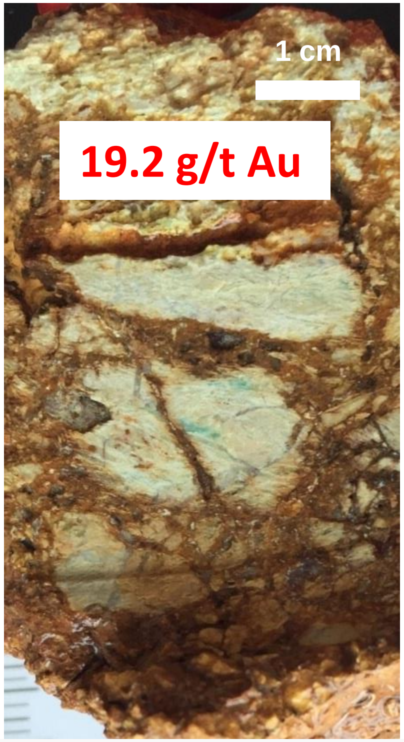
Zenith Minerals Limited

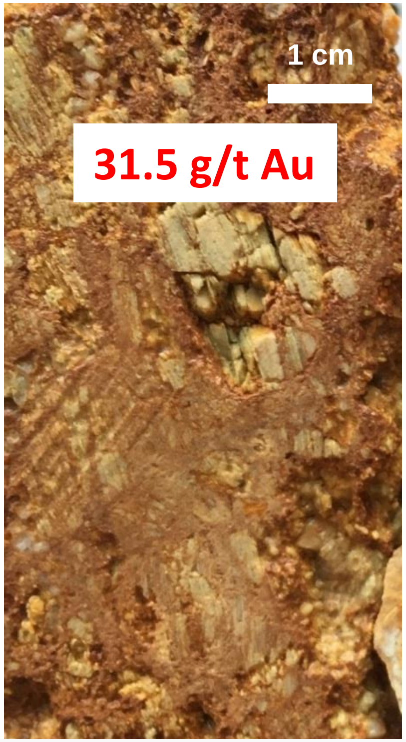
ABN 96 119 397 938

23rd June 2016

Investor Update

Lithium and Gold - Copper Focus





Example of Gold Mineralised Surface Rock Samples from Kavaklitepe – Kuzey Zone

Disclaimer

Forward looking statements

Some statements in this presentation regarding estimates or future events are forward looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include estimates of future production, reserve and mineralised material estimates, capital costs, and other estimates or prediction of future activities. They include statements preceded by words such as "believe", "estimate", "expect", "intend", "will" and similar expressions. Actual results could differ materially depending on such things as political events, labour relations, currency fluctuations and other general economic conditions, market prices for Zenith Minerals Limited products, timing of permits and other government approvals and requirements, change in operating conditions, lower than expected ore grades, unexpected ground and mining conditions, availability and cost of materials and equipment, and risks generally inherent in the ownership and operation of mining properties and investment in foreign countries.

Information presented is a summary

This presentation aims to provide a high level summary of various technical aspects of the Company's projects. For more details on the underlying technical parameters the reader is referred to the ASX Reports on the Zenith Minerals Limited's website: www.zenithminerals.com.au

JORC competent persons statements

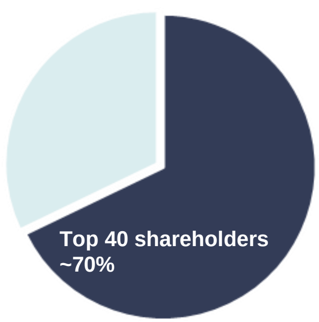
The information in this Report that relates to in-situ Mineral Resources at the Develin Creek project is based on information compiled by Ms Fleur Muller an employee of Geostat Services Pty Ltd. Ms Muller takes overall responsibility for the Report. She is a Member of the AusIMM and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity she is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 Edition). Ms Muller consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to Zenith Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Corporate Structure

Capital Structure – ASX: ZNC	
Share Price (as at 21st June 2016)	$0.13
Shares on Issue ZNC fully paid ordinary	172.9m
Market Capitalisation	$22.5m
Listed Options ZNCO ($0.1 Exercise price)	22.1m
Cash as at 31st March 2016	$1.9m

Major Shareholders	
City Corp. Nom.	7.09%
HSBC Custody. Nom.	6.66%
Granich	6.12%
GDR PL	4.27%
Miquilini	3.49%



Directors ~10%

Mike Joyce – Non-Executive Chairman
Geologist, substantial prior experience at Aberfoyle Resources Ltd (1980-98) then MD at Giralia Resources NL (1998-2011 - $828m takeover). Chairman of Gascoyne Resources Ltd.

Mick Clifford - Managing Director
Geologist, >26 years experience, Billiton Australia, Acacia Resources & AngloGold Ashanti. MD of PacMag Metals Ltd (2005 – 2010 - $50m takeover).

Stan Macdonald - Non-Executive Director
Industry veteran, founded numerous ASX listed companies including Giralia Resources NL, Director of Gascoyne Resources Ltd.

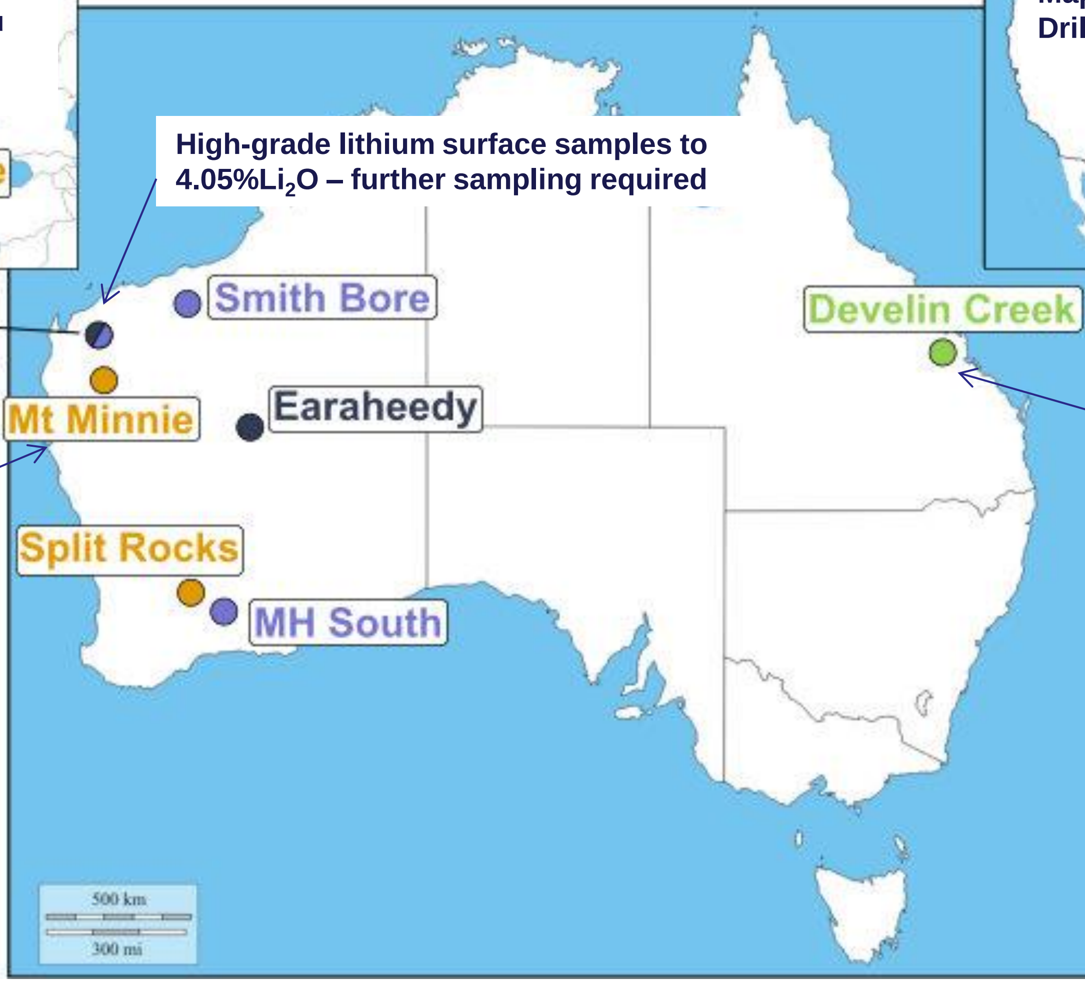
Julian Goldsworthy - Non-Executive Director
Geologist, currently Geology Manager at Gascoyne Resources Ltd. Substantial experience with Newcrest Mining, Newmont Australia (1986-2007) and Giralia Resources NL (2007- 2011).

