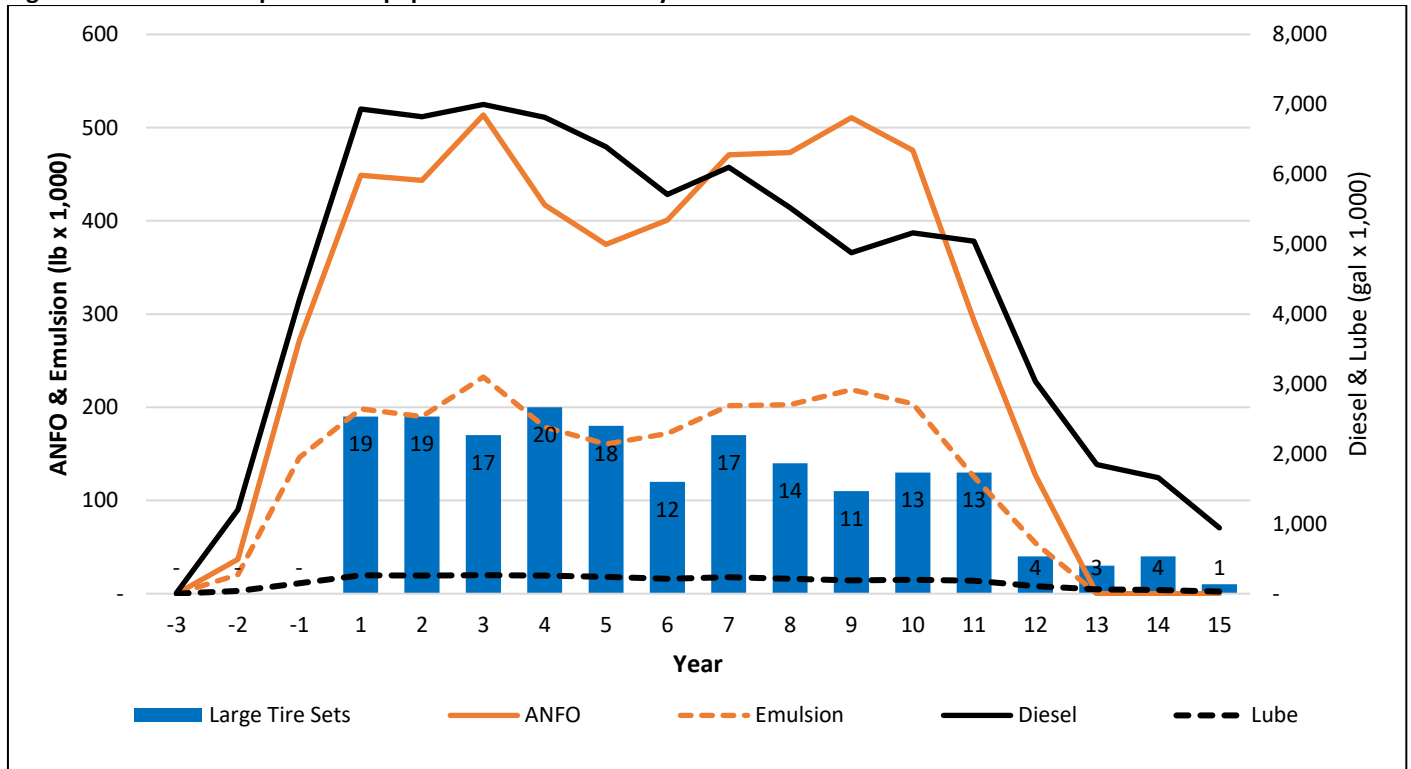
Figure 13-26: Annual Mine Progression – End of Year 12



### 13.9 Mine Consumables Estimate

The mine consumables estimate incorporates the mine production schedule, drill and blast schedule, and equipment consumable rates assumptions to generate the mine consumables schedule used in the operating cost estimate. All mine consumable rates are based on equipment manufacturer values and actual mining data. Consumables for the loading, hauling, auxiliary, and support equipment primarily consist of diesel fuel, lube, tires, maintenance parts, and ground engaging tools. Additional consumables for drilling include drill steel, drill bits, hammers, bushings, and chucks. Blasting consumables were estimated separately based on pattern type and include ANFO, emulsion, stemming, detonation chord, boosters, detonators, and air deck plugs. The mine consumables schedule was developed using first principal calculations based on equipment engine hours and blast pattern designs for each period throughout the mine life. A summary of principle mine equipment consumables is shown on Figure 13-27.

Figure 13-27: Principal Mine Equipment Consumables by Year



### 13.10 Mine Maintenance Estimate

The mine maintenance estimate consists of estimating equipment preventive maintenance schedules, major rebuild schedules, equipment parts life and cost estimates, and equipment mechanical availability to generate mine maintenance staffing requirements, equipment mechanical availability estimates, and operating costs. The basis for estimating mine equipment maintenance requirements was manufacturer estimates, actual mine data, and maintenance cost surveys. The maintenance schedule was generated for each individual equipment unit for the life of the equipment based on each unit’s cumulative engine hours and unscheduled downtime assumptions as a function of each unit’s progressive time in-service.

### 13.11 Staffing Estimation and Organizational Structure

The mine is scheduled to operate continuously 365 days per year with personnel working 12-hour shifts on a 2-week-on / 2-week-off rotation. All mine operations staff will rotate between day and night shift except for the blasting crew, technical staff, and management which will work day shift only. The staffing estimate is based on the mine equipment schedule, equipment maintenance schedule, and estimated technical workload during construction, mine operation, and closure. All mining staff are managed by the mine manager, who reports to the general manager as shown on Figure 13-28. Staffing headcount is summarized on Figure 13-29 and shown by position and year in Table 13-6 and Table 13-7.

Figure 13-28: Mining Organizational Structure

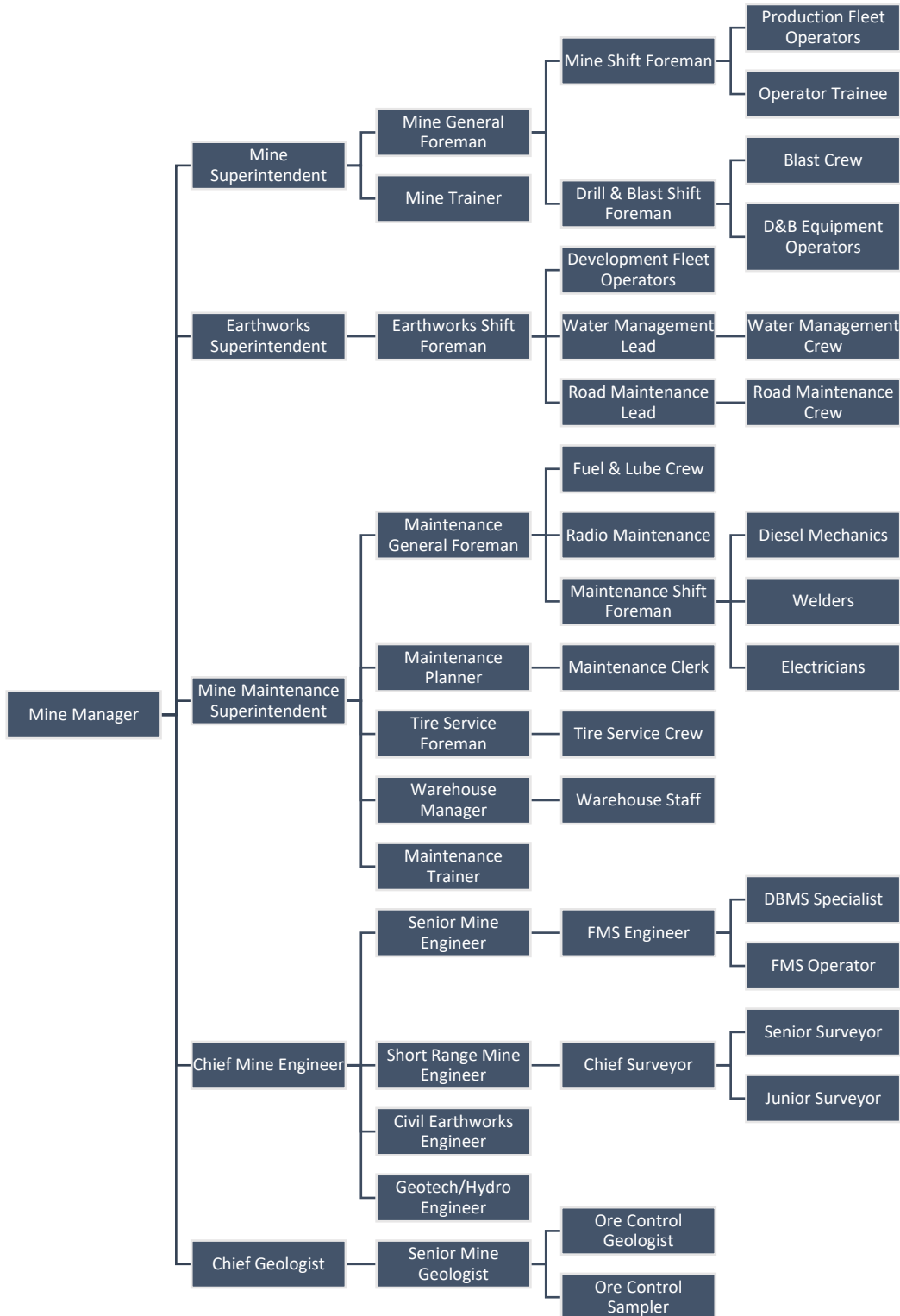


Figure 13-29: Salaried and Hourly Mining Personnel by Department and Year

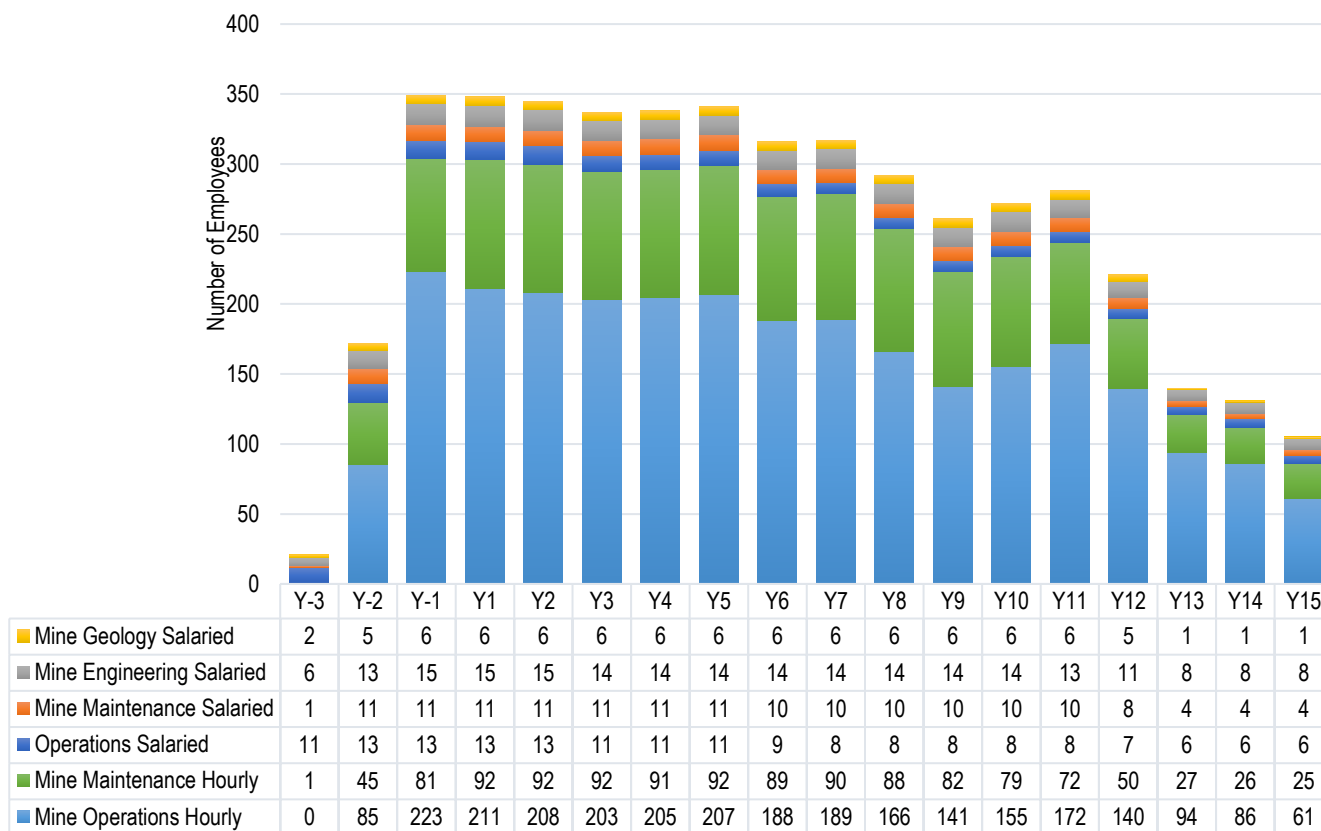


Table 13-6: Salary Staff Requirements

Year	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mine Manager	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Mine Operations</b>																		
Mine Superintendent	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Earthworks Superintendent	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mine General Foreman	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mine Shift Foreman	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Drill & Blast Shift Foreman	0	2	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0	0
Earthworks Shift Foreman	2	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0
Mine Trainer	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0
<b>Mine Operations Total</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Mine Maintenance</b>																		
Maintenance Superintendent	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Year	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Maintenance General Foreman	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Maintenance Shift Foreman	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2
Maintenance Planner	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Maintenance Trainer	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Maintenance Clerk	0	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
<b>Mine Maintenance Total</b>	<b>1</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>
<b>Mine Engineering</b>																		
Chief Mine Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Senior Mine Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Short Range Mine Engineer	0	2	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0	0
FMS Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DBMS Specialists	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0	0
Civil Earthworks Engineer	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Geotech / Hydro Engineer	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Chief Surveyor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Senior Surveyor	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Junior Surveyor	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
<b>Mine Engineering Total</b>	<b>6</b>	<b>13</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>11</b>	<b>8</b>	<b>8</b>	<b>8</b>
<b>Mine Geology</b>																		
Chief Geologist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Senior Mine Geologist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ore Control Geologist	0	1	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0	0
Sampler	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0
<b>Mine Geology Total</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Salaried Staff Total</b>	<b>21</b>	<b>43</b>	<b>46</b>	<b>46</b>	<b>46</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>40</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>38</b>	<b>32</b>	<b>20</b>	<b>20</b>	<b>20</b>

**Table 13-7: Hourly Staff Requirements**

Year	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Mining Equipment Operators</b>																		
Mine Production Fleet	0	7	102	114	112	118	116	104	97	109	94	84	87	103	66	24	21	21
Mine Development Fleet	0	58	90	65	63	51	53	66	59	52	41	29	40	40	45	40	35	18
Mine Auxiliary Fleet	0	19	26	27	27	27	28	29	25	21	23	20	23	22	21	13	16	11
Mine Indirect Hourly	0	21	39	45	44	44	44	45	41	38	37	33	35	36	27	17	15	12
<b>Mine Equipment Operator Total</b>	<b>0</b>	<b>105</b>	<b>257</b>	<b>251</b>	<b>246</b>	<b>239</b>	<b>241</b>	<b>245</b>	<b>222</b>	<b>220</b>	<b>195</b>	<b>166</b>	<b>184</b>	<b>201</b>	<b>159</b>	<b>95</b>	<b>87</b>	<b>63</b>
<b>Mine Maintenance Staff</b>																		
Mine Maintenance Staff	0	6	12	16	16	16	16	16	16	16	16	16	14	12	6	6	6	6
Diesel Mechanics	0	5	21	23	23	23	23	22	20	21	19	17	18	19	13	7	6	5
Welder	0	4	8	10	10	10	10	10	10	10	10	10	8	6	6	2	2	2
Fuel & Lube Crew	0	8	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4
Tire Crew	0	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	4
Maintenance Laborer	1	9	18	20	21	20	20	21	20	20	20	17	17	14	10	2	2	2
Radio Maintenance Staff	0	2	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0	0
Warehouse Staff	0	3	5	5	5	5	5	5	5	5	5	5	5	3	2	2	2	2
<b>Mine Maintenance Staff Total</b>	<b>1</b>	<b>45</b>	<b>82</b>	<b>92</b>	<b>93</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>89</b>	<b>90</b>	<b>88</b>	<b>83</b>	<b>80</b>	<b>72</b>	<b>50</b>	<b>27</b>	<b>26</b>	<b>25</b>
<b>Hourly Staff Total</b>	<b>1</b>	<b>149</b>	<b>338</b>	<b>343</b>	<b>339</b>	<b>332</b>	<b>333</b>	<b>337</b>	<b>312</b>	<b>311</b>	<b>284</b>	<b>249</b>	<b>264</b>	<b>273</b>	<b>209</b>	<b>122</b>	<b>114</b>	<b>88</b>

## 13.12 Capital and Operating Cost Estimate

### 13.12.1 Mine Equipment Capital Cost Estimate

All capital costs for each equipment type were estimated using vendor budgetary quotes or recent mining industry surveys. Additionally, Perpetua is currently going through contract negotiations with major mining equipment suppliers. Equipment capital costs include estimates for freight, assembly, spare parts, initial tire purchase, fire suppression, equipment advance payments, and potential equipment modifications. For equipment that is planned to be leased, pay schedules are based on quotes provided by equipment manufacturers. Capital and operating cost details are provided in Section 18 of this Report. The equipment purchase schedule is shown in Table 18-3.

### 13.12.2 Mining Operating Cost Estimate

Mine equipment operating costs were developed using first principles based on vendor-provided hourly operating cost estimates and recent operating mine equipment survey data. Each equipment unit was scheduled on a monthly period through the end of year 2 and quarterly after.

Once all time categories were estimated for each equipment unit, operating costs were calculated for each schedule period including fuel, maintenance parts, lube, tire replacement, ground engaging tool replacement, operator labor, and maintenance labor. If operating time for a fleet was not sufficient to accomplish the work required in the mine production schedule, additional units were added. A summary of major operating costs calculated by category is shown on Figure 13-30. Additional mine operating cost details are provided in Section 18 of this Report.

The average mining cost for the three open pits is \$3.12 per short ton mined (Figure 13-31).

**Figure 13-30: Operating Costs by Category**

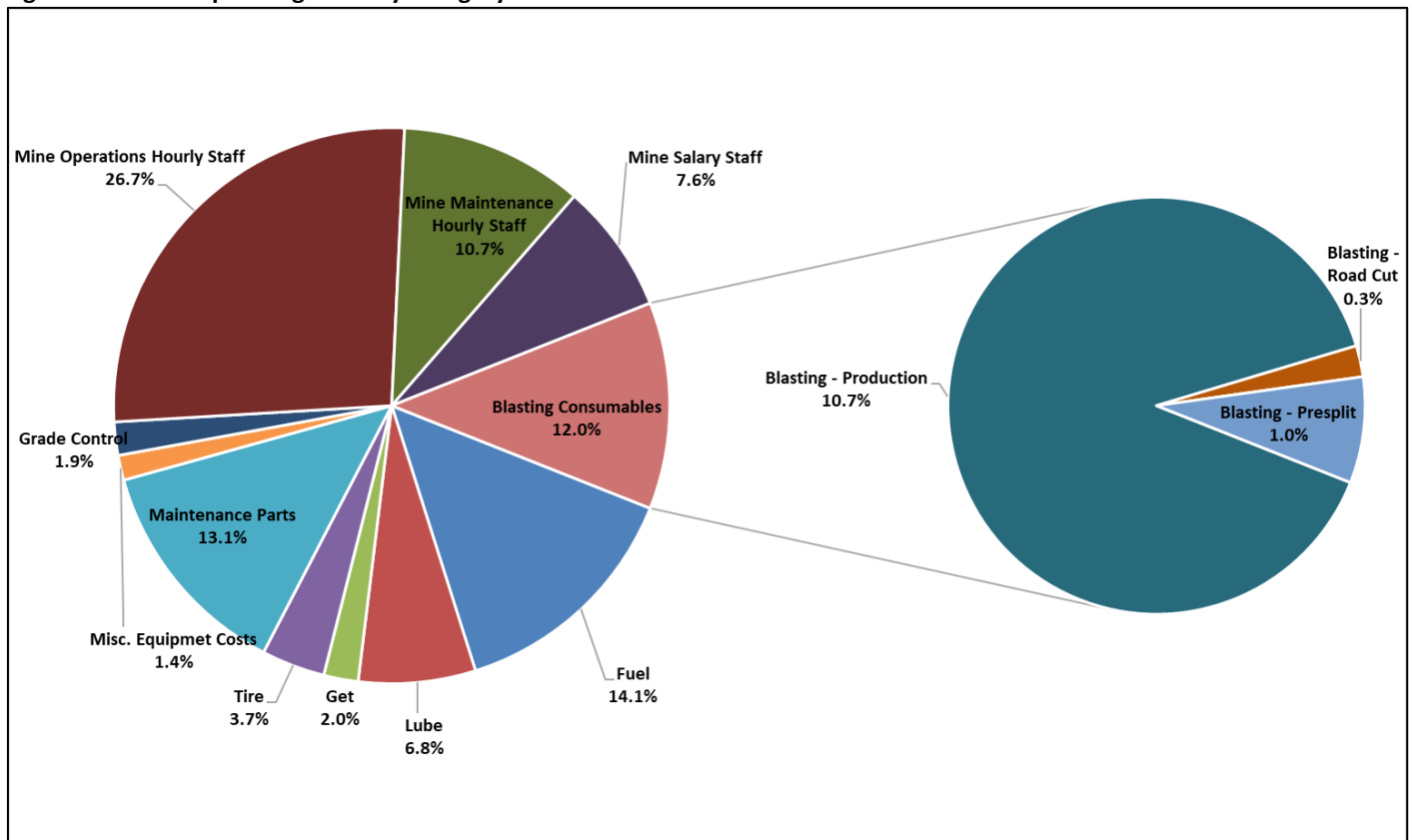
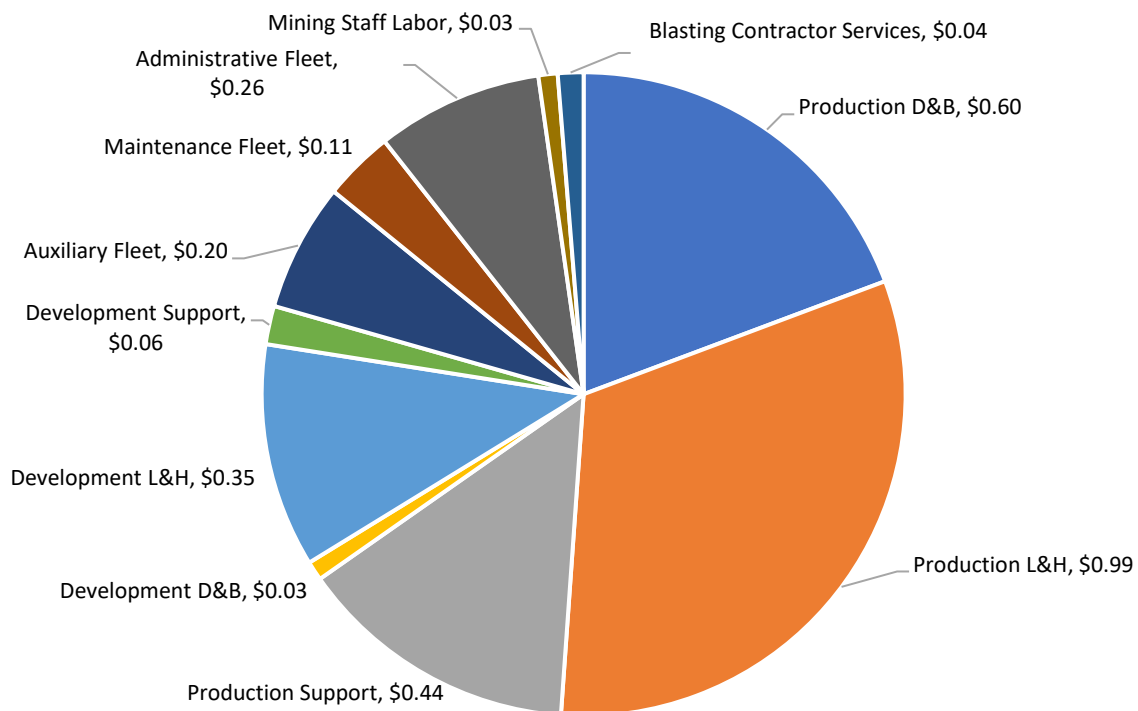


Figure 13-31: Mine Operating Unit Cost by Category



## 14 PROCESSING AND RECOVERY METHODS

Material updates to the processing plant and overall recovery process since the issuance of the 2022 TRS include design enhancements to the crushing circuit, the addition of a regrind mill to improve particle liberation, an updated design of the antimony cleaner flotation circuit to optimize metallurgical performance, and a redesign of the air and oxygen delivery systems. The design of the Project's processing facility remains in active development and will continue to be refined as detailed engineering progresses. Updates may be required to reflect new technical specifications, optimization studies, and outcomes from ongoing procurement and contracting activities.

The Project process plant has been designed to process both sulfide and oxide mineralized material from three deposits (Hangar Flats, Yellow Pine, and West End) as well as Historical Tailings from former milling operations. The design of the processing facility was developed based on the laboratory testing, summarized in Section 10, to treat 1,021 short tons per hour (stph) (excluding historical tailings) through crushing, grinding, flotation, concentrate oxidation, leaching by cyanidation, carbon handling and refining, oxide leaching, gold recovery, and tailings processing operations with a design availability of 90%.

Run-of-mine (ROM) materials from the three pits and historical tailings have characteristics that require several process variations. A simplified process flow diagram is shown in Figure 14-1. Process variations are as follows:

- Sulfide ROM with high antimony concentrations is crushed, ground, and treated in an antimony flotation circuit before sulfide flotation and pressure oxidation (POX) to release refractory gold for cyanide leaching and gold recovery.
- Sulfide ROM with low antimony concentrations is sent directly from grinding to sulfide flotation, POX, leaching, and gold recovery.
- Oxidized ROM is sent from crushing and grinding directly to a whole-ore cyanide leaching and gold recovery circuit, which is scheduled to be constructed when such ROM is anticipated in the mine plan.
- Mixed sulfide and oxide (transition) ROM is handled as low-antimony sulfide ROM except that the flotation tailings are cyanide leached with the same circuit used for oxide material.

### 14.1 Process Description

The gold-bearing sulfide concentrate of pyrite and arsenopyrite is processed using pressure oxidation to break down the sulfide crystalline structure to liberate gold and silver to be leached and recovered to doré bars containing gold and silver. Small quantities of elemental mercury are collected in flasks to prevent its potential release into the environment. The design introduces Historical Tailings into the ball mill during the first 3 to 4 years of operation. Tailings from the operation are deposited in a geomembrane-lined tailings storage facility (TSF). A simplified process flow diagram is shown in Figure 14-1 and a list of major equipment, including the estimated connected power requirements, is shown in Table 14-1.

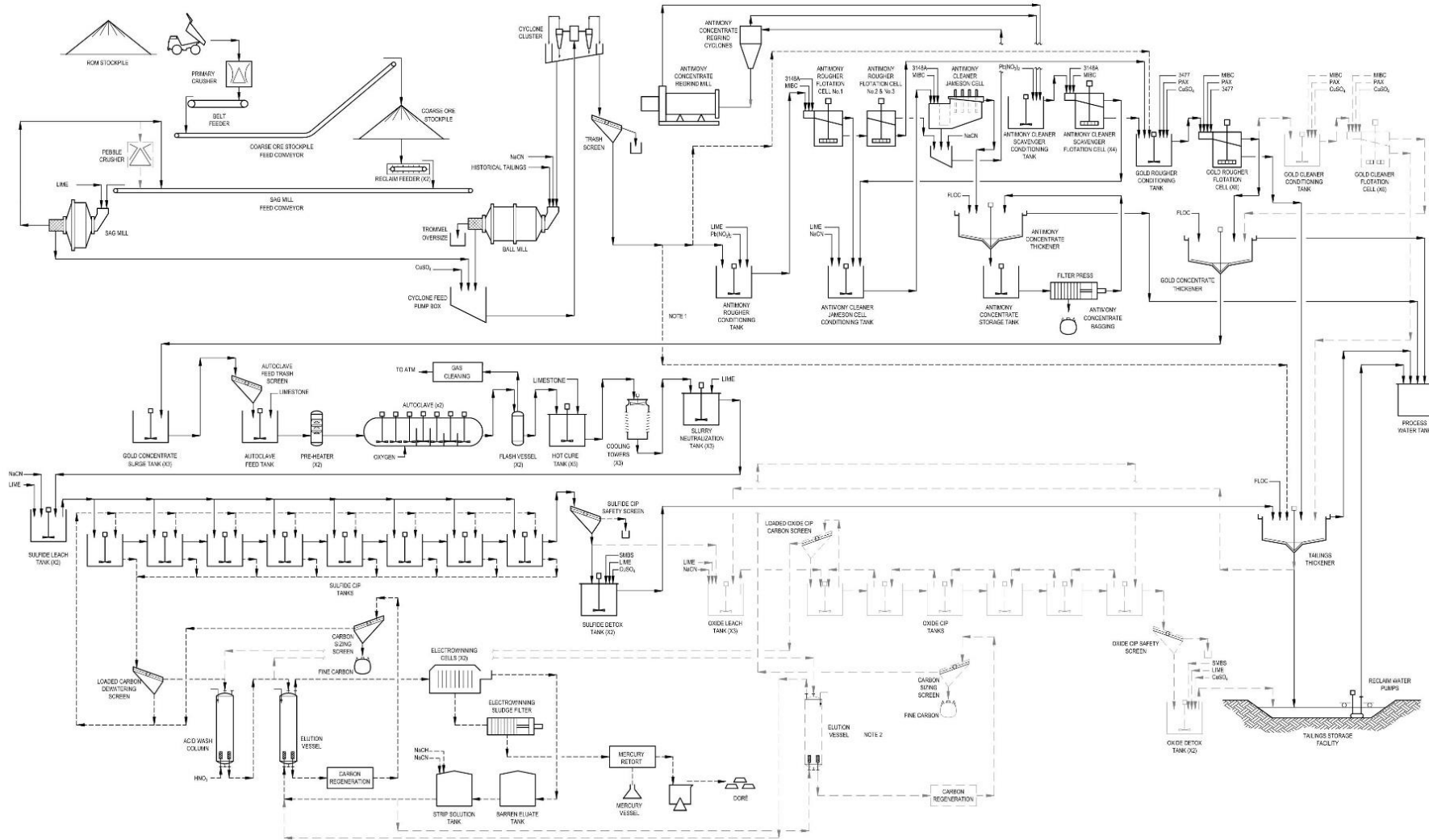
The process operations are described as follows:

- **Crushing Circuit** – ROM material would be dumped directly into the primary crusher feed hopper or onto ROM stockpiles and the primary crusher discharge is delivered to the coarse ore stockpile. The coarse ore stockpile provides 12-hour live capacity. The crushing circuit design is based on a 24-hour per day, 365-day year operation at an average utilization of 75% yielding an instantaneous design throughput of 1,225 stph.
- **Grinding Circuit** – The grinding circuit incorporates a single semi-autogenous (SAG) mill, single ball mill design with an average utilization of 90%, yielding an instantaneous design throughput of 1,021 stph. When Historical Tailings are processed during early years of the operation, the slurry from the tailings repulping plant would also flow into the cyclone underflow tub. Cyclone underflow flows by gravity to the ball mill. The cyclone overflow, at 35% solids with a target size of 80% passing (P80) 85 microns, is screened to remove tramp oversize and flows through a sampler and on to the antimony or gold rougher flotation circuit, depending on the antimony concentration of the material.
- **Flotation Circuit (Antimony and Gold)** – The flotation circuit consists of up to two sequential flotation stages to produce two different concentrates; the first stage of the circuit was designed to produce an antimony concentrate when the antimony grade is high enough, or bypassed if not, and the second stage is designed to produce a gold-rich sulfide concentrate. The antimony flotation circuit includes a regind mill for size reduction. The antimony concentrate will be packaged and sold. The gold-rich sulfide concentrate will be stored in three agitated surge tanks.
- **Pressure Oxidation Circuit** – Sulfide concentrate from the surge tanks is pumped to the autoclave feed tank. The autoclave is designed to provide 75 minutes of retention time at 220° Celsius (428° Fahrenheit) to oxidize the sulfides and liberate the precious metals. Autoclave discharge would be processed through flash vessels and gas discharge would be condensed and the remaining gas cleaned through a scrubber.
- **Oxygen Plant** – An oxygen plant producing 670 stpd of gas at 95% oxygen and a gauge pressure of 40 bars is planned. The oxygen plant equipment is planned to be purchased from a vendor including installation supervision.
- **Lime Plant** – Limestone quarried from the West End pit is hauled to an area south of the primary crusher pad. The material is crushed and screened to feed the limestone grinding mill. Ground limestone slurry and milk of lime are used to control acid in the autoclave, neutralize solutions and slurries coming out of the POX process, and control pH for leaching.
- **Oxidized Sulfide Processing** – After pressure oxidation, slurry discharge from the flash vessels is neutralized and cooled prior to leaching. The slurry is leached in cyanide solution, followed by an eight-stage, pump-cell carbon-in-pulp (CIP) circuit for precious metal recovery from this high-grade stream. The sulfide CIP tailings are detoxified and discharged to the flotation tailings thickener. Alternatively, the sulfide leach tailings are combined with flotation tailings when the latter undergoes cyanide leaching, as described below.
- **Oxide CIP and Tailings Detoxification** – A future oxide leach circuit is included in the design of the process plant to be running in Year 7 of mill operations. This circuit is designed to recover gold from non-refractory material in the flotation tailings when the mill is processing transition ore from the West End deposit. This circuit also directly processes oxide material from the West End deposit as a whole-ore leach process—without undergoing flotation.

