



Zenith
Minerals
Limited
ABN 96 119 397 938

DRILLING COMMENCED AT DEVELIN CREEK COPPER-ZINC-GOLD-SILVER DEPOSIT

7th October 2014

HIGHLIGHTS

- Drilling has commenced testing Resource Extension Targets at Develin Creek
- First drilling in 20 years at Scorpion and Window Deposits.
- Upgrade of the current JORC resource in progress to incorporate 2011 drilling south of Sulphide City deposit.
- Geophysical review and regional prospect assessments including systematic soil sampling of regional target horizon in progress.

August 2014 Zenith announced 4 high-priority resource extension targets at its Develin Creek Copper-Zinc-Gold-Silver Project, located in Queensland (51% owned, right to acquire 100% from ASX:FRY). The Company is now pleased to advise that a 10 – 15 hole RC drilling program has commenced to test these targets. It is anticipated that the drilling component of the program will take approximately 2- 3 weeks to complete and assay results should be available early November.



In conjunction with the drill program a systematic field assessment of the many high-priority regional prospects has also commenced, including a soil sampling program covering the key target horizons. Over 1600 soil samples have been collected to date, from a 10,000 sample program.

Activities

Exploration/Development

- Earraheedy Manganese
- Kavaklitepe Gold
- Develin Creek Copper-Zinc
- Mt Minnie Gold
- Mt Alexander Magnetite Iron

Details as at 30th Sep 2014

Issued Shares	123.6 m
Unlisted options	1.2 m
Mkt. Cap. (\$0.07)	A\$ 8m
Cash 30 th Sep 14	A\$1.2m
Debt	Nil

Directors

Michael Clifford:

Managing Director

Mike Joyce:

Non Exec Chairman

Stan Macdonald:

Non Exec Director

Julian Goldsworthy:

Non Exec Director

Major Shareholders

HSBC Custod. Nom	8.5 %
Giralia (Atlas Iron)	8.3%
Miquilini	4.8%
Nada Granich	4.4%
Citicorp Nom Ltd	4.1%



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In addition an upgrade of the current JORC 2012 resource is nearing completion incorporating more recent drilling data including intersections of 13.2 metres @ 3.3% copper, 4.0% zinc and 0.4g/t gold outside the existing Sulphide City resource, extending mineralisation up to a further 200m south.

A desktop geophysical review is in progress to assess and rank the numerous regional prospects and targets generated from the previous Fitzroy Resources Limited airborne electromagnetic survey (HeliTEM) flown over the entire project area, that to date have had limited ground follow-up.

Key assets at Develin Creek include:

- 3 Massive Sulphide Deposits (Sulphide City, Scorpion and Window) with JORC 2012 Compliant Resources of 1.76Mt grading 1.7% copper, 2% zinc and 0.2g/t gold, total inferred resource,
- Numerous other geophysical and geochemical targets along 50km of host volcanic rocks, with strong evidence that downhole electromagnetic (EM) surveys clearly detect massive sulphide zones, and induced polarisation (IP) geophysical surveys can outline the stringer zone mineralisation beneath the massive sulphides.

The Develin Creek base metals project is located 80km north-west of Rockhampton in Central Queensland and hosts several copper-zinc-gold volcanic hosted massive sulphide (VHMS) deposits and covers an extensive belt of underexplored prospective volcanic stratigraphy. Mineralisation comprises massive sulphide, stringer and breccia style copper-zinc-gold deposits, hosted by basalts.

DEVELIN CREEK RESOURCE EXTENSION TARGETS

Significant potential exists to extend the currently defined copper-zinc-gold deposits and to discover new mineralisation lenses in higher or lower stratigraphic positions. A reverse circulation drilling program to test these targets has now commenced (Figure 1).

