# POLAR

# Advancing High-Grade Discoveries

January 2024

Alaska Range Project ALASKA ALASKA Ing of Fire Interalised bel

USA

ASX: PXX www.polarx.com.au

29

Cu

Copper 63.546

Au

Gold 196.97

# **USA focus**

#### Advancing Alaska Range Mine Development:

Total JORC resource 11.2Mt; 269,375t Cu, 213,000oz Au and 3,131,000oz Ag.

Mine Scoping Study:A\$625m pre-tax NPV, A\$223m Capex, 74% IRR. 1.6-year payback.

#### Stellar Property (100% PXX)

- 4.0Mt @ 1.1% Cu + 1.6g/t Au + 12.6g/t Ag JORC at Zackly Project, open in all directions
- Metallurgical test work at Zackly supports copper, gold and silver recovery
- Potential joint co-processing options being assessed in an ongoing mining scoping study

#### Caribou Dome Property (PXX earning up to 90%)

- 7.2Mt @ 3.1% Cu & 6.5 g/t Ag JORC at Caribou Dome deposit, with high-grade surface zones up to 7% Cu
- Mineralization open in all directions, and numerous untested IP/geochemical targets.

#### Nevada: Humboldt Range

- Bonanza grades: 9.1m @ 124g/t Au + 49g/t Ag in drilling at Star Canyon
- New 2.7km long mineralized gold target ready to drill
- Tier 1 fiscal and geological jurisdiction
- Between the 5Moz Florida Canyon Gold Mine, and the 400Moz Rochester Silver mine (which also contains 3.5Moz gold), same geology
- Outcropping quartz veins and historical mines show numerous assays over 10g/t gold, with peak values of 3,384g/t gold 4,800g/t silver, 22.9% lead, 3.1% Zn





# Strong management backed by strong investors

#### Key Executives and Management:



#### Mr. Mark Bojanjac (Executive Chairman)

A Chartered Accountant with >25 years experience in the resource sector. Has led many successful mining developments, including the discovery and development of the East Kundana goldfield near Kalgoorlie, development of the Boroo gold mine in Mongolia and the Nzema gold mine in Ghana.



**Dr. Jason Berton (Managing Director)** is a Structural Geologist with >20 years experience, including working for Homestake, Barrick, BHP Billiton and SRK Consulting. He also has experience in private equity and is the former managing director of ASX-listed Estrella Resources.



**Dr. Frazer Tabeart (Director)** is an economic geologist with >30 years international experience. Spent 15 years with WMC Resources, prior to leading several ASX-listed exploration companies through discovery, resource delineation and feasibility studies in copper-gold, uranium and coal in North America and Africa.

Oct 2023 :	
MKT CAP:	<b>A</b> \$12.5M
CASH:	~A1.0M
DEBT:	Nil
MAJOR SHAREHOLDERS	%
Ruffer Gold Fund (UK)	12.0
Northern Star Resources (Aus)	11.2
U.S. Global (US)	5.9
Lundin Mining Corporation (Can)	3.4
Management/Directors/MRG	2.3
Тор 20	= 54%
Тор 40	= 65%



# Alaska: USA's Mineral Frontier

#### TIER 1 Geology:

Au

One of the world's great mineral provinces:

- Over 40Moz Au mined to date
- More than 200Moz Au under development/feasibility study
- In the world's most productive copper belt, >50Mt Cu in feasibility/permitting stage
- World's highest grade giant zinc deposit

#### Considerably under-explored vs. other TIER 1 provinces:

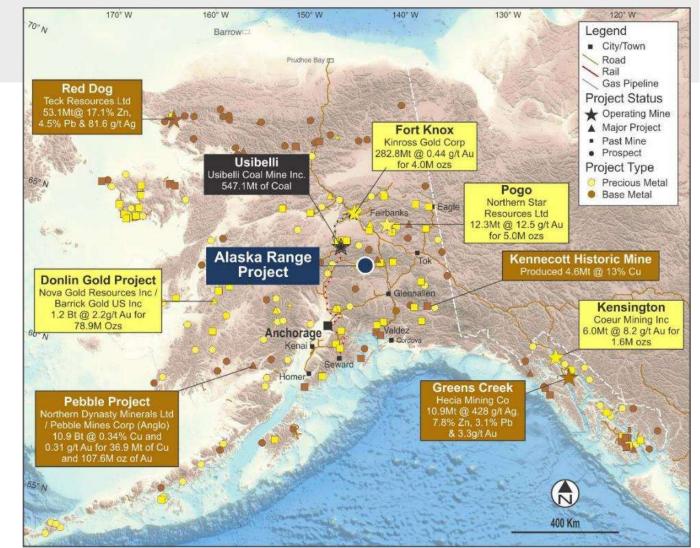
- Many new discoveries made in last decade
- New opportunities are near-surface, accessible

#### Attractive mining investment destination:

- Transparent regulatory regime for exploration + mining
- Strong local support for job creation
- Home of major players

Strong Australian presence in major projects:

- Northern Star acquisition of Pogo (Au)
- South32 investment in Trilogy (Cu, Co)