- **Carbon Handling** – Loaded carbon from the CIP circuits is processed through a conventional carbon handling circuit, pumping eluant from the strip solution tank through heat exchangers to the bottom of the elution vessel at 45 psig and 293°F and a flow rate of 2 bed volumes per hour.
- **Gold Room** – Precious metals are recovered from the strip solution by electrowinning, mercury retort, and a gold furnace that produces doré bars as a saleable product.
- **Tailings** – Neutralized and thickened tailings are pumped from the process plant to the TSF in an HDPE-lined carbon steel pipe. Water produced by the settling of the tailings solids is reclaimed with barge-mounted pumps and returned to the process water storage tank.
- **Process Control Systems** – The process plant design includes an integrated process control system.

The two finished products from the Stibnite Gold Project ore processing facility will be: gold/silver bars, known as doré; and antimony-silver concentrate.

**Figure 14-1: Overall Process Flow Diagram**



**Table 14-1: Major Process Equipment List and Estimated Connected Power Requirements**

Item	No	Description	Estimated Connected Power (hp)	
			Each	Total
Primary Crusher	1	Gyratory Crusher; feed opening 70 x 43"	600	600
Semi Autogenous Grinding (SAG) Mill	1	29 ft diameter x 16 ft EGL, low-speed induction motor on VFD	11,126	11,126
Pebble Crusher	1	Pebble cone crusher [deferred to year 7]	670	670
Ball Mill	1	26 ft diameter x 38 ft EGL low speed dual-drive with synchronous motors	22,252	22,252
Cyclone Cluster	1	22-place cyclone cluster; gMax220 type cyclones	-	-
Sb Rougher Flotation	3	11,046 ft <sup>3</sup> Tank Cells	335	1,005
Sb 1st Cleaner Flotation	1	E2532/6 Jameson Cell	-	-
Sb Concentrate Regrind Mill	1	SMD-1100	1,500	1,500
Sb Cleaner Scavenger Flotation	4	1,290 ft <sup>3</sup> Tank Cells	60	240
Gold Rougher Flotation Cell	6	11,046 ft <sup>3</sup> Tank Cell	335	2,010
Gold Cleaner & Cleaner Scavenger Flotation Cells (Future)	6	2,875 ft <sup>3</sup> Tank Cell	100	600
Gold Concentrate Thickener	1	98 ft diameter high-rate thickener	15	15
Autoclave Feed Pumps	2	Positive displacement pumps, 638 gpm, 450 psi discharge pressure, 1 operating 1 standby	250	500
Autoclave	2	15.4 ft inside brick x 93.8 ft T/T inside brick, 5 compartments, 7 agitators	2,450	4,900
Autoclave Agitators	14	3 in Compartment 1, 1 each in Compartments 2 – 5 for each autoclave	8x125, 6x50	1,300
Preheat Vessels	2	11 ft diam x 35.6 ft high T/T; 3 - 4.4 psig	-	-
Flash Vessels	2	22.5 ft diameter I/S x 35.4 ft high T/T, brick lined	-	-
Slurry Neutralization Tanks	3	20.5 ft dia. x 22.2 ft high, LDX 2101 SS; Covered, Agitated	60	180
Limestone Cure Tanks	5	23 ft diameter by 23 ft tank height, MS, agitated	125	625
Slurry Cooling Towers	3	26 ft dia. x 45.9 ft high atmospheric cooling tower, with demister and fan; 2 operating 1 standby	75	225
Sulfide Leach Tanks	2	37.8 ft diameter x 41 ft tank height; CS, agitated	60	120
Sulfide CIP Tanks	8	18 ft diameter x 20 ft tank height; CS, agitated; with pump cell mechanism	30	240
Oxide Leach Tanks (Future)	3	59' diam x 65' height, CS, agitated	300	900
Oxide CIP Tanks (Future)	6	39' diam x 47' height, CS, agit, pumping screens	150	900
Carbon Regeneration Kiln	1	11 stpd carbon throughput; propane fired; 1,562°F (design temp)		
Oxide Carbon Regeneration Kiln (Future)	1	22 stpd carbon throughput; propane fired; 1562°F (design temp)		

Item	No	Description	Estimated Connected Power (hp)	
			Each	Total
Elution Vessel	1	11.1 ton, 4 to 1 height to diameter ratio; CS; 300°F (design temp); 100 psig	-	-
Electrowinning Cells	2	2,500 L, 45 cathodes, 46 anodes, 2500 Amp 9v Rectifier	22.5	45
Limestone Primary Crusher	1	Jaw Crusher, feed opening 42" x 28"	150	150
Limestone Secondary Crusher	1	HP 200 Standard Cone or equiv	175	175
Limestone Slurry Ball Mill	1	9.8' x 15' EGL overflow, SCIM on VFD	750	750
Lime Kiln	1	Vertical Lime Kiln	135	135
Lime Silo	1	500 ton	-	-
Lime Slaker Plant	1	Ball mill lime slaker system, 6' diam x 8' EGL	250	250
Oxygen Plant (Onsite supply contract)	1	32.5 (max 37) stph @ 95% purity; 82.4°F; 600 psig	14,000	14,000

## 14.2 Water Systems

Two types of water systems are required for the Project process plant: fresh water and process water. Fresh water for the Project would be supplied from multiple sources including wells, contact water ponds, and a raw water intake from the EFSFSR at the south tunnel portal.

Groundwater wells located within the Meadow Creek valley alluvial deposits may contain elevated concentrations of metals and are considered to be the equivalent of contact water. Contact water includes seepage from storage piles and runoff from mine-impacted areas. Contact water from various sources would be pumped to the freshwater tank, which also serves as the firewater tank. Fresh water in the tank would be distributed to and used for:

- the freshwater distribution system;
- process water makeup;
- the firewater pipeline loop;
- the gland seal water tank and pumped by horizontal centrifugal pumps to be used as seal water for mechanical equipment;
- the mine water trucks to be used in road dust control; and
- the process uses points (e.g., crusher dust suppression, reagent mixing, etc.).

Process water would be reclaimed from several locations and returned to the process water tank. Overflow from the tailings thickener, water reclaimed from the TSF, contact and stormwater ponds would also be pumped to the process water tank.

### 14.3 Reagents

Reagents required for various aspects of the Project process are housed in two primary areas. Reagent Building 1 is located next to the flotation building and contains reagents primarily used in flotation. Reagent Building 2 is located on the south side of the plant area and contains reagents associated with gold recovery. A third reagent area has been added to produce limestone slurry and milk of lime for neutralization for the process.

#### 14.3.1 Limestone and Lime

Limestone from the Middle Marble formation will be mined from the West End pit, trucked to a stockpile south of the primary crusher stockpile in 40-ton articulated haul trucks, and fed to a dedicated jaw crusher. Crusher discharge would be conveyed to a sizing screen from which oversize and undersize material would be produced. A coarse fraction of the crushed limestone is segregated as feed for a vertical lime kiln to provide the lime necessary to increase the pH of solutions and slurries as needed in the process. The fine fraction is fed to a grinding mill to make a limestone slurry for the autoclave feed and neutralization circuits.

#### 14.3.2 Process Reagent Mixing and Storage

Reagents requiring handling, mixing, and distribution systems are summarized in Table 14-2. The table also includes estimated reagent consumption rates for full-scale plant operation, which have been estimated based on metallurgical testing results. The dry reagents would be stored under cover, then mixed in reagent tanks and transferred to distribution tanks for process use.

**Table 14-2: Estimated Primary Reagent Consumption Rates**

Reagent	Use in Process Plant	Yellow Pine		Hangar Flats			West End		Historical Tailings	
		High Sb lb/ton ore	Low Sb lb/ton ore	High Sb lb/ton ore	Low Sb lb/ton ore	Sulfide lb/ton ore	Transition lb/ton ore	Oxide lb/ton ore	High Sb lb/ton ore	Low Sb lb/ton ore
Ground Limestone Slurry (CaCO <sub>3</sub> )	Acid neutralizer during POX	47.4	47.4	47.4	47.4	10.3	10.3	-	-	47.4
	Acid neutralizer in POX discharge	17	17	17	17	10	10	-	-	17
Milk of Lime (CaO)	Pyrite depressant	0.60	-	0.68	-	-	-	-	-	-
	POX leach and leach tails detox	8.7	8.7	8.7	8.7	5.2	5.2	-	0.26	8.7
	Oxide/tails leach and combined tails detox	-	-	-	-	-	-	4.2	4.2	-
Lead Nitrate (Pb(NO <sub>3</sub> ) <sub>2</sub> )	Antimony activator	0.60	-	0.60	-	-	-	-	-	-
Aerophine 3418A	Antimony collector	0.050	-	0.05	-	-	-	-	-	-
Aerophine 3477	Gold collector	-	0.10	-	0.10	-	-	-	-	0.10
Copper Sulfate (CuSO <sub>4</sub> )	Sulfide activator	0.40	-	0.25	-	0.39	0.39	-	0.40	-
Potassium Amyl Xanthate (PAX)	Sulfide collector	0.45	0.30	0.45	0.30	0.39	0.39	-	0.39	0.45
Methyl Isobutyl Carbinol (MIBC)	Frother	0.15	0.09	0.14	0.09	0.08	0.08	-	0.15	0.09
Sodium Cyanide (NaCN)	Gold and silver leachant, pyrite depressant, stripping	0.37	0.27	0.37	0.27	0.37	1.17	0.80	0.37	0.27
Flocculant, tailings	Promote settling	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06

Reagent	Use in Process Plant	Yellow Pine		Hangar Flats			West End		Historical Tailings	
		High Sb lb/ton ore	Low Sb lb/ton ore	High Sb lb/ton ore	Low Sb lb/ton ore	Sulfide lb/ton ore	Transition lb/ton ore	Oxide lb/ton ore	High Sb lb/ton ore	Low Sb lb/ton ore
Flocculant, conc.	Promote settling (lb/ton conc)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Activated Carbon	Recover soluble gold and silver	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Sodium Metabisulfite (Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> )	Cyanide detoxification of POX tailings	0.43	0.43	0.43	0.43	0.43	-	-	0.43	0.43
	Cyanide detoxification of float tailings/oxide leach	-	-	-	-	-	1.64	1.64	-	-
Nitric Acid (HNO <sub>3</sub> )	Descale activated carbon	0.08	0.08	0.06	0.06	0.05	0.05	0.05	0.05	0.04
Caustic (NaOH) (sodium hydroxide)	Strip solution makeup and neutralization of spent acid from carbon acid wash	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05
Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> )	POX scrubbing	0.07	0.07	0.07	0.07	0.07	0.07	-	0.07	0.07
Antiscalant	Scale prevention	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

#### 14.4 Process Air Systems

Dedicated blowers will provide air to the gold and antimony flotation cell banks. The blowers in the antimony and gold flotation area provide the air needed to create the tiny bubbles that will carry the sulfide particles to the froth collection lip of the cell.

Dedicated air compressors, air dryers and air receiver systems will be installed at the primary crushing and autoclave areas. Plant air compressors will provide instrument air required to support the grinding, flotation, leaching, gold room, and reagent areas. Air dryers remove the moisture in the instrument air, and local plant air and instrument air receivers are provided.

#### 14.5 Oxygen Plant

An air separation unit (ASU) will be provided to separate atmospheric air into its primary components to produce high-purity oxygen for use in the POX area and for cyanide leach and detox. The oxygen plant will include provisions for liquid oxygen storage and vaporization to provide gaseous oxygen as a backup to the air separation unit.

#### 14.6 Process Control Systems

The Project process plant design includes an integrated process control system consisting of three tiers of control and monitoring systems. A conceptual description of the control architecture is provided below, followed by a conceptual control philosophy that depicts the level of automation and the principles that guide decisions concerning instrumentation and control design in the next phase of this Project.

Process control for the process plant would be accomplished by a multi-tiered monitoring, control, and recording system using an Ethernet backbone. The fiber optic network would be arranged in dual self-healing ring configuration for redundant peer-to-peer communications and control. The redundant fiber optic communication modules protect the integrity of the Ethernet network by maintaining network communications, even with a failure of a fiber path. The functions of the network include data collection and control on a single high-speed network, with tie-in to the plant management system. The devices on the network include servers, workstations, switches, Programmable Logic Controllers (PLCs), and Human-Machine Interfaces (HMIs).

The process plant would incorporate modern, dependable and proven instrumentation and control systems. The monitoring and control systems would support the operation of the plant under the following parameters. The plant would operate on a two 12-hour shift per day basis. Planned maintenance shutdowns would take place on a regular basis. The plant would have an overall operating availability 90%, with lower availabilities for the crusher (75%). There are no holiday and/or other planned work stoppages during the calendar year. The maintenance of the monitoring and control systems would be performed in accordance and support of this operating and maintenance schedule.

The mill building control room would serve as the center for communications, fire systems monitoring and emergencies in general. The control room would be manned on a 24-hour-a-day basis. A base station radio would be assigned to the control room as well as an outside telephone line. The control room would also have the ability to communicate

on all other site group frequencies. The control room operator would also have access to the company computer network and e-mail system.

Real-time observation of strategic points along the operation would be by a TV camera system with monitors in the control room. PLC systems would be used for controlling the plant equipment. Proper graphic displays would be developed for the PLC systems. The control room would serve as the center of all control and recording of key process variables, outputs, functions and plant stoppages.

Safety systems would include, but are not limited to the following:

- The use of start-up warnings – horns, sirens or some other means – would be used throughout the property.
- Applicable interlocks would be used to protect people and equipment.
- All fire protection systems and fire detection systems would be monitored from the mill control room.
- Interlocks and/or other safety-related protection would either be hard-wired or in control logic, depending upon which offers the greatest level of assured safety.

#### 14.7 Projected Metallurgical Recoveries

The comparison of recovery and payable metal between 2021 FS and this TRS is summarized in Table 14-3. The Antimony metal produced in this TRS production plan is lower compared with the 2021 FS due to revised recovery models that align better with the bench scale test work data.

**Table 14-3: Comparison of Projected Recovered and Payable Metal**

	Units	Metal Recovered 2021 FS	Metal Recovered (this TRS)	Metal Payable 2021 FS	Metal Payable (this TRS)
Antimony – Sb Concentrate	Mlbs	115.3	106.5	78.4	90.5
Gold – Sb Concentrate	koz	20.4	32.0	3.7	7.5
Silver – Sb Concentrate	koz	827	647	134	85
Gold – Doré	koz	4,217	4,191	4,196	4,187
Silver - Doré	koz	852	515	835	505

## 15 INFRASTRUCTURE

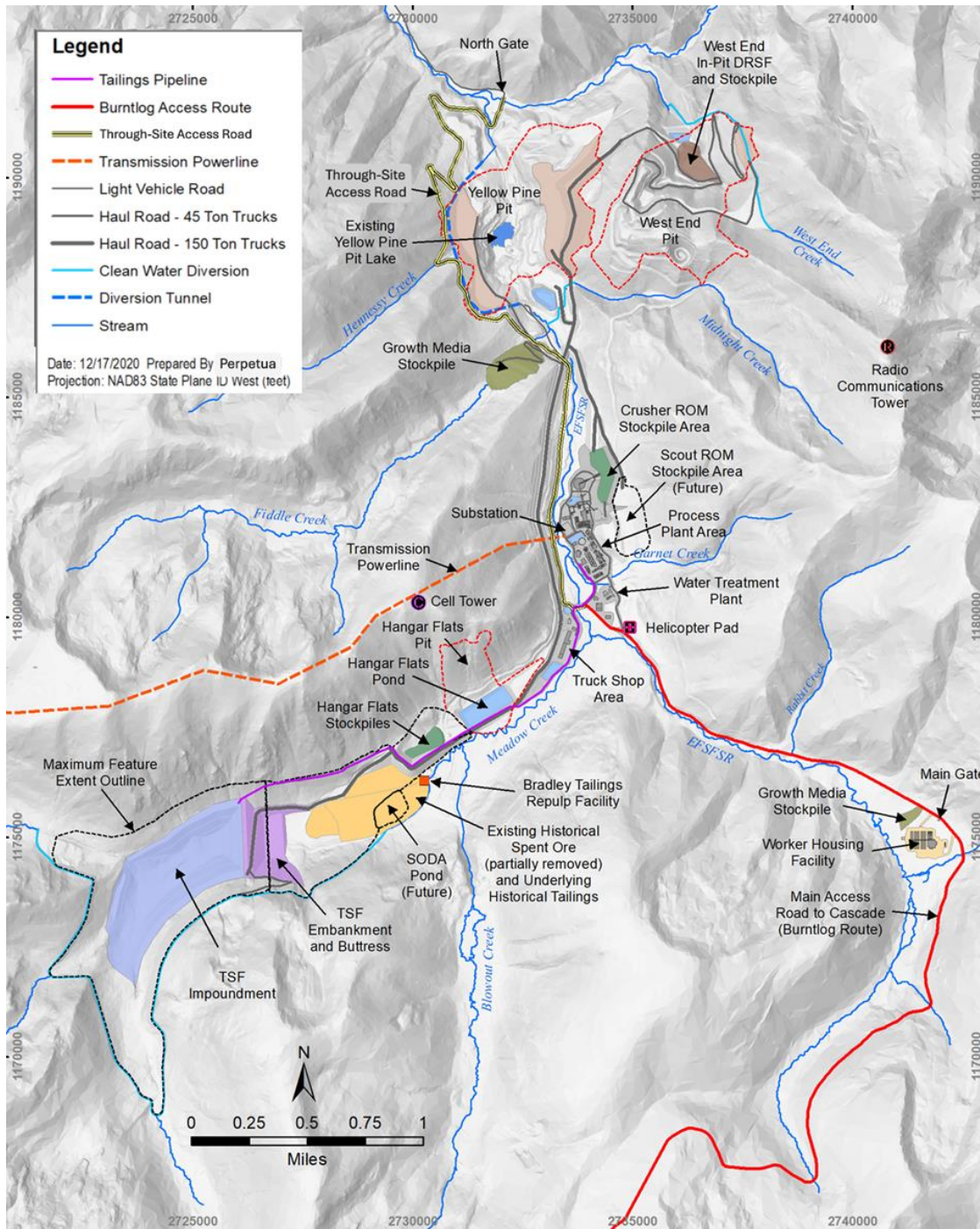
This TRS incorporates engineering designs advanced during the basic engineering phase completed in January 2025 and subsequent engineering, contracting and related analysis completed through the end of 2025. Major infrastructure updates since the 2022 TRS include design modifications to the permanent worker housing facility, (including the execution of the associated construction contract), refinements to the Stibnite Gold Logistics Facility, improvements to the Project's power supply and distribution systems, enhancements to site communications infrastructure, updates to water management designs, and minor revisions to the tailings storage facility configuration.

Existing infrastructure relevant to the development and operation of the Project is presented in Section 4 of this Report. This section summarizes the infrastructure upgrades and additions that would be required to support the mining and mineral processing activities that were discussed in Sections 13 and 14, respectively, of this Report. The Project infrastructure needs that are discussed in this section include:

- Project Access – New road construction and upgrades to existing roads to support safe and reliable all-season vehicle access to the Project site.
- Power Transmission and Communication Systems – Upgrade power supply system on and off-site, install reliable high-speed communications, and expand radio communications across the mine site and access road.
- Other Offsite Infrastructure – Road maintenance facility, offsite logistics, warehousing, metallurgical laboratory, and administration facilities near Cascade.
- Site Preparation and Support Infrastructure – Clearing, grubbing, growth media stockpiling, borrow sources, construction of a temporary worker facility and construction of a new facility to support construction and operations.
- Ore Processing Plant – Equipment, buildings, facilities, and infrastructure to process mineralized material and extract saleable concentrates and metals.
- Onsite Infrastructure – Systems, facilities, and structures contributing to the entire operation including truck shop, oxygen plant, limestone crushing, freshwater system, reclaim and process water system, and water treatment plant for treating excess water to discharge standards.
- Tailings Management – Tailings storage facility (TSF), buttress, and associated pumps and pipelines to safely manage ore processing by-products during operations and in the long term.
- Water Management – Surface water diversions and contact water management infrastructure; freshwater, reclaim water, and potable water supply systems; mining impacted water treatment and management infrastructure; and sanitary waste management infrastructure.

Figure 15-1 provides a general overview of the mine site at the beginning of the mine life.

Figure 15-1: Site Layout at the Beginning of Mine Life



## 15.1 Project Site Access

The Project site is currently accessed by the Stibnite Road, National Forest (NF-412), from the village of Yellow Pine, with three alternative routes up to that point. To address a number of shortcomings related to these routes, alternative access via the Burntlog Route was selected over several other possible alternatives because it provides safer year-round access for mining operations, reducing the proximity of roads to major fish-bearing streams, and this route respects the advice and privacy of community members close to the Project location. The route originates from the intersection of Highway 55 and Warm Lake Road and would be approximately 71 miles long. The route consists of 34 miles of existing highway (Warm Lake Road), 23 miles of upgraded road, and 14 miles of new road. The 37 miles of new and upgraded road would have a design speed of 20 mph, max 10% grade, a 21-foot width and intermediate-sized tractor-trailer loading criteria. A maintenance facility would be constructed along the route, as shown on Figure 15-2.

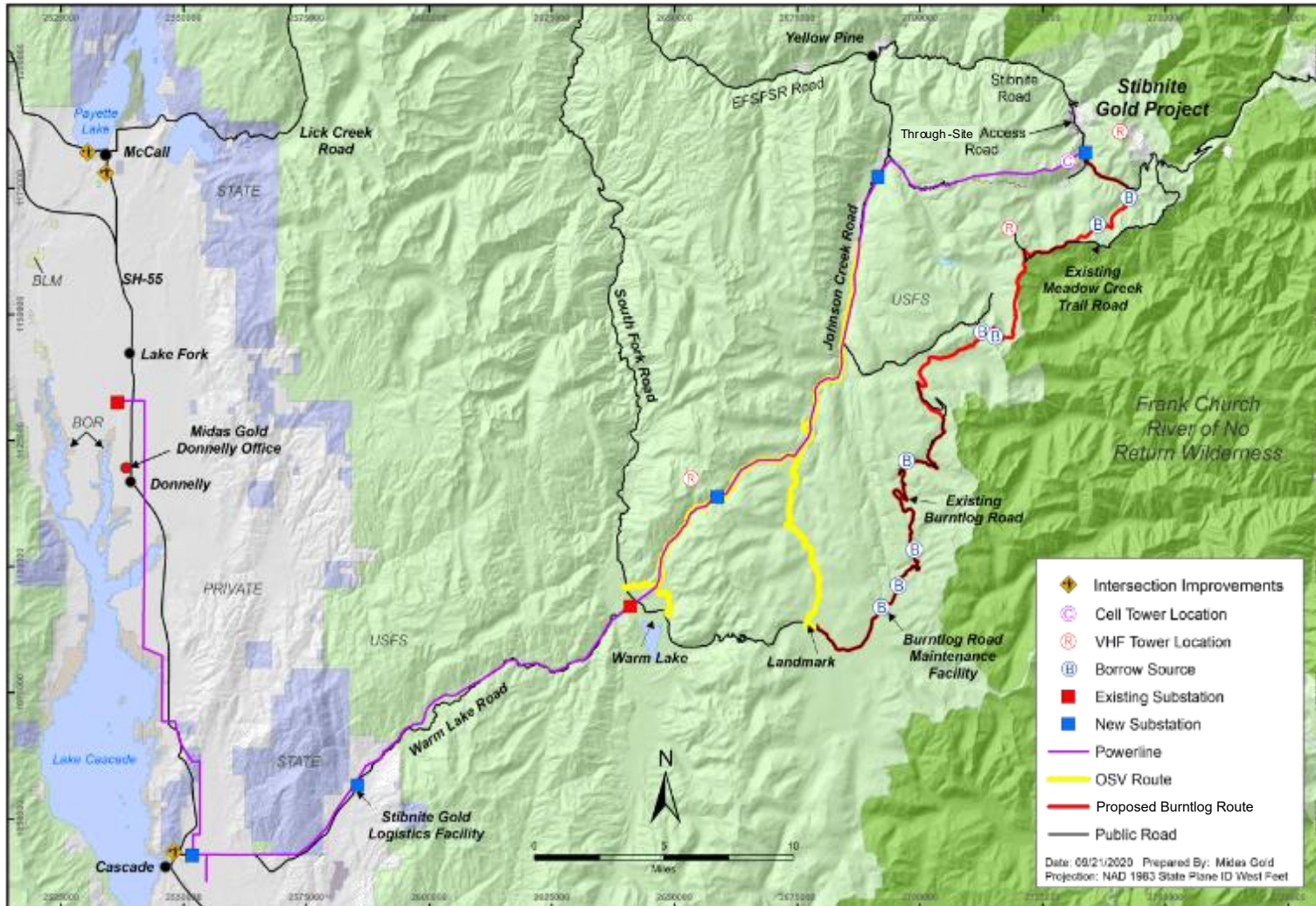
Perpetua Resources will provide buses and vans as the primary means of employee and contractor transportation to the Project site, reducing Project-related traffic along the access roads to the Project site, thereby reducing risks to the safety of workers, as well as minimizing the environmental impacts associated with vehicle traffic (particularly dust generation and sediment runoff, and also greenhouse gas and particulate emissions from vehicle use).

A through-site access route will replace the current access through the Project site on Stibnite Road during mine operations. During construction of the Project, a new 16-foot-wide gravel road would be constructed to provide access from Stibnite Road to Thunder Mountain Road through the mine site. A small segment of the road would be constructed on a widened bench within the Yellow Pine pit. South of the Yellow Pine pit, this road would parallel a new mine haul road, following the route of a former mine haul road west of the EFSFSR.

Valley County currently grooms for over-snow vehicle (OSV) use between Warm Lake and Wapiti Meadows (approximately 17 miles) along Warm Lake and Johnson Creek Roads. During construction and operations, Perpetua Resources would plow Warm Lake Road between Warm Lake and Landmark which requires an alternative route for OSV users. During construction, Johnson Creek Road will be plowed during the winter and an OSV route will be established parallel to the road to provide access to the Landmark area.

Primary access to and from the Project (via Warm Lake Road) originates along State Highway 55 (SH-55), a major north-south transportation corridor connecting southern Idaho to northern Idaho. A traffic impact study commissioned by Perpetua Resources evaluated five intersections along this corridor and recommended improvements to three of the intersections to maintain an adequate level of service on the state transportation network. Two of the intersections are located in McCall, Idaho and the third is located at the intersection of Warm Lake Road and SH-55 near Cascade, Idaho. Proposed traffic improvements would improve WB-67 semi-truck turning movements and include the addition of dedicated turn lanes, acceleration/deceleration lanes, and striping modifications.

Figure 15-2: Offsite Infrastructure and Utility Upgrades



## 15.2 Logistics Facility

The offsite administrative offices, transportation hub, and warehousing needed for the Project, referred to as Stibnite Gold Logistics Facility (SGLF), will be located within Valley County, with easy access to State Highway 55 (Figure 15-2). This facility will be located near the town of Cascade to reduce traffic to and from the Project site and to reduce housing requirements at the Project site. Perpetua Resources has acquired property along Warm Lake Road for the SGLF. Operating supplies for the mine will be staged and consolidated at the SGLF to reduce traffic to the site. The southern portion of the facility includes parking for vehicles of construction and operations workers who will be bused to the Project site. A new substation will be constructed in the northern area of the Project site as well as a laydown yard for equipment and material staging. An area on the east side of the facility is reserved for potential future construction of a core storage facility.

The administration building includes offices for managers, safety and environmental services, human resources, purchasing, and accounting personnel, as well as conference rooms, a break room, and restrooms. Network servers and the communications link for the mine would also be located at this complex as well as the offsite repository for physical and electronic records for mine operations.

The training facility includes a reception and waiting room, offices, conference rooms, a training room and restrooms. The training facility will be utilized to onboard personnel prior to mobilization to the Project site with the aim to reduce housing requirements and traffic at the Project site.

The SGLF hazardous storage facility will be utilized as a short-term collection, sorting and storage prior to shipping hazardous materials and waste off-site. The SGLF design also includes a warehouse which will be utilized to store parts and supplies and includes a parking area for trucks to check-in and assemble loads prior to traveling to the Project site. A truck scale is planned to verify loads going into and out of the warehouse area, as well as a laydown area for temporary outdoor storage.

## 15.3 Burntlog Maintenance Facility

The Burntlog Maintenance Facility would be located on NFS land 4.4 miles east of the intersection of Warm Lake and Johnson Creek Roads and would be accessed via the Burntlog Route (Figure 15-2). The maintenance facility would be located within the footprint of a borrow source established for construction of the Burntlog Route. The facility would include three buildings: a 7,500-square foot maintenance building, a 7,100-square foot aggregates storage building, a 4,300-square foot equipment shelter, and an 825-square foot sleeping quarters; and a double-contained fuel storage area housing three 2,500-gallon fuel tanks for on-road diesel, off-road diesel, and unleaded gasoline. A 1,000-gallon used oil tank would be located inside the maintenance facility and a 1,000-gallon propane tank would be located at the facility for heating.

## 15.4 Power Supply and Communications

### 15.4.1 Power Supply

Grid power was selected as the preferred primary power supply for the Project based on its low operating cost, low unit prices, and the existing clean energy portfolio of Idaho Power Company (IPCo). The existing grid network would need to be upgraded to provide the power necessary to support the 65-megawatt (MW), 72MVA load.

