



TUVATU

EXPLORING TO MINE / MINING TO EXPLORE

PERMITTED TO PRODUCE FIJI'S
NEXT HIGH GRADE GOLD MINE

JUNE 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.Ge., 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 .

CAPITAL SUMMARY



MAJOR INVESTORS

DONALD SMITH VALUE FUND (7.51%)
FRANKLIN PRECIOUS METALS (7.1%)
INVESCO GOLD FUND (4.82%)
RBC GLOBAL PRECIOUS METALS
AEGIS VALUE FUND
GABELLI GOLD FUND
MACKENZIE PRECIOUS METALS
CEO WALTER BERUKOFF (13%)

Shares Outstanding	156,421,893
Options	8,530,000
Broker Warrants	1,303,010
Warrants	0
Shares Fully Diluted	166,254,903
Working Capital	C\$40M
Market Capitalization	C\$162M*
* As of June 1, 2022 @ C\$1.04 per share	



CANADA	USA	AUSTRALIA
TSX-V: LIO	OTCQX: LOMLF	ASX: LLO
LIO: \$1.04 52wk: \$1.34 \$0.88 Avg. vol: 79k		

LEADERSHIP



Walter Berukoff
Chairman & CEO

TRACK RECORD

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

DIRECTORS

RICHARD MELI CA., EX-RIO TINTO, LA MANCHA
KEVIN PUIL CFA RIVI ADVISORS
DAVID TRETBAR PGEO EX-SUMMIT USA (SUMITOMO)

MANAGEMENT

PATRICK HICKEY, COO EX-NEWMONT, KINROSS
SERGIO CATTALANI, SVP EXPLORATION EX-OSISKO, INCO
TONY YOUNG, CA CFO
HAMISH GREIG, VP, CORP. SECRETARY

MINING DIVISION



Patrick Hickey
Chief Operating Officer
Engineer, mine builder, Ex
Newmont/Kinross



Kevin Li
Project Manager
Engineer – Formerly Fluor, SNC
Lavalin, Saskpower, Pretium



Lion One Fiji Team
Over 200 years combined
experience in underground mining,
geology, drilling, and mineral
exploration

EXPLORATION DIVISION



Sergio Cattalani
Senior VP, Exploration
Economic geologist,
Ex-Osisko Mining, Inco-CVRD,
Equinox Gold

Will Ostrenga, P.Geo
Economic geologist,
Ex-Sumitomo, Novo Resources

Quinton Hennigh, P.Geo
Economic geologist,
Ex-Newmont, Novo Resources



ASSAY LAB



6 DRILL RIGS

***2 additional rigs on order**

HIGH GRADE DISCOVERY

- the longest high-grade gold intercept ever recorded at Tuvatu (June 2022)
- new discovery located at depth beneath the current resource
- fully contained within the permit boundaries of the Tuvatu mining lease

TUG 141: 20.9 g/t Au over 75.9 meters

- 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**

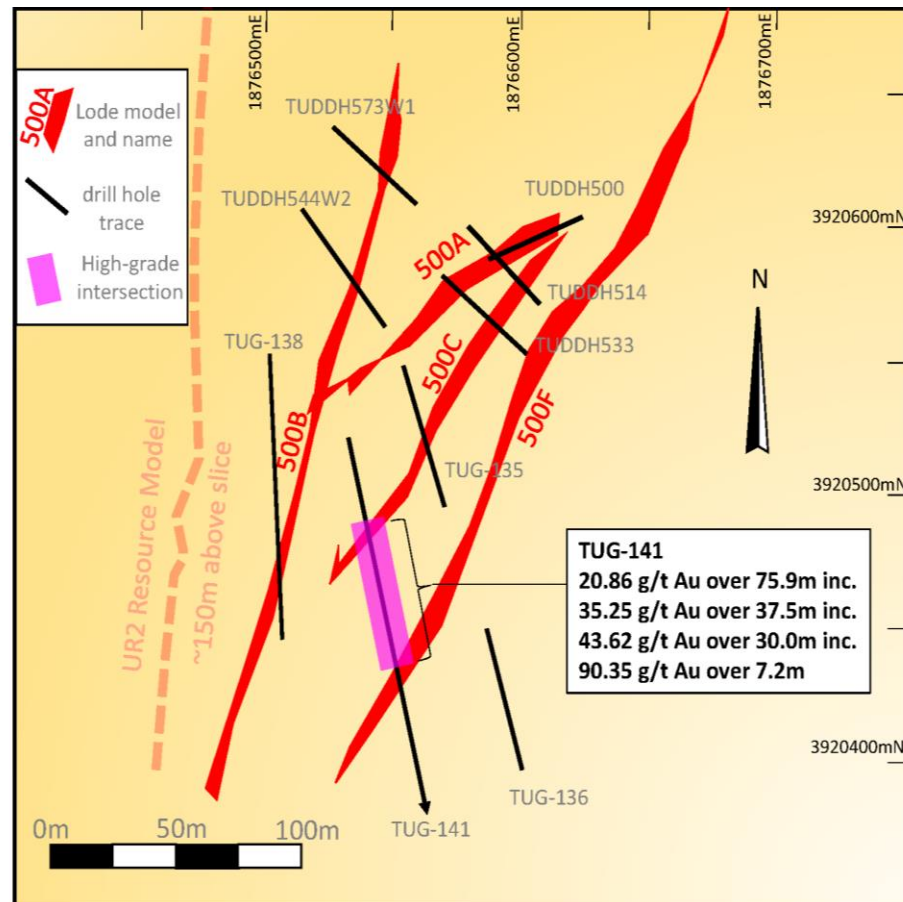


HIGH GRADE DISCOVERY

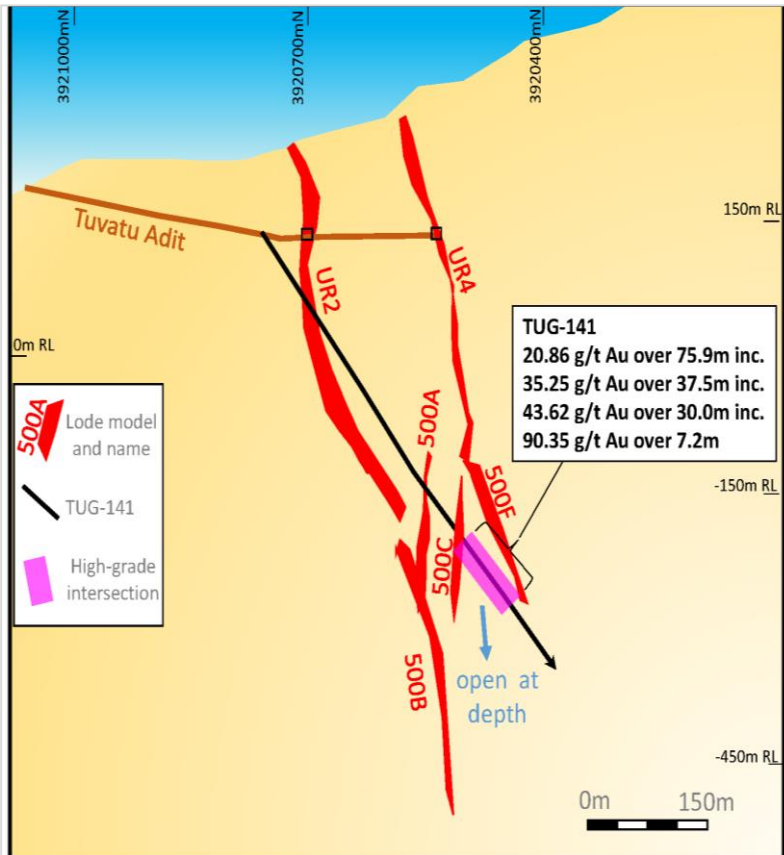
Plan view of the trace of TUG-141 and selected drill holes relative to the 500 Zone lodes modeled to date.

