

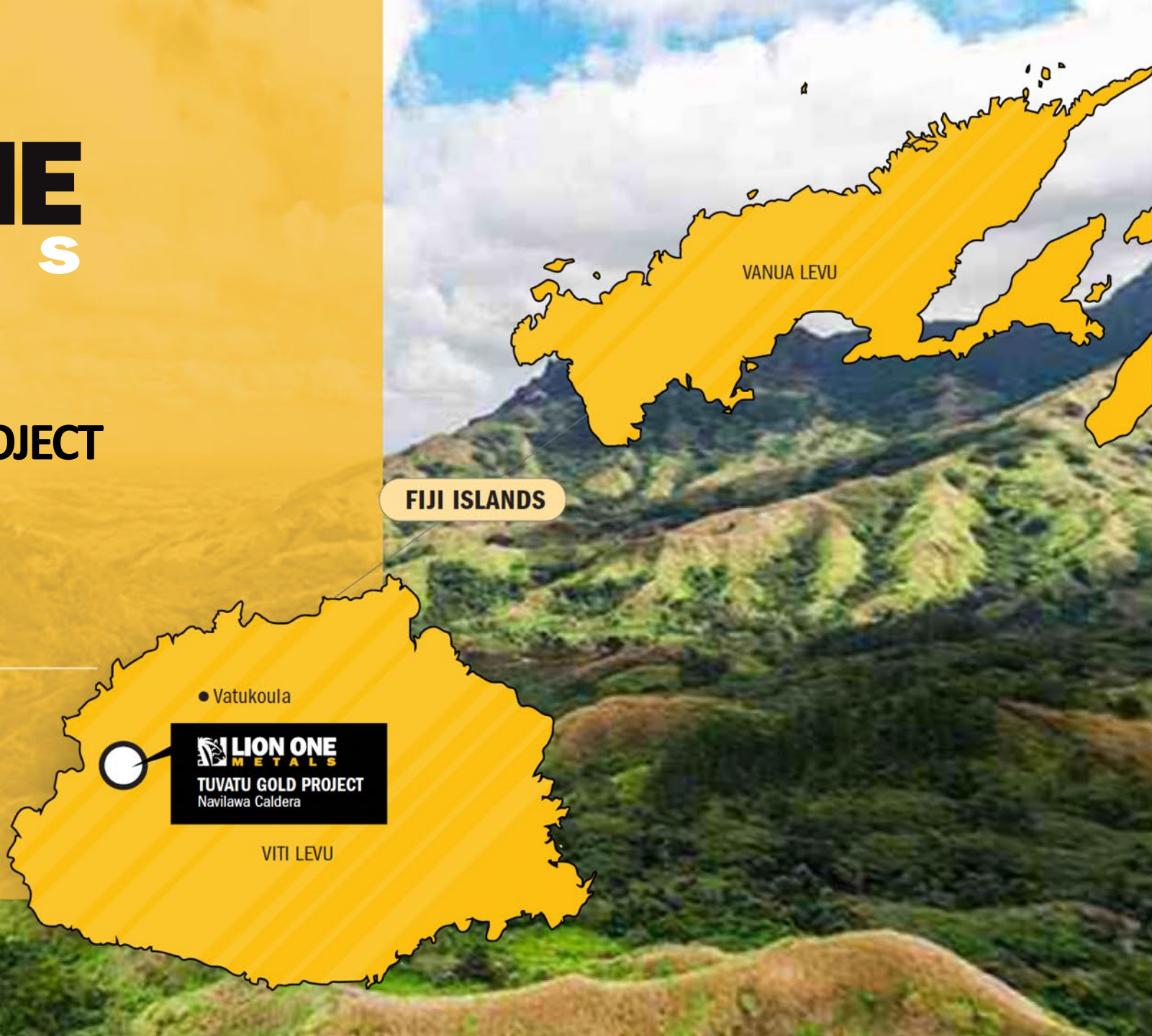


TSX-V: LIO | OTCQX: LOMLF | ASX: LLO

TUVATU ALKALINE GOLD PROJECT

FIJI ISLANDS

CORPORATE PRESENTATION, SEPTEMBER 2022



Forward Looking Statements

DISCLAIMER

The information provided in this presentation is not intended to be a comprehensive review of all matters and developments concerning the Company and should be read in conjunction with all other disclosure documents of the Company. The information contained herein is not a substitute for detailed investigation or analysis. No securities commission or regulatory authority has reviewed the accuracy or adequacy of the information presented.

FORWARD-LOOKING STATEMENTS

This presentation contains statements and information that constitute forward-looking information within the meaning of Canadian securities legislation, referred to herein as "forward-looking statements", include statements regarding proposed exploration and development activities and their timing, resource estimates, exploration potential and the PEA, including estimates of capital and sustaining costs, anticipated internal rates of return, mine production, estimated recoveries, mine life, estimated payback period and net present values, opportunities to enhance the value of the Tuvatu Gold Project and other plans and objectives of the Company. In making the forward-looking statements herein, the Company has applied several material assumptions, including that (1) required approvals, permits and financing will be obtained; (2) the proposed exploration and development of the Company's properties will proceed as planned and that actual results will be consistent management's expectations; (3) with respect to mineral resource estimates, the key assumptions and parameters on which such estimates are based; (4) market fundamentals will result in sustained metals and minerals prices; and (5) with respect to the PEA, the assumptions underlying the PEA, that the proposed mine plan and recoveries will be achieved, that capital costs and sustaining costs will be as estimated and that no unforeseen accident, fire, ground instability, flooding, labor disruption, equipment failure, metallurgical, environmental or other events that could delay or increase the cost of development will occur.

Forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ from those expressed or implied by the forward-looking statements, including: delays or inability to obtain required government or other regulatory approvals, permits or financing, the risk of unexpected variations in mineral resources, grade or recovery rates, of failure of plant, equipment or processes to operate as anticipated, of accidents, labor disputes, and unanticipated delays in completing exploration and development activities, the risk that estimated costs will be higher than anticipated and the risk that the proposed mine plan and recoveries will not be achieved, bad weather, exploration and development risks, actual results of exploration and/or development activities being materially different from those expected by management; uncertainties related to interpretation of drill results and geological tests, failure to meet expenditure and financing requirements, title matters, third party consents, operating hazards, metal prices, political and economic factors, competitive factors and general economic conditions. Actual results may vary from those implied or projected by forward-looking statements and therefore investors should not place undue reliance on such statements. The forward-looking statements herein are made as at the date of this presentation and the Company expressly disclaims any intention or obligation to update or revise any forward-looking statements except as required by applicable securities legislation.

TECHNICAL DISCLOSURE

The technical information in this presentation has been approved by Sergio Cattalani, P.Geo., Senior Vice President, Exploration of the Company and a Qualified Person as defined by National Instrument "NI" 43-101 Standards of Disclosure for Mineral Projects.

Investment Highlights

25km

from Nadi International Airport in Fiji

\$36M

working capital (CAD)

136km²

exploration license area

12,000

assay lab monthly analytical capacity

8/30,000m

8 rigs /annual drilling capacity

2035

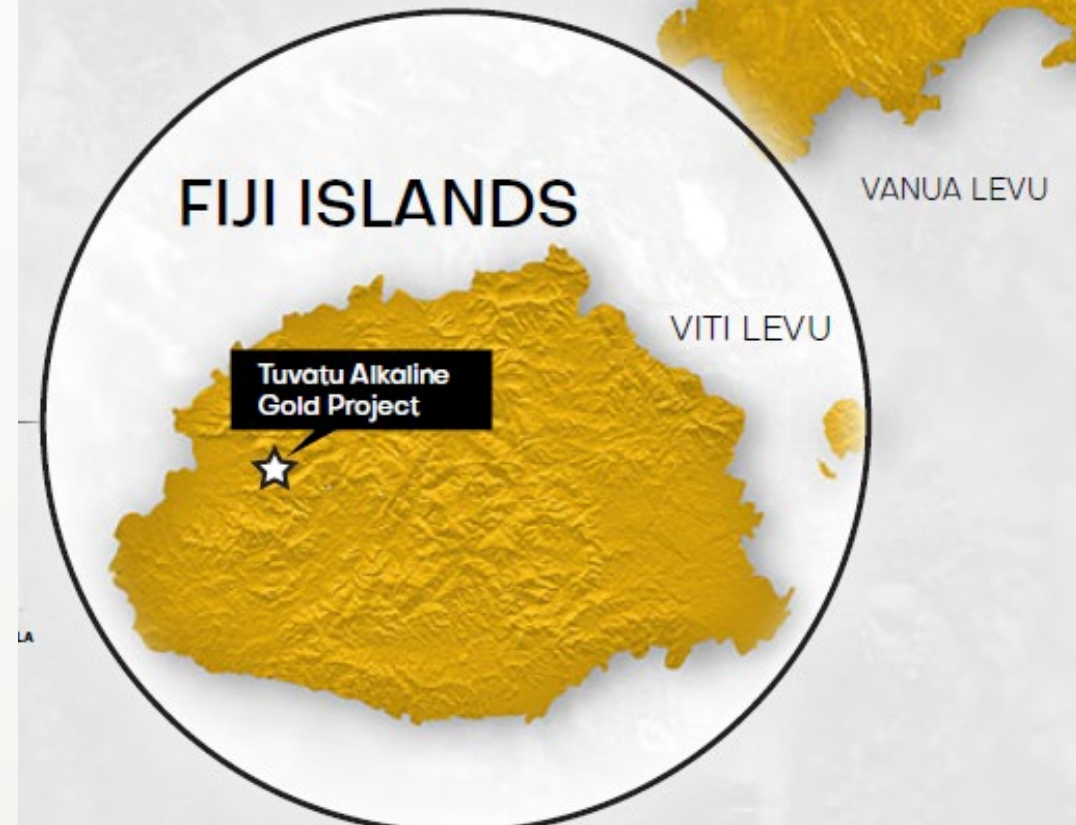
updated Mine Lease renewal

Recent Drilling Highlights: Globally Significant Intercepts

July 2020: **55.4 g/t Au over 12.7m** from 571m (TUDDH 500)

June 2022: **20.9 g/t Au over 75.9m** from 443m (TUG 141)

August 2022: **12.22 g/tAu over 54.90m** from 576m (TUDDH 601)



Corporate Snapshot

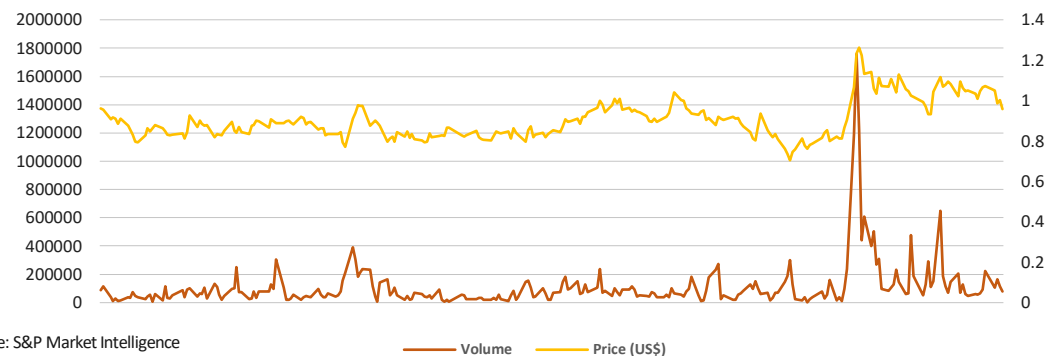
CAPITALIZATION

SHARE CAPITAL As of September 03, 2022

Shares Outstanding	156,421,893
Options	13,010,000
Warrants	0
Shares Fully Diluted	169,431,893
Working Capital	C\$36M
Market Capitalization	\$172M

LIO: \$1.10 | 52wk: \$1.66 \$0.88 | Avg. vol: 220k

52 WEEK SHARE PERFORMANCE



LARGEST INVESTORS

Donald Smith Value Fund	7.51%
Franklin Precious Metals	7.1%
Invesco Gold Fund	4.69%
Walter Berukoff	13.4%

