

POLARX
LIMITED

Alaska Range Copper-Gold Project, USA

SCOPING STUDY

2023



2023 Alaska Range Scoping Study

Potential for Exceptional Economic Returns with Plans for Significant Upside



Alaska Range Copper-Gold Project, USA

Significantly enhanced cashflow potential from mining the recently expanded high-grade Caribou-Dome Copper and Zackly Copper-Gold deposits.

PolarX Limited (**ASX: PXX, “PolarX” or “the Company”**) is pleased to report resoundingly positive results from its updated scoping study (“2023 Scoping Study”), which was undertaken following the recent mineral resource estimate upgrade for the Alaska Range Copper Gold Project (**“Alaska Range Project” or “the Project”**). The 2023 Scoping Study evaluates sequential mining and processing options for the high-grade Caribou Dome VMS Copper deposit and the nearby Zackly Copper-Gold-Silver skarn deposit, and updates the study previously published in 2022 (refer ASX release of 17 October 2022).

Key outcomes from the 2023 Scoping Study are presented in this announcement, together with its underlying material assumptions.



Overview

The 2023 Scoping Study is based on the updated mineral resource estimate for the Caribou Dome deposit (refer ASX release of 14 June 2023), the 2022 mineral resource estimate for Zackly deposit (refer ASX release of 17 October 2022) and metallurgical test work results previously reported for both deposits as summarised in this release.

This 2023 Scoping Study reveals several key aspects:

- Mining and processing are now scheduled to commence at Caribou Dome with a high-grade open pit followed by underground mining at Zackly which will be trucked to the proposed plant at Caribou Dome.
- 83% of the material proposed to be mined falls in the Measured and Indicated resource categories.
- Relatively fast capital recoupment within 2.75 years is possible.
- Further metallurgical test-work is intended to improve copper recovery and concentrate grades at Caribou Dome and gold recovery at Zackly.
- Even modest increases in copper and gold recoveries and/or concentrate grades could deliver a dramatic uplift to potential economics.
- Modest resource extensions at either deposit could also significantly further enhance projected economic returns.
- Mineralisation is known to continue 150m below the current resource at Caribou Dome and a future anticipated underground mine could extend the modelled mine-life.
- Revenue from copper contributes more than gold or silver at the assumed commodity prices.

Sensitivity analysis indicates potential economic returns are most responsive to the copper price, copper recovery and concentrate grades, and can be enhanced further by both infill and extension drilling and by improved metal recoveries via further metallurgical test-work.

Even modest increases in copper recovery and concentrate grades from material mined at Caribou Dome could yield the most substantial NPV increases. PolarX is accordingly now extending that test-work.

Significant resource expansion potential is evident at Caribou Dome, where the most recent drilling (19m at 7% Copper, refer ASX release of 23 February 2023) remains open at depth and along strike, and at Zackly, which also remains open at depth and, immediately east along strike from the mineral resource.

Mineralisation at Caribou Dome is currently modelled from surface to only 300m depth. **Existing exploration drilling has however revealed mineralisation exists down to 450m from surface and further drilling may significantly extend the resource.**



Cautionary Statement

The 2023 Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential development of the Alaska Range Copper Gold Project in Alaska USA ("Alaska Range Project"). It is a preliminary technical and economic study of the potential viability of the Alaska Range Project. The 2023 Scoping Study outcomes, production target and projected financial information referred to in the release are based on low level technical and economic assessments that are insufficient to support estimation of Ore Reserves. The 2023 Scoping Study is presented in US dollars to an accuracy level of +/- 35%.

While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation and appropriate studies are required before PolarX will be able to estimate any Ore Reserves or to provide any assurance of any economic development case. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

The Company concludes it has reasonable grounds for disclosing a production target which includes an amount of Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. Over the planned 9.5 year life of the Project Measured and Indicated Resources account for 83% of the total tonnes mined. Inferred Mineral Resources comprise only 17% of the production schedule. **In particular, during the first 3 years of planned mining in the 2023 Scoping Study production plan, approximately 99% of the material to be mined is classified as Measured and Indicated which comfortably recovers projected capital start-up costs.** The viability of the development scenario envisaged in the 2023 Scoping Study does not depend on the inclusion of Inferred Mineral Resources.

The Mineral Resources underpinning the production target in the 2023 Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details on the Mineral Resource estimate, please refer to the ASX announcements of 14 June 2023 (Caribou Dome) and 17 October 2022 (Zackly). Other than as presented in those announcements, PolarX confirms that it is not aware of any new information or data that materially affects the information included and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not been changed. The 2023 Scoping Study is based on the material assumptions outlined in this announcement and which are also detailed in the Appendices. These include assumptions about the availability of funding. While PolarX considers that all the material assumptions are based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the 2023 Scoping Study, funding in the order of US\$145 million will likely be required. Investors should note that there is no certainty that PolarX will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of PolarX's existing shares. It is also possible that PolarX could pursue other value realisation strategies such as a sale or partial sale of its interest in the Alaska Range Project.

This announcement contains forward-looking statements. PolarX has concluded that it has a reasonable basis for providing these forward-looking statements and believes it has a reasonable basis to expect it will be able to fund development of the Alaska Range Project. However, several factors could cause actual results or expectations to differ materially from the results expressed or implied in the forward-looking statements. Given the uncertainties involved, investors should not make any investment decisions based solely of the results of this study.

Summary

Key assumptions and results of the study include:

(Note - all references to \$ are in US Dollars unless otherwise stated key economic outcomes are stated on a 100% project basis and without finance leverage. For ownership details see Section 2 of this release).

- Caribou Dome mineral resource estimate of 7.2Mt @ 3.1% Cu and 6.5g/t Ag.
- Zackly mineral resource estimate of 4.0Mt @ 1.1% Cu, 1.6g/t Au and 12.6g/t Ag.
- Metallurgical recoveries of 90% copper and 79% gold from flotation at Zackly, and 78% copper recovery from flotation at Caribou Dome and 80% silver at each deposit.
- Processing scheduled to occur at 750ktpa at Caribou Dome followed by 600ktpa at Zackly over 9.5 years, with mining commencing at Caribou Dome and then moving to Zackly, with mineralisation processed through a common conventional sulphide flotation plant located at Caribou Dome.
- Returns are most sensitive to copper price, metallurgical recovery, concentrate grades and operating costs.

<p>Revenue</p> <p>US\$1,375 M A\$2,115 M (\$0.65)</p>	<p>Total EBITDA</p> <p>US\$573 M A\$882 M</p>
<p>C1 Cash Cost</p> <p>US\$1.93 / lb A\$2.97 / lb</p> <p>Cash costs with Au and Ag credits</p>	<p>Operating Margin</p> <p>42%</p> <p>EBITDA/Revenue</p>
<p>Average Annual Free Cash Flow</p> <p>US\$53 M A\$82 M</p> <p>Post construction</p>	<p>Initial Capital Required</p> <p>US\$145 M A\$223 M</p> <p>Including pre-strip & royalty buyback</p>
<p>NPV₇ Pre-tax</p> <p>US\$201 M A\$309 M</p>	<p>IRR Pre-tax</p> <p>38.4%</p>
<p>Payback</p> <p>2.75 Years</p> <p>Post construction</p>	<p>Mine Life</p> <p>9.5 Years</p>

Table 1. Key Scoping Study Outputs

Next Steps:

Sensitivity analysis within the 2023 Scoping Study (pages 29 to 33) reveals and quantifies key areas for cashflow, NPV and IRR enhancement.

Other than copper and gold prices, the most immediate uplifts in value are found by improving Concentrate Copper Grades, Copper and Gold Recoveries and Resource Extension.

Copper Concentrate Grade and Recovery

Analysis reveals that successfully advancing metallurgical test work has the most immediate potential to deliver the greatest uplift in potential Project returns.

It shows substantially better economic returns could be realised with improvements in both copper recovery and concentrate grades at Caribou Dome. Concentrate grades at 20% copper or greater deliver the best returns as they reduce freight-to-refinery costs and avoid punitive realisation costs levied on lower grade concentrates.

Sensitivity analysis indicates that lifting copper recovery from 78% to 85% (a 7% increase) and producing a 20% copper concentrate at Caribou Dome could potentially yield a \$174M (+87%) increase in projected pre-tax NPV.

ACTION: Sample collection has commenced at Caribou Dome and PolarX will be advancing metallurgical test work during the second half of 2023.

Similarly, the metallurgical test work at Zackly is at an interim stage and is not yet optimised. It is more sensitive to the gold price than the copper price and the current gold recovery based on test work to date is assumed at only 79%.

ACTION: Further metallurgical testing and the examination & trial of alternative recovery options is also planned at both Caribou Dome and Zackly during this year.

Resource Extension

Potential upside from significant resource expansion may be achieved with further successful drilling at both Caribou Dome and Zackly.

Existing Caribou Dome drilling includes mineralised intercepts 150m below the current resource. Further drilling could extend the current resource depth of 300m to that 450m depth and add an extra 2Mt. If mined from underground this could yield a \$50M increase in projected pre-tax NPV (+25%).

Analysis of drilling and the current Indicated mineral resource at Zackly also highlights several open mineralised shoots that plunge at depth and along-strike which are unconstrained.

Adding an extra year's material mined from Zackly at depth could yield a \$22M increase in projected pre-tax NPV (+11%).

ACTION: Further resource extension drilling programs will be focussed in these specific areas to enhance overall returns.

Scope Changes

PolarX published an initial Scoping Study on 17 October 2022 based on the 2017 mineral resource estimate for Caribou Dome and 2022 mineral resource estimate for Zackly.

On 14 June 2023, the Company announced a substantial increase in the mineral resource estimate at Caribou Dome along with an increased proportion of Measured and Inferred resource confidence classifications. This new mineral resource estimation also included silver for the first time. These enhancements underpinned the re-optimisation of the 2022 scoping study.

This 2023 Scoping Study addresses the enhanced resource at Caribou Dome along with the scale and scheduling of operations, capital and operating costs, current metal price trends and optimal mining methods.

Given the relative scale of each deposit, this study now examines a larger open pit mine at Caribou-Dome with no underground component for 5 years followed by underground mining at Zackly for 4.5 years.

Mine Optimisation

- A new block model for the enhanced Caribou Dome resource was constructed.
- The Zackly mine design and scale of operations did not require change

Mine design

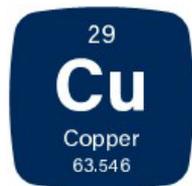
The proposed Zackly underground mine design did not require change.

Changes to the Caribou Dome mine design include:

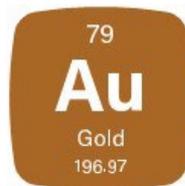
- A substantially larger staged, single open pit.
- Staged mine design to improve cashflow.
- No underground mining at this scale.
- Increased ramp widths to 25m from 17m, anticipating bigger trucks.
- Reduced minimum mining width.
- Steeper pit wall batter angles. 75° from 65°. Overall wall angle 55°
- Mining dilution set at 20%, previous design was 5% (smaller excavators).

