



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

TUVATU ALKALINE GOLD PROJECT FIJI ISLANDS

CORPORATE PRESENTATION
DECEMBER 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

\$31M

working capital (CAD)
(Oct. 1, 2022)

136km²

exploration license area

12,000

assay lab monthly sampling capacity

8/30,000m

8 rigs /annual drilling capacity

2035

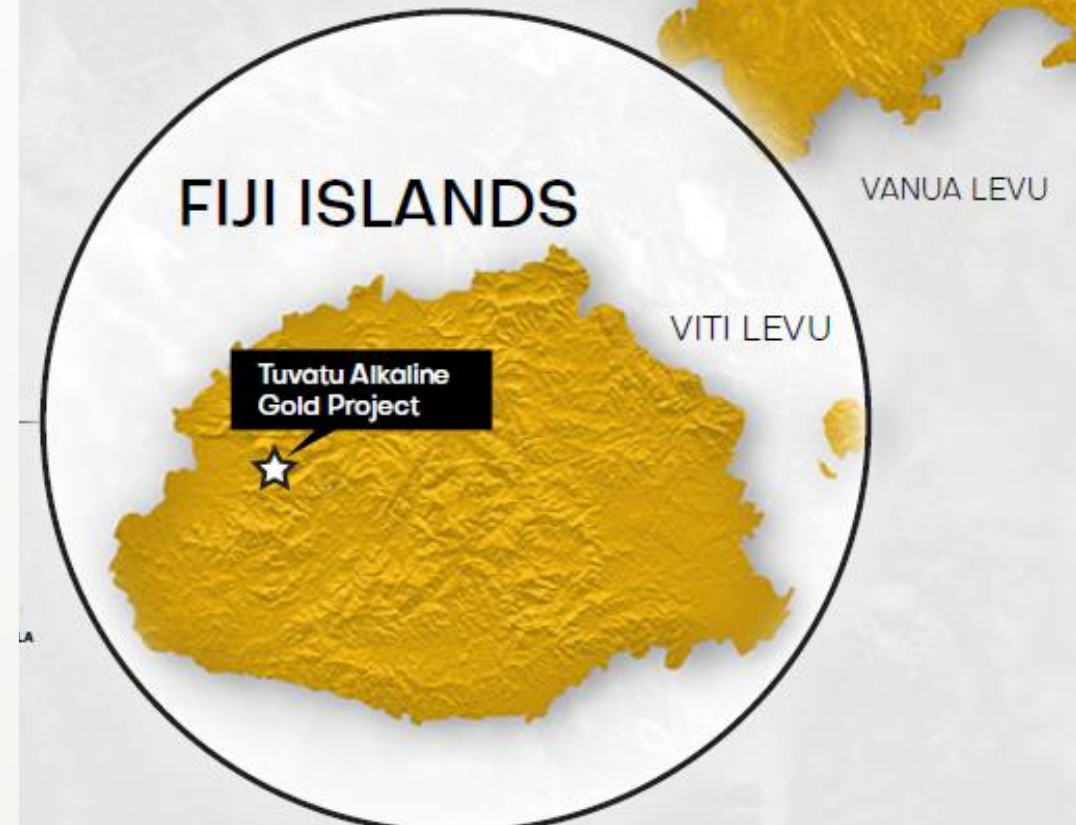
updated Mine Lease renewal

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 54.9m** from 576m (TUDDH 601)



\$13.35 million bought deal financing
completed in September 2022

Corporate Snapshot

CAPITALIZATION

SHARE CAPITAL As of Dec 14, 2022

Shares Outstanding	173,769,893
Options	13,015,000
Warrants	9,714,880
Shares Fully Diluted	196,499,773
Market Capitalization	\$147M

LIO: \$0.85 | 52wk: \$1.66 \$0.59 | Avg. vol: 372k

Canada
TSX-V: LIO

USA
OTCQX: LOMLF

Australia
ASX: LLO

ANALYST COVERAGE

Roth Capital Partners, LLC
Eight Capital Partners

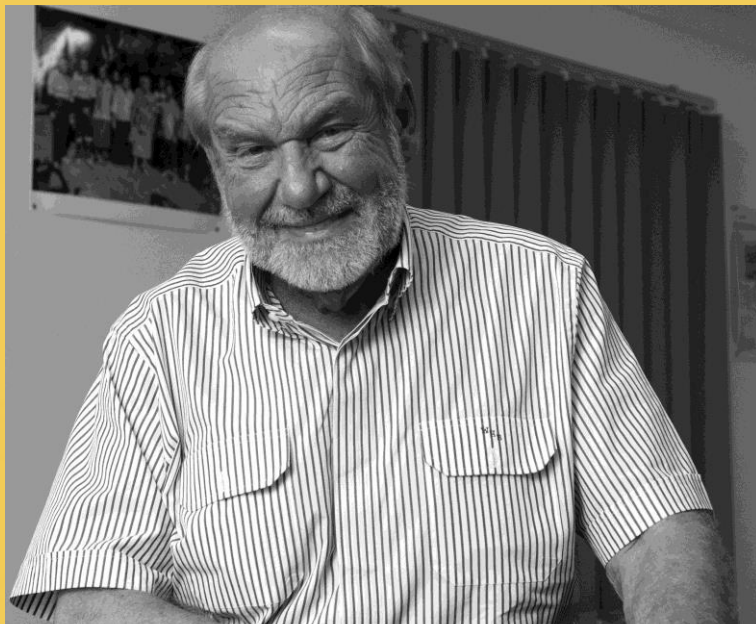
Mike Niehuser
Felix Shafigullin

LARGEST INVESTORS

Walter Berukoff (CEO)	12.03%
Donald Smith & Co.	6.76%
Franklin Precious Metals	6.38%

INSTITUTIONAL INVESTORS

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



Walter Berukoff

CHAIRMAN & CEO

Success Stories

Northern Orion sold to Yamana in 2007 for \$1.1B

Miramar Mining sold to Newmont in 2008 for \$1.5B

La Mancha sold in 2012 for \$600M

Emperor Gold Mines Fiji Gold Assets
(Vatukoula & Tuvatu) purchased in 2008.

Lion One Metals Limited created in 2011

Leadership Team

THE LION ONE METALS TEAM

OFFICERS

Walter Berukoff, CEO
Tony Young, CA, CFO
Patrick Hickey, COO
Sergio Cattalani, SVP Exploration
Hamish Greig, VP, Corp. Secretary

DIRECTORS

Walter Berukoff, Chairman
Richard Meli (ex-Rio Tinto SVP)
Kevin Puil, CFA (RIVI Advisors)
David Tretbar, P.Geo (ex-Sumitomo)

TECHNICAL TEAM

Kevin Li, P.Eng (ex-Fluor, Pretium)
Dr. Quinton Hennigh, P.Geo (ex-Newmont)
Will Ostrenga, P.Geo (ex-Sumitomo)
Darren Holden, P.Geo

Patrick Hickey

CHIEF OPERATING OFFICER
Engineer, mine builder, Ex-Newmont/Kinross



Sergio Cattalani

SENIOR VP, EXPLORATION

Economic geologist, Ex-Osisko Mining,
Inco-Vale, Equinox Gold, EMX Royalties,
Cominco



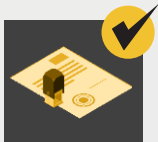


Key Assets: Lion One Fiji Team – Drilling Fleet – Assay Laboratory



2022-23 Mine Development Progress

MINE DEVELOPMENT



Permits are in place for underground mining operations



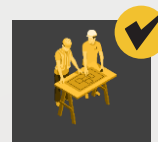
Development of no. 2 underground access portal @ rate of 2m per day; currently at +150m



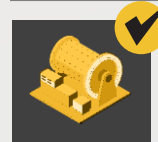
Mobile mining equipment fleet has been purchased or delivered



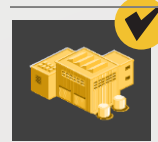
MILL DESIGN & CONSTRUCTION



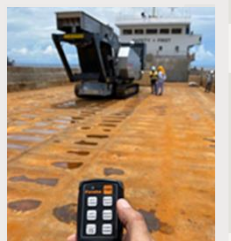
Detailed engineering & procurement underway