Projects Summary

TURKEY

New Gold Discovery
54m @ 3.33g/t Au continuous rock samples, 9m @ 5.2 g/t Au from surface in hole KT02,
Drilling in progress

AUSTRALIA



High-grade lithium surface samples to 4.05%Li_2O – further sampling required

High-grade gold in quartz veins (21.5, 17.7 and 11.5 g/t gold) in gold soil anomaly.
Drilling planned

Massive copper-zinc sulphide

Inferred Mineral Resource 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold & 9.6g/t silver (Feb 2015)

Regional EM & Geochem targets.

Drilling planned

USA

Spodumene pegmatite field
Mapping & sampling in progress
Drilling planned

Clear Strategy for Growth

Zenith has a clear strategy for adding value for shareholders.

1. Use project generation skills to acquire projects - lithium and gold focus;
2. Undertake smart, cost effective exploration to add real value and progress projects;
3. Use experience and corporate skills to deliver value-add to shareholders.

Focus on lithium and copper-gold projects in the portfolio

Advance to Drill → Drill Targets → Resources

Smart Exploration

			Develin Creek	Copper/Zinc
Split Rock	San Domingo	Kavaklitepe	Mt Alexander Fe	Gold
MH South	Mt Alexander	Mt Minnie	Earaheedy Mn	Lithium
Smith Bore				

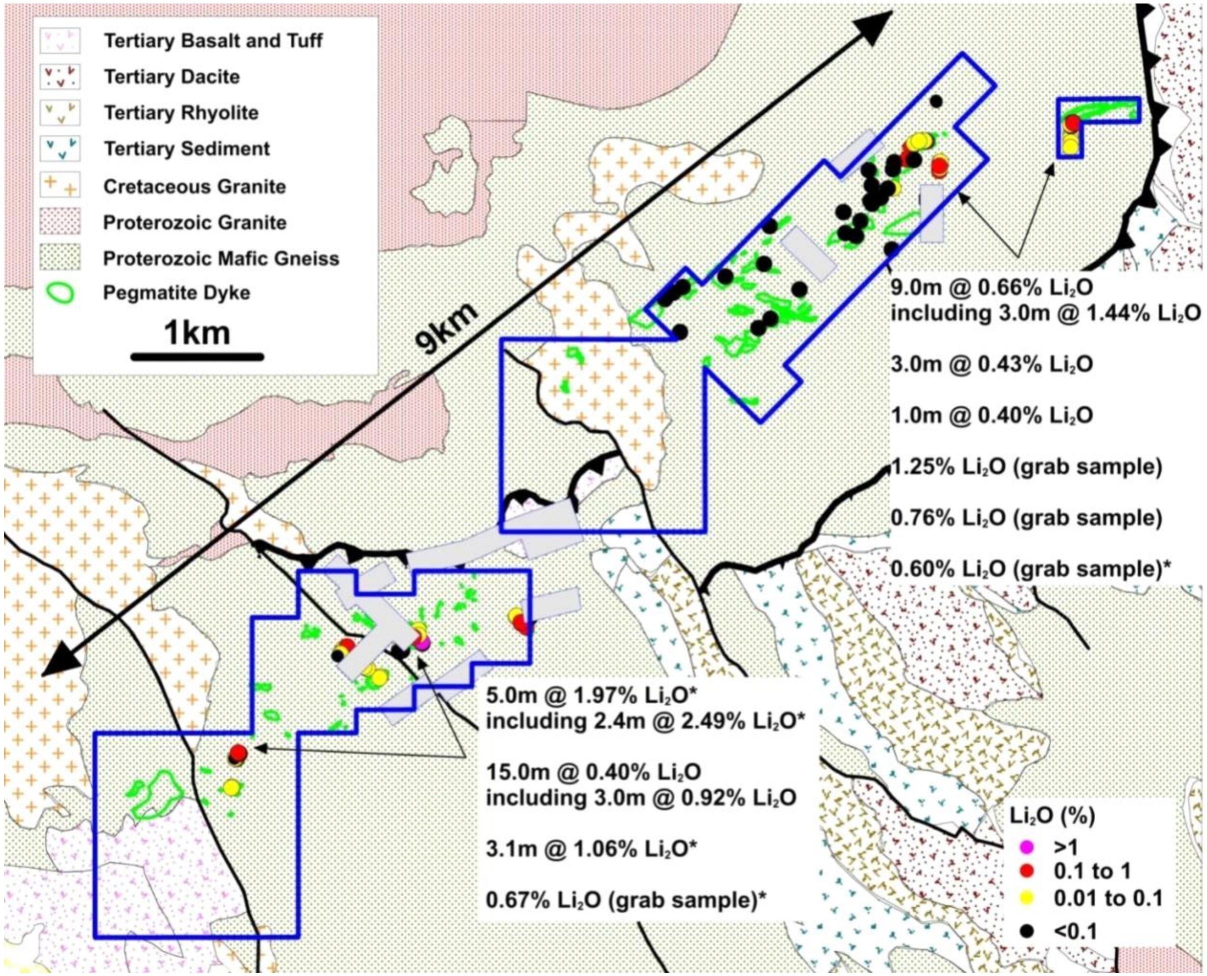
Maturity in portfolio →

Acquire

Develop / Monetise / Retain at Low Cost

San Domingo Lithium

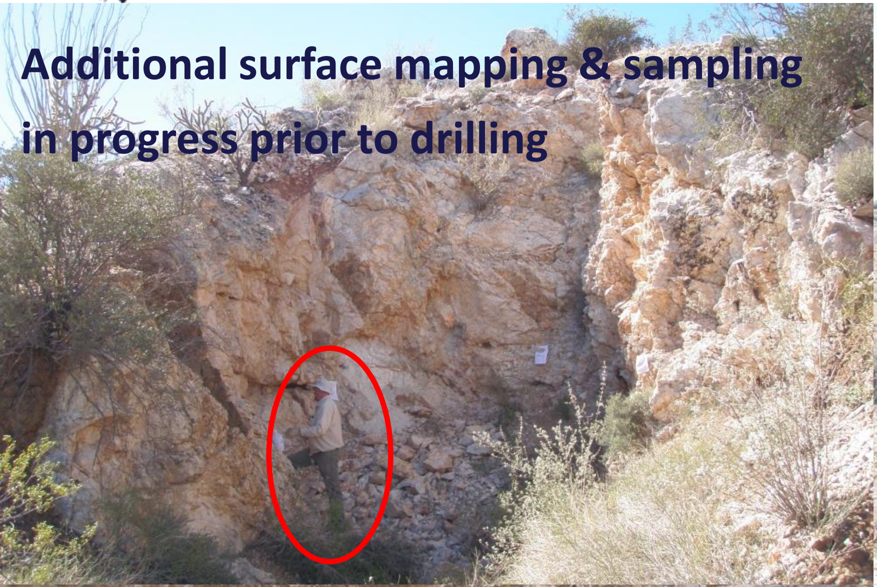
Ownership:	100%
Location:	USA
Commodity:	Lithium
Stage:	Prospects



- **New 100% owned, Arizona USA**
- **9km by 1.5km lithium pegmatite field;**
- **Initial Zenith sampling 5m @ 1.97% Li_2O incl 2.4m @ 2.49% Li_2O from spodumene rich pegmatites;**
- **Lithium as spodumene and amblygonite concentrates & tantalum produced from district (1947 – 1952);**
- **Limited diamond drilling in 1952 of 4 pegmatites & 1980-82 drilling program for tantalum and niobium focussed outside Zenith's claims; and**
- **Follow-up mapping & sampling prior to drill testing.**