## Alaska Range: **Overview**

Au

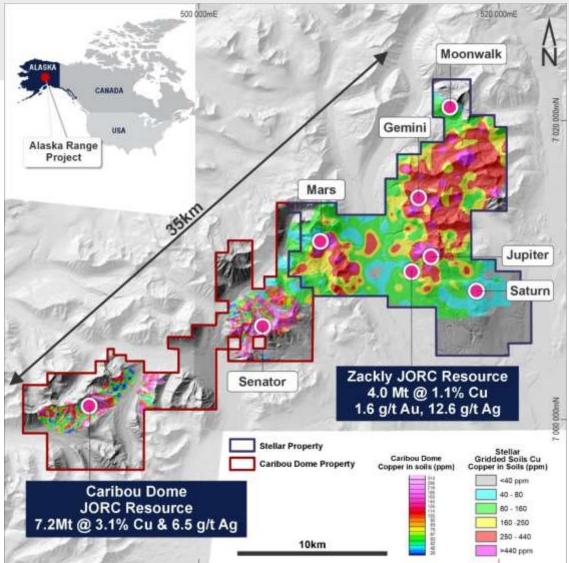
Copper 63.546

#### Alaska State Mining Claims) covering ~261km<sup>2</sup> Caribou Dome

- Earn-In JV Agreement at Caribou Dome (PXX earning 80%) and Senator (PXX earning 90%)
- · Massive sulphides remain open at depth and along strike
- JORC resource more than doubled to 7.2Mt @ 3.1% Cu and 1.6g/t Ag in 2023 from surface to only 300m depth
- Exceptional +ve Economic Scoping Study

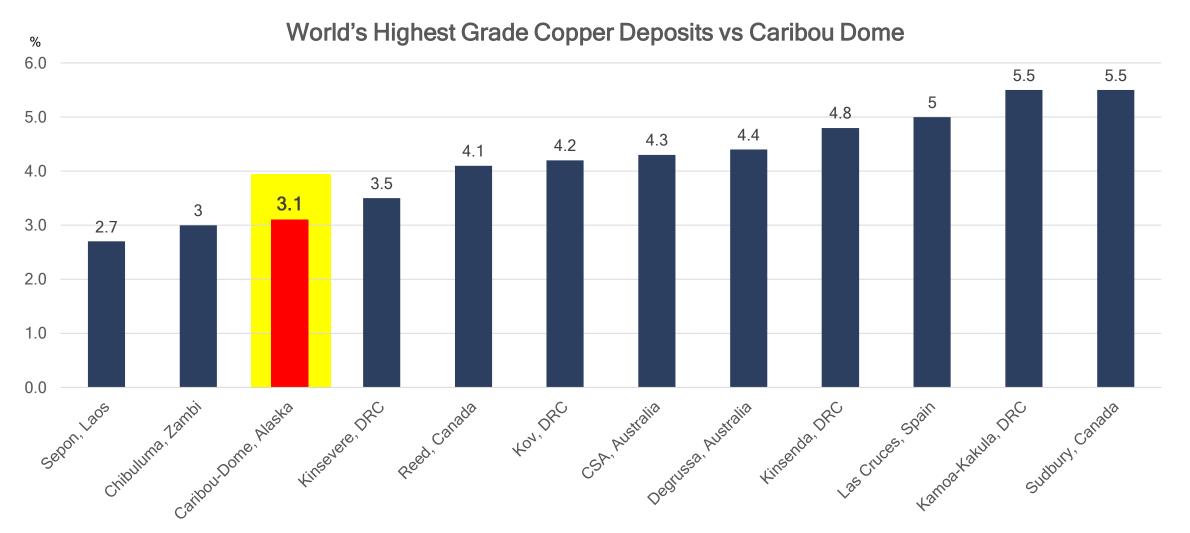
#### Stellar (PXX 100%)

- Zackly JORC 4.0Mt @ 1.1% Cu, 1.6g/t Au and 12.6g/t Ag) and open at depth along several km's of strike
- Prospectivity for larger porphyry copper-gold deposits confirmed by the presence of the Zackly skarn mineralisation:
  - Porphyry copper-gold mineralisation discovered at Mars in 2019, intersected 102m @ 0.22% Cu, 0.1g/t Au, hole ended in mineralisation
  - High-grade Cu and Au in rock-chip sampling and soils at Jupiter and Gemini
  - Intense alteration in drilling and associated geophysical anomalies at the blind Saturn porphyry prospect









Sources: \*Ivanhoe Mines website PFS 2020. All others from miningforzambia.com "The ten highest grade copper mines in the world" 2019



### Caribou Dome & Zackly Combined: Compelling Scoping Study

Total JORC resource est. of 11.2Mt containing: 269,375t Copper,

213,000oz Gold, and

3,131,000oz Silver.

- PolarX more than doubled the Caribou Dome Copper and Silver resource estimate in 2023
- Conventional sulphide flotation plant.
- Processing 750ktpa over 5 years at Caribou-Dome followed by 600ktpa over 4.5 years mining underground at Zackly.
- Modelled on a 100% project basis without finance leverage.
- Prelim metallurgical recoveries of 90% copper and 79% gold from flotation assumed at Zackly, and 88% copper at Caribou Dome
- Returns most sensitive to copper price, metallurgical recovery, concentrate grades and operating costs





## Caribou Dome & Zackly Combined: Sensitivity = Next Steps

Sensitivity Analysis indicates:

#### Metallurgy

Au Gold

Recently Increased Recovery and Concentrate grades delivered the biggest uplift.