Design process completed for scalable mill facility



Installation & initial production planned for Q3 & Q4 2023



Mine Site Infrastructure: Set Up For Success



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

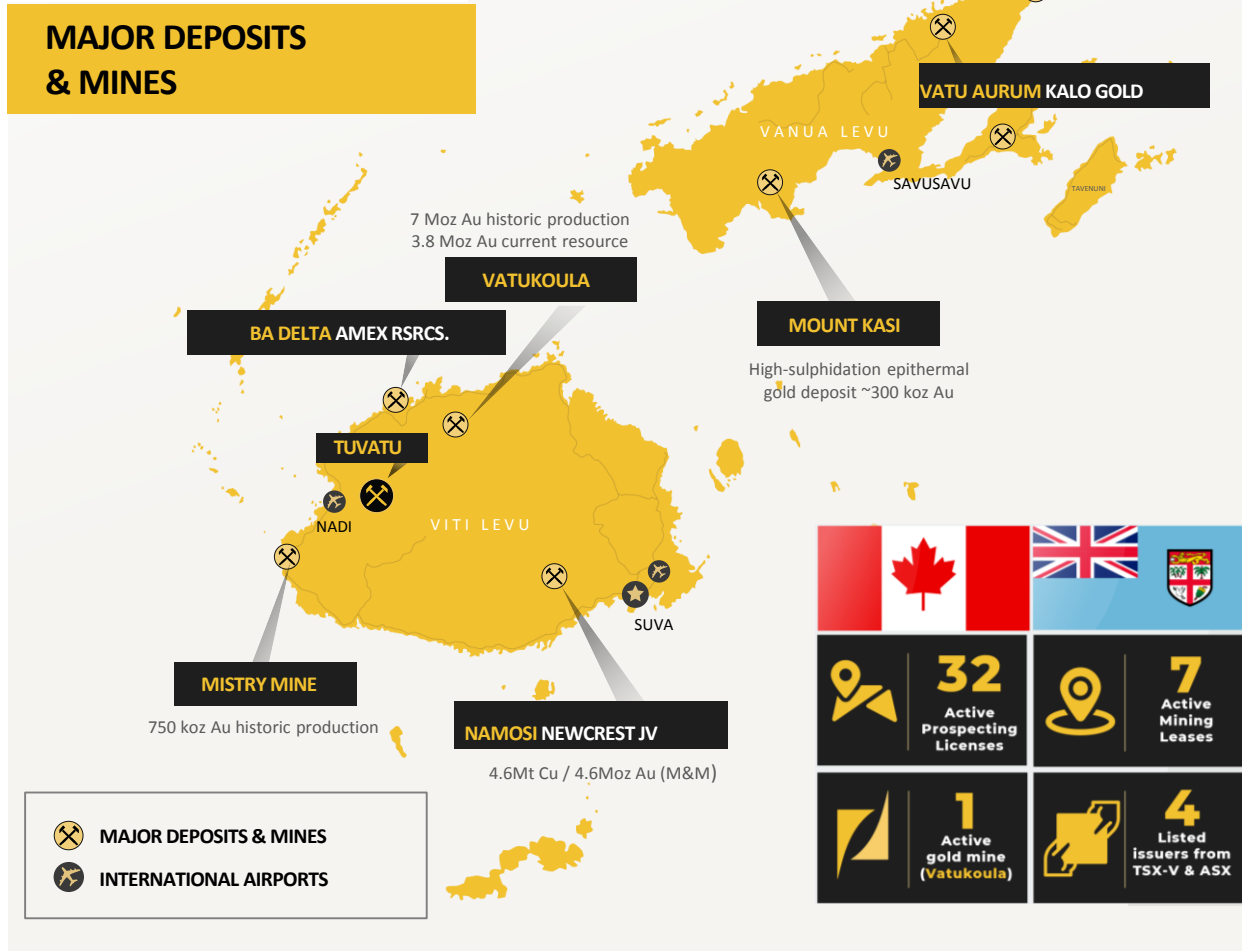


ERP SYSTEMS IMPLEMENTATION

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

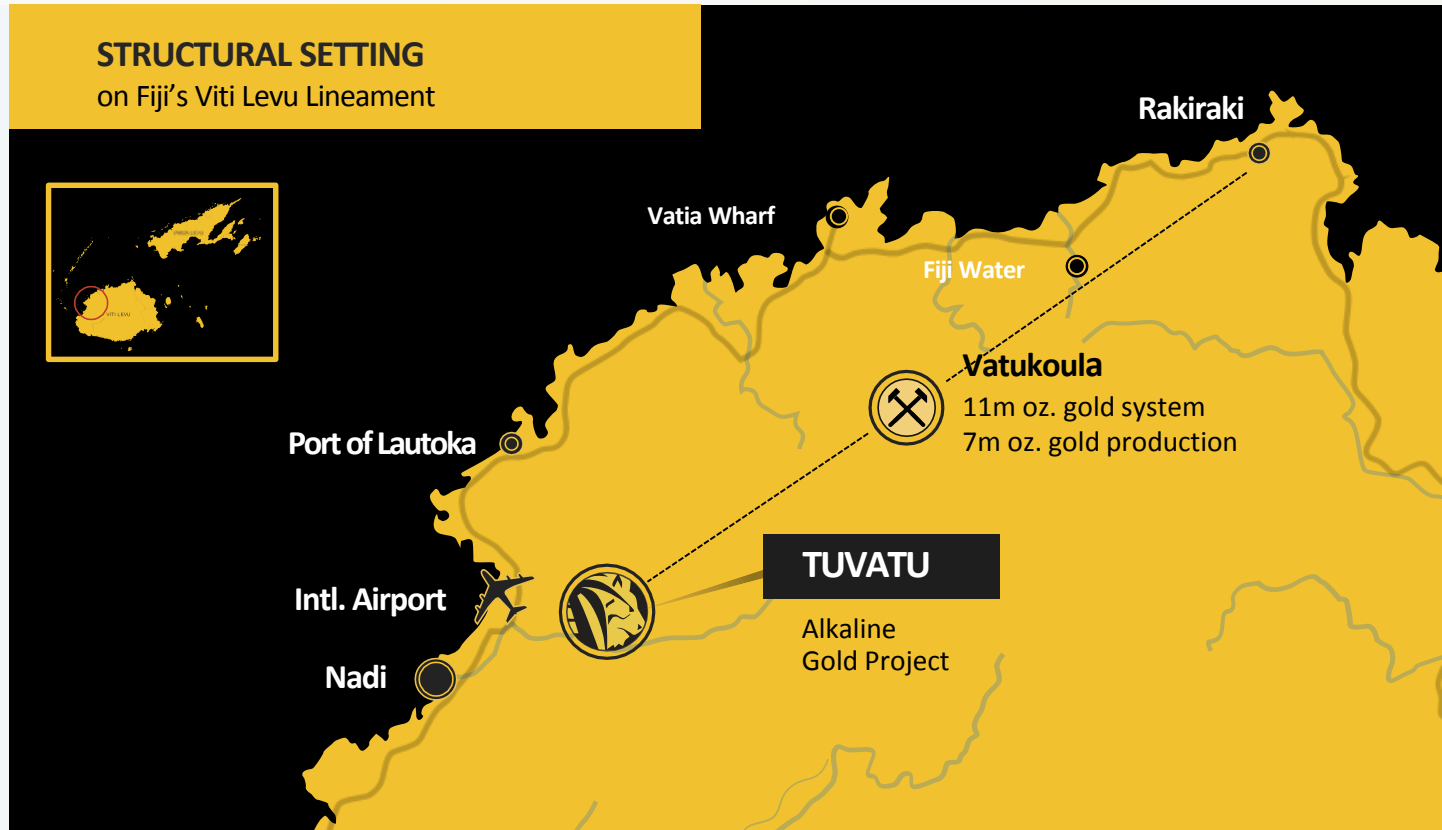
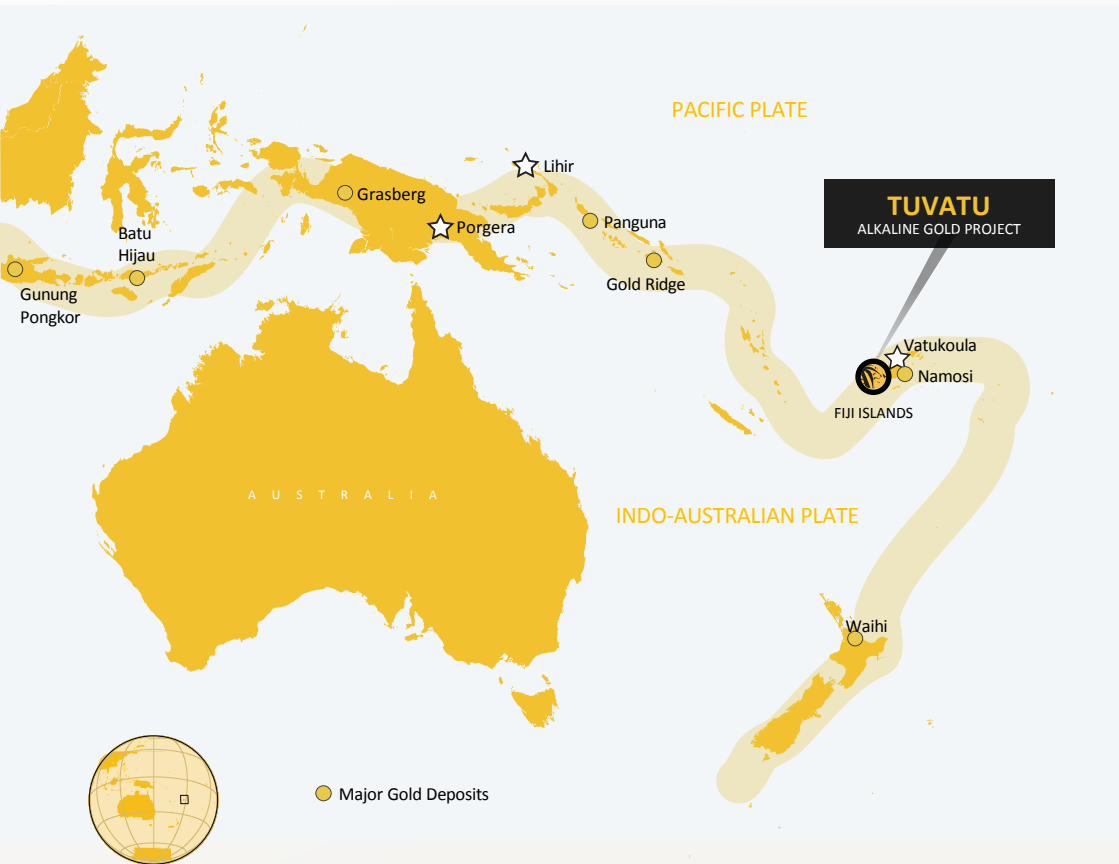
Fiji: A Stable And Supportive Mining Jurisdiction

-  Mining key to national economy – gold is one of the key exports
-  Long mining history including the Vatukoula / Emperor Gold Mine
-  Mining Act and Administration was founded on British Law
-  Reasonable royalty and taxation structures, as well as negotiable taxation concessions
-  Low sovereign, political and social risk
-  Skilled domestic workforce and low operating costs

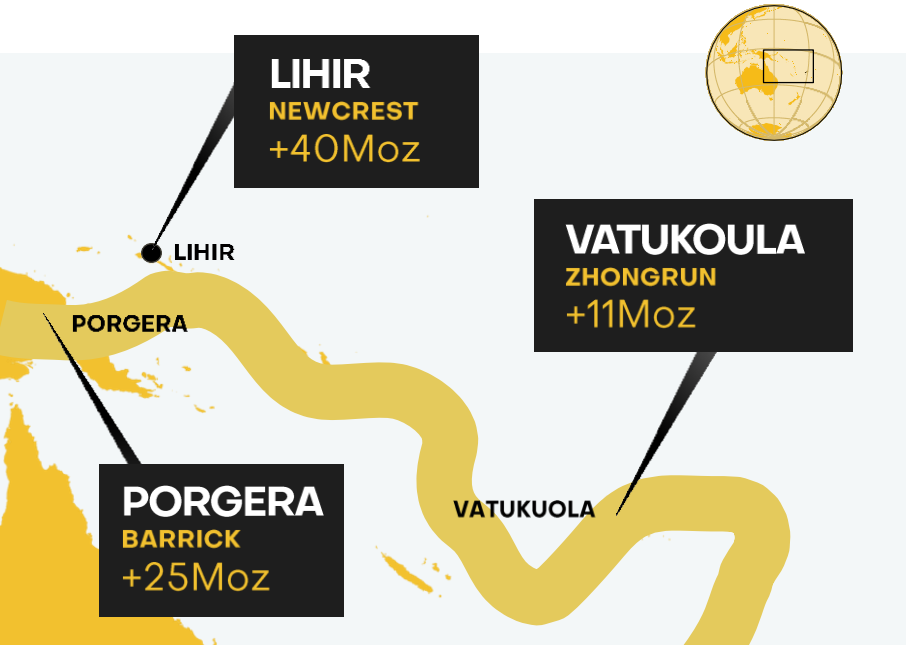


Prime Location & Setting

TECTONIC SETTING IN THE SOUTH PACIFIC RING OF FIRE

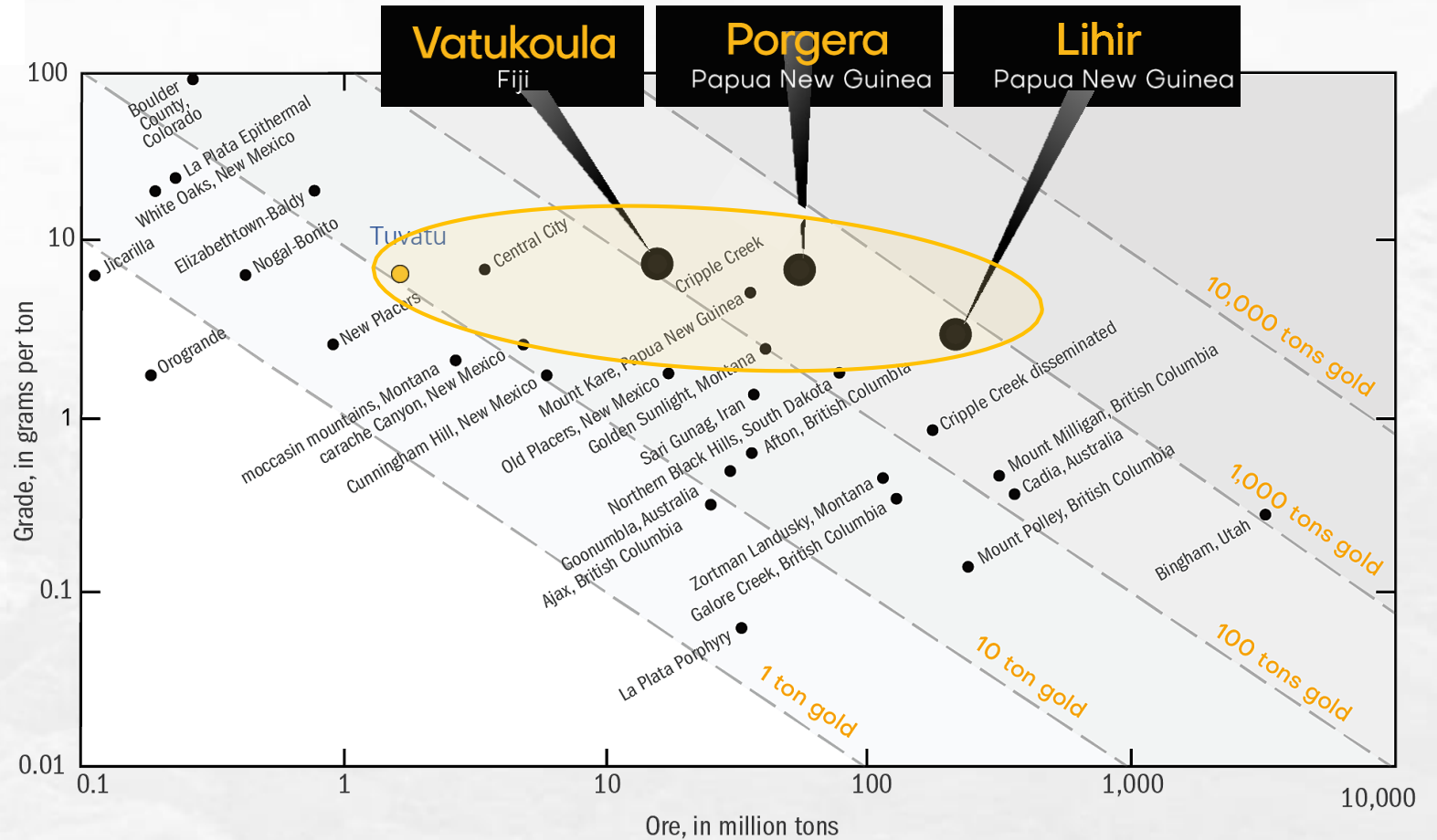


The Next World Class Alkaline Gold Deposit



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

PORGERA IS TUVATU'S CLOSEST ANALOG
16.4M oz. Gold Produced / 30M oz. Resource Inventory