Other notable intervals include:

- 138.15 g/t Au over 0.30m from 450.9-451.2m
- 396.16 g/t Au over 0.30m from 479.1-479.4m
- 103.54 g/t Au over 0.30m from 498.6-498.9m
- 340.07 g/t Au over 0.30m from 498.9-499.2m
- 600.42 g/t Au over 0.30m from 499.5-499.8m
- 244.37 g/t Au over 0.30m from 502.5- 503.1m
- 230.18 g/t Au over 0.30m from 507.3-507.6m
- 105.58 g/t Au over 0.30m from 518.7-519.0m



HIGH GRADE DISCOVERY



Vertical section looking E at the traces of TUG-141 and selected drill holes relative to the 500 Zone lodes modeled to date.

TUG-141 was drilled from underground along the Tuvatu exploration decline.

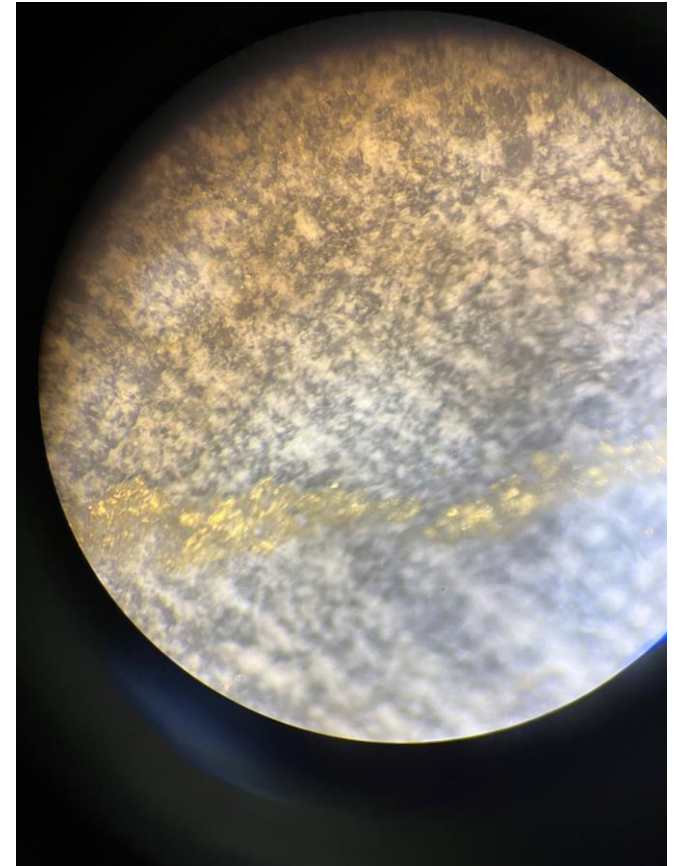
The traces of known lodes UR2 and UR4, and modelled lodes of the 500 Zone feeder are shown in red.

HIGH GRADE DISCOVERY

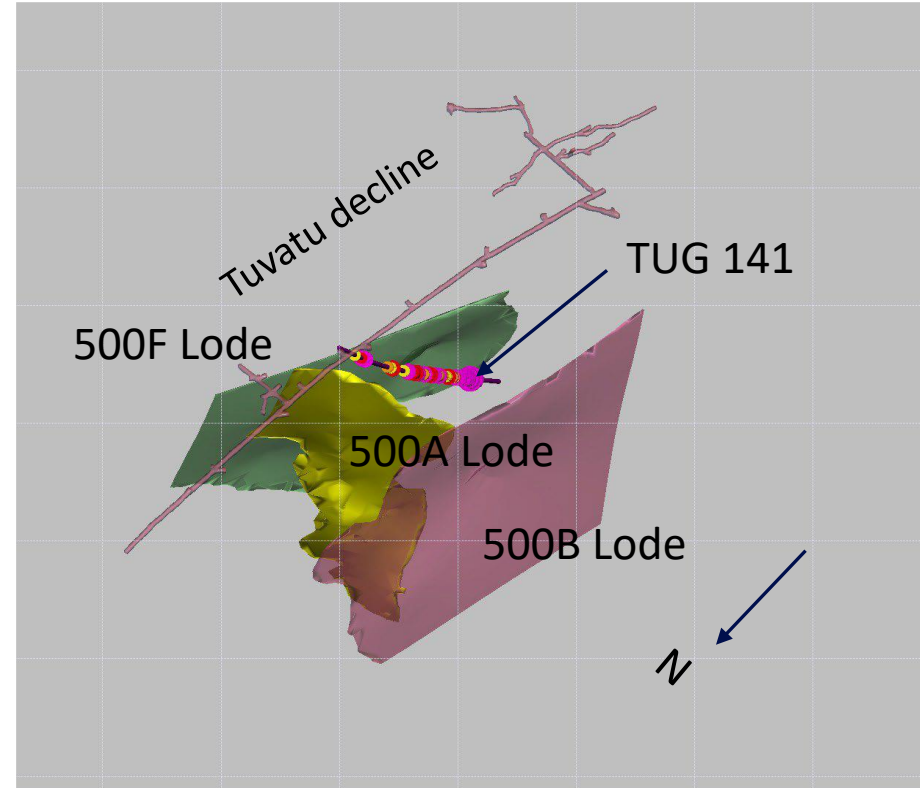
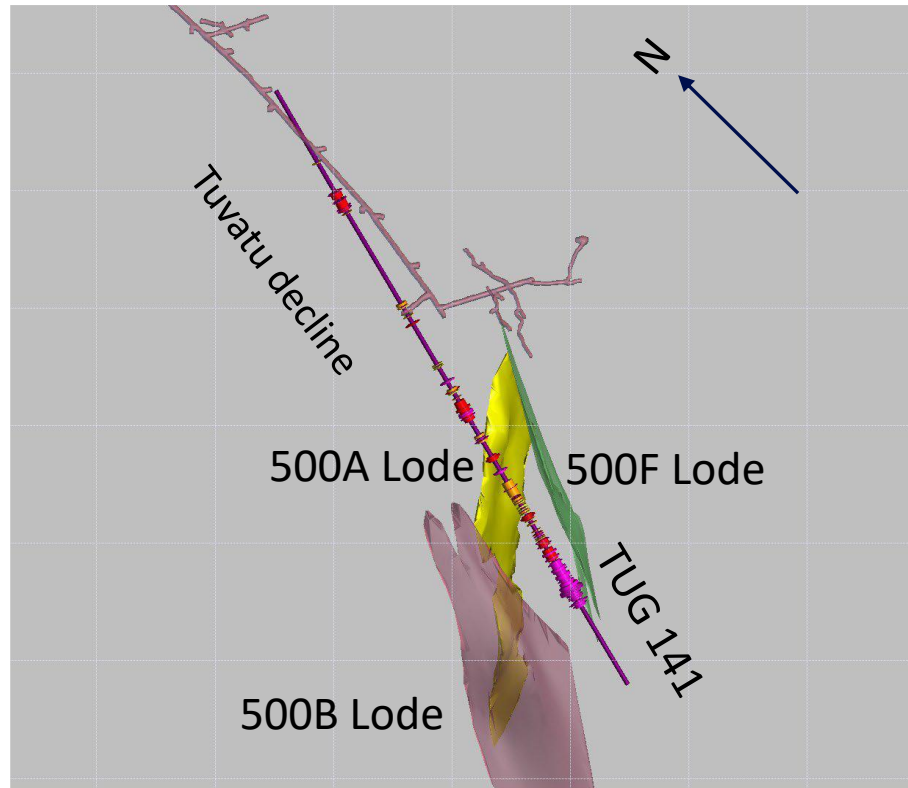
(L) 0.5mm wide veinlet
with gold & roscoelite
from sample that
assayed 600 g/t Au