Further metallurgical test-work for downstream processing is underway.

#### **Resource Extension**

- **Caribou Dome** has drill intercepts 150m below its existing surface to 300m resource.
- If drilling extended it to 450m and 2Mt was mined underground it could yield a pre-tax NPV increase of US\$130M.
- Zackly could deliver an NPV discounted potential US\$22M increase on the same basis by drilling deeper under known geology to add another year's production.

Assuming constant grades	\$US M	A\$ M @0.65
Base Case pre-tax NPV	406	625
<b>Caribou</b> Extra 2Mt underground by drilling 150m deeper <b>Zackly</b> Another year's production	130 22	200 34
TARGET	558	859

Over 9.5 years, Measured and Indicated Mineral Resources account for 83% of the total tonnes mined and Inferred Mineral Resources comprise only 17%. In the first 3 years approx. 99% of the material to be mined is Measured and Indicated. There is a lower level of geological confidence associated with Inferred Mineral Resources and no certainty that further exploration work will result in the determination of Indicated Mineral Resources nor that the production target itself will be realised.



# **Key Metrics**

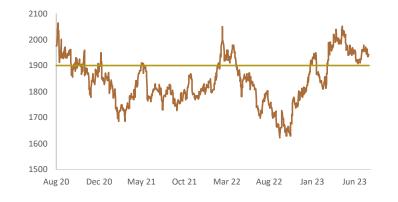
Au

Geld 196.97

Au Gold 196.97

29 **Cu** Copper 63.546

Ag



US\$1900/oz

400

350

300

250

200

150

100

50

0.0%

10.0%

5.0%

15.0%



Dec 20 May 21 Oct 21 Mar 22 Aug 22 Jan 23 Jun 23

US\$8500/t



20.0%

30.0%

25.0%

11000

10500

10000 9500

9000

8500

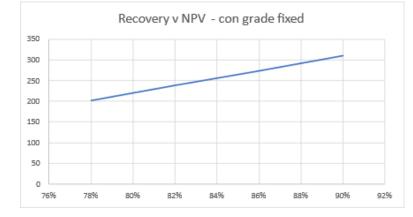
8000

7500

7000

6500 6000

Aug 20











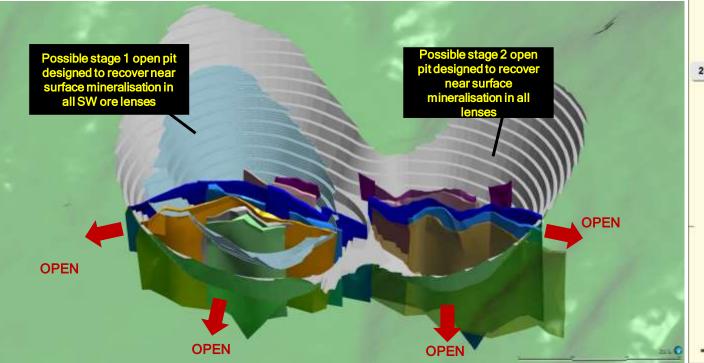
## Caribou Dome: Very high-grade surface copper

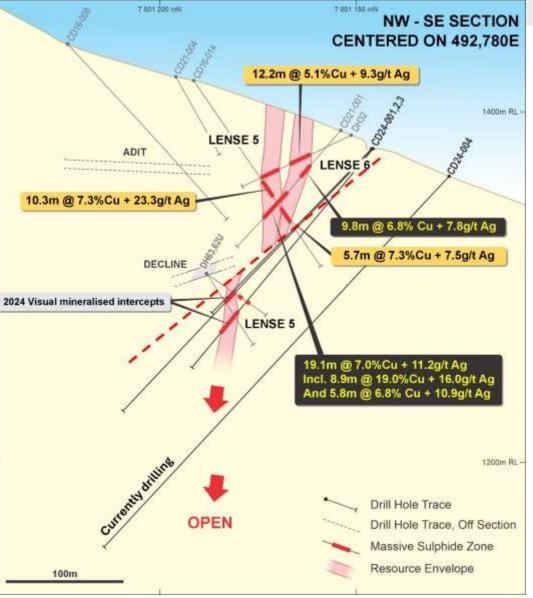
- 4-5% Copper from surface!
- Drill intersections over >800m strike-length
- Open in all directions

Au

Cu Copper 63.546

- Many un-tested 3D-IP and soil anomalies within 1km of mineral resourc
- 80% earn-in completed by June 2024 after paying US\$1.26M cash





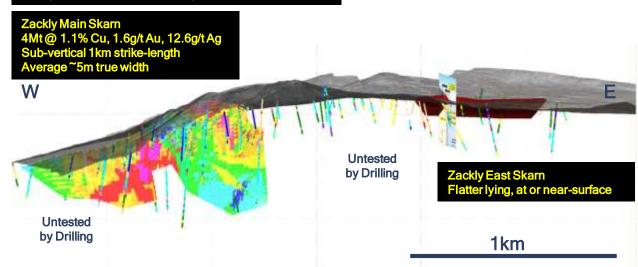


# Zackly Deposit: High-grade Copper/Gold

Au

- 5km long skarn system with high-grade gold, copper and silver from surface and open to at least ~400m depth
- Zackly Main Skarn JORC Resource hosts 4.0Mt averaging 1.6g/t Au + 1.1% Cu + 12.6g/t Ag at its western end
- Subvertical Cu-Au-Ag mineralization could be mined by conventional underground mining methods
- Zackly East mineralisation is generally thicker and may be more suitable for open pit mining
- Substantial exploration upside over 2.5km of untested strike-length on known, mineralised structures
  - Further upside on identification of the source porphyry system feeding Zackly