Project Overview

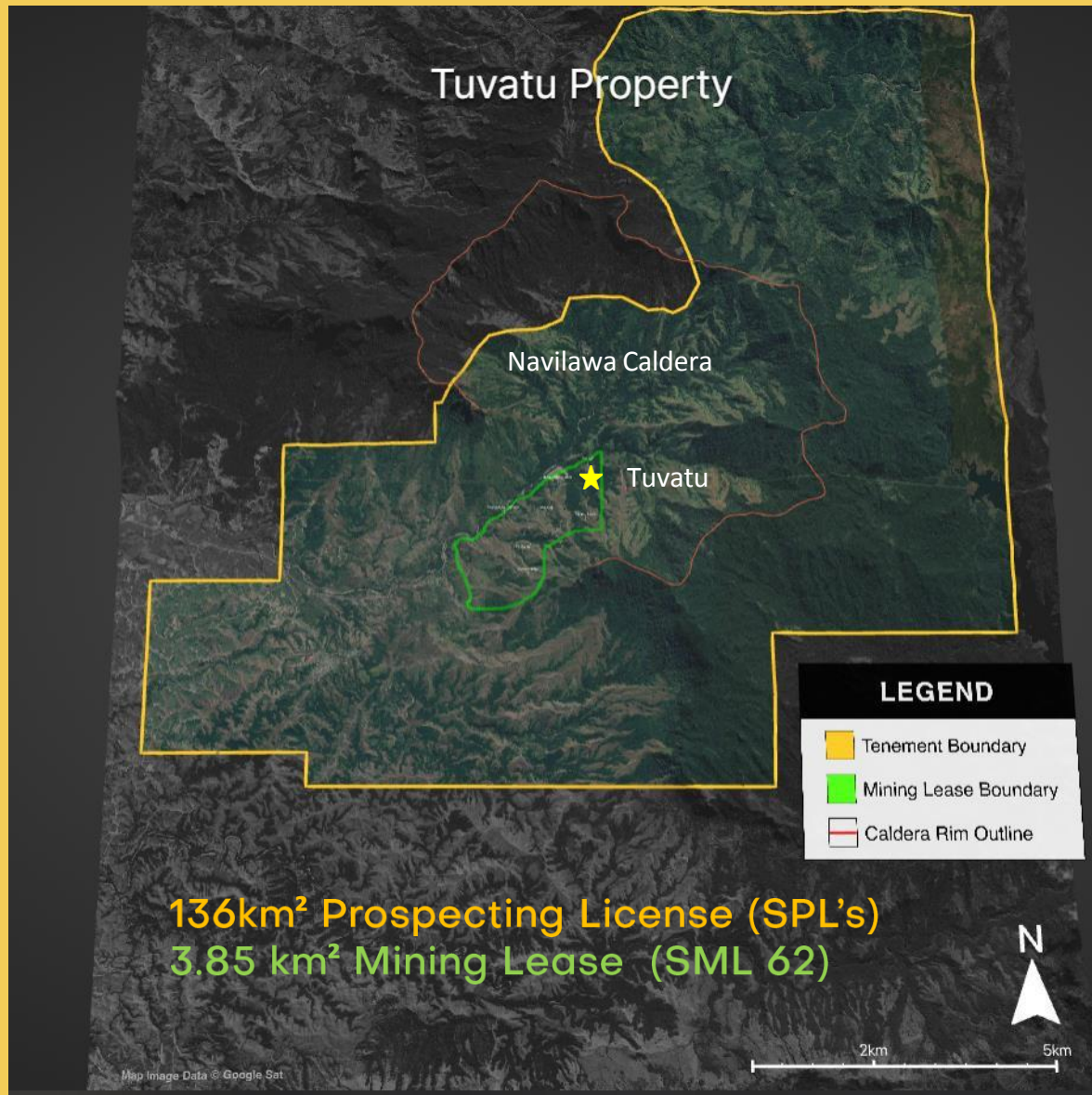
HIGH GRADE RESOURCE

PERMITTED FOR PRODUCTION

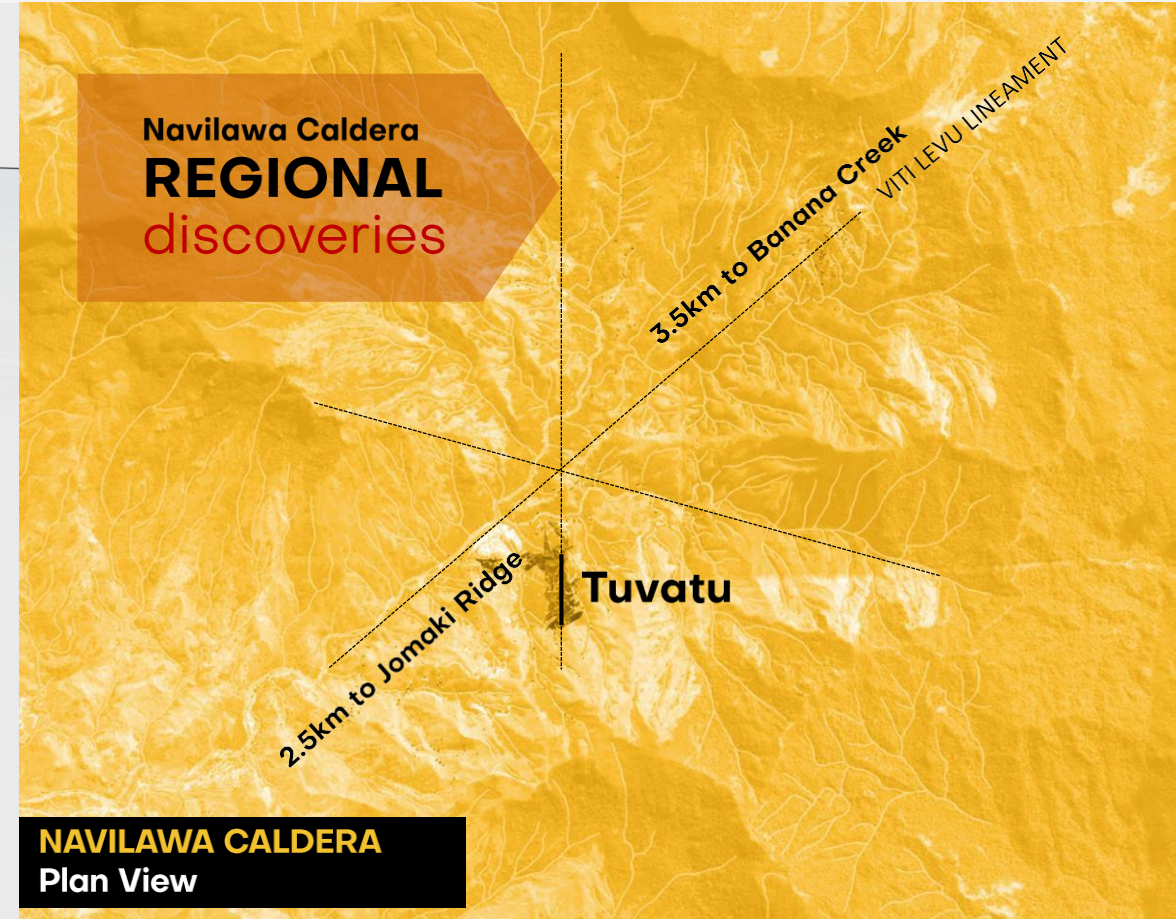
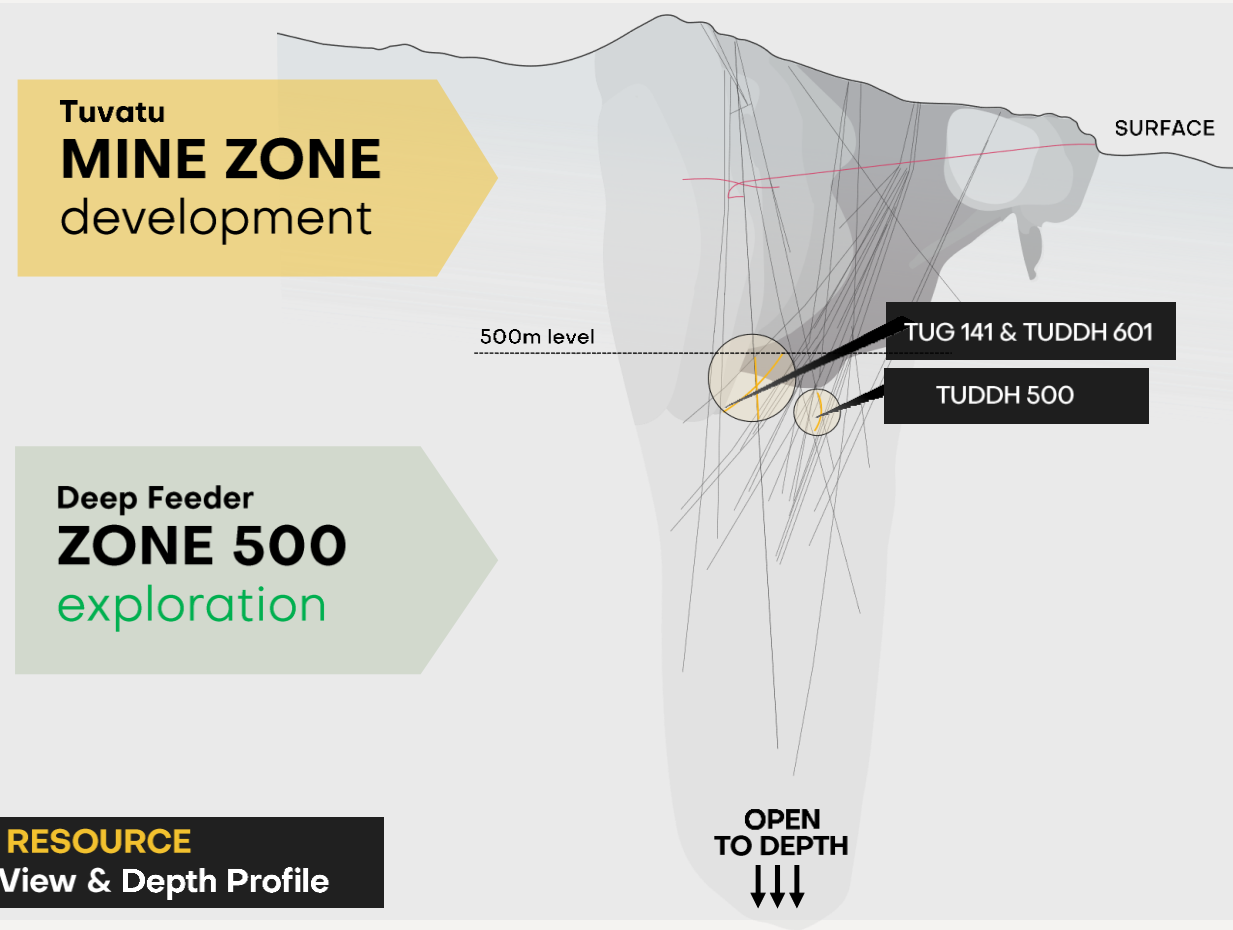
PRIME GEOLOGICAL SETTING

PROXIMITY TO INFRASTRUCTURE

PRO-MINING COUNTRY



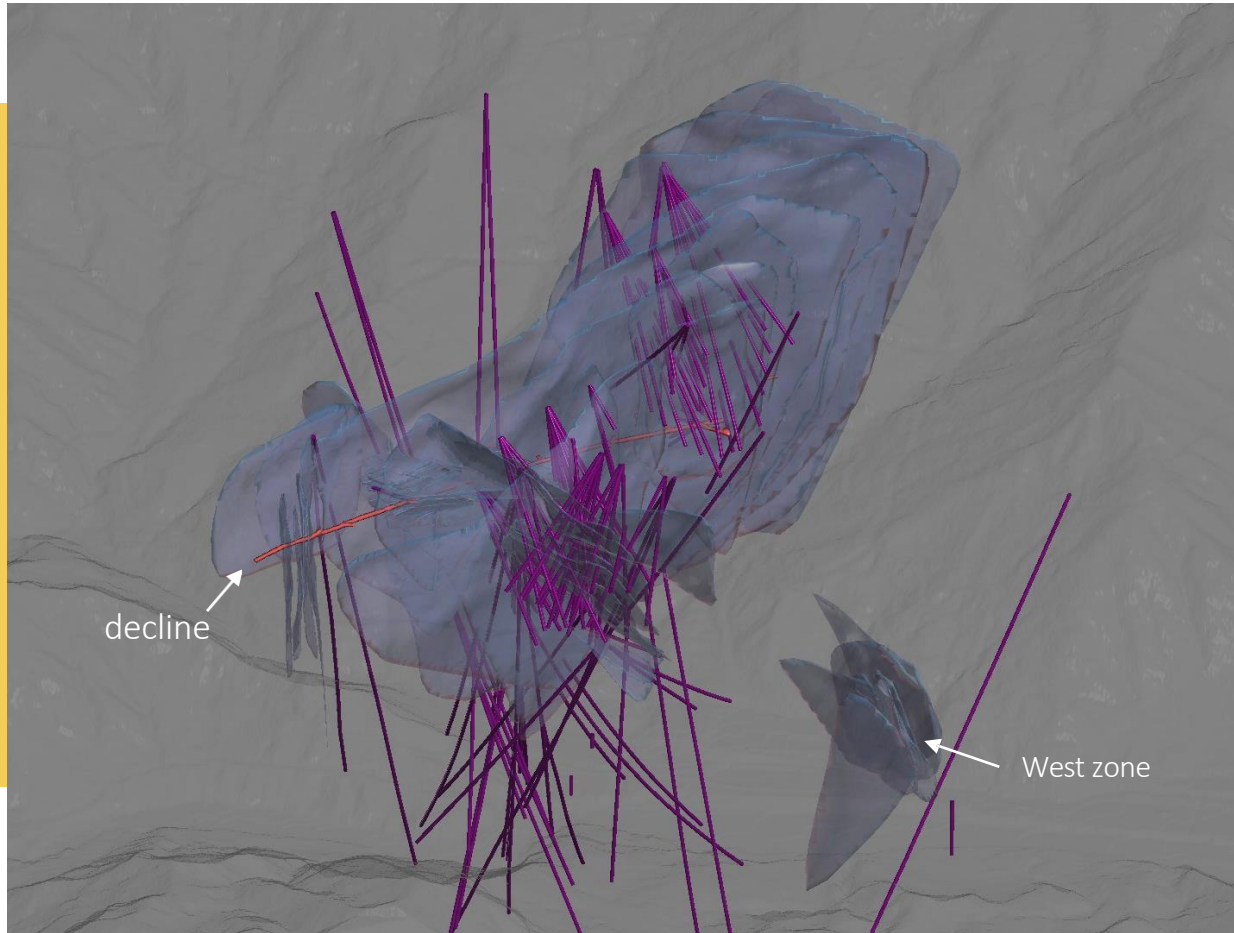
Exploration Strategy



TUVATU RESOURCE
Section View & Depth Profile

NAVILAWA CALDERA
Plan View

Tuvatu Exploration

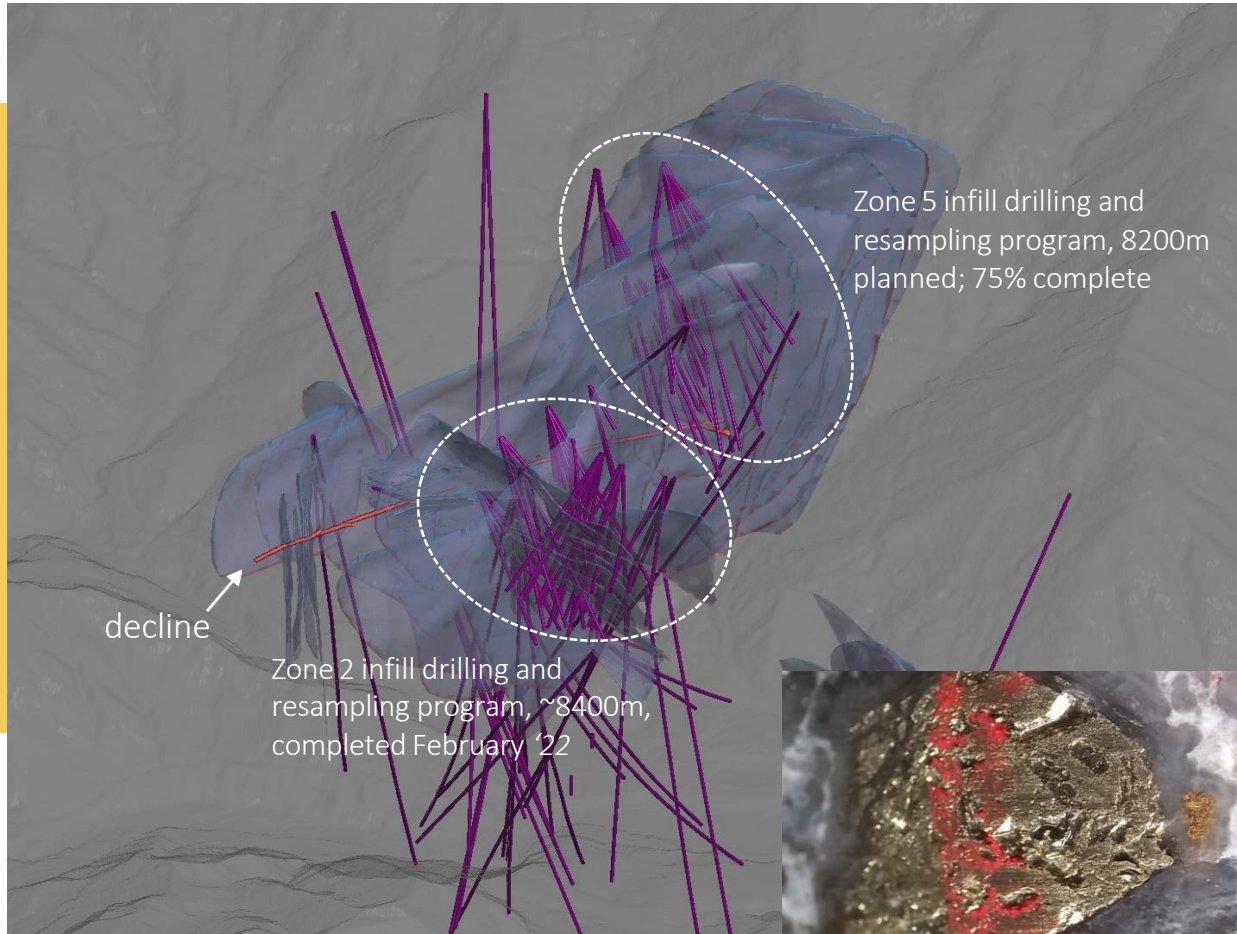


2022 infill drilling refining grade and continuity ahead of mining planned for Q4 2023

