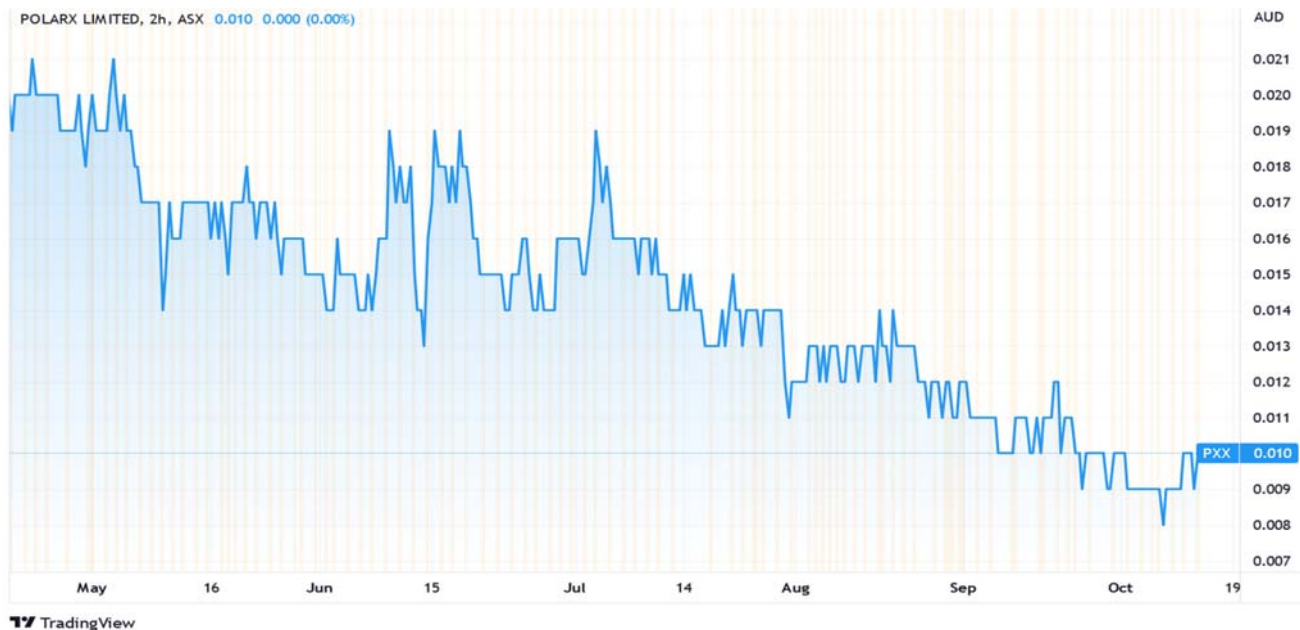


Tuesday 18th October, 2022

Portfolio Stock Developments

PolarX - (ASX: PXX, Share Price: \$0.01, Market Cap: \$9m, coverage initiated @ \$0.066 in April 2019)



Key Catalyst

Positive Scoping Study results for Alaska Range Copper Gold Project, comprising the high-grade Caribou Dome VMS Copper deposit and the nearby Zackly Copper-Gold-Silver skarn deposit.

We initiated coverage of PXX during April 2019 based on its 80% to 100%-owned Alaska Range Project, located in south-central Alaska. Encouraging results from ongoing exploration campaigns have so far delineated two advanced deposits - the Zackly skarn and the high-grade Caribou Dome sedimentary copper deposit. Zackly hosts an Inferred resource estimate of 4.0Mt @ 1.1% Cu and 1.6g/t Au from surface; whilst Caribou Dome hosts a JORC 2012-compliant resource of 2.8Mt @ 3.1% Cu. Mineralisation at both these prospects remains open at depth and along strike, with PXX pursuing a strategy of stand-alone mining operations supported by a single processing plant, with positive results from a recent Scoping Study. More recently, PXX has diversified its exploration interests through the acquisition of the Humboldt Range Gold-Silver Project in Nevada, USA - situated between two large-scale and active mines.