#### Long-section View Looking toward the North







### Stellar Property, Zackly Deposit: 5km of copper/gold strike to be tested

• Zackly Main JORC resource is all within just 1km of strike and occurs along a structure with a strong magnetic gradient

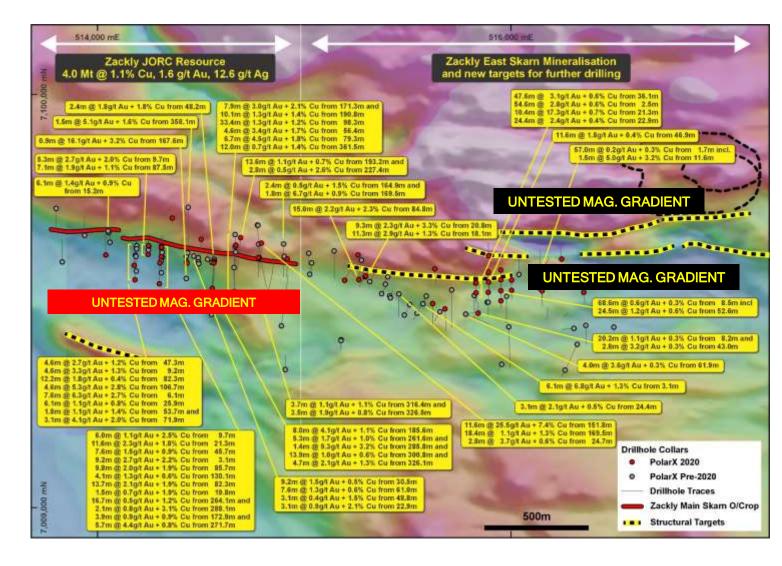
Au

Copper 63.546

Ag

- Mineralisation now confirmed along strike over >800m East extending mineralised strike-length to 2.5km (Zackly Main + Zackly East)
- A further 2.5km of untested strong magnetic gradient to the north and east of current drilling

Possible porphyry Cu-Au targets to north and east of current drilling





Broad spaced (500m) soil sampling shows 2 highly significant copper anomalies, both >250ppm, ~11km x 6km in size

#### MARS (Porphyry, skarn)

Au

Copper e3.546

- 2km x 1.5km soil anomaly with visible copper oxides at surface, up to 3,510ppm Cu and 1.1g/t Au in soils
- Rock-chip samples up to 6.9g/t Au and 7.4% Cu
- Co-incident ground geophysics (IP) anomaly
- Discovery hole 19MAR001: 102m @ 0.22% Cu + 0.1g/t Au

#### JUPITER (Porphyry)

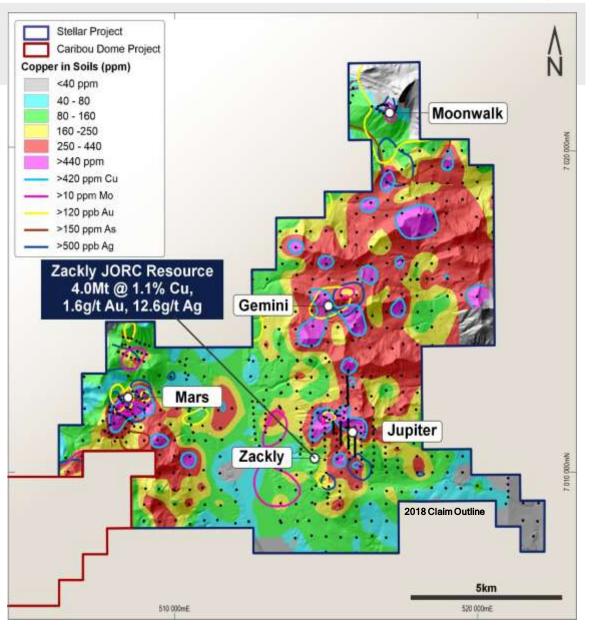
 2km x 1km soil anomaly at Jupiter with up to 3,850ppm Cu, 0.78 g/t Au, no drilling, and very limited IP

#### GEMINI (Porphyry)

 2km x 2km soil anomaly with up to 1,130ppm Cu, 0.25g/t Au, no IP or drilling, high-grade copper in sporadic rock-chips

#### MOONWALK (Tintina-style Au)

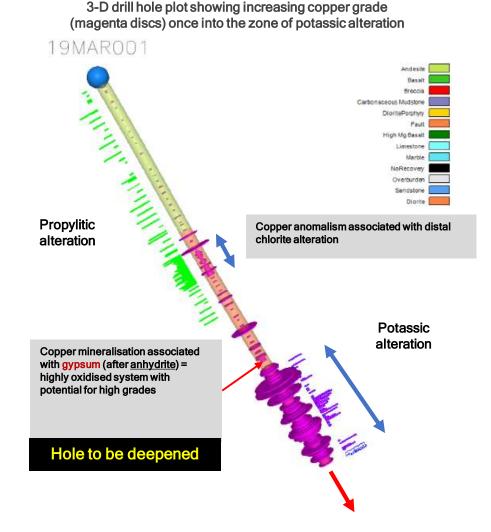
 1km x 1km Au, As, W anomaly in soils, Tintina style Au mineralisation in outcrop - multiple samples >1g/t Au in rock-chips