+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

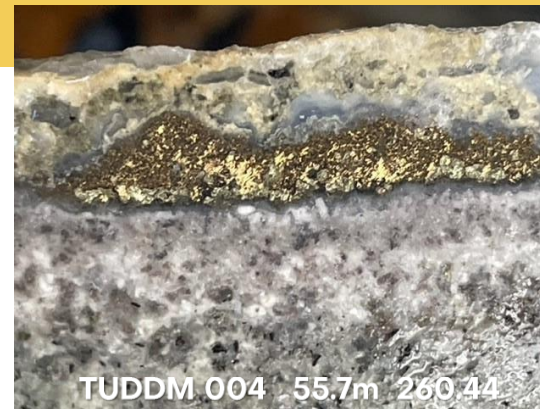
Tuvatu Exploration



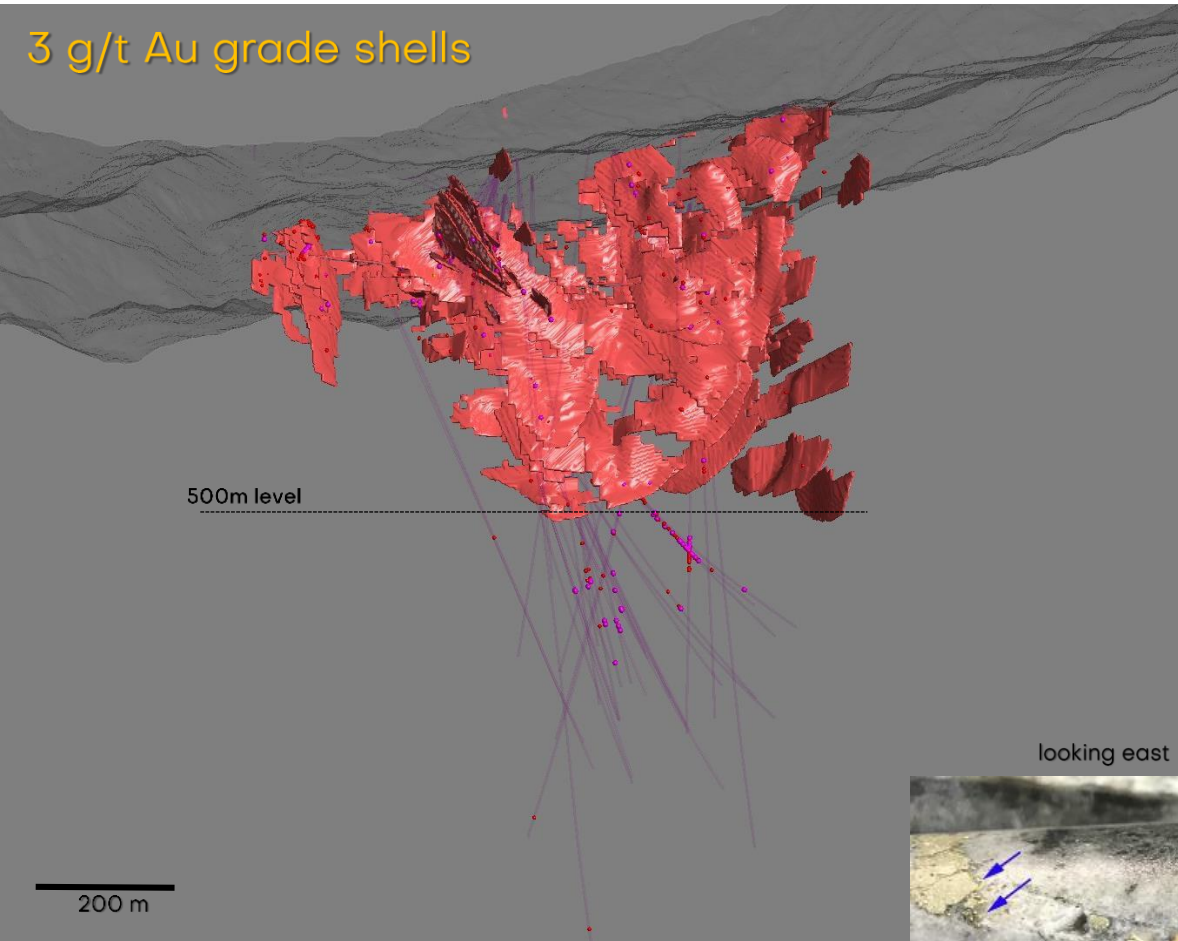
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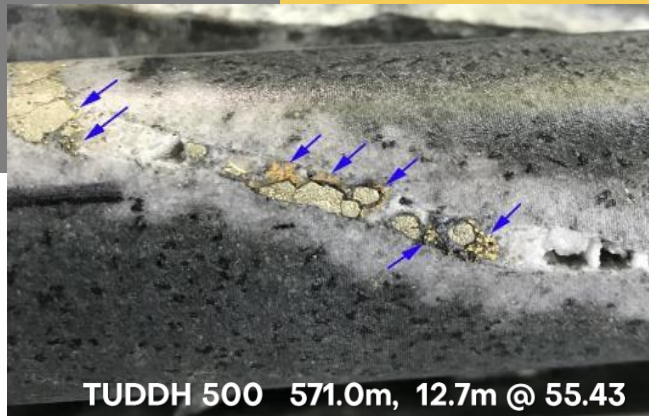
Tuvatu Exploration