Financial modelling

- Plant to be located at Caribou Dome in recognition of its larger economic contribution and tonnes mined. This removed haulage costs from Caribou Dome and added them to Zackly.
- Increased plant throughput capacity to 750ktpa at Caribou Dome, but retained 600ktpa at Zackly.
- Estimated mining costs were increased by 3%.
- Indexed comparison capex from other benchmarked builds/estimates by 10% and increased the estimate based on bigger plant.
- Added silver recovery at Caribou Dome and assumed silver recovery for both sites to 80%.
- Sustaining capital was increased to 2% of project capex.
- Pit stages had capital phases (prestrip capitalised until stage hit 10kt of ore in a month) - similar to before, but only on stage.
- Added \$4M in for setting up Zackly infrastructure.
- Open pit mining opex increased by ~1%.
- Changed Revenue assumptions based on current market trends:



US\$8500/t
(2022 study \$9000)



US\$1900/oz
(2022 study \$1800)



US\$25/oz
(2022 study \$25)



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Location and Ownership

The Alaska Range Project (Figure 1) is located approximately 250km northeast of Anchorage in central Alaska, USA. It is readily accessible via the Denali Highway which passes within 20km of the Project and from there gravel roads provide direct access to the historic underground development at the Caribou Dome Cu deposit and the Zackly Cu-Au-Ag skarn deposit.

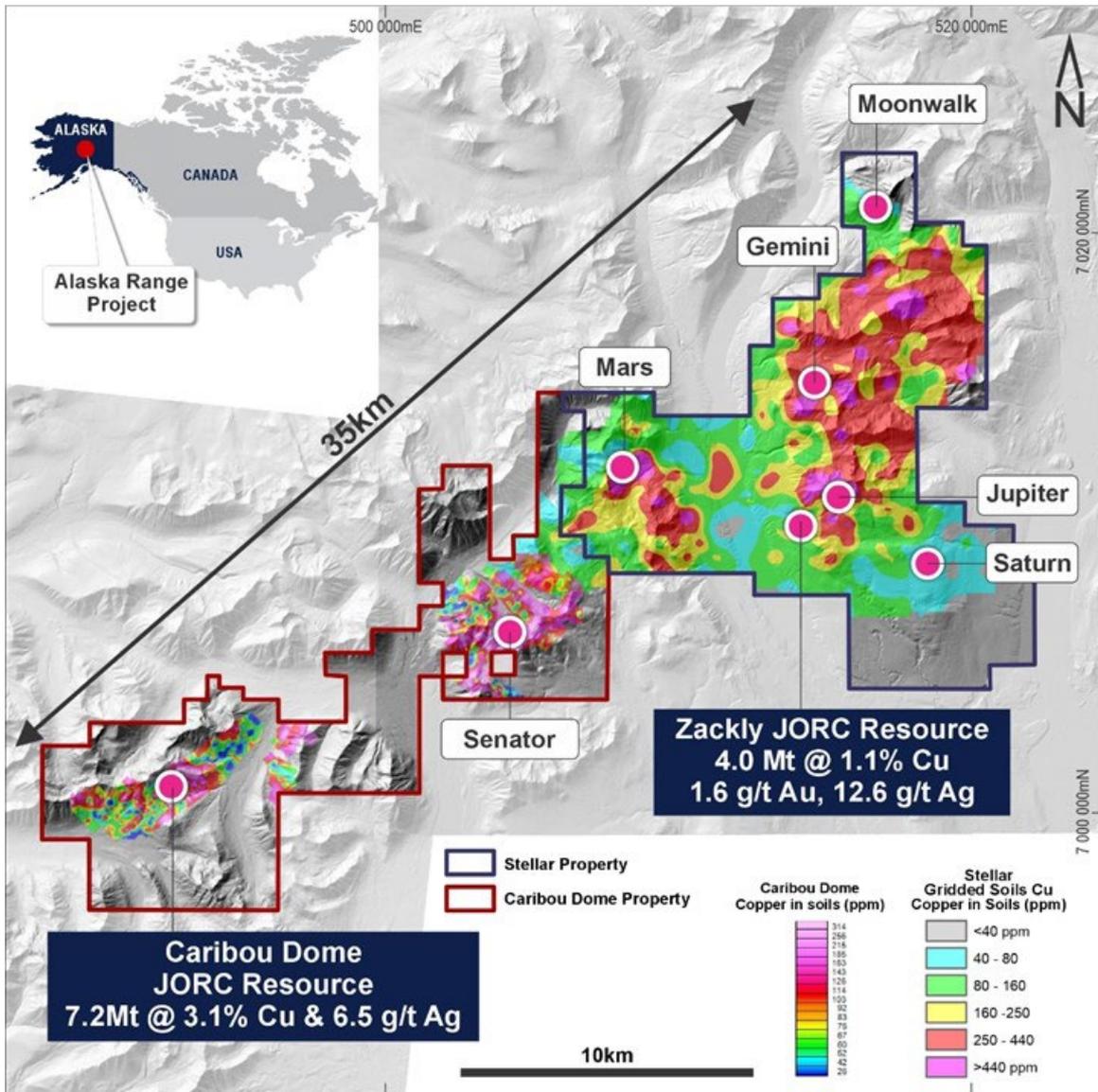


Figure 1. Map for the Alaska Range Project showing the Caribou Dome and Zackly deposits plotted on copper-in-soils geochemical anomalism.

Caribou Dome comprises 216 State Mining Claims covering approximately 28,800 acres (11,655 hectares). The claims which host the Caribou Dome deposit are owned by CD Development Corp and are under option to Hatcher Resources Inc and SV Metals LP. PolarX's remaining commitments in relation to its right to earn an 80% interest in Caribou Dome are:

- by making further option payments totaling USD\$1.26M by 6 June 2024;
- by completing a feasibility study on the deposit or spending a further ~USD \$160,000 by 6 June 2024; and
- payment of a 5% net smelter return royalty in relation to the sale of ore from the property and the Company has the right to purchase the royalty for USD\$1,000,000 for each 1.0%.

The Zackly deposit occurs within the Stellar Project which comprises 229 contiguous State Mining Claims. The claims cover a total area of 36,960 acres (14,957 hectares) and are registered to Vista Minerals (Alaska) Inc a wholly owned subsidiary of PolarX (100% PolarX ownership).

For the purposes of the Scoping Study, 100% ownership of both deposits has been assumed for the economic evaluation (that is, the 2023 Scoping Study has been completed on a total project basis).



Geology

The Alaska Range Project occurs in south-central Alaska in a belt of rocks containing known large-scale porphyry Cu-Au deposits of Cretaceous age (eg. Pebble) and associated Cu-Au skarns (eg. Zackly) and epithermal gold deposits, along with older VMS deposits such as Caribou Dome hosted in the basaltic andesites and associated volcanoclastic sediments of the upper Triassic Nikolai Greenstones (Figure 2):

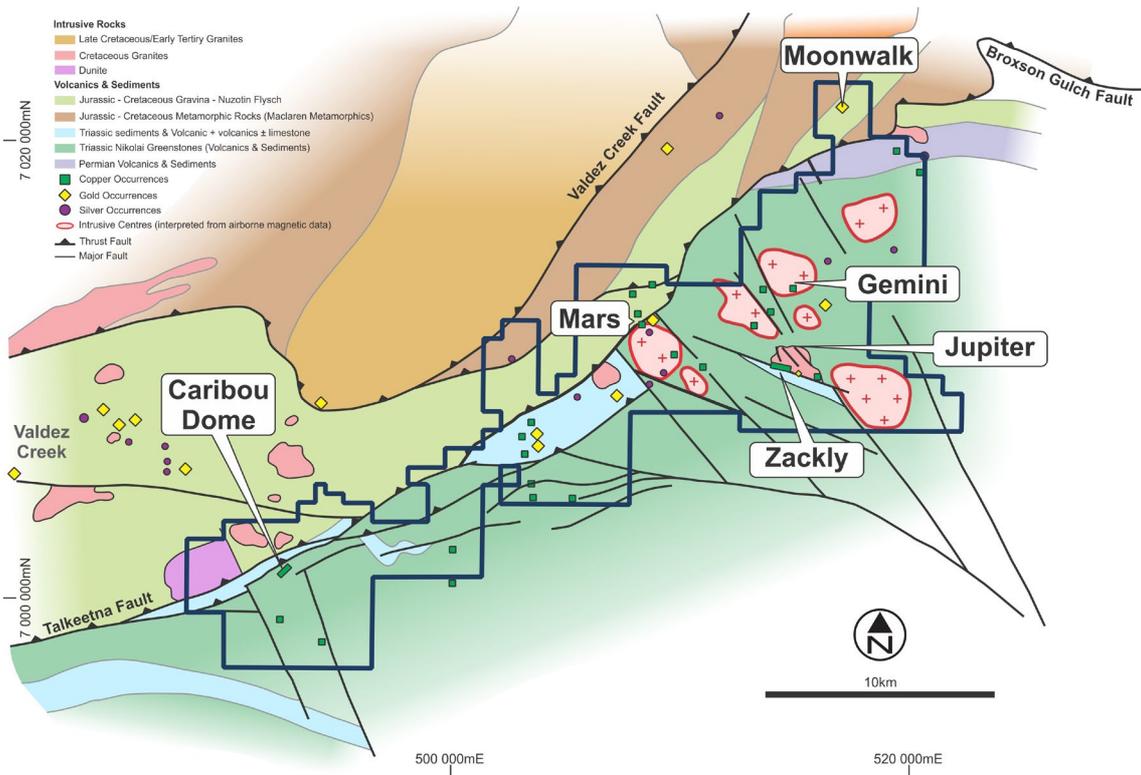


Figure 2. District-scale geological setting of the Caribou Dome VMS deposit and the younger Zackly skarn deposit.



Copper mineralisation was discovered at the Caribou Dome Project in 1963. From 1963-1970, approximately 95 diamond core holes were drilled to delineate nine lenses of volcanic sediment-hosted copper mineralization over approximately 800m of strike. Significant additional drilling has been undertaken by PolarX since 2015, with a maiden resource announced on 6 April 2017 which was substantially upgraded to encompass further drilling on 13/14 June 2023.

The Caribou Dome mineralisation occurs in deformed lenses of very fine-grained massive sulphides comprising chalcopyrite and pyrite associated with calcareous volcanic argillites of andesitic affinity. Mineralisation has been deformed by two-phases of folding and subsequently faulted. The mineralization extends from surface to depths of over 300m.

The **Zackly Cu-Au Skarn** deposit was discovered in 1979 with exploration between 1981 to 1994 including surface sampling, trenching, geophysics and both core and reverse circulation drilling totalling approximately 40,000 feet (12,200 metres) in approximately 85 holes. Resource delineation drilling at Zackly was completed in early October 2017 and led to a maiden Inferred Resource (JORC 2012) on 20 March 2018 for the Zackly Main Skarn. More drilling was undertaken in 2018 and 2020 and an upgraded resource was published on 17 October 2022.

Zackly occurs in limestone which is intruded by Cretaceous quartz-monzonites and diorites. Contact metamorphism and associated alteration has affected all the rocks near the intrusive contacts at Zackly. Cu-Au mineralisation in the form of bornite, chalcocite, minor chalcopyrite and native gold occurs in exoskarn in limestone/marble and endoskarn in intrusive rocks and volcanic rocks.