INSTITUTIONAL INVESTORS

RBC Global Precious Metals
Aegis Value Fund
CI Precious Metals
Walter Berukoff
Gabelli Gold Fund
Mackenzie Precious Metals

Canada
TSX-V: LIO

USA
OTCQX: LOMLF

Australia
ASX: LLO

2022-23 Mine Development Progress

MINE DEVELOPMENT



All necessary permits are in place for underground mining operations



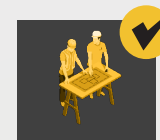
No. 2 underground development portal advancing @ rate of 2-4m per day; currently at +100m



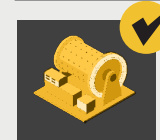
Mobile mining equipment fleet has been purchased or delivered



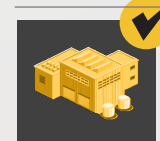
MILL DESIGN & CONSTRUCTION



Detailed engineering & procurement underway; major plant components en route to Fiji



Design process completed for scalable 300-500 tpd mill facility



Commissioning & initial production planned for Q3 & Q4 2023



Mine Site Infrastructure: Set Up For Success

Plant Site



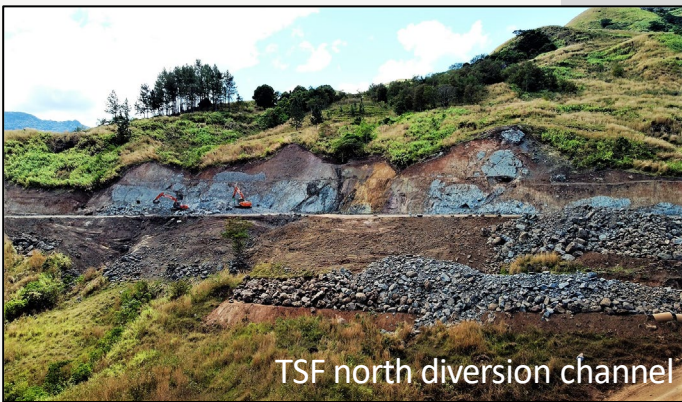
Pouring foundations for plant



Main portal and workshop



TSF construction



TSF north diversion channel

Contracts are complete or in final negotiation for all mine infrastructure including:

OFFICES COMPLETED		TAILINGS UNDERWAY	
WATER SUPPLY AND WASTE-WATER TREATMENT UNDERWAY		MINE EXPLOSIVES MAGAZINE COMPLETED	
POWER UNDERWAY		COMMUNICATIONS INCL. FIBER-OPTIC ACCESS, COMPLETED	

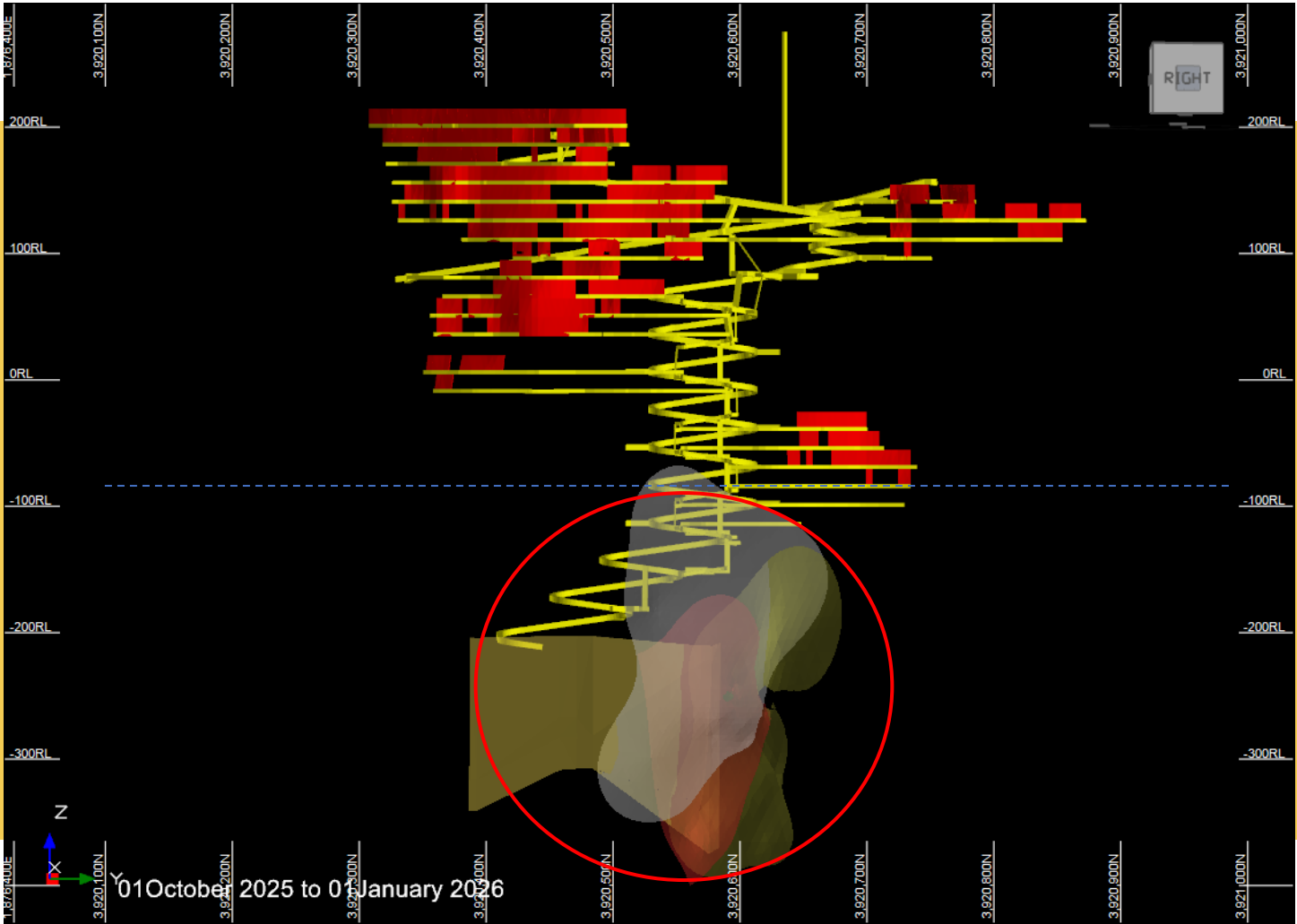
ERP SYSTEMS IMPLEMENTATION

Lion One is Implementing a fully integrated HRIS and Enterprise Resource Platforms (ERP) for Accounting, Supply Chain, Maintenance, Inventory, Cost Control and Personnel tracking.

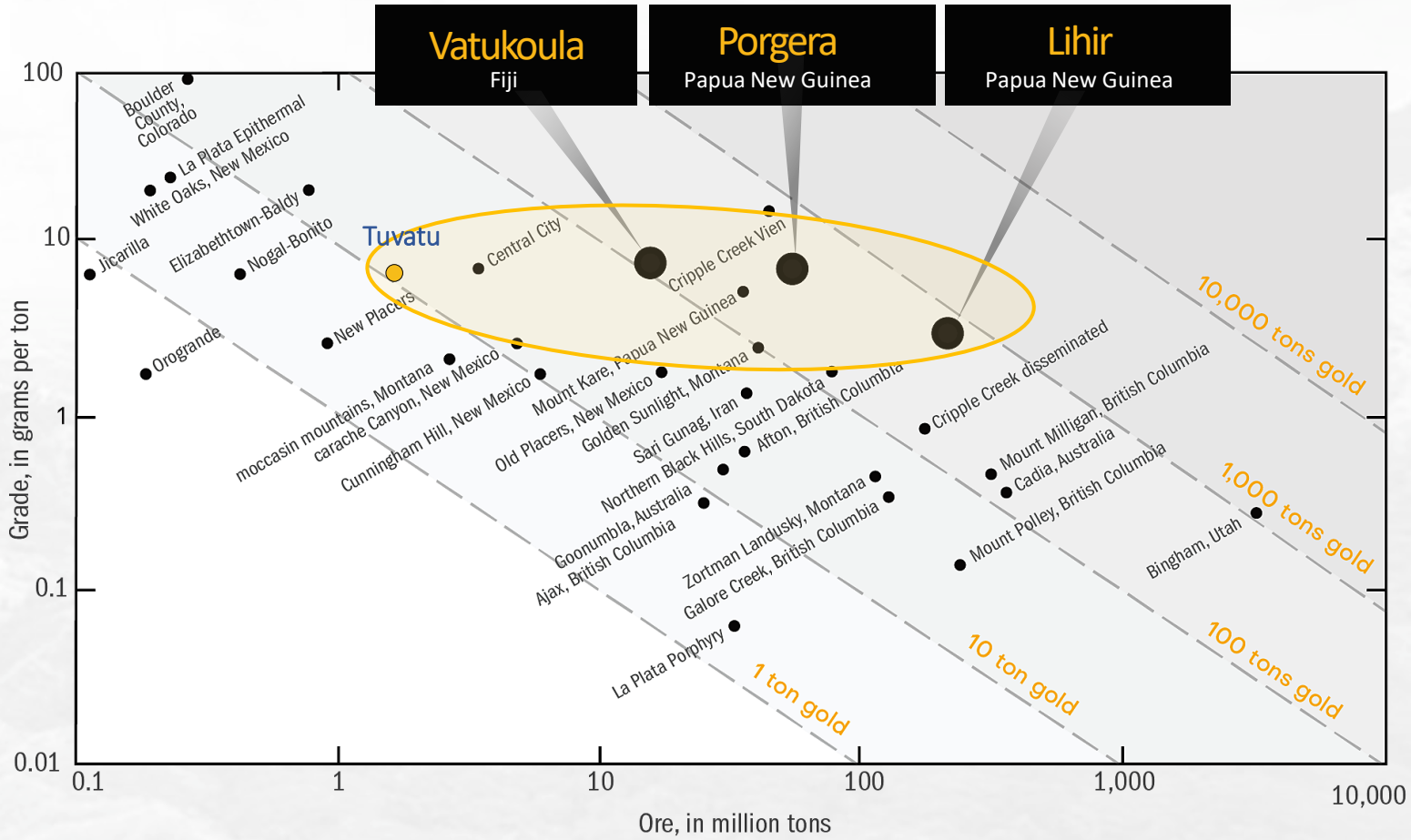
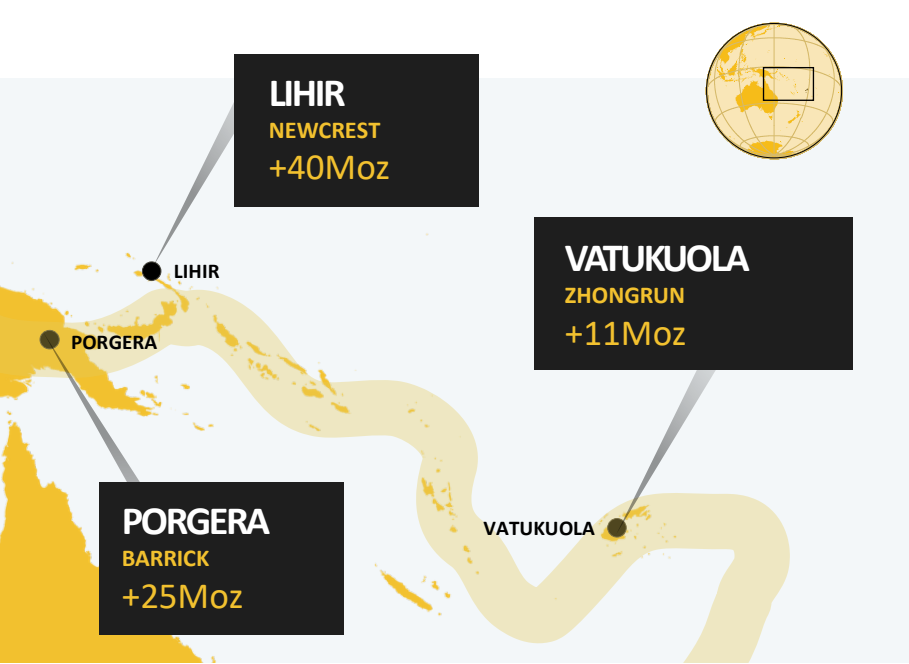
Conceptual Development Plan 2022 – 2025 plus 500 & 141 Zones