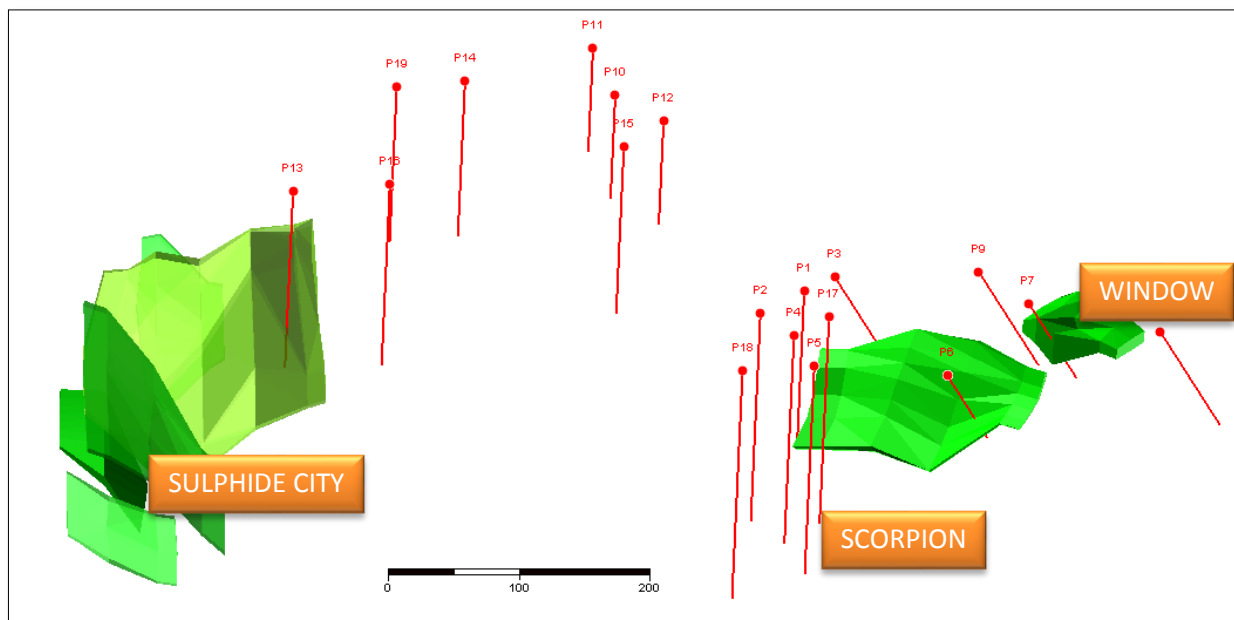


Figure 1: 3D View looking south-east of Develin Creek Resources (Green - Existing Resource Polygons & Red - Proposed Drill Holes. (For the location of existing drill holes refer to Figure 2)

Key targets identified by Zenith include extensions to the massive sulphide horizons at **Sulphide City**. Mineralisation is open to the south of Sulphide City and will be tested as part of this drill program (Figure 2). In addition, data review and



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modelling by Zenith has led to the recognition of an interpreted new east-west trending fault that displaces mineralisation at the north end of the Sulphide City deposit. The deposit appears open beyond this fault, particularly extending down-dip to the northwest where existing drilling is sparse. The northern extension will form part of a future drill program.

The main Sulphide City lens, outlined with a 1% copper equivalent cut-off, has a horizontal projection of about 300m x 150m and varies from 2.5m to 29m in thickness. Better historic drill intersections (previously reported by Fitzroy Resources Limited to the ASX, 14th Oct 2010, 11th May 2011 and 28th Oct 2011) include:

- **FRWD0002** 13.2m @ 3.3%Cu, 4.0% Zn, 30g/t Ag and 0.5g/t Au
- **DDH-016** 14.5m @ 0.6% Cu and 4.3% Zn (includes 2.5m @ 12.0% Zn)
- **DDH-044** 11.3m @ 2.1% Cu, 5.9% Zn, 16g/t Ag and 1.21g/t Au
- **PD-052** 15.0m @ 3.1% Cu, 2.3% Zn