Metallurgical Test Work Results and Conclusions

PolarX consultants conducted metallurgical testwork during 2022 as summarised and reported in the 2022 Scoping study (Refer ASX release 17 October 2022). The base testwork conducted is ongoing and interim results to date support the following key assumptions:

Caribou Dome

- The massive sulphides at Caribou Dome are very fine-grained mixtures and complex composite grains comprising predominantly chalcopyrite and pyrite along with minor amounts of sphalerite (zinc sulphide) and galena (lead sulphide) plus silicate gangue.
- Flotation tests to date show that the pyrite floats as readily as the chalcopyrite which results in a diluted copper concentrate grade. The relatively low-grade copper concentrate yields significantly lower payability of the copper due to higher unit transport costs and refining and tolling charges. Concentrates containing less than 20% copper incur increased processing charges.
- Based on testwork conducted to date the following interim recoveries were used for Caribou Dome:
 - **78% recovery for copper; and**
 - **80% assumed recovery of Silver.**
- Obvious upside therefore remains from further evaluation of processing options for Caribou Dome's fine-grained massive sulphides.
- The Company is aware of and is undertaking further work investigating alternative process routes which may yield better overall copper recovery and significantly better concentrate grades.

Zackly

- Based on the testwork conducted to date the following recoveries were used for Zackly:
 - **90% recovery for copper;**
 - **79% recovery for gold; and**
 - **80% assumed recovery for silver.**
- These results have not yet been optimised and represent rougher flotation results only, indicating there is room for significant improvement in the results with further study.
- In particular, gold recovery has significant room for improvement with more tests.
- Mining of oxide mineralization at Zackly was excluded from this study.

Updated Alaska Range Mineral Resources

The current Mineral Resource estimates for the Alaska Range Project are summarised below:

Table 2. Alaska Range Project Resource Estimates (JORC 2012), 0.5% Cu cut-off

	Resource Category	Mt	Cu %	Au g/t	Ag g/t	Contained Cu (t)	Contained Cu (M lb)	Contained Au (oz)	Contained Ag (oz)
ZACKLY	Inferred	1.5	0.9	1.2	10.4	14,300	32	58,000	513,000
	Indicated	2.5	1.2	1.9	13.9	30,700	68	155,000	1,120,000
	TOTAL	4.0	1.1	1.6	12.6	45,000	100	213,000	1,633,000
CARIBOU DOME	Inferred	3.0	2.6	-	5.7	79,400	175	-	552,000
	Indicated	3.2	3.3	-	6.5	105,175	232	-	662,800
	Measured	1.0	3.9	-	8.6	39,800	88	-	284,000
	TOTAL	7.2	3.1		6.5	224,375	495		1,498,000
COMBINED	TOTAL	11.2				269,375	595	213,000	3,131,000

An initial Mineral Resource estimate for Caribou Dome was published on 6 April 2017 and was updated on 14 June 2023.

An initial Mineral Resource estimate for Zackly was published on 20 March 2018 and was updated on 17 October 2022.

There is no new information or data which materially affects either resource estimate.

Mining Optimisation, Design and Inventory

Optimisations were completed for both deposits utilizing Whittle 4X software for Caribou Dome and Datamine's Mineable Shape Optimiser (MSO) for the underground at Zackly.

Mine designs were completed for each deposit based on these optimisations.

Caribou Dome

Caribou Dome has been assessed as a staged open pit. The starter pit design was based on the revenue factor 0.58 pit shell in the South West zone, with the final pit design based on the revenue factor 0.9 pit shell (figure 3).

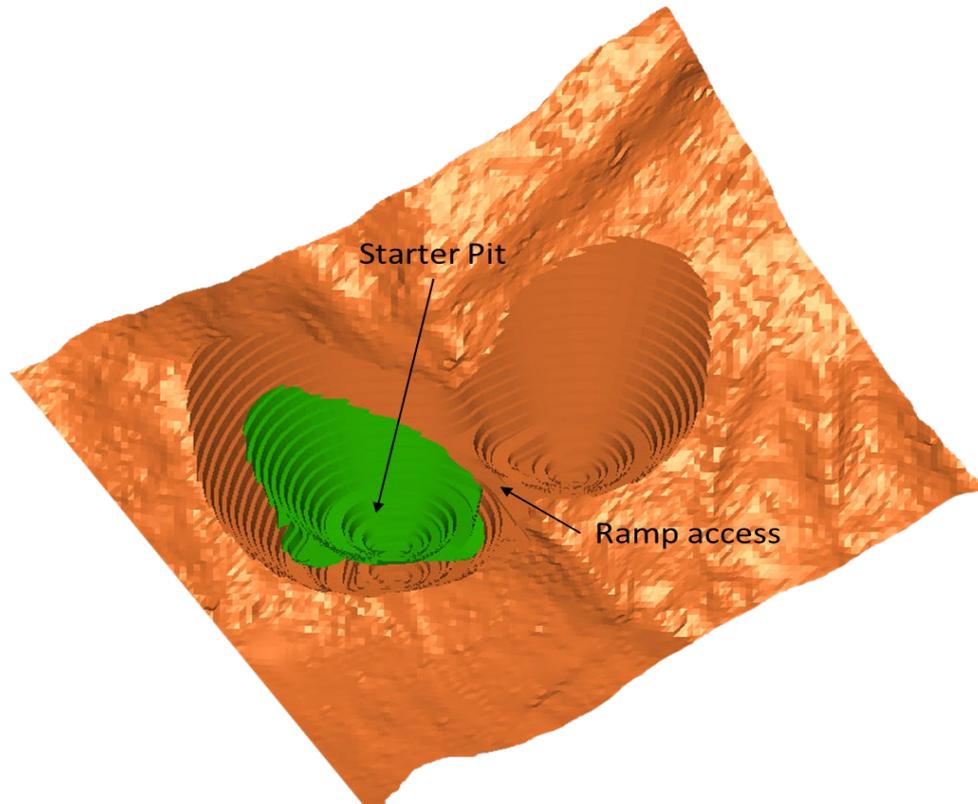


Figure 3. Pit design including staging. Isometric looking North

- The pit design, shown in (Figure 3), was completed to 1300RL using the Deswik automated pit design tool. Key parameters were;
- Overall slope angle of 55° including:
 - Berm widths of 9m; and
 - Batter heights of 20m.
- Ramp widths of 25m.
- Minimum mining width of 20m.
- The open pit design anticipates the pit being mined in 5m benches with a 200t class excavator loading 140t rigid body haul trucks.

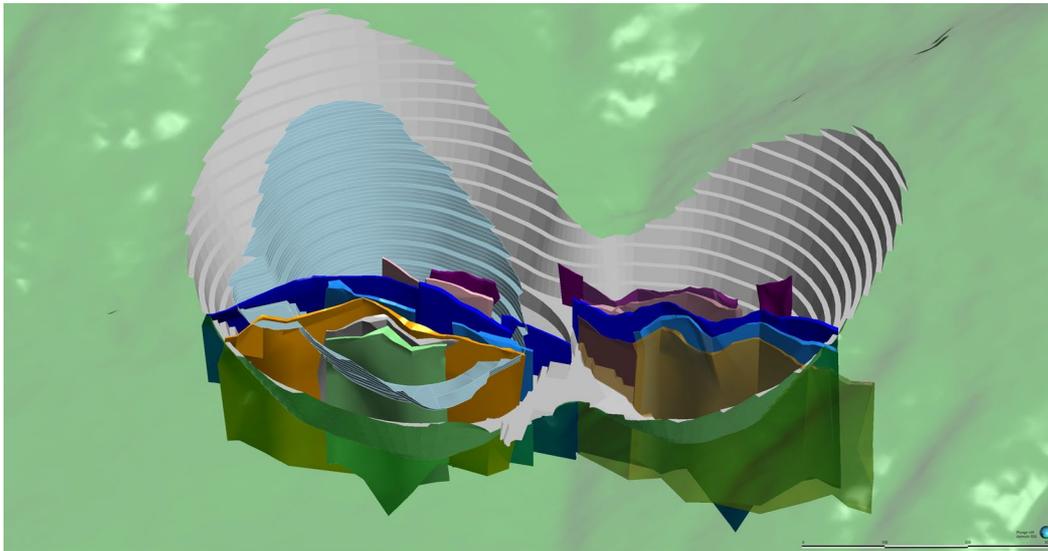


Figure 4. Caribou Dome open pit design showing topography and resource wireframes.

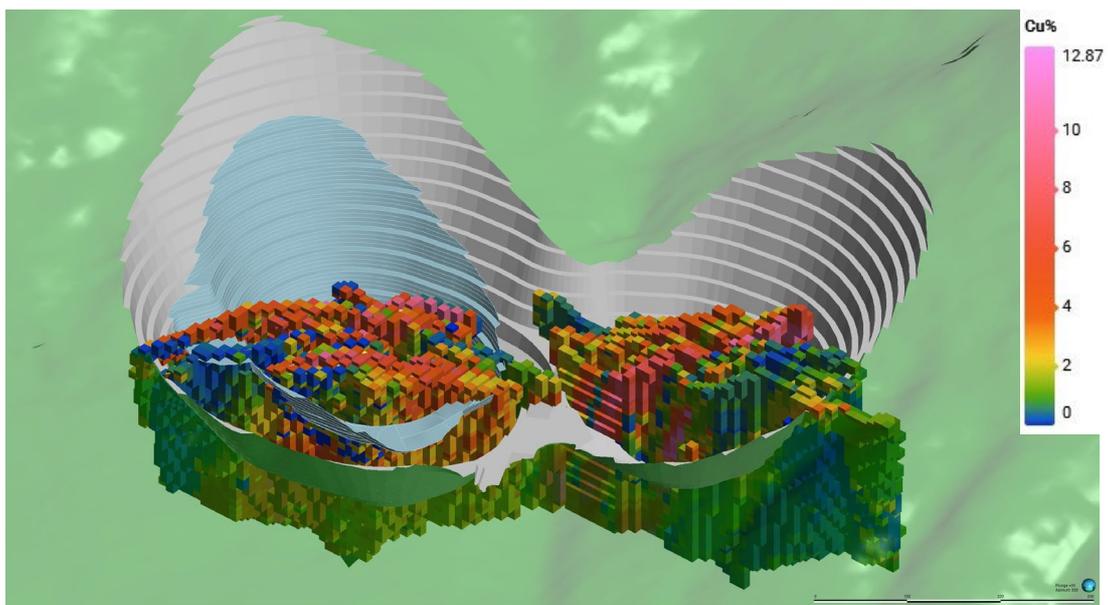


Figure 5. Caribou Dome open pit design showing topography and resource block model coloured by copper grade. View looking West

Overall tonnages mined from Caribou Dome are as shown in Table 3 below:

Table 3. Mining summary for Caribou Dome

Caribou Dome	Ore	Copper		Gold	Silver		
Source	t	%	t	g/t	oz	g/t	oz
Open Pit	4,363,877	3.34	145,902			6.7	932,696