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g/t Au

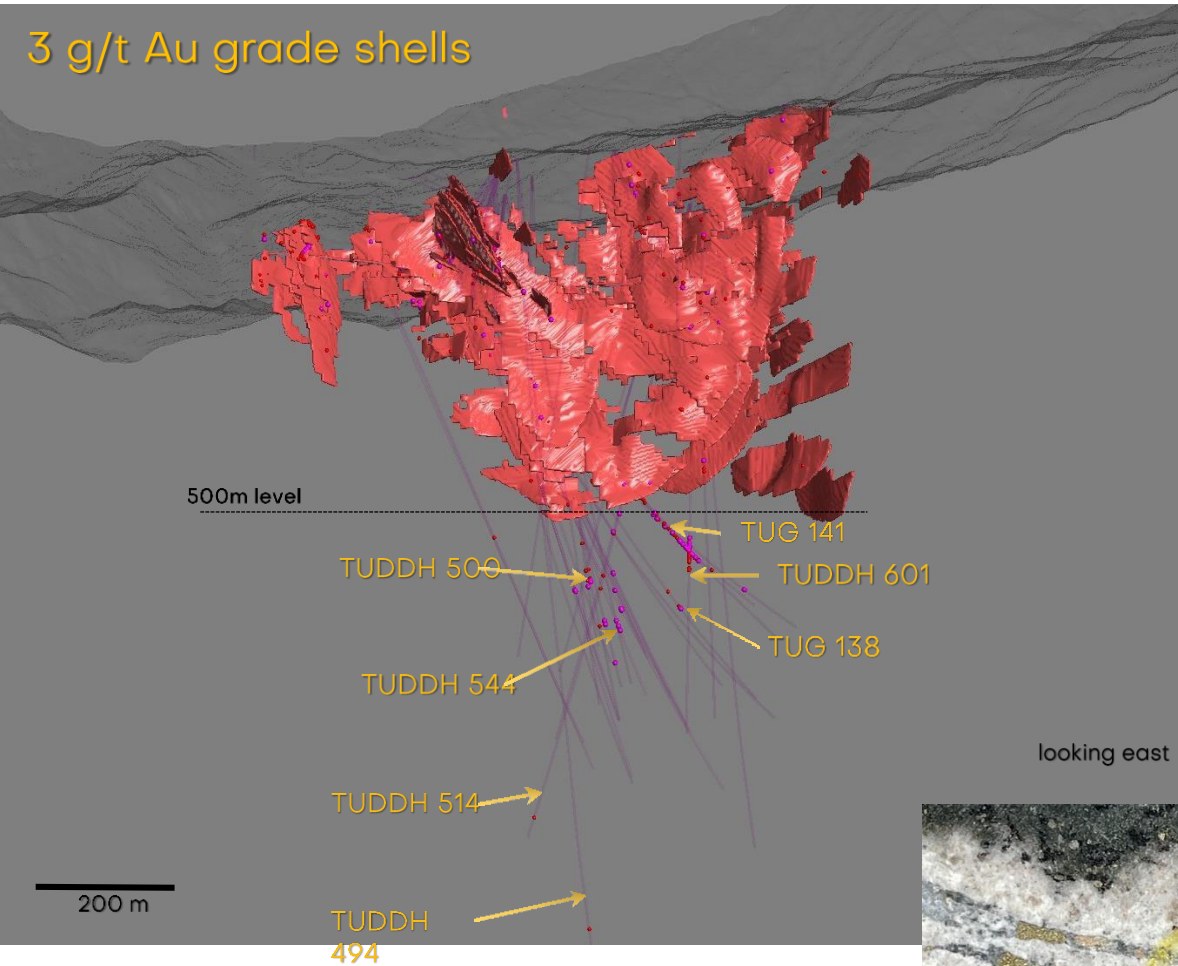


g/t Au



g/t Au

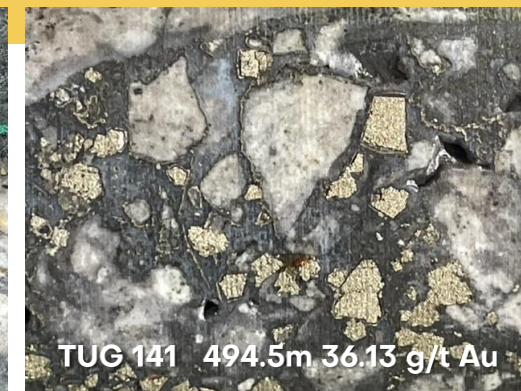
Tuvatu Exploration



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



TUG 141: High Grade Zone 500 Discovery

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

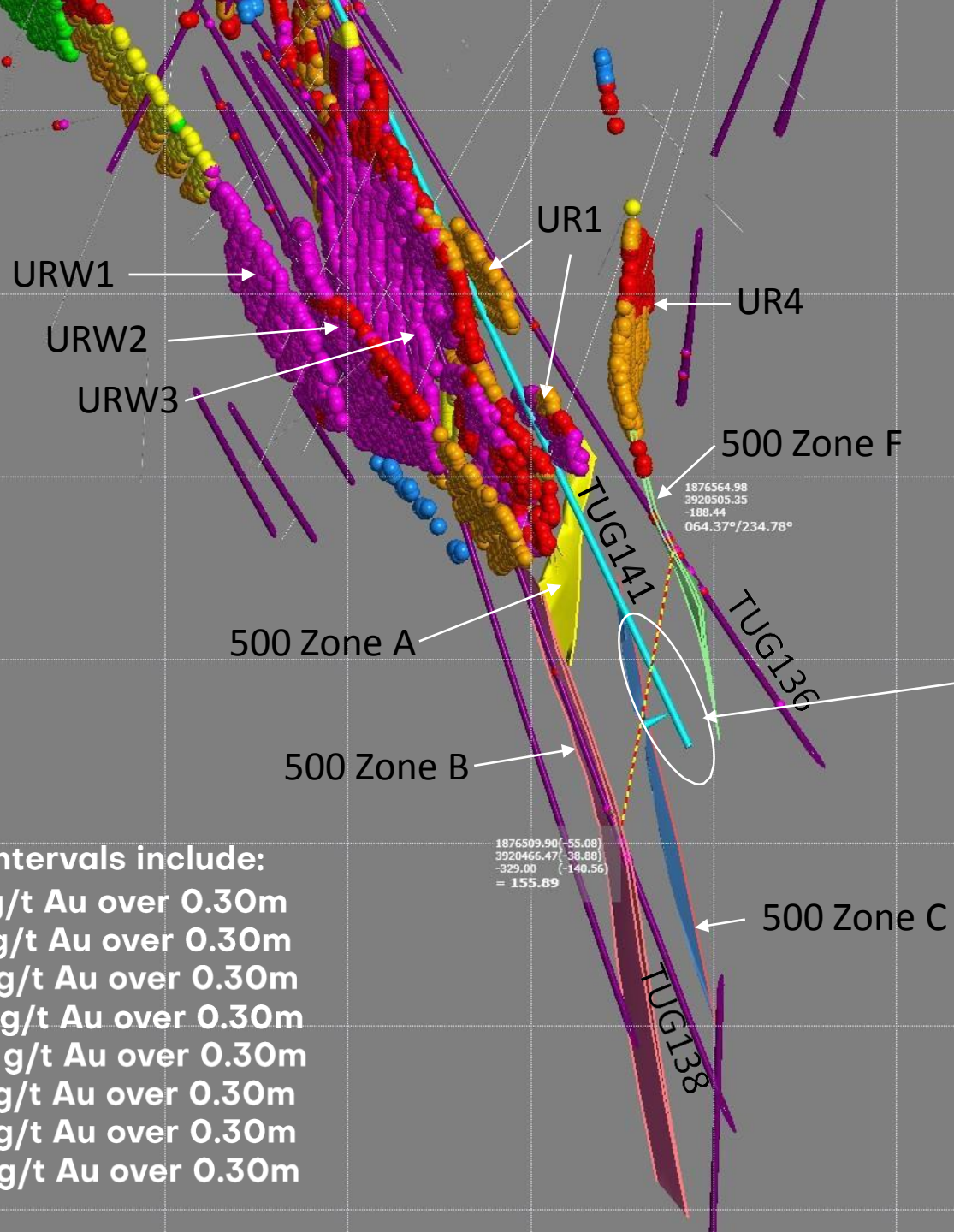
Interval of best mineralization

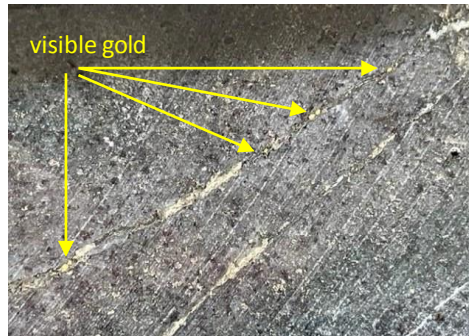
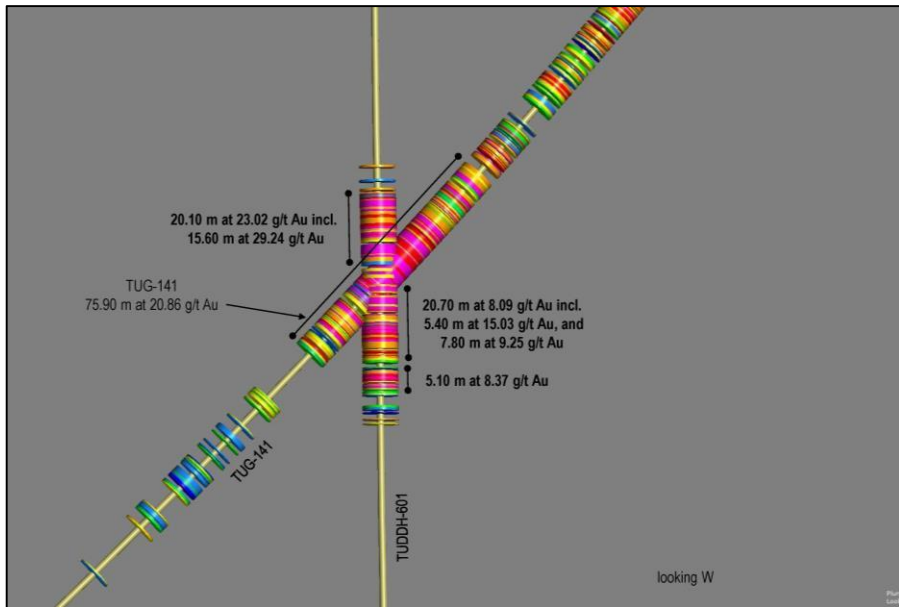
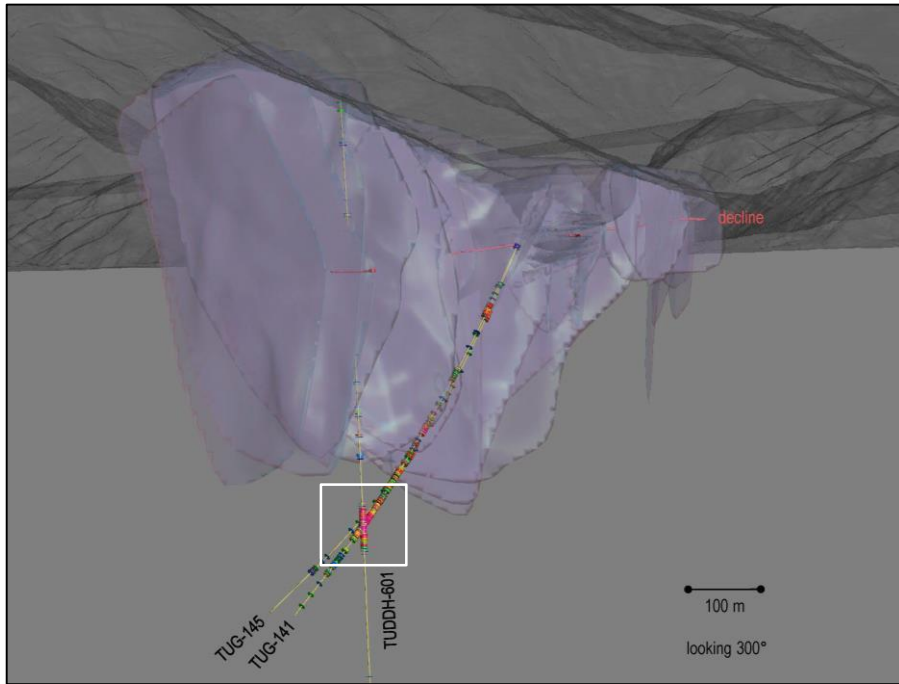
20.9 g/t Au over 75.9m
from 443.4-519.3m, including

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

Other notable intervals include:

- 138.15 g/t Au over 0.30m
- 396.16 g/t Au over 0.30m
- 103.54 g/t Au over 0.30m
- 340.07 g/t Au over 0.30m
- 600.42 g/t Au over 0.30m
- 244.37 g/t Au over 0.30m
- 230.18 g/t Au over 0.30m
- 105.58 g/t Au over 0.30m





TUG 141: High Grade Zone 500 Discovery

TUG-141:
drilled from underground along the Tuvatu exploration decline

TUDDH-601:
confirmed mineralization in TUG-141 with **12.22 g/t Au over 54.9m** vertical, including **29.24 g/t Au over 15.6m**

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



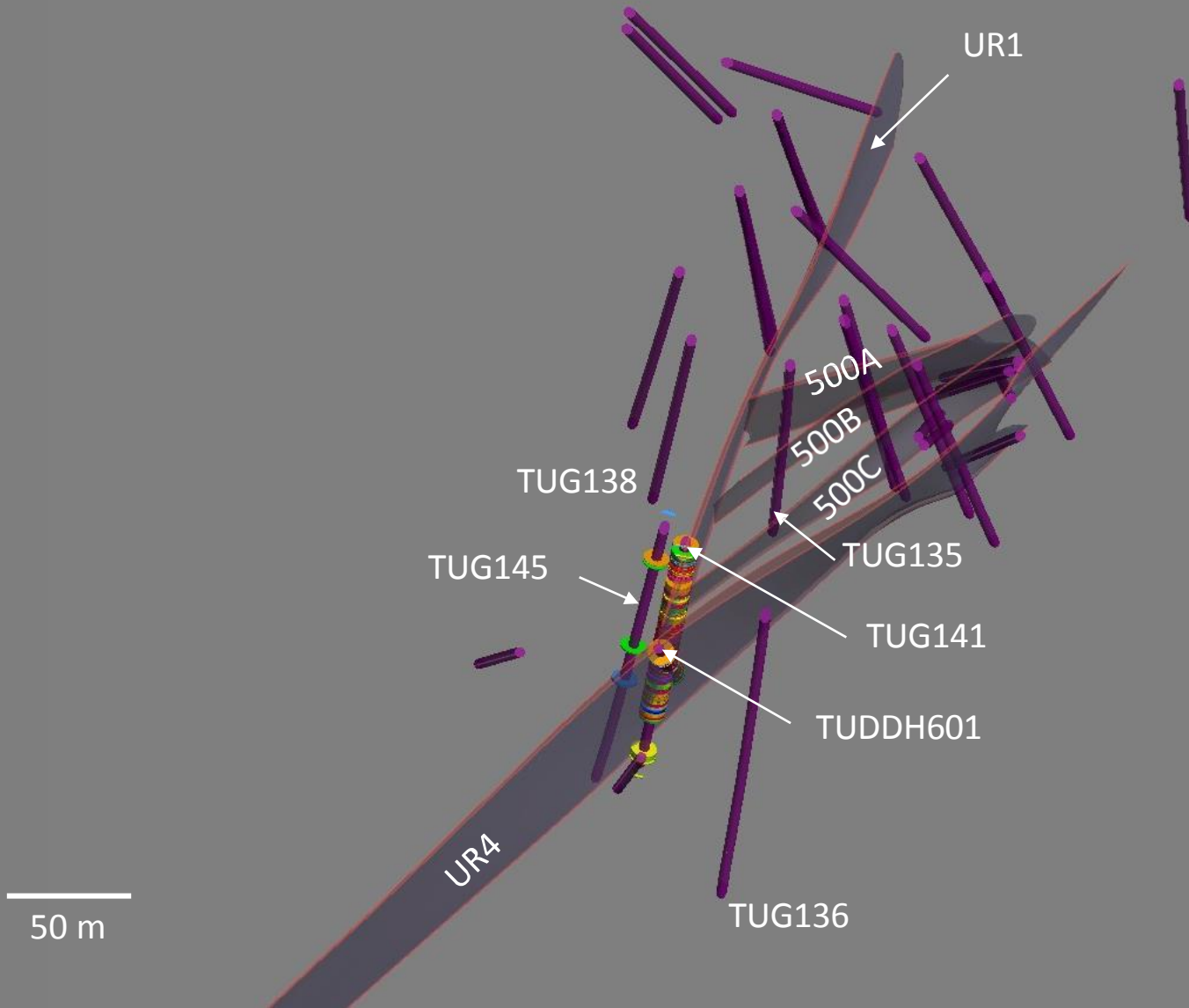
593.9m 230.4 g/t Au

TUG 141: High Grade Zone 500 Discovery

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

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

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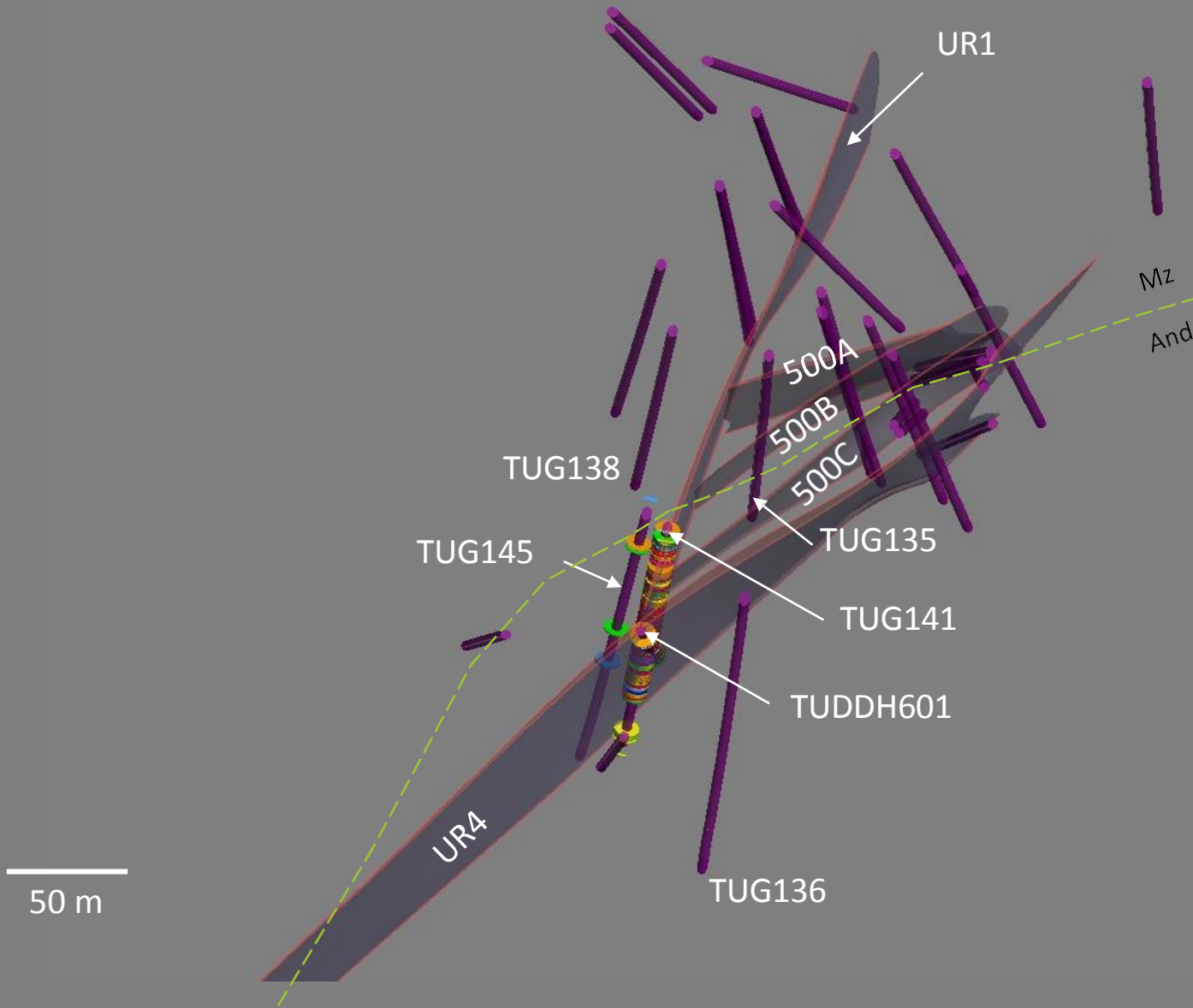