Latest Activity

Alaska Range Project Update – Scoping Study Results

PXX has provided an important update with respect to its Alaska Range Project in the USA, with the release of encouraging Scoping Study results based on sequential mining and processing options for the high-grade Caribou Dome VMS Copper deposit and the nearby Zackly Copper-Gold-Silver skarn deposit.

Overview

PXX has reported positive results from the recently completed Scoping Study conducted at its the Alaska Range Copper Gold Project. The Scoping Study has been based on the 2017 Caribou Dome mineral resource estimate, an updated mineral resource estimate for Zackly, together new metallurgical test-work results for both deposits

The Scoping Study has revealed several key aspects:

- Sequentially mining the Zackly deposit (best commenced underground), followed then by the Caribou Dome deposit (commencing as a shallow, high-grade open pit, then transitioning to underground mining).
- A conventional sulphide flotation plant would be utilised at a nominal production rate of 600ktpa over 6.5 years. The plant would be modified when production shifts from Zackly to Caribou Dome.
- Metallurgical recoveries of 90% copper and 79% gold from flotation at Zackly, and 78% copper recovery from flotation at Caribou Dome.
- Revenue from copper contributes more than gold at the assumed commodity prices.
- Increased size of the Zackly mineral resource estimate to 4.0Mt @ 1.1% Cu and 1.6g/t Au.
- Key economic outcomes on a 100% project basis and without finance leverage
- Relatively fast capital recoupment is possible and could accommodate a short mine-life.
- Potential remains to improve copper recoveries at Caribou Dome and gold recoveries at Zackly by way of further metallurgical test-work.
- Modest resource extensions at either deposit could significantly enhance projected economic returns.

Technical Significance

The release of the Alaska Range Project Scoping Study is a significant development, as it provides clarity and perspective around what PXX is trying to achieve with respect to its Zackly and Caribou Dome deposits, whilst outlining possible production scenarios. This is an important line-in-the-sand moment, as it provides investors with context around the potential workings of a base-line production scenario, where possible enhancements can be made, and most importantly of all what will be required for PXX to transition from explorer to production status.

The Scoping Study has demonstrated potential for significant upside in NPV terms through successful resource extension drilling at Caribou Dome and Zackly. For example, a modest 300,000t increase (+14%) in material mined at Zackly at the same grades could yield a \$31M increase in projected pre-tax NPV (+43%). Similarly, a 500,000t increase in material mined at both Zackly and Caribou Dome could similarly yield a \$52.5M increase in projected pre-tax NPV.

<p>Revenue US\$812M A\$1,160M (\$0.70)</p>	<p>Net Cash Flow US\$322M A\$460M</p>
<p>C1 Cash Costs US\$1.89/lb A\$2.70/lb Cash costs with Au and Ag credits</p>	<p>Operating Margin 40% EBITDA/Revenue</p>
<p>Average Annual Free Cash Flow US\$37M A\$53M Post construction</p>	<p>NPV₇ Pre Tax US\$72M A\$103M</p>
<p>IRR Pre-tax 26%</p>	<p>Pre-production Capital US\$111M A\$158M</p>
<p>Payback 2.25 Years Post construction</p>	<p>Initial LOM 6.5 years</p>

Table 1: Alaska Range Project Scoping Study economic projections (based on a 100% project basis and without finance leverage).

The bottom-line is that Alaska Range Project economics appear most responsive to both the copper price and copper recoveries. Importantly, both can be further enhanced by infill and expansionary drilling, together with improved metal recoveries via further metallurgical test-work.

Importantly too, significant resource expansion potential is evident at both Caribou Dome: where the most recent drilling (19m at 7% copper) remains open at depth and along strike; and at Zackly: which remains open at depth and immediately along strike to the east of the mineral resource. The Scoping Study outcomes fully justify additional investment on extension drilling at both deposits, where an increase in mineral resources could significantly enhance projected returns.