The upgrades required to integrate the Project load into the IPCo network include an increased 230/138 kV transformer capacity; approximately 41.3 miles of 69 kV lines upgraded to 138 kV; approximately 21.0 miles of 12.5 kV line upgraded to 138 kV line; and approximately 9.2 miles of new 138 kV line. Measures to increase the voltages on the IPCo system include new or upgraded 138 kV substations at McCall, Lake Fork, Cascade, Scott Valley, Warm Lake, Thunderbolt Drop, Johnson Creek, and Stibnite. IPCo would need to resupply small consumers between the Johnson Creek substation and users to the south via an underground 12.5 kV replacement line. Two route modifications were identified during public outreach and were incorporated into the design. The key reasons for the modifications were to avoid wetland disturbance and impacts to private property.

The 138-kV line would be routed to the Project site's main electrical substation where transformers would step the voltage down to the distribution voltage of 34.5 kV. The main substations will be redundant dual 138 to 34.5 kV transformers to prevent loss of power due to failure.

Power distribution from the Main Substation to various Project facilities would be at 34.5 kV. Power distribution to the primary crusher, truck shop, mine pits, TSF, worker housing facility, and within the process plant is designed to be mostly overhead with specific areas being underground.

Diesel generators distributing at 34.5 kV are planned for use as backup/emergency power during the operations phase of the Project. These generators will be connected to the main plant switchgear located adjacent to the substation; generators will also be installed at the Contact Water Treatment Plant (CWTP) and Worker Housing Facility (WHF) providing operational power during the Project construction phase and emergency power once utility power is energized. The sanitary wastewater treatment plant (SWWTP), drinking water treatment plant (DWTP), fire systems, and camp will all be supplied from the WHF generation

### 15.4.2 Communications

Perpetua Resources' existing microwave relay was designed and constructed to be scalable to accommodate potential future increases in communication requirements. To support construction communication, Perpetua Resources would run fiber optic cable to our Donnelly office from a port on State Highway 55. From there, the existing microwave point-to-point system from Donnelly to Snowbank and then Snowbank to Cinnabar would be upgraded to support internet speeds up to 1.4 Gbps utilizing an 11 GHz band. This microwave infrastructure will provide redundant communications during operations. Perpetua Resources' primary communication infrastructure during operations would include fiber optics installed on Idaho Power's transmission line between Cascade and Stibnite.

Perpetua Resources would partner with a local telecommunications company to provide fiber internet service to a demarcation point at the Cascade Switching Station. The fiber optic cable would be deployed on the transmission line in the shield position.

The communication facilities would also need to be expanded at the mine site and along the Burntlog Route to facilitate two-way rapid communication between equipment operators and ground personnel and to allow broadcasting of emergency messages. The two-way radio system would be supported by a series of repeaters placed on public and private land. A series of very high frequency (VHF) radio repeaters would be placed along the Burntlog Route as needed. The repeaters would be placed near the existing Meadow Creek Lookout and Thunderbolt Lookout communication sites, the new Burntlog Road Maintenance Facility, and on private parcels at the mine site as needed. The 10-foot towers on 3-foot by 3-foot concrete pads would be supported by solar panels, support hardware, and a backup battery case.

### **15.5 Worker Accommodations**

Perpetua Resources has an existing on-site worker housing facility with a capacity for approximately 60 workers. A temporary housing facility will be installed to accommodate up to 140 people for early works construction activities at the Project site.

Since the Project is in a remote area of Idaho, accommodation at the Project site will be required for construction and operations personnel. The location selected for the worker accommodation is approximately 1½ miles southeast of the confluence of the EFSFSR and Meadow Creek, just off the existing Thunder Mountain Road.

The new accommodations will house the estimated 1,052-person construction workforce. The existing exploration housing facility will be decommissioned and demobilized once the new worker accommodations are built and commissioned. A construction contract with ATCO was executed in 2025 for the development and construction of the permanent worker housing facility.

The operations worker housing facility would be developed by demobilizing approximately half of the beds at the construction worker housing facility and upgrading the remaining units of the construction housing facility. Approximately 675 on-site employees are needed for the operation based on the overtime scheme associated with the majority of employees working a modified “14 on, 14 off” schedule, with a portion following an “8 on, 6 off” work cycle. The bed count associated with this position assessment is approximately 485. As a result, the camp is designed to be a 550-person site residential facility, leaving approximately 65 beds for visitors and/or temporary workers of various types.

### **15.6 Onsite Infrastructure**

Infrastructure in the plant area includes a network of roads, power distribution, surface water diversions, and water pipelines. The contributing processes of oxygen supply, limestone crushing, lime calcining, truck servicing, and water treatment for discharge are also included as infrastructure. The roads that provide access to plant buildings and facilities connect to the access road before it reaches the haul road, facilitating deliveries of equipment, materials, and supplies without conflict with mine traffic. The main roads parallel the EFSFSR and have gentle grades, contributing to safety, even in winter months. Power distribution through most of the Project site is on overhead powerlines or in

cable trays. Powerlines enter the Project site from the west side into the Main Substation and power is distributed to the Oxygen Plant substation and throughout the process area. Overhead power lines distribute power to the north and south of the plant area for water management, truck maintenance, fish tunnel supply, and water reclamation from the TSF. Water from supply wells in the Meadow Creek valley is directed to a collection tank and pumped to the fresh/fire water tank. The pipelines to and from the fresh/fire water tank, as well as yard piping in the plant area, are buried to protect the lines from freezing.

Stormwater and snowmelt are diverted by berms and channels that pass through the process area to natural drainages (Figure 15-6). Contact water from the plant site is collected by berms and ditches that direct it to lined contact water ponds. Collected contact water is used as process makeup water after settling to reduce suspended solids.

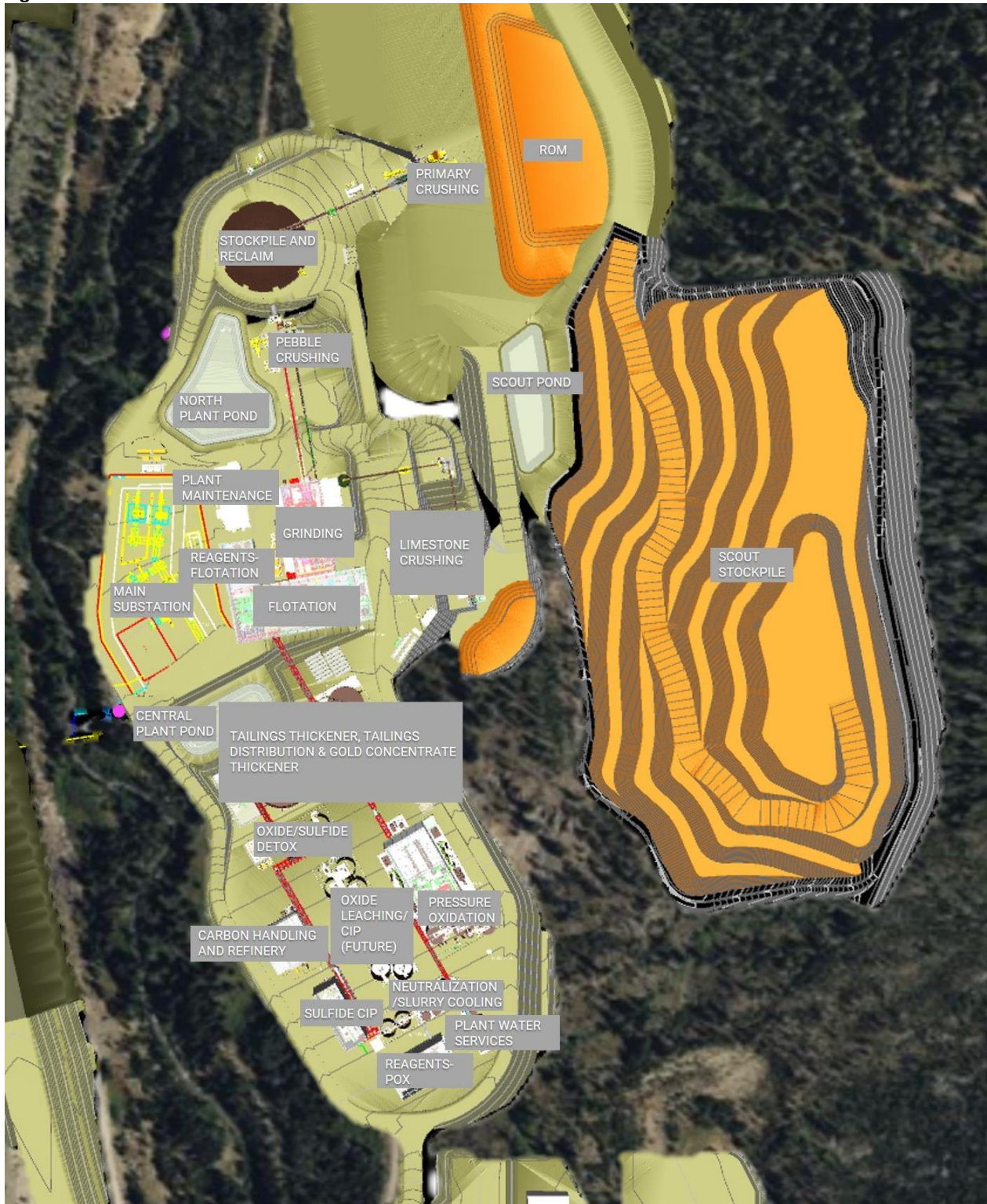
### **15.6.1 Oxygen Supply**

A cryogenic air separation unit (ASU) is planned to provide the supply of oxygen required in the pressure oxidation process (Figure 15-3). The oxygen plant equipment is planned to be purchased from a vendor including installation supervision. Oxygen would be piped directly from the oxygen plant to the autoclave building. The oxygen plant would have its own electrical power substation adjacent to the plant.

### **15.6.2 Limestone and Lime**

A limestone and lime area were added to the layout defined in the 2022 TRS because of changes in the neutralization strategy. Limestone quarried from the north end of the West End pit would be hauled to a pad south of the primary crusher pad (Figure 15-3). Limestone would be crushed and screened to feed the lime kiln and the limestone grinding mill. The large-sized fraction of the crushed limestone is conveyed to the Lime Kiln to make lime for pH conditioning. The smaller fraction is conveyed to a limestone grinding area of the mill building to make a limestone slurry for acid neutralization, both within and after the autoclave.

Figure 15-3: Process Area Detail



### 15.6.3 Water Treatment Plant

Contact water and groundwater pumped from dewatering wells will be used to augment the operation's water supply demands. Periodically during mine life, especially in Years 4 through 7, these sources are projected to produce more water than is required to satisfy operational demands. A water treatment plant (WTP) using metals precipitation, biological treatment, and filtration technology is planned to treat up to 2,000 gpm of excess water and discharge it to permitted outfalls on the perennial streams flowing through the site (Figure 15-6). A closure process water treatment plant, for treating TSF water, will be located on private land on the TSF buttress after the buttress has been covered and reclaimed.

### 15.6.4 Truck Shop Area

A truck servicing area is located along the main haul road near the Hangar Flats pit (Figure 15-4). The main truck shop complex includes a parts warehouse, repair shop, truck wash, and tire shop. The mine operations and change house (mine dry) are in an adjacent building. Contact water ponds are present to collect stormwater runoff at the north and south ends of the area. A containment pond for draining the tailings line is located at the far south end of the area adjacent to booster tanks for contact and dewatering water.

Fuel for the operation consists of diesel, gasoline, and propane. Truck and light vehicle fuel is stored and dispensed from tanks at the north end of the truck shop area (Figure 15-4). Propane is stored in a tank north of the lime kiln, which is its primary consumer along with the autoclave steam boilers.

Figure 15-4: Truck Shop Area Detail



## 15.7 Water Management

Perpetua Resources will develop a water management system that protects or improves water quality in Project-area streams and provides water for ore processing, fire protection, exploration activities, surface mining (dust control), and potable water needs.

The key water management consideration for the Project site is the large amount of snowmelt runoff during the months of April through June, making spring melt the critical time for water management, storage, and treatment. In general, surface water that comes in contact with materials that have the potential to introduce mining- and process-related contaminants (contact water) is kept separate from surface water that originates from undisturbed, uncontaminated ground (non-contact water). This is accomplished by diverting clean water around mine facilities and collecting and reusing, evaporating, or treating and discharging contact water.

Meteoric and tailings consolidation water will be reclaimed from the TSF and would supply the majority of the water needed for ore processing. Additional water needs would be supplied from: pit dewatering, reuse of stored contact water, groundwater wells, and a surface intake near the upstream portal of the EFSFSR diversion tunnel.

Active dewatering will be required at the Yellow Pine and Hangar Flats pits, generally from alluvium and fractured bedrock wells, with total pumping ranging from zero to approximately 2,100 gpm over the life of mine. Excess dewatering water not used for ore processing would be treated, if required, and discharged to a surface outfall.

Major water diversions include construction of a tunnel and fishway to divert the EFSFSR and provide fish passage around the Yellow Pine pit, and surface diversions of Meadow Creek at the TSF, TSF Buttress, and Hangar Flats pit. Other smaller scale diversions are provided to intercept hillslope runoff and minor tributaries at the TSF, TSF Buttress, Fiddle GMS, Bradley Tailings reprocessing operation, open pits, and process plant area.

Contact water from the pits, stockpiles, TSF buttress, truck shop, ore processing facilities, and legacy materials exposed during construction would be collected in lined ponds or in-pit sumps for later use in ore processing, dust control, or treatment for discharge. Water management features would be phased in and out as mining progresses and the amount of surface area generating contact water increases as pits, stockpiles, and DRSFs expand and are removed as backfilling and reclamation is completed. Aggregate contact water pond storage varies according to mine phase and is roughly 300 to 400 ac-ft over the mine life (excluding storage in pits).

Four water types will require treatment over the life of the Project: contact water, including dewatering water, from mine facilities (construction through closure); process water from the TSF (closure); potable water; and sanitary wastewater (construction through early closure). Early in construction a modular, mobile, two-stage metal precipitation and clarification system, followed by filtration, with reverse osmosis polishing as required, is planned while the permanent system is under construction. The permanent system will employ two-stage precipitation, clarification, and biological treatment followed by filtration. During construction, the brine and sludge would be temporarily stored onsite then transported offsite for disposal as treatment needs require. During operations, sludge from the clarifiers and brine would be piped to the tailings thickener and transported for storage in the TSF along with project tailings. During operations, treating and releasing contact water is generally limited to periods when a significant amount of dewatering water is being produced, or seasonally in wet years. During construction and at closure, absent a water demand for ore processing, less contact water can be consumed and proportionally more must

be disposed of through evaporation or treatment and discharge. The variability in water excess is met with a phased water treatment approach, with approximately 300 gpm of treatment capacity during construction, ramping up to 2,000 gpm during the peak of dewatering excess, and returning to 750 gpm through closure. Throughout the mine life, treatment would be augmented by mechanical evaporation when seasonal water storage and weather allow. Contact water volumes decline rapidly at closure as facilities are covered and reclaimed, but post-closure treatment is anticipated for the TSF until approximately 25 years after tailings deposition ceases when tailing consolidation water is predicted to be minimal.

## 15.8 Tailings Management

The Project plans to produce approximately 120 million short tons of tailings solids (approximately 115 Mt of ground ore plus approximately 5 Mt of lime, ground limestone, and gypsum resulting from the neutralization of oxidized sulfides) over a 14.25-year mill life. The tailings would contain trace amounts of cyanide and metals (including arsenic and antimony). A fully lined containment facility utilizing a composite liner with a leak collection/recovery system is proposed to contain the tailings and process water within the impoundment. This option is optimal to reduce the project footprint, provide for a single containment facility for monitoring and closure, and allow for the utilization of development rock and legacy material to construct and buttress the TSF. The TSF impoundment, embankment, and associated water diversions would occupy approximately 423 acres at final buildout. The TSF location relative to other project features is shown on Figure 15-1.

### 15.8.1 TSF Design Criteria

The TSF would consist of a rockfill embankment, a fully-lined impoundment with a leak collection/recovery system, and appurtenant water management features including a surface diversion of Meadow Creek and its tributaries around the facility. The TSF Buttress located immediately downstream of, and abutting against, the TSF embankment would substantially enhance embankment stability. Historical spent heap leach ore would be reused in TSF construction in locations isolated from interaction with water, but the majority of the rockfill would be development rock sourced from the open pits. Design criteria were established based on the facility size and risk using applicable dam safety and water quality regulations and industry best practice for the TSF embankment on a standalone basis; the addition of the buttress substantially increases the safety factor for the design. Table 15-1 lists the design criteria for the TSF.

**Table 15-1: Tailings Storage Facility Design Criteria**

	Parameter	Minimum Value	Comments
Solution and Water Management	Inflow Design Flood (IDF) – Impoundment	24-hour Probable Maximum Flood (PMF)	The facility will provide reserve storage capacity above the normal operating pool to store the IDF, assuming diversions fail at the onset of the storm. No operational spillway is included.
	IDF - Diversions	1% annual exceedance probability (AEP) (1-in-100-year event)	Diversions will convey peak flow from IDF without damage.
	Freeboard – Impoundment	Stage 1: 6.6 feet Stages 2-5: 5.8 feet	Wind/wave effects (wind setup and wave runup) + 2' dry freeboard above stored IDF and operational pool combined. Wind/wave effects vary by stage.
	Minimum Freeboard – Diversions	1 foot	Minimum freeboard increased to 2.8 feet in steep outfall channel.
Geotechnical Stability	Minimum Static Factor of Safety (FOS)	1.5	-
	Minimum Pseudo-static (Earthquake) FOS	1.0	-
	Minimum Post-Earthquake Load FOS	1.2	-
	Design Earthquake	2,500-year – temporary slopes in operations (OBE); Maximum Credible Earthquake (MCE) – embankment and post-closure	2,500-year OBE applies to temporary slopes (TSF interior, excluding the upstream embankment face) that are overtaken and buttressed by tailings as the facility fills. MCE applies to embankment during both operations and closure.

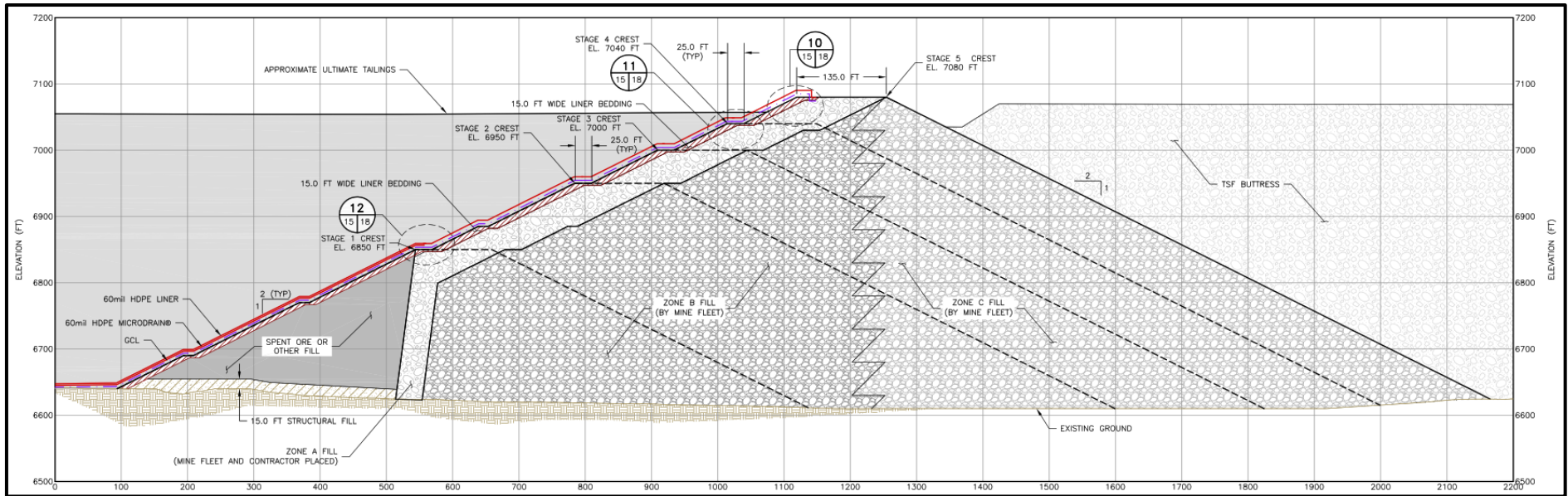
The TSF embankment would be constructed of compacted mine development rock and overburden, repurposed spent heap leach ore, and native borrow sources within the impoundment footprint. Rockfill would be placed in zones of successively more stringent lift height and compaction criteria approaching the liner (Figure 15-5), with the final liner bedding (directly under the liner system) consisting of well-graded silt, sand, and gravel. The development rock TSF Buttress would be placed on the east side of the TSF embankment, providing additional short- and long-term geotechnical stability. Engineered slope preparation fill (Figure 15-6) would be placed against steep slopes within the impoundment to flatten and smooth slopes to facilitate liner placement. Slope preparation fill would consist of spent ore, alluvium, colluvium, previously-mined rock, till, or rock borrowed from within the limits of the TSF or open pits, depending on material availability, as the fills are expanded.

### 15.8.2 TSF and Buttress Staging

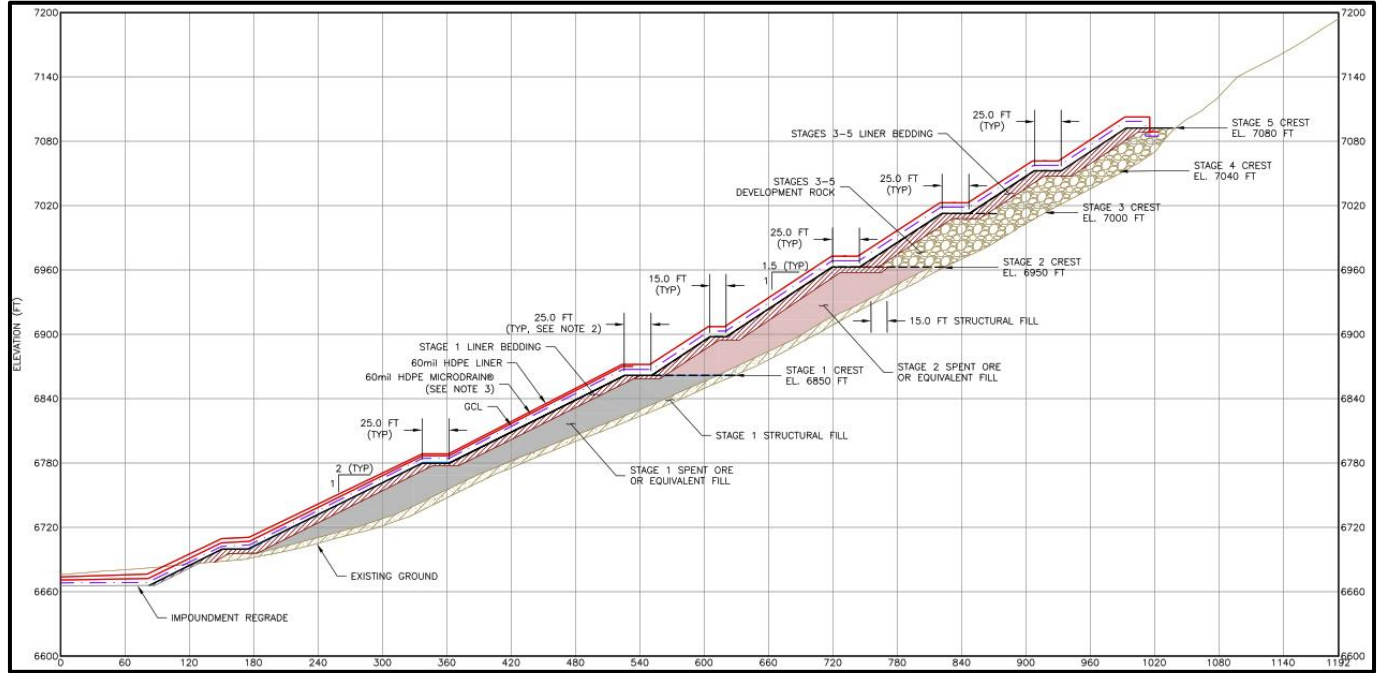
The TSF would be expanded at intervals throughout the mine life to align with tailings storage and freeboard requirements, beginning with a starter embankment constructed to a crest elevation of approximately 6,850 ft (or approximately 240 ft above the existing ground surface). The final embankment height would be approximately 480 ft at a crest elevation of 7,080 ft. Predicted fill rates and staging are based on tailings consolidation testing and modeling, the mine plan, and the site-wide water balance. Buttress staging is driven by the availability of development rock from the open pits; development rock will only be placed in the buttress when not needed for embankment construction.

The impoundment and starter embankment would be constructed and fully lined to the elevation of the first stage during preproduction. The bulk of the embankment and buttress rockfill would be placed well in advance of the need for lined storage, with the embankment crest reaching its maximum elevation by end of the fifth year of production. Subsequent facility expansions would thus consist of placement of the finer, thinner lift-height material on the upstream embankment face; clearing and fill within the impoundment; liner bedding placement; and liner installation and drain extensions throughout the facility. Five total stages are envisioned, with a facility expansion planned every 3 years on average during operations as illustrated by the filling curve (Figure 15-7).

Figure 15-5: TSF Embankment Section

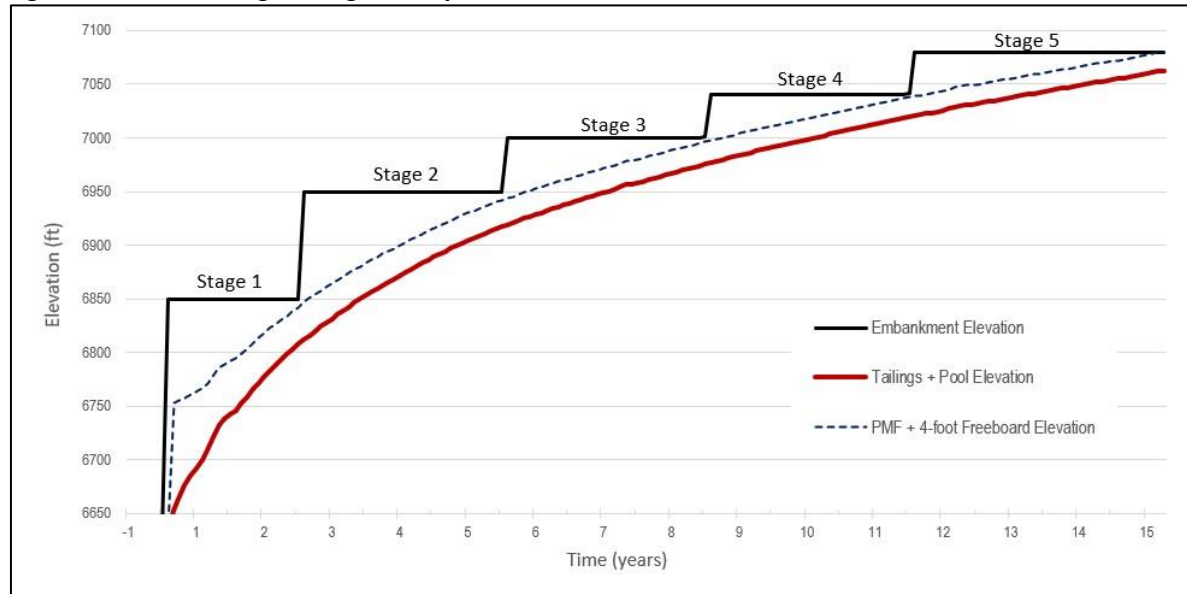


**Figure 15-6: TSF Impoundment Slope Preparation Fill Section**



Note: Slope preparation fill crest is sloped. Referenced crest elevation is the slope preparation fill crest at the TSF embankment.

**Figure 15-7: Tailings Storage Facility Fill Curve**



### 15.8.3 TSF Liner and Drainage System

The TSF impoundment (including the upstream embankment face) would be composite-lined with geosynthetic materials to prevent seepage of process water or transport of tailings out of the facility. Throughout the Stage 1 impoundment and in areas of shallow groundwater (<100 ft per Idaho regulations), an additional leak collection and recovery system (LCRS) will be provided above the conventional composite liner, with the upper layer of the LCRS consisting of a 60-mil (1.5 mm) textured high-density polyethylene (HDPE) geomembrane primary liner, and the bottom layer consisting of 60-mil HDPE MicroDrain® secondary liner, placed with drainage studs facing upwards to create a leak collection layer in between the primary and secondary geomembranes without the need for a geonet. A geosynthetic clay liner (GCL) will be placed underneath the geomembrane layers, providing a self-sealing leakage barrier should the geomembrane liner be torn or punctured, and improving contact between the liner system and the subgrade, both of which reduce leakage. As the facility is expanded past Stage 1, the LCRS will be installed in shallow groundwater areas, but replaced with a conventional composite liner (textured 60-mil HDPE over GCL) in other areas. A network of geosynthetic drains (overdrains) would be placed above portions of the geomembrane liner to reduce hydraulic head on the liner and excess pore pressure in the overlying tailings. The drains would report to a sump near the upstream embankment toe, and the water would be pumped out to the pool or reclaim system for reuse. A similar sump would be used to recover any water from the LCRS. The two systems are jointly referred to as the Overdrain-LCRS (OL) sump.

Where suitable soil exists (typically in valley bottoms), it would be scarified and re-compacted to prepare the liner subgrade, or a minimum of 12 inches of liner bedding fill would be placed. Steep, rocky hillsides (approximately 1/3 of the TSF footprint) would be covered with slope preparation fill to cover rock outcrops and flatten slopes sufficiently to allow liner placement.

Underdrains installed during site preparation would collect spring and seep flows beneath the TSF impoundment liner and embankment, reducing hydrostatic uplift on the liner system, and convey the collected water beneath the TSF embankment and buttress. The underdrains would be a series of parallel drains with branching laterals. Underdrain flows would be collected in a sump upstream of the discharge point, monitored for water quality, then discharged to surface water or pumped to the ore processing facility for use as makeup water.

Cyanide would be reduced in the process plant to levels protective of wildlife. An 8-foot high, chain-link fence surrounding the TSF is designed to keep wildlife such as deer and elk from entering the impoundment area to prevent either liner damage or wildlife drowning.

### 15.8.4 Tailings Distribution and Water Management

Thickened tailings slurry would be pumped from the tailings thickener at the process plant to the crest of the embankment and then around the perimeter of the TSF in a distribution header. The tailings pipeline and pumping system would require sufficient head and operating flexibility to deliver tailings to the back of the TSF as the embankment increases in height over the 14.25-year operational life of the facility. Horizontal centrifugal pumps that increase in number as the embankment height increases would be used to pump the tailings from the thickener to the TSF. The initial requirement includes five operating pumps and five standby pumps.

Thickened tailings would be deposited in the TSF from a series of drop-pipes (spigots) originating from a 20" HDPE tailings distribution header along the facility perimeter bench. Subaerial tailings deposition would promote drying and consolidation of the tailings. Rotating the active deposition points would allow additional drying, and sequencing of deposition would allow gradual development of a tailings beach that slopes generally from west to east within the facility, mimicking the pre-Project valley drainage and simplifying facility closure. Development of a tailings beach around the perimeter would provide a measure of protection against floating ice damaging the liner system.