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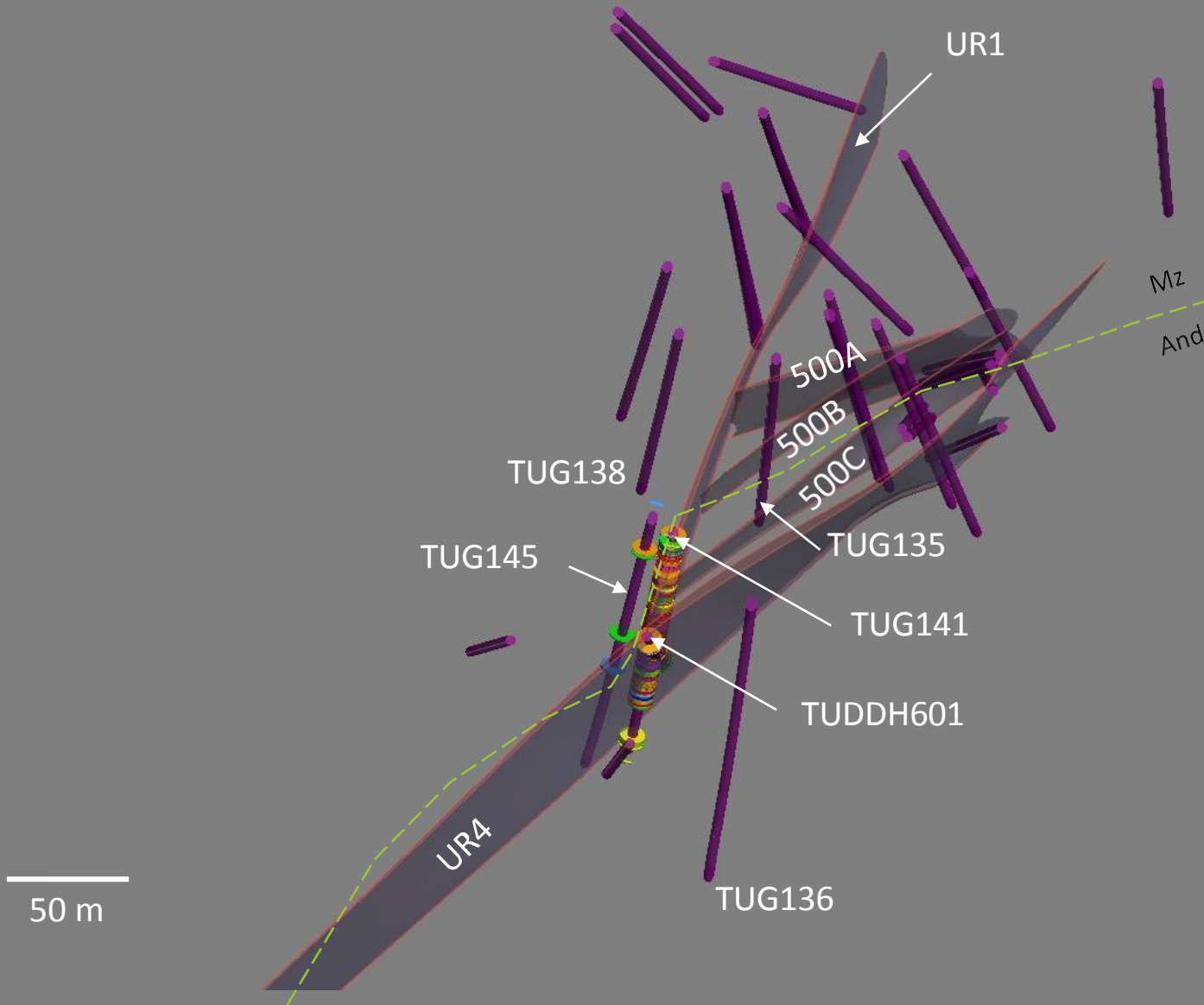


TUG 141: High Grade Zone 500 Discovery

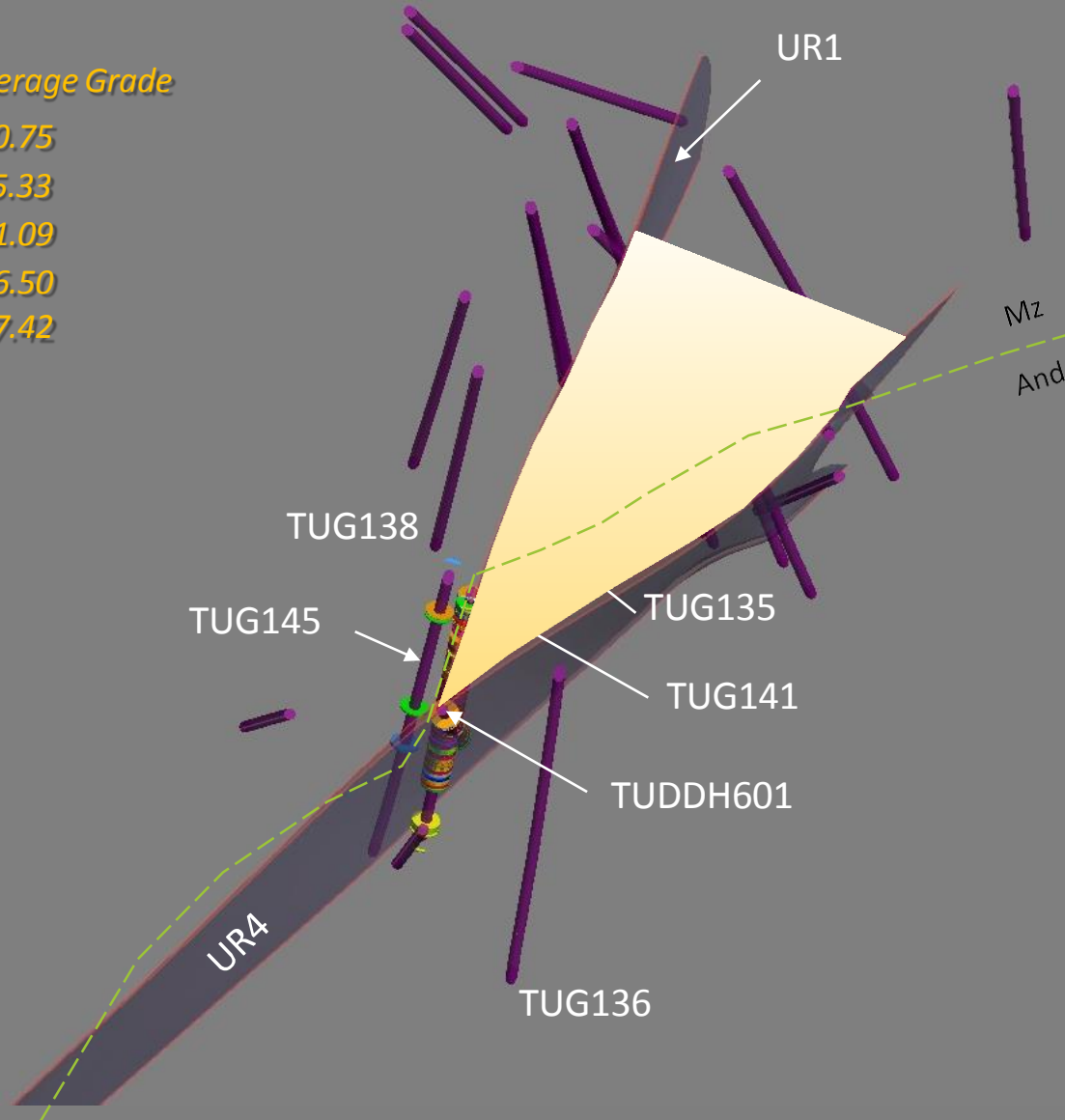
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- 90.35 g/t Au over 7.2m



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

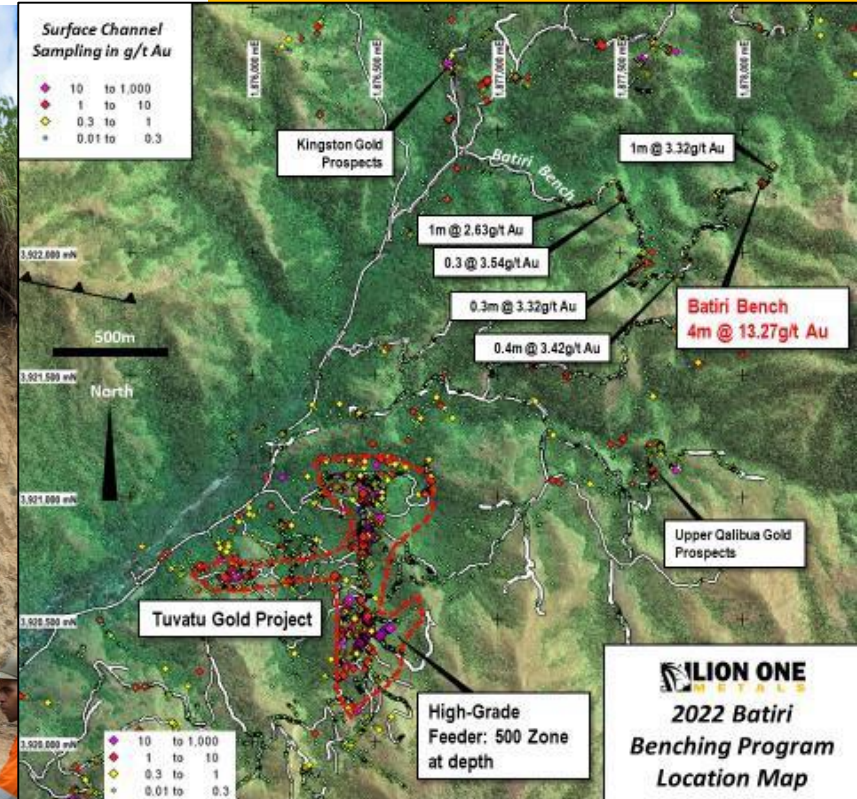
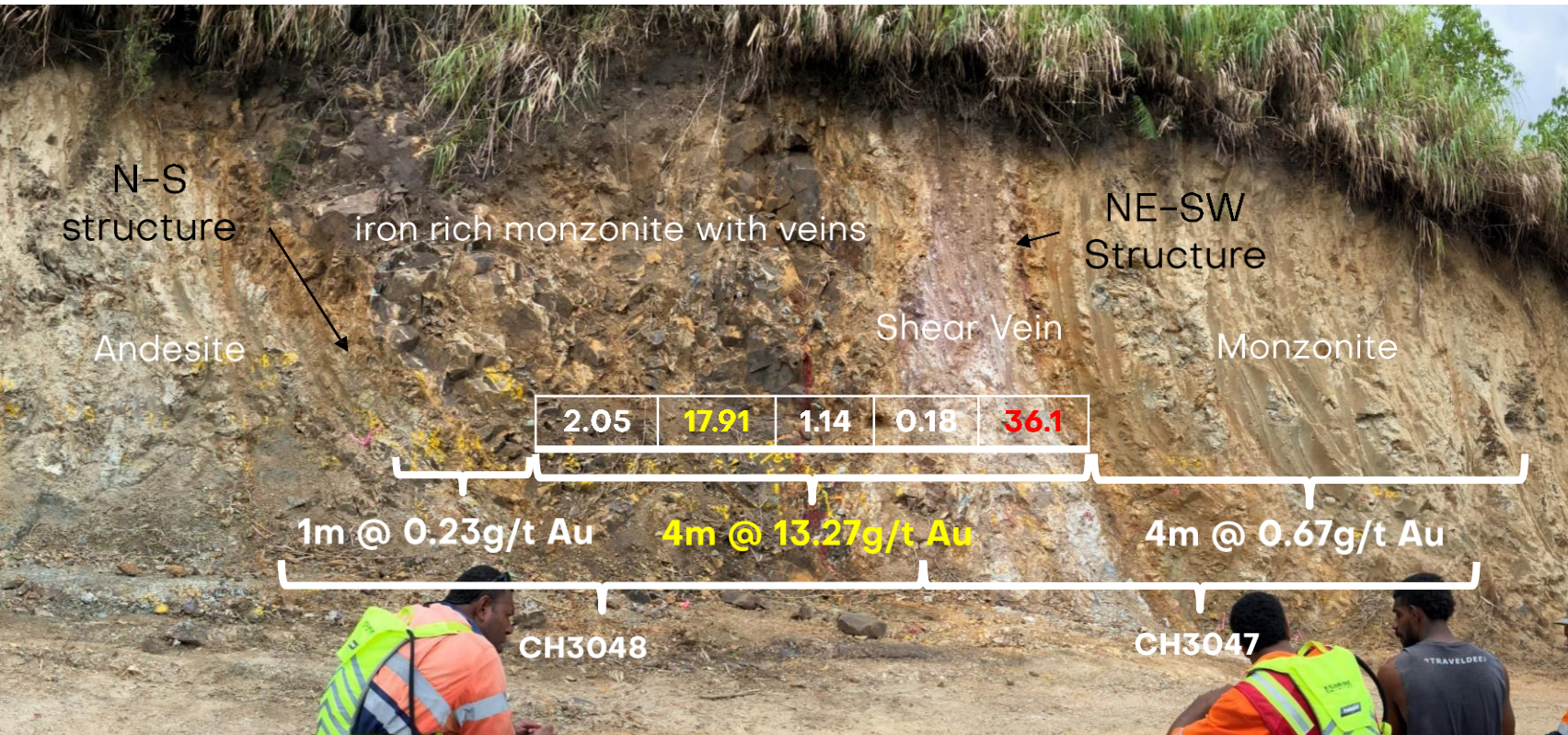
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Regional Discoveries: Batiri Creek Vein