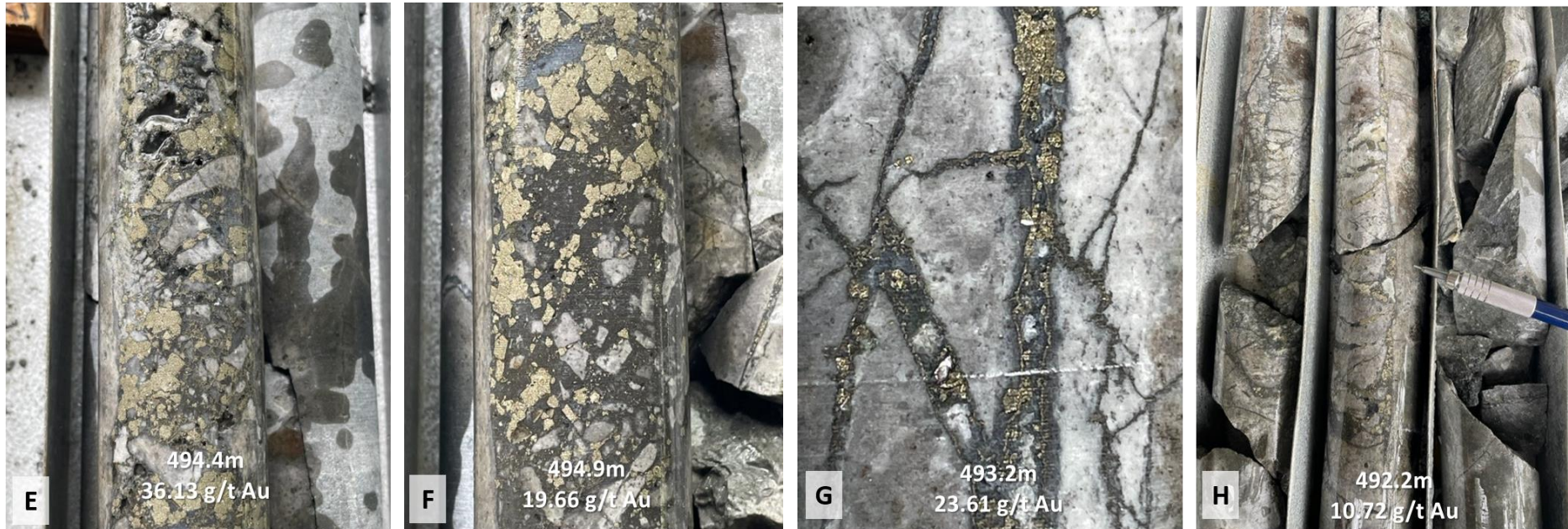
(R) Vein of gold + pyrite
under microscope



HIGH GRADE DISCOVERY

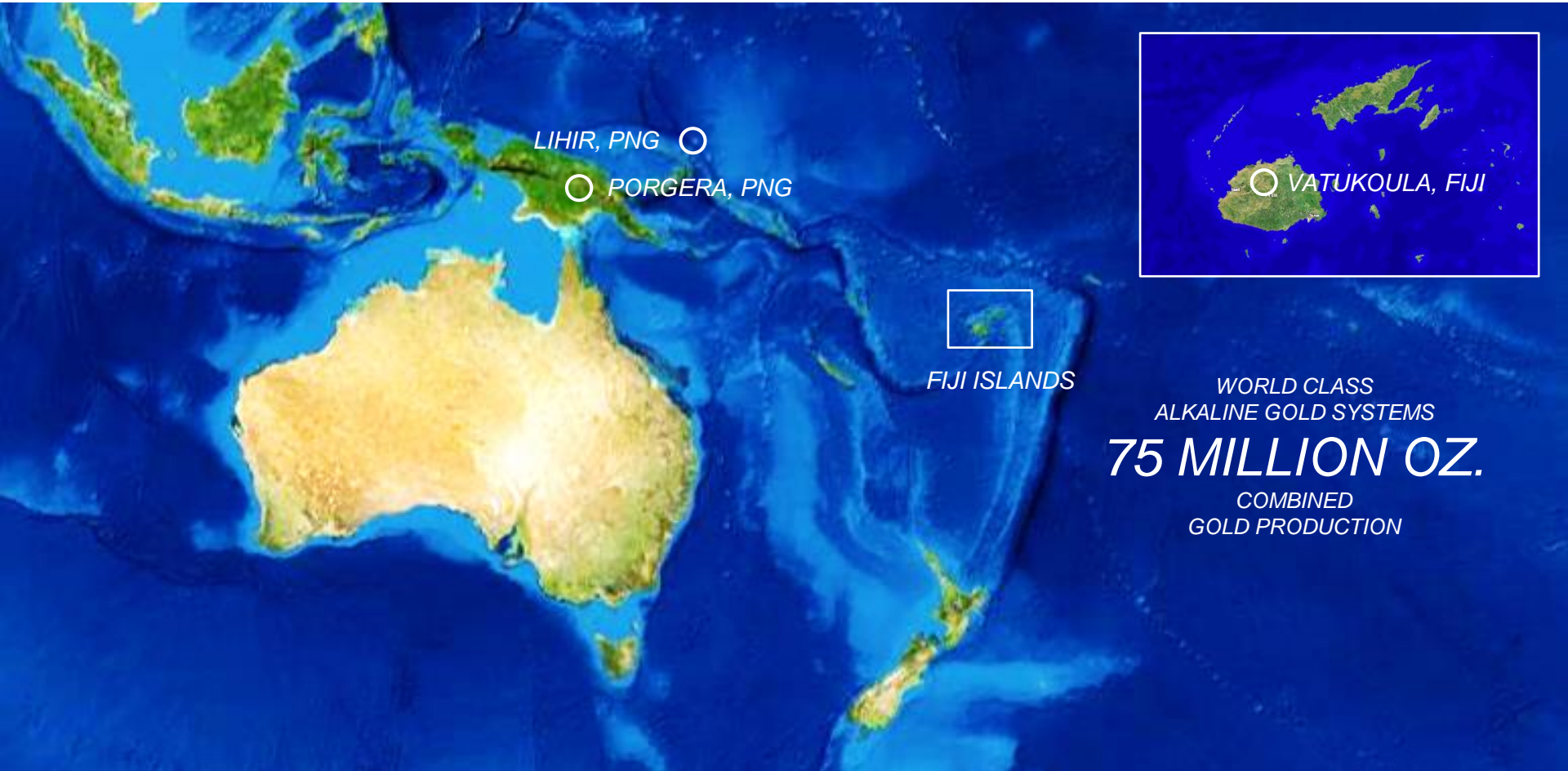


HIGH GRADE DISCOVERY JUNE 2022



(E) Vuggy 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.