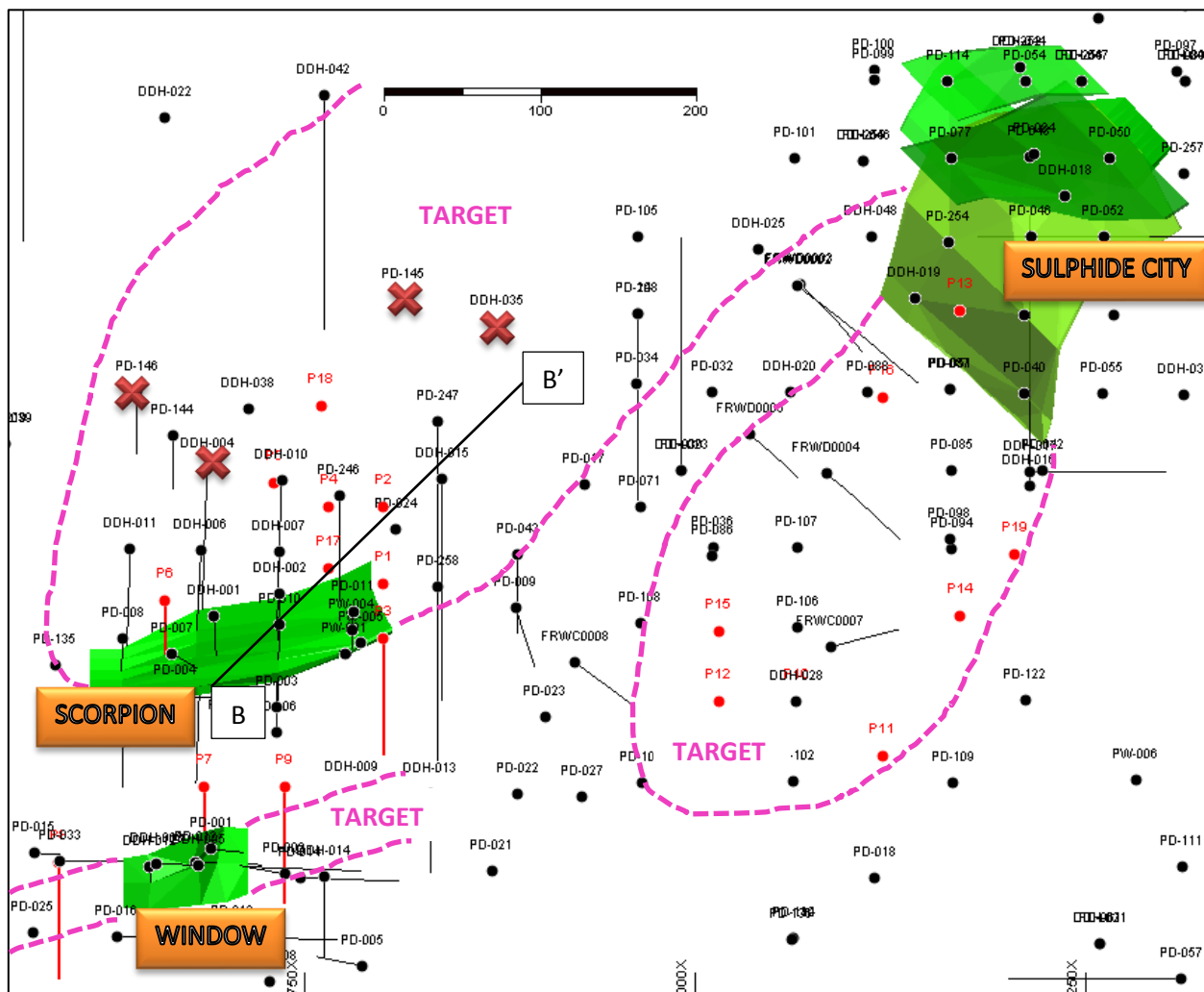


Figure 2: Plan of Develin Creek Resource Extension Targets (Green - Existing Resource Polygons, Dashed outlines – Zenith Targets and Proposed Holes – Red, Red Crosses - Shallow Ineffective Holes)

The north-easterly, down-plunge extensions to the main massive sulphide lens at the **Scorpion Deposit** (Figure 2 & 3) are open-ended beyond historic hole PD246 which intersected 12m @ 1.47% Cu, 1.33% Zn, 0.35g/t gold, and 10.3g/t Ag including 9 metres of logged massive sulphide, and require drill testing. In addition the northern down-dip extents of the Scorpion Deposit remain open. Sparse deeper drilling intersected bedded sulphides in holes DDH042 – 1.3m @ 1.0% Cu and 0.4g/t gold and hole DDH038 – 1.6m @ 1.5% Cu, 0.8% Zn and 0.3 g/t gold (Figures 2). This distal bedded sulphide target extends over an area some 200m x 350m and may extend as far as the Sulphide City deposit a further 400m north-east of the intersection in hole DDH042.