First three years of mining

500 and 141 Zones



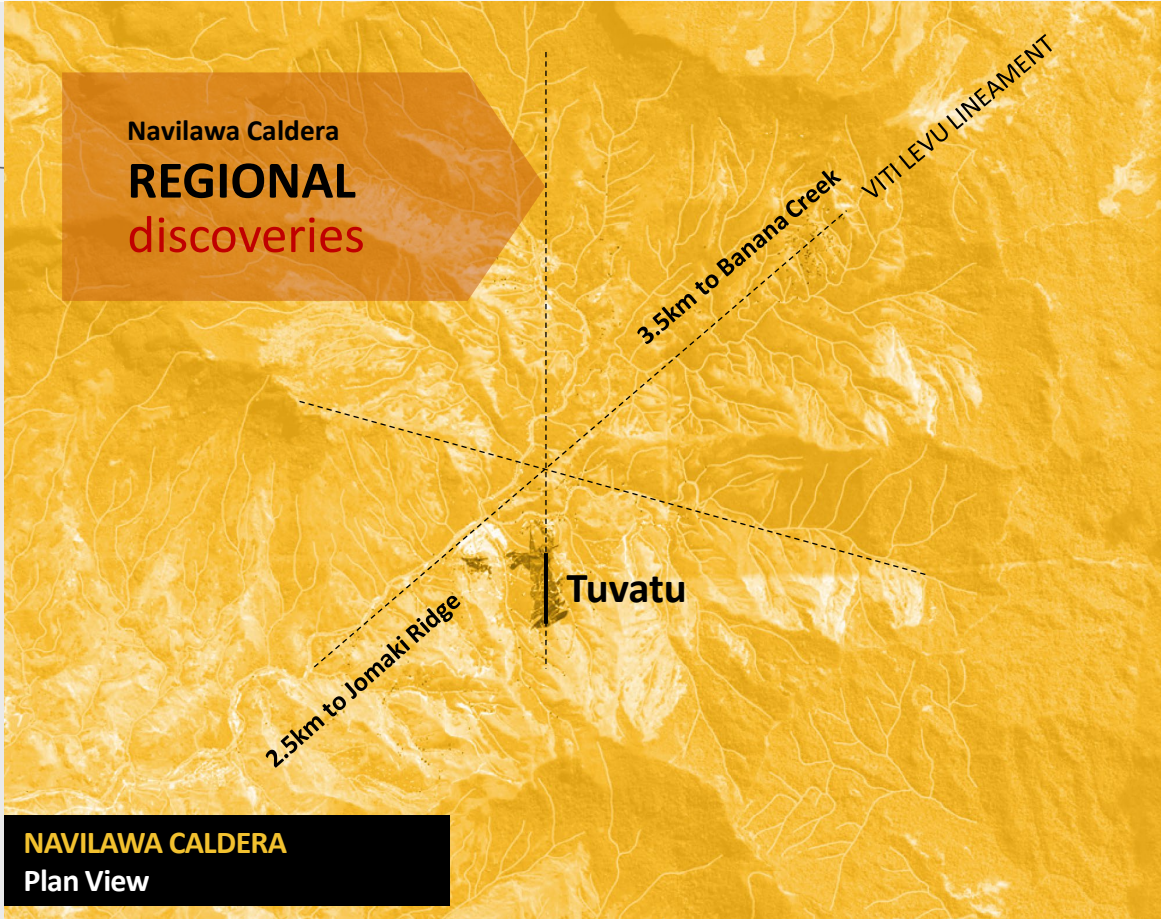
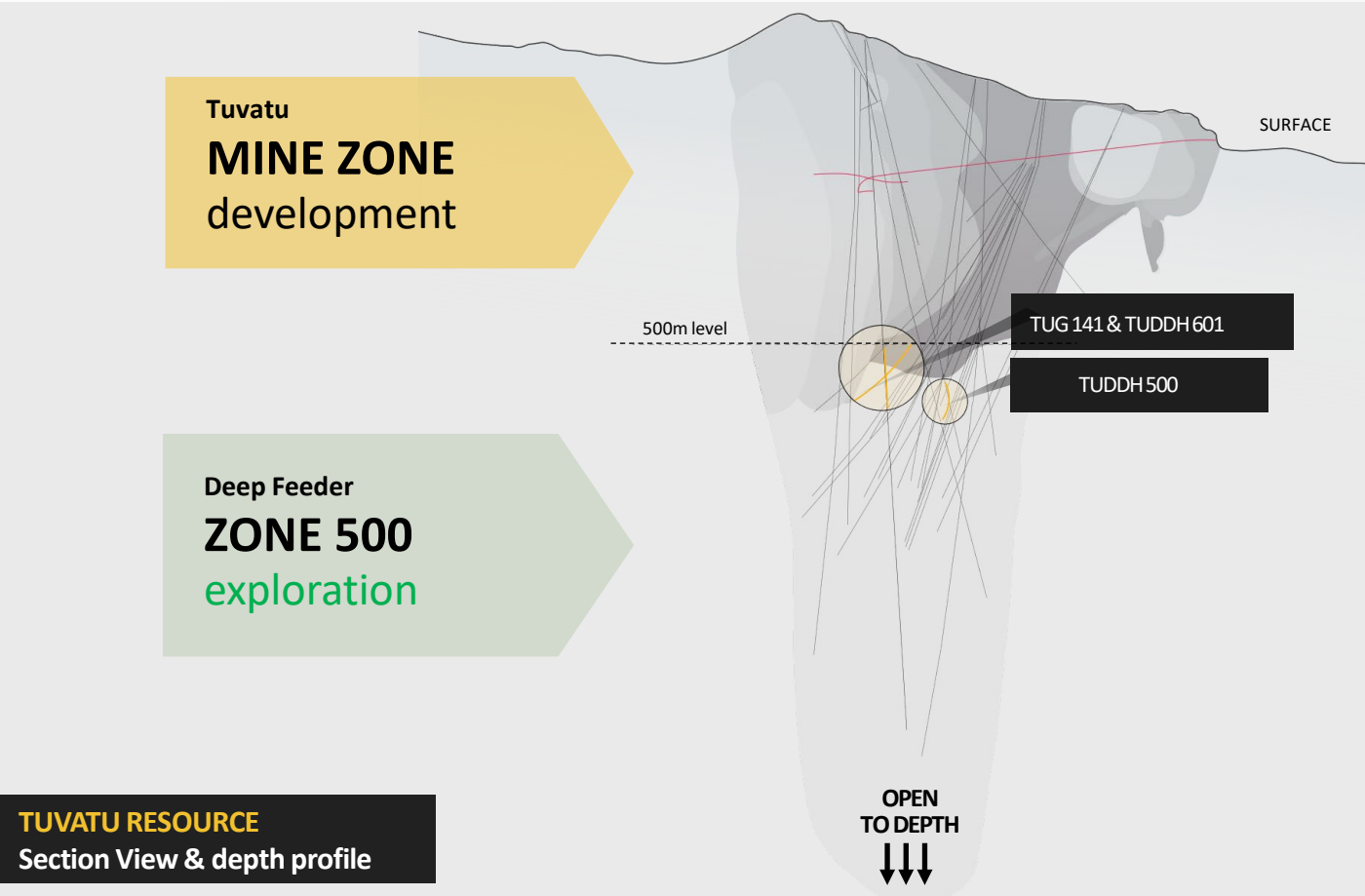
The Next World Class Alkaline Gold Deposit



PORGERA, LIHIR, VATUKOUOLA:
Three Globally Significant Alkaline Gold Systems

PORGERA IS TUVATU'S CLOSEST ANALOG
16.4M oz. Gold Produced / 30M oz. resource inventory