San Domingo Lithium

Ownership:	100%
Location:	USA
Commodity:	Lithium
Stage:	Prospects



Additional surface mapping & sampling in progress prior to drilling

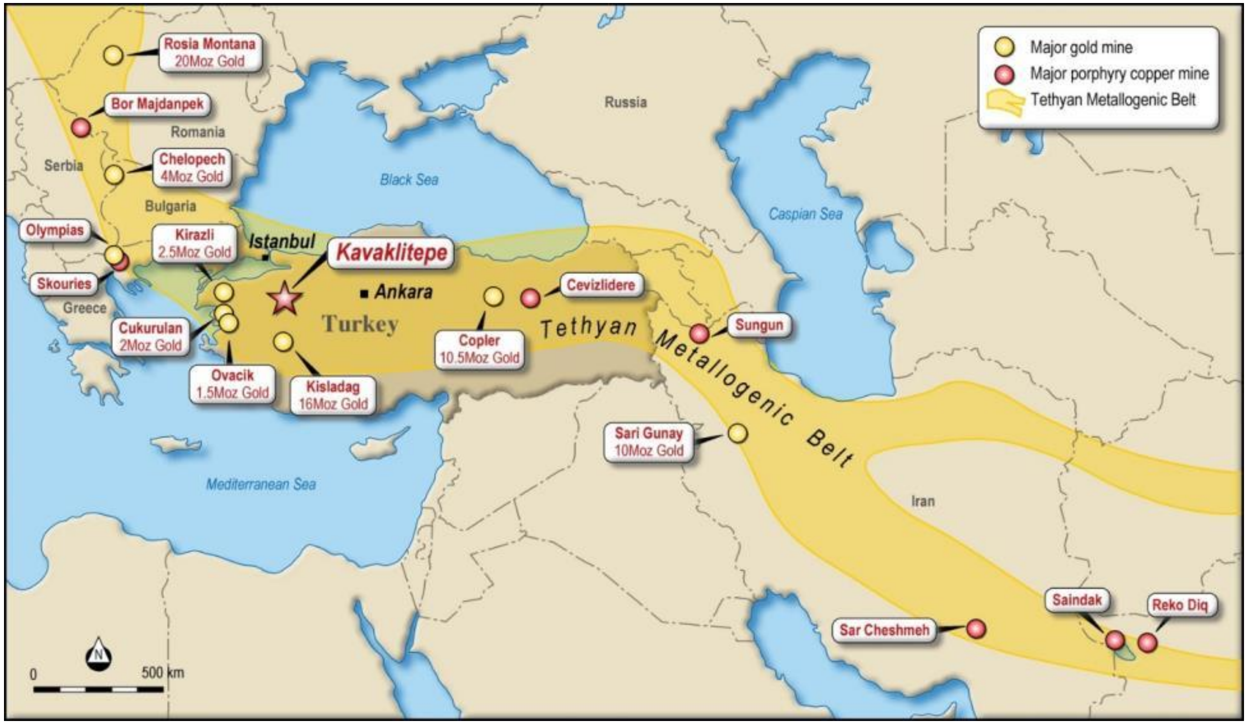
Pegmatite dykes up to 60m in width and 600m in length

Lithium rich pegmatites in district, spodumene crystals up to 3m in length

Numerous historic small scale workings

Kavaklitepe

Location: Turkey
Commodity: Gold
Stage: Drilling



Discovered in 2013

Joint Venture, subsidiary of Teck earning 70%
Zenith free carried for first US$700k of expenditure and 1500m drilling

Drilling in progress

Turkey - Europe's largest gold producer

Highly endowed Tethyan Metallogenic Belt

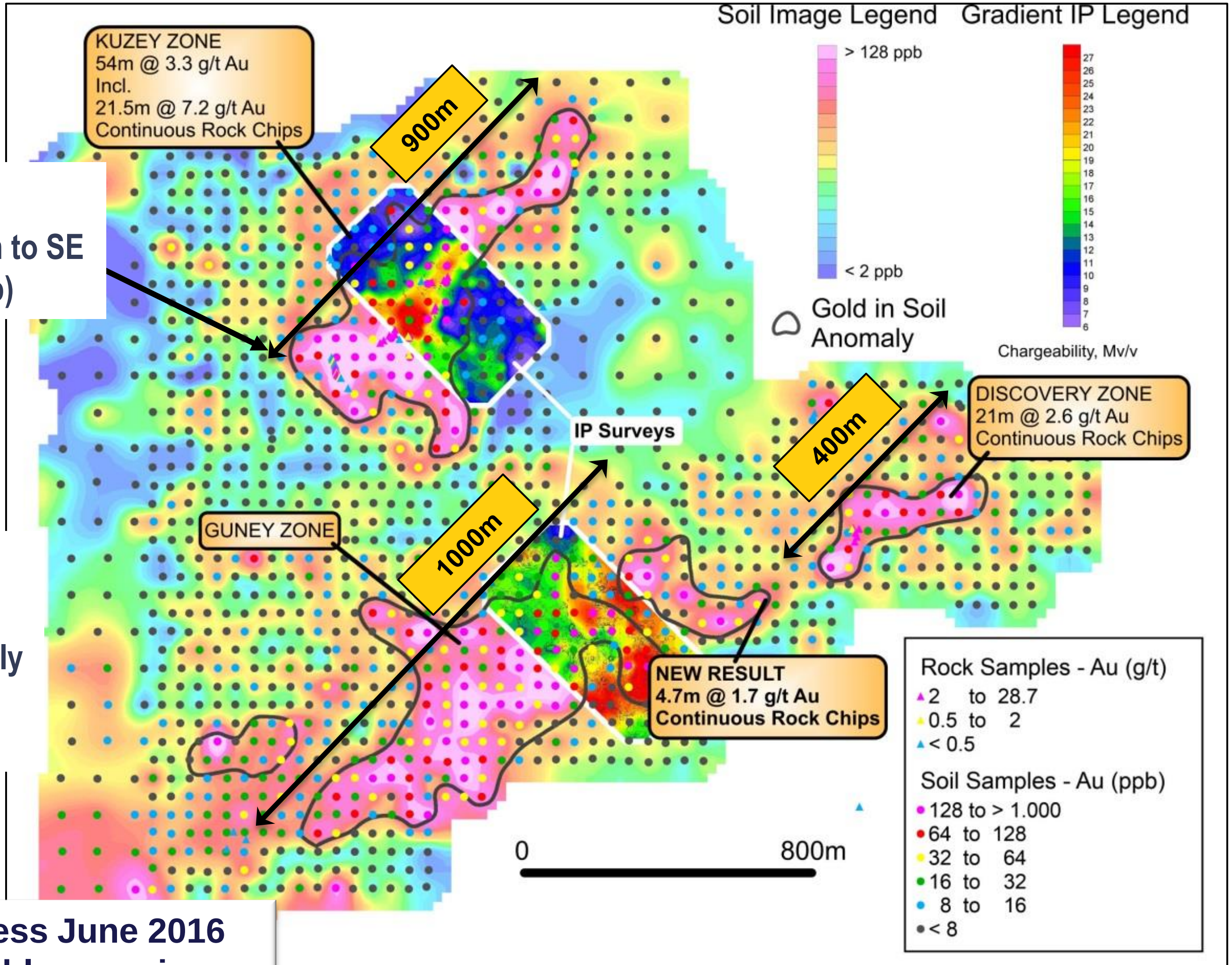
Ranked 8 out of 96 by Frazer Institute

Kavaklitepe

Location: Turkey
Commodity: Gold
Stage: Drilling

Kuzey Zone
42m @ 1.5g/t Au open to SE
(continuous rock chip)

Guney Zone
1000m strike length
Coincident IP anomaly
New rock chips
4.7m @ 1.7 g/t Au



Discovery Zone
400m strike length
27m @ 1.4g/t Au open to SE
(continuous rock chip)