The tailings pipeline from the mill to the TSF would be HDPE-lined, 18-inch carbon steel pipe. Light vehicle roads and haul roads would connect the ore processing facility and the TSF. The tailings delivery and reclaim water return pipelines would parallel the roads (Figure 15-1) with secondary containment provided throughout the pipeline length. Secondary containment for pipelines would consist of a backfilled geomembrane-wrapped trench, pipe-in-pipe, or open geosynthetic-lined trench, depending on location. The pipeline corridor would drain to one of two locations – a pipeline maintenance pond at the truck shop or the tailings thickener at the ore processing facility. A 12-inch to 18-inch (size variable according to elevation) HDPE reclaim water line would be co-located in the trench to provide secondary containment of process water being reclaimed from the TSF. In approximately Year 4, a portion of the tailings pipeline would be rerouted to the southeast to accommodate the growth of the Hangar Flats open pit and associated reconfiguration of haul roads.

TSF water management facilities include diversions, underdrains, overdrains, reclaim system, and evaporators. The TSF would be operated as a zero-discharge facility meaning no water would be discharged to the surface water or groundwater except under unusual circumstances and in compliance with applicable laws, until closure when water treatment would be implemented. During operations, water collected in or falling on the surface of the TSF would drain to the supernatant pond on top of the tailings and be recycled along with tailings consolidation water for use in ore processing via barge-mounted pumps discharging to the reclaim pipeline. Clean water would be diverted around and under the facility in surface diversions and underdrains. Surface water diversion channels would serve to temporarily divert Meadow Creek and its tributaries around the TSF and TSF Buttress, while underdrains constructed in valley bottoms would collect springs and natural seeps and prevent accumulation of water under the liner system. Evaporators may be installed at the TSF and used to dispose of excess water as needed. The geocomposite overdrains would report to a sump near the upstream embankment toe, from where it would be pumped out and the water returned to the TSF water pool. Any water reporting to the LCRS would be collected in a similar sump adjacent to the overliner drain sump and sampled then pumped back to the TSF water pool. Table 15-2 summarizes the TSF design.

**Table 15-2: Summary of TSF Design**

Design Aspect	Description
Underdrains	Mains: perforated pipe and gravel in geotextile-wrapped trenches. Laterals: DRAINTUBE® geocomposite drains.
Subgrade	Reworked and compacted in situ materials, or minimum 12 inches of liner bedding fill.
Liner Subbase	Geosynthetic clay liner
Secondary Liner / Leak Collection and Recovery System	60-mil HDPE MicroDrain® installed drainage studs facing upwards
Primary Liner	60-mil HDPE geomembrane, double-side textured
Overliner drains	DRAINTUBE® geocomposite drains.

Design Aspect	Description
Leak Detection	Sampling of LCRS, underdrains, and downgradient monitoring wells.
Deposition Strategy	Subaerial; depositing from perimeter of impoundment and embankment with pool on south (early) and east (later) sides near, but not normally in contact with embankment.
Reclaim	Pumped from barge (vertical turbine pumps).
Excess Water Disposal	Consumption in process (operations), mechanical evaporators (operations and closure), water treatment and discharge (closure).
Diversions	Surface channels, in rock cut or lined with geosynthetics (e.g., concrete cloth, HydroTurf®) or riprap and GCL. Parallel or embedded pipe for low flows (stream temperature mitigation measure).

## 16 MARKET STUDIES

The Stibnite Gold Project anticipates generation of two saleable products: doré bars and an antimony concentrate. The doré bars would contain gold and silver and would need to be shipped to a refinery to separate the precious metals from impurities and each other. The antimony concentrate consists predominantly of stibnite but also contains gold, silver, and impurities, so it must be shipped to a facility for smelting or refining to separate the valuable components.

### 16.1 Doré Payabilities, Refining and Transportation Assumptions

The economic analysis completed for this Report assumed that gold production in the form of doré could be readily sold without deleterious element penalties. Typical gold doré payabilities, refining and transport charges are provided in Table 16-1.

**Table 16-1: Dore Payables, Refining and Transportation Assumptions**

Parameter	Gold in Doré
Metal Payability in Doré	99.5%
Refining Charges	\$1.00/oz Au
Transportation Charges	\$1.15/oz Au

### 16.2 Antimony Concentrate

In December 2024, Perpetua Resources entered into a Memorandum of Understanding (MOU) to explore antimony processing opportunities with an Idaho-based company. This resulted in the reduction of estimated transport costs to \$74.60/wmt and an increase of antimony payability to 85%, which has been utilized in the economic analysis. Since then, another Idaho operator in the same area has announced plans to construct and operate a hydrometallurgical plant to process antimony-bearing ores and concentrates.

All remaining payabilities, refining and transport charges for the Project remain unchanged since the 2022 TRS.

Table 16-2 summarizes the antimony concentrate payables and transportation charge assumptions for this study.

**Table 16-2: Antimony Concentrate Payables and Transportation Assumptions**

Parameter	Concentrate Payables and Transportation Charges
Antimony Payability	85%
Gold Payability	<5.0 g/t Au no payability ≥5.0 g/t ≤8.5 g/t Au payability of approximately 15 - 20% ≥8.5 g/t ≤10.0 g/t Au payability of approximately 20 - 25% ≥10.0 g/t Au payability of approximately 25%
Silver Payability	<300 g/t Ag no payability ≥300 g/t ≤700 g/t Ag payability of approximately 40 - 50%

Parameter	Concentrate Payables and Transportation Charges
	≥700 g/t Ag payability of approximately 50%
Transportation Charges	\$74.60/wet tonne

### 16.3 Metal Prices

The metal prices selected for the four economic cases evaluated in the economic assessment are shown in Table 16-3. The basis for the selection of these metal prices is also provided in Table 16-3.

**Table 16-3: Study Metal Prices**

Case	Metal Prices			Basis
	Gold (\$/oz)	Silver (\$/oz) <sup>1</sup>	Antimony (\$/lb) <sup>1</sup>	
Case A	\$3,250	\$40.00	\$10.00	Case corresponds to long-term average metal price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case B	\$4,000	\$40.00	\$10.00	Case corresponds to 4-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case C	\$4,500	\$40.00	\$10.00	Case corresponds to 3-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case D	\$5,000	\$40.00	\$10.00	Case corresponds to recent spot gold pricing in Q1 2026, and long-term average price forecasts for silver and antimony

Notes: 1. The company has elected to use flat antimony (\$10/lb) and silver (\$40/oz) prices in its analysis which reflect long-term consensus estimates.

The prices used in this study are consistent with accepted industry practices, analyst forecasts, and the range of prices being used for other project studies for gold and silver.

There is no guarantee that the gold, silver, and antimony prices used in the study cases would be realized at the time of production. Prices could vary higher or lower with a corresponding impact on Project economics.

### 16.4 Contracts

There are no mining, concentrating, smelting, refining, transportation, handling, sales, hedging, forward sales contracts, or arrangements for the Project. This situation is typical of a project that is still several years away from production.

## 17 ENVIRONMENTAL STUDIES, PERMITTING AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

This TRS incorporates updates since the 2022 TRS based on recent environmental baseline studies, permitting submittals and approvals, and ongoing regulatory compliance activities. Key updates from 2022 include the Forest Service's issuance of the EIS final Record of Decision and approval of the Plan of Operations, the U.S. Army Corps of Engineer's (USACE) issuance of a Clean Water Act Section 404 permit, IDEQ's , issuance of the air quality construction and operating permit, IDEQ's determination of the groundwater point of compliance, and IDWR's grant of water rights. Cyanide Permit Phase 1 was also approved by IDEQ during the spring of 2025. IDWR issued five Stream Channel Alteration Permits, and the Idaho Department of Lands approved the comprehensive reclamation plans. Also, the Forest Service, USACE, IDL, and IDWR issued various approvals for construction phase financial assurance. Additionally, the Yellow Pine Agreement and the Valley County Community Impact Benefit Agreement were executed.

The Stibnite District has been mined extensively for tungsten, antimony, mercury, gold, and silver since the early 1900s, which produced significant legacy environmental impacts. Cleanup efforts undertaken by federal and state agencies and private entities have partially mitigated some of those historical impacts, but significant legacy environmental impacts persist to this day. The development of the Project presents the opportunity of mitigating those historical impacts.

Perpetua Resources established an environment, social and governance (ESG) approach focused on a "net-benefit" goal. Perpetua Resources focused on several key restoration and mitigation principles. These principles included:

- conduct activities in an environmentally responsible manner;
- utilize previously disturbed areas;
- improve fish passage and habitat;
- remove, reprocess, or reuse legacy mine wastes to protect and improve water quality;
- revegetate disturbed or burned areas to improve wildlife habitat and reduce sediment loads; and,
- restore or enhance wetlands and streams.

Perpetua Resources plans to provide restoration and mitigation projects that are both durable and additive with the intent of producing mitigation outcomes exceeding those which would have occurred in the absence of the Project.

Perpetua Resources' plans for environmental restoration, compliance, permitting, and collaboration with local and community groups are adequate to support the responsible development of the Project in the opinion of the Qualified Person.

## 17.1 Environmental Studies

An extensive dataset demonstrating historical and existing conditions exists for the Project site, including data collected by contractors for the US Forest Service (USFS or Forest Service) and EPA, the US Geological Survey (USGS), prior mine operators, and Perpetua Resources and its contractors.

Assessments by several Perpetua Resources and federal agency contractors determined that there were several pre-existing, significant and moderate, recognized environmental conditions. Overall water quality in all drainages was impaired due to naturally occurring mineralization and impacts associated with historical mining.

Perpetua Resources' environmental resource baseline data collection program was initiated in 2011, and baseline monitoring reports were submitted in 2017 to regulators. Certain studies are ongoing to provide monitoring data, and additional supplementary studies have been prepared per agency requests since 2017. Baseline data from all sources informed environmental modeling and Project design.

### 17.1.1 Historical Environmental Studies

Historical environmental studies and effects analysis conducted for the Project site supported the preparation of Environmental Impact Statements for Superior's and Hecla's legacy mining and heap-leaching operations for the West End and Homestake mines, respectively. These operations were permitted in the 1980s and included the subsequent expansion of West End mining activities in the 1990s.

An environmental site characterization was conducted at the Project site from 1998 through 2000 by URS for the USFS and the EPA (the "URS Report"; URS, 2000). Subsequent to the URS Report, Millennium Science and Engineering Inc. (MSE) conducted additional investigations and prepared various site-specific studies including an Engineering Evaluation and Cost Analysis (EE/CA) in 2003.

Although some portions of the Project site were placed on the Federal Facilities Docket on September 25, 1991, and are currently listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List (No. ID9122307607), in 2001 the EPA, the Bureau of Environmental Health and Safety (BEHS), and the Division of Health, Idaho Department of Health and Welfare determined the risk to be too low for listing the Project site on the National Priorities List (NPL).

### 17.1.2 Perpetua Resources Environmental Studies

In 2009 and 2010, Midas Gold and Vista US contracted MSE to conduct ASTM International (formerly American Society for Testing and Materials) Phase I and Phase II Environmental Site Assessments (Site Assessments) to identify RECs in connection with the Property. These Site Assessments were intended to fulfill obligations for undertaking "all appropriate inquiry" as to site conditions to satisfy the bona fide prospective purchaser, contiguous property owner, and the innocent landowner affirmative defenses under CERCLA. The Site Assessments identified a number of recognized environmental conditions, but none were categorized as imminent threats to human health or the environment; however, the Site Assessments indicated that overall water quality in all drainages was impaired due to naturally occurring mineralization and impacts associated with historical mining.

In 2011, Perpetua Resources initiated an environmental resource baseline data collection program to establish the existing environmental conditions, identify and quantify environmental risks and potential liabilities, monitor for potential impacts from onsite activities, and generate baseline reports for Project approval and permitting efforts. The environmental baseline work plans were approved by USFS subject matter experts for each of the resource categories, with input from representatives from additional state and federal agencies. Table 17-1 summarizes the nature, timeframe, and contractors responsible for environmental baseline studies. While baseline monitoring reports were initially submitted in 2017 in support of NEPA analysis, certain of the studies continue to provide monitoring data, and additional supplementary studies have also been prepared in connection with reviews from the agency interdisciplinary teams convened for the NEPA analysis. The Final EIS describes in detail studies performed to support the USFS Record of Decision and agency approval process for the SGP.

## 17.2 Environmental Modelling

Perpetua Resources and its contractors developed predictive models for use in environmental evaluation and prefeasibility-level engineering studies. Environmental models include air emissions modeling, the Hydrologic Model and meteoric water balance, Stream and Pit Lake Network Temperature Model (SPLNT), Site-Wide Water Chemistry (SWWC), and Site-Wide Water Balance (SWWB). The modeling process involved the development of conceptual models, work plan approval by the regulatory agencies, development and calibration of existing conditions models, and development of predictive models for the proposed action and alternatives to the proposed action. The suite of models facilitated environmental analysis, evaluation of alternate design scenarios, and design trade-offs. Environmental modeling has been a key tool for advanced engineering and identification of Project modifications and appropriate mitigation measures to reduce cost and environmental impact. Key Project changes and mitigation measures include: contact water treatment; expanded use of low-permeability geosynthetic covers; mine plan changes to eliminate some facilities, reduce facility size, backfill pits, reduce the acreage of concurrent disturbance; and modifying water diversion designs to reduce summer stream temperatures.

**Table 17-1: Perpetua Resources Recent and Ongoing Environmental Baseline Studies**

Baseline Resource	Baseline Study Document(s)	Preparers	Date
Groundwater	Environmental Quality Information System (EQiS) database developed	Perpetua	Ongoing
Groundwater	Quarterly Monitoring Reports	Brown and Caldwell	Ongoing
Surface Water	Quarterly Monitoring Reports	Brown and Caldwell	Ongoing
Cultural/Heritage Resources	Class III Cultural Resources Inventory Report for the Stibnite Gold Project, Valley County Idaho	Tetra Tech	March 2026
Wildlife/ESA	North Idaho Ground Squirrel Preconstruction Survey	Brown and Caldwell	September 16, 2025
Vegetation /ESA	Memorandum on Whitebark Pine Survey Results	Tetra Tech	May 19, 2025
Wetlands	Wetland Resources Baseline Study Addendum #7	Tetra Tech	October 2024
Wetlands	Wetland Resources Baseline Study Addendum #6	Tetra Tech	October 2024
Wildlife/ESA	Monarch Butterfly and Milkweed Survey	Tetra Tech	August 2025
Wildlife	Wolverine Monitoring	Perpetua	2026

### 17.3 Mine Impacted Water Treatment

The seasonal water balance excess and predicted leaching of arsenic and antimony from mined materials lead to a need to dispose of water which may not meet discharge water quality standards absent treatment. Based on measured and predicted water quality and potentially applicable discharge water quality standards, dewatering water, seepage, and contact stormwater could require treatment before discharge during operations. In closure, once other facilities are reclaimed, TSF water would require treatment. Mechanical evaporation would be used along with active, and potentially passive, water treatment to manage excess water at site. Due to the need to remove arsenic and antimony, iron coprecipitation was selected as the primary technology for active treatment. Required water treatment capacity varies from construction through closure, according to the site water balance changes and storage capacity, peaking in the middle of operations at approximately 2,000 gpm when both Hangar Flats and Yellow Pine pits are being mined, declining to approximately 1,000 gpm later in operations as facilities are concurrently reclaimed, and continuing until after the TSF is covered to manage tailings consolidation water. Post-closure water treatment will continue until approximately Year 40 (approximately 25 years after the end of ore processing operations).

### 17.4 Permitting

Project approval required completion of the Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA), which requires federal agencies to study and consider the probable environmental impacts of the proposed federal action before deciding on that action. For the Project to proceed, there are multiple federal actions required as described in the Final EIS (FEIS) for the Project, which is available at <https://www.fs.usda.gov/r04/payette/projects/50516>.

In October 2016, after many years of study, analysis, planning, and community and stakeholder engagement, Perpetua Resources prepared a comprehensive plan for the restoration and redevelopment of Stibnite, known as the PRO (Alternative 1 in the DEIS) and that plan was modified to form the ModPRO (Alternative 2 in the DEIS) in August of 2020. During the NEPA process, public and agency comments on the Modified Proposed Action (ModPRO), along with refinements to predictive modeling and the incorporation of additional environmental resource data, resulted in further revisions to the ModPRO. These refinements culminated in October 2021 with the development of the ModPRO2 mine plan of operations. The ModPRO2, identified as the 2021 Mine Management Plan (MMP) in the October 2022 Supplemental Draft Environmental Impact Statement (SDEIS), which in turn was selected as the preferred alternative in the September 2024 FEIS. The USFS in its January 2025 final Record of Decision (ROD) approved the 2021 MMP, which in turn formed the basis of the Plan of Operations approved by the Forest Service in October 2025.

The 2021 MMP also forms the basis of other federal approvals of the Project. Before the Forest Service issued its Final ROD in January 2025, the National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (USFWS) issued their Biological Opinions pursuant to the Endangered Species Act (ESA). And in May 2025, the U.S. Army Corps of Engineers issued its Clean Water Act Section 404 permit and associated ROD.

In addition to federal permits, the Project also requires multiple state and local permits, which also are described in the FEIS. The FEIS was issued by the USFS in September 2024 along with the Draft ROD State and local permitting processes are completed or in progress and include, among others, water discharge (IPDES), air quality, cyanidation,

groundwater, water rights, dam safety, mine closure and reclamation plans, building permits, sewer and water systems, among others. These permits are also generally grounded in the 2021 MMP.

The FEIS and RODs from USFS and USACE serve as an overarching procedural permitting requirement. Other primary federal and state authorizations or determinations are summarized below.

#### 17.4.1 Major State Authorizations, Licenses, and Permits

The key authorizations, licenses, and permits required by the State of Idaho are as follows:

- IPDES permits are required from IDEQ for certain discharges to surface waters. As of December 31, 2025, the applications for both the IPDES individual industrial wastewater permit and IPES sanitary wastewater discharge permit remained pending. Perpetua Resources anticipates that both IPDES permits will be issued in H1 2026.
- Air Quality Permit to Construct and Operate is required by IDEQ prior to construction and assesses the air pollutant emissions from stationary sources, determines the allowable impacts to air quality and prescribes measures and controls to reduce and/or mitigate impacts. IDEQ issued this permit to Perpetua Resources on June 17, 2022, and it is currently extended until June 17, 2026. Perpetua Resources anticipates requesting an extension through June 17, 2028.
- A Cyanidation Permit is required by IDEQ and phase 1 of the permit was issued by IDEQ on March 31, 2025 for the TSF. A permit modification for the grinding and flotation phase was submitted in November 2025, a draft permit for this second phase has been published and a final permit is anticipated in 2026. A third and final phase and of the cyanidation permit modification will address the balance of the processing plant and is expected to be submitted during 2026.
- The Idaho Ground Water Rule establishes minimum requirements for ground water protection through standards and a set of aquifer protection categories and determines the locations where these standards will be met. The IDEQ issued a determination of the points of compliance on August 25, 2023.
- Water Rights – As described in Section 4 of this Report, Perpetua Resources currently holds various water rights for domestic, commercial, industrial, and irrigation purposes. These were granted by IDWR in approvals issued in February 2024 and January 2025.
- Stream Channel Alteration Permits were required from the IDWR for modification, alteration, or relocation of any stream channel within or below the mean high-water mark. By the end of 2025, IDWR had issued five alteration permits related to Stibnite Gold Project, with one remaining, which is expected to be issued in 2026. The permits cover both on-site and off-site activities.
- Dam Safety permits must be obtained for dams greater than 10 ft high that impound a reservoir exceeding 50 acre-ft, including mine tailings impoundments greater than or equal to 30 ft high. The Dam Safety permit for the TSF starter dam was issued October 17, 2025. Other sediment and process water pond(s) may need permits, but final design optimization is still in process. Applications for those ponds will be submitted to IDWR in advance of pond construction.
- A comprehensive Reclamation Plan has been approved by the Idaho Department of Lands (IDL) and the USFS. Financial assurance in the amounts necessary to support construction phase activities and to reclaim those activities were posted in 2025 in accordance with approvals from USFS, IDL, USACE and IDWR.

- Approval of a historic/cultural resources assessment by the State Historic Preservation Office is required because the Project is located within the Stibnite National Historic District. No designated historical buildings are present. A Programmatic Agreement was signed by multiple agencies in September and October 2024 and Historic Properties Management Plan was developed in 2025.
- Others – The drinking water system(s) design(s) must be approved prior to use and comply with the Safe Drinking Water Act. Application for the drinking water system permit for the worker housing facility is under review, while the existing exploration camp facilities will be utilized to support early works construction. Ancillary facility drinking water supplies will be permitted as they are developed. Fuel Storage Facilities must comply with IDEQ design and operating standards, as well as Idaho State Fire Marshal and Valley County requirements. Spill reporting requirements for federal and state agencies are necessary components of spill prevention containment and countermeasures (SPCC) plans prepared under the authority of EPA. State requirements would also involve compliance with the Idaho Solid Waste Management Regulations and Standards transportation safety requirements enforced by the Idaho Public Utilities Commission, and others.

**Table 17-2: Federal, State and County Permit Applications and Status**

<b>Federal Government</b>	<b>Permits and Approvals</b>	<b>Status</b>	<b>Anticipated Approval</b>
Forest Service	<ul style="list-style-type: none"> <li>• Final ROD</li> <li>• Financial Assurance</li> <li>• Final Mine Plan</li> <li>• Powerline SUP</li> <li>• Section 106 Consultation</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> <li>• In Process</li> <li>• In Process</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> <li>• 2026</li> <li>• 2026</li> </ul>
NMFS/USFWS	<ul style="list-style-type: none"> <li>• ESA Section 7 Consultation</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>
Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Clean Water Act Section 404 Permit</li> </ul>	<ul style="list-style-type: none"> <li>• Issued May 16, 2025</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>
US Bureau of Reclamation	<ul style="list-style-type: none"> <li>• Transmission Line Easement Amendment (for Idaho Power Company)</li> </ul>	<ul style="list-style-type: none"> <li>• In process</li> </ul>	<ul style="list-style-type: none"> <li>• 2026</li> </ul>
Federal Communications Commission	<ul style="list-style-type: none"> <li>• Radio Authorizations</li> </ul>	<ul style="list-style-type: none"> <li>• Planning</li> </ul>	<ul style="list-style-type: none"> <li>• 2026</li> </ul>
Bureau of Alcohol, Tobacco, Firearms and Explosives	<ul style="list-style-type: none"> <li>• Permit for Transporting, Storage and Use of Explosives</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor blasting personnel are licensed</li> </ul>	<ul style="list-style-type: none"> <li>• In process</li> </ul>
Mine Safety and Health Administration	<ul style="list-style-type: none"> <li>• Mine Identification Number</li> <li>• Legal Identity Report</li> <li>• Ground Control Plan</li> <li>• Part 48 Training Plan</li> <li>• Commencement of Operations</li> </ul>	<ul style="list-style-type: none"> <li>• Planning</li> <li>• Planning</li> <li>• Planning</li> <li>• Planning</li> <li>• Planning</li> </ul>	<ul style="list-style-type: none"> <li>• 2026</li> <li>• 2026</li> <li>• 2026</li> <li>• 2026</li> <li>• 2029</li> </ul>
<b>State of Idaho</b>	<b>Permits and Approvals</b>	<b>Status</b>	<b>Anticipated Approval</b>
Department of Environmental Quality	<ul style="list-style-type: none"> <li>• Air Quality Permit to Construct</li> <li>• Cyanidation Permit (coordinate with IDL) <ul style="list-style-type: none"> <li>○ Phase I Permit</li> <li>○ Phase II Permit</li> <li>○ Phase III Permit</li> </ul> </li> <li>• IPDES (Industrial Water) (in appeal; subject to automatic stay during appeal)</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• In process/review</li> <li>• Complete</li> <li>• In process/review</li> <li>• In process</li> <li>• In process</li> <li>• In process</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Phased <ul style="list-style-type: none"> <li>○ App. Filed 2024</li> <li>○ App. Filed 2025</li> <li>○ App. in prep</li> </ul> </li> <li>• 2026</li> </ul>

Federal Government	Permits and Approvals	Status	Anticipated Approval
	<ul style="list-style-type: none"> <li>• IPDES (Sanitary)</li> <li>• Point of Compliance</li> <li>• CWA Section 401 Certification</li> <li>• Wastewater Treatment Permit</li> <li>• Drinking Water Permit</li> <li>• Solid Waste permits</li> <li>• Construction General Permit(s)</li> <li>• Multi-Sector General Permit</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• IDEQ initiated modification in process</li> <li>• Planning</li> <li>• Planning</li> <li>• Planning</li> <li>• Complete</li> <li>• Complete</li> </ul>	<ul style="list-style-type: none"> <li>• 2026</li> <li>• Complete (original Certification)</li> <li>• Modification (anticipated 2026)</li> <li>• 2026</li> <li>• 2026</li> <li>• 2026</li> <li>• Complete</li> <li>• Complete</li> </ul>
Department of Health and Welfare	<ul style="list-style-type: none"> <li>• Septic System Approval – Existing Exploration Camp</li> <li>• Food Establishment License                             <ul style="list-style-type: none"> <li>○ Existing exploration Camp</li> <li>○ Future WHF</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Completed</li> <li>• Completed</li> <li>• Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Completed</li> <li>• Completed</li> <li>• 2027</li> </ul>
Department of Water Resources	<ul style="list-style-type: none"> <li>• Water Rights</li> <li>• Mine Tailings Impoundment Structure / Dam Safety approval</li> <li>• Dam Safety approval for contact water ponds</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• In process</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• 2026</li> </ul>
State Historic Preservation Office (SHPO)	<ul style="list-style-type: none"> <li>• Cultural (SHPO) Pre-Construction Clearance</li> </ul>	<ul style="list-style-type: none"> <li>• In process/review</li> </ul>	<ul style="list-style-type: none"> <li>• 2026</li> </ul>
Department of Lands	<ul style="list-style-type: none"> <li>• Mine Operating Plan (Final)</li> <li>• Mine Reclamation and Closure Plan (RCP)</li> <li>• Reclamation Financial Assurance</li> <li>• CN Permanent Closure Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> <li>• Complete</li> </ul>
Valley County	Permits and Approvals	Status	Anticipated Approval
Planning and Zoning Department	<ul style="list-style-type: none"> <li>• Conditional Use Permit (numerous)</li> </ul>	<ul style="list-style-type: none"> <li>• Various</li> </ul>	<ul style="list-style-type: none"> <li>• Variable</li> </ul>
Building Department	<ul style="list-style-type: none"> <li>• Building Permits</li> </ul>	<ul style="list-style-type: none"> <li>• Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Variable</li> </ul>
Valley County Road & Bridge	<ul style="list-style-type: none"> <li>• Road use/maintenance agreement</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>	<ul style="list-style-type: none"> <li>• Variable</li> </ul>

#### 17.4.2 Local and County Requirements

There are several other permits and approvals that could or would apply to the Project including:

- Conformance with the Valley County Comprehensive Plan;
- Issuance of building permits, conditional use permits, and various other plans and permits by Valley County; and

- Worker Housing Facility (WHF) Wastewater treatment and drinking water systems approval by IDEQ, Central District Health Department, and various other authorizations.

A key annual authorization by the Valley County Road Department is the Valley County Road Use Permit for summer and winter road maintenance. This permit addresses standard operating procedures for the County maintained road route to be used, snow removal, dust suppression, and seasonal load limits. As of the end of 2025, the arrangements remained under negotiation between Valley County and Perpetua Resources, with a goal of reaching an agreement in Q1 2026.

As the Project facilities lie outside incorporated towns, except for portions of the power line upgrades which are generally located on already-existing utility rights-of-way and certain laydown yard locations, there are minimal applicable local approvals below the County level.

### **17.4.3 Challenges to Permits and Regulatory Approvals.**

Legal challenges to the permits and other regulatory approvals are typical for mining projects in the United States. With respect to the Project, two lawsuits – one filed by certain environmental advocacy groups and another filed by the Nez Perce Tribe – were commenced in 2025 in the U.S. District Court for the District of Idaho challenging the validity of the Forest Service’s ROD for the SGP under NEPA and other federal laws and regulations. The lawsuits also contest the Biological Opinions issued by NMFS and USFWS under the ESA. These lawsuits remain pending. Also, certain environmental advocacy groups filed a petition in Idaho state court in 2025 contesting the air permit to construct and operate issued by IDEQ (and approved by the Idaho Board of Environmental Quality) for the Project. This lawsuit also remains pending. The challenged permits remain valid while the pending lawsuits proceed.

Idaho law also includes various procedures allowing administrative challenges to various permits issued by state agencies. Certain environmental advocacy groups have initiated an administrative challenge to IDEQ’s Clean Water Act Section 401 water quality certification, and that case remains pending as of December 31, 2025. Other state permits, such as the IPDES permit and others, also can be contested in administrative proceedings. The procedures and remedies applicable in administrative proceedings in Idaho vary depending on specific permits.

Other lawsuits and/or administrative challenges beyond those described above may occur with respect to the Project.

## **17.5 Social and Community Impact**

Perpetua Resources respects the needs of Project stakeholders, including local communities, Tribal governments, and regional interests in the development of the Project. Project planning and design have incorporated an iterative process of community engagement involving communication, listening, and responding to stakeholders. These activities include estimating Project impacts and communication of those impacts to the potentially affected communities, helping local communities plan for potential expansion of public services and infrastructure, developing community agreements to ensure long-term financial benefits beyond the Project lifespan, engaging with local tribal governments, and sponsoring and participating in community and educational events. The public scoping and DEIS and SDEIS public comment phases of the NEPA process, along with comment procedures applicable to various federal and state permits, also provided important feedback from the communities that will be affected by the Project. Significant comment-driven Project changes, including backfilling of Hangar Flats pit, elimination of Fiddle DRSF, and additional fisheries and

water quality mitigation measures, were incorporated by Perpetua Resources in modifications of the mine design as the Project proceeded through NEPA and permitting.

### 17.5.1 Economic Effects

Economic impacts of the Project include creation of direct, indirect and induced jobs and additional tax revenues for local communities, the state of Idaho and the nation. An economic model known as Impact analysis for Planning (IMPLAN) was constructed to estimate impacts within Valley and Adams Counties (regional impacts), the state of Idaho and the U.S. (Highland Economics, 2018). The IMPLAN model is based on estimates of expenditures related to labor, materials and services and allocation of expenditures to various geographical and retail sectors for different periods of the project. The IMPLAN model was reviewed and approved by the USFS for suitability in the NEPA process.

### 17.5.2 Community Agreements

**2018 Community Agreement:** In December 2018, Perpetua Resources entered into a Community Agreement with villages, cities, and counties in the vicinity of the Project: Adams County, Idaho County, Cascade, Council, Donnelly, New Meadows, Riggins and Yellow Pine. This agreement created a collaborative environment for engagement with these communities.

The Community Agreement established the Stibnite Advisory Council, a panel composed of local residents appointed by each signatory community, and Perpetua Resources leadership to facilitate these interactions.

The Stibnite Advisory Council provides a forum for communication and dissemination of information between the communities and Perpetua Resources on such topics as safety and environment, employment and workforce training, business opportunities, housing, infrastructure and community and family support and sustainability.

The Community Agreement also established the Stibnite Foundation, a non-profit organization which identifies, evaluates, and funds projects to benefit the communities in the West Central Mountains. Decisions regarding projects to be supported are made by the Stibnite Foundation board, which is comprised of one representative from each community that has signed the Community Agreement. Long-term financial stability of the Stibnite Foundation is ensured through creation of an endowment funded by Perpetua Resources through cash and equity grants at periodic intervals in conjunction with Project milestones including receipt of operating permits, commencement of construction, commencement of commercial production, and completion of reclamation.

**2023 Yellow Pine Agreement:** Perpetua Resources signed a Memorandum of Understanding (MOU) in November 2023 with the Village of Yellow Pine, committing to formalize regular communication with the Village on at least a quarterly basis, as well as to provide financial support not exceeding \$5,000 annually to the Village to support its engagement with the company.