13.27 g/t Au over 4m CHANNEL SAMPLE 2KM N-E OF TUVATU

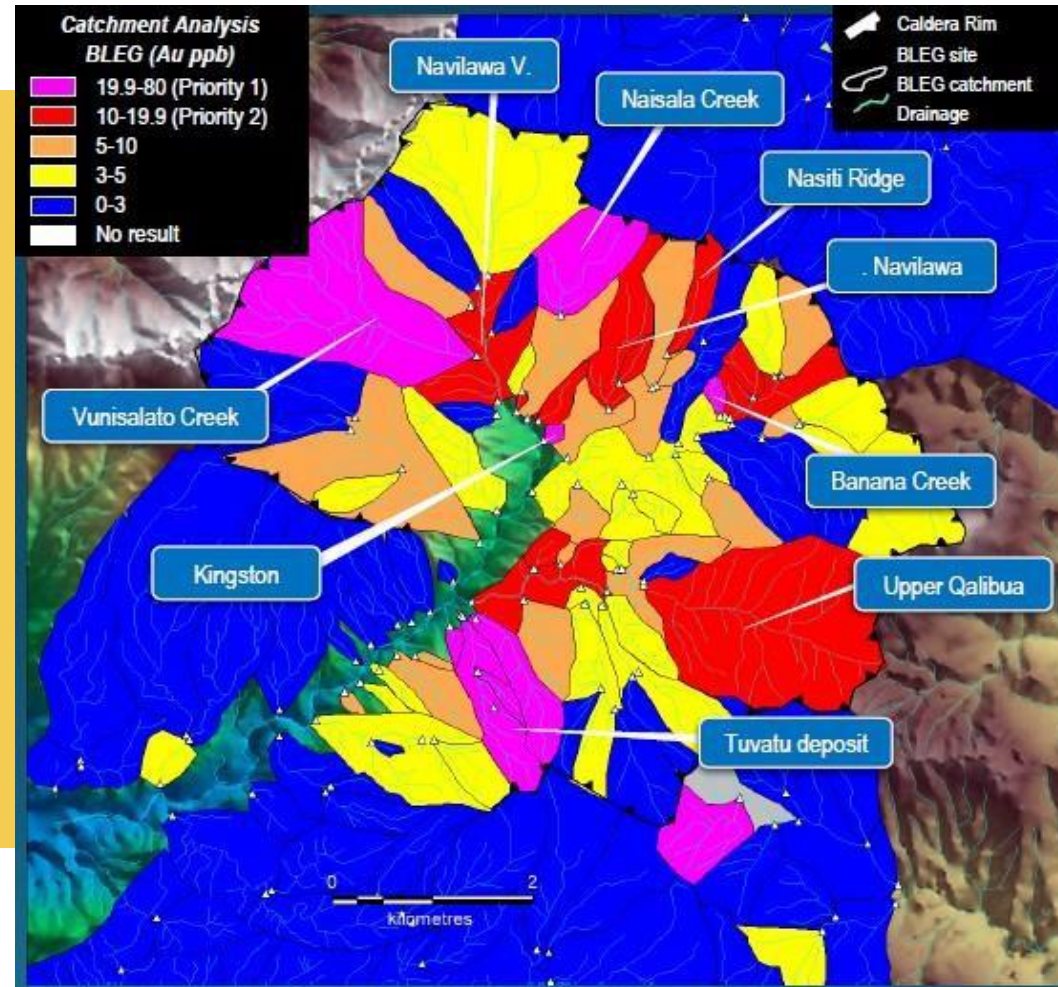


Regional - BLEG Geochemical Survey

HIGH GRADE GOLD ACROSS 7KM WIDE NAVILAWA CALDERA

DRILLED RESOURCE AREA COVERS LESS THAN 5% OF LICENSE AREA

TARGET-RICH ENVIRONMENT

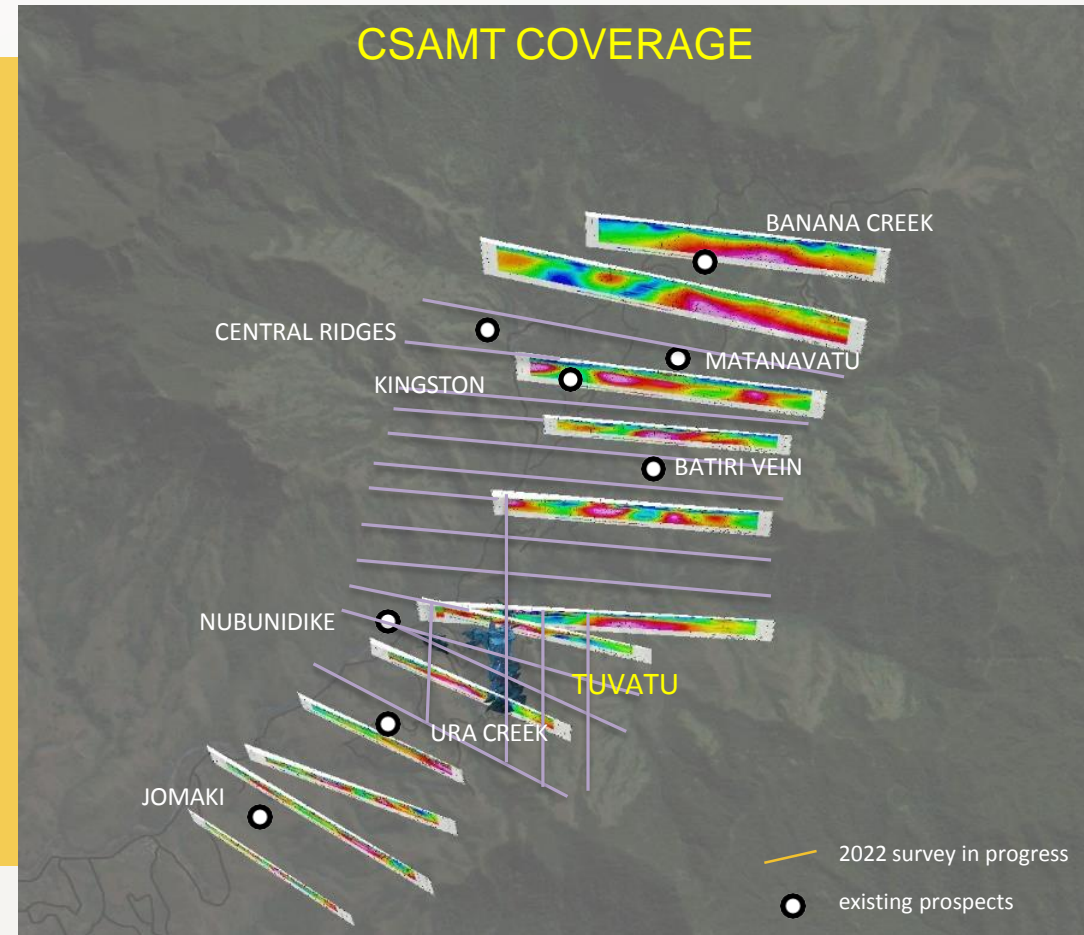


Regional - CSAMT Geophysical Survey

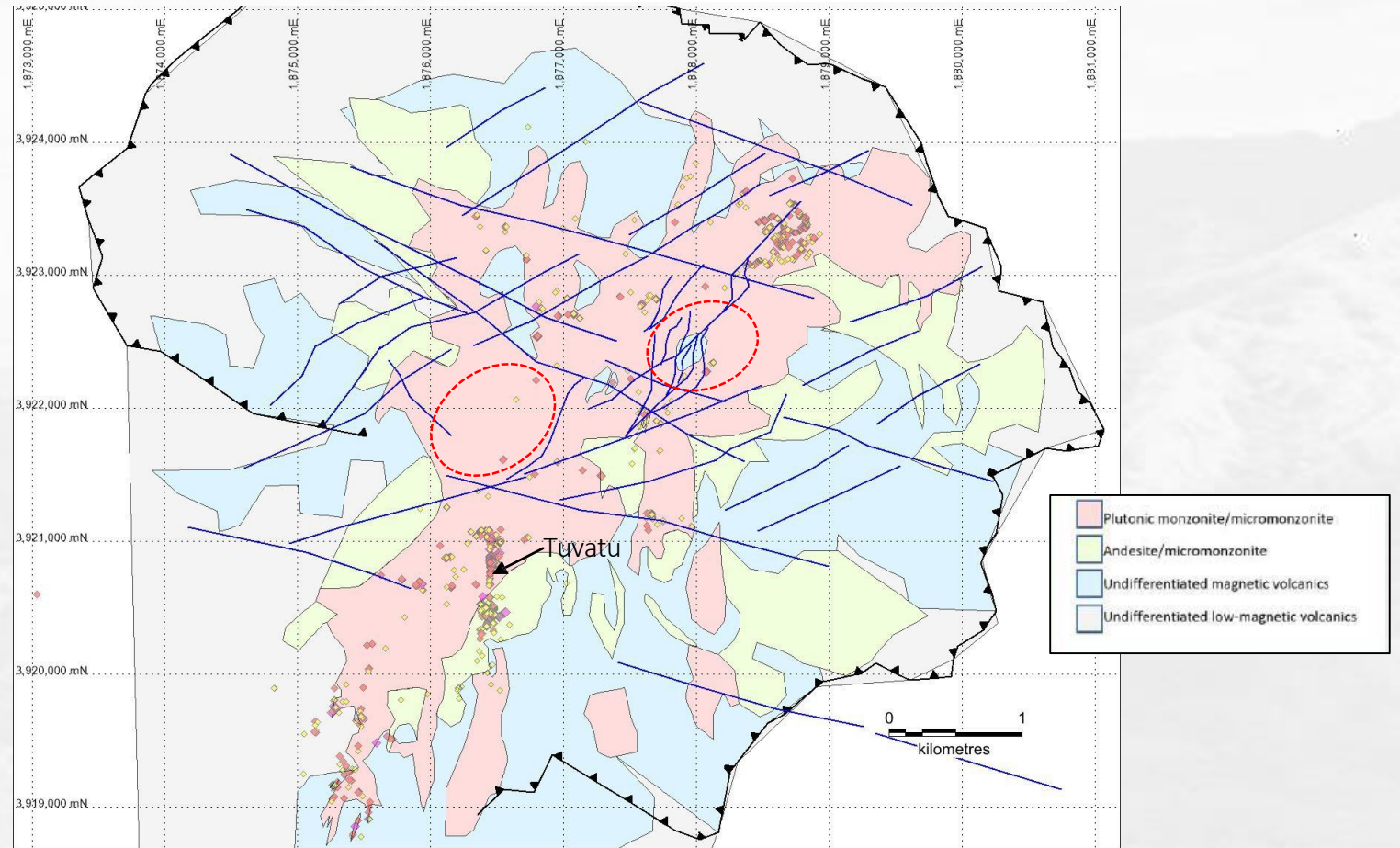
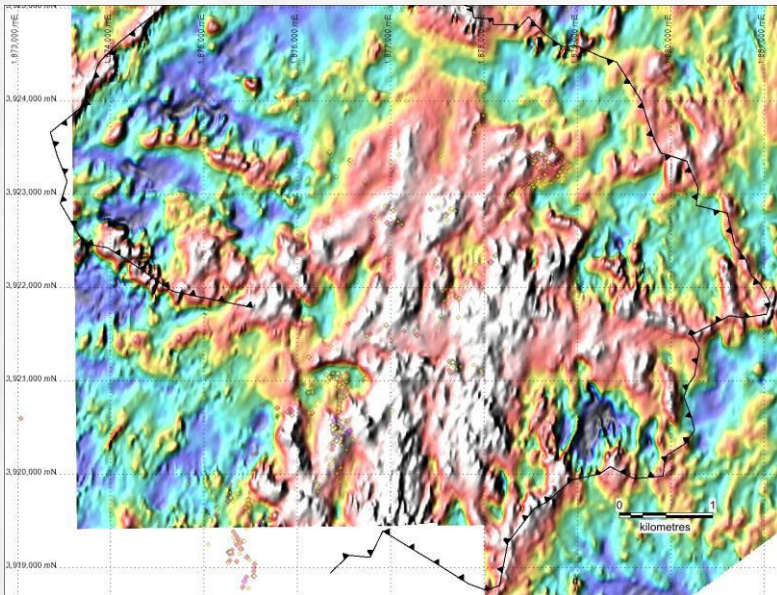
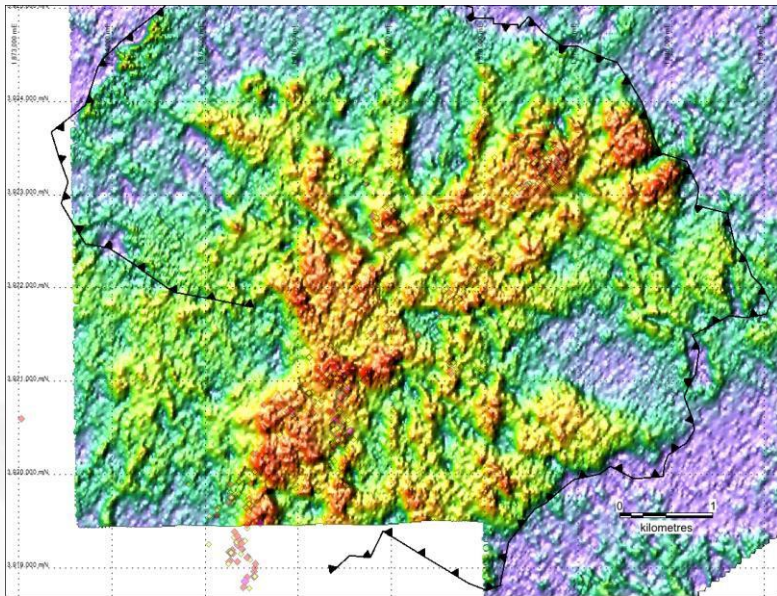
HIGH GRADE GOLD ACROSS 7KM WIDE NAVILAWA CALDERA