Drilling in progress June 2016 using man-portable core rig

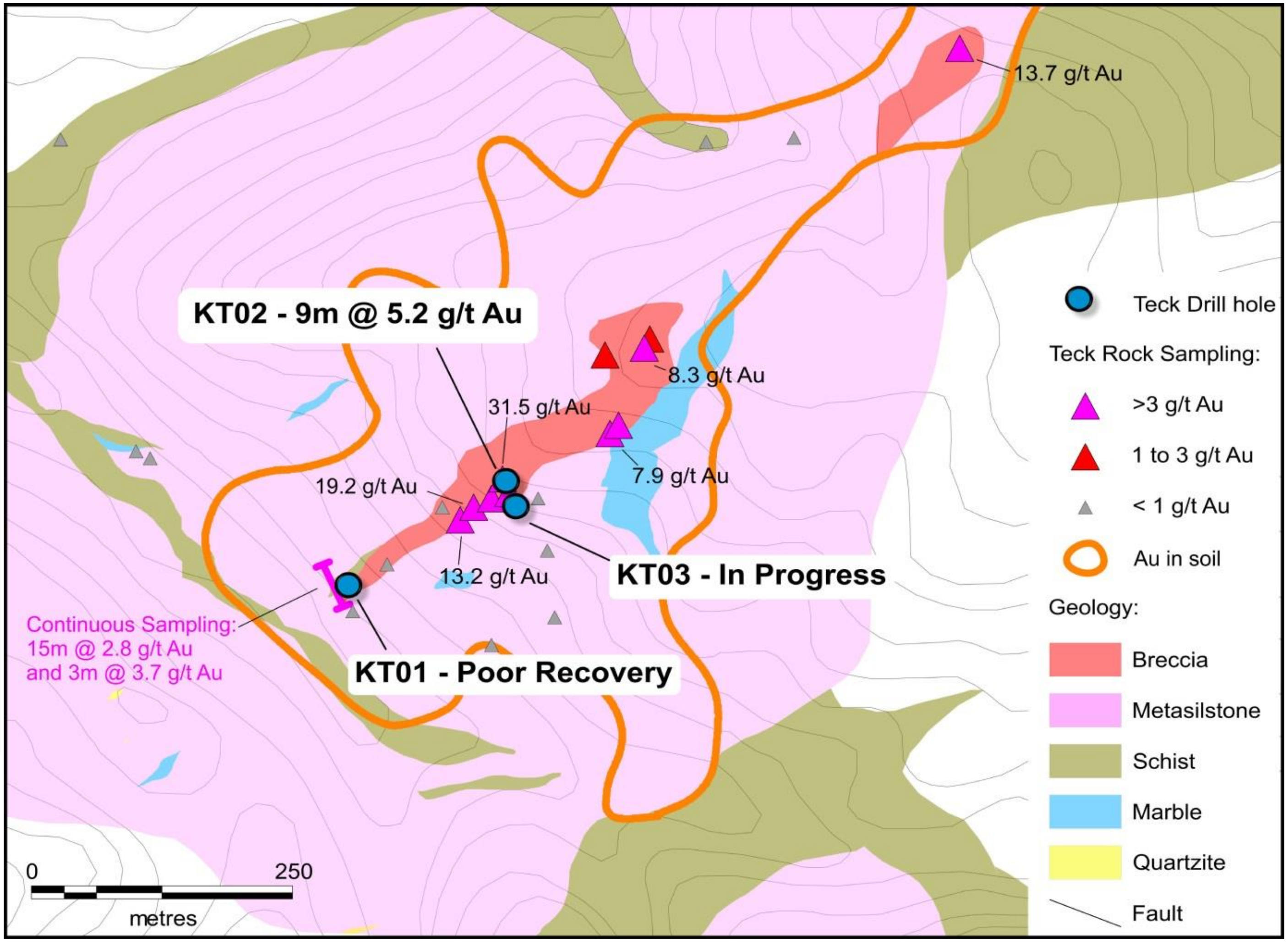
Kavaklitepe

Location: Turkey
Commodity: Gold
Stage: Drilling

Drilling in progress June 2016 using man portable core rig

- **Two diamond drill holes KT-01 & 02 (total 90.5m depth) have been completed to date using the small man-portable rig;**
- **Drill core recovery for hole KT-02 was satisfactory over initial 9m down-hole averaging 82% core recovery & returned 9m at 5.2 g/t Au from surface;**
- **Although gold was intersected in the first hole (KT-01) core recovery was poor, results will not be reported.**
- **KT-03 in progress**

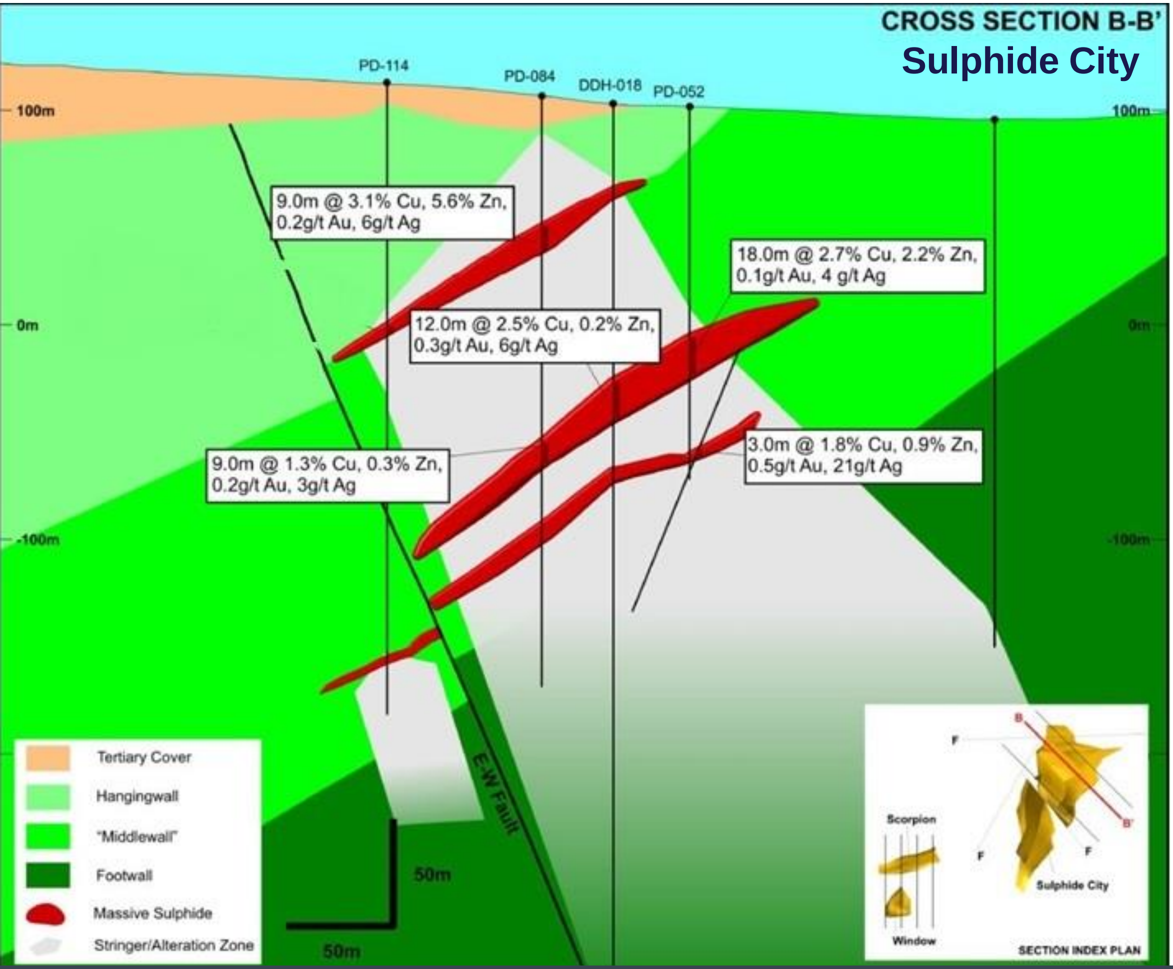
Kavaklitepe Drill Hole Locations Kuzey Zone (showing new rock sample results)