**2025 Valley County Community Impact Benefit Agreement:** In December 2025, Perpetua and Valley County signed a comprehensive Community Impact Benefit Agreement as a vehicle to satisfy Valley County requirements outlined in its approval of the Stibnite Logistics Facility CUP (2020), as a way to codify mitigation commitments in the US Forest Services Final Record of Decision, and formalize additional commitments made by Perpetua to directly offset impacts and provide benefits to the community.

In total, Perpetua will spend roughly \$10 million to meet CUP required mitigations, including offsetting general county services, providing emergency services support, and managing all waste generated by the project. An additional \$203 million will be spent on already planned for employee housing, which satisfies the County's housing requirements.

Perpetua proposed to spend no less than \$1.46 million in additional voluntary mitigations and benefits for the community, including emergency services support, recreational support, and economic development. Additional benefits not included in the Community Impact Benefit Agreement include a powerline upgrade that will provide increased power and grid reliability for the region at no cost to ratepayers.

### 17.5.3 Community Engagement

Perpetua has undertaken a number of initiatives to act as a contributing member of the local community while providing transparency and accountability. In addition to active participation in local organizations and events, Perpetua focused on opportunities to listen to community members in order to gather feedback. Feedback and information sharing occurred through regularly hosted events, webinars, office hours, and focus groups.

Perpetua Resources has participated in strategic planning with local officials, local public service organizations and events and infrastructure stakeholders to identify and plan for potential issues associated with the development of the Project. These efforts included:

- The primary mine access road (Burntlog Route) was conceived in a Yellow Pine community meeting.
- Improvement information and access negotiation for collection of baseline data with landowners along the electrical transmission line right-of-way.
- Transportation corridor and intersection improvements with the cities of McCall, Valley County Road Department, and Idaho Transportation Department.
- Plans community adaptation associated with the influx of workers and indirect job creation associated with the Project with local school districts, fire departments and emergency response providers.
- An alternative snowmobile trail adjacent to the Project access road and through-site access to the Thunder Mountain recreation area through the mine site.

### 17.5.4 Tribal Engagement

Perpetua Resources respects the sovereign treaty rights of Native American tribes and recognizes the Government-to-Government consultation obligations of the United States under federal statutes and regulations. Three federally recognized tribes - the Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone-Paiute Tribes - were consulted with throughout the permitting process through formal Government-to-Government consultation conducted by the U.S. Forest Service (USFS or Forest Service) and U.S. Army Corps of Engineers (USACE).

In parallel to Government-to-Government consultation, Perpetua Resources engaged directly in good faith with the Tribal governments of the Nez Perce Tribe, the Shoshone Bannock Tribes, and the Shoshone Paiute Tribes through all phases of Project exploration, planning, permitting and early development to support information sharing, increased awareness, and open opportunity for collaboration. Idaho's Tribal Nations have a vast knowledge and diverse perspective of the region and Perpetua has worked diligently to listen to Tribal perspectives, incorporate knowledge, and encourage ongoing engagement to build and implement a more sustainable project.

Previous engagements with the Tribes have included direct information sharing, meetings between technical subject matter experts, leadership meetings with Tribal Governments, offers to conduct site visits, and quarterly reports. In addition, the Tribes also participated in direct communication with the federal agencies and provided written and verbal comments on the Project. These interactions helped shape the Project as it continues today. Perpetua Resources has modified the Project Plan based on input from Idaho's Tribes. Revisions included prioritizing fish passage, improving site water quality, reducing project footprint by 13%, stream and wetland restoration, creating a Tribal Member Site Access Plan, implementing dust abatement, and culvert repairs, and investing \$20 million in early action cleanup activities to improve water quality.

Efforts to enhance communication included a communications agreement between the Company and the Nez Perce Tribe, which was implemented successfully for over a year. Despite Perpetua Resources' best intentions and efforts to collaborate, in 2019, the Nez Perce Tribe filed a lawsuit alleging unpermitted water pollution discharges in areas impacted by legacy mine activity by third parties. In 2023, Perpetua Resources and the Nez Perce Tribe entered a Settlement Agreement, with a stipulation of dismissal without prejudice, to resolve that case. In 2025, the Nez Perce Tribe filed a lawsuit challenging to the U.S. Forest Service's Record of Decision for the Project, which is currently pending in the U.S. District Court for the District of Idaho.

Significantly, as the result of the Government-to Government consultation, in the final Record of Decision, the Forest Service established that the Tribes may participate in a Tribal Monitoring Program, Tribal Observation Program, and Tribal Access plan. Perpetua Resources' Plan of Operation, approved by the Forest Service in October 2025, incorporates these programs and plans.

The Tribal Monitoring Program facilitates tribal monitoring of project activities near historic properties as defined consistent with applicable National Historic Properties Act, Section 106 requirements. The program is funded by Perpetua Resources, and Tribal monitors nominated and elected by their respective Tribes will have the opportunity to be present during construction and operations, subject to applicable health and safety requirements. Together, elected Tribal monitors and a USFS archaeologist will help ensure Project activities avoid impacts to historic properties, if any are present, and remain within surveyed and flagged areas. The monitoring program is designed in accordance with the National Historic Properties Act, Section 106 and is a requirement of the USFS Record of Decision for the Project. In 2025, the Shoshone-Paiute Tribes entered into an agreement to conduct a Tribal Monitoring Program at the Project.

Perpetua Resources is committed to supporting ongoing transparency and accountability related to project compliance with NEPA and required permits. The Tribal Observer Program facilitates Tribal observation of pre-construction and construction activities. As outlined in the final Record of Decision, Tribal observers will be nominated by their respective Tribes to serve in the role and work will be funded by Perpetua Resources.

USFS' approved Tribal Member Site Access Plan provides Tribal members access to the Project site for hunting, fishing, cultural activities, and traditional ceremonies. Access is subject only to safety rules and requirements put in place to protect the health and safety of workers and visitors in the mining area. Tribal members interested in accessing the Project site for hunting, fishing, cultural activities, and traditional ceremonies can either work through their Government leadership or directly reach out to Perpetua Resources by emailing [Access@Perpetua.us](mailto:Access@Perpetua.us) to learn more about making arrangements.

Perpetua Resources recognizes the need to consider potential effects on historic properties and provide mitigation and protection to support the preservation of cultural values. In its final Record of Decision for the Project, USFS mandated a Cultural Resource Programmatic Agreement to detail the treatment of historical and cultural findings and ensure the Project remains in compliance with the National Historic Preservation Act and 36 CFR 800. After consultation with the Tribes, the Project's Programmatic Agreement includes provisions for identification of historic properties, mitigations for any adverse effects to historic properties, the preparation of a historic properties management plan, and subsequent historic properties treatment plans to address potential effects to historic properties over the life of the Project. Perpetua Resources is a signatory to this Programmatic Agreement with the USFS.

## 17.6 Compensatory Mitigation

While Project facilities and infrastructure would be located in areas of previous disturbance wherever practicable, in some cases disturbance of wetlands and streams would be unavoidable. Unavoidable impacts to waters of the U.S. require compensatory mitigation (i.e., replacement of their lost function) under Section 404 of the Clean Water Act. The mitigation typically precedes the disturbance taking place and is accomplished either by using a mitigation bank or construction of replacement wetlands and stream segments preferably in the same drainage basin.

Complete compensatory mitigation via a single means is impractical due to the combined effects of the Project sequence, limited valley-bottom land available, and lack of established mitigation banks in the basin. Perpetua Resources pursued a comprehensive approach to wetland and stream compensatory mitigation that entails on-site enhancement and off-site projects such as stream habitat enhancements and replacement of culverts that presently impede fish passage. This approach has been agreed to and implementation has begun. Compensatory mitigation measures include certain closure and restoration projects. The U.S. Army Corps of Engineers (USACE) has approved the mitigation proposals as part of its Clean Water Act Section 404 permit issued in May 2025, although additional review is required with respect to design and construction details.

## 17.7 Closure and Reclamation

The approved closure, reclamation and restoration work at the Project site would include interim, concurrent, and final closure, reclamation and restoration of the Project site:

1. Interim reclamation is intended to provide shorter-term stabilization to prevent erosion of disturbed areas and stockpiles that would be removed or more fully and permanently reclaimed later.
2. Concurrent reclamation and restoration are designed to provide permanent, low-maintenance achievement of final reclamation and restoration goals on completed portions of the Project prior to the overall completion of mining activities throughout the mine site.

- Final closure and reclamation and restoration would involve removing all structures and facilities; reclamation of those areas that have not been concurrently reclaimed such as the TSF and backfill surfaces; recontouring and improving drainages; creation of wetlands; reconstructing various stream channels; decommissioning of the EFSFSR diversion tunnel; growth media placement; planting and revegetation on disturbance areas; and reopening Stibnite Road (FR 50412) through the mine site.

Perpetua Resources developed closure and restoration plans with the objectives to establish a sustainable fishery with enhanced habitat to support natural populations of salmon, steelhead, and bull trout; protect water quality; establish vegetation; and enhance wildlife habitat, all contributing to a self-sustaining and productive ecosystem (Tetra Tech, 2025). Closure, reclamation, and restoration activities would achieve post-mining land uses of wildlife and fisheries habitat and dispersed recreation at the mine site.

### 17.7.1 Tailings Storage Facility and Buttress

Perpetua Resources proposes to complete tailings reclamation and restoration after ore processing operations cease. After tailings consolidate sufficiently to use heavy equipment on top of the tailings, starting approximately 5 years after the end of deposition and concluding approximately 10 years after the end of deposition, Perpetua Resources would begin with placement of soil/rock cover material, then construct wetlands and restore Meadow Creek and its tributaries within appropriately sized lined floodplain corridors, place growth media, and revegetate the area. The TSF upland areas adjacent to the restored stream corridor would be capped with a low permeability geosynthetic cover with underlying geotube drain system that will collect and deliver consolidation waters to the water treatment facility. This would be overlain by an inert soil/rock layer and growth media and revegetated.

A low permeability geosynthetic cover would be placed over the TSF buttress after final grading, which would be designed to limit infiltration into the underlying development rock. The geosynthetic cover would be overlain by an inert soil/rock layer and growth media and revegetated. A lined channel and floodplain corridor would be established for Meadow Creek across the top of the closed buttress, with the stream corridor liner contiguous with the buttress cover. The channel would have a low gradient and wide floodplain across the top of the buttress, then drop more steeply to the valley floor near the south abutment. The steep channel segment would consist of a boulder chute (with underlying liner contiguous with the buttress cover) that would flow through an energy-dissipating basin at the toe of the TSF buttress before being discharged to a restored Meadow Creek on the valley bottom.

Perpetua Resources would begin removing the TSF supernatant pool when ore processing operations have ceased through evaporation and active water treatment that meets IPDES discharge limits followed by discharge to the EFSFSR or Meadow Creek. Removal of the remaining supernatant water from the TSF would allow the tailings surface to dry and gain strength to allow equipment on the tailings surface for grading and placement of cover. Cover placement and minor grading of tailings would work inward from the perimeter. The cover material would come from unconsolidated overburden stored in the upper lifts of the TSF Buttress.

Perpetua Resources would restore meandering stream channels (Meadow Creek and tributaries) within a geosynthetic-lined stream and floodplain corridor across the top of the TSF. This would allow for the post-closure development of riparian habitat, convey water off the facility, and minimize potential interaction of surface water with the underlying tailings.

Consolidation of the tailings would continue after surface reclamation, and consolidation water and any meteoric water comingled with it would be collected for treatment and discharge. Treatment would no longer be required after approximately year 40, at which time the treatment facility would be decommissioned, and the treatment facility site reclaimed.

### 17.7.2 Mine Pit Reclamation

The reclamation approach for each mine pit will vary depending on factors such as: backfill status, highwall geologic exposure, and hydrological setting.

Hangar Flats pit would be backfilled to the valley bottom elevation or slightly higher during mine operations. The already-established Meadow Creek diversion channel and floodplain corridor would be retained around Hangar Flats pit as the final configuration, and the segment of Meadow Creek between the toe of the TSF Buttress and the entrance to the Hangar Flats pit diversion would be restored along with adjacent riparian wetlands. At closure, the backfill will be capped with a low permeability geosynthetic and covered with growth media and seed bank material. The area would be revegetated with a combination of upland and wetland vegetation. Wetlands created on the backfill surface would be fed from reestablished intermittent and ephemeral streams that were diverted above the Hangar Flats pit highwall and the TSF Buttress during operations. Meadow Creek downstream of the Hangar Flats pit diversion, to the confluence with the EFSFSR, would be enhanced during mine operations with large woody debris, boulder cluster habitat structures, and riparian plantings.

The Yellow Pine pit would be backfilled during operations, reaching the post-mine floodplain level, after which the EFSFSR and its nearby tributaries would be restored across the backfill. Portions of the highwalls on the east and west sides of the pit would remain above the backfilled portion of the pit and would not be reclaimed, enabling a wider restored floodplain in the middle of the backfill. The curved alignment of the valley restored in the backfill allows for a longer length and therefore flatter gradient, enabling a longer, flatter, and more sinuous EFSFSR channel to be constructed maximizing fish habitat and facilitating fish passage.

Stibnite Lake, of similar size to the current Yellow Pine pit lake, would be constructed within the lined corridor. The Stibnite Lake feature would reduce summer maximum stream temperatures leaving the site and replace the habitat functions of the current pit lake.

Hennessy Creek would cascade over the west highwall of the Yellow Pine pit to a restored section of low-gradient channel on the western edge of the reconstructed EFSFSR floodplain before joining the restored EFSFSR channel, and Midnight Creek would be restored across the southeastern portion of the EFSFSR floodplain, both forming “wall-based channels” that receive high-flow overflows from the main EFSFSR and sustain cold low flows year-round for juvenile fish rearing.

A road would be established over the backfilled Yellow Pine pit to allow through-site access through the reclaimed site and connect Stibnite Road (FR 50412) to Thunder Mountain Road (FR 50375, replacing segments of Stibnite Road (FR 50412) removed by mining. After restoration of the EFSFSR and Hennessy Creek across the backfill, closure of the EFSFSR tunnel, and construction of the permanent through-site access road, the Hennessy Creek diversion would be decommissioned and the area reclaimed, along with the adjacent operations-phase through site access road. Similarly, remaining portions of the Midnight Creek diversion would be reclaimed to pre-mining conditions.

The West End pit is not planned to be backfilled because it is planned as the last in the sequence to be mined. The sequence of mining facilitates backfilling the Yellow Pine and Hangar Flats pits, enabling permanent restoration of fish passage and preventing formation of large pit lakes at either Yellow Pine or Hangar Flats. No backfilling would occur for the main West End pit. At closure, the remaining road into the pit and access to highwalls would be blocked with large boulders and/or earthen berms to deter motorized vehicle passage into the pit. West End Creek is planned to be routed into the West End pit in a rock chute on the highwall adjacent to the legacy DRSF, which is anticipated to form a lake. The pit lake is not expected to overflow because it is in the upper portions of its drainage basin with a relatively small catchment area. Lake levels would be monitored after closure, and a threshold water level would be established, sufficient to contain the predicted runoff volume from a high-snowpack year without discharge. If water levels approach the threshold, surface water diversions or water treatment could be implemented to prevent an uncontrolled discharge. A temporary treatment unit would be mobilized to the site to treat and discharge the water until the lake level falls below the threshold level to prevent an untreated discharge.

The Midnight pit in the southern portion of the overall West End pit is planned to be backfilled with approximately 6 million tons of development rock from the West End pit. The backfill would be placed to achieve a mounded final reclamation surface to promote drainage away from the West End pit and prevent formation of a pit lake. Portions of the backfill would be covered with growth media and revegetated, and the remainder covered with talus like development rock to mimic a natural talus slope.

### 17.7.3 Plant Site and Related Infrastructure

The processing plant, ancillary and offsite facilities, utilities, and roads will be dismantled, recycled/salvaged, and reclaimed to the extent practicable unless there is an ongoing beneficial use. All structures and facilities not necessary for post-closure water management (e.g., certain roads, culverts, pipelines, and water treatment facilities) or other beneficial use would be removed, and the affected areas reclaimed.

The materials from the dismantling or demolition of structures and facilities would be salvaged or disposed of in the onsite private landfill(s) and/or in permitted offsite landfills. All reagents, petroleum products, solvents, and other hazardous or toxic materials would be removed from the Project site for reuse or would be disposed of according to applicable state and federal regulations. Sewage systems and septic tanks would be decommissioned. Foundations would be broken or fractured as required to prevent excessive water retention and covered in-place with an appropriate depth of soil-like material (approximately 2-ft thick combination of 1.5 ft of backfill and 0.5 ft of growth media) or would be removed and buried a minimum of 2 ft deep in the TSF buttress or pit backfill. Soil beneath fuel storage areas and chemical storage or processing buildings would be tested for contamination and removed and disposed of appropriately as needed. Following removal of facilities, the affected areas would be graded to restore drainage patterns and revegetated with approved seed mix.

Additionally, the plant site area will be covered with growth media and revegetated. Wetlands created on the plant site area would be fed by diverting Garnet Creek into the reclaimed plant site area providing a perennial water supply.

The Burntlog Route is planned to be closed once all reclamation work has been completed and significant fuel and reagent haulage is completed. New sections of the Burntlog Route would be decommissioned/obliterated and upgraded sections would be returned to their pre-project width, while retaining the safer upgraded lines and grades.

The worker housing facility would be used during the years of reclamation, restoration, and closure activities but these activities would not require the full facility. A portion of it would be removed during the early years of closure and the worker housing facility would be dismantled, salvaged and the area reclaimed and revegetated after most closure activities are complete.

Strategic roads would initially be left in place during reclamation, restoration and closure. Other haul roads would be recontoured, ripped, and revegetated to the approximate pre-mining condition. Stream crossings would be restored in kind, and drainage facilities constructed for haul roads would be retained temporarily as necessary for sediment control and then reclaimed.

The section of powerline from the Johnson Creek substation to the site would be retained in service during closure and post-closure water treatment, but substation components downsized to accommodate approximately 1 MW service. After closure activities that have significant power requirements have been completed, the section of the powerline from the Johnson Creek substation to the site will be disassembled, and the associated roads reclaimed to their pre-project state. Drainage stabilization and erosion control features would be installed. The upgraded powerline from Warm Lake to Yellow Pine would be left in place; Idaho Power would continue to maintain that line.

Perpetua Resources would decommission and close underground facilities and underground support facilities, including the portals of the EFSFSR Tunnel and underground workings partially mined-out within the open pits. To prevent future access to underground workings, portals will be closed using a concrete block bulkhead, rockfill, or a combination of rockfill and low-permeability foam.

All construction and demolition waste generated at the SGP would be hauled off site for disposal at a permitted landfill; a landfill would not be constructed or maintained at the SGP. Solid waste from the worker housing facility, shops, and other work areas that cannot be recycled will be collected in wildlife-resistant receptacles and hauled off site for disposal in a municipal waste landfill. Material that meets the classification of a “hazardous waste” would be collected and stored, per the SGP Waste Management Plan at specially designed and operated secured satellite collection sites and a main storage site prior to shipment off-site to a Resource Conservation and Recovery Act (RCRA) certified hazardous waste disposal facility.

## **17.8 Closure and Reclamation Costs, and Financial Assurance**

Anticipated costs for closure and reclamation of the Stibnite Gold Project were developed utilizing the Standardized Reclamation Cost Estimator (SRCE) model currently used and developed in Nevada for mining specific projects, supplemented by site-specific costs and quantity estimates. Cost for reclamation and closure and conservation/mitigation measures are for both concurrent reclamation/restoration (integrated with mining costs) and final reclamation/restoration. Financial assurance cost estimates are based on third-party performance of reclamation and closure activities. In 2025 Q4, Perpetua Resources posted construction phase financial assurance in the approximate amount of approximately \$160 million to meet the requirements of USFS, USACE, IDL, and IDWR for construction phase financial assurance. Under applicable regulatory approvals, this amount can be adjusted to reflect either increased or decreased reclamation costs as construction proceeds. Additional financial assurance will be required for Project operations.

## 17.9 Environmental Monitoring and Reporting

Perpetua Resources has developed extensive Environmental Management and Monitoring Plans to ensure all requirements for protection, avoidance, monitoring, and reporting related to permits and other approvals are met. These Plans are incorporated into the Project Plan of Operations approved by USFS in October 2025. Local, state, and federal agencies will conduct routine inspections to ensure compliance with applicable monitoring and reporting regulations.

## 18 CAPITAL AND OPERATING COSTS

Estimation of capital and operating costs is essential to the evaluation of the economic viability of a prospective project. These factors, combined with revenue and other expense projections, form the basis for the financial analysis presented in Section 19 of this Report. Capital (CAPEX) and operating (OPEX) costs for the Project were estimated on the basis of the mine plan, plant design, estimates of materials and labor based on that design, analysis of the process flowsheet and predicted consumption of power and supplies, budgetary quotes for major equipment, labor requirements, and estimates from consultants and potential suppliers to the project.

The economic information included in this TRS is presented as of December 31, 2025, and updates the information presented in the 2022 TRS, which was supplemented by an updated cash flow model published by the company on February 13, 2025 (the “Financial Update”). The Financial Update applied cost estimates, commodity pricing and other assumptions as of the fourth quarter of 2024 and was based, in part, on basic engineering work completed in January 2025 by Ausenco Engineering USA South Inc. (“Ausenco”), and with contributions from other mining engineers and consultants. Since February 2025, the company has continued to progress engineering, contracting, and early construction activities, and announced in December 2025 the appointment of Hatch Ltd. (“Hatch”) as EPCM contractor for certain design, engineering, procurement, construction, management, testing, studies, and related services for the Stibnite Gold Project, including the process plant, the pressure oxidation facility, associated on-site infrastructure, utilities, and facilities, together with overall integration, coordination, and execution support for those in-scope elements of the Project. Prior to this appointment, the Company had already been working closely with Hatch on detailed design and engineering of the Company’s pressure oxidization circuit and related facilities.

Throughout 2025 and into early 2026, Perpetua has continued to progress basic engineering as well as more advanced engineering in numerous areas with overall engineering estimated at 45% complete as of December 31, 2025. With receipt of the Final Record of Decision in January 2025, Perpetua proceeded to post initial financial assurance with various state agencies ahead of commencing early works construction which occurred on October 21, 2025. Considering rapidly rising metal prices over the last 24 months and the company’s transition into early works construction, Perpetua is publishing this updated TRS to provide timely and relevant Project information regarding project development at the Stibnite Gold Project. All assumptions and estimates presented are effective as of December 31, 2025. Ongoing efforts to advance engineering, contracting and construction work may result in revisions to the costs, figures, methods and assumptions presented.

### 18.1 Capital Cost Summary

Estimated CAPEX, or capital expenditures, include three components: (1) the initial CAPEX to undertake the detailed design, pre-strip, construction, and commissioning of the mine, plant facilities, ancillary facilities, utilities, and operations camp, and complete on and offsite environmental mitigation and remediation; (2) the sustaining CAPEX for facilities expansions, mining equipment replacements, expected replacements of process equipment and ongoing environmental mitigation activities; and (3) the closure and reclamation CAPEX to close and rehabilitate on and off-site components of the Project, which includes post-closure water treatment. Closure assumes self-performed closure

costs, which may differ from those assumed for financial assurance calculations required by regulators. Table 18-1 summarizes the initial, sustaining and closure CAPEX for the Project.

**Table 18-1: Capital Cost Summary**

Name	Initial Capital, \$M	Sustaining Capital,	Closure Costs, \$M	Total, \$M
Mining	183.6	211.4	-	395.0
Process Plant	740.6	93.4	-	834.0
Additional Process Facilities	73.1	-	-	73.1
On-Site Infrastructure	336.3	305.1	-	641.4
Off-Site Infrastructure	395.5	0.4	-	395.9
Project Indirects	180.3	-	-	180.3
Project Delivery	233.5	-	-	233.5
Owner Project Team Costs	231.7	112.3	118.1	462.1
Taxes	9.2	-	-	9.2
Contingency	191.9	44.3	-	236.2
<b>Sub-Total \$M</b>	<b>2,575.8</b>	<b>766.9</b>	<b>118.1</b>	<b>3,460.7</b>
Pre-Production Revenue <sup>1</sup>	-52.1	-	-	-52.1
<b>Adjusted Total \$M</b>	<b>2,523.7</b>	<b>766.9</b>	<b>118.1</b>	<b>3,408.7</b>

1. Revenue derived from doré sales net of costs of sale assumed to occur prior to start of commercial production. 2. Totals may not sum due to rounding.

The CAPEX estimate includes direct mining equipment and pre-stripping costs, process plant costs, on-site infrastructure such as the TSF and the operations camp, and off-site infrastructure such as the power transmission line, the mine access road, the Stibnite Gold Logistics Facility (SGLF), and reclamation and closure costs. The initial CAPEX also includes indirect costs for detailed design and engineering, land acquisition, some environmental mitigation, and other costs. Initial CAPEX also includes an estimate of contingency based on the accuracy and level of detail of the cost estimate. The purpose of the contingency provision is to make an allowance for uncertain cost elements that may occur but are not included in the cost estimate. These cost elements include uncertainties concerning completeness, accuracy and characteristics or nature of material takeoffs, accuracy of labor and material rates, accuracy of labor productivity expectations, and accuracy of equipment pricing. The CAPEX estimates are considered to have an accuracy range of -10% to +15%.

The primary assumptions used to develop the CAPEX are provided below:

- The estimate is based on Q4 2025 costs.
- There is no escalation added to the estimate from the base date of Q4 2025 forward.
- All cost estimates were developed and are reported in United States of America (US) dollars.
- Units of measure for this Project are primarily in English customary units, unless otherwise noted.
- At the time of this estimate, engineering was approximately 45% complete.
- Contingency during the pre-production period is specific to each major component of the Project as determined by the company and informed by various consultants.

- Qualified and experienced construction contractors will be available at the time of Project execution.
- Borrow sources are available in the Meadow Creek valley or nearby within the Project boundary.
- Weather-related delays in construction are not accounted for in the estimate. However, the engineering, procurement and construction management (EPCM) schedule does account for a ramp down in construction activity during the three winter months (December, January, and February).
- The oxygen plant equipment is planned to be purchased from a vendor including installation supervision. Oxygen would be piped directly from the oxygen plant to the autoclave building. The oxygen plant would have its own electrical power substation adjacent to the plant.
- Financial assurance costs associated with closure-related bonding are excluded from this estimate.
- An allowance of 5% is included in the financial model for salvage value of selected capital equipment, excluding buildings and tanks, which are included in the reclamation costs.
- Costs incurred prior to the start of construction are not included in the model and are considered “sunk costs”, except for tax purposes, where the aggregate expenditures accumulated prior to the construction start date are available to offset taxes.
- No provision has been made for currency fluctuations.

### 18.1.1 Mine Capital Costs

The mine capital includes three components: the mining fleet, mine support equipment, and the cost of pre-stripping. Mine capital cost for mobile equipment was developed from the mine equipment list presented in Section 13 of this Report. Mine capital costs including equipment and pre-production development are presented in Table 18-2.

**Table 18-2: Mine Capital Cost Summary**

Mining CAPEX Components	Pre-Production (\$M)	Sustaining (\$M)	Total CAPEX (\$M)
Mine Major Equipment (Leased)	27.0	206.8	233.9
Mine Support Equipment (Purchased)	17.2	4.5	21.7
Capitalized Preproduction Development	139.5	-	139.5
<b>Total Mining CAPEX</b>	<b>183.6</b>	<b>211.4</b>	<b>395.0</b>

Perpetua plans to lease the major mining equipment. The down payment, principal payment, and buyout portions of the leasing costs for the mining fleet are included in initial and sustaining CAPEX. Lease rates were based on 60-month leases with equipment buyouts at the end of the lease period.

Lease rates for the major mine equipment were obtained from major mine equipment vendors. Lease down payments, lease principal payments, and end-of-lease term buyout options are accounted for as capital costs.

Capital costs for each equipment type were estimated using a combination of official vendor quotes, budget quotes or recent mining industry surveys. Equipment capital costs include estimates for freight, assembly, spare parts, initial tire

purchase, fire suppression, equipment advance payments, and potential equipment modifications. For equipment that is planned to be leased, pay schedules are based on quotes provided by equipment manufacturers.

There are certain capital costs associated with the mine that are included elsewhere in the estimate. These items include mine office buildings, shop facilities, mobile equipment that is not required by the mine, and all infrastructure costs (except for haul roads).

Table 18-3 summarizes the mine capital costs by year. The down payment, principal payments, and buyout costs for the mine major equipment are included as capital costs. Preproduction stripping is part of the mine capital cost but is shown separately to differentiate it from the cost of purchasing mine equipment.

**Table 18-3: Life-of-Mine Mining Capital Cost Detail**

Production Year	Mine Equipment		Capitalized Preproduction Consumables and Labor (\$M)	Total <sup>1</sup> Mine Capital (\$M)
	Leased Major Equipment Down & Monthly Payments (\$M)	Other Support Equipment Capital Costs (\$M)		
<b>Initial Capital</b>				
-3	2.4	6.2	1.9	10.5
-2	19.4	22.3	13.5	55.1
-1	74.4	12.1	31.5	118.0
<b>Sub-Totals</b>	<b>96.2</b>	<b>40.5</b>	<b>46.9</b>	<b>183.6</b>
<b>Sustaining Capital</b>				
1	23.4	1.5	-	24.9
2	25.4	3.9	-	29.3
3	34.4	1.1	-	35.5
4	29.0	1.1	-	30.1
5	37.4	4.5	-	41.9
6	7.5	4.4	-	11.9
7	5.3	2.2	-	7.5
8	5.9	0.8	-	6.6
9	3.8	0.5	-	4.2
10	4.7	1.5	-	6.2
11	5.7	1.1	-	6.7
12	3.0	0.6	-	3.6
13	0.8	0.2	-	1.0
14	1.1	0.2	-	1.3
15	0.2	0.4	-	0.6
<b>Sub-Totals</b>	<b>187.3</b>	<b>24.1</b>	<b>-</b>	<b>211.4</b>
<b>Totals</b>	<b>283.5</b>	<b>64.6</b>	<b>46.9</b>	<b>395.0</b>

Notes: 1. Lease down payments, principal payments and end-of-lease term buyout options shown as a capital cost.

Major mine equipment is leased in the year it is required for operation. The acquisition schedule for the leased major mine mobile equipment is provided in Section 13 of this Report. The mine capital costs in Table 17 5 represent major mine equipment being leased throughout the mine life and bought out when the lease term has expired. Mine support equipment is purchased outright except motor graders and includes auxiliary equipment (e.g., water trucks, light plants, ANFO trucks), mine maintenance vehicles, and mine administration vehicles, such as pickup trucks for mine supervisors. Equipment capital costs include estimates for freight, assembly, spare parts, initial tire purchase, fire suppression, equipment advance payments, and potential equipment modifications.

Table 17 5 also includes the mine support equipment capital costs. Mine support equipment pricing was priced from vendor quotes. The truck shop, truck wash, and truck shop warehouse are included in the Plant CAPEX.

Pre-stripping requirements were developed monthly to provide ore exposure for production in Year 1 and construction material for the TSF starter dam. A total of 28.5 Mst of development rock would be mined during preproduction from Yellow Pine open pit, West End open pit, SODA area and TSF borrow. Mining costs during pre-production were based on areas stripped, haul profiles, established equipment rates and estimated operator wages. The cost build-up assumes that pre-stripping activities will be conducted by an owner-operated fleet using leased equipment.

#### **18.1.2 Plant Capital Costs**

Capital costs for the processing plant were estimated using budgetary equipment quotes, material take-offs (MTOs) for concrete, steel, and earthwork, estimates from vendors and consultants, and estimates based on experience with similar projects of this type. The capital cost estimate for the plant is shown in Table 18-4.