SOUTH PACIFIC SETTING



LIHIR, PNG ○

○ PORGERA, PNG

○ VATUKOULA, FIJI

FIJI ISLANDS

WORLD CLASS
ALKALINE GOLD SYSTEMS

75 MILLION OZ.

COMBINED
GOLD PRODUCTION

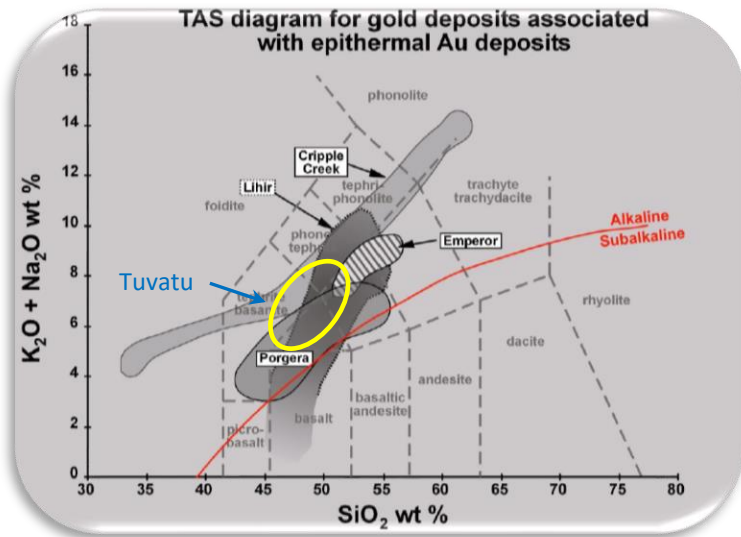
TSX-V: LIO OTCQX: LOMLF

1
3

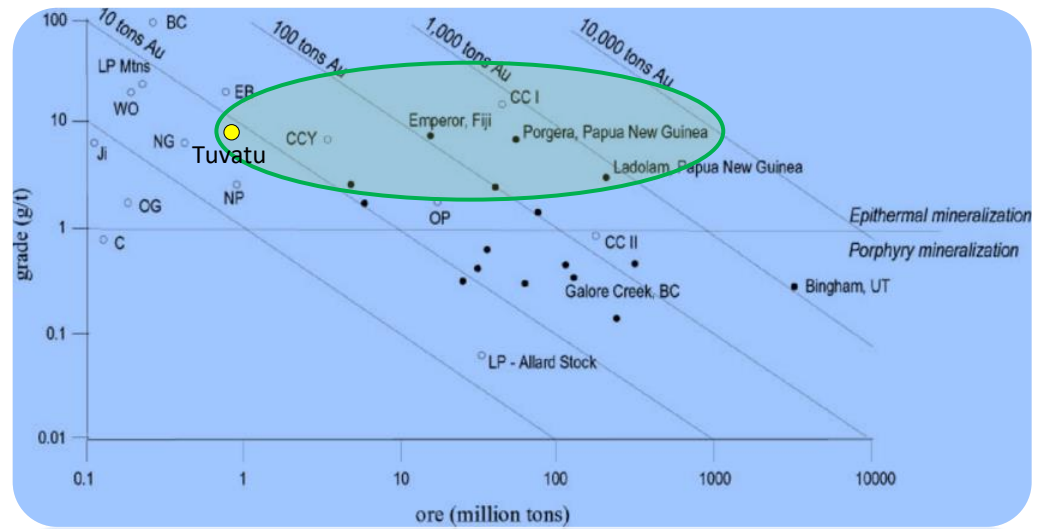
www.liononemetals.com

ALKALINE GOLD SYSTEMS

Small in Number but Economically Significant



Unusually Large, Unusually High Grade



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

LOCATION & INFRASTRUCTURE



Tuvatu minesite located
25km from Fiji office at
Nadi International Airport

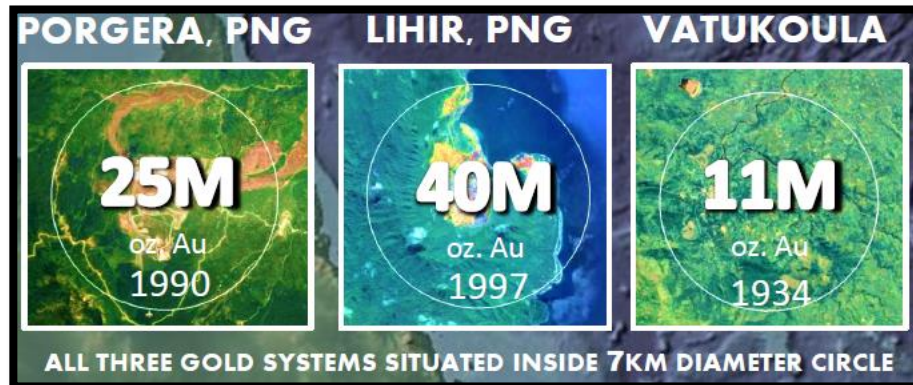
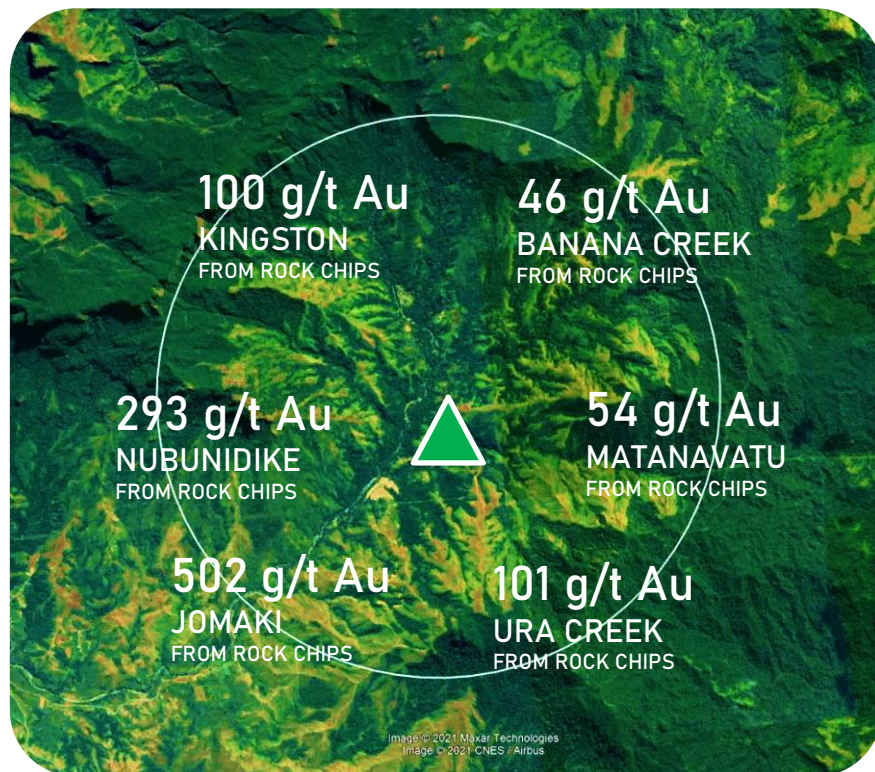
35km from deepwater port
of Lautoka