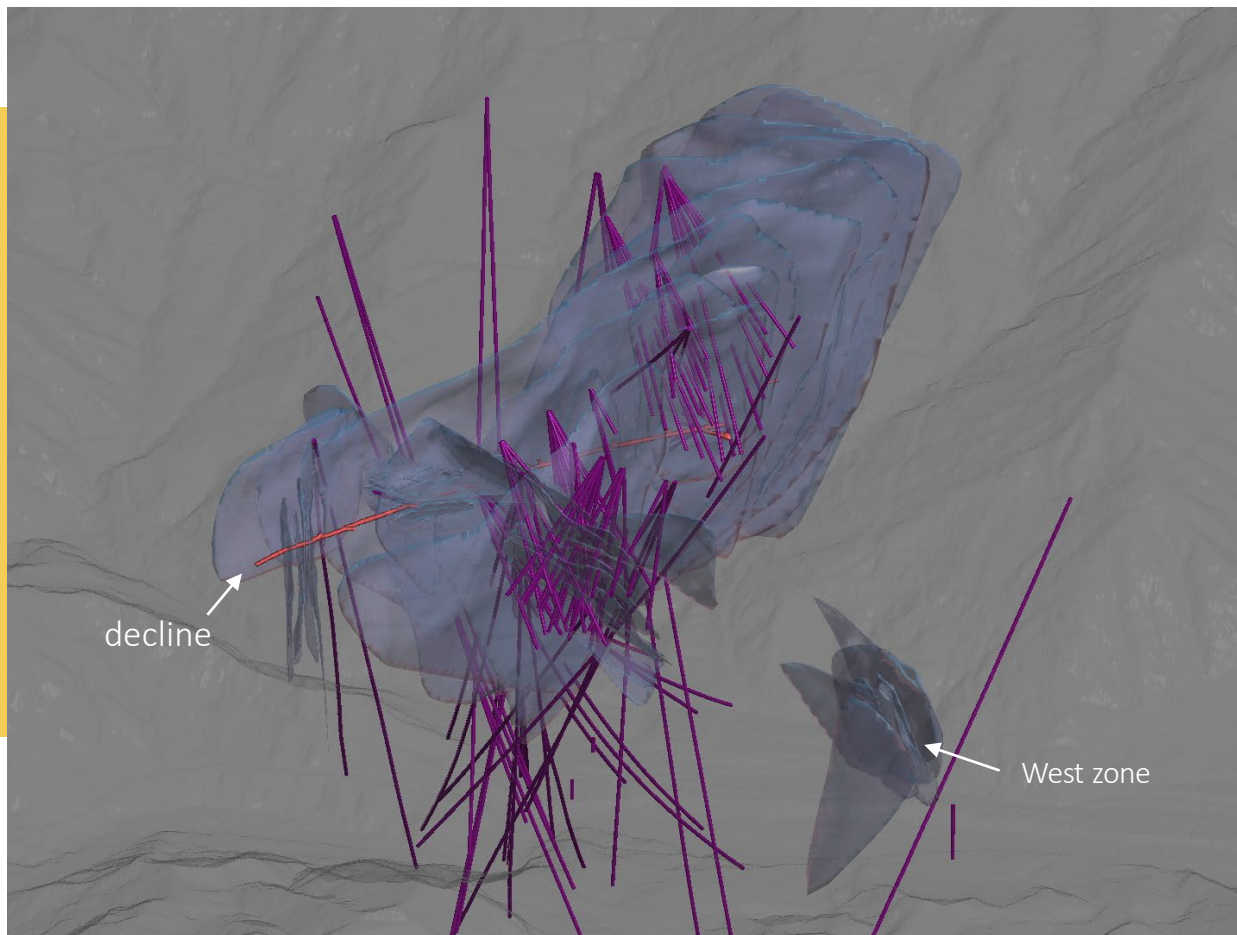
Exploration Strategy



TUVATU RESOURCE
Section View & depth profile

NAVILAWA CALDERA
Plan View

Tuvatu Exploration

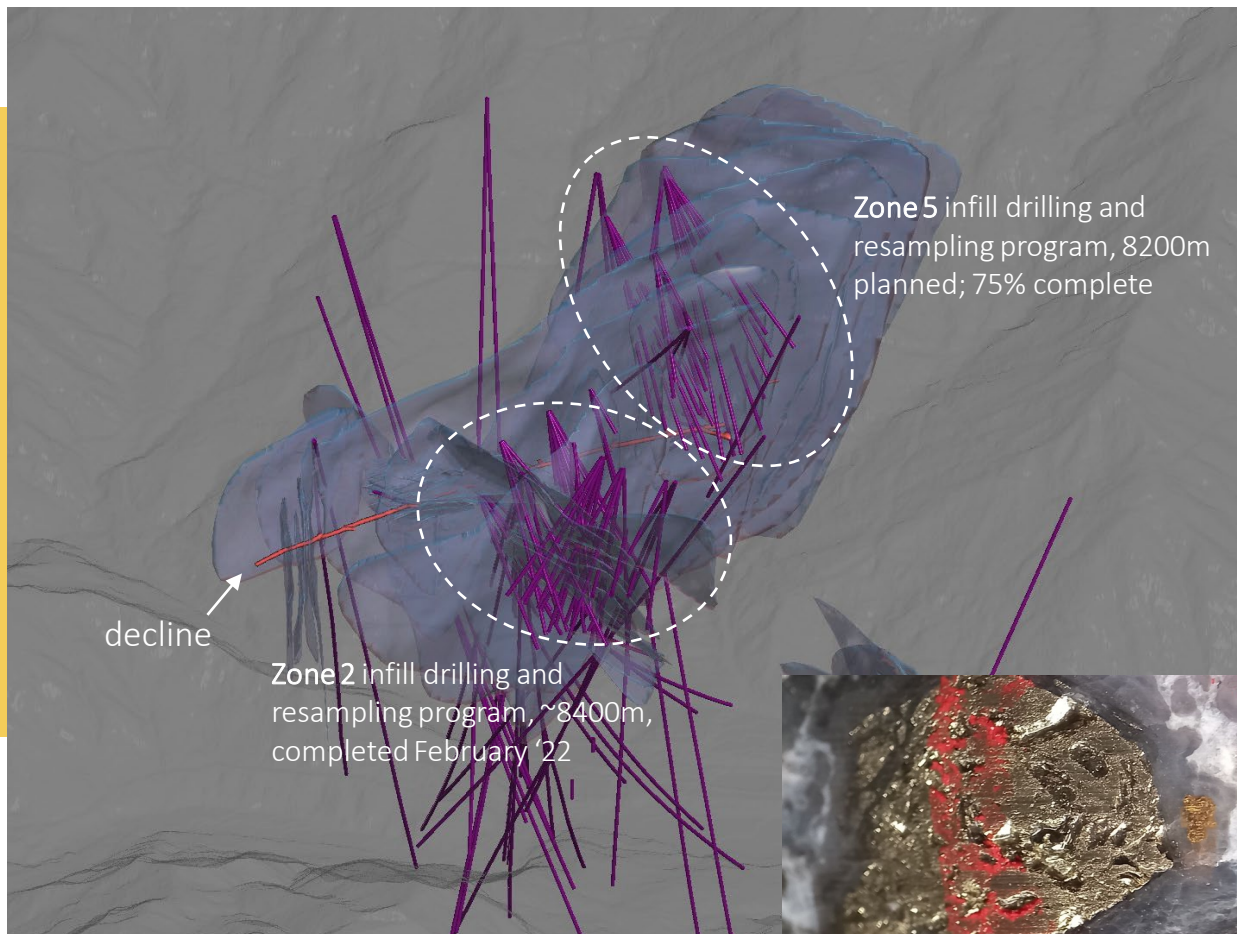


2022 infill drilling refining grade and continuity ahead of mining planned for Q4 2023

+1,100m deep high-grade Au system coming into view;
targeting +1m oz. resource +10 g/t Au

TUDDH 500, TUG 141 & TUDDH 601: depth extensions of
current resource with exceptional high-grade profile

Tuvatu Exploration



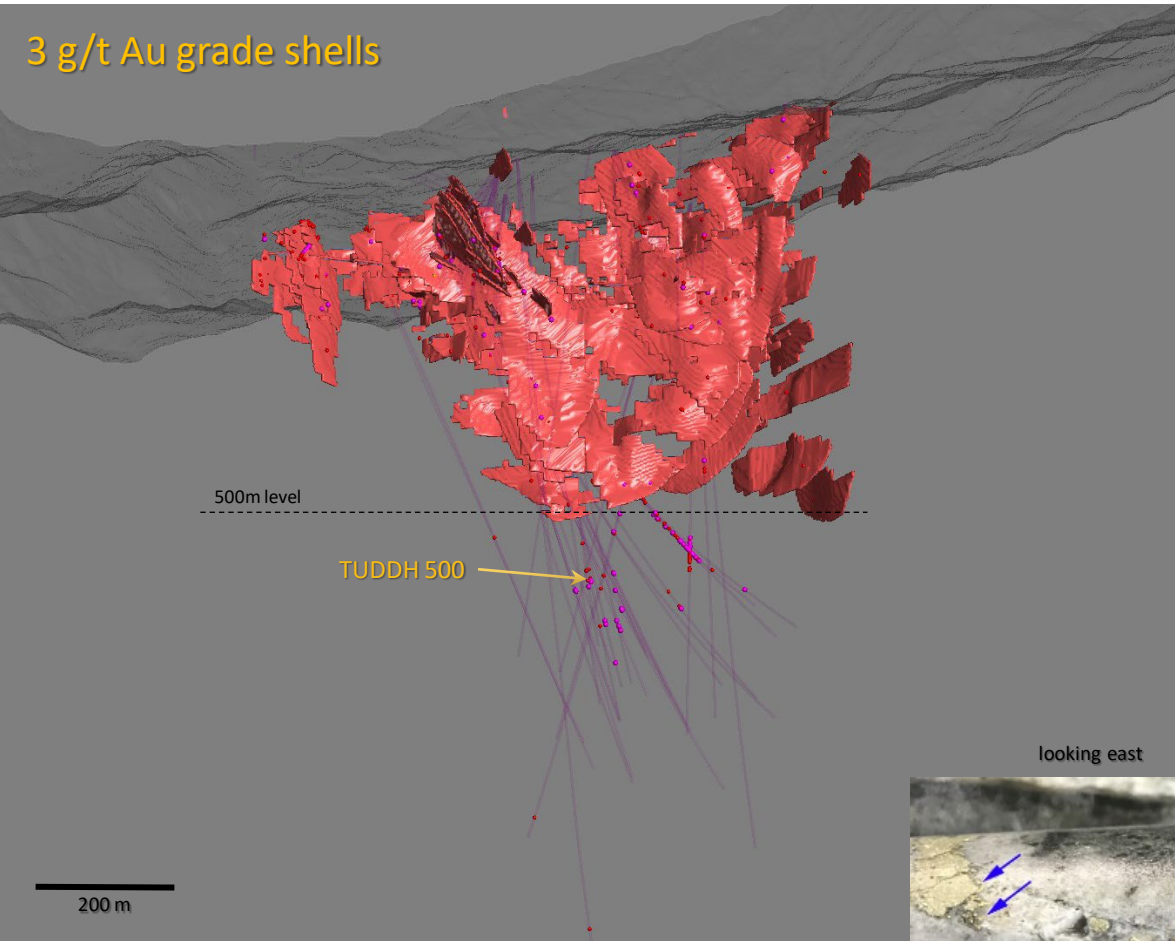
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3 g/t Au grade shells

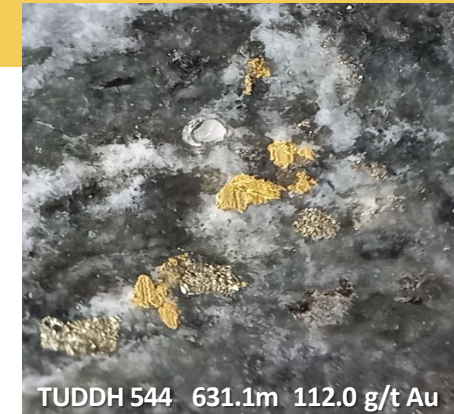
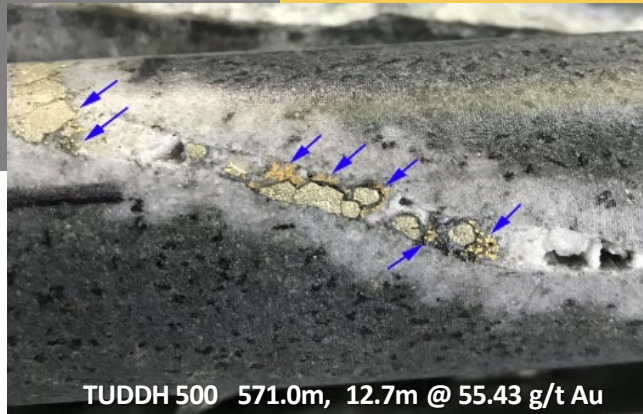


Tuvatu Exploration

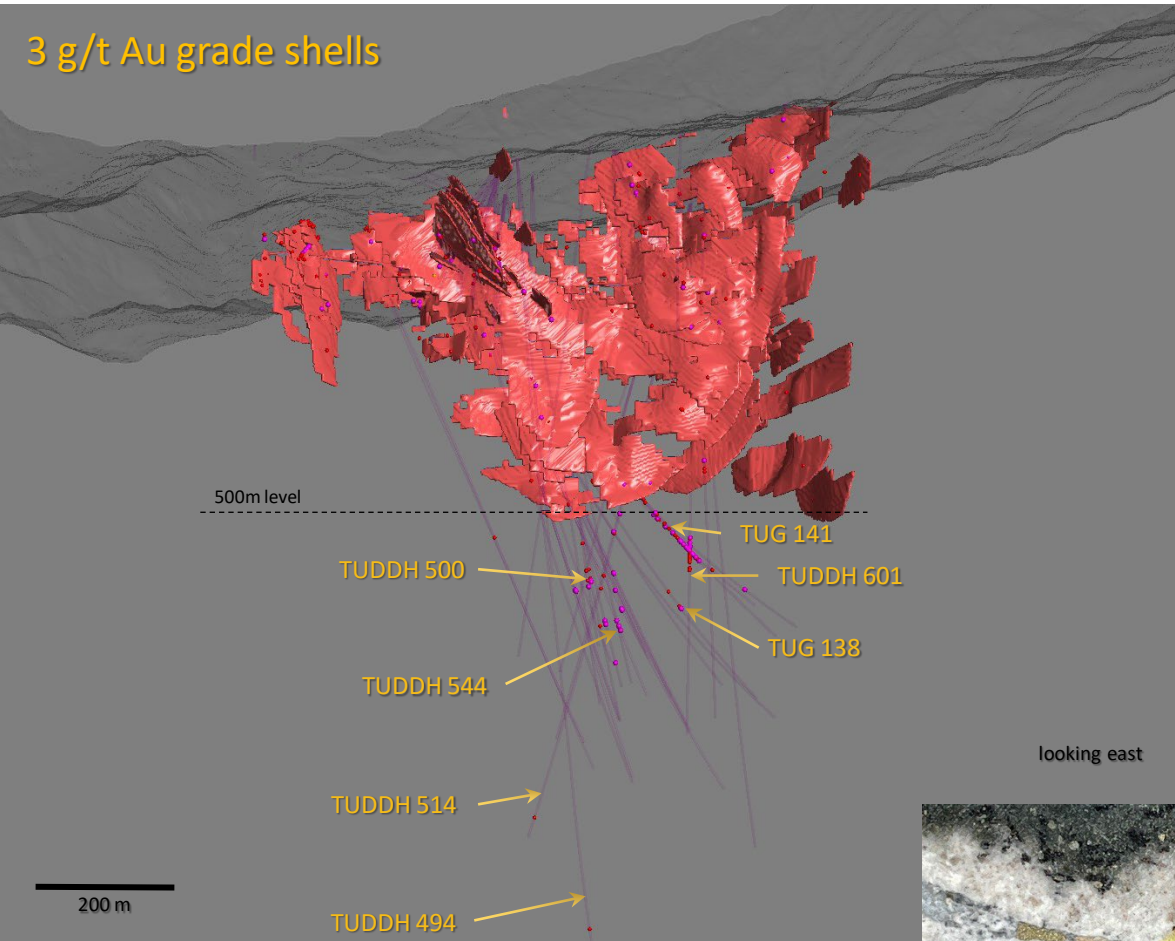
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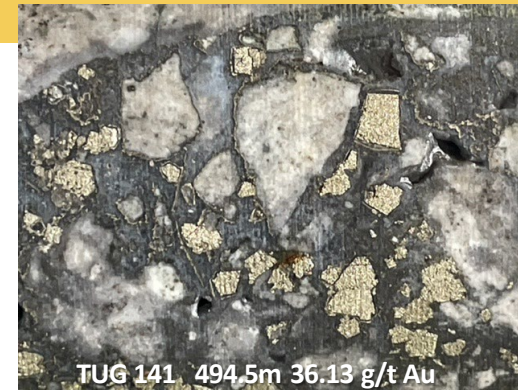