Next Steps

Planning of resource extension drilling programs has commenced as a priority, whilst additional metallurgical test-work is warranted and may deliver better copper recovery and concentrate grade, particularly for Caribou Dome, and better gold recovery for Zackly.

Alaska Range Project Overview

The Alaska Range Project is located 250km northeast of Anchorage in central Alaska, USA. It is readily accessible via the Denali Highway that 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.

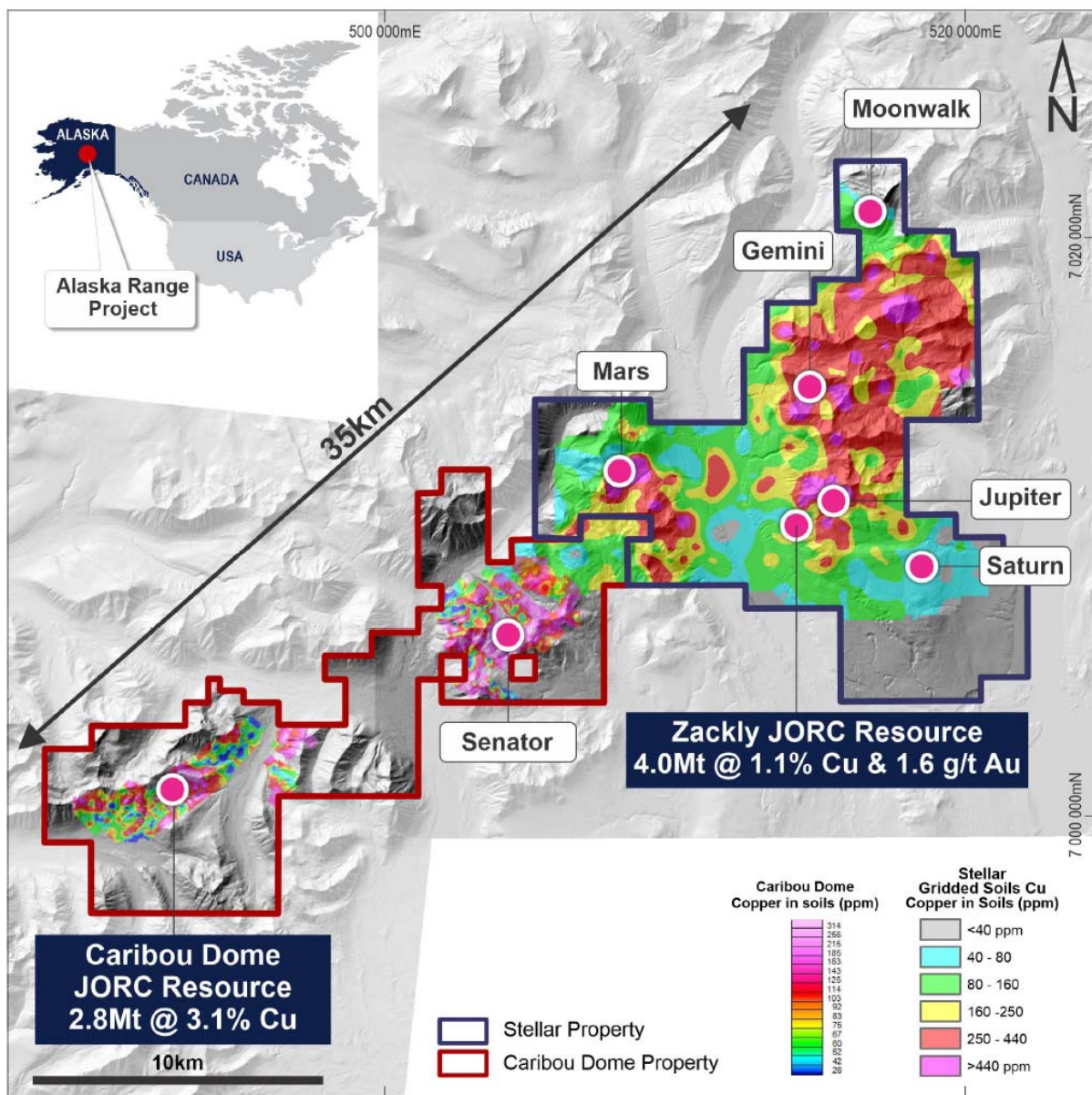


Figure 1: Location Map for the Alaska Range Project showing the Caribou Dome and Zackly deposits plotted on copper-in-soils geochemical anomalism.