40km from Vatukoula
(7 million oz. producer)

Vastly experienced local
mining industry workforce



NAVILAWA CALDERA



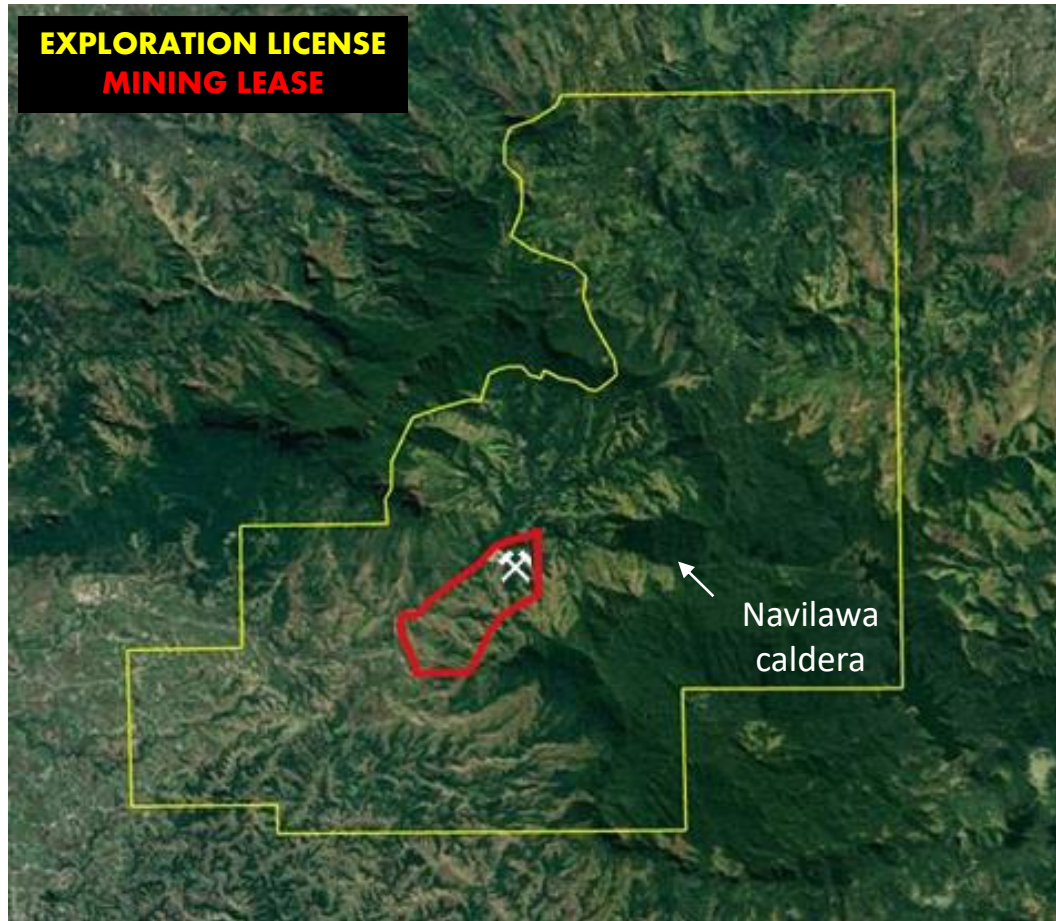
TUVATU Current Resource (3.0 g/t cutoff)
 274,600 oz. indicated @ 8.48 g/t Au
 384,000 oz. inferred @ 9.00 g/t Au