Zackly

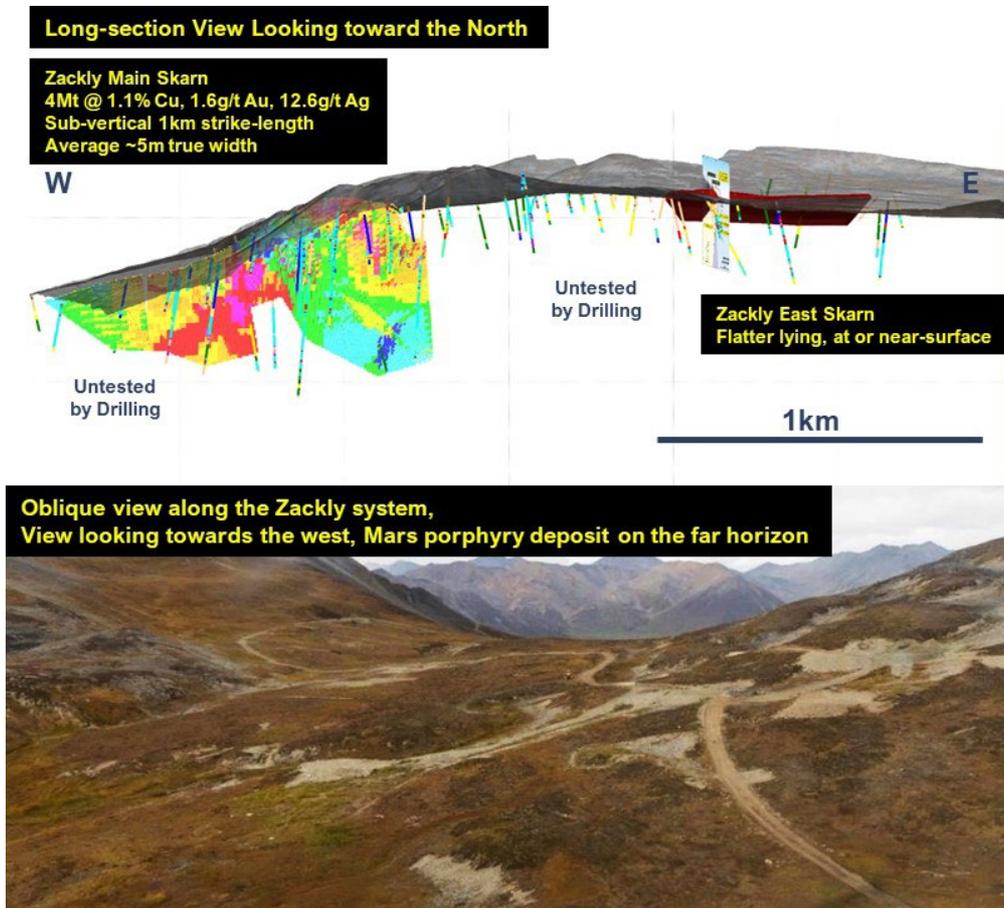


Figure 6. Zackly long section showing resource calculated over 800m of strike with mineralisation intercepts over 2km further strike length.

- Zackly has been designed as long-hole open stoping operation with cemented rock fill.
- A twin decline system was designed to enable multiple stoping accesses to be (Figure 7).
- The twin declines will be accessed via a single portal designed on the slope at the approximate halfway point of the strike length.
- Level spacing of 20m, with twin exhaust ventilation rises supplying exhaust to each level.
- Development has been designed to accommodate 17t loaders and 60t trucks and will be developed via twin boom electric/hydraulic jumbos.
- Stoping blocks at Zackly have been designed to enable multiple concurrent stoping fronts.
- The Eastern decline approaches the orebody at a level enabling stoping fronts to commence both up dip and down dip.

- The Western decline accesses the top of the orebody: stoping blocks are separated with a sill pillar enabling concurrent top-down stoping fronts. Stopping sequence is shown in Figure 7.
- A 30m ‘crown’ has been designed to prevent breakthrough to surface and to avoid mining non-sulphide copper minerals.
- Stopes will be filled with reticulated paste fill, containing thickened tails.
- The Zackly mining inventory is in table 5 below, with the whole project shown in Table 5.

Table 5. Zackly Mining Inventory

Zackly	Mined	Gold		Silver		Copper	
Source	t	g/t	oz	g/t	oz	%	t
Underground	2,165,812	1.86	129,844	12.80	888,231	1.01%	21,908

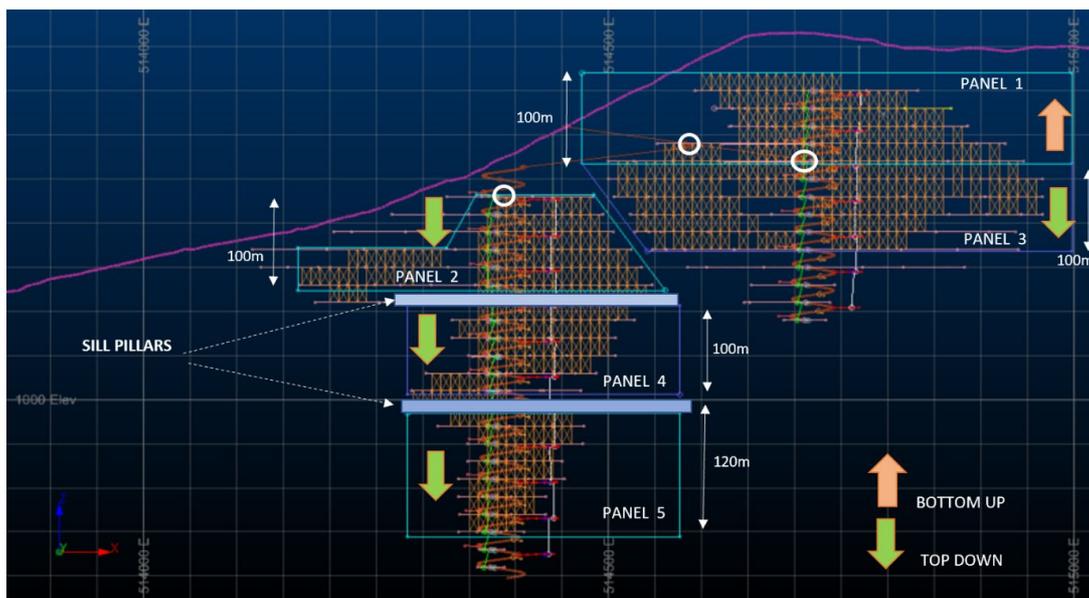


Figure 7. Stopping Sequence at Zackly showing temporary sill pillars and locations of twin declines

Table 4. Consolidated Alaska Range Mining Inventory. (Nb, rounding errors may occur).

Alaska Range	Ore	Copper		Gold		Silver	
Source	t	%	t	g/t	oz	g/t	oz
Caribou Dome	4,363,877	3.34	145,902			6.7	932,696
Zackly	2,165,812	1.01	21,908	1.86	129,844	12.8	888,231
Total	6,529,689	2.57	167,810	0.62	129,844	8.7	1,820,927

Production schedules

Metallurgical differences indicate that the same comminution and processing plant will be able to be utilised although will require ‘batch processing’ of the different mineralisation types as Caribou Dome will require concentrate regrind and additional flotation and thickener/concentrate handling capacity.

For the purposes of this study, and based on the recent resource upgrades, a decision was made to locate the processing plant at Caribou Dome:

- Mining scheduled to commence at Caribou Dome.
- Zackly mined tonnes are lower than Caribou Dome (ie. reduced haul cost).

It was determined to mine and treat Caribou Dome before commencing Zackly to:

- Improve NPV as Caribou Dome has a greater and longer contribution.
- Prioritise higher confidence Mineral Resource classification feed (Caribou Dome has Measured and Indicated for the first three years).
- Reduce initial trucking requirement.
- Develop only one site at commencement.

Typical production/productivity constraints were applied to develop production schedules. These are described in Table 6.

Table 6. Key Production Constraints

Operation	Scheduling Constraints
Caribou Dome Open Pit	Two 200t excavators 300kBCM/month per excavator Maximum vertical advance of 100m/yr
Zackly Underground	Jumbo advance 200m/mth single heading Jumbo advance 250m/mth multiple headings Two Jumbos maximum Stoping max 15,000kt/mth per stope

- The mining schedule commences at Caribou Dome in Year 0, whilst the plant is being constructed.
- Zackly commences in Year 5 with capital development and orebody access.
- The key mining and processing physicals are shown in Table 7 below.
- The mining schedule supports a processing capacity of 750ktpa for five years with a further four years between 600 and 700ktpa.

Table 7. Key mining physicals by deposit and processing physicals by year

Area	Type	Units	Rate	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Open Pit				4,363,877	13,263	974,525	981,732	696,516	379,662	1,318,178					
Gold		g/t		-	-	-	-	-	-	-					
		oz		-	-	-	-	-	-	-					
Silver		g/t		6.65	9.04	7.74	6.08	6.09	6.03	6.71					
		oz		932,696	3,856	242,477	192,053	136,435	73,565	284,310					
Copper		%		3.3%	3.7%	3.6%	3.5%	3.5%	2.7%	3.1%					
		t		145,902	496	35,082	34,353	24,130	10,384	41,456					
Total Waste		tonnes		80,991,512	4,964,914	12,840,257	19,451,827	19,771,701	13,827,389	10,135,424					
Stripping Ratio		wst/t/ore t		18.6	374.1	13.2	19.8	28.4	36.4	7.7					
Underground				2,165,812						23,145	207,220	479,993	601,931	600,000	253,523
Gold		g/t		1.86						3.15	2.12	2.51	2.26	1.13	1.13
		oz		129,844						2,344	14,151	38,691	43,649	21,798	9,211
Silver		g/t		12.8						22.2	15.4	17.2	11.8	10.0	10.0
		oz		888,231						16,530	102,749	265,741	228,797	192,904	81,509
Copper		%		1.01%						1.79%	1.35%	1.47%	0.97%	0.68%	0.68%
		t		21,908						414	2,789	7,069	5,832	4,080	1,724
Processing				6,529,689		750,000	750,000	750,000	750,000	750,000	675,000	625,000	600,000	600,000	279,689
Tonnes		t		6,529,689		750,000	750,000	750,000	750,000	750,000	675,000	625,000	600,000	600,000	279,689
Au g/t		g/t		0.62							0.26	2.37	2.26	1.18	1.14
		oz		129,844							5,642	47,623	43,596	22,763	10,219
Ag g/t		g/t		8.67		7.76	6.41	6.22	6.13	6.69	8.05	16.40	11.99	10.09	10.00
		oz		1,820,926		187,117	154,565	149,983	147,813	161,316	174,699	329,545	231,292	194,640	89,955
Cu%		t		2.57%		3.60%	3.52%	3.49%	3.13%	3.14%	3.10%	1.33%	0.99%	0.69%	0.68%
		t		167,810		27,000	26,400	26,175	23,475	23,550	20,925	8,313	5,940	4,140	1,892
Recovered Metal															
Gold		oz	79.0%	102,577							4,458	37,622	34,441	17,983	8,073
Silver		t	80.0%	1,456,741		149,694	123,652	119,986	118,250	129,053	139,759	263,636	185,034	155,712	71,964
Copper		t	82.5%	138,446		22,275	21,780	21,595	19,367	19,429	17,263	6,858	4,901	3,416	1,561

Over the currently planned 9.5 life of the project, Measured and Indicated Resources account for 83% of the total tonnes mined. The resource category of tonnes mined over time are shown in Table 7.

During the first three years of mining (which covers the payback period), 99% of the mineralisation mined falls under either Measured Resources or Indicated Resources.

The Inferred material in year 5 is in the base of the pit. There is a lower level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will necessarily result in the determination of Indicated Resources or that the production target itself will be realised (refer further cautionary statement on page 3).