**Table 18-4: Plant Capital Cost Summary**

Description	Initial Capital \$M	Sustaining Capital \$M	Total \$M
<b>Process Plant</b>	<b>740.6</b>	<b>93.4</b>	<b>834.0</b>
Crushing, Stockpile and Reclaim	33.5	-	33.5
Grinding	84.4	10.6	95.0
Flotation and Thickening	67.6	4.0	71.7
Pressure Oxidation	262.9	24.4	287.2
Leaching and Tailings	65.1	41.2	106.3
Carbon Handling and Refinery	25.9	1.5	27.3
Reagents	22.9	-	22.9
Process Plant Services and Utilities	178.4	11.7	190.0
<b>Additional Process Facilities</b>	<b>73.1</b>	<b>-</b>	<b>73.1</b>
Historical Tailings Repulping Facility	9.1	-	9.1
Limestone And Lime Processing	64.0	-	64.0
<b>Total Plant CAPEX</b>	<b>813.7</b>	<b>93.4</b>	<b>907.1</b>

#### 18.1.2.1 Plant Capital Basis of Estimate

The capital cost estimate is based on the cost of equipment, material, labor, and construction equipment needed to complete the plant up to start-up. The accuracy of the CAPEX estimate is -10% to +15%. Data for this estimate was obtained from numerous sources including:

- Design engineering consisting of flow sheets, general arrangement plans and cross sections, civil grading drawings, process and instrumentation diagrams (P&IDs), and electrical one-line drawings;
- Pressure oxidation engineering;
- Topographical base information from a 2009 aerial LiDAR survey augmented by a 2013 LiDAR survey for outlying areas for the mine access road;
- Budgetary equipment and materials quotations from vendors; and
- Installation rates and contractors' Indirects were also sourced from contractors for major construction packages such as earthworks, concrete works, structural/mechanical/piping/platework installation, and field-fabricated tanks and electrical and instrumentation installation.

Below is a description of the pricing that was used by category.

#### Capital Equipment Pricing

All major processing equipment were sized based on the process design criteria. Once the mechanical equipment list was developed, mechanical scopes of work were compiled and sent to suppliers for budgetary pricing. 91.9% of the mechanical equipment costs and 98.4% of the electrical equipment costs were sourced from budgetary quotations, while the remaining pricing for minor equipment was derived from recent reference projects and studies.

### Electrical Equipment

One-line electrical distribution diagrams were designed for each plant and ancillary area to determine the required number and size of transformers, switchgear, and motor control centers. All major electrical equipment were sized based on the project equipment list. Once electrical equipment list was developed, scopes of work were derived and sent to the market for budgetary pricing to domestic and international equipment suppliers. Once the budgetary quotations were reviewed and integrated, the remainder of the minor equipment pricing sourced from other recent projects and studies.

### Mechanical Equipment

All major mechanical equipment was priced for the capital cost estimate by soliciting budgetary quotations, or in the case of minor equipment, from quotes or purchases from recent jobs. The vendors that were approached were generally the best-known suppliers of process equipment in the mining industry: Operating data sheets (ODSs) were developed to provide duty specifications for each unique piece of major equipment in the Equipment Register. The ODSs were populated with process flows and data from the METSIM process simulation, from specifications in the Process Design Criteria, and from physical information derived from General Arrangement drawings. Vendors were provided other information needed to receive a credible quote. All quotes were evaluated to determine if they met the duty specifications. The price that was used in the capital cost estimate was based on the most suitable quote.

### Piping, Pump, and Valve Quotes

A list of pumps was developed for all process areas. Operating data were tabulated for all pumps on this list. Requests for budgetary quotes were furnished to pump suppliers for comparative quotes. A piping engineer reviewed the vendor submissions and technical information to select the appropriate equipment to include in the capital cost estimate.

### Structural Steel and Concrete Quantity Estimates

Structural steel and concrete quantities were based on MTOs. Dimensions were taken from design drawings and used for estimation. The MTO provided total quantities of each category of steel by plant area number. Concrete quantity totals were similarly compiled by type and plant area number.

### Concrete & Structural Commodity Pricing

Unit pricing was solicited from four structural steel providers for the Project, which were adjusted for steel unit prices typical for current large EPCM jobs. These unit prices were applied by the estimator to the quantities provided in the MTOs.

A regional concrete supplier provided prices for supply of concrete predicated on the assumption that a batch plant would be set up on site and that aggregate would be available from site-furnished materials.

### Instrumentation

Instrumentation materials costs were based on instrumentation lists derived from P&IDs developed for the Project.

### 18.1.3 Infrastructure Costs

#### 18.1.3.1 On-Site Infrastructure

The onsite Infrastructure includes site utilities and roads, ancillary facilities, the TSF, water management systems, and the operations camp. The ancillary facilities include a variety of offices, shops, and warehouses that support the day-to-day operations of the mine and the plant. Table 18 5 summarizes the direct costs for on-site infrastructure.

**Table 18-5: Capital Cost Summary On-Site Infrastructure**

Description	Initial Capital \$M	Sustaining Capital \$M	Total \$M
Bulk Earthworks	5.0	-	5.0
Power And Communication Distribution	19.0	-	19.0
Fuel Storage	4.9	0.2	5.1
Water Supply, Management & Treatment	83.8	1.9	85.7
Tailings Storage Facility	118.9	300.1	419.0
On-Site Infrastructure Buildings	36.8	2.8	39.6
Stream Enhancement and Restoration	47.1	-	47.1
Fire Safety and Suppression Systems	11.4	0.1	11.5
Permanent Construction Services	9.4	-	9.4
<b>Total Onsite Infrastructure</b>	<b>336.3</b>	<b>305.1</b>	<b>641.4</b>

Note. 1. Totals may not sum due to rounding.

The capital components that make-up the tailings management system consist of the TSF embankment, the tailings impoundment and liner, tailings pumps, slurry pipeline system, water reclaim system, TSF under-liner drains, TSF surface water diversions, and the civil work that is required to route the tailings and reclaim water lines between the process plant and the TSF. Capital costs for the TSF and buttress water diversions, embankment and impoundment construction, liner, over-liner drain, and under-liner drain were estimated by BBA. The water reclaim system consists of reclaim barge, pumps, head tank, pipeline, and process water storage tank.

The TSF will be constructed in five stages. The Stage 1 TSF, constructed in Years -2 and -1, would be preceded by the construction of the TSF and buttress diversion channels. Stages 2 and 3 would be constructed over two years each, finishing in Years 2 and 5, respectively. Stages 4 and 5 would be completed in a single year, finishing in Years 8 and 11. The tailings and reclaim pipeline corridor must be relocated out of the footprint of the Hangar Flats pit in Year 3, resulting in additional sustaining CAPEX.

**Table 18-6: Tailings Storage Facility CAPEX**

Tailings Storage Facility	Initial (\$M)	Sustaining (\$M)	Total (\$M)
Surface Water Diversion	21.2	-	21.2
Embankment and Impoundment	49.3	291.0	340.3
Tailing Pipeline & Water Reclaim System	48.4	9.1	57.5
<b>TSF, Diversion, and Reclaim System</b>	<b>118.9</b>	<b>300.1</b>	<b>419.0</b>

Note. 1. Totals may not sum due to rounding.

Water management systems include pit dewatering; surface diversions (excluding the TSF diversion); contact water ponds, pumps, and piping; water treatment; and a diversion tunnel for the EFSFSR. The EFSFSR diversion includes the surface approaches and exit to the tunnel diversion around the Yellow Pine pit, fishway, freshwater intake and the diversion tunnel itself. CAPEX for water management systems is shown in Table 18-7 including initial and sustaining CAPEX. Initial CAPEX includes water management systems (excluding the TSF and buttress), pre-operation water treatment, and tunnel diversion around the Yellow Pine pit. Sustaining CAPEX costs are also estimated for water management modifications and water treatment required by the changes in the mining operation.

**Table 18-7: Water Management CAPEX**

Water Management Systems	Initial (\$M)	Sustaining (\$M)	Total (\$M)
Water Treatment Plant	6.5	0.9	7.4
Dewatering, Contact Water Systems, & Diversions	38.3	1.0	39.2
Water Diversion Tunnel & Intake (MIA)	39.0	-	39.0
<b>Water Management Totals</b>	<b>83.8</b>	<b>1.9</b>	<b>85.7</b>

### 18.1.3.2 Off-Site Infrastructure

The off-site infrastructure includes three main components: the mine access road, the power transmission line, and the off-site infrastructure buildings, including the Burntlog Road Maintenance Facility, and the Stibnite Gold Logistics Facility, which includes administration offices, the production assay lab, the staging area for mine personnel transportation, and warehouse capacity. Table 18-8 summarizes the direct costs estimated for these three components.

**Table 18-8: Off-Site Infrastructure Summary**

Description	Initial Capital \$M	Sustaining Capital \$M	Total \$M
Main Access Road	96.3	-	96.3
Power Supply	284.2	-	284.2
Off-Site Infrastructure Buildings	15.0	0.4	15.4
<b>Total \$M</b>	<b>395.5</b>	<b>0.4</b>	<b>395.9</b>

Note. 1. Totals may not sum due to rounding.

The mine access road is described in Section 15.1 of this Report. The FS designs and cost estimates for the Burntlog Route were developed by Parametrix. The cost estimates include civil excavation costs, placement of aggregate base course and geotextile, emplacement of culverts, retaining walls, installation/upgrade of bridges, the installation of a storm water drainage system, and other minor costs.

The power supply infrastructure upgrades are described in Section 15.4 of this Report. The cost for the power transmission line, communications, and substation upgrades was developed by Kiewit, in consultation with Idaho Power Company. Increasing the power supply includes upgrading eight substations, installation of a new switching station in Cascade and a substation at the Stibnite Gold Logistics Facility (SGLF), and construction of a new transmission line with under-built fiber optic communication line from Cascade to the mine site.

The Burntlog Maintenance Facility is designed for a location 4.4 miles from the junction of Warm Lake and Johnson Creek roads, as described in Section 15.3 of this Report. The cost estimate includes a 7,500-square-foot maintenance building, a 7,100-square-foot aggregate storage building, a 4,300-square-foot equipment shelter, and an 825-square-foot sleeping quarters.

The SGLF is described in Section 15.2 of this Report. The facility design includes administrative offices and an analytical laboratory, both of modular construction; a pre-engineered warehouse; and parking and transportation areas for employees bussed to the site. The estimated direct costs of these facilities do not include land acquisition costs. The land for the SGLF is owned by PRIL.

#### 18.1.4 Indirect Costs

Indirect costs are those costs that can generally not be tied to a specific work area or are related to the overall project execution, as summarized in Table 18-9.

**Table 18-9: Indirect Capital Cost Summary**

Description	Initial Capital
<b>Project Indirects</b>	<b>180.3</b>
Temporary Construction Facilities and Services	16.0
Construction Camp	116.2
Vendor Reps	0.8
Spares	14.2
First Fills & Initial Charges	3.8
Other Temporary Construction Costs	16.0
Third-Party Indirect Costs	13.3
<b>Project Delivery</b>	<b>233.5</b>
Engineering, Procurement & Construction Management Services	233.5
Commissioning Services	-
<b>Total \$M</b>	<b>413.8</b>

Note. 1. Totals may not sum due to rounding.

#### 18.1.4.1 EPCM Costs

The EPCM (engineering, procurement, project management, and construction management) budget for the process plant was developed using a firm proposal submitted by Hatch. Hatch is expected to serve as the primary EPCM contractor, responsible for certain design, engineering, procurement, construction, management, testing, studies, and related services for the Stibnite Gold Project, including the process plan, the pressure oxidation facility, associated on-site infrastructure, utilities, and facilities, together with overall integration, coordination, and execution support for those in-scope elements of the Project. Perpetua Resources and other contractors will manage the remaining project scopes, including the Burntlog Road, the TSF, the diversion tunnel, the worker housing facility, the power line, and the water treatment plant. Hatch contract amendment provides for a total Control Budget of \$204.3 million, with \$42.0 million allocated to the POX/O<sub>2</sub> System. EPCM costs including Hatch and other contractors, are summarized in Table 18-10.

**Table 18-10: EPCM Capital Cost Summary**

EPCM Components	Percentage of Total Direct Field Cost	Cost (\$M)
Management & Accounting	0.95%	16.4
Engineering	4.63%	80.1
Procurement	0.89%	15.4
Project Controls	1.01%	17.5
Construction Management	5.85%	101.2
Commissioning	0.11%	1.9
EPCM Temporary Facilities & Support	0.06%	1.1
<b>EPCM Total</b>	<b>13.50%</b>	<b>233.5</b>

Note. 1. Totals may not sum due to rounding.

#### 18.1.4.2 Other Indirect Costs

Table 18-11 also includes “Consultant Indirect Estimates” from other consultants for infrastructure engineering and construction, including access roads and water diversions. The indirect costs for these tasks were provided by the estimating entity, as detailed in Table 18-11.

**Table 18-11: Consultants’ Indirect Capital Cost Estimates**

Consultants’ Indirect Cost Estimates	Cost (\$M)
EFSFSR Diversion and Intake (McMillen Jacobs)	0.5
Access Road (Parametrix)	12.8
<b>Total Consultants’ Indirect Estimates</b>	<b>13.3</b>

#### 18.1.5 Owner Project Team Costs

Owner Project Team costs were developed to cover specific functions relating to the construction of the Project. Owner Project Team costs exclude exploration and corporate costs and are summarized in Table 18-12.

Key staff, plant and equipment operators will be hired as early as three months prior to start-up for training, and preparation work. Senior staff and engineering personnel will also be hired several months prior to start-up as they become available. Environmental monitoring will continue through the construction period. Other Owner Cost items include:

- Owner's construction and administrative costs, including the Owners camp;
- plant mobile equipment and light vehicles;
- insurance, accounting and legal;
- furniture and office equipment;
- tools;

- environmental monitoring;
- accounting, human resources and community services;
- security and safety management;
- staffing and operator training cost; and
- initial fills and wear steel spares.

**Table 18-12: Owner Project Team Capital Costs**

Owner Project Team Items	Initial (\$M)	Sustaining & Closure (\$M)	Total (\$M)
Project Staffing and Expenses	220.2	-	220.2
Closure, Mitigation and Monitoring	11.5	230.3	241.9
<b>Total Owner Project Team Costs</b>	<b>231.7</b>	<b>230.3</b>	<b>462.1</b>

### 18.1.6 Environmental Mitigation, Reclamation and Closure Costs

The Project site is located near the headwaters of the EFSFSR and has been environmentally impacted by historical mining activities by third parties. Perpetua Resources has integrated environmental remediation and restoration activities into its mine plan and will be required to reclaim Project disturbance and complete both onsite and offsite stream and wetland compensatory mitigation to offset impacts to these resources attendant to mine construction and operations. Additionally, off-site road intersection improvements are included as mitigation for traffic impacts. Capital costs for these activities are summarized in Table 18-13. These costs are divided into three time periods: pre-operation (initial), operation (sustaining, i.e., for concurrent reclamation), and post-operation (closure).

**Table 18-13: Mitigation, Reclamation, and Closure Costs**

Environmental Mitigation and Reclamation	Initial (\$M)	Sustaining (\$M)	Closure (\$M)	Total (\$M)
Mitigation, Reclamation, and Closure	11.5	112.3	118.1	241.9

Notes: 1. The mitigation, reclamation and closure costs above are carried under Owner Project Team Capital Costs.

Closure and reclamation costs were developed utilizing the Standardized Reclamation Cost Estimator (SRCE), discussed in Section 14 of this Report, based on these activities being conducted by the operator, and do not include management and administration by outside entities. Costs were then incorporated into the overall Project cost model in the year that they occur.

Closure costs include items such as potential long-term water treatment, stream and wetland restoration, reclamation and reclamation maintenance, and long-term site monitoring such as surface and ground water monitoring, vegetation success monitoring, aquatic species and habitat monitoring, and chemical and physical stability. Water treatment during construction and operations is included in the water management cost. Bulk earthmoving of legacy materials accomplished by the mine fleet is included in the mining operations cost.

Long-term closure and monitoring costs are factored from anticipated operational costs, experience from closure operations of similar projects, first principles construction costs, and standard unit costs. The schedule of costs for

reclamation, closure, and post-closure are allocated along the life of mine and closure, based upon expected reclamation and closure related activities.

Under applicable federal and state laws, financial assurance will be required to be posted with certain agencies at various times over the life of the Project to address disturbances during Project construction and operations. For example, Perpetua Resources was required to post certain financial assurance before commencing certain limited early works construction-related activities in October 2025. A separate bond has been posted in connection with the ASAOC. Financial assurance costs have not been included in the capital cost estimate because the structure and amount of the financial assurance requirements is subject to ongoing regulatory review and adjustment.

### 18.1.7 Estimated Contingency

Contingency costs, as summarized in Table 18-14, are estimates of the costs that are not included in the CAPEX that can be expected to be spent during initial construction. The more engineering and construction execution planning that is done ahead of the estimate, the higher the accuracy of the CAPEX and thus, the lower the contingency costs as a percentage of total CAPEX.

The amount of risk was assessed with due consideration of the level of design work, the way pricing was derived, and the nature of the plan for project implementation.

A Probabilistic Contingency Analysis was performed, which consisted of a contingency-ranging workshop. It evaluated the major cost components in terms of confidence in pricing and quantity basis and provided input ranges for potential underrun/overrun.

The probabilistic range of the estimate reflects the potential project cost outcomes created by the variances assigned to each line item in the estimate. Determining a range for each line item in the estimate provides a means for approximating the accuracy of the estimate.

The following results from the @Risk simulations showed contingency percentages as per the following and were applied to the CAPEX Table 18-14.

**Table 18-14: Project Costs Summary for Contingency**

Description	Initial Capital \$M	Sustaining Capital \$M	Total \$M
Contingency - EPCM	117.6	12.4	129.9
Contingency – Owner Project Team	39.3	4.1	43.5
Contingency - RPM	10.8	27.8	38.6
Contingency - PARAMETRIX/GEOENGINEERS	6.8	0.0	6.8
Contingency - BROWN & CALDWELL	4.5	0.0	4.5
Contingency - BBA	7.2	0.0	7.2
Contingency - McMillen	4.8	0.0	4.8
Contingency - Rio Ase	0.9	0.0	0.9
<b>Total Contingency \$M</b>	<b>191.9</b>	<b>44.3</b>	<b>236.2</b>

Note. 1. Totals may not sum due to rounding.

### 18.1.7.1 Idaho Sales Tax

The capital cost estimate accounts for a 6% Idaho sales tax rate applied on the supply cost of electrical equipment, electrical bulks, structural steel, building materials and instrumentation materials and include \$9.2 million in total sales tax.

Mechanical equipment supply, piping materials and platework materials are exempt of Sales Tax.

## 18.2 Operating Costs

The average cash operating cost per short ton (st) of processed material before by-product credits, royalties, refining and transportation charges over the life-of-mine (LOM) and during an average year of operations are summarized in Table 18-15. These cash costs include mine operations, process plant operations, and general and administrative costs (G&A) and are in the accuracy range of -10% to +15% in the opinion of the QPs. The average cash operating cost per ton of processed material after by-product credits but before royalties, refining and transportation charges over the LOM and during the first four years of operations are also provided, as are the all-in sustaining costs (AISC) and all-in costs (AIC). Total costs in each category are divided by the total tonnage of processed material.

A summary of the operating costs is presented below in Table 18-15.

**Table 18-15: LOM Operating Cost Summary**

	Average Annual Cost (\$M)	\$/st processed	LoM Operating Cost (\$M)
Mining	87	10.78	1,233
Process	112	14.00	1,602
General & Administration	37	4.55	521
<b>Cash Costs Before By-Product Credits</b>	<b>236</b>	<b>29.32</b>	<b>3,357</b>

Key assumptions were made to estimate the operating costs for the Project:

- Cost estimates are based on Q4 2025.
- Costs are expressed in United States Dollars (US\$).
- Power cost of US\$0.06 per kilowatt-hour (kWh) was assumed.
- A ROM throughput of 22,046 st/d and repulped historical tailings throughput of 2,976 st/d were used for the processing plant.
- Plant crusher availability is assumed to be 75%, filter availability is assumed to be 82.5%, while the availability for the rest of the process plant is assumed to be 90%.
- ROM and concentrate grades, and recoveries are based on metallurgical test work results.
- Material and equipment are purchased as new or lease purchased.
- Reagent consumption rates are based on metallurgical test work results and in-house benchmarks.

- Grinding media consumption rates are based on mineral material characteristics.

### 18.2.1 Mine Operating Costs

Mine equipment operating costs were developed using first principles based on vendor provided hourly operating cost estimates and recent operating mine equipment survey data. The unit costs for labor were jointly developed by Perpetua Resources and RPM. Table 18-16 summarizes the consumable and labor operating costs by the unit operations.

**Table 18-16: Life-Of-Mine Mining Cost Averages**

Mining Function	Percentage (%)	Unit Cost (\$/st)
Production D&B	19	0.60
Production L&H	32	0.99
Production Support	14	0.44
Development D&B	1	0.03
Development L&H	11	0.35
Development Support	2	0.06
Auxiliary Fleet	6	0.2
Maintenance Fleet	4	0.11
Administrative Fleet	8	0.26
Mining Staff Labor	1	0.03
Blasting Contractor Services	1	0.04
<b>Total for Material Mined</b>	<b>100</b>	<b>3.12</b>

Preproduction development costs are assigned 100% as CAPEX and amortized during the production years of the mine plan. Table 18-17 summarizes the total mine operating cost per year.

Operating costs were calculated for each schedule period including fuel, maintenance parts, lube, tire replacement, ground engaging tool replacement, operator labor, and maintenance labor. If operating time for a fleet was not sufficient to accomplish the work required in the mine production schedule, additional units were added. Table 18-17 summarizes the total mine operating cost per year.

**Table 18-17: Mine OPEX by Year**

Year	Total (\$M)
-3	0
-2	0
-1	0
1	113,021
2	110,870
3	116,706
4	110,439
5	103,285

Year	Total (\$M)
6	95,690
7	101,969
8	95,938
9	89,314
10	91,654
11	84,064
12	55,064
13	31,278
14	28,005
15	6168
<b>Total</b>	<b>1,233,465</b>

Note: Mine preproduction development is shown as 100% capital cost and 0% operating expense.

The mine operating costs provided in Table 18-16 include:

- Drilling, blasting, loading, and hauling of material from the mine to the crusher, stockpiles or development rock storage facilities. Maintenance of the development rock storage areas and stockpiles is included in the mining costs. Maintenance of mine mobile equipment is included in the operating costs.
- Rehandling ore stockpiles to the crusher is included in the mining costs.
- Mine supervision, mine engineering, geology and ore control are included in the G&A category.
- Operating labor and maintenance labor for the mine mobile equipment are included.
- Mine access road construction and maintenance are included. If mine haul trucks drive on the road, its cost and maintenance is included in the mine operating costs.
- Relocation of SODA material and reprocessing of Historical Tailings is included.
- Delivery of mine development rock to the tailings dam construction is included. However, placement and compaction of that material at the TSF is not included.
- The cost of backfilling the Yellow Pine open pit, Hangar Flats open pit, and Midnight area of the West End open pit is included.
- A general mine allowance is included that is intended to cover mine pumping costs and general operating supplies that cannot be assigned to one of the unit operations.
- A general maintenance allowance is included that is intended to cover the general operating supplies of the maintenance group.

The mine is planned to work two 12-hour shifts per day for 365 days per year. Ten days (20 shifts) of lost time are assumed due to weather delays or other interruptions.

## 18.2.2 Plant Operating Costs

The process operating cost can be broken up into seven areas: power, reagents, consumables, maintenance, oxygen, labor, and mobile equipment. Limestone and lime are produced on-site, and the costs associated with them are included in reagent costs. Oxygen is also produced on-site and the costs associated with the production is grouped in its own area. Table 18-16 summarizes the process operating costs for the life of mine. The processing costs allocated by process area are provided in Table 18-19.

**Table 18-18: Process Operating Cost Summary by Category**

Area	Average Annual Cost (\$M)	LoM \$/st processed	LoM Operating Cost (\$M)	%
Power	20.0	2.49	285	18
Reagents	28.1	3.50	400	25
Consumables	17.9	2.23	255	16
Maintenance	13.0	1.61	185	11
Labor	23.9	2.97	340	21
Mobile Equipment	1.7	0.21	24	2
Oxygen	7.9	0.99	113	7
<b>Total<sup>1</sup></b>	<b>112.4</b>	<b>14.00</b>	<b>1,602</b>	<b>100</b>

Note. 1. Totals may not sum due to rounding.

**Table 18-19: Process Operating Cost Summary by Unit Operation**

Process Area	LOM Cost (\$M)	Cost (\$/st)
Crushing and Conveying	35	0.31
Grinding & Classification	483	4.22
Antimony Recovery	35	0.31
Gold Flotation	139	1.21
Pressure Oxidation	336	2.93
POX Discharge Cooling, HC & Neutralization	110	0.96
POX Leach-CIP Circuit	196	1.71
Tailings / Oxide Leach-CIP	55	0.48
Carbon Handling & Refinery	66	0.58
Tailings & Water Reclaim	52	0.45
Water Treatment	4	0.03
Fresh / Contact Water System	16	0.14
Ancillaries	75	0.66
<b>Total Process Plant</b>	<b>1,602</b>	<b>14.00</b>

Note. 1. Totals may not sum due to rounding.

The process plant operating and maintenance labor costs were derived from a staffing plan and are based on labor rates from an industry survey for this region and modified where necessary. The annual salaries include overtime and benefits for both salaried and hourly employees.

### 18.2.3 General and Administrative Costs

The general and administrative (G&A) operating costs cover the expenses of the departments which share function and support across both mine and processing operations. G&A costs include management, accounting, human resources, environmental and safety compliance, laboratory, community relations, site residential camp, communications, insurance, legal, training, and other costs not associated with either mining or processing. The LOM G&A cost estimated for the Project are presented in Table 18-20.

**Table 18-20: General and Administrative Costs Summary**

Area	Average Annual Cost (\$M)	US\$/st processed	LoM Operating Cost (\$M)	%
Personnel	10.5	1.31	150	29%
General	3.7	0.46	52	10%
Burntlog access road	1.3	0.17	19	4%
Utilities	2.0	0.25	28	5%
Contracts, insurance, legal	7.1	0.88	102	19%
Camp	8.9	1.11	127	24%
IT services	1.1	0.14	16	3%
Contact water treatment	1.3	0.17	19	4%
Waste water treatment	0.7	0.08	9	2%
<b>Total<sup>1</sup></b>	<b>36.6</b>	<b>4.55</b>	<b>521</b>	<b>100%</b>

Note. 1. Totals may not sum due to rounding.

### 18.2.4 Labor Requirements

Process labor costs were derived based on an estimated staff of 270 employees. Employee wages were determined based on surveys of actual labor rates in the area. Labor rates and fringe benefits for employees include all applicable benefits as well as applicable payroll taxes but exclude profit sharing (PTU). The burden rate used is 48% for hourly staff and 51% for salaried staff. Limestone, lime, and oxygen labor costs are discussed in Sections 21.2.3.6 and 21.2.3.7 of this Report. Table 18-21 below summarizes the labor costs.

**Table 18-21: Labor Cost Summary**

Area	Staff	LOM (\$M)
Process	88	112
Maintenance	66	88
E&IC	31	44
Tech Services	11	17
Lab	43	52
Process Administration	14	27
Oxygen	96	0
Limestone & Lime	85	0
<b>Total<sup>1</sup></b>	<b>270</b>	<b>340</b>

Note. 1. Totals may not sum due to rounding.

### 18.2.5 Major Reagents, Fuel and Electricity Unit Costs

Table 18-22 summarizes the unit costs for the major Project consumables (process reagents, diesel fuel and power).

**Table 18-22: Cost Assumptions for Major Reagents and Power**

Item	Unit	Cost Estimate	Comment
Diesel fuel (Off-road)	\$ per gallon	2.80	Based on quotes and diesel price forecasts
Diesel fuel (On-road)	\$ per gallon	2.97	Based on quotes and diesel price forecasts
Electricity	\$ per kWhr	0.06	Price rate from previous study
Lime	\$ per st	74.25 – 90.25	OPEX for onsite production
Sodium Cyanide	\$ per lb	1.38	Price quote delivered to site
Sodium Metabisulfite	\$ per lb	0.51	Price quote delivered to site
Copper Sulfate	\$ per lb	1.86	Price quote delivered to site

Reagent consumption rates were determined from the metallurgical test data or industry practice. Budget quotations were received for reagents supplied from local sources where available, with an allowance for freight to site or from historical data from other projects.

The crusher liners, mill liners, and grinding media are the contributing costs for consumables. Consumption unit cost estimates are based on quotes for the specific equipment and the consultant's internal database of wear item costs. The maintenance annual costs and life-of-mine costs are presented below in Table 18-23.

**Table 18-23: Consumables Annual Costs and Life of Mine Costs**

Item	Average Annual Cost (\$000)	LoM Cost (\$000)
Gyro crusher liners	259	3696
Cone crusher liners <sup>2</sup>	107	1,529
SAG mill liners	3457	49,267
Ball mill liners	2522	35,938
Regrind mill liners <sup>3</sup>	34	478
SAG mill media	2140	30,496
Ball mill media	9382	133,694
Regrind mill media <sup>3</sup>	12	169
<b>Total<sup>1</sup></b>	<b>17,913</b>	<b>255,267</b>

Notes: 1. Totals may not sum due to rounding. 2. Installed in later years. 3. Only consumed when running high antimony ore.

An allowance of 3% - 5% of the installed equipment costs was made to estimate the cost of equipment maintenance for a full year of production with the equipment in use. For process equipment with variable run hours (ex. antimony flotation circuit), the annual maintenance cost was scaled based on throughput or number of process lines running (ex. only one autoclave in use when running west end ore). The annual maintenance cost is projected at approximately \$18 million and life-of-mine costs are \$255 million

## 19 ECONOMIC ANALYSIS

The economic analysis presented in this Report uses a financial model that estimates cash flows on a monthly basis for the life of the Project at the level of detail appropriate to the prefeasibility level of engineering and design. Annual cash flow projections are estimated over the LOM based on the CAPEX, OPEX, sales revenue and other cost estimates outlined in Section 18. CAPEX is estimated in four categories: initial, sustaining, closure and reclamation, and working, and are distributed in accordance with the estimated year of expenditure. OPEX estimates include labor, reagents, maintenance, supplies, services, and electrical power for each year. The sales revenue is based on payable metals contained in doré bullion and antimony concentrate produced by the ore processing plant. Other costs, such as royalties, taxes, and depreciation are estimated in accordance with the present stage of the Project.

The financial model results are presented in terms of net present value (NPV), payback period (time in years to recapture the initial capital investment), and the internal rate of return (IRR) for the Project. Cash flow projections are estimated over the life-of-mine (LOM) based on the estimates of capital expenditures and production cost and sales revenue. The estimates of CAPEX and OPEX have been developed specifically for this Project, as presented in Section 18 of this Report.