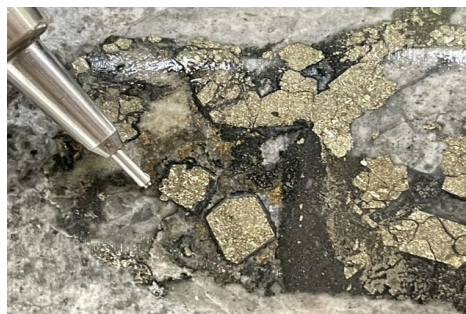
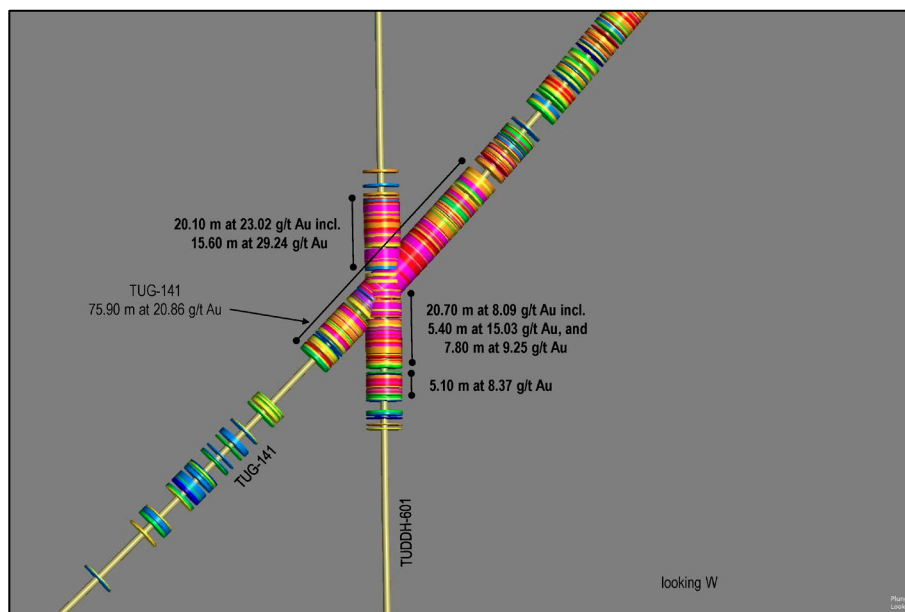
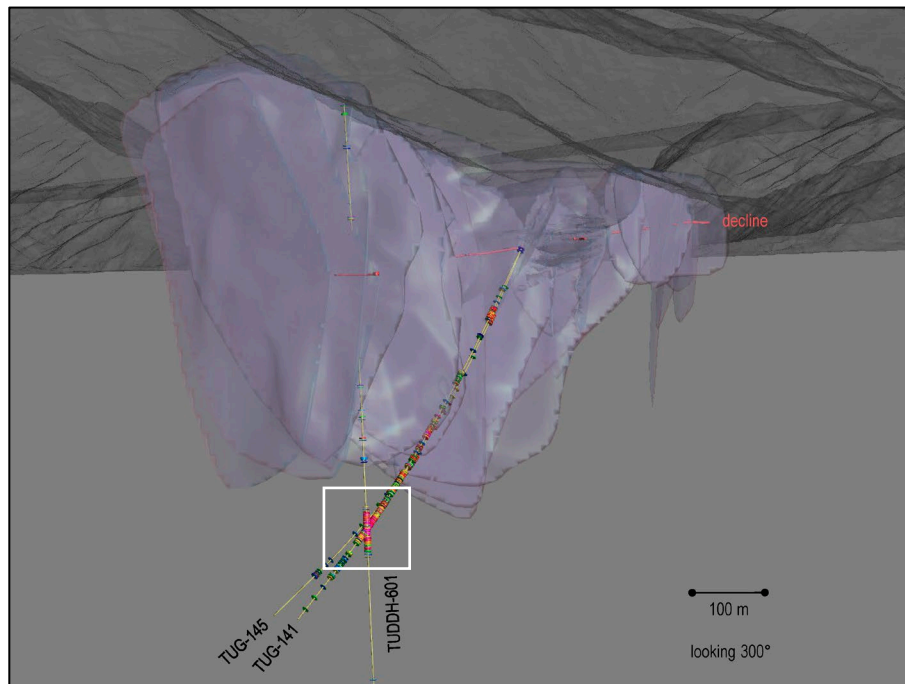
Tuvatu Exploration

2022 infill drilling refining grade and continuity ahead of mining planned for Q4 2023

+1,100m deep high-grade Au system coming into view; targeting +1m oz. resource +10 g/t Au

TUDDH 500, TUG 141 & TUDDH 601: depth extensions of current resource with exceptionally high-grade profile





TUG 141: High Grade Zone 500 Discovery

TUG-141 drilled
20.9 g/t Au over 75.9m
 from 443.4-519.3m, including

- **35.25 g/t Au over 37.5m**
- **43.62 g/t Au over 30.0m**
- **90.35 g/t Au over 7.2m**

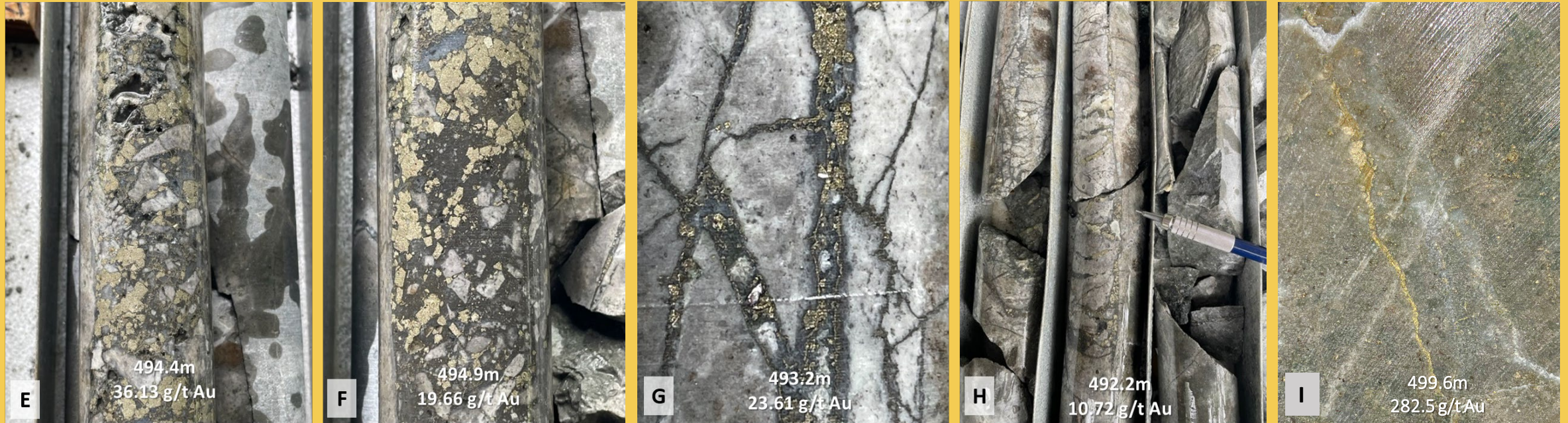
TUDDH-601 confirmed the mineralization in TUG-141 with
12.22 g/t Au over 54.90m, including

- **29.24 g/t Au over 15.60m**
- **15.03 g/t Au over 5.40m**

Follow-up drilling from multiple locations currently underway

TUG 141: 20.86 g/t Au over 75.9m

HIGH GRADE DISCOVERY – JUNE 2022



(E) Vuggy hydrothermal breccia with coarse pyrite and silicified-sulfidized ground mass. Breccia clasts are angular to sub-rounded.

(F) Coarse pyrite breccia with silicified-sulfidized ground mass.

(G) Network fracture stockwork ~1-5mm veins with two generations of pyrite. The clasts are highly altered silicified andesite, with the veins containing quartz-pyrite.

(H) Network fracture stockwork veins at multiple angles, with intense silicification, quartz-carbonate infill and pyrite.