Production Profile by Resource Category

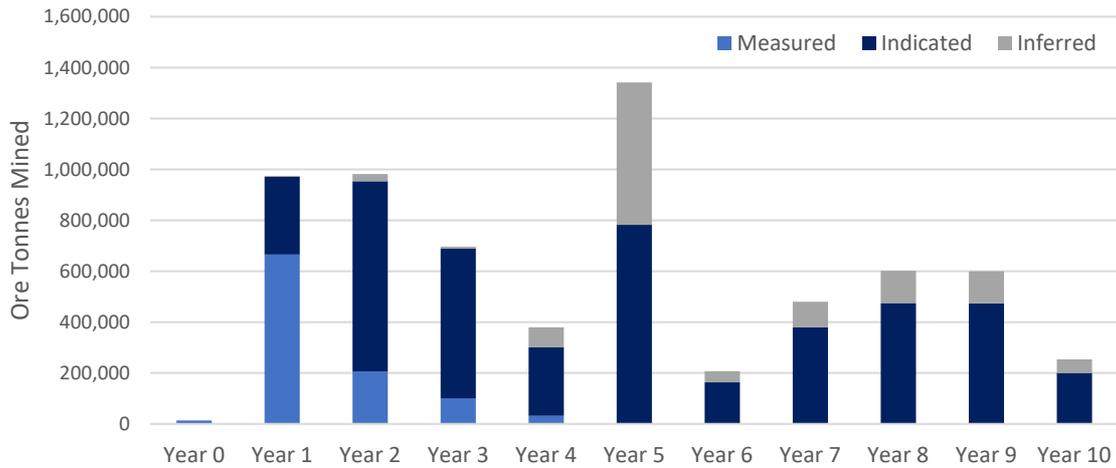
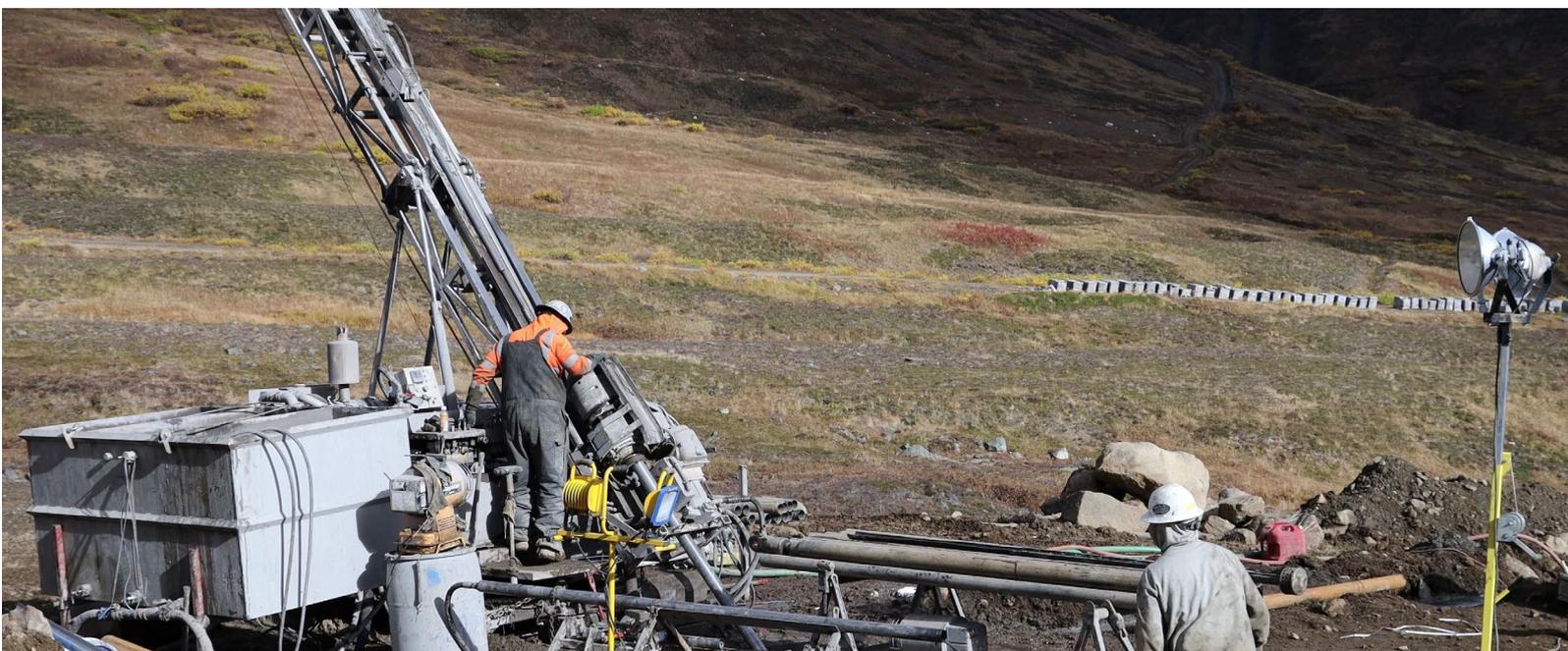


Chart 1. Tonnes mined by resource category Bar Chart.



Capital Cost Estimates

Capital cost estimates for the Project have been determined via multiple sources, and in accordance with Scoping Study standards, project capital has been factored from other studies.

- Capital development (pre-strip and declines/infrastructure development) has been built up from unit rates.
- The unit rates have been built from benchmarks/prior estimates in the case of open pit pre-strip, and from first principles cost models for underground capital development.
- Estimated capital development costs, by deposit are shown in Table 8.

Table 8. Mining capital cost summary

Capital Costs	Area	Cost \$'M	Unit Cost \$/ore tonne	Basis
Mining	Zackly UG	29.9	13.8	1 st principles build up
	Caribou Dome OP	60.1	14.3	Benchmark mining costs

- The primary source for project capital cost estimates is a comparison to selected other projects. The project capital cost includes the processing plant, camp and office/workshops and associated infrastructure. The power stations have been assumed to be supplied via a build/own operate (BOO) model through an independent power provider and will take no project capital. Underground mining related capital items have been modelled as supplied by the contractor, with modest upfront cost to the project for surface infrastructure.
- Reported project costs for infrastructure (excluding mining) has been indexed to 2023 costs and scaled to the size of Alaska Range (0.75 Mtpa) utilising the 'six tenth rule'. These are considered appropriate measures for this level of study given the +/-35% confidence level.
- The results of this comparison with select projects is shown in Table 9. The average estimated cost of \$126.6M was utilised for this study.



Table 9. Select comparable capital projects

Project	Published Year	Capital ¹ US\$M	Throughput Mtpa	Years since estimate	2022 cost US\$M	Scaled using 6/10 rule
T3 Motheo	2020	182	3.0	3	210.3	91.6
Kutcho	2021	237.5	1.4	2	267.8	184.1
Jervois	2021	150.75	1.6	2	170.0	107.9
Antler	2022	130.2	1.0	0	143.2	120.5
					Average	126.6

¹ Costs exclude mining capital and associated portion of contingency

- Study capital costs have been factored from the project capital cost at a rate of 1.0% of capital for the pre-feasibility study and 3.0% of capital for the feasibility study.
- \$5M has been added to the estimated \$126.6M project capital cost to purchase 3rd party royalties at Caribou Dome at contracted prices.
- Sustaining capital has been modelled at 2% of Project Capex per annum, with mining sustaining capital captured in the mining rates.
- \$4M has been allocated to set up surface infrastructure at Zackly has been assumed (access, offices, workshop, etc.).
- No exploration capital has been applied as no ‘blue-sky’ has been included in the evaluation.
- All capital items over the life of the mine used in the evaluation are shown in Table 10.

Table 10. Initial and Sustaining Capital Cost Summary

Capital Item	\$'M
Project Capex	131.6
Pre-Feasibility Study	1.3
Feasibility Study	3.2
Setup Zackly	4.0
Sustaining Capital	23.7
Ongoing Mine Develop	90.1
Total	253.8

Operating Cost Estimates

Key Assumptions

The operating cost estimate has been developed using a range of methods, from a build-up of rates from first principals to benchmark numbers.

Underground mining costs have been derived from first principals utilising:

- equipment ownership cost (including depreciation, interest and insurance);
- equipment operating costs based on hours utilised;
- personnel costs, based on Australian labour costs converted to USD at \$0.70 exchange rate with 35% on-costs;
- benchmark mining consumables costs either \$/t or \$/m; and
- fuel consumption based on hours and OEM burn rates.

Underground mining costs have been split between operating and capital based on activity (direct charge or allocation).

Open Pit mining costs have been factored from previous studies and a staff cost build-up. The overall unit costs are shown in Table 11.

- Contractor open pit mining costs have been factored from other comparable studies and benchmarks.
- Ore and waste rates are differentiated to allow for grade control costs. Costs are incremented by \$0.01/t/m vertical to account for additional haulage costs.
- Management and technical roles have been estimated from first principals based on an organisation chart, Australian mining labour costs (at a 0.7 FX rate) and 35% oncosts. (Owners Cost).

Table 11. Open pit unit cost

Cost Breakdown	\$/t	\$/BCM
Contractor – Waste	2.41	6.56
Contractor – Ore	2.98	9.58
Owner’s cost	0.20	0.58
Overall cost	2.55	7.28



Open pit mining costs have been split between operating and capital based on capitalisation of all costs until ore production is achieved. Each stage has a capitalisation phase.

Processing costs have been calculated using a fixed and variable build-up.

- Fixed costs have been estimated at \$5Mpa, made up of primarily labour – approximately 33 persons
- Operating unit costs have been estimated to be \$11.30/t for Zackly and \$15.30/t for Caribou Dome. Costs are inclusive of power, consumables and maintenance.

Surface ore transport costs have been based on benchmarks. Road maintenance is included in G&A costs.

Realisation costs have been developed based on estimates of concentrate handling and benchmark TC/RC costs

G&A costs have been developed based on benchmarks

The summary of operating cost build-up and output is shown in Table 12.

Table 12. Operating Cost Basis

Operating Costs	Area	Unit	Value	Basis
Mining	Zackly UG	\$/t ore mined	\$65.98	1st principles build up
	Caribou Dome OP	\$/t ore mined	\$32.07	Benchmark studies
	Surface ore transport	\$/tkm trucked	\$0.12	Benchmark figures including fuel
Processing	Fixed	\$/yr	\$5,000,000	Labour for approx 33 people
	Variable	\$/t processed	\$13.59	Benchmark figures
	Overall	\$/t processed	\$20.86	
Concentrate Sales	Includes Transport, payability, TC and RC	\$/t processed	\$49.30	Market data and benchmarks
G&A	Variable	\$/t processed	\$5.00	Benchmark figures

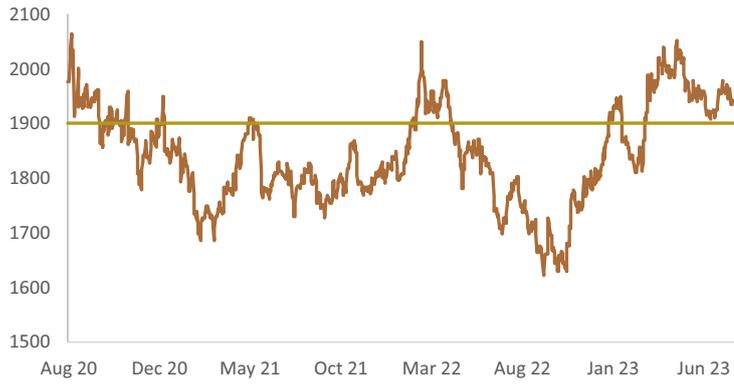
Financial Analysis

- The 2023 Scoping Study considers sequential mining of Caribou Dome followed by Zackly Dome and has been prepared on the basis of 100% ownership (that is the financial evaluation is on a full project basis).
- 6.5Mt of mineralised material is mined over the life of the operation:
 - Open-cut mining at Caribou Dome commences during construction; and
 - Underground extraction at Zackly follows Caribou Dome.
- Processing rate of approximately 0.75Mtpa for the first 5 years with 600-700ktpa over the remain 3.5years of a 9.5 year operating life.
- Metal recovery based on the preliminary metallurgical test work undertaken to date.
- Revenue, driven by metal recoveries, metal prices and metal volumes into concentrate for sales as shown below in Table 13.
- The basis for the selected metal prices is a combination of recent history as shown in Figure 9 and market based medium term views on commodity prices.