### 19.1 Assumptions

The base case economic analysis was performed assuming a gold price of US\$3,250/oz, silver price of US\$40.00/oz, and antimony price of US\$10.00/lb. This forecast is premised on consensus long-term forecasts of the gold price as at December 31, 2025. With a smaller sample set of forecasts for antimony and silver only representing an immaterial portion of project economics, pricing was selected at or below long-term consensus estimates. Where applicable, price inflation and escalation factors were considered and applied for various line items except where firm vendor pricing has been obtained and/or under contract. Commodity prices can be volatile and there is the potential for positive or negative deviation from the forecast. Assumptions that were used to estimate the CAPEX and OPEX are presented in Section 18 of this Report. The economic analysis also used the following assumptions:

- A discount rate of 5% is applied to NPV calculations (NPV<sub>5%</sub>).
- Construction period of 45 months.
- Total mine life of 14.25 years.
- Cost estimates in constant Q4 2025 dollars with no inflation or escalation factors considered beyond this period.
- Results based on 100% ownership with a 1.7% net smelter return (NSR) royalty on gold production and a 100% NSR royalty on all silver production starting in year 7.
- Funding for the Project is assumed to be 100% equity funding with no financing costs except leasing of major mining equipment since this equipment would almost certainly be lease purchased.
- All cash flows discounted to start of construction period using mid-month discounting convention.
- All metal products are sold in the same month they are produced.

- Project revenue is derived from the sale of gold doré and antimony concentrate.
- No firm contractual arrangements for refining or transportation currently exist.
- Costs incurred prior to the start of construction are not included in the model and are considered “sunk costs”, except for tax purposes, where the aggregate expenditures accumulated prior to the construction start date are available to offset taxes.
- A 15-day delay in revenue from sales and a 15-day delay in payment of accounts payable are used in the formulation of working capital, which is recaptured at the end of mine life.
- An allowance of 5% is included in the financial model for salvage value of selected capital equipment, excluding buildings and tanks, which are included in the reclamation costs.
- Depreciation is calculated using the Modified Accelerated Cost Recovery System (MACRS) method in accordance with current U.S. Internal Revenue Service (IRS) regulations.
- Depletion for tax purposes is estimated for the financial model using the percentage method; a rate of 15% is used for gold and silver and 22% is used for antimony.

## 19.2 Revenue

Revenue for the financial model is based on the grade and tonnage of mill feed from the mine plan (Table 19-1), using the plant recovery for the specific mineralization type to yield metal production figures (Table 19-2). The appropriate refinery or smelter treatment terms (Table 19-3) are applied to the payable metals (Table 19-4) using the metal prices presented in Table 19-5.

**Table 19-1: Life of Mine Contained Metal by Deposit**

Deposit	Ore Type	Ore Tons (kst)	Contained Metal Grade			Contained Metal Quantity		
			Gold (oz/st)	Silver (oz/st)	Antimony (%)	Gold (koz)	Silver (oz)	Antimony (klb)
Yellow Pine	High Sb	11,279	0.060	0.137	0.460	671	1,543	103,758
	Low Sb	41,463	0.049	0.045	0.009	2,047	1,881	7,859
Hangar Flats	High Sb	3,411	0.056	0.141	0.369	191	483	25,148
	Low Sb	5,696	0.039	0.048	0.018	223	273	2,104
West End	Oxide	4,931	0.016	0.026	--	78	126	--
	Mixed	28,483	0.030	0.043	--	855	1,236	--
	Low Sb	16,801	0.039	0.038	--	649	635	--
Historical Tailings	High Sb	2,961	0.034	0.084	0.166	100	247	9,814
<b>Totals / Averages</b>		<b>115,025</b>	<b>0.042</b>	<b>0.056</b>	<b>0.065</b>	<b>4,815</b>	<b>6,424</b>	<b>148,683</b>

**Table 19-2: Recovered Metal Production**

Deposit	Doré Bullion		Antimony Concentrate		
	Gold (koz)	Silver (koz)	Antimony (klb)	Gold (koz)	Silver (koz)
Yellow Pine	2,498	54	86,506	25	421

Deposit	Doré Bullion		Antimony Concentrate		
	Gold (koz)	Silver (koz)	Antimony (klb)	Gold (koz)	Silver (koz)
Hangar Flats	372	10	17,441	6	205
West End	1,230	441	-	-	-
Historical Tailings	90	4	2,538	1	21
<b>Totals Production</b>	<b>4,191</b>	<b>509</b>	<b>106,484</b>	<b>32</b>	<b>647</b>

**Table 19-3: Smelter Treatment Factors**

Gold and Silver Bullion	
Gold Payability	99.9%
Silver Payability	98.0%
Refining Charge – Au (per troy ounce)	\$1.00
Transportation Charge – Au (per troy ounce)	\$1.15
Refining Charge – Ag (per troy ounce)	\$0.50
Transportation Charge – Ag (per troy ounce)	\$1.15
Antimony Concentrate	
Payable Antimony (%)	85%
Gold Payability (approximate)	
<5.0 g/t	0%
5.0 to <8.5 g/t	15-20%
8.5 to <10.0 g/t	20-25%
≥10.0 g/t	25%
Silver Payability (approximate)	
<300 g/t	0%
300 to <700 g/t	40-50%
≥700 g/t	50%
Transportation to Idaho (per wet ton)	\$74.60

**Table 19-4: Payable Metals Production**

Product	Gold (koz)	Silver (koz)	Antimony (klb)
Doré Bullion	4,187	505	--
Antimony Concentrate	8	85	91
<b>Total Payable Metals</b>	<b>4,195</b>	<b>590</b>	<b>91</b>

**Table 19-5: Metal Price Cases**

Case	Metal Prices			Basis
	Gold (\$/oz)	Silver (\$/oz) <sup>1</sup>	Antimony (\$/lb) <sup>1</sup>	
Case A	\$3,250	\$40.00	\$10.00	Case corresponds to long-term average metal price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case B	\$4,000	\$40.00	\$10.00	Case corresponds to 4-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony

Case	Metal Prices			Basis
	Gold (\$/oz)	Silver (\$/oz) <sup>1</sup>	Antimony (\$/lb) <sup>1</sup>	
Case C	\$4,500	\$40.00	\$10.00	Case corresponds to 3-year consensus gold price forecasts as of December 31, 2025, and long-term average price forecasts for silver and antimony
Case D	\$5,000	\$40.00	\$10.00	Case corresponds to recent spot gold pricing in Q1 2026, and long-term average price forecasts for silver and antimony

Notes: 1. The company has elected to use flat antimony (\$10/lb) and silver (\$40/oz) prices in its analysis which reflect long-term consensus estimates.

### 19.3 Capital Costs

The details of the CAPEX estimate for the Project are summarized below and are presented in more detail in Section 18 of this Report. For purposes of the financial model, CAPEX is broken into four categories: initial capital, sustaining capital, closure, and reclamation capital, and working capital. Table 19-6 presents a summary of the initial, sustaining and closure and reclamation capital costs.

**Table 19-6: Capital Cost Summary**

Area	Detail	Initial CAPEX (\$M)	Sustaining CAPEX (\$M)	Closure CAPEX (\$M)(1)	Total CAPEX (\$M)
Direct Costs	Mine Costs	184	211	-	395
	Processing Plant	814	93	-	907
	On-Site Infrastructure	336	305	-	641
	Off-Site Infrastructure	396	-	-	396
Indirect Costs & Project Delivery		414	-	-	414
Owner's Costs		232	112	118	462
Contingency and Sales Tax		201	44	-	245
<b>Sub-total CAPEX</b>		<b>2,576</b>	<b>767</b>	<b>118</b>	<b>3,461</b>
Pre-Production Revenue		-52	-	-	-52
<b>Total CAPEX</b>		<b>2,524</b>	<b>767</b>	<b>118</b>	<b>3,409</b>

Notes: 1. Closure assumes self-performed closure costs, which will differ for those assumed for financial assurance calculations required by regulators.

### 19.4 Operating Costs

The average cash operating cost per short ton (st) of processed material before by-product credits, royalties, refining and transportation charges over the LOM and during the first four years of operations are summarized in Table 19-7. These cash costs include mine operations, process plant operations, and general and administrative costs (G&A).

By-product revenue from silver and antimony can be "credited" as a deduction to the operating costs. The average cash operating cost per ton of processed material after by-product credits but before royalties, refining and transportation charges over the LOM and during the first four years of operations are also presented in Table 19-7.

**Table 19-7: Operating Cost Summary**

Cash Operating Cost Estimate	Years 1-4 Average		LOM Average		
	\$/st milled	\$/oz Au	\$/st mined	\$/st milled	\$/oz Au
Mining OPEX <sup>(1)</sup>	14.13	248	3.12	10.78	295
Processing OPEX	14.15	249		14.00	383
General & Administrative OPEX	4.55	77		4.55	125
<b>Cash Costs Before By-Product Credits<sup>(2)</sup></b>	<b>32.83</b>	<b>574</b>		<b>29.32</b>	<b>803</b>
By-Product Credits	-18.47	-324		-8.07	-222
<b>Cash Costs After By-Product Credits<sup>(3)</sup></b>	<b>14.35</b>	<b>249</b>		<b>21.22</b>	<b>580</b>

Notes: **1.** Mining OPEX excludes capitalized stripping. **2.** Cash costs shown in this table are before royalties, refining, and transportation charges; cash costs that include these costs are presented in Table 19-8. **3.** By-product credits accrue from silver and antimony revenue.

## 19.5 Other Costs

There is a 1.7% royalty that applies to gold revenue and a 100% royalty that applies to silver revenue starting in year 7. The LOM reduction in Net Operating Income of the combined royalties is estimated to be \$272 million.

Depreciation is calculated using the MACRS method starting with the first year of production. The initial capital and sustaining capital used a 7-year life. The last year of production is the catch-up year for the assets that are not fully depreciated at that time.

The percentage depletion method was used in the evaluation. It is determined as a percentage of gross income from the property, not to exceed 50% of taxable income before the depletion deduction. A rate of 15% is used for gold and silver and a rate of 22% is used for antimony.

The Project has been evaluated on a post-tax basis to provide an approximate value of the potential economics. The tax model and calculations are based on the tax regime as of the date of this Report. At the effective date of this Report, the Project is assumed to be subject to the American federal corporate income taxes, Idaho state corporate income taxes, and the Idaho Mine License Tax. The corporate income taxes payable over the life of the mine are estimated to be US\$1,336 million and the Idaho Mine License Tax payable over the life of the mine is estimated to be US\$54.9 million. It must be noted that tax calculations involve complex variables that can only be accurately determined during operations and, as such, the actual taxes payable and post-tax economic results may differ from those estimated.

Taxable income for income tax purposes is defined as metal revenues minus operating expenses, royalty, property and severance taxes, reclamation and closure expense, depreciation and depletion. Deduction for depletion is used in the calculation of State income tax, but no deduction is taken for the federal income taxes paid. The combined effective tax rate was calculated as follows:

$$\begin{aligned}
 \text{Combined Effective Tax Rate} &= \text{State Rate} + \text{Federal Rate} \times (100\% - \text{State Rate}) \\
 &= 5.7\% + 21\% \times (100\% - 5.7\%) \\
 &= 25.503\%
 \end{aligned}$$

The Idaho Mine License Tax is a tax for the privilege of mining or receiving royalties from mining operations. The tax rate is 1% of the value of ores mined or extracted and royalties received. The basis is the taxable income that is defined by the IRS.

## 19.6 Total Production Costs

A detailed breakdown of the various measures of cash cost over the life of the mine are shown in Table 19-8. The costs are presented in \$/st mined, \$/st milled, and in \$/oz Au. The table provides the cash costs before and after by-product credits; the total cash costs, which include royalties, refining and transportation charges; and All-In Sustaining Costs (AISC) that includes the Sustaining CAPEX, salvage, and property taxes for both the LOM and initial four years of operation. The All in Costs (AIC), that includes non-sustaining capital, is included for the LOM.

**Table 19-8: Total Production Cost Summary**

Total Production Cost Item	Years 1-4		LOM	
	(\$/st milled)	(\$/oz Au)	(\$/st milled)	(\$/oz Au)
Mining	14.13	248	10.78	295
Processing	14.15	249	14.00	383
G&A	4.55	77	4.55	125
<b>Cash Costs Before By-Product Credits</b>	<b>32.83</b>	<b>574</b>	<b>29.32</b>	<b>803</b>
By-Product Credits	-18.47	-324	-8.07	-222
<b>Cash Costs After By-Product Credits</b>	<b>14.36</b>	<b>250</b>	<b>21.25</b>	<b>581</b>
Royalties	3.24	56	2.36	65
Refining and Transportation	0.27	5	0.15	4
<b>Total Cash Costs</b>	<b>17.86</b>	<b>311</b>	<b>23.76</b>	<b>650</b>
Sustaining CAPEX	10.68	188	6.67	184
<b>All-In Sustaining Costs</b>	<b>28.54</b>	<b>498</b>	<b>30.42</b>	<b>833</b>
Reclamation and Closure(1)	-	-	1.03	28
Initial (non-sustaining) CAPEX(2)	-	-	22.311	614
<b>All-In Costs</b>	<b>-</b>	<b>-</b>	<b>53.76</b>	<b>1,476</b>

Notes: 1. Defined as non-sustaining reclamation and closure costs in the post-operations period. 2. Initial Capital includes capitalized preproduction.

## 19.7 Financial Model Results

The financial model results are presented in terms of NPV, IRR, and payback period in years for recovery of the capital expenditures. These economic indicators are presented on both pre-tax and after-tax bases. The NPV is presented both undiscounted (NPV0%) and at a 5% discount rate (NPV5%), as shown in Table 19-9. The primary metric for comparison of the cases is the after-tax net present value at a 5% discount rate (ATNPV5%). Assumptions used for the model are provided in Table 19-9 and the detailed annual cash flow forecast based on \$3,250/oz gold, \$40.00/oz silver, and \$10.00/lb antimony using the annual production schedule for the life of the project is presented in Table 19-10.

**Table 19-9: Financial Model Pre-Tax and After-Tax Indicators by Case**

Parameter	Unit	Pre-tax Results	After-tax Results
<b>Case A – \$3,250/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	7,506	6,115
NPV5%	M\$	4,349	3,457
Annual Average EBITDA	M\$	766	-
Annual Average After-Tax Free Cash Flow	M\$	-	607
IRR	%	26.6	23.5
Payback Period	Production Years	2.3	2.4
<b>Case B – \$4,000/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	10,599	8,526
NPV5%	M\$	6,344	5,012
Annual Average EBITDA	M\$	983	-
Annual Average After-Tax Free Cash Flow	M\$	-	775
IRR	%	33.0	29.0
Payback Period	Production Years	1.9	2.1
<b>Case C – \$4,500/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	12,661	10,128
NPV5%	M\$	7,674	6,045
Annual Average EBITDA	M\$	1,128	-
Annual Average After-Tax Free Cash Flow	M\$	-	887
IRR	%	36.8	32.3
Payback Period	Production Years	1.7	1.9
<b>Case D – \$5,000/oz Au, \$40/oz Ag, \$10/lb Sb</b>			
NPV0%	M\$	14,722	11,727
NPV5%	M\$	9,004	7,076
Annual Average EBITDA	M\$	1,273	-
Annual Average After-Tax Free Cash Flow	M\$	-	999
IRR	%	40.3	35.3
Payback Period	Production Years	1.5	1.8

**Table 19-10: Financial Analysis Summary Table**

Description	Units	LOM Total / Avg.	
Gold Price	US\$/oz	3,250	
Silver Price	US\$/oz	40	
Antimony Price	US\$/lb	10	
Mine Life	years	14.25	
Total Mill Feed	kst	115,025	
Average Annual Mill Feed	kst/a	8,073	
Production	Units	LOM Total / Avg.	
Mill Feed Grade – Au	oz/st	0.042	
Mill Feed Grade – Ag	oz/st	0.056	
Mill Feed Grade – Sb	%	0.06%	
Total Production – Au	koz	4,814.8	
Total Production – Ag	koz	6,423.5	
Total Production – Sb	mlb	148.7	
Average Annual Production – Au	koz/a	337.9	
Average Annual Production – Ag	koz/a	450.8	
Average Annual Production – Sb	mlb/a	10.4	
Total Payable Metal – Au	koz	4,194.7	
Total Payable Metal – Ag	koz	590.0	
Total Payable Metal – Sb	mlb	90.5	
Operating Costs	Units	LOM Total / Avg.	
Mining Cost	US\$/t milled <sup>1</sup>	10.78	
Processing Cost	US\$/t milled <sup>1</sup>	14.00	
G&A Cost	US\$/t milled <sup>1</sup>	4.55	
Total Operating Cost	US\$/t milled <sup>1</sup>	29.32	
Total Cash Costs (By-product basis) <sup>2</sup>	US\$/oz Au	650	
All-in Sustaining Costs (AISC) (By-product basis) <sup>3</sup>	US\$/oz Au	833	
Capital Costs	Units	LOM Total / Avg.	
Initial Capital Cost	US\$M	2,576	
Pre-production Revenue (Net of sales costs and royalties)	US\$M	(52)	
Adjusted Initial Capital Cost (Net of Pre-production revenue)	US\$M	2,524	
Sustaining Capital	US\$M	767	
Salvage Credit	US\$M	(51)	
Closure Costs <sup>4</sup>	US\$M	118	
Economic Outcomes	Units	Pre-Tax	Post-Tax
NPV (5%)	US\$M	4,349	3,457
IRR	%	26.6	23.5
Payback	Years	2.3	2.4

Note: **1.** Unit operating costs exclude costs and tons associated with pre-production operation. **2.** Total Cash Costs consist of mining costs, processing costs, mine-level G&A, by-product credits, royalty costs, treatment costs, refining costs, and transportation costs. **3.** AISC includes Total Cash Costs plus sustaining capital costs. **4.** Post-production closure costs following the end of the mine life are discounted at 5% to a single cashflow of \$118.1M at the closure of the mine.

**Table 19-11: Cash Flow Forecast on an Annual Basis**

Macro Assumptions	Units	Total / Avg.	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Gold Price	US\$/oz	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250	\$3,250
Antimony Price	US\$/lb	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Silver Price	US\$/oz	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
<b>Revenue</b>	<b>\$mm</b>	<b>\$14,561</b>	--	--	--	<b>\$53</b>	<b>\$1,153</b>	<b>\$1,667</b>	<b>\$1,845</b>	<b>\$1,883</b>	<b>\$1,412</b>	<b>\$1,188</b>	<b>\$785</b>	<b>\$718</b>	<b>\$625</b>	<b>\$685</b>	<b>\$935</b>	<b>\$839</b>	<b>\$385</b>	<b>\$309</b>	<b>\$79</b>	--
Off-Site Costs	\$mm	(\$16.8)	--	--	--	(\$0.0)	(\$1.2)	(\$2.7)	(\$2.6)	(\$1.9)	(\$1.9)	(\$1.9)	(\$0.6)	(\$0.6)	(\$0.7)	(\$0.6)	(\$0.7)	(\$0.6)	(\$0.4)	(\$0.3)	(\$0.1)	--
Royalties	\$mm	(\$271.6)	--	--	--	(\$0.9)	(\$18.8)	(\$24.8)	(\$28.4)	(\$31.4)	(\$24.7)	(\$17.9)	(\$15.3)	(\$15.8)	(\$15.4)	(\$18.4)	(\$20.2)	(\$16.1)	(\$12.4)	(\$7.3)	(\$3.7)	--
Operating Cost	\$mm	(\$3,357)	--	--	--	--	(\$252.748)	(\$262.271)	(\$275.810)	(\$257.035)	(\$256.347)	(\$245.636)	(\$248.726)	(\$245.799)	(\$240.080)	(\$243.212)	(\$235.072)	(\$205.709)	(\$188.330)	(\$165.361)	(\$34.612)	--
<b>EBITDA</b>	<b>\$mm</b>	<b>\$10,916</b>	--	--	--	<b>\$52</b>	<b>\$880</b>	<b>\$1,377</b>	<b>\$1,538</b>	<b>\$1,593</b>	<b>\$1,129</b>	<b>\$923</b>	<b>\$521</b>	<b>\$456</b>	<b>\$369</b>	<b>\$423</b>	<b>\$679</b>	<b>\$617</b>	<b>\$184</b>	<b>\$136</b>	<b>\$40</b>	--
Initial Capex	\$mm	(\$2,576)	(\$447)	(\$738)	(\$685)	(\$706)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sustaining Capex	\$mm	(\$766.9)	--	--	--	--	(\$117.6)	(\$85.7)	(\$42.5)	(\$95.0)	(\$34.0)	(\$4.1)	(\$112.6)	(\$72.8)	(\$5.4)	(\$21.8)	(\$82.0)	(\$6.3)	(\$6.8)	(\$80.0)	(\$0.1)	--
Closure Capex	\$mm	(\$118.1)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(\$19.7)	(\$98.4)
Salvage Value	\$mm	\$50.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	\$4.9	--	\$3.4	\$1.3	\$41.3	--
Change in Working Capital	\$mm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Pre-Tax Unlevered Free Cash Flow</b>	<b>\$mm</b>	<b>\$7,506</b>	<b>(\$447)</b>	<b>(\$738)</b>	<b>(\$685)</b>	<b>(\$654)</b>	<b>\$763</b>	<b>\$1,292</b>	<b>\$1,495</b>	<b>\$1,498</b>	<b>\$1,095</b>	<b>\$919</b>	<b>\$408</b>	<b>\$383</b>	<b>\$363</b>	<b>\$401</b>	<b>\$602</b>	<b>\$611</b>	<b>\$180</b>	<b>\$57</b>	<b>\$62</b>	<b>(\$98)</b>
Pre-Tax Cumulative Unlevered Free Cash Flow	\$mm		(\$78)	(\$540)	(\$1,248)	(\$1,935)	(\$1,761)	(\$469)	\$1,026	\$2,524	\$3,619	\$4,538	\$4,946	\$5,329	\$5,692	\$6,093	\$6,695	\$7,305	\$7,486	\$7,543	\$7,621	\$7,585
Taxes Payable	\$mm	(\$1,391)	--	--	--	(\$5)	(\$49)	(\$118)	(\$195)	(\$242)	(\$162)	(\$123)	(\$37)	(\$45)	(\$57)	(\$69)	(\$131)	(\$118)	(\$24)	(\$4)	(\$12)	--
<b>Post-Tax Unlevered Free Cash Flow</b>	<b>\$mm</b>	<b>\$6,115</b>	<b>(\$447)</b>	<b>(\$738)</b>	<b>(\$685)</b>	<b>(\$659)</b>	<b>\$713</b>	<b>\$1,173</b>	<b>\$1,300</b>	<b>\$1,255</b>	<b>\$933</b>	<b>\$796</b>	<b>\$371</b>	<b>\$338</b>	<b>\$306</b>	<b>\$332</b>	<b>\$471</b>	<b>\$493</b>	<b>\$157</b>	<b>\$53</b>	<b>\$50</b>	<b>(\$98)</b>
Post-Tax Cumulative Unlevered Free Cash Flow	\$mm		(\$78)	(\$540)	(\$1,248)	(\$1,935)	(\$1,816)	(\$642)	\$658	\$1,913	\$2,846	\$3,642	\$4,013	\$4,352	\$4,658	\$4,990	\$5,461	\$5,954	\$6,111	\$6,164	\$6,230	\$6,194
<b>Production Summary</b>																						
Waste Mined Total	kst	279,764	--	--	2,631	17,925	24,243	24,743	22,019	18,846	23,195	24,386	25,058	25,931	30,158	25,222	11,893	3,514	--	--	--	--
Mineralized Material Mined Total	kst	115,289	--	--	--	885	8,628	9,882	14,544	14,473	11,123	6,500	8,436	8,752	6,157	8,924	10,407	6,579	--	--	--	--
Total Mill Feed	kst	115,025	--	--	--	555	6,858	8,023	8,988	8,050	8,072	8,050	8,050	8,050	8,072	8,050	8,050	8,050	8,072	8,050	1,985	--
Project Life	yrs	14.2	--	--	--	--	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.2	--
<b>Processing Summary</b>																						
Mill Feed - Au Grade	oz/st	0.04	--	--	--	0.04	0.05	0.06	0.06	0.08	0.05	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.02	0.02	0.01	--
Mill Feed - Sb Grade	%	0.06%	--	--	--	0.02%	0.08%	0.22%	0.19%	0.10%	0.15%	0.14%	0.01%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	--	--
Mill Feed - Ag Grade	oz/st	0.06	--	--	--	0.04	0.06	0.10	0.09	0.07	0.08	0.06	0.04	0.03	0.04	0.05	0.05	0.04	0.03	0.03	0.02	--
Mill Feed - S Grade	%	0.78%	--	--	--	1.0%	1.2%	1.1%	1.1%	1.1%	1.1%	1.0%	0.7%	0.5%	0.6%	0.5%	0.7%	0.8%	0.2%	0.5%	0.2%	--
<b>Total Au Content</b>	<b>koz</b>	<b>4,815</b>	--	--	--	<b>20</b>	<b>373</b>	<b>493</b>	<b>564</b>	<b>613</b>	<b>438</b>	<b>359</b>	<b>277</b>	<b>262</b>	<b>225</b>	<b>252</b>	<b>336</b>	<b>300</b>	<b>145</b>	<b>127</b>	<b>29</b>	--
<b>Total Sb Content</b>	<b>mlbs</b>	<b>148.7</b>	--	--	--	<b>0</b>	<b>11</b>	<b>36</b>	<b>34</b>	<b>15</b>	<b>24</b>	<b>22</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	--	--
<b>Total Ag Content</b>	<b>koz</b>	<b>6,424</b>	--	--	--	<b>24</b>	<b>430</b>	<b>828</b>	<b>853</b>	<b>584</b>	<b>662</b>	<b>511</b>	<b>291</b>	<b>230</b>	<b>351</b>	<b>400</b>	<b>417</b>	<b>334</b>	<b>255</b>	<b>205</b>	<b>47</b>	--
<b>Total S Content</b>	<b>kst</b>	<b>900.4</b>	--	--	--	<b>5.6</b>	<b>81.5</b>	<b>90.7</b>	<b>95.3</b>	<b>87.1</b>	<b>91.0</b>	<b>83.9</b>	<b>55.3</b>	<b>44.2</b>	<b>46.8</b>	<b>39.4</b>	<b>52.7</b>	<b>61.6</b>	<b>19.6</b>	<b>42.6</b>	<b>3.1</b>	--
Total Antimony Produced - Sb Concentrate	mlbs	106.5	--	--	--	--	7.6	27.3	23.9	10.3	16.0	17.8	0.9	--	2.6	--	--	--	--	--	--	--
Total Gold Produced - Sb Concentrate	koz	32.0	--	--	--	--	2.4	7.1	8.2	4.3	4.6	5.0	0.2	--	0.2	--	--	--	--	--	--	--
Total Silver Produced - Sb Concentrate	koz	647	--	--	--	--	26	156	142	82	171	61	2	--	8	--	--	--	--	--	--	--
Total Gold Produced - Dore	koz	4,191.3	--	--	--	16.3	334.5	440.3	503.4	551.7	390.9	318.2	239.1	220.6	184.7	209.9	287.3	258.2	117.8	94.6	23.8	--
Total Silver Produced - Dore	koz	515	--	--	--	0	7	12	13	9	9	8	31	51	69	84	54	28	67	37	35	--
Sb Concentrate Produced - Dry	kst	98.0	--	--	--	--	6.9	24.8	21.7	9.5	15.3	16.4	0.8	--	2.5	--	--	--	--	--	--	--
Sb Concentrate Produced - Wet	kst	103.1	--	--	--	--	7.3	26.1	22.9	10.0	16.1	17.2	0.8	--	2.6	--	--	--	--	--	--	--
<b>Total Payable Antimony</b>	<b>mlbs</b>	<b>90.5</b>	--	--	--	--	<b>6.5</b>	<b>23.2</b>	<b>20.3</b>	<b>8.7</b>	<b>13.6</b>	<b>15.1</b>	<b>0.7</b>	--	<b>2.3</b>	--	--	--	--	--	--	--

Macro Assumptions	Units	Total / Avg.	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Total Payable Gold</b>	koz	<b>4,194.7</b>	--	--	--	16	335	441	505	552	392	319	239	220	184	210	287	258	118	94	24	--
<b>Total Payable Silver</b>	koz	<b>590</b>	--	--	--	0.3	8.8	11.7	12.3	24.1	77.8	8.0	30.3	50.1	67.4	82.6	52.7	27.2	65.9	36.3	34.5	--
<b>Total Payable Gold Equivalent</b>	koz AuEq	<b>4,480</b>	--	--	--	16	355	513	568	579	435	366	242	221	192	211	288	258	118	95	24	--
<b>Total Operating Costs</b>	\$mm	<b>(\$3,357)</b>	--	--	--	--	(\$253)	(\$262)	(\$276)	(\$257)	(\$256)	(\$246)	(\$249)	(\$246)	(\$240)	(\$243)	(\$235)	(\$206)	(\$188)	(\$165)	(\$35)	--
Mine Operating Costs	\$mm	(1,233)	--	--	--	--	(113)	(111)	(117)	(110)	(103)	(96)	(102)	(96)	(89)	(92)	(84)	(55)	(31)	(28)	(6)	--
Mill Processing Costs	\$mm	(1,602)	--	--	--	--	(103.9)	(115.5)	(123.2)	(109.1)	(113.9)	(111.5)	(108.6)	(113.7)	(114.7)	(115.2)	(114.7)	(114.0)	(120.6)	(100.6)	(23.0)	--
G&A Costs Total	\$mm	(521.1)	--	--	--	--	(35.8)	(35.9)	(35.9)	(37.5)	(39.2)	(38.4)	(38.1)	(36.2)	(36.1)	(36.3)	(36.3)	(36.7)	(36.5)	(36.8)	(5.4)	--
Total Unit Operating Costs	\$/t Processed	(29.2)	--	--	--	--	(36.9)	(32.7)	(30.7)	(31.9)	(31.8)	(30.5)	(30.9)	(30.5)	(29.7)	(30.2)	(29.2)	(25.6)	(23.3)	(20.5)	(17.4)	--
<b>Total Offsite Charges</b>	\$mm	<b>(\$16.8)</b>	--	--	--	(\$0.0)	(\$1.2)	(\$2.7)	(\$2.6)	(\$1.9)	(\$1.9)	(\$1.9)	(\$0.6)	(\$0.6)	(\$0.7)	(\$0.6)	(\$0.7)	(\$0.6)	(\$0.4)	(\$0.3)	(\$0.1)	--
Sb Concentrate Transport Cost	\$mm	(7.0)	--	--	--	--	(0.5)	(1.8)	(1.5)	(0.7)	(1.1)	(1.2)	(0.1)	--	(0.2)	--	--	--	--	--	--	--
Dore Transport Cost	\$mm	(5.4)	--	--	--	(0.0)	(0.4)	(0.5)	(0.6)	(0.6)	(0.5)	(0.4)	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	(0.3)	(0.2)	(0.2)	(0.1)	--
Sb Concentrate Treatment & Refining Charges	\$mm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dore Au Refining Charges	\$mm	(4.2)	--	--	--	(0.0)	(0.3)	(0.4)	(0.5)	(0.6)	(0.4)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.1)	(0.1)	(0.0)	--
Dore Ag Refining Charges	\$mm	(0.3)	--	--	--	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	--
<b>Total NSR Royalties</b>	\$mm	<b>(\$271.6)</b>	--	--	--	(\$0.9)	(\$18.8)	(\$24.8)	(\$28.4)	(\$31.4)	(\$24.7)	(\$17.9)	(\$15.3)	(\$15.8)	(\$15.4)	(\$18.4)	(\$20.2)	(\$16.1)	(\$12.4)	(\$7.3)	(\$3.7)	--
<b>Cash Costs (By-Product Basis)</b>																						
Cash Cost Net of By-Products*	US\$/oz Au	\$581.1	--	--	--	--	\$560.7	\$66.99	\$143.01	\$305.54	\$298.34	\$294.65	\$1,004.42	\$1,106.34	\$1,164.76	\$1,144.06	\$811.60	\$793.38	\$1,578.41	\$1,734.65	\$1,395.75	--
Total Cash Cost Net of By-Products**	US\$/oz Au	\$649.9	--	--	--	--	\$620.6	\$129.4	\$204.4	\$365.9	\$366.4	\$356.7	\$1,071.0	\$1,180.6	\$1,251.9	\$1,234.4	\$884.6	\$858.1	\$1,687.1	\$1,814.8	\$1,511.1	--
All-in Sustaining Cost (AISC)***	US\$/oz Au	\$833.4	--	--	--	--	\$971.7	\$323.7	\$288.5	\$538.0	\$453.3	\$369.6	\$1,542.3	\$1,511.1	\$1,281.0	\$1,338.4	\$1,170.4	\$882.6	\$1,745.2	\$2,661.1	\$1,514.0	--
<b>Total Initial Capital</b>	\$mm	<b>(\$2,576)</b>	(\$447)	(\$738)	(\$685)	(\$706)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mining Capital Cost	\$mm	(\$74)	(\$6)	(\$13)	(\$24)	(\$31)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mining Capitalized Opex	\$mm	(\$110)	--	(\$2)	(\$28)	(\$80)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mine Capital Cost Contingency	\$mm	(\$11)	--	(\$0)	(\$3)	(\$7)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Process Plant Direct Costs	\$mm	(\$1,546)	(\$290)	(\$496)	(\$390)	(\$370)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Project Indirect Costs	\$mm	(\$414)	(\$71)	(\$121)	(\$98)	(\$123)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Owners Costs	\$mm	(\$232)	(\$35)	(\$53)	(\$91)	(\$53)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Contingency Costs	\$mm	(\$190)	(\$45)	(\$53)	(\$50)	(\$42)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Total Sustaining Capital</b>	\$mm	<b>(\$767)</b>	--	--	--	--	(\$118)	(\$86)	(\$42)	(\$95)	(\$34)	(\$4)	(\$113)	(\$73)	(\$5)	(\$22)	(\$82)	(\$6)	(\$7)	(\$80)	(\$0)	--
Mine Capital Cost & Contingency	\$mm	(\$215)	--	--	--	--	(\$37.0)	(\$51.4)	(\$36.6)	(\$32.7)	(\$18.8)	(\$3.7)	(\$4.4)	(\$4.9)	(\$4.9)	(\$5.4)	(\$5.4)	(\$4.7)	(\$3.7)	(\$1.7)	(\$0.1)	--
Process Plant and Remediation	\$mm	(\$508)	--	--	--	--	(\$73.9)	(\$29.4)	(\$3.5)	(\$57.0)	(\$13.3)	(\$0.2)	(\$101.9)	(\$63.9)	(\$0.2)	(\$15.1)	(\$72.0)	(\$1.3)	(\$2.7)	(\$73.7)	--	--
Closure Cost	\$mm	(\$118)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(\$19.7)	(\$98.4)
Salvage Value		\$51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	\$4.9	--	\$3.4	\$1.3	\$41.3	--

Notes: 1. Dollar figures in Real 2025 \$mm unless otherwise noted. 2. Cash costs consist of mining costs, processing costs, mine-level G&A, and by-product credits. 3. Total Cash Costs consist of Cash Costs, royalty costs, treatment costs, refining costs, and transportation costs. 4. AISC includes Total Cash Costs plus sustaining capital costs.