TUVATU PROJECT



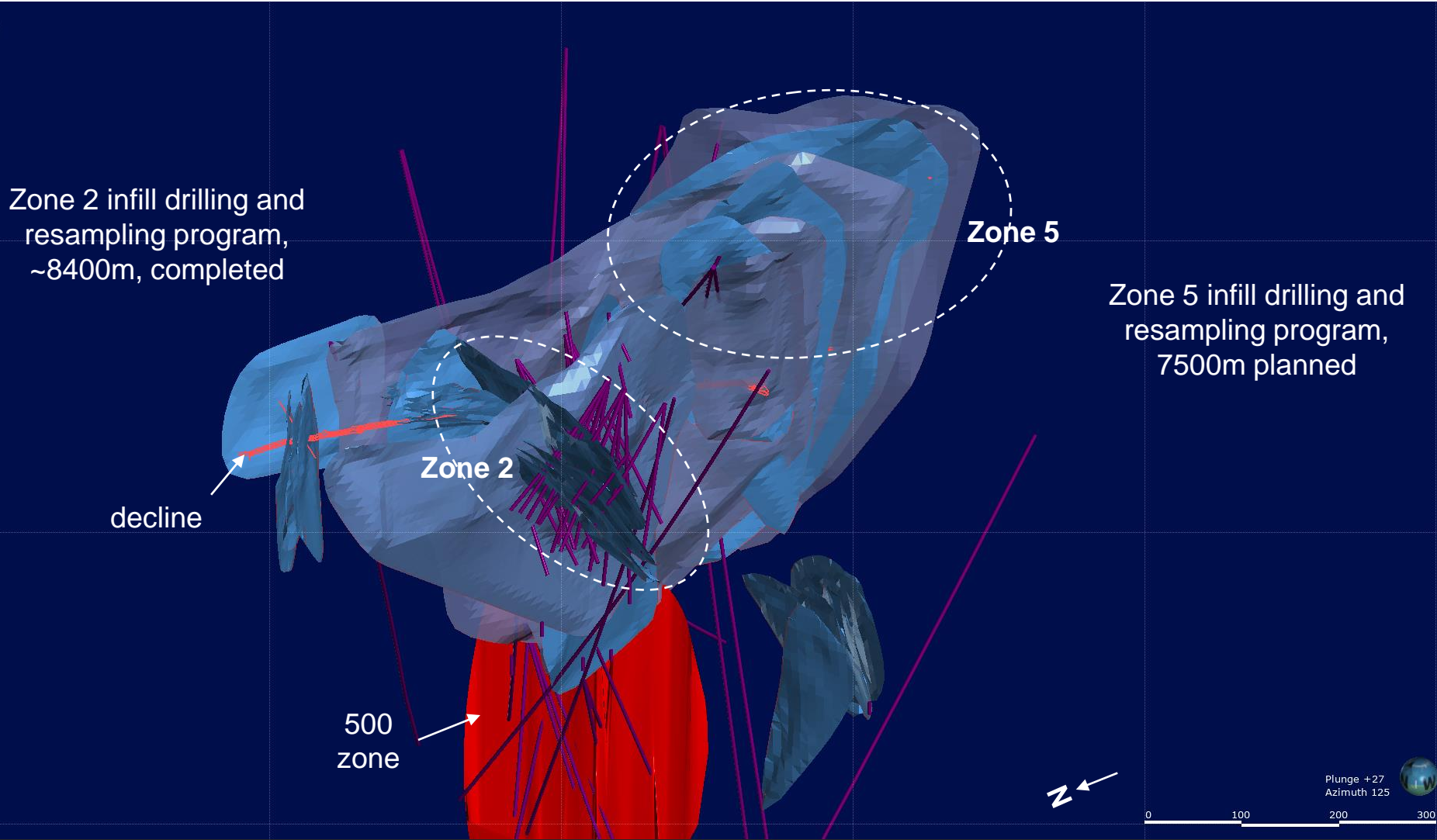
EXPLORATION LICENSE
MINING LEASE



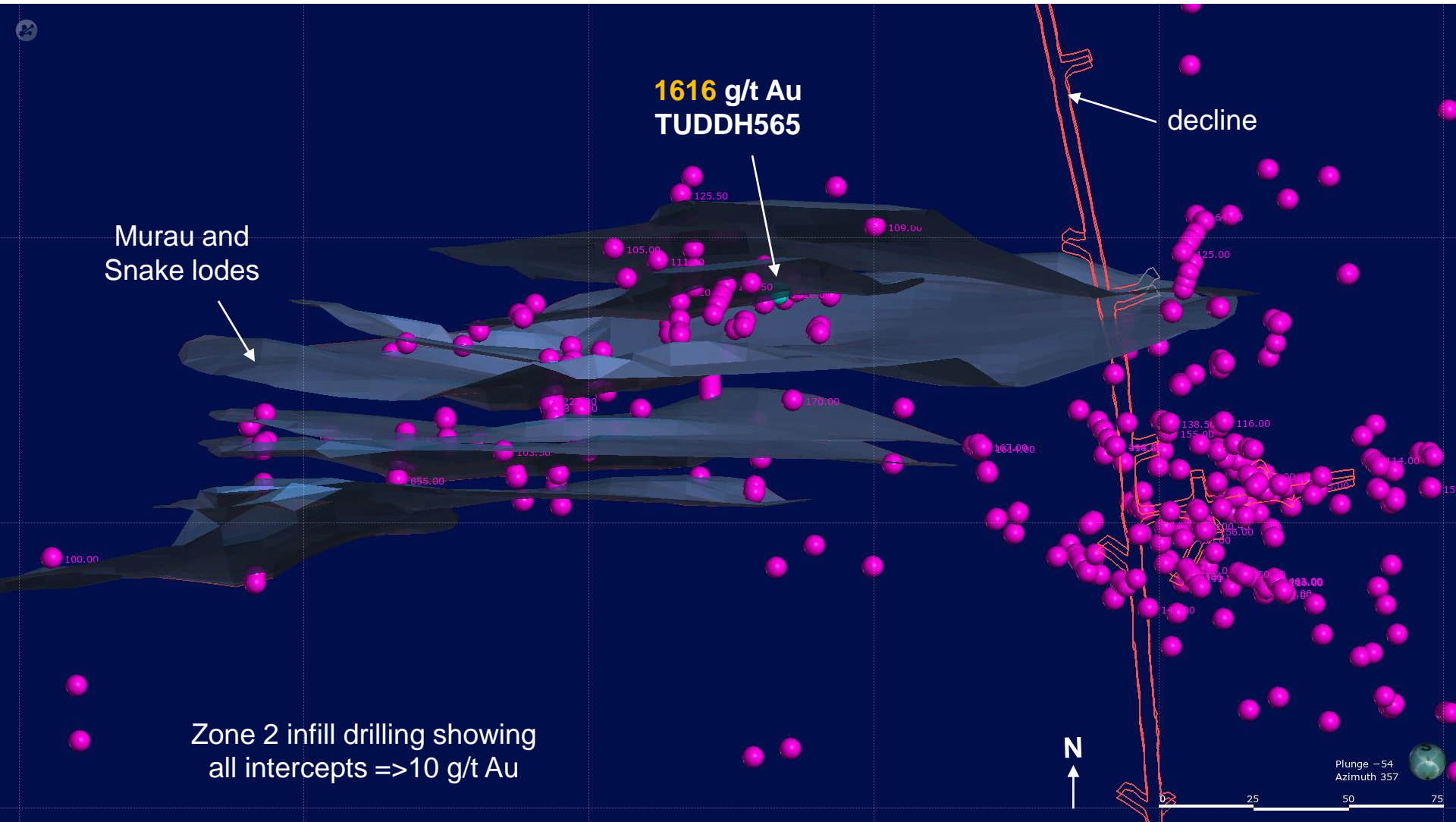
EXPLORATION STRATEGY

- 1. RESOURCE EXPANSION*
- 2. DEPTH EXTENSIONS*
- 3. REGIONAL TARGETS*

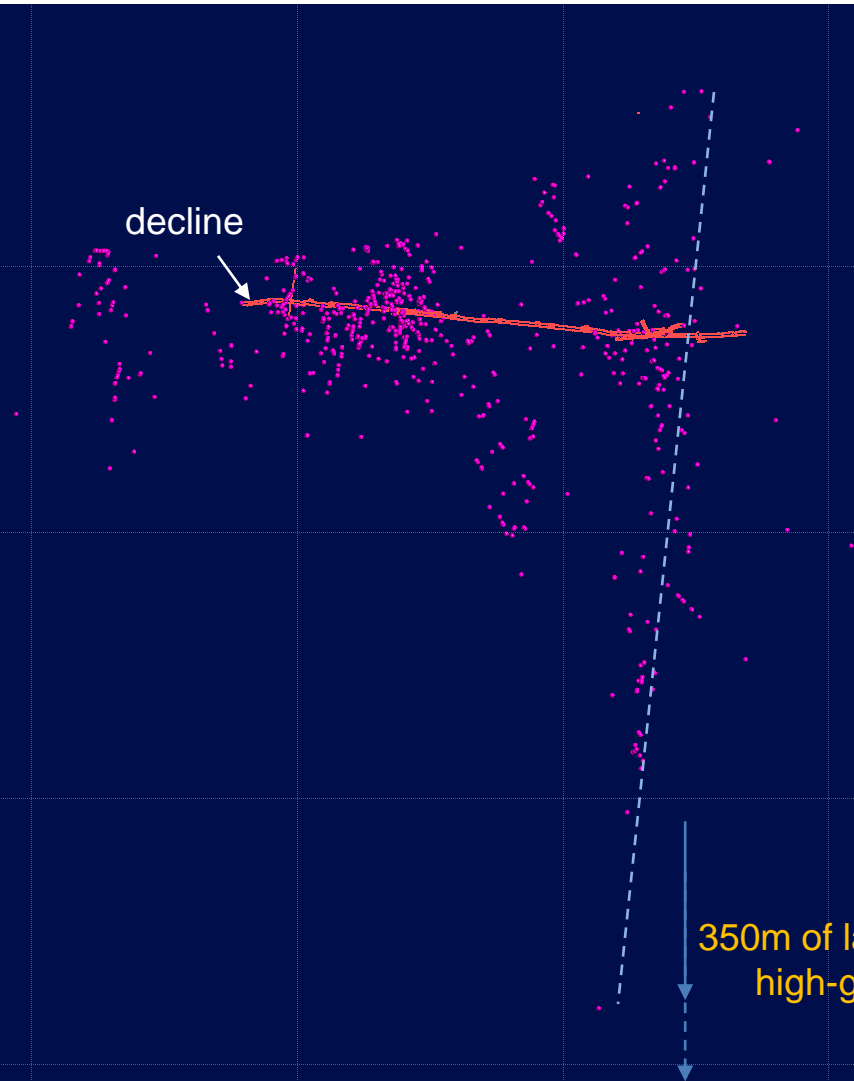
TUVATU DEPOSIT – Resource Expansion



TUVATU DEPOSIT – Resource Expansion



TUVATU DEPOSIT – Depth Extension



Alkaline Au deposits are known to exhibit remarkable vertical continuity of mineralization, up to >1200m vertically e.g. Cripple Creek, CO; Vatukoula, Fiji.