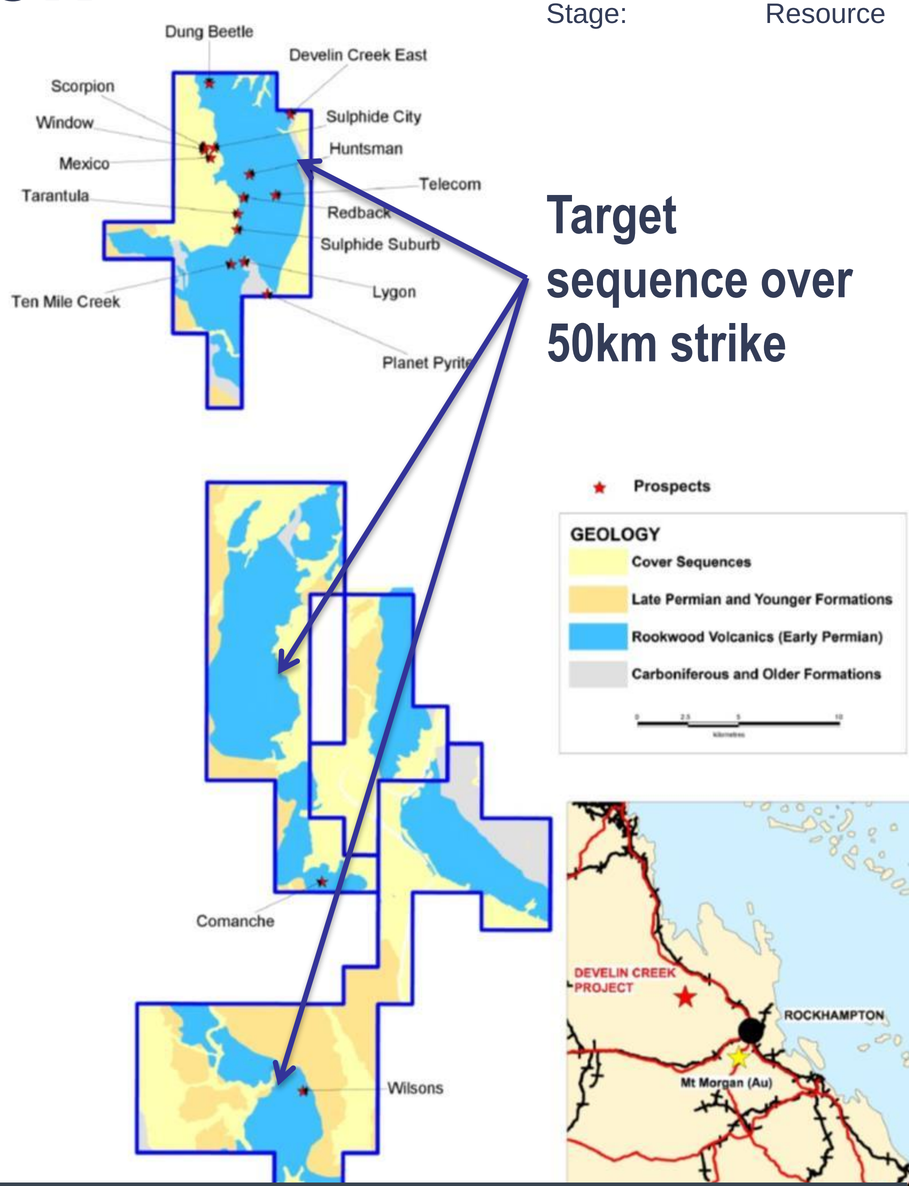


Develin Creek

Ownership: 51-100%
Location: Queensland
Commodity: Cu-Zn-Ag-Au
Stage: Resource

- Massive sulphide deposits at Sulphide City and Scorpion
- Degrussa-Monty deposits analogy (VMS in basalt-pepperite host rocks)

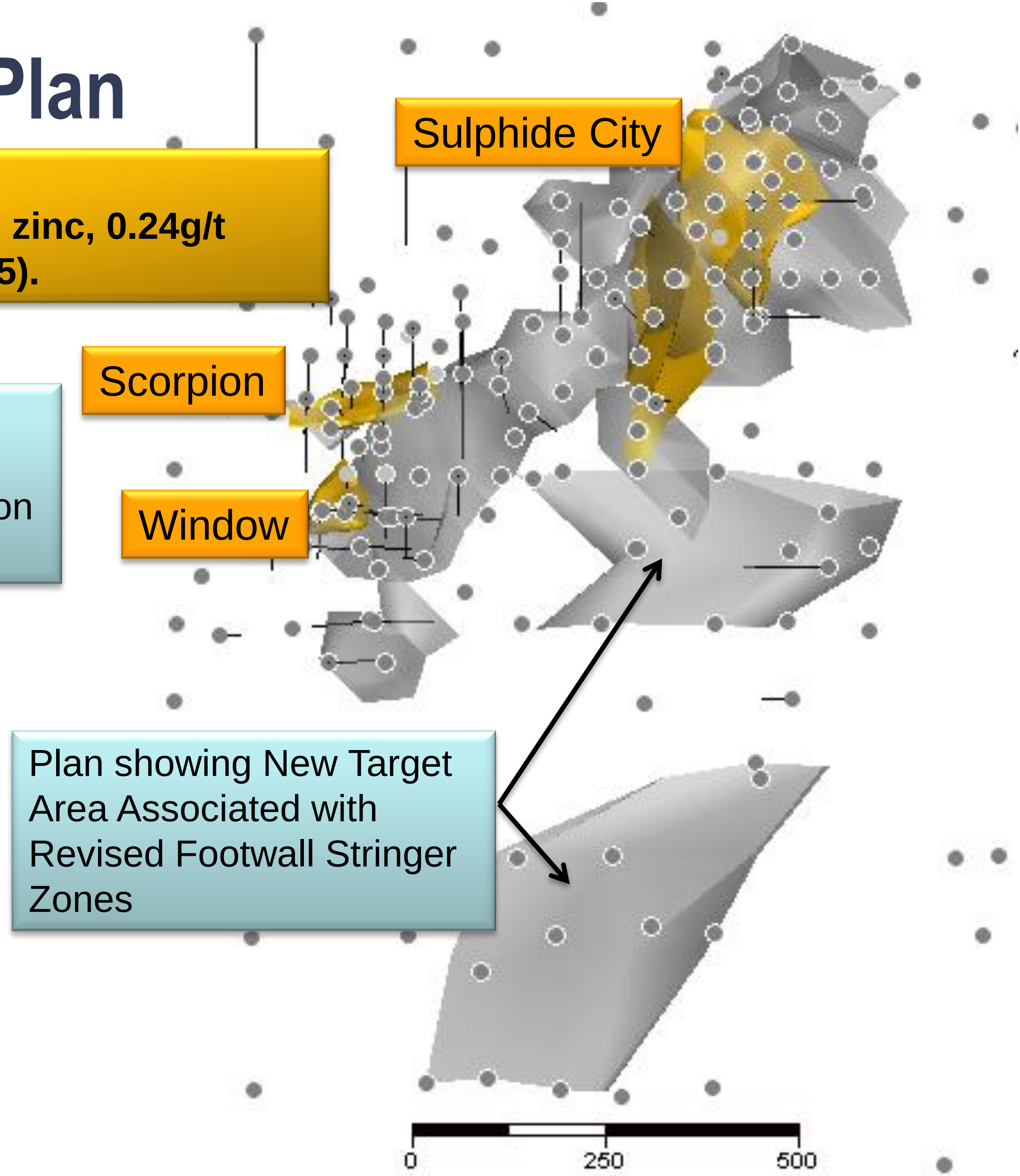




Develin Creek - Plan

Inferred Mineral Resource :
2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (Feb 2015).

Zenith RC drilling indicates potential significant upgrade in copper, zinc, gold and silver grades **(3 to 7 times)** compared with historic percussion drilling – further twin holes planned



Positive Initial Metallurgical Test Work

Mt Minnie

Ownership:	100%
Location:	WA
Commodity:	Gold
Stage:	Reconnaissance

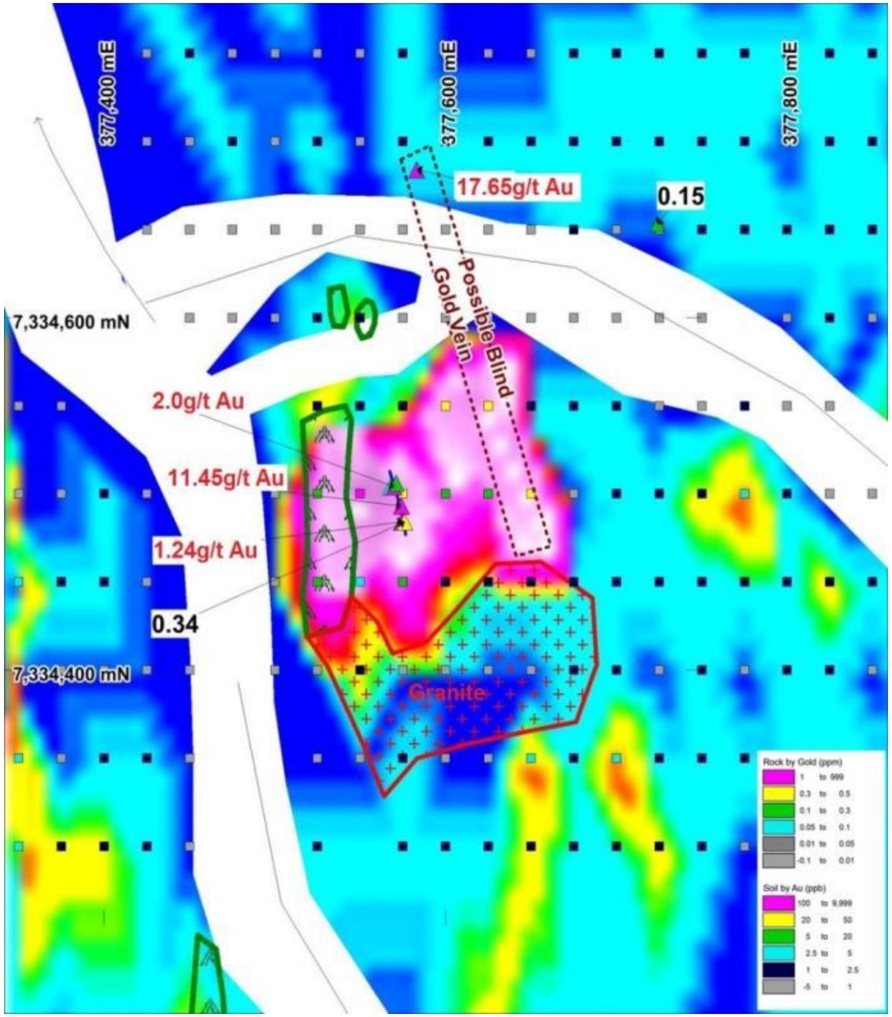
New geological model prospective for reduced intrusion related gold deposits