(I) 0.5mm wide veinlet of VG from sample that assayed 282.5 g/t Au

TUDDH 601: 12.22 g/t Au over 54.9m

HIGH GRADE DISCOVERY – AUGUST 2022



Hydrothermal breccia



580.2m

140.9 g/t Au



593.9m

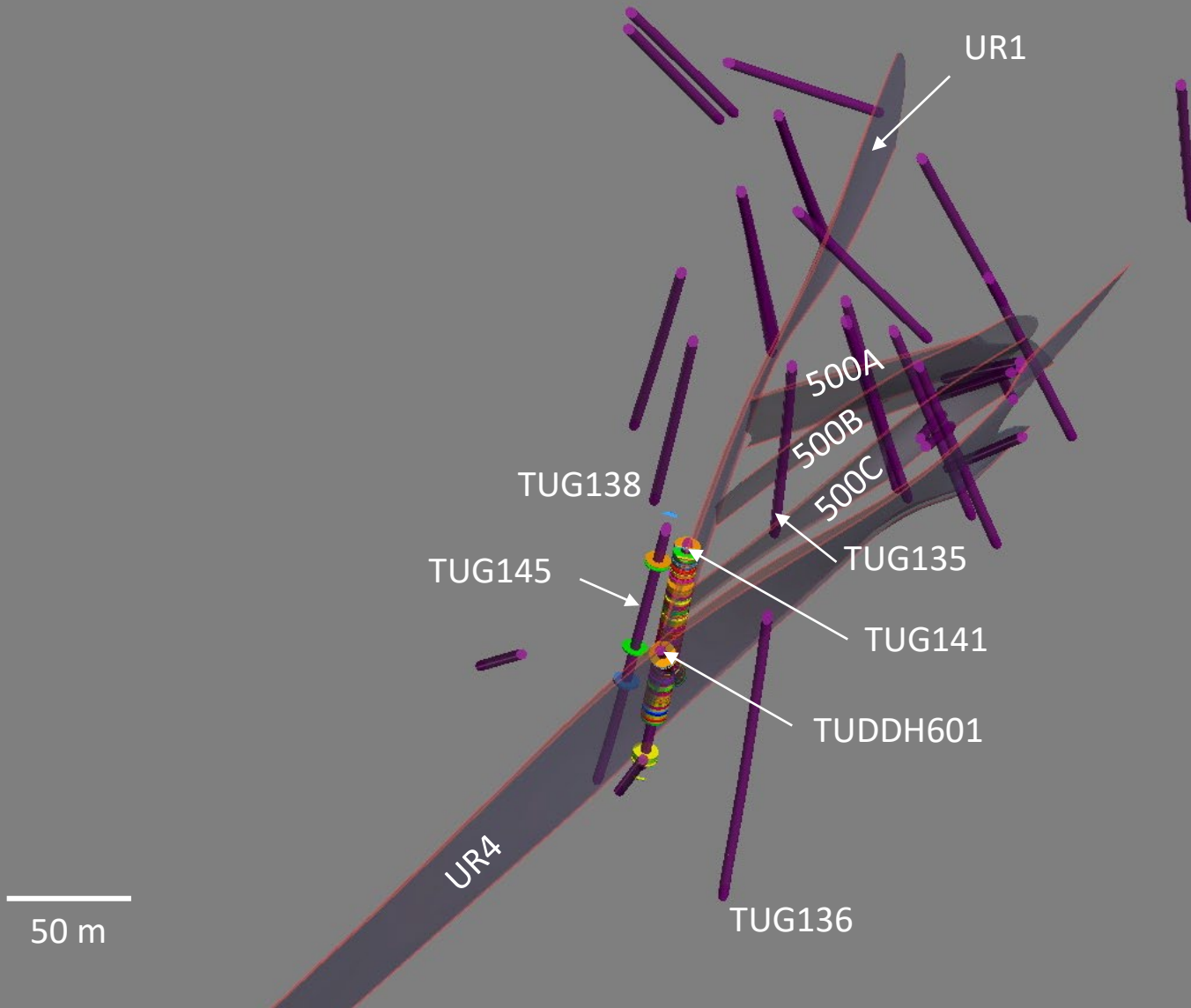
230.4 g/t Au

TUG 141: High Grade Zone 500 Discovery

Among the Top 10 highest grade
gold intercept in the world 2021-
2022 (g/m)

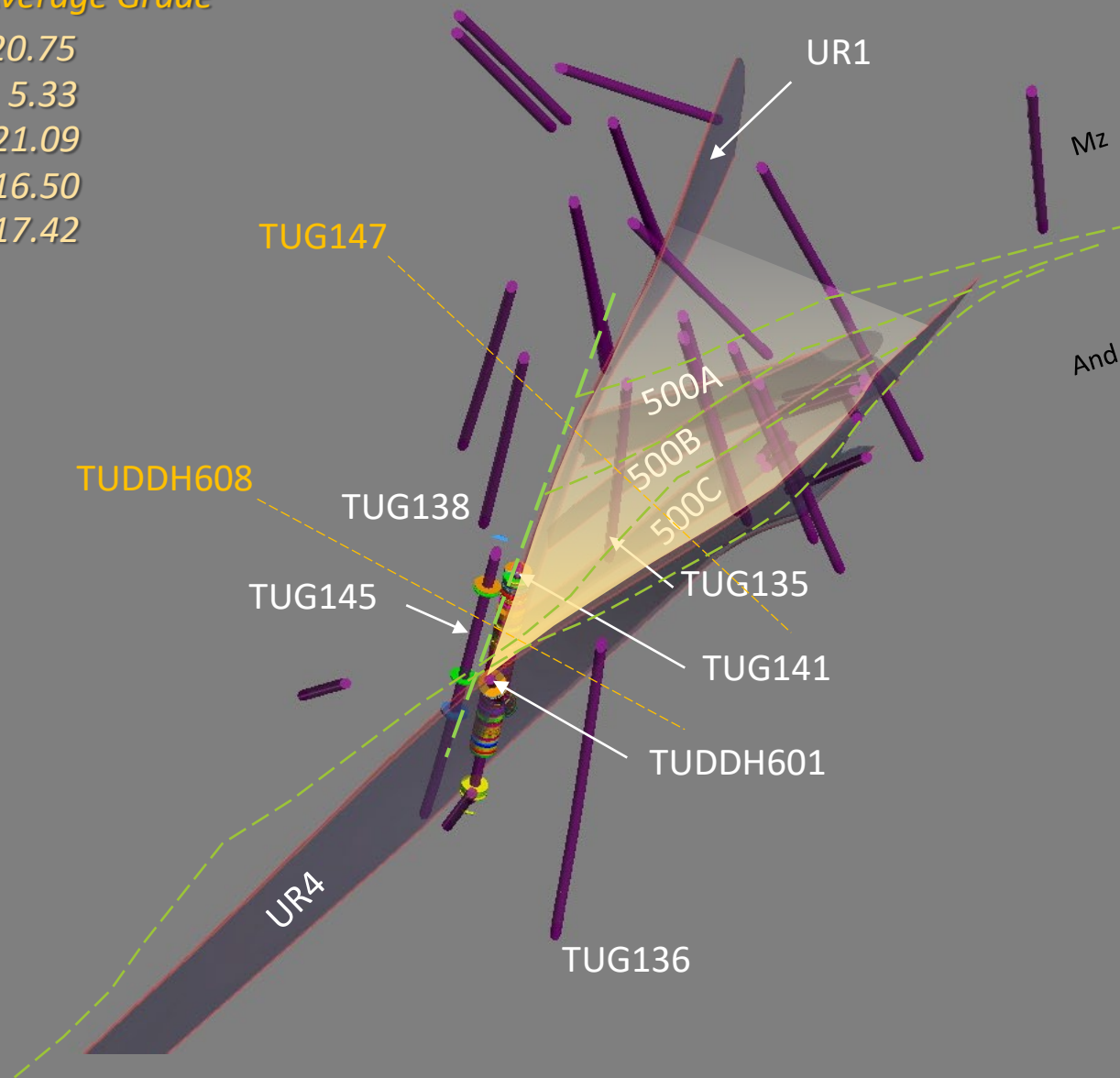
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500 Zone Average Grade

UR1	20.75
UR4	5.33
500A	21.09
500B	16.50
500C	17.42



TUG 141: High Grade Zone 500 Discovery

Among the Top 10 highest grade gold intercept in the world 2021-2022 (g/m)

20.9 g/t Au over 75.9m
from 443.4-519.3m, including

- 35.25 g/t Au over 37.5m
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Similarities to Porgera



TUG-141 at 492.5m 25.23 g/t Au



Porgera D Veins

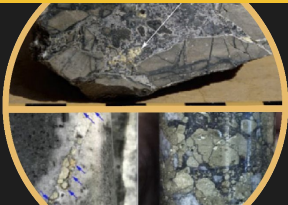
	PORGERA	TUVATU / VATUKOULA
AGE	5 Ma	5.4 – 4.6 Ma
ALKALIC IGNEOUS ROCKS	Silica-poor, K-rich, shoshonitic rootless Intrusive Complex	Shoshonites intruded by monzonite stocks
TECTONIC/ GEOLOGICAL SETTING	Island-arc continental crust, fold- thrust collision belt with deep seated crustal transform faulting	Central to a shoshonitic volcanic caldera controlled by NE trending structures
GOLD HOST	Electrum, Native, Pyrite, Tellurides	Electrum, Native, Pyrite, Tellurides
MINERALIZATION STYLE/STRUCTURE	Disseminated Au-Py-Pb-Zn with Au-Te epithermal overprint controlled by early conjugate array and later normal faults	Networks of Au-Te veins, stockworks and breccias funneling into a feeder structure(s) at depth
METALLIC MINERALS	Aspy, Cpy, electrum Gn, Hm, Native Au, Po, Py, Sp, Tt, tellurides	Bi, Gn, Hm, Mt, Native Au, Py, Sp, tellurides, Tt-Tn
TRACE ELEMENT ASSOCIATION	Au, Ag, Te, V	Au, Te, V

RON STEWART, former CHIEF GEOLOGIST @ PORGERA GOLD MINE for PLACER DOME

CONCLUSION: “ All of the geologic lines of evidence suggests Tuvatu and Porgera are related gold systems with remarkable geologic similarities ”

“LIO’s recent announcement of the discovery hole TUG-141: 20.86 g/t over 75.90m from 443.4m downhole into the 500 Zone is a major breakthrough and suggests a high likelihood that there is more to come based on the conclusive evidence in the geologic data".