Vertical extent of mineralization at Tuvatu is currently 1140 m

All intercepts =>10 g/t Au

350m of largely untested high-grade feeder



Plunge -05
Azimuth 045

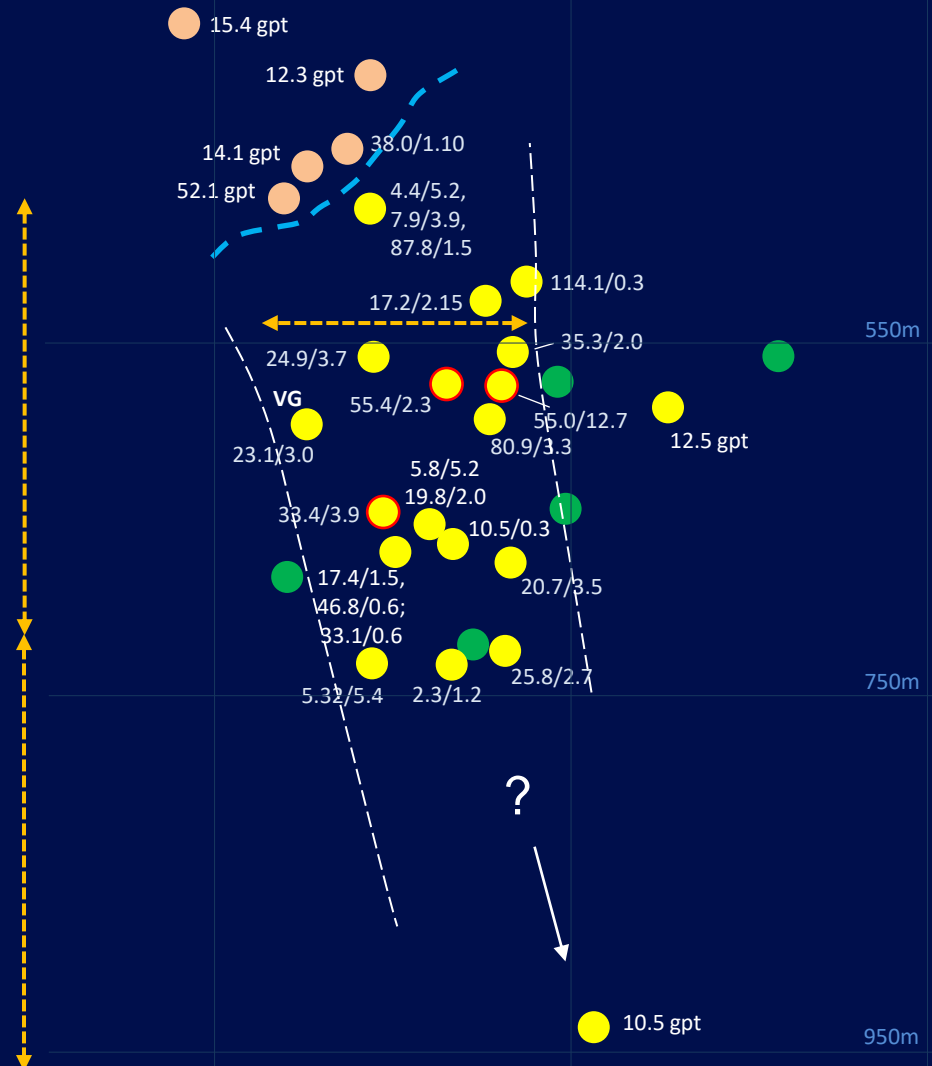


TUVATU DEPOSIT – 500 Zone



500 Zone drilling to date

- 150m x 250m over a ~90m thickness
- using a 3 g/t cutoff, average grade of all composited intervals in this zone is **~25 g/t Au**
- mineralization is known to occur at least another ~350m lower
- remains largely untested