Table 13. Revenue drivers

Metal	Production	Recoveries		Metal Prices
		Zackly	Caribou Dome	
Copper	134,609t	0.90	0.78	\$8,500/t
Gold	102.6kOz	0.79	-	\$1,900/oz
Silver	1,457kOz	0.80	0.80	\$25/oz

- Estimated pre-production capital expenditure of approximately US\$135M (including agreed royalty buy-back of US\$5M and further studies of US\$4.4M).
- One year construction timeframe to initial production from Caribou Dome.
- Annual sustaining capital (including mining capital development) and subsequent cessation/rehabilitation costs totaling approximately US\$129M over the 9.5-year operating life.



79
Au
Gold
196.97



29
Cu
Copper
63.546



47
Ag
Silver
107.87



Figure 8. Showing three years of metal prices (source: <https://markets.businessinsider.com/commodities>)

Key Study Outcomes

The key financial metrics for the 2023 Scoping Study are shown in Table 14 below.

Table 14. Key Financial Metrics

<p>Revenue</p> <p>US\$1,375 M A\$2,115 M (\$0.65)</p>	<p>Total EBITDA</p> <p>US\$573 M A\$882 M</p>
<p>C1 Cash Cost</p> <p>US\$1.93 / lb A\$2.97 / lb</p> <p>Cash costs with Au and Ag credits</p>	<p>Operating Margin</p> <p>42%</p> <p>EBITDA/Revenue</p>
<p>Average Annual Free Cash Flow</p> <p>US\$53 M A\$82 M</p> <p>Post construction</p>	<p>Initial Capital Required</p> <p>US\$145 M A\$223M</p> <p>Including pre-strip & royalty buy-back</p>
<p>NPV₇ Pre-tax</p> <p>US\$201 M A\$309 M</p>	<p>IRR Pre-tax</p> <p>38.4%</p>
<p>Payback</p> <p>2.75 Years</p> <p>Post construction</p>	<p>Project Life</p> <p>9.5 Years</p>

Sensitivities

In order of economic significance, the NPV and IRR of the Project are most sensitive to the commodity prices, concentrate grades and realisation costs of copper as well as project operating costs.

Project outcomes are more sensitive to the price and recovery of copper than they are to gold or silver. (9 below).

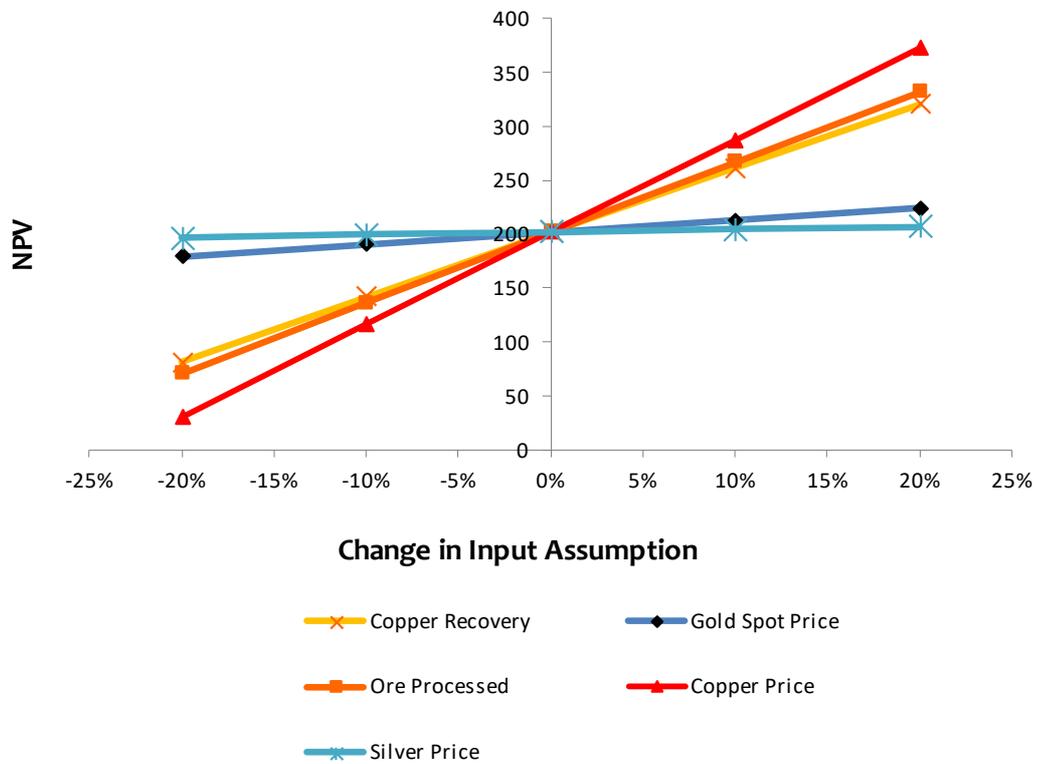


Figure 9. NPV sensitivity (pre-tax basis) for copper and gold price, copper recovery and tonnes processed.

The Project is less sensitive to capital costs than it is to life-of-mine operating costs and copper realisation costs (10):

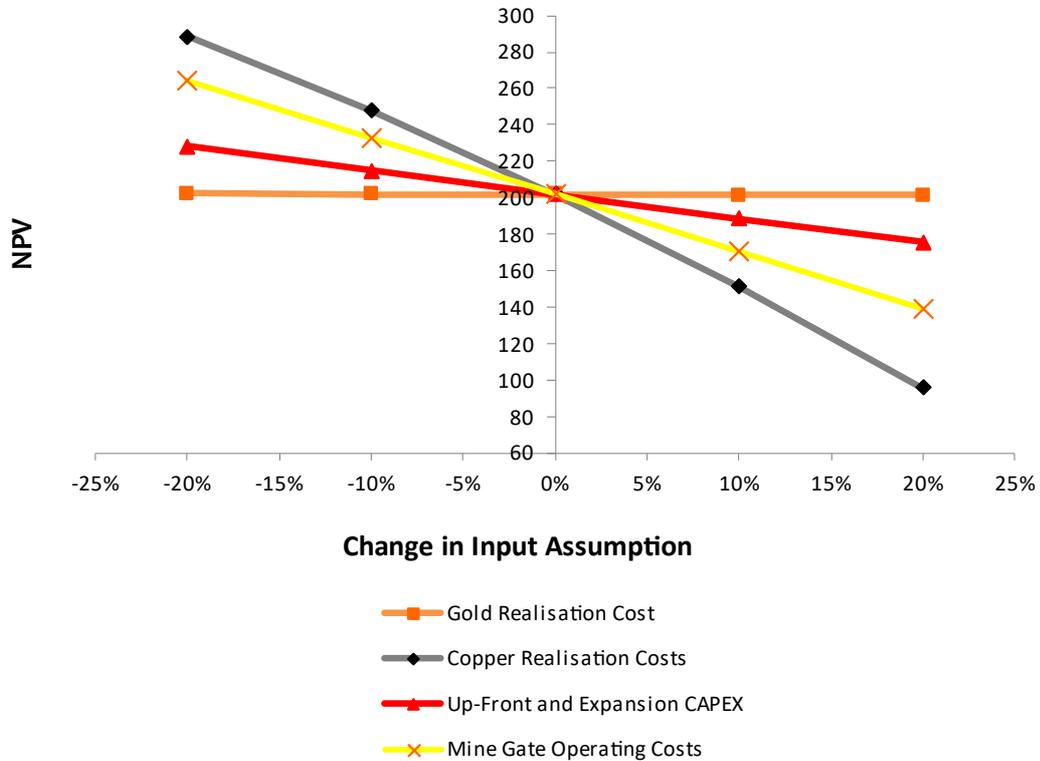


Figure 10. NPV sensitivity (pre-tax basis) to capital costs and operating costs

This Scoping study reveals key areas for potential Cashflow and NPV enhancement.

Other than copper and gold prices, the most immediate uplifts in value, in order, are found in improving Concentrate Grades, Copper and Gold Recovery and Resource Extension.

Sensitivity analysis reveals advancing successful metallurgical test work has the most immediate potential to deliver the greatest uplift in Project NPV.

It reveals that substantially better economic returns could be achieved with even modest improvements in both copper recovery and concentrate grades at Caribou Dome. Concentrate grades at 20% or greater deliver the best returns as they reduce freight-to-refinery costs and avoid punitive realisation costs for lower grade concentrates.

Similarly, advancing test-work to deliver better gold recovery at Zackly could also yield immediate economic benefit.

Concentrate Grade

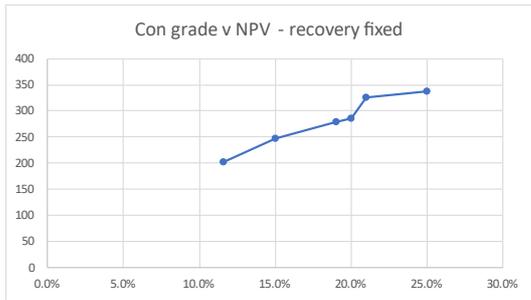


Figure 11. Concentrate grade vs NPV

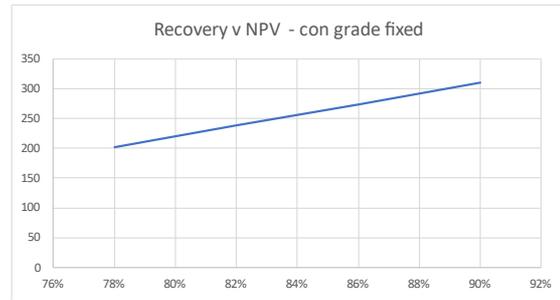


Figure 12. Metal Recovery vs NPV

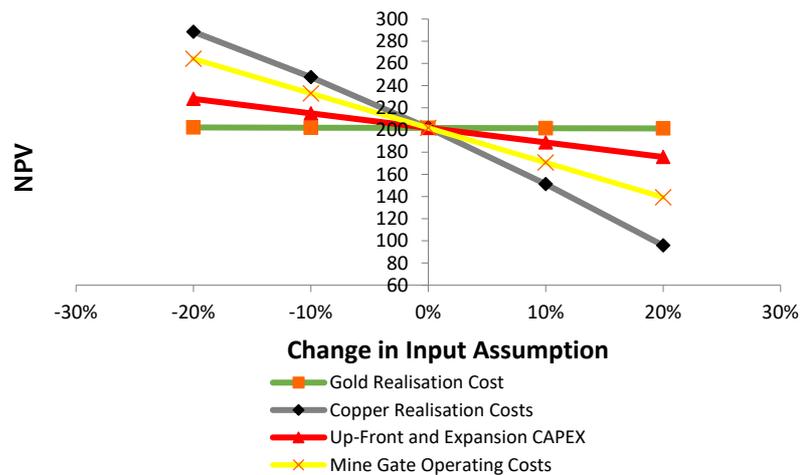


Figure 13. NPV vs Various Inputs

For example, sensitivity analysis indicates that lifting copper recovery from 78% to 85% (a 7% increase) by floating a 20% copper concentrate from material mined at Caribou Dome could potentially yield a further \$174M (+87%) increase in projected pre-tax NPV. (see Figure 11 and Figure 12).