The Scorpion deposit, 500m south-west of the Sulphide City deposit occurs in a 400m X 200m zone in altered volcanic rocks, the sulphide body, 2.5m – 9.5m thick consists of brecciated massive sulphides grades up to 6% Cu, 9% Zn, 43g/t Ag

and 1g/t Au. Better historic drill results (previously reported by Fitzroy Resources Limited to the ASX, 14th Oct 2010 and 11th May 2011) include:

- DDH-001 21.6m @ 2.5% Cu, 1.5% Zn, 13g/t Ag, 0.5g/t Au, (includes 16.2m @ 3.2% Cu, 1.6% Zn)
- DDH-002 31.6m @ 1.5% Cu, 1.5% Zn, 15g/t Ag and 0.3g/t Au (includes 16.7m @ 2.1% Cu, 2.0% Zn)
- DDH-007 24.0m @ 1.3% Cu, 1.9% Zn, 8g/t Ag and 0.3g/t Au (includes 14.0m @ 2.1% Cu, 2.8% Zn)

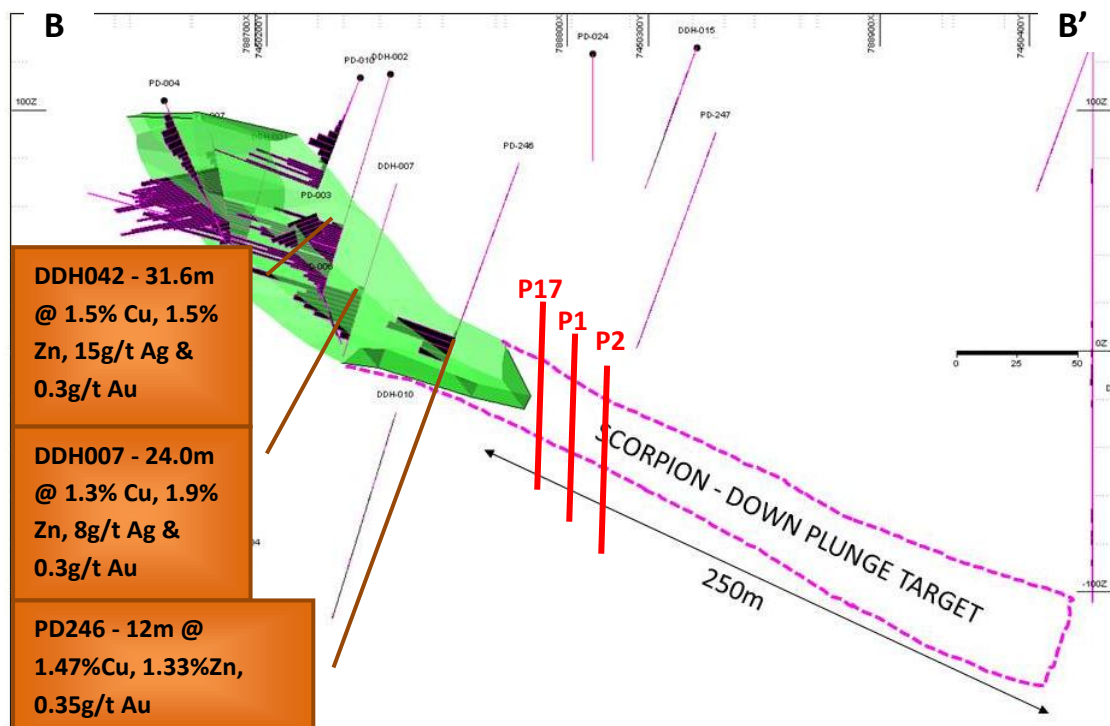


Figure 3: Longitudinal Section (B-B') of the Scorpion Deposit (resource in green) with drill hole traces and copper histogram plot— Showing Down-Plunge Extension Target to the north east, Red Holes (P17, P1 & P3) are Proposed