TUVATU DEPOSIT – 500 Zone

DDH 500



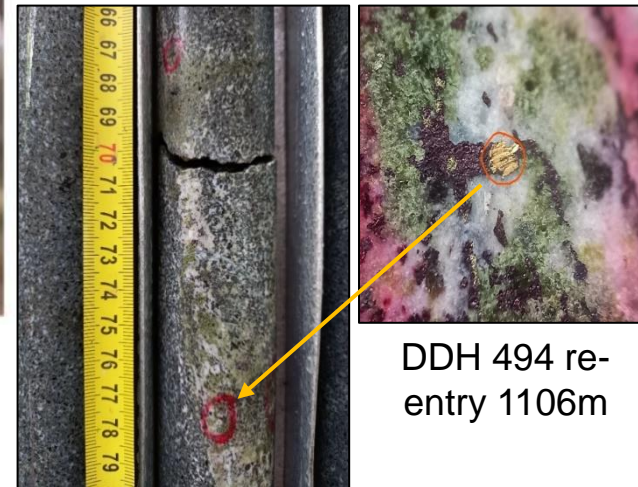
DDH 533



DDH 544W2



DDH 544W2 33.40 g/t Au over 3.90m from 629.3m

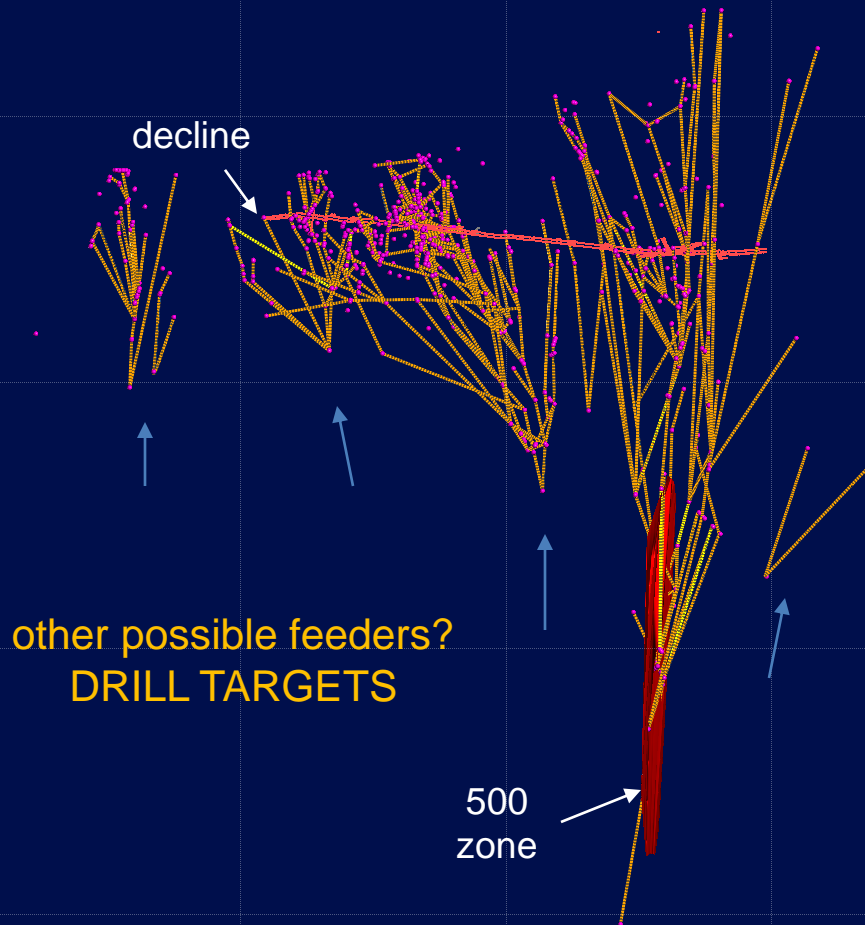


DDH 494 re-entry 1106m

DDH 500 55.43 g/t Au over 12.7m from 571.0m

DDH 533 55.44 g/t Au over 2.30m from 575.7m

TUVATU DEPOSIT – Depth Extension



All intercepts => 10 g/t Au

other possible feeders?
DRILL TARGETS

500
zone



Plunge -05
Azimuth 045

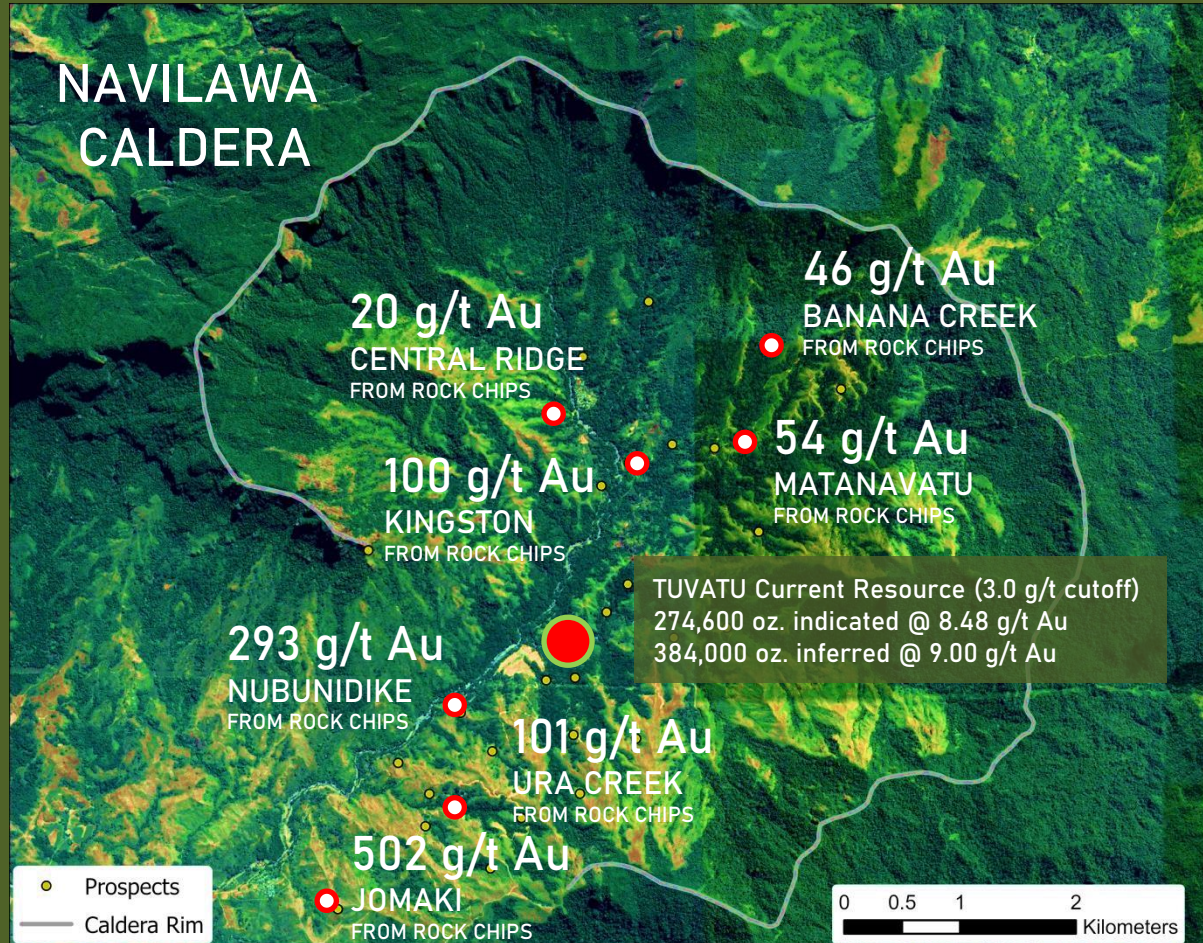


EXPLORATION UPSIDE

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

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

**TARGET RICH DRILLING
PIPELINE**



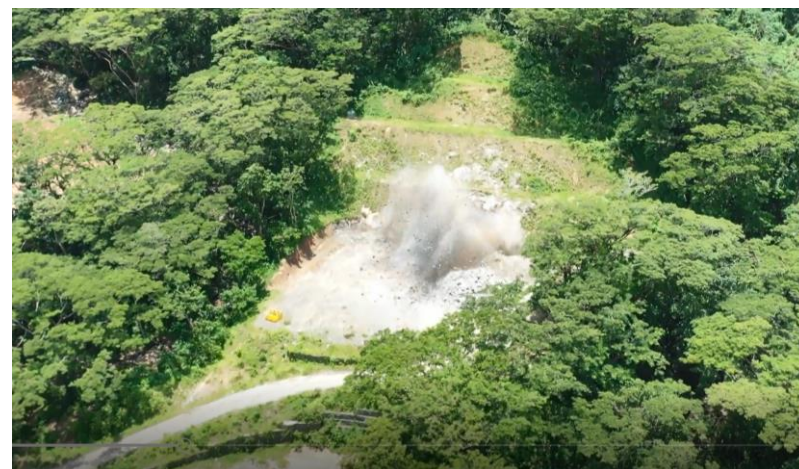
MINE DEVELOPMENT

PERMITS ARE IN PLACE FOR UNDERGROUND MINING OPERATIONS

DEVELOPMENT OF NO. 2 UNDERGROUND ACCESS PORTAL UNDERWAY

MOBILE MINING EQUIPMENT FLEET HAS BEEN PURCHASED OR DELIVERED

EXPECTED UG DEV RATE OF 2M/DAY



MILL DESIGN & CONSTRUCTION



DETAILED ENGINEERING & PROCUREMENT UNDERWAY

DESIGN PROCESS COMPLETED FOR SCALABLE MILL FACILITY

INSTALLATION & INITIAL PRODUCTION PLANNED FOR Q3 & Q4 2023



PROJECT INFRASTRUCTURE



MINESITE INFRASTRUCTURE

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

1. Offices
2. Water supply and waste-water treatment.
3. Power
4. Tailings
5. Mine Explosives Magazine
6. Communications including fiber-optic access

ERP SYSTEMS IMPLEMENTATION

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





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