### Stellar Property: Mars porphyry Cu-Au discovery

- Porphyry Cu-Au discovered in first (and only) drill hole 9MAR001: 102m @ 0.22% Cu + 0.1g/t Au below a 1200m x 800m Cu-Au-As-Mo soil anomaly
- Associated with porphyry B-Veins in potassic alteration (anhydrite and biotite), hole ended in mineralisation, but not yet in best part of system
- Potentially higher-grade core of the intrusion not yet drilled
- Seeking a Major Miner JV earn-in for porphyry exploration / development





# Humboldt Range: High-grade Gold / Silver

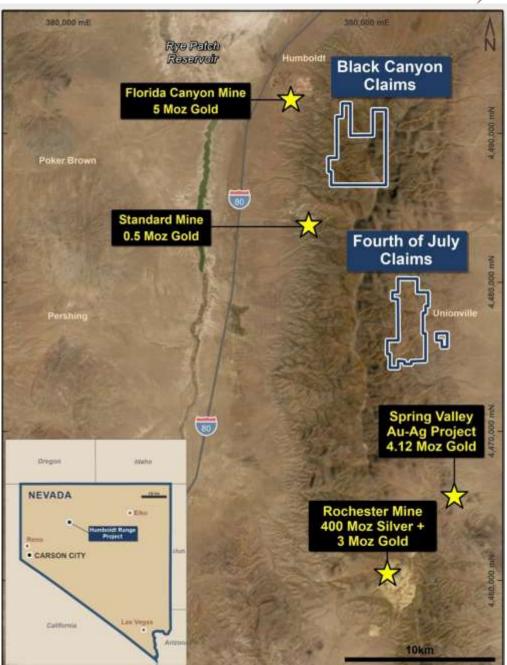
#### **Project Highlights**

Au

- +75% of USA's annual gold production
- · Close to active multi million-ounce gold and silver mines
- 2 claim blocks: Black Canyon and Fourth of July
- Very high grades of Au and Ag in drilling, outcrop, historic workings (pre-1927)

#### **Exploration Program**

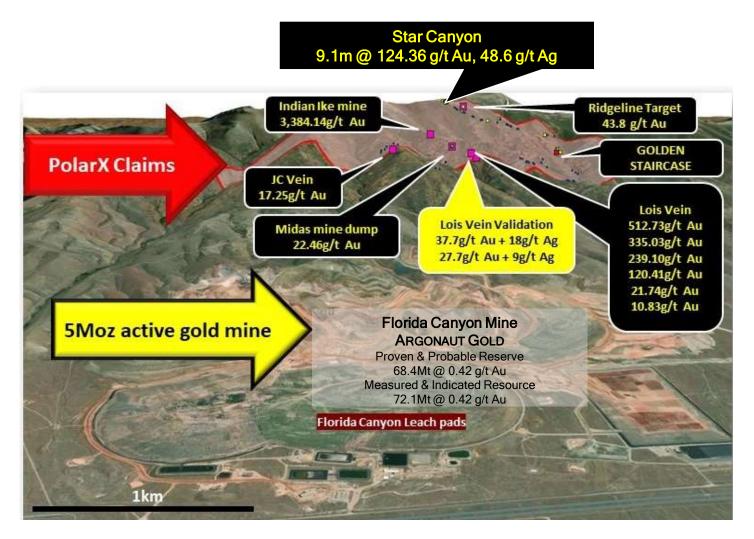
- Very successful maiden RC drilling program at Star Canyon: 9.1m @ 124g/t Au + 49g/t Ag
- >2,200 soil samples and >150 rock-chip samples collected since April 2021
- similar geology to nearby mines
- · Ultra-high-resolution drone images for geological mapping and drill planning
- Rock-chip and channel sampling confirms mine-grade material at surface
- · Recent IP program to highlight extensive regional scale anomalies
- Multiple drill targets