Mid-Proterozoic granite host

High-grade rock samples include: 21.5, 17.7 and 11.5 g/t gold

New gold in soil anomaly in predominantly sand covered area

Drilling planned

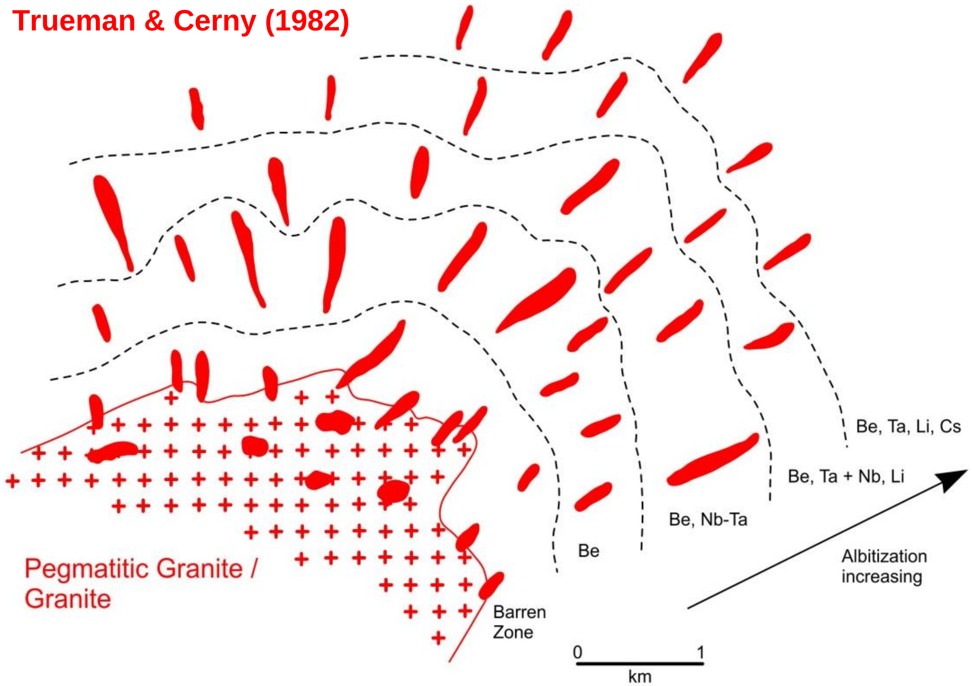


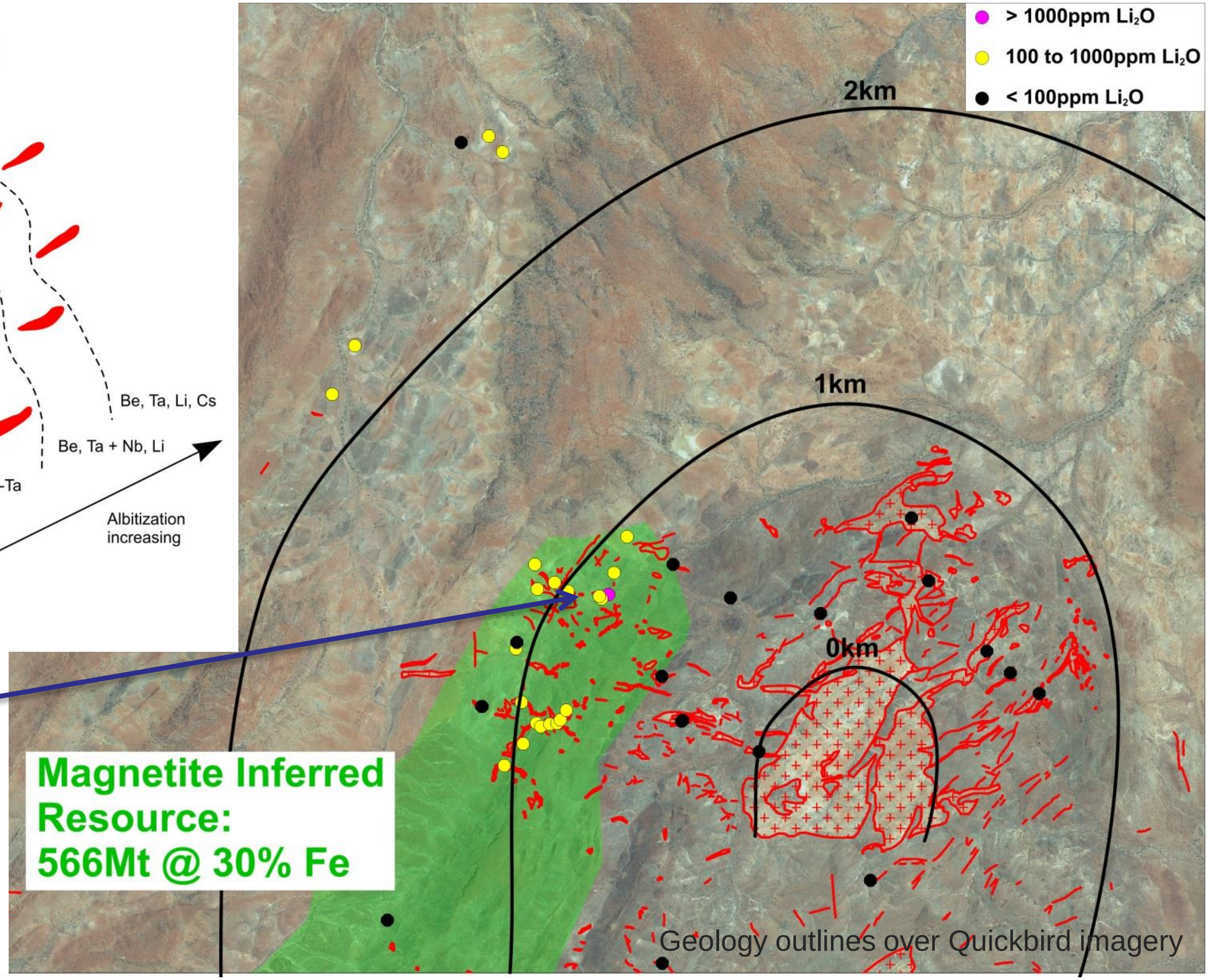
Woods Prospect Gold in Soil Anomaly (Triangles = rock samples, squares = soil samples, green polygons = dolerite dykes, red hatched polygons = granite outcrop)

Mt Alexander - Lithium

Ownership:	100%
Location:	WA
Commodity:	Lithium
Stage:	Prospect

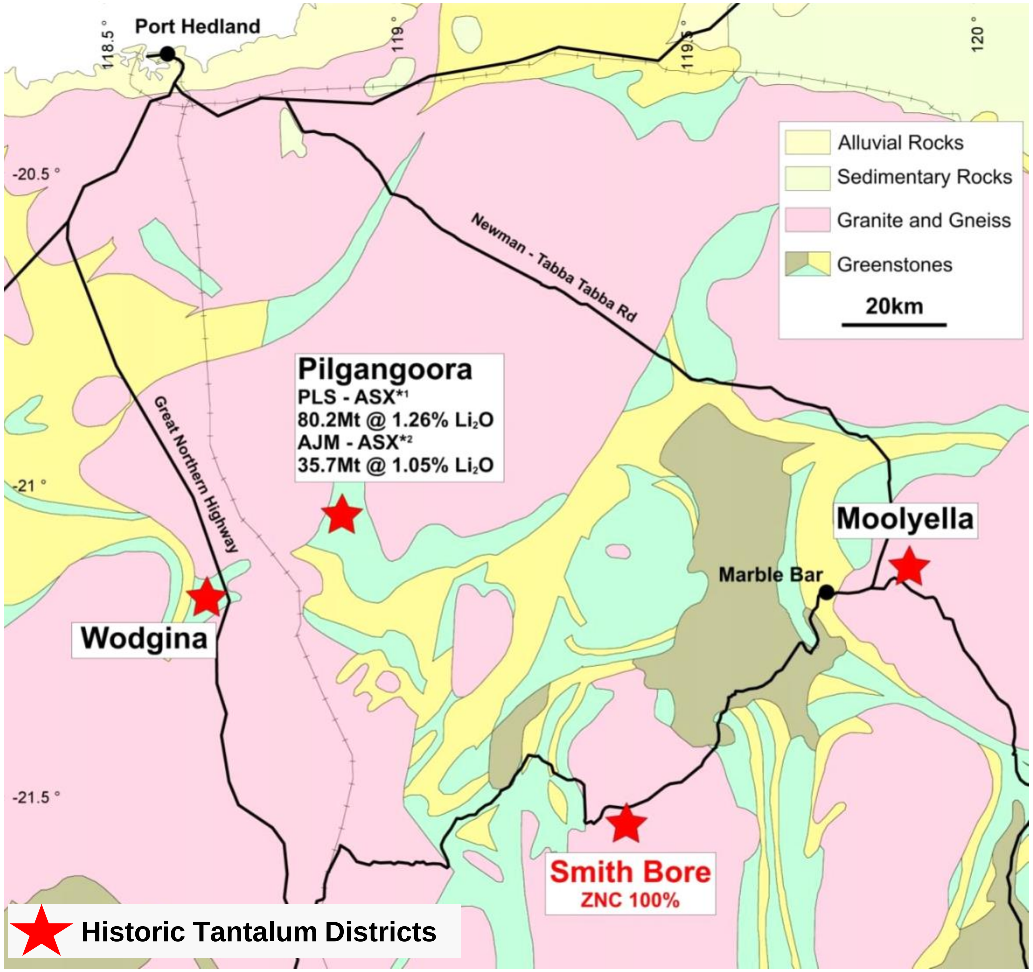
Trueman & Cerny (1982)