PORGERA HIGH GRADE AU-TE-PY



TUVATU DRILL CORE AU-TE-PY

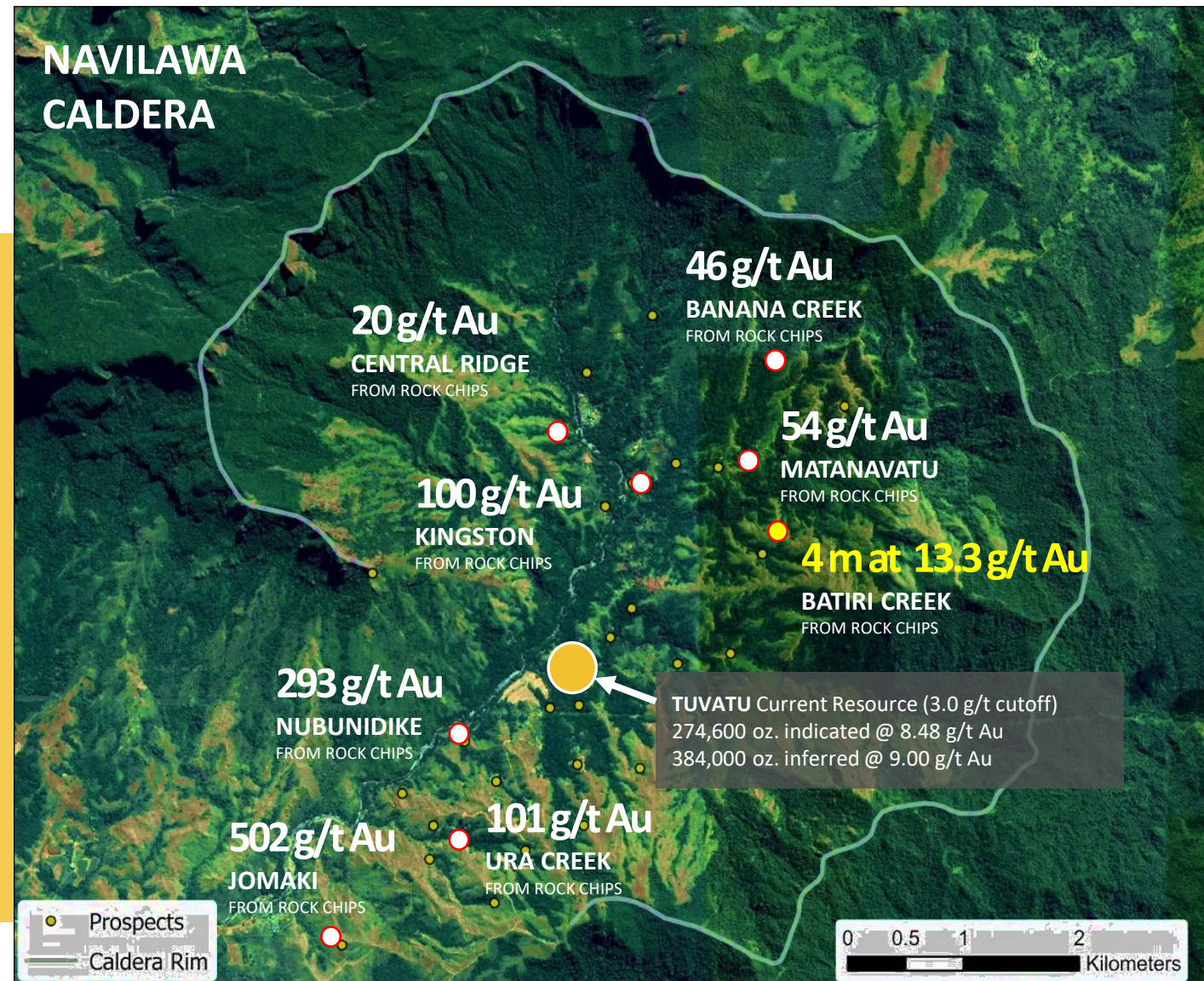
Regional Upside

HIGH GRADE GOLD ANOMALIES ACROSS 7KM STRIKE IN NAVILAWA ALKALINE GOLD SYSTEM

TUVATU DRILLING CONFIRMS VERTICAL PROFILE OF AT LEAST 1,200 METERS, OPEN TO DEPTH

CSAMT REVEALS STEEP STRUCTURAL GRADIENTS OVER 1.KM DEEP ACROSS ENTIRE 7KM STRIKE

NEW OCCURRENCES BEING DISCOVERED

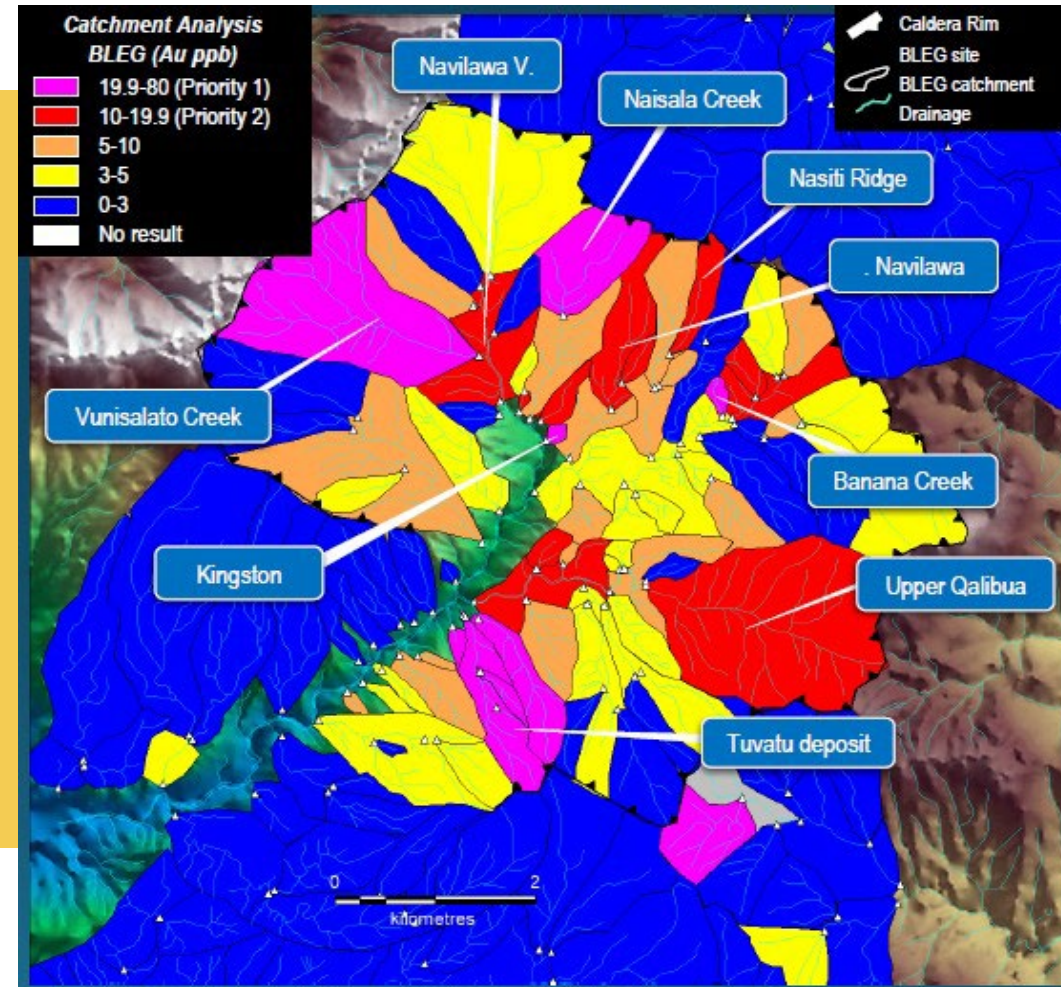


Regional - BLEG Geochemical Survey

**HIGH GRADE GOLD ACROSS 7KM
WIDE NAVILAWA CALDERA**

**DRILLED RESOURCE AREA COVERS
LESS THAN 5% OF LICENSE AREA**

TARGET-RICH ENVIRONMENT

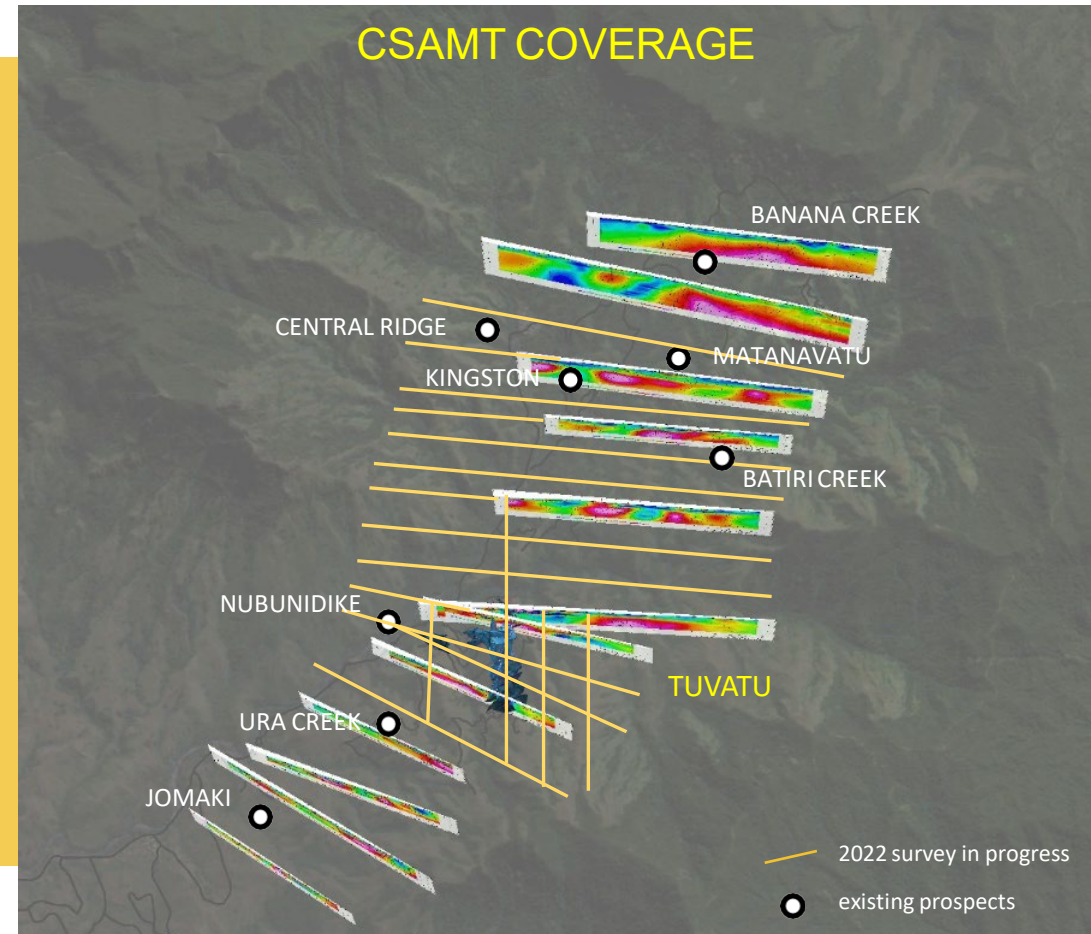


Regional - CSAMT Geophysical Survey

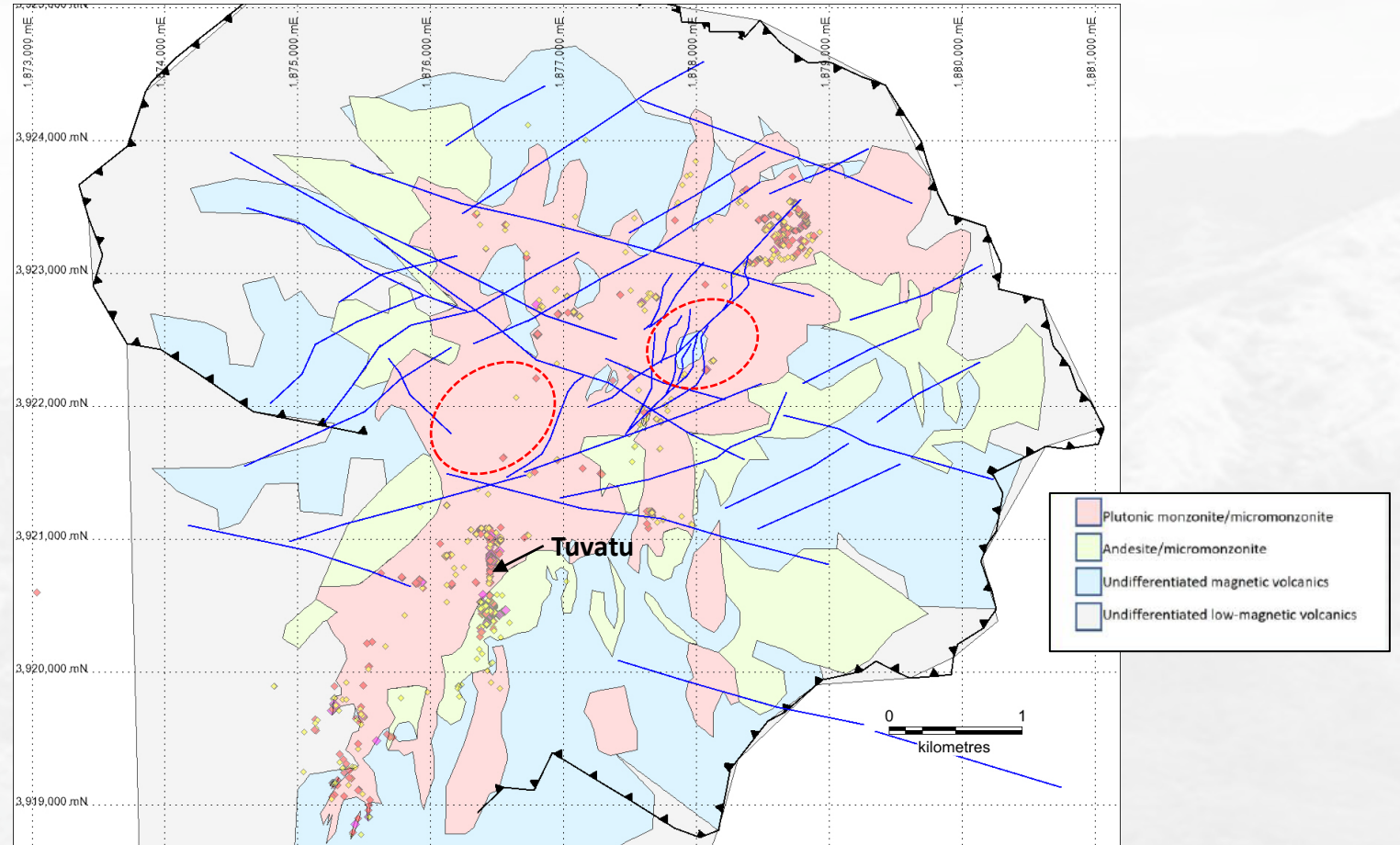
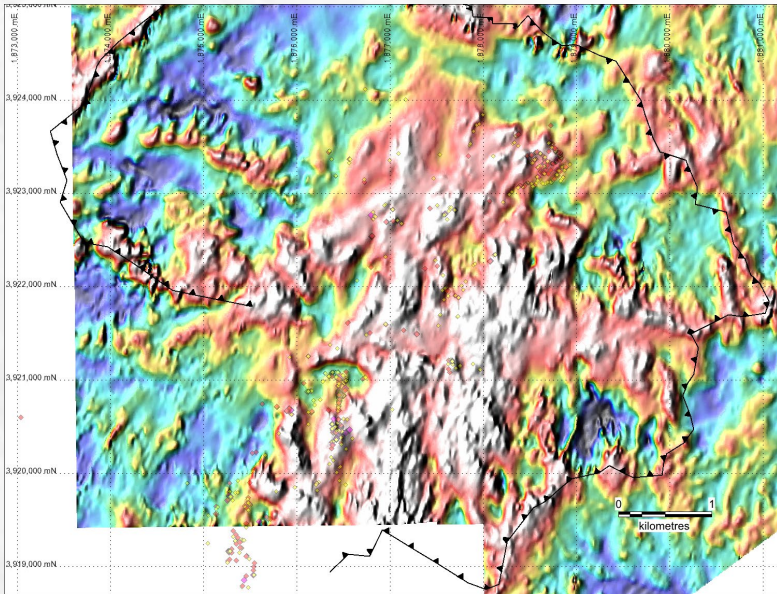
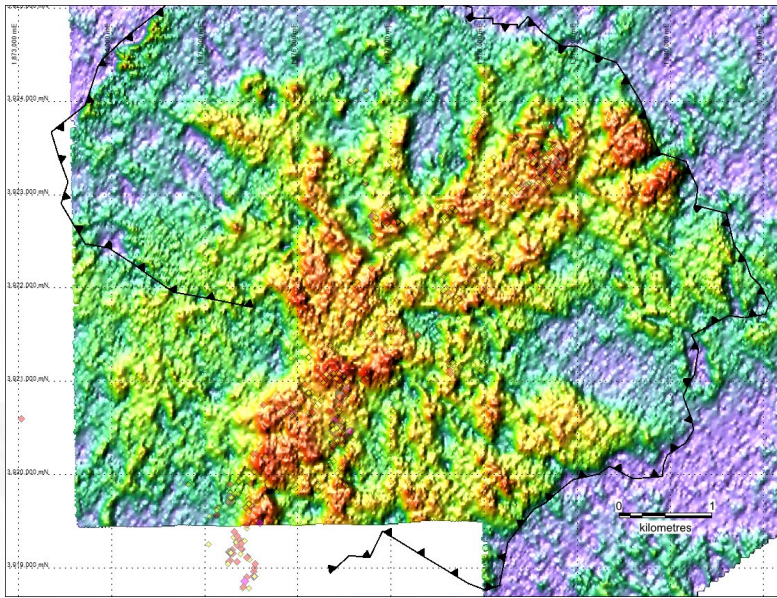
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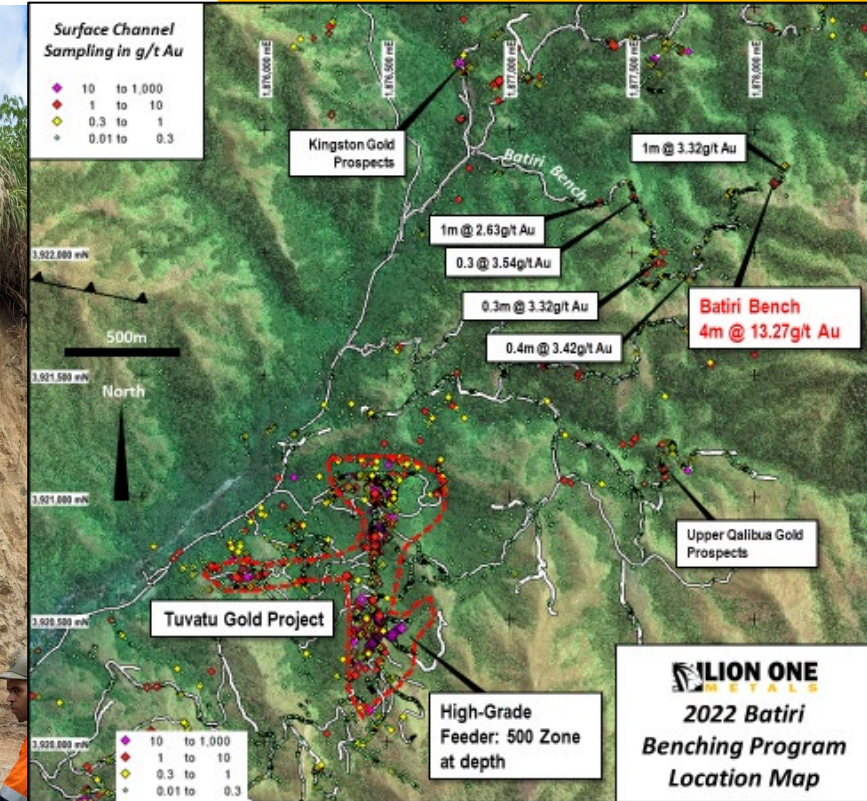
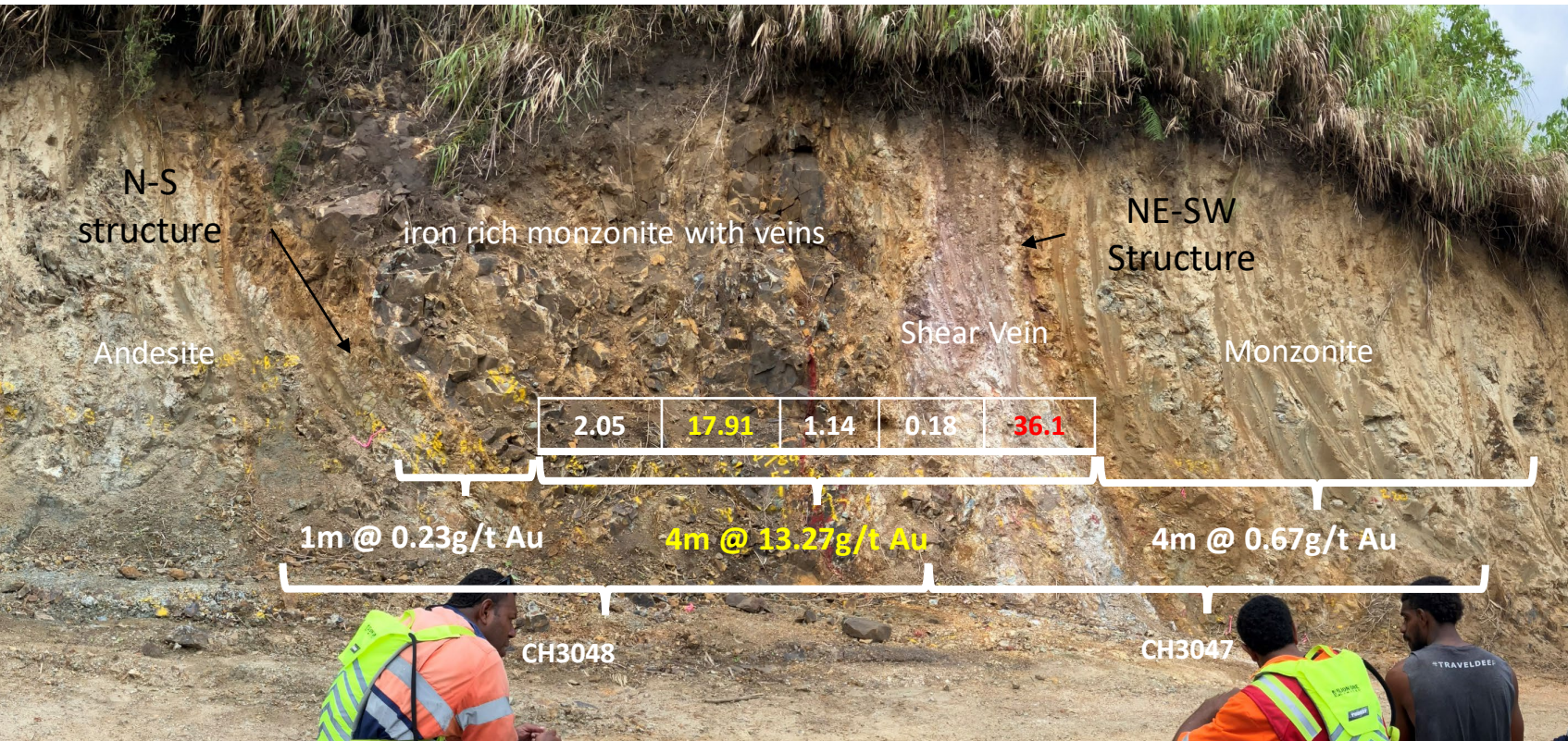


Regional – Geology & Target Generation



Regional Discoveries: Batiri Creek Vein

13.27 g/t Au over 4m CHIP CHANNEL SAMPLE 2KM NE OF TUVATU





Regional Upside

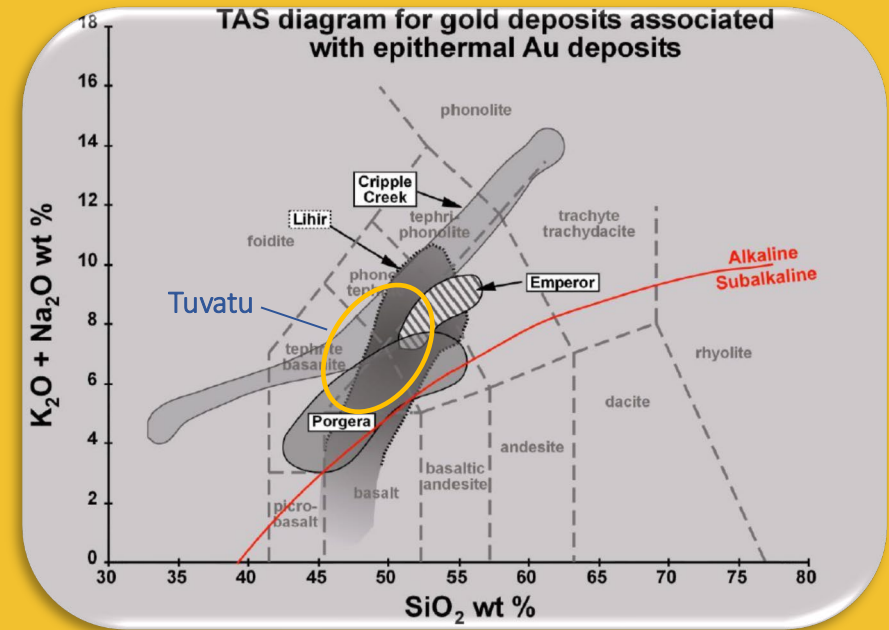


geosciences

Article

Petrological and Mineralogical Aspects of Epithermal Low-Sulfidation Au- and Porphyry Cu-Style Mineralization, Navilawa Caldera, Fiji

Nathan A. Forsythe¹, Paul G. Spry^{1,*}  and Michael L. Thompson²  Published: 15 January 2019



modified from Jensen, E.P. and Barton, M.D. 2000 Gold Deposits Related to Alkaline Magmatism, SEG Reviews, v. 13, Chapter 8, pp. 279-314

“Similarities in composition of the alkaline igneous rocks of almost identical age in the Navilawa and Tavua calderas, and the presence of both low-grade porphyry Cu and epithermal Au–(Te) mineralization in both calderas highlights the **potential presence of a large gold telluride system** in the Navilawa caldera, **in addition to the gold resource in the Tuvatu prospect**.”

There are strong geological **similarities between** the metallic mineralization in the **Navilawa caldera** and elsewhere in the SW Pacific Ocean at the **Emperor, Porgera, Acupan, Mt. Kare, and Ladolam deposits**. These similarities include the transition from porphyry Cu- to low-sulfidation epithermal-style Au–Te mineralization, the geologic setting, the composition of the igneous rocks, and the precious metal mineralogy and attendant alteration”.



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