# Humboldt Range: Black Canyon Claims

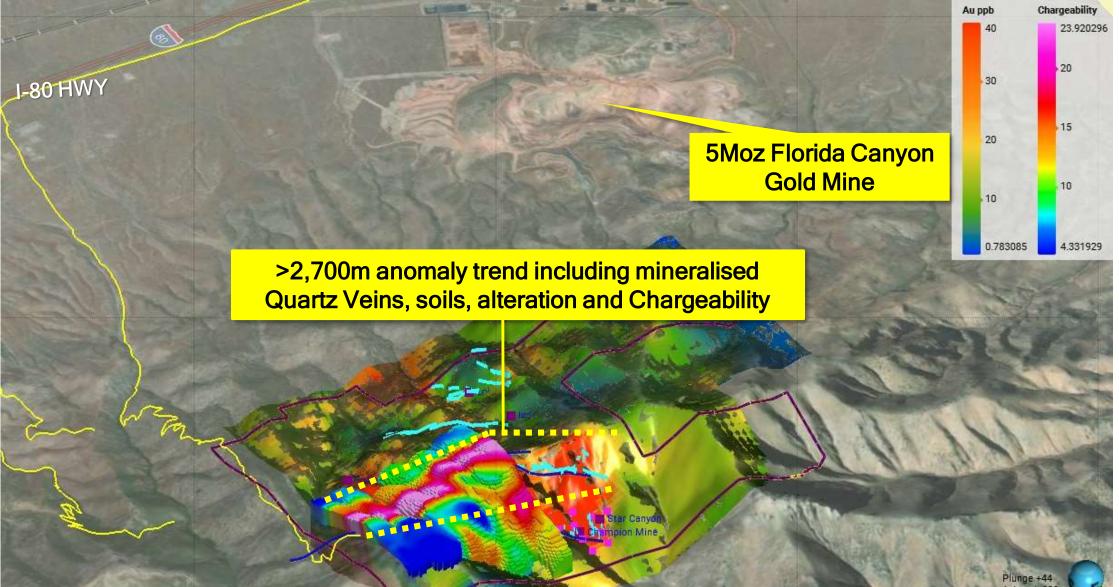
- Owned by same family since 1950
- Limited exploration since mining ceased in 1927
- High-grade assays from previous rock-chip sampling of outcropping veins and grab sampling from the dumps of old mine workings with peak values up to:
  - 3,384g/t gold,
  - 2,837g/t silver,
  - 22.9% lead and 3.1% zinc
- Maiden RC drill program at Star Canyon: 9.1m @ 124.36 g/t Au, 48.6 g/t Ag from 27m
- Gold occurs in swarms of 5cm to 1.5m wide epithermal quartz veins and silicified alteration haloes
- Structural corridors between 30m and 275m wide contain numerous (in some cases hundreds of) mineralised quartz veins
- · Potential bulk mining targets being drilled





# Black Canyon: Scale and Proximity to a 5Moz operating gold mine

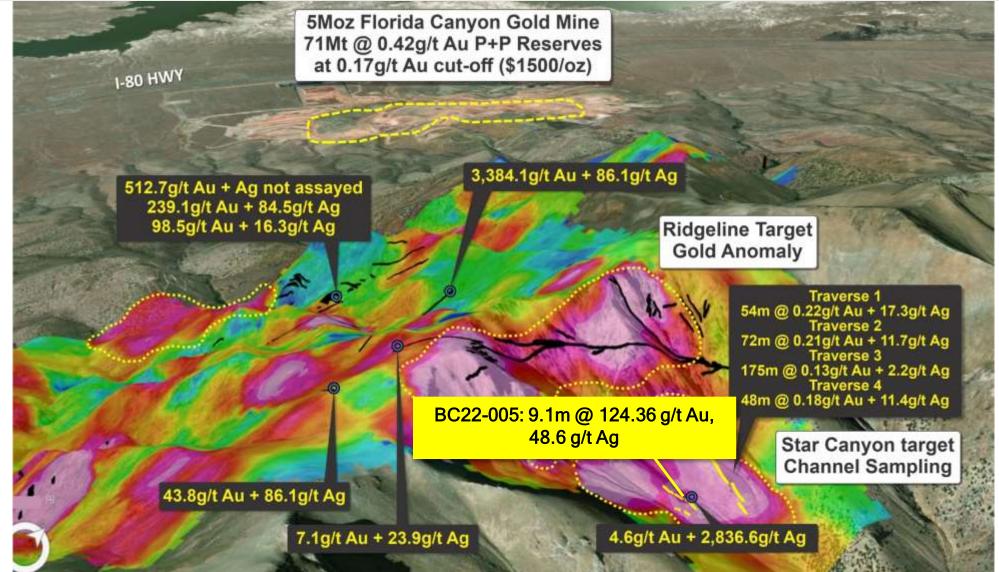
Au





## Star Canyon: Gold + Silver .... Everywhere

Au





# **Bonanza veins AND Rochester Rhyolite**

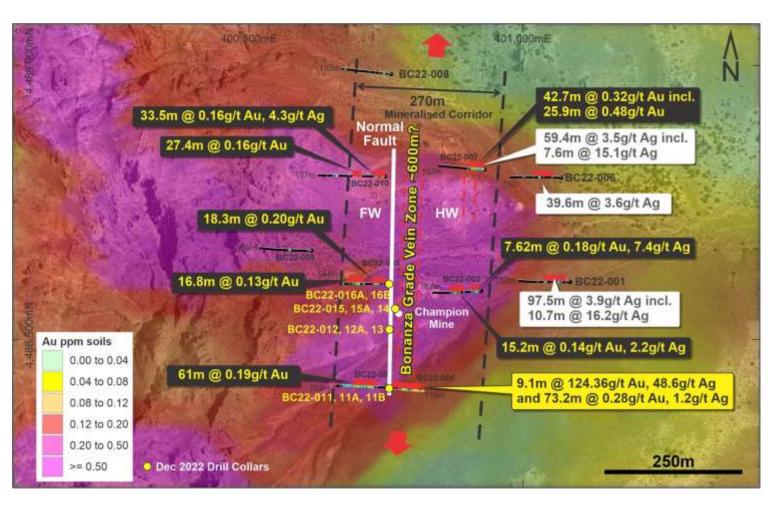
#### **FIRST DRILLING**

- Bonanza grades in quartz veins seen in BC22-005
  9.1m @ 124g/t Au + 49g/t Ag
- Immediately overlies
  73.2m @ 0.3g/t Au + 1.2g/t Ag