The area along strike and down dip of the **Window** deposit is also poorly tested and remains open (Figure 2). The highly weathered Window mineralisation consists of a supergene zone of secondary copper minerals within a steeply dipping stringer style mineralisation comprising a multiphase quartz / pyrite /chalcopyrite stockwork. The location and style of mineralisation indicates that Window may be the partially eroded footwall stringer zone to the nearby Scorpion massive sulphide lenses. Better historic drilling results previously reported by Fitzroy Resources Limited to the ASX, 14th Oct 2010) include **PD-012, 84.0m @ 0.8% Cu (including 48.0m @ 1.2%)**.

Potential also exists for near deposit discoveries such as mineralisation concealed under extensive cover, particularly to the west where existing IP geophysical coverage terminates approximately 300m to the west of the Window-Scorpion deposit. It is also important to note that the detailed IP survey also terminates to the immediate east of the Sulphide City resource area, where there is a 250m x 900m gap in IP coverage before a widely spaced, more regional survey starts.

DEVELIN CREEK RESOURCES

The current (JORC 2012) Inferred Resource estimate was first calculated by Icon Resources to the ASX in 2007 for the three main mineralized bodies (Sulphide City, Scorpion and Window). Zenith completed a review and updated the resource to be compliant with the JORC 2012 guidelines in July 2014. The resource defined to date by drilling is: 1.76Mt grading 1.7% copper (Cu), 2% zinc (Zn) and 0.2g/t gold (refer to JORC compliant resource statement and associated tables attached to the Zenith June 2014 Quarterly Report, dated 30th July 2014).

Deposit	Tonnes	Cu% Grade	Zn% Grade	Ag g/t Grade	Au g/t Grade
SULPHIDE CITY	1,114,784	1.64	2.41	7.2	0.20
SCORPION	485,100	1.98	1.87	13.9	0.39
WINDOW	156,960	1.45	-	1.0	0.02
TOTAL	1,756,844	1.71	2.05	8.5	0.24

Subsequent to the resource estimates reported in 2007, drilling by Fitzroy extended mineralisation at the Sulphide City deposit by 200m to the south. Drilling intersections previously reported by Fitzroy (ASX Releases 28th July 2011, 28th Oct 2011 and 30th Jan 2012) that extend high-grade copper-zinc mineralisation to the north and south that are not included in the 2007 resource estimate above include:

- **FRWD0002 - 13.2m @ 3.3% Cu, 4.0% Zn & 0.4g/t gold (40m south of resource)**
- **FRWD0004 - 1.1m @ 3.5% Cu, 1.7% Zn & 0.6g/t gold (140m south of resource)**
- **FRWD0001 - 0.7m @ 4.7% Cu, 1.9% Zn & 0.8g/t gold (50m north of resource)**
- **FRWC007 - 2.0m @ 0.2% Cu, 2.4% Zn & 2.2g/t silver (200m south of resource)**

Zenith has commissioned an updated JORC resource that will include these additional drill holes.

BACKGROUND ON VHMS COPPER-ZINC-GOLD DEPOSITS

VHMS ore deposits are a type of metal sulphide ore deposit created by volcanic-associated hydrothermal events in submarine environments. VHMS deposits are a major economic source of metals worldwide and in particular contain large accumulations of copper and zinc with associated gold and silver that are exploited by both open pit and underground mining methods, the deposits occur in clusters and have well defined exploration vectors.

A study in 1980 on 8 VHMS districts in Canada and Japan (D F Sangster - Geological Survey of Canada) demonstrated that: on average the VHMS districts studied contained between 4 and 20 deposits, each district has an average of 12 deposits and the total base metal content of each district is 5.4 million tonnes.