Metal Recoveries

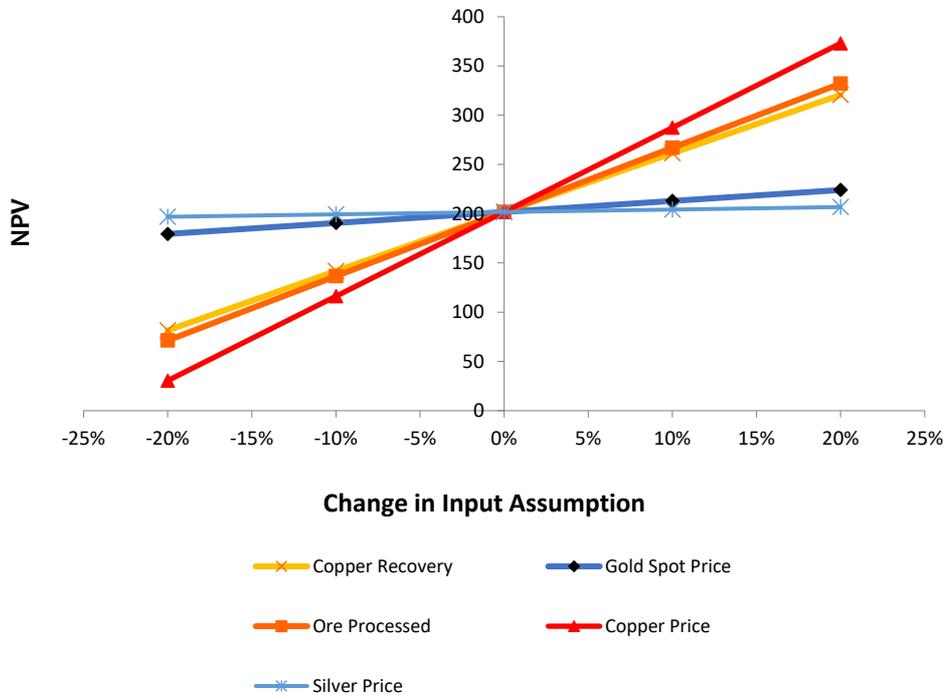


Figure 14. NPV vs Key inputs

Project returns are less sensitive to metal recoveries than metal prices. Copper now matters more than gold due to the recent and substantial copper resource upgrade at Caribou Dome.

Metallurgical test work to date is at an interim level and is not yet optimised. Further testing including the examination and trial of alternative recovery options at both Caribou Dome and Zackly are planned this year.

Resource Extension

Upside resource expansion potential is evident and may be achieved with further successful resource extension drilling at Caribou Dome and Zackly. (Figures 14 and 15).

Caribou Dome drilling to date has mineralised intercepts a further 150m below the current resource. If further drilling extended the resource to that depth and an estimated 2Mt was mined from underground this could yield a \$50M increase in projected pre-tax NPV (+25%).

Analysis of drilling and the current Indicated mineral resource at Zackly also highlights several mineralised shoots which plunge at depth and along-strike and have yet to be fully evaluated by drilling.

Adding an extra year's material mined from Zackly could yield a \$22M increase in projected pre-tax NPV (+11%).

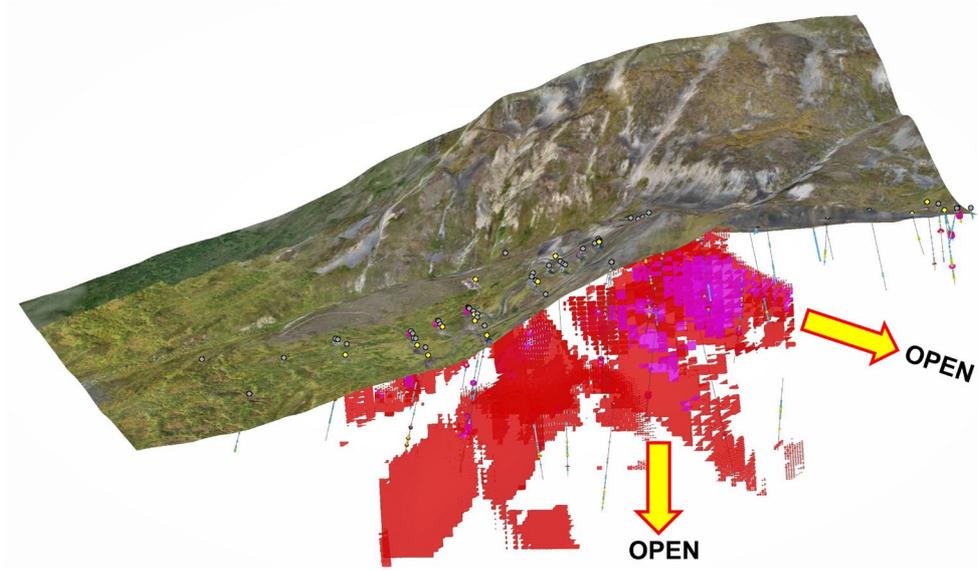


Figure 15. 3D oblique view of the Zackly deposit looking towards the NE and showing resource blocks

1% Cu and >2.5g/t Au, with mineralisation open towards the east and at depth

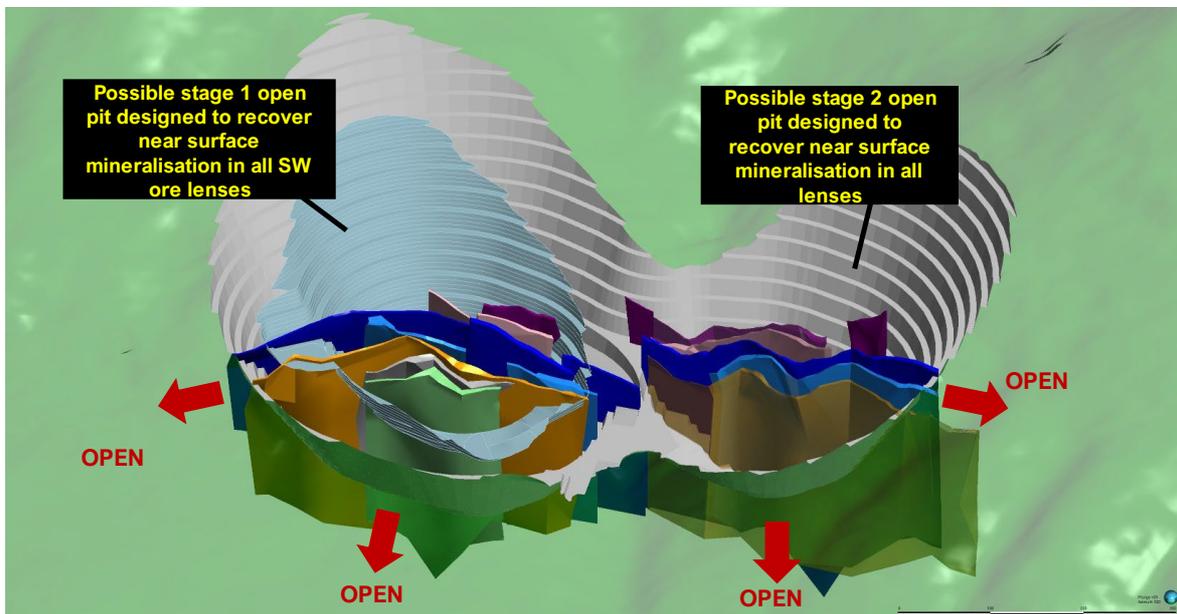


Figure 16. Along-strike and down-dip resource expansion potential for Caribou Dome

Funding

To achieve the range of outcomes indicated in the 2023 Scoping Study, it is estimated that pre-production funding of approximately US\$145 million before working capital may be required. It is anticipated that the finance will be sourced through a combination of equity and debt instruments from existing shareholders, new equity investors and debt providers from Australia and overseas and/or potential streaming of the metals produced.

PolarX has formed the view that there is a reasonable basis to believe that requisite funding for development of the Alaska Range Project would be available when required, having considered factors including the following:

- The quality of the Alaska Range Project, in terms of the high grade of the deposit and relatively low level of projected pre-production capital expenditure. The release of this updated Scoping Study will provide a platform for PolarX to commence discussions with potential financiers.
- Global debt and equity finance availability for high-grade mining projects like the Alaska Range Project is expected to remain robust, particularly given the long-term price forecasts for copper.
- The project is in Alaska USA, which was the 11th ranked global jurisdiction for mining investment (per the Frazer Institute's 2022 Investment Attractiveness Index).
- The Company has no existing debt.
- The Company's Board and management team has extensive experience in financing development and production in the resources industry.
- The Company has a record of raising equity funds and its shareholders include several large institutional resource investors.



Forward Plans

The 2023 Scoping Study indicates that the project economics could be very significantly enhanced through the delineation of and mining of extensions of the known mineral resources.

This is particularly the case if additional tonnes were delineated for Caribou Dome and Zackly along strike of existing mineral resources.

The following high priority outcomes have been derived from the 2023 Scoping Study results:

1. Further metallurgical testing and evaluation to increase copper recovery and concentrate grade for Caribou Dome, and gold recovery for Zackly.
2. More drilling to define extensions of the mineralisation at Caribou Dome particularly in the top 200-300m (Figure 16).
3. More drilling to increase the mineral resources at Zackly, particularly the down-plunge extensions of known higher-grade shoots within the overall resource envelope (Figure 15).
4. More drilling to improve the confidence in the mineral resource category in the deeper zones of the Caribou Dome resource.

Conclusions

The 2023 Scoping Study has clearly confirmed potential for a combined mining operation at the Alaska Range Project to yield substantial economic returns.

In particular, it has highlighted that significant further value could be realised by increasing metallurgical recoveries and concentrate grades at Caribou Dome with further test work.

The Study also quantifies the extent to which expanded mineral resources from additional drilling, near surface along-strike and deeper at both deposits would further enhance economic returns.

PolarX is focused on delivering both outcomes as it advances Alaska Range towards mining.

Authorised for release by:

Executive Chairman Mr Mark Bojanjac.



Additional Disclosure

COMPETENT PERSONS STATEMENT – Exploration Results, Mineral Resources and Ore Reserves

The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The information contained in this announcement has been presented in accordance with the JORC Code.

Information in this announcement relating to Exploration results is based on information compiled by Dr Jason Berton (a director and shareholder of PolarX Limited), who is a member of the AusIMM. Dr Berton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Berton consents to the inclusion of the data in the form and context in which it appears.