Au Gold

29 Cu Copper 63.546

- Lower grade mineralisation is in Rochester Rhyolite: silicified volcanics with sulphide alteration
- Structural corridor over 275m wide contains numerous (hundreds of) mineralised quartz veins at nearby mine grades
- Potential for open pit bulk mining and more targeted underground mining on the bonanza veins at depth
- Very broad initial drill spacing highlights scale of opportunity

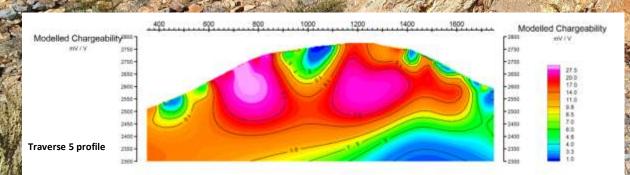


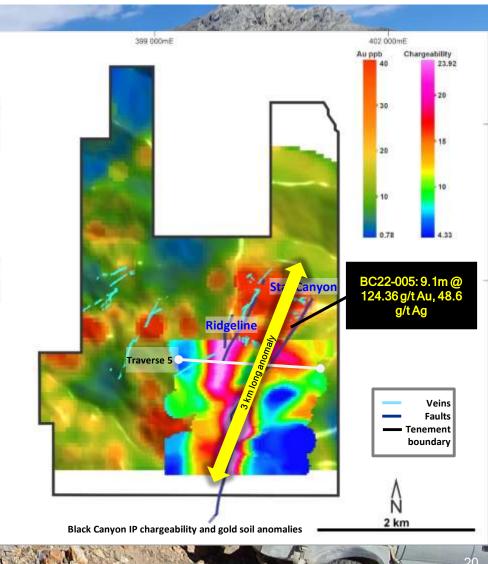


# Soil sampling highlights scale of opportunity

#### · Detailed soil sampling outlined a 3km long gold anomaly

- · Contains outcropping high-grade veins such as the Monster Vein system
- Also contains the Star Canyon area where Rochester Rhyolite mineralisation outcrops
- Wide spaced RC drilling undertaken in Star Canyon
- Successfully discovered both bonanza veins and Rochester Rhyolite style Gold + Silver mineralisation
- Our broad spaced drilling only covers ~15% of the 3km long soil anomaly
- IP survey completed to target sulphide mineralisation concentration







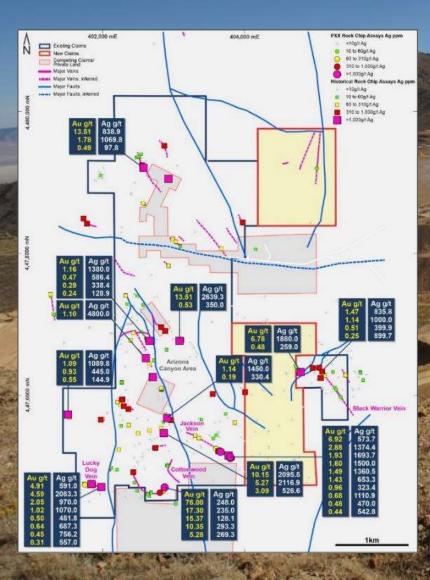
#### 29 Cu Copper 63.646

Au

# **Numerous Other Vein Systems - Never Drilled**

Ridgeline anomaly veins above Star Canyon The Golden Staircase veins 69m @ 1.10 g/t Au, 7.65 g/t Ag (channel)

### Humboldt Range: Fourth of July Claims



#### Fourth of July Claims

400Moz Rochester silver-gold mine

- Metal zonation from silver-rich veins with strong gold credits at southern part of Fourth of July (closest to the Rochester silver mine) to gold-rich veins in Black Canyon (close to Florida Canyon gold mine)
- Individual veins up to 700m long (eg, Jackson Vein)
- Massive silver and gold anomaly defined by PXX soil sampling in the Arizona Canyon area
- Targeting sulphide mineralisation in Rochester Rhyolite with IP