- **2.94%Li_2O to 4.05% Li_2O and tantalum to 0.034%Ta_2O_5 from a lepidolite rich pegmatite;**
- **> 100 pegmatite and granite dykes form a radiating swarm around the Mortgage Monzonite intrusive.**
- **Follow-up sampling and mapping**

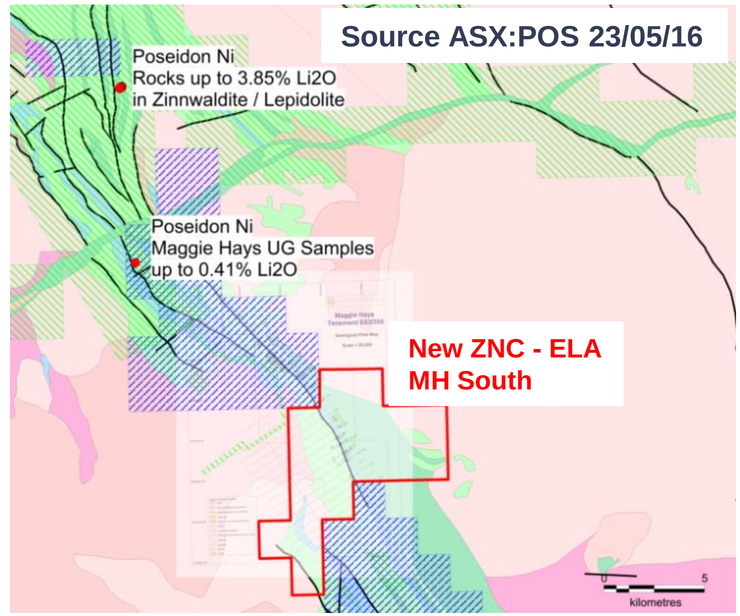
Lithium Project Generation



Smith Bore ELA (100% ZNC) – Rock samples to 0.63% Li_2O

Very active project generation program

- Technically driven;
- Targeting lithium brines, pegmatites & clays;
- Understanding known lithium districts & applying knowledge to brownfield & greenfields targets;
- USA team - field evaluations in progress;
- Aus team - multiple projects under assessment; &
- Competitor monitoring & opportunistic staking



Investment Summary

	Apr - June 2016	Jul - Oct 2016	Oct - Dec 2016
San Domingo Lithium			
Mapping & Surface Sampling			
Drilling			
Kavaklitepe Gold			
Mapping & Surface Sampling			
Hand Pitting			
Geophysics (IP & Magnetics)			
Drilling			
Mt Minnie Gold			
Drilling			
Develin Creek (Copper-Zinc)			
Surface Geochem Sampling			
Drilling (Resource Twining & Regional Targets)			
Mt Alexander Lithium			
Follow-up Sampling			
Lithium Evaluations & Project Generation			
Reviews, Due Diligence & New Tenure			

Contact Details

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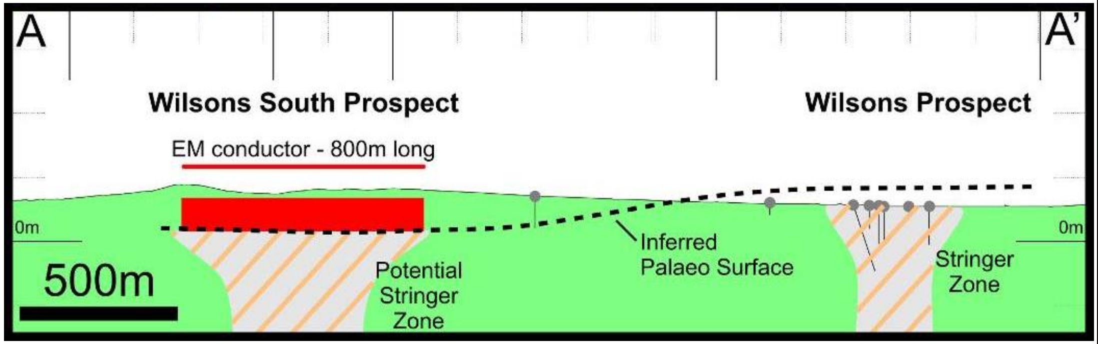
Website:	www.zenithminerals.com.au