There is information in this announcement relating to:

- (i) the Mineral Resource Estimate for the Caribou Dome Deposit, which was previously announced on 14 June 2023;*
- (ii) the Mineral Resource Estimate for the Zackly Deposit, which was previously announced on 17 October 2022; and*
- (iii) exploration results which were previously announced on 11 January 2021, 4 February 2021, 3 March 2021, 27 May 2021, 19 August 2021, 23 February 2022 and 15 March 2022.*

Other than as disclosed in those announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

COMPETENT PERSONS STATEMENT – Mining studies

The information in this report relating to mining design, scheduling and cost estimation is based on and fairly reflects information reviewed by Mr Andrew Doe (consultant to PolarX Limited). Mr Doe is a Member of the Australian Institute of Mining and Metallurgy. Mr Doe is a qualified Mining Engineer and has sufficient experience which is relevant to the mining studies and cost estimation undertaken to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Doe consents to the inclusion in the ASX release of the matters based on their information in the form and context in which it appears.

Forward Looking Statements:

Information included in this announcement constitutes forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as "anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties.

Forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of resources and reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation as well as other uncertainties and risks set out in the announcements made by the Company from time to time with the Australian Securities Exchange.

Forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, its directors and management of the Company that could cause the Company's actual results to differ materially from the results expressed or anticipated in these statements.

The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Company does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.



Scoping Study

APPENDICES



Appendix 1: Reasonable Basis for Forward Looking Statements

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this announcement and disclosed in the table below.

Consideration of Modifying Factors (in the form of Section 4 of the JORC Code (2012) Table 1)

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<p>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</p> <p>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</p>	<p>No Ore Reserve has been declared as part of the scoping study</p> <p>The Caribou Dome Mineral Resource estimate on which the Caribou Dome portion of the scoping study is based was separately and previously announced on 14 June 2023.</p> <p>The Zackly Mineral Resource estimate on which the Zackly portion of the scoping study was separately and previously announced on 17 October 2022.</p>
Site visits	<p>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</p> <p>If no site visits have been undertaken indicate why this is the case.</p>	<p>No site visit has been undertaken for the purpose of this scoping study by the Competent Person for Mining. This is predominantly due to COVID19 travel restrictions in the data acquisition phase of the project.</p>
Study status	<p>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</p> <p>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</p>	<p>The study presented is a scoping study and accordingly no Ore Reserve has been declared.</p>
Cut-off parameters	<p>The basis of the cut-off grade(s) or quality parameters applied.</p>	<p>Cut-off grade parameters have been determined utilizing scoping study level cost inputs in line with the AusIMM Cost Estimation Handbook.</p> <p>For Caribou Dome, cut-off grades were based on copper grades only, whilst for Zackly, they were based on copper equivalent grades</p>
Mining factors or assumptions	<p>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (ie. either by application of appropriate factors by optimisation or by preliminary or detailed design).</p>	<p>No Ore Reserve has been declared</p> <p>CARIBOU DOME</p> <p>The copper mineralisation at Caribou Dome is contained in subvertical lenses, which are shallow.</p>

Criteria	JORC Code Explanation	Commentary
	<p>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</p> <p>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre- production drilling.</p> <p>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</p> <p>The mining dilution factors used.</p> <p>The mining recovery factors used.</p> <p>Any minimum mining widths used.</p> <p>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</p> <p>The infrastructure requirements of the selected mining methods.</p>	<p>Open pit mining is considered appropriate.</p> <p>Convention truck and shovel open pit operations have been designed</p> <p>Overall wall angles of 55° have been assumed for the pit with batter angles of 65°, batter heights of 20m and 9m wide berms. A dual lane ramp system flattens the overall pit angle below the optimisation angle.</p> <p>Minimum mining width of 20m for open pit mining has been applied.</p> <p>Open pit dilution of 20% and ore loss of 5% has been applied using a 5m bench height</p> <p>Inferred Mineral Resources are used in the evaluation as described in the body of this release and account for ~15% of the total mining inventory for Caribou Dome.</p> <p>Limited infrastructure (offices, ablutions and workshop) will be required.</p> <p>ZACKLY</p> <p>The mineralization consists of steeply dipping continuous lenses which allows for conventional mining.</p> <p>No open pit has been considered due to the oxidized ore zone near surface having poor floatation recoveries.</p> <p>Underground mining has been assumed to be conventional longhole open stoping with cemented backfill (cemented aggregate fill). Interlevel spacing of 20m and maximum stope lengths of 25m have been applied. Minimum mining width of 2m, with 1m of dilution has been assumed for stoping. Mining recovery of 95% is applied.</p> <p>Inferred Mineral Resources are used in the evaluation as described in the main body of this release. Only 12% of the mined material at Zackly is in the inferred resource category, with 88% in Indicated.</p>
<p>Metallurgical factors or assumptions</p>	<p>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</p> <p>Whether the metallurgical process is well tested technology or novel in nature.</p> <p>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical doming applied and the</p>	<p>A conventional crushing, grinding and floatation circuit has been assumed, with copper and copper/gold/silver concentrates dried and shipped in bags.</p> <p>Caribou Dome test work suggests a finer grind and larger volumetric capacity floatation circuit than will be required for Zackly ores. As such, the evaluation has considered campaign treatment of ores.</p>

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	<p>corresponding metallurgical recovery factors applied.</p> <p>Any assumptions or allowances made for deleterious elements.</p> <p>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</p> <p>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</p>	<p>Caribou Dome concentrate grade of 13% has been assumed, with appropriate smelter penalties modelled.</p> <p>Zackly concentrate grades of 22% for Cu and 35g/t for Au have been assumed.</p> <p>Zackly oxide ores will be difficult to float, so these ore zones (near surface) have been excluded from the evaluation.</p> <p>Sampling and test work to date have not shown any deleterious element that would have a material detrimental effect on the selling price or project viability.</p> <p>The metallurgical test-work is summarized in Section 4 of the main body of this release. Recoveries assumed are;</p> <p>Zackly – Cu 90%, Au 79% and Ag 80%. The recovery of Ag has been assumed and is not supported by test work.</p> <p>Caribou Dome Cu 78% and Ag 80%. The recovery of Ag has been assumed and is not supported by test work.</p> <p>No bulk or pilot test work has been performed</p>
Environmental	<p>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</p>	<p>No work has been performed on environmental impacts. Potential for AMD and tail classifications will occur at PFS level. No approvals have been applied for.</p>
Infrastructure	<p>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</p>	<p>Processing is assumed in this scoping study to occur at Caribou Dome. Caribou Dome is the larger operation with higher value, so will be mined first.</p> <p>The project is accessed via the Denali highway, with rail access at Cantwell, approximately 100km to the west of Caribou Dome.</p> <p>An accommodation camp and a diesel-fired power station are assumed for the project.</p> <p>Whilst in a mountainous area, it is considered that small-scale infrastructure will be able to be built.</p>
Costs	<p>The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs.</p> <p>Allowances made for the content of deleterious elements.</p> <p>The source of exchange rates used in the study.</p>	<p>The capital cost estimates were based on benchmarking with similar operations and factoring appropriate for a Scoping Study with a target accuracy of +/- 35%</p> <p>Process plant and other infrastructure was scaled from similar projects using the 'six-tenth rule'. No attempt has been made to allocate costs to</p>

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	<p>Derivation of transportation charges.</p> <p>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</p> <p>The allowances made for royalties payable, both Government and private.</p>	<p>separate subsections of the plant as no preliminary engineering has been completed</p> <p>Capital development costs were built up from benchmark rate (open pit) and first principals (underground)</p> <p>Preliminary operating costs were built up from first principals for underground mining and benchmarks for open pit mining and processing</p> <p>Transportation costs were escalated from previous quotes and checked with benchmarks</p> <p>A metals trader provided benchmark TC/RC, payabilities and penalties.</p> <p>All costs are in USD other than labour costs where AUD rates at 0.70 FX rate was used.</p> <p>An allowance of USD5M has been made to buy out a 3rd party royalty</p> <p>Alaskan royalties of 3% on net metal revenues has been applied</p> <p>No contingencies have been applied</p>
Revenue factors	<p>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</p> <p>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co- products.</p>	<p>Key revenue assumptions in this assessment are based on an average of the previous 4 month's price;</p> <ul style="list-style-type: none"> • Cu price - \$8500/t • Au price - \$1900/oz • Ag price - \$25/oz <p>A metals trader provided benchmark TC/RC, payabilities and penalties.</p> <p>Transportation costs include road, rail and sea transport.</p> <p>No sales contracts have been negotiated</p>
Market assessment	<p>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</p> <p>A customer and competitor analysis along with the identification of likely market windows for the product.</p> <p>Price and volume forecasts and the basis for these forecasts.</p> <p>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</p>	<p>No assessment of the market has been completed given the lead time to construction with respect to the life of the project. Market sentiment is strong for copper in particular in the medium to long term with decarbonization and electrification.</p>
Economic	<p>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</p>	<p>The evaluation is at a project level (100% ownership).</p>

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	<p>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</p>	<p>The NPV was determined using the Discounted Cash Flow method of valuation using a discount rate of 7%.</p> <p>The financial model is in real terms based on yearly increments.</p> <p>No escalation was applied</p> <p>US Federal corporate tax and Alaskan State Mining Licence tax rate less exploration credits are applied.</p> <p>Sensitivity to 7 different variables has been modelled;</p> <ol style="list-style-type: none"> 1. Gold Spot Price 2. Gold Recovery 3. Up-Front CAPEX 4. Mine Gate Operating Costs 5. Copper Price 6. Copper Recovery 7. Copper Realisation Costs incl transport, TC/RC, payability and penalties <p>The project is most sensitive to copper price, followed by operating costs.</p>
<p>Social</p>	<p>The status of agreements with key stakeholders and matters leading to social licence to operate.</p>	<p>Both Caribou Dome and Zackly deposits occur in a large block of Alaska State Mining Claims which are entirely owned by the State of Alaska and administered by the Department of Natural Resources (DNR).</p> <p>There is no Native Corporation ownership of land in which these deposits are located.</p> <p>There are no other formal stakeholders in these projects.</p>
<p>Other (incl Legal and Governmental)</p>	<p>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</p> <p>Any identified material naturally occurring risks.</p> <p>The status of material legal agreements and marketing arrangements.</p> <p>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</p>	<p>No ore reserve has been declared</p> <p>No material naturally occurring risks have been identified.</p> <p>The Zackly project is owned 100% by PolarX and there are no marketing agreements in place.</p> <p>The Caribou Dome project is owned by third parties with whom PolarX has an earn-in and joint venture agreement under which PolarX can earn an 80% stake in the project. There are no marketing agreements in place for Caribou Dome</p> <p>There are currently no governmental agreements in place.</p> <p>The state mining claims within which the deposits are located are owned by one of PolarX's subsidiaries in the US.</p>

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Classification	<p>The basis for the classification of the Ore Reserves into varying confidence categories.</p> <p>Whether the result appropriately reflects the Competent Person’s view of the deposit.</p> <p>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</p>	<p>No ore reserve has been declared</p> <p>No ore reserve has been declared</p> <p>No ore reserve has been declared</p>
Audits or reviews	<p>The results of any audits or reviews of Ore Reserve estimates.</p>	<p>No ore reserve has been declared</p>
Discussion of relative accuracy/confidence	<p>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</p> <p>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</p> <p>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</p> <p>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</p>	<p>No ore reserve has been declared</p>



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