# Fourth of July: +3km long Silver/Gold Target

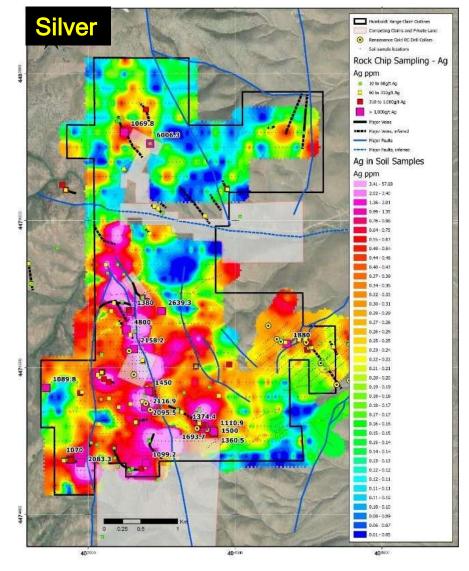


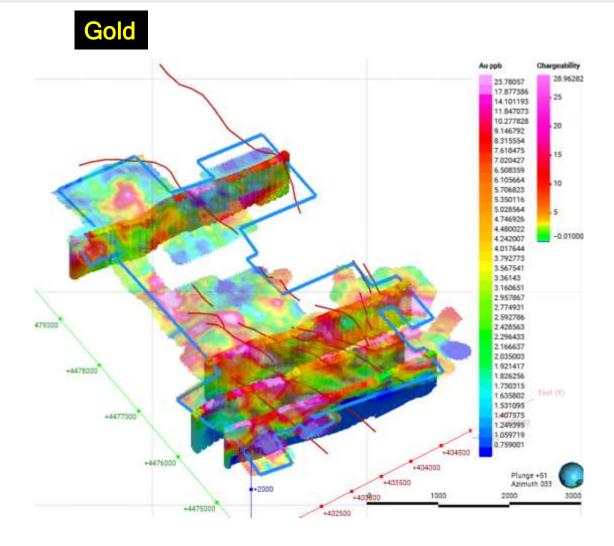




# Fourth of July: Very strong Silver/Gold anomalism

Au Gold

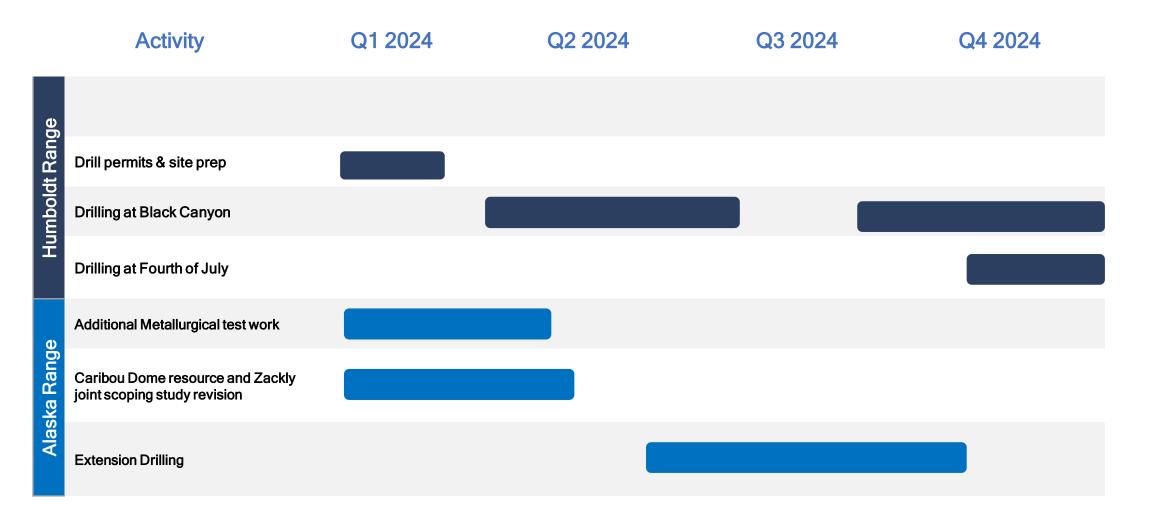






# Wiew Forward 2024

79 Au Gold 196.97



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Previously Reported Results

Au

29 Cu Copper 63.546

There is information in this presentation relating to:

(i). the Mineral Resource estimate for the Zackly deposit, which was previously announced on 17 October 2022 ;

(ii). the Mineral Resource estimate for the Caribou Dome deposit, which was previously announced on 13 June 2023; and

(iii). exploration Results which were previously announced on 15 August 2018, 25 September 2018, 5 November 2018, 12 November 2018, 29 January 2019, 25 March 2019, 5 August 2019, 1 October 2019, 21 October 2019, 21 October 2019, 19 November 2019, 20 January 2020, 14 September 2020, 9 October 2020, 21 October 2020, 17 November 2020, 11 January 2021, 2 February 2021, 4 February 2021, 6 May 2021, 22 June 2021, 6 July 2021, 19 August 2021, 31 August 2021, and 5 October 2021.

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, and that all material assumptions and technical parameters have not materially changed. 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.

All references to the 2023 Scoping Study and its outcomes in this presentation relate to the announcement of 28 august 2023 titled "2023 Scoping Study Alaska Range Copper Gold Project". Please refer to that announcement for full details and supporting information.

All references to the 2022 Scoping Study and its outcomes in this presentation relate to the announcement of 17 October 2022 titled "Scoping Study – Alaska Range Copper-Gold Project". Please refer to that announcement for full details and supporting information.

	Category	Million Tonnes	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	Measured	1.0	3.9	-	8.6	39,800	88	-	284,000
	Indicated	3.2	3.3	-	6.5	105,175	232	-	662,800
	Inferred	3.0	2.6	-	5.7	79,400	175	-	552,000
	TOTALS	11.2				269,375	595	213,000	3,131,000

# POLARY

# Highlights

Tier 1 copper, gold and silver assets

Alaska and Nevada = within world's top mining exploration and investment precincts

Top 40 shareholders own 65% of PolarX - including management

Mining Scoping Study advancing Zackly and Caribou Dome toward potential mine production

Massive upside in Nevada adjacent to active mines

Management with a record of delivering increased shareholder value

For more information contact or alternatively visit our website;

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