The Caribou Dome Project 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. PXX's remaining commitments in relation to its right to earn an 80% interest in Caribou Dome comprise:

- Making further option payments totalling US\$1.36M by 6 June 2024.
- Completing a feasibility study on the deposit or spending a further ~US\$160,000 by 6 June 2024.
- Paying a 5% net smelter return (NSR) 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 231 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).

The Alaska Range Project occurs within south-central Alaska in a belt of rocks containing known large-scale porphyry Cu-Au deposits of Cretaceous age (e.g. Pebble) and associated Cu-Au skarns (e.g. 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.

Copper mineralization 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 mineralisation over approximately 800m of strike. Significant additional drilling has been undertaken by PXX since 2015, with a maiden resource announced during April 2017.

The Caribou Dome mineralisation occurs within 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 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.

Zackly occurs in limestone that 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.

Resource Base

The Mineral Resource estimate for Caribou Dome was published during April 2017, while an initial Mineral Resource estimate for Zackly was published on during March 2018. PXX’s additional drilling during 2018 and 2020, along with ultra-detailed drone magnetic data collected during 2020 and increased geological confidence in the deposit geometry, led to an enhanced Zackly Mineral Resource estimate.

	Resource Category	Mt	Cu %	Au g/t	Ag g/t	Cu % equiv*	Contained Cu (t)	Contained Cu (M lb)	Contained Au (oz)	Contained Ag (oz)
ZACKLY	Indicated	2.5	1.2	1.9	13.9	2.4	30,700	68	155,000	1,120,000
	Inferred	1.5	0.9	1.2	10.4	1.7	14,300	32	58,000	513,000
	TOTAL	4.0	1.1	1.6	12.6	2.1	45,000	100	213,000	1,633,000
CARIBOU DOME	Measured	0.6	3.6	-		3.6	20,500	45	-	-
	Indicated	0.6	2.2	-		2.2	13,000	29	-	-
	Inferred	1.6	3.2	-		3.2	52,300	115	-	-
	TOTAL	2.8	3.1			3.1	85,800	189		
COMBINED	TOTAL	6.8				2.5	131,000	290	213,000	1,633,000

*Copper equivalent grades for Zackly have been calculated using the average metallurgical recoveries for Cu and Au noted in the previous section (95% for Cu, 90% for Au) and assumed metal prices of \$9000/t for copper and \$1800/oz for gold used throughout the Scoping Study. $CuEq = Cu (\%) + Au (g/t) * 0.6431 * (Au \text{ recovery} / Cu \text{ recovery})$. Silver credits were not included in the calculation of copper equivalent grades.

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

Metallurgy

Based on Scoping Study metallurgical test-work results, PXX believes it possible to treat the sulphide ore from both Caribou Dome and Zackly using the same comminution and processing (flotation) plant on a campaign basis. This is an important confirmation of the original concept of a combined plant to treat sequentially mined material from both deposits.

The Caribou ore, with a greater mass pull, will require additional and larger float cells and thickening to Zackly. It is envisaged that the rougher cells in the Zackly flowsheet will become the cleaner cells for the Caribou Dome flowsheet with a dedicated Caribou Dome roughing circuit brought on-line when processing Caribou Dome material.