DRILLED RESOURCE AREA COVERS LESS THAN 5% OF LICENSE AREA

TARGET-RICH ENVIRONMENT



Regional – Geology & Target Generation



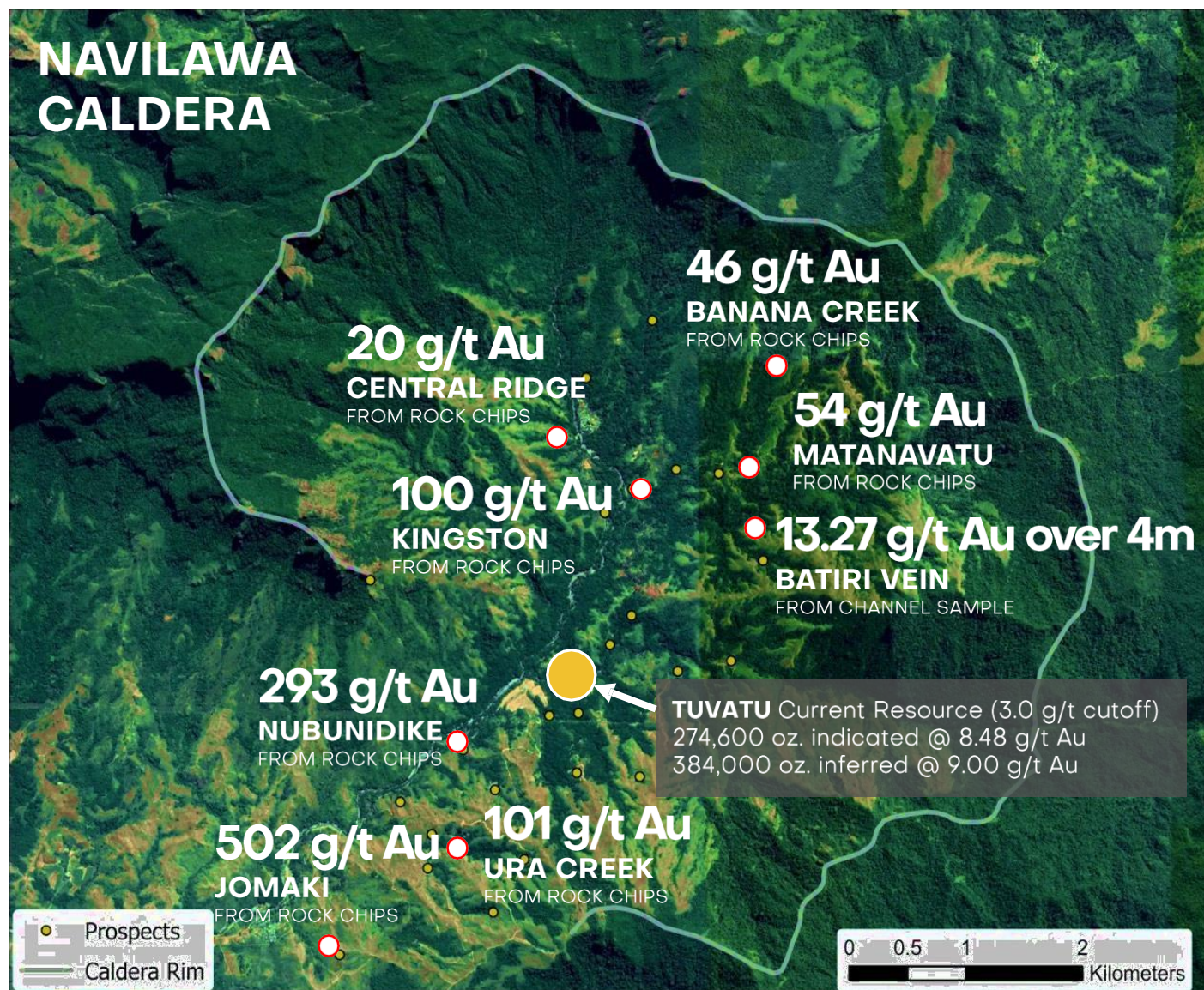
Regional Upside

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

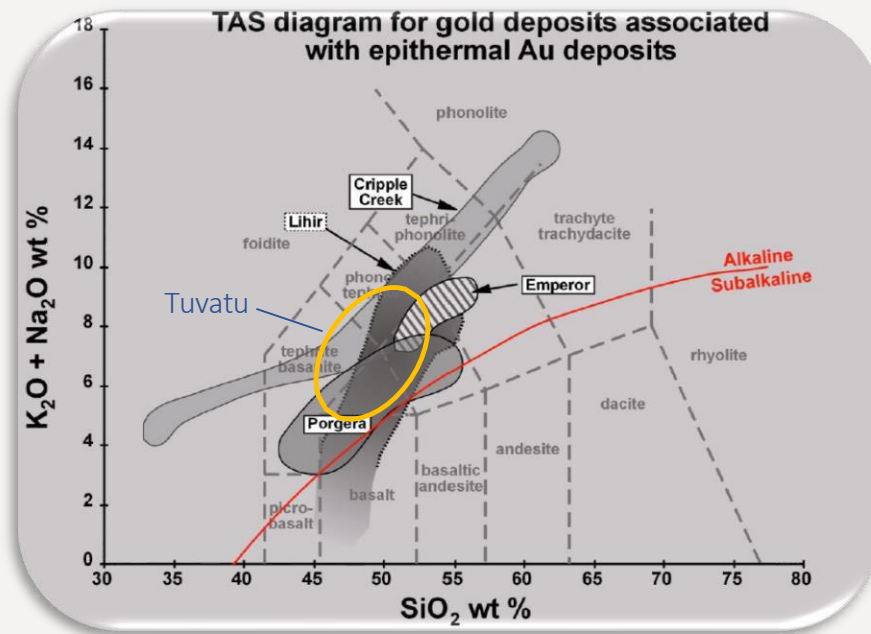
TUVATU DRILLING CONFIRMS VERTICAL PROFILE OF AT LEAST 1,200 METERS, OPEN TO DEPTH

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

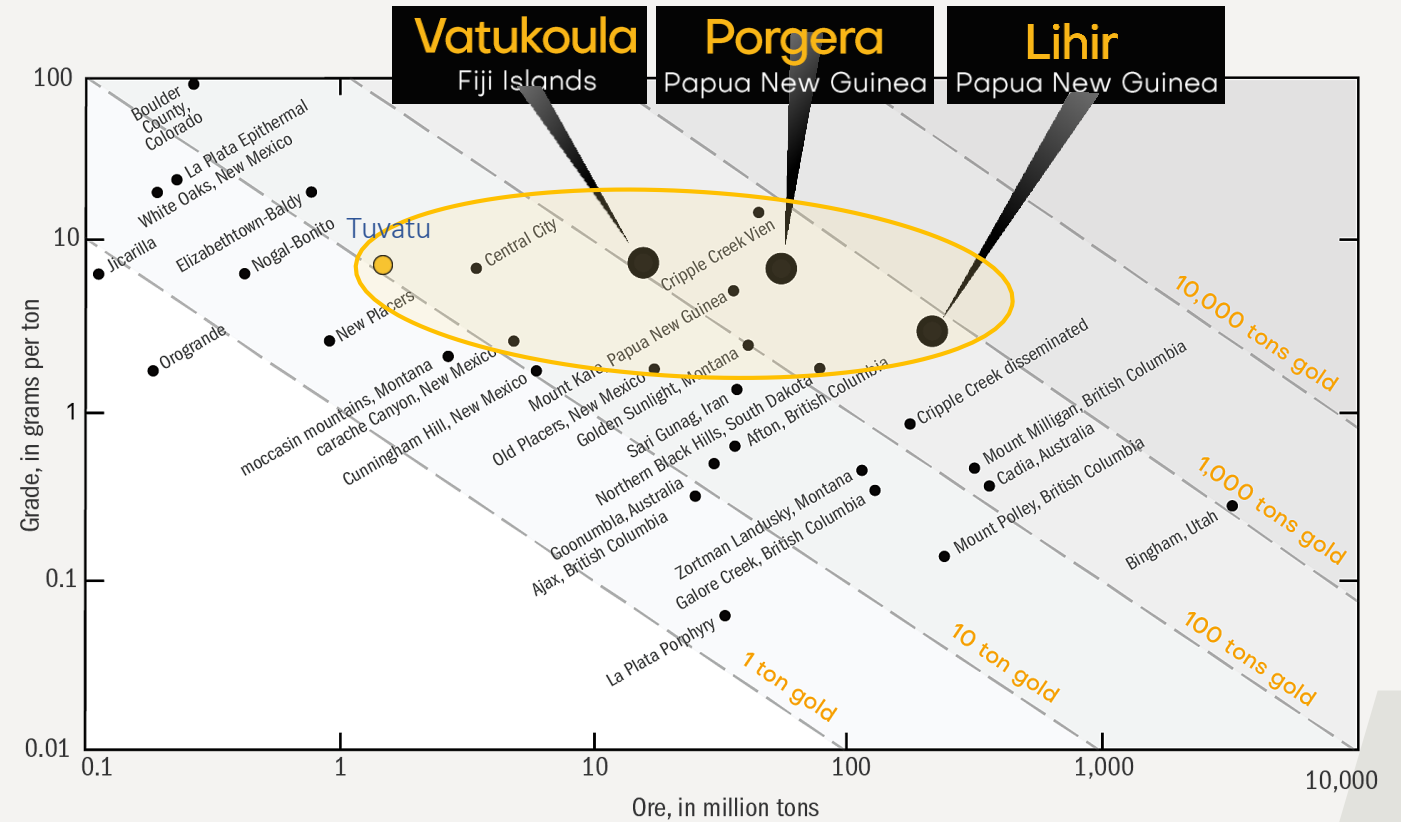
NEW OCCURRENCES BEING DISCOVERED



Alkaline Gold Systems



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



TUVATU Current Resource (3.0 g/t cutoff)
 1,007,000t at 8.48 g/t Au for 274,600 oz indicated
 1,325,000t at 9.00 g/t Au for 384,000 oz inferred

- Small in Number
- Economically Significant
- Unusually Large
- Unusually High Grade

Exploration Model

Alkaline Gold Systems

UNIQUE ATTRIBUTES

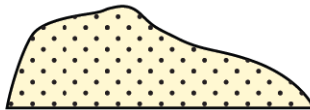
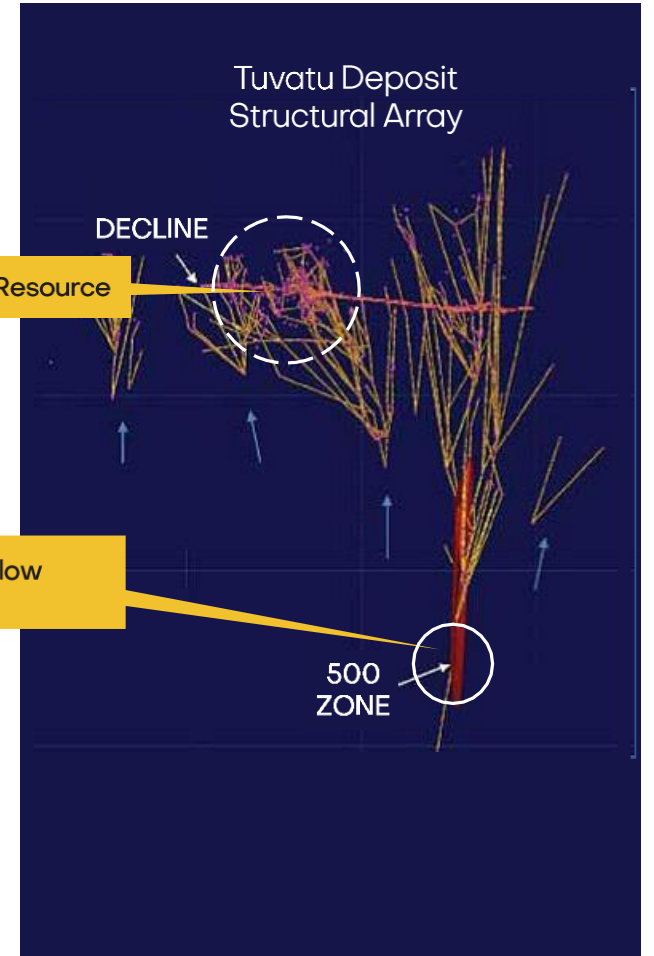
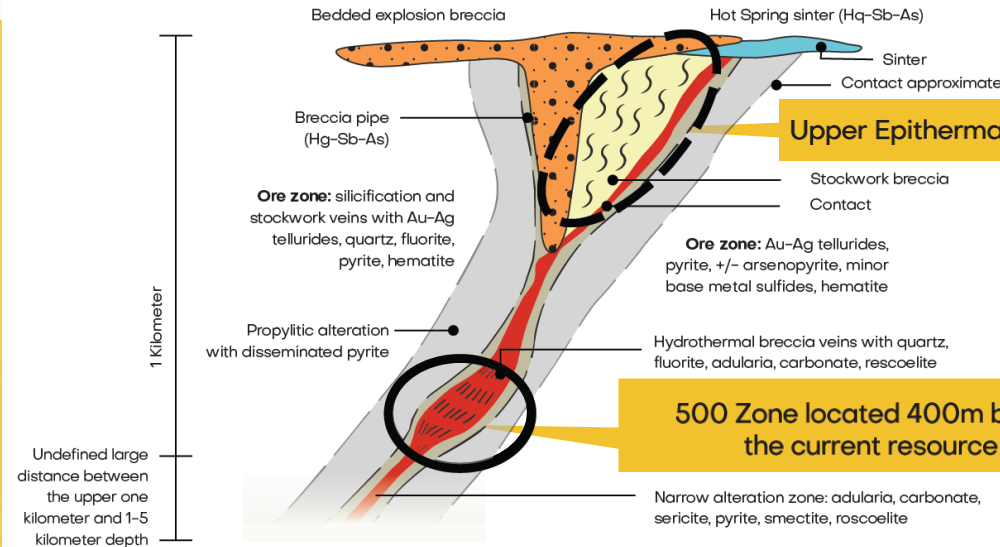
Deep, high grade gold endowments

Rare but economically significant

Favored by major mining companies

Generalized Model

(after Bonham, 1986)



1-5 kilometer depth: alkalic porphyry stock (syenite to phonolite) with possible Cu-Au-Pt mineralization

Alkalic-type Epithermal Gold Deposit

Generalized early model of an alkalic-type epithermal gold deposit (from Bonham, 1986). Note the depiction of possible alkalic-type porphyry deposits. (Ag, silver; As, Arsenic; Au, gold; Cu, copper; Hg, mercury; Pt, platinum; Sb, antimony)

Similarities to Porgera



TUG-141 at 492.5m 25.23 g/t Au



Porgera D Veins

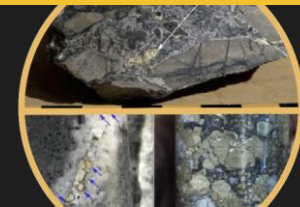
RON STEWART, former CHIEF GEOLOGIST @ PORGERA GOLD MINE for PLACER DOME

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

	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

“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



TSXV:LIO | OTCQX: LOMLF

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