ASX Code:	ZNC

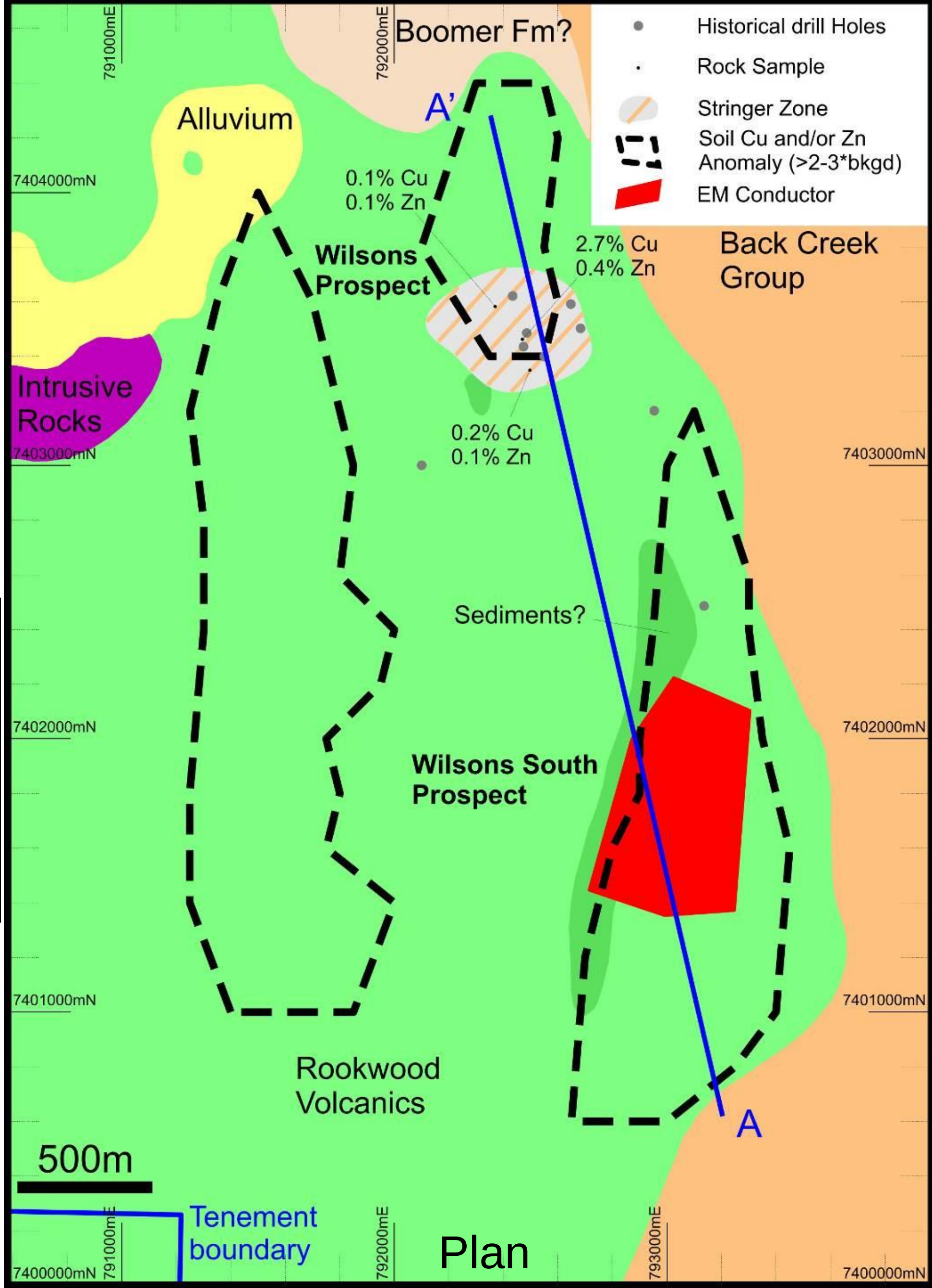
Supplementary Slides

Develin Creek Wilsons South Drill Target

Coincident EM and Geochemical Anomaly



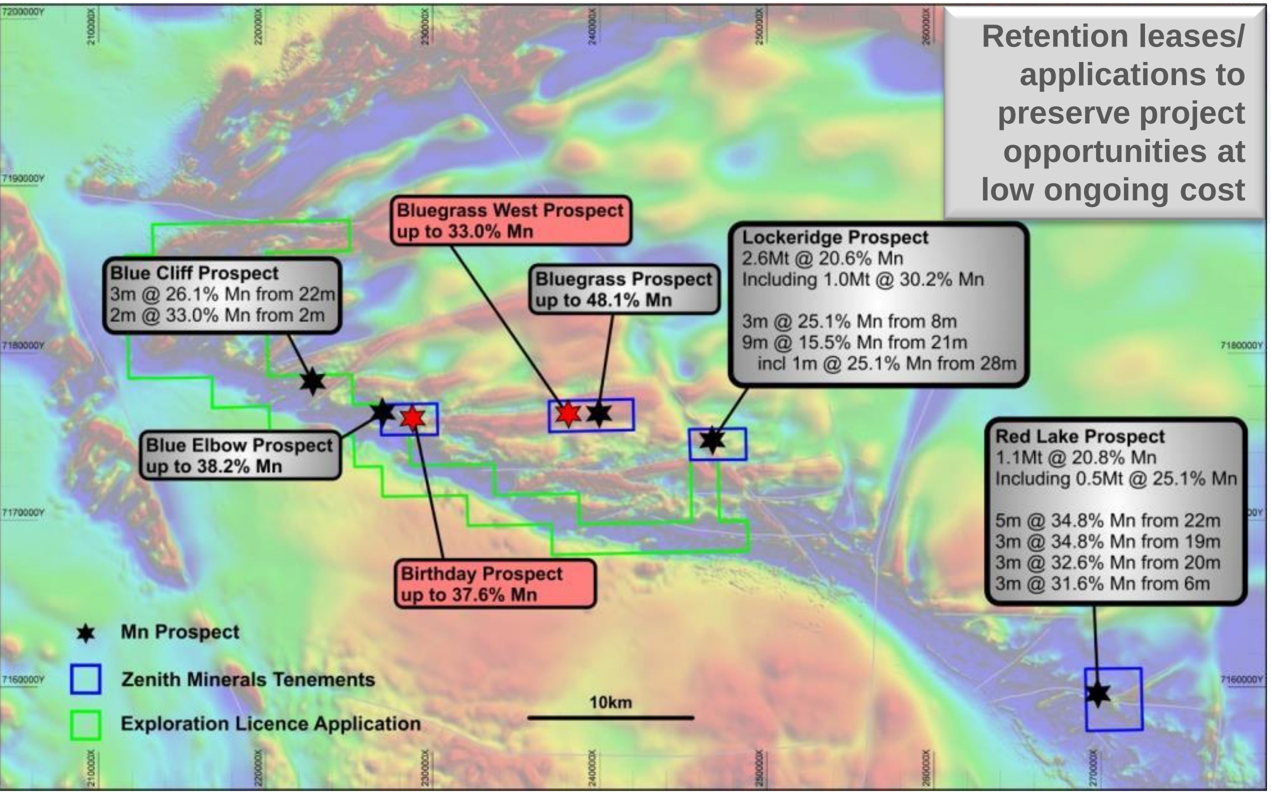
Cross Section



Plan

Earaheedy Manganese

Ownership: 100%
Location: WA
Commodity: Manganese
Stage: Resources



Zenith completed first drilling for Mn in Earaheedy

- Shallow dipping oxide; and
- Carbonate (Kalahari Basin style) mineralisation

Manganese both structurally controlled and stratiform.

Inferred Mineral Resources:

- Red Lake 1.1Mt @ 20.8% Mn (Sep 2014)
- Lockeridge 2.6Mt @ 20.6% Mn (Apr 2015)

Drill intersections include:

- 3m @ 41.0% Mn within 5m @ 34.8% Mn from 22m
- 1m @ 40.2% Mn within 3m @ 30.7% Mn from 3m
- 2m @ 38.4% Mn within 3m @ 32.6% Mn from 20m
- 1m @ 42.3% Mn within 3m @ 34.8% Mn from 19m

New discoveries:

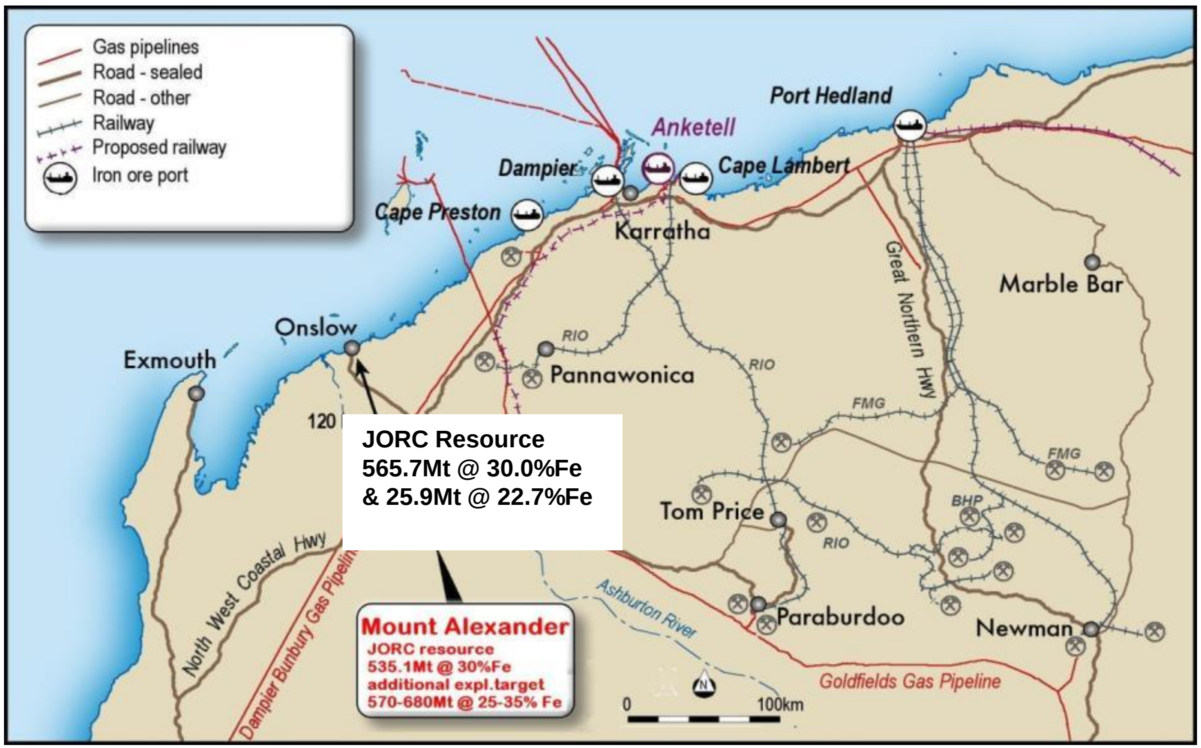
- Bluegrass, Bluegrass West, Blue Elbow & Birthday

Focused tenement strategy

Mt Alexander Magnetite

Ownership: 100%
Location: WA
Commodity: Iron Ore
Stage: Resources

Retention leases/ applications to preserve project opportunities at low ongoing cost



JORC Resource
565.7Mt @ 30.0%Fe
& 25.9Mt @ 22.7%Fe

Well located close to – sealed roads, gas pipelines, only 120km from coast near Onslow (Mitsui, Chevron ports)

Base case in 2011 Scoping study - slurry pipeline, tranship by barge to vessel offshore

Only 80km to API JV (Baosteel -AMCI) West Pilbara proposed railway to Anketell Port – third party access.

Advantages over other WA magnetite deposits:
- location close to coast and infrastructure
- coarser grained = better beneficiation +40 micron grind size

Inferred Mineral Resources:
- Mt Alexander 565.7Mt @ 30.0%Fe (Oct 2015)
- Mt Alexander West 25.9Mt @ 22.7%Fe (Jun 2015)

Additional very large exploration target

Key tenure retained