Work Planning

The Alaska Range Scoping Study has indicated that project economics would 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 immediately along strike of existing mineral resources. Accordingly, the following high priority targets have been outlined:

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

Other Project Interests

Humboldt Range Project

PXX also has 100% ownership of the Humboldt Range Project in Nevada, USA - comprising 333 lode mining claims within two claim groups - Black Canyon and Fourth of July. The project is located between two large-scale active mines - the Florida Canyon gold mine and the Rochester silver-gold mine. Access to the project is straightforward via roads off the I-80 Interstate Highway, which lies less than 15km to the west of the claims.

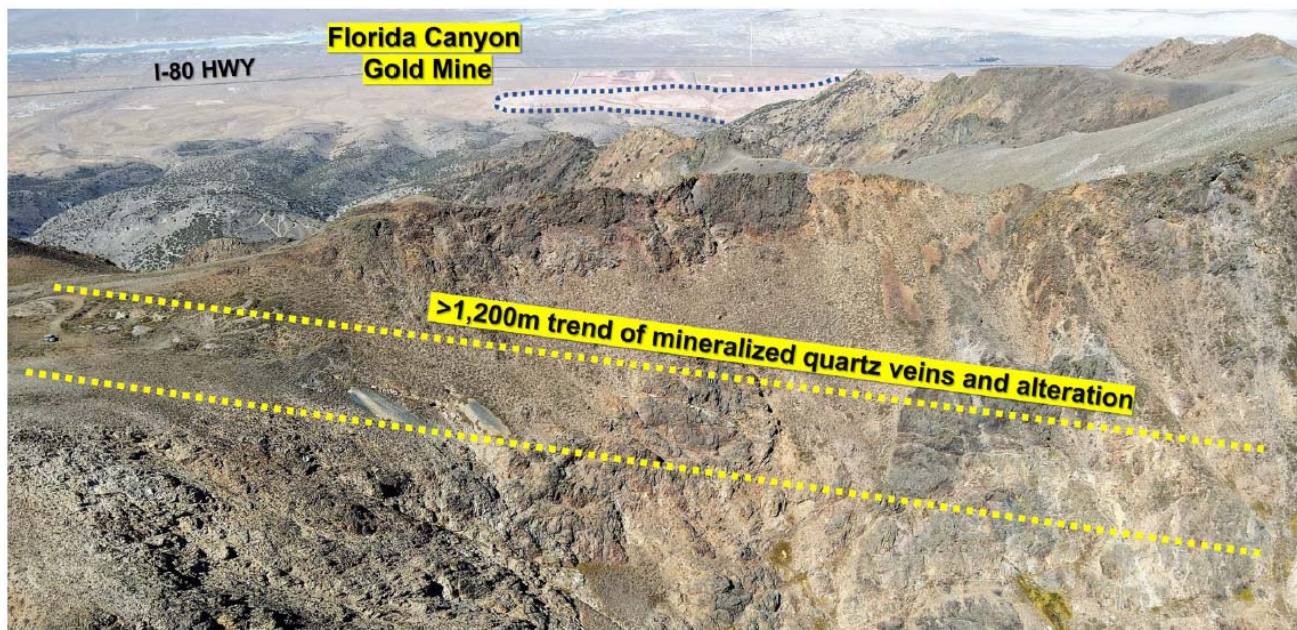


Figure 2: Aerial view looking northwards towards the Ridgeline Target which comprises the extension of the high-grade Monster Veins and associated gold-in-soil anomalism.

Humboldt Range contains geology consistent with bonanza-style epithermal gold-silver mineralisation and bulk mineable epithermal gold-silver mineralisation, both of which are well known in Nevada.

Widespread narrow vein mineralisation with visible gold occurs within the claims and was historically mined via numerous adits and underground workings between 1865 and the 1927. Mineralisation occurs in swarms of high-grade epithermal quartz veins of varying thickness (reported from 1cm to 3m), either as isolated veins or as broad zones of sheeted/anastomosing veins within zones of intensely altered and mineralised host rocks.

Summary

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We await further results with great interest from both Alaska and Nevada, and we retain PXX firmly within our coverage Portfolio.

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