## 19.8 Sensitivity Analysis

The sensitivity of the financial model was tested with respect to metal prices or gold grade, initial CAPEX, and OPEX for each case. The value of each parameter was raised and lowered 20% to evaluate the impact of such changes on the NPV at a 5% discount rate. The results for the pre-tax NPV<sub>5%</sub> (PTNPV<sub>5%</sub>) and after-tax NPV<sub>5%</sub> (ATNPV<sub>5%</sub>) are presented in Table 19-12. After-tax sensitivities with respect to NPV<sub>0%</sub>, NPV<sub>5%</sub>, IRR, and payback in production years for the base case are presented in Table 19-13.

**Table 19-12: Pre-Tax and After-Tax NPV5% Sensitivities by Case**

Case	Variable	NPV5% (M\$)					
		-20% Variance		0% Variance		20% Variance	
		Pre-Tax	After-Tax	Pre-Tax	After-Tax	Pre-Tax	After-Tax
Case A	CAPEX	4,927	3,921	4,349	3,457	3,771	2,988
	OPEX	4,761	3,765			3,938	3,146
	Metal Price or Grade	2,458	1,960			6,239	4,932
Case B	CAPEX	6,922	5,471	6,344	5,012	5,766	4,551
	OPEX	6,756	5,316			5,933	4,707
	Metal Price or Grade	4,047	3,219			8,640	6,796
Case C	CAPEX	8,252	6,503	7,674	6,045	7,096	5,585
	OPEX	8,086	6,347			7,263	5,741
	Metal Price or Grade	5,106	4,047			10,241	8,037
Case D	CAPEX	9,582	7,535	9,004	7,076	8,427	6,617
	OPEX	9,416	7,379			8,593	6,774
	Metal Price or Grade	6,165	4,870			11,842	9,279

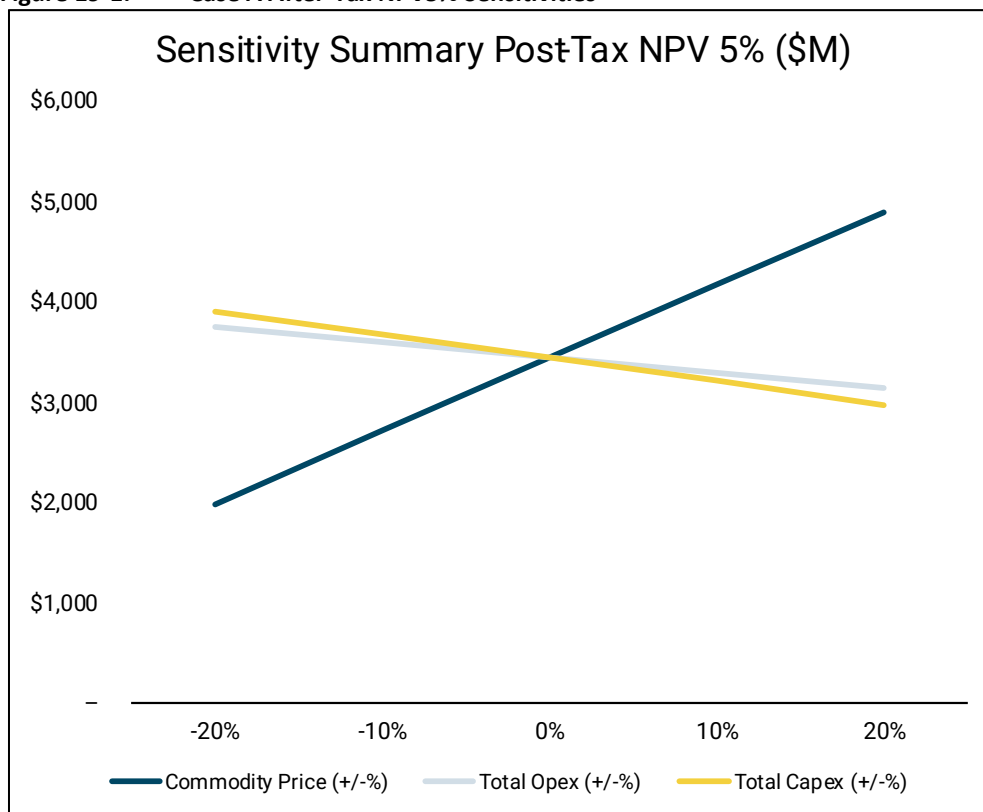
**Table 19-13: Base Case After-Tax Sensitivity Analysis**

Variance	NPV0% (M\$)	NPV5% (M\$)	IRR (%)	Payback (yrs)
<b>Metal Prices or Gold Grade</b>				
20%	8,341	4,932	29%	2.1
10%	7,207	4,196	26%	2.3
0%	6,069	3,457	23%	2.4
-10%	4,923	2,713	20%	2.8
-20%	3,764	1,960	17%	3.1
<b>Capital Cost</b>				

Variance	NPV0% (M\$)	NPV5% (M\$)	IRR (%)	Payback (yrs)
20%	5,523	2,988	19%	2.9
10%	5,797	3,223	21%	2.7
0%	6,069	3,457	23%	2.4
-10%	6,338	3,690	26%	2.3
-20%	6,605	3,921	29%	2.1
Operating Cost				
20%	5,560	3,146	22%	2.5
10%	5,815	3,302	23%	2.5
0%	6,069	3,457	23%	2.4
-10%	6,321	3,612	24%	2.4
-20%	6,572	3,765	25%	2.4

The after-tax sensitivities for NPV<sub>5%</sub> (Table 19-13) for Case A are illustrated on Figure 19-1.

**Figure 19-1: Case A After-Tax NPV<sub>5%</sub> Sensitivities**



The ATNPV<sub>5%</sub> of the Project is most sensitive to changes in revenue, which is manifested as changes in metal prices and gold grades. For example, a 20% increase in gold price or gold grade raises the ATNPV<sub>5%</sub> from \$3,457 million to \$4,932 million, a 43% increase. Similarly, a decrease of 20% in gold grade or gold price results in a 43% decrease in ATNPV<sub>5%</sub>.

All the cases indicate that the Project is slightly less sensitive to changes in OPEX than it is to changes in CAPEX. For example, the change in  $ATNPV_{5\%}$  for a 20% increase in CAPEX is -14%, whereas a 20% increase in OPEX causes a -9% change in  $ATNPV_{5\%}$ .

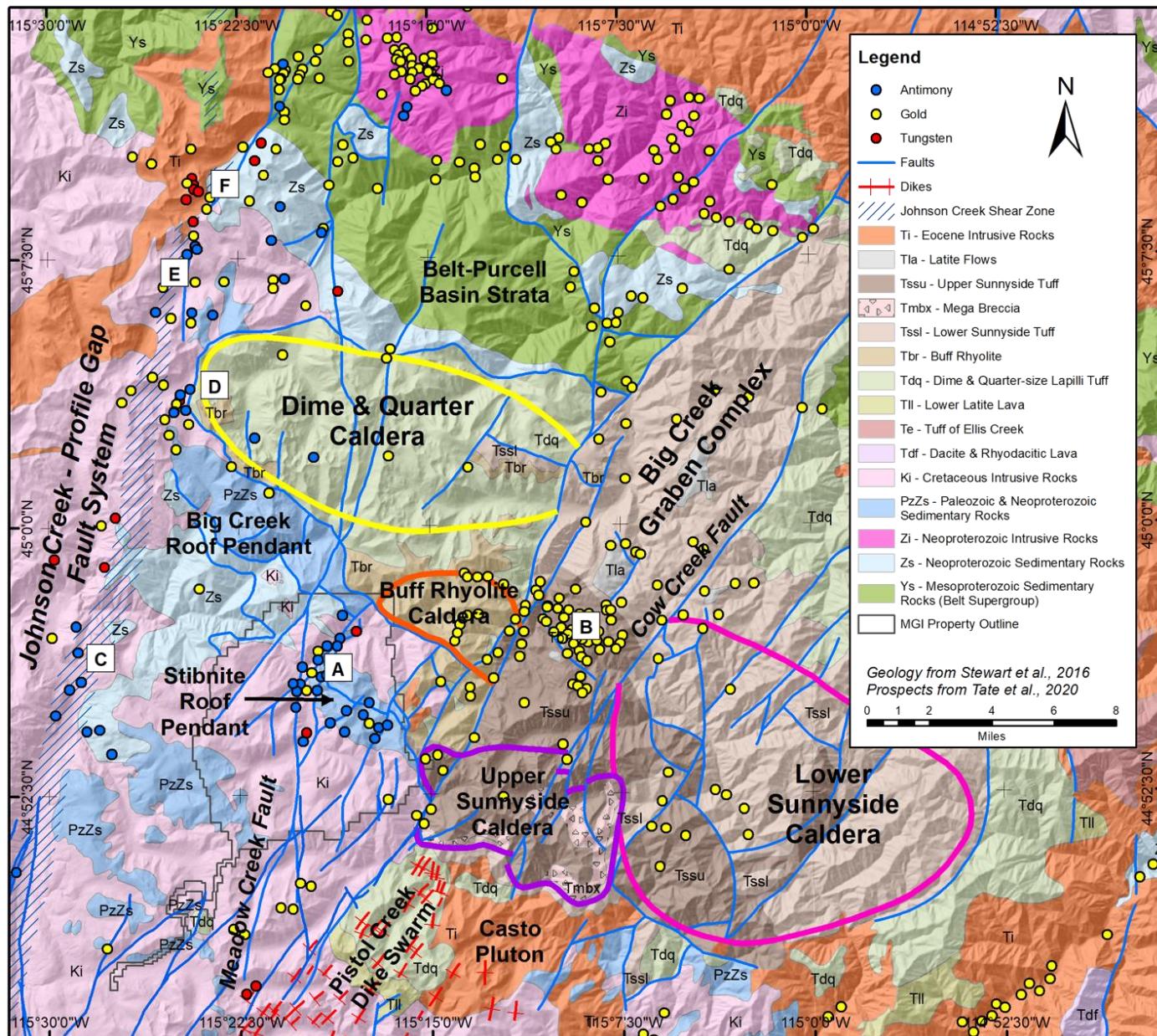
## 20 ADJACENT PROPERTIES

### 20.1 Nearby Past Producers and Major Prospects

The Stibnite Gold Project is not impacted by adjacent properties. However, there are properties controlled by other parties to the east, west, and north of the Project that have been past producers and continue to be considered major prospects. Figure 20-1 illustrates the location of these adjacent properties relative to Stibnite.

Since the announcement of receipt of the majority of Project permits, exploration activity at nearby sites has increased significantly with additional claims staked in open ground between existing mineral property owners and active drilling in several areas. As of the effective date of this Report, operators of these other prospects, while actively exploring, have not announced development of mineral resources or reserves with respect to such adjacent properties. The QP has not independently verified reports of mineralization or exploration targets on the adjacent properties, and the publicly reported information is not necessarily indicative of mineralization on the SGP property that is the subject of this TRS. Significant past producing gold mines and major prospects from the Idaho Geological Survey Mines Database (2018 version) and Perpetua Resources files near Stibnite (A) include: Thunder Mountain (B); Golden Gate and Antimony Ridge (C); B&B and Red Mountain (D); Moscow and Ludwig (E); and McRae and Independence (F).

Figure 20-1: Past Producing Mines and Major Prospects near Stibnite



The Thunder Mountain District (labeled B on the map) had numerous placer mines and was the site of a major gold rush in the late 1880s and early 1990s. Later, several of the larger lode mines in the area produced over 100,000 oz of Au.

Recorded Sb production from Antimony Ridge (aka Babbitt Metal mine) south-southeast of the town of Yellow Pine (labeled C on map) includes ~40 tons mined in 1916-1917 and 400 tons mined from 1940-42 by the Bradley interests (Schrader and Ross, 1926; Shenon and Ross, 1936; La Heist, 1964). Small amounts of silver and gold were reported in

some antimony ore (Thomson, 1919). Anaconda mapped and sampled the prospect in 1938 and reported high-grade antimony-gold mineralization in a series of parallel but discontinuous veins. In the 1950s-70s, the Oberbillig interests and lessees continued work including the development of short adits and prospect pits and produced an undisclosed, but presumably small, amount of antimony from hand-cobbed stibnite veins. Amselco, Meridian, and TRV Minerals conducted extensive gold exploration in the 1980s-1990s, outlining a large area of mineralized material containing gold and antimony. However, no NI 43-101-compliant mineral resources have been reported. Material from this prospect was mined in the 1960s-1970s and either shipped to out of state smelters or processed at the nearby Antimony Camp (Oberbillig) mill along the Johnson Creek flood plain. Former mill tailings indicate that several thousand tons have been processed; however, some tailings represent custom milling of ore from other deposits. These prospects at Antimony Ridge have been the subject of significant recent drilling by the operators.

The Golden Gate prospect is located along a prominent ridge southeast of the town of Yellow Pine (labeled C on Figure 20-1) and approximately 9,000 tons of tungsten ore grading ~2 wt% WO<sub>3</sub> were mined from Golden Gate Hill in 1972 and 1980, although it is unclear if tungsten was recovered (Leonard, ca 1992). These prospects at Golden Gate have been the subject of significant recent drilling by the operators.

Production of antimony, and possibly other metals such as mercury, from the former “B&B” underground and open pit mine near Profile Gap (located near D on Figure 20-1) probably did not exceed several hundreds of tons at an unknown grade (Leonard, 1965; Leonard et al., 1973).

Extensive exploration targeting gold was conducted in other areas by other operators during the 1980s-1990s to the north-northwest of Stibnite including drill campaigns at the Red Mountain (labelled D on Figure 20-1), Moscow (E), Ludwig (E), Independence (F) and McCrae (F) mines by Placer Dome, Freeport, Cambior, Amselco, St. Joe American Corporation, Kennecott, Coeur d’Alene Mines, Nerco Exploration, Freeport-McMoRan, Independence Mining Company, Meridian Gold, and others. Several of these former operators reported historical estimates of mineralized materials, but there are no current mineral resources reported for these prospects.

## 21 OTHER RELEVANT DATA AND INFORMATION

Upon commencement of production, the Project would become a significant producer of domestically sourced antimony. Antimony was designated as a critical mineral in the U.S. Department of Interior's final list of 35 critical minerals published in 2025 (U.S. Dept. of Interior, 2025) due to a complete lack of primary domestic production in the U.S. and reliance on imports, directly or indirectly, from non-aligned countries such as China, Russia, and Tajikistan, which produce approximately 86% of the world's antimony, according to the U.S. Geological Survey, Mineral Commodity Report Summaries, January 2026.

In September 2025, Perpetua Resources announced plans to issue a Request for Proposal (RFP) to assess the technical and economic feasibility of multiple emerging potential off-site processing facilities from third parties to secure antimony for domestic uses. The RFP was issued with multiple parties providing responses. The RFP review process, underway on the effective date of this Report, will evaluate companies on potential production capacity, capitalization, reliability, environmental track record, creditworthiness, production readiness, transport reliability, and the ability to meet end users' product requirements and market needs, among other factors.

## 22 INTERPRETATION AND CONCLUSIONS

Industry-standard mining, processing, construction methods, and economic evaluation practices were used to assess the Project. The financial analysis presented in Section 19 of this Report demonstrates that the Project is financially viable and has the potential to generate positive economic returns based on the assumptions and conditions set out in this TRS, while other sections of this TRS demonstrate that the Project is technically and environmentally viable.

Except as discussed in this Report, the QPs that have prepared this Report are not aware of any significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration results, Mineral Resource or Mineral Reserve estimates, or projected economic outcomes based on the data and information available to date.

### 22.1 Risk and Opportunities

Risks and opportunities have been identified concerning the Project, apart from industry-wide risks and opportunities (such as changes in law and changes in capital and operating costs related to inputs like steel and fuel, metal prices, permitting timelines, etc.). Project-specific risks and opportunities are summarized below.

**Risks**, which additional information could eliminate or mitigate, include:

- Delay in permitting or necessary project changes resulting from permitting;
- Legal challenges to the USFS ROD or other regulatory approvals or environmental complications associated with legacy mining impacts;
- Water chemistry and management issues that could affect diversion and closure designs and/or the duration of long-term water treatment;
- Geological uncertainties which may affect Mineral Resources and Mineral Reserves;
- Geotechnical uncertainties in the open pit walls and infrastructure areas could impact the allowable pit slopes and design criteria;
- Increases to estimated capital and operating costs; and
- Delays or modifications to the construction schedule.

**Opportunities** that could improve the economics, and/or permitting schedule of the Project, including several with the potential to increase the NPV<sub>5%</sub> by more than \$100 million include:

- In-pit conversion of approximately 9.8 Mt of Inferred Mineral Resources grading 1.02 g/t Au occurring within the Mineral Reserve Pits containing approximately 321 koz of gold, to Mineral Reserves, increasing Mineral Reserves and reducing the strip ratio;
- Out-of-pit conversion of approximately 27.1 Mt of Inferred Mineral Resources grading 1.26 g/t Au occurring outside the current Mineral Reserve Pits containing approximately 1,098 koz of gold, to Mineral Reserves;

- Out-of-pit conversion of approximately 26.2 Mt of Indicated Mineral Resources grading 1.09 g/t occurring outside the current Mineral Reserve Pits containing approximately 917 koz of gold, to Mineral Reserves;
- In-pit conversion of unclassified material currently treated as development rock to Mineral Reserves, increasing Mineral Reserves and reducing strip ratios;
- Discovery of additional antimony Mineral Resources and Mineral Reserves in the Hangar Flats and Yellow Pine deposits as improved continuity of stibnite vein arrays and/or additional discrete zones of higher-grade antimony mineralization;
- Increased Mineral Resources and Mineral Reserves in West End due to improved continuity of higher-grade gold mineralization and through the addition of fire assay information in areas where only cyanide assays were available for the current Mineral Resource estimates;
- Potential for the definition of higher-grade, higher-margin underground Mineral Reserves at Scout, Garnet or Hangar Flats;
- Potential to delineate other critical minerals on the Project, most notably tungsten. The Stibnite District was a significant past producer of tungsten, in addition to antimony. Between 1941-45 the operation produced approximately 50% of the tungsten and 90% of the antimony of US demand. Tungsten has the highest melting point of all metals and this property along with its density and toughness make it a critical component of armor, drones, ammunition, and is used in many other military and industrial applications. While Perpetua has not defined tungsten mineral resources at this time, previous drilling by Perpetua and historic operators has returned sufficiently high grades of tungsten to warrant further investigation and analysis. Discovery of other new deposits with attractive operating margins, and
- Discovery of other new deposits with attractive operating margins.

Past production is not indicative of future production. Exploration targets include conceptual geophysical targets, geochemical targets from soil, rock and trench samples, and results from widely spaced drill holes; as a result, the potential size and tenor of the targets are conceptual in nature. There has been insufficient exploration to define mineral resources on these prospects and this data may not be indicative of the occurrence of a mineral deposit. Such results do not provide assurance that further work will establish sufficient grade, continuity, metallurgical characteristics and economic potential to be classed as a category of mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Mineral resources exclusive of mineral reserves are reported based on a fixed gold cut-off grade of 0.40 g/t for sulfide and 0.35 g/t for oxide, and in relation to conceptual Mineral Resource pit shells and Mineral Reserve pits to demonstrate potential economic viability as required under S-K 1300. Indicated mineral resources exclusive of mineral reserves are reported to demonstrate potential for future expansion should economic conditions warrant. Inferred mineral resources exclusive of mineral reserves are reported to demonstrate potential to increase in-pit production should inferred mineral resources be successfully converted to mineral reserves; mineralization lying outside of Mineral Resource pit shells is not reported as a mineral resource.

These mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated.

Opportunities with a medium impact (\$10 to \$100 million increase in Project NPV<sub>5%</sub>) include improved metallurgical recoveries, secondary processing of antimony concentrates, steeper pit slopes, and government funding of off-site infrastructure. A number of lesser-impact opportunities also exist.

To the extent that any of the of opportunities referenced above, including the potential to explore for additional minerals or the possibility of expanding the SGP, involve any activities not analyzed in the NEPA review for the Project or were to result in material changes to the Project design or scope, additional environmental review and/or permitting or other regulatory approvals might be required under applicable federal or state laws. In such circumstances, Perpetua Resources would evaluate the need for any such regulatory action and approvals, and take the necessary actions to comply with all applicable requirements before proceeding.

## 23 RECOMMENDATIONS

The QPs for this study recommend advancing the project toward a final construction decision. A detailed list of recommendations and work programs has been developed, including estimated costs, that would move the Project through to a construction decision. The estimated cost for completion of this phase is approximately \$7.5 million, of which approximately \$5.5 million is required for permitting.

Discretionary expenditures intended to pursue certain opportunities are identified in Section 22 of this Report but not required for a construction decision, are also included. These estimates assume a reasonable level of success in each area. If early evaluation results are poor, spending on that activity would likely be significantly lower than indicated. Conversely, exceptional results could necessitate higher expenditures. It is also unlikely that all discretionary activities will be completed before construction begins.

The detailed recommendations have been grouped into logical discipline categories including:

- Mineral Resource evaluation and exploration;
- Field programs required prior to a construction decision;
- Project optimization and Detailed Engineering; and
- Environmental, regulatory affairs and compliance.

Table 23-1 summarizes the recommendations and work programs, and separates the costs associated with the work program into core and discretionary categories.

**Table 23-1: Project Recommendations, Work Program and Budget**

Recommendations and Work Program		Unit	Quantity	Estimated Costs (\$000s)	
				Core	Discretionary
<b>Mineral Resource Evaluation and Exploration</b>					
R1	Selective, high-value drilling that targets converting in-pit Inferred Mineral Resources to Measured and Indicated Mineral Resources, with the goals of increasing the Mineral Reserves, increasing grade and/or reducing strip ratio, especially within the West End pit.	feet of drilling	15,000	-	4,000
R2	Selective, high value drilling targeting near-pit opportunities for additional Mineral Reserves, at all three deposits.	feet of drilling	10,000	-	2,500
R3	Selective testing of in-pit unclassified material for potential additional Mineral Reserves and lower strip ratio for all pits, but especially at Hangar Flats west of the MCFZ and at Yellow Pine east of the MCFZ.	feet of drilling	10,000	-	2,500
R4	Testing of the Hangar Flats deposit below and along strike/down plunge for underground potential.	feet of drilling	15,000	-	5,000
R5	Additional drilling of both Mineral Resources and in-pit unclassified material at West End for potential higher grades, additional Mineral Reserves, and/or lower strip ratio.	feet of drilling	15,000	-	4,000
R6	Exploratory surficial drilling along the Scout Fault system to test the continuity of the high-grade antimony mineralization and geotechnical/structural analysis to inform geological potential and construction of an exploration decline.	feet of drilling	10,000	-	2,500
R7	Discovery and definition of small tonnage, high grade Mineral Resources at Garnet, Upper Midnight, and/or other areas for potential high margin mill feed that could supplement early production.	feet of drilling	25,000	-	6,500
R8	Continued exploration including mapping, geochemical sampling, and drilling geared toward defining additional Mineral Resources.	Lump sum	1	-	5,500
<b>Field and Laboratory Programs Required Prior to or Concurrent with Construction</b>					
R9	Shallow sampling of alluvium and bedrock via test pits or hand-held auger drilling to better define concrete aggregate borrow sources.	Lump sum	1	-	400
R10	Geotechnical drilling along Burntlog Route to support detailed design of bridges, retaining walls, and confirm suitability of borrow areas.	Lump sum	1	1,300	-
R11	Pit slope geotechnical evaluation prior to pit development to validate Feasibility Study pit design criteria.	Lump sum	1	-	1,000

Recommendations and Work Program		Unit	Quantity	Estimated Costs (\$000s)	
				Core	Discretionary
R12	Surficial sampling, drilling, and characterization of the limestone resource in the West End pit to better define the limestone deposit prior to commissioning of the ore processing plant and limestone processing facility.	Lump sum	1	-	550
R13	Consider additional and/or higher-energy geophysics to confirm the bedrock contact and overburden properties at the TSF and tunnel.	Lump sum	1	-	150
<b>Project Optimization and Detailed Engineering</b>					
R14	Continue coordination with U.S.-based refining and metallurgical facilities to improve antimony concentrate processing. Concurrently, develop and issue RFPs to identify qualified service providers capable of supporting ancillary processing, characterization, and beneficiation activities.	-	-	-	-
R15	Continue evaluating the economics of leasing and/or contracting out certain equipment and infrastructure.	Lump sum	1	-	100
R16	Continue layout and design optimizations to reduce capital cost. This work is part of the base scope, no additional cost.	-	1	-	0
R17	Continue to execute bundled contracting strategy to reduce capital cost. This work is part of the base scope, no additional cost.	-	1	-	0
R18	Consider bundled procurement strategies to reduce capital cost. This work is part of the base scope, no additional cost.	-	1	-	0
R19	Consider deferral of certain capital cost scope to move cost to sustaining capital cost. This work is part of the base scope, no additional cost.	-	1	-	0
<b>Environmental, Regulatory Affairs and Compliance</b>					
R20	Advance environmental and closure-related technical studies based on additional field and laboratory information generated to refine reclamation, closure and bonding cost estimates.	Lump sum	1	-	300
R21	Continue environmental data collection to support environmental compliance and reclamation.	Lump sum	1	730	50
R22	Continue to advance regulatory process and support ancillary Federal and State permits, as outlined in Section 17 of this Report.	Lump sum	1	5,500	-
<b>Total</b>				<b>7,530</b>	<b>35,050</b>

Before proceeding with the above recommendations, Perpetua Resources may determine whether any of the activities require additional environmental review or regulatory approvals before proceeding and obtain such approvals if required. If any of the recommended activities such as exploration or project optimization and detailed engineering work to result in proposed material changes to the SGP, additional environmental review and/or permitting or other regulatory approvals might be required under applicable federal or state laws. In such circumstances, Perpetua Resources may evaluate the need for any such regulatory action and approvals and take the necessary actions to comply with all applicable requirements before proceeding.

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## 25 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

The QPs have relied on certain information provided by Perpetua Resources (The Registrant). The Qualified Persons responsible for the preparation of this Report have reviewed the information and conclusions provided, and reasonably determined that such information and conclusions conform to industry standards, are professionally sound, and are acceptable for use in this Report.

### 25.1 Property Ownership, Mineral Tenure, and Agreements

Review of the Stibnite Gold Project property ownership and title, presented in Section 3 of this Report, was completed by multiple qualified, independent title examiners. Independent legal opinions in respect of mineral title have been prepared on behalf of Perpetua Resources in support of its initial listing as a public company, subsequent financings, sale of royalties to a third-party and its continued listing as a public company. The most recent opinion and current as of the date of this TRS was completed in June 2025, by the law firm of Hardee, Piñol & Kracke, PLLC. building on comprehensive earlier reviews by the law firm of Parsons, Behle & Latimer (PB&L) and by Givens Pursley LLP (Givens Pursley). A series of Landman Reports by Almar Professional Land Services, Inc. (Almar) were completed in accordance with reasonable industry standards to provide data for the subsequent title opinions.

This information is applied across multiple sections of the report. It supports the property description, mineral tenure, surface rights, agreements, and royalties in Section 3; the assessment of reasonable prospects for economic extraction and the declaration of Mineral Resources in Section 11; the evaluation of modifying factors for declaring Mineral Reserves in Section 12; the placement of infrastructure in Section 15; plans, negotiations, and agreements with local groups in Section 17; and the consideration of royalties, encumbrances, and property agreements for economic analysis in Section 19.

### 25.2 Water Rights

Mr. Terry Scanlan, P.E., P.G. of SPF Water Engineering, LLC (SPF), performed a comprehensive review of Perpetua Resources' water rights portfolio. The water rights held by Perpetua Resources are summarized in Section 4 of this Report.

### 25.3 Other Information Provided by the Registrant

The QPs have also relied on the following information provided by Perpetua Resources:

- Macroeconomic trends, data and assumptions, and interest rates.
- Marketing information and plans within the control of the Registrant.
- Legal matters outside the expertise of the QPs, such as statutory and regulatory interpretations affecting the mine plan.

- Environmental matters outside the expertise of the QPs.
- Access rights the Registrant commits or plans to provide to local individuals or tribal groups in connection with its mine plan.
- Governmental factors outside the expertise of the QPs.

The QPs consider it reasonable to rely upon the Registrant for the above information, based on the QPs' past and ongoing interactions with the subject-matter experts in these areas employed or engaged by the Registrant, as well as the Registrant's considerable experience mining at the Property. Further, the QPs have taken appropriate steps, in their professional opinion, to verify that the above information provided by the Registrant is accurate in all material respects and have no reason to believe that any material facts have been withheld or misstated.