The ongoing successful discovery of VHMS copper-zinc deposits in a single district is highlighted by the discovery history of the Bathurst VHMS district in Canada, where a total of 41 individual deposits have been discovered progressively over a 42 year period. The VHMS clustering is also well demonstrated via the discovery of deposits by Independence Group (and its predecessors) along the 15km long Bentley-Jaguar-Teutonic Bore mine trend, as shown below in Figure 4. Such deposit clustering is very likely at the Develin Creek project and it is anticipated that further exploration will result in the discovery of additional mineralisation.

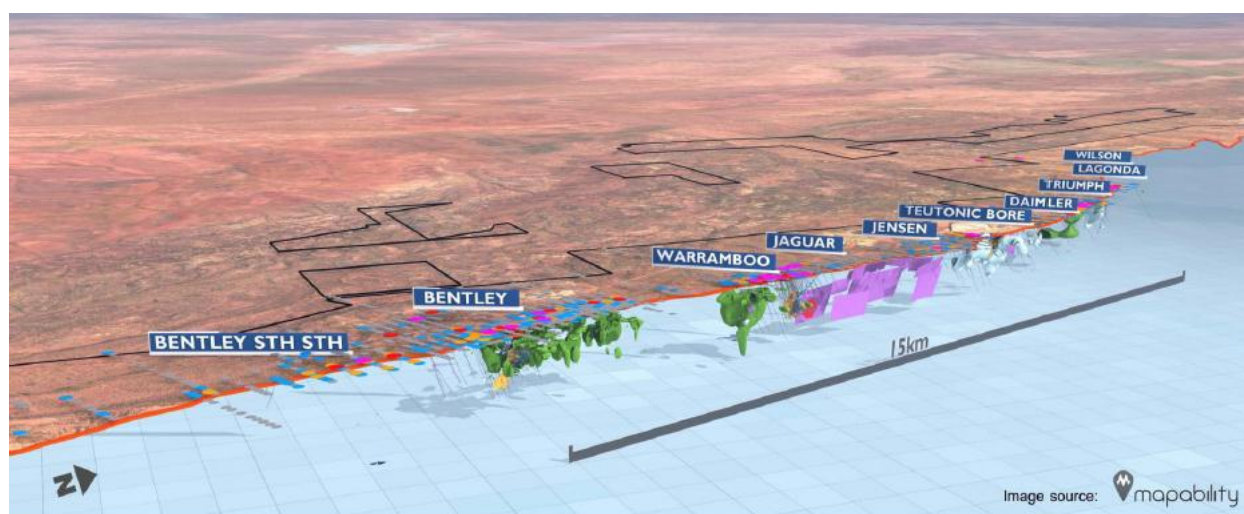


Figure 4: VHMS Deposit Cluster at IGO's Bentley-Teutonic Bore Trend
(Source: IGO ASX Release May 2014)

The information in this report that relates to 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 Minerals Limited. 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.

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.

About Zenith

Zenith is advancing its project portfolio of high-quality, gold, base metal and manganese projects whilst building a superior project base of high-quality advanced exploration assets:

Kavaklitepe Gold Project, Turkey (ZNC earning 70%)

- Recent (2013) grass roots gold discovery in Tethyan Belt – (“elephant” terrain)
- Large, virtually drill-ready, high-order gold soil / IP anomaly >1km strike
- Rock chip traverses to 54m @ 3.33g/t gold, including 21.5m @ 7.2 g/t gold
- Trenching and drilling (permitting in progress)

Develin Creek Copper-Zinc-Silver-Gold, QLD (ZNC initial 51%, option for 100%)

- 3 known VHMS massive sulphide deposits with JORC resources, 50km of strike of host volcanics
- 2011 drilling outside resource; 13.2 metres @ 3.3% copper, 4.0% zinc, 30g/t silver and 0.4g/t gold
- Drilling to extend known deposits, geophysics, geochemistry to detect new targets

Mt Minnie Gold Project, WA (ZNC 100%)

- 75km strike of major regional fault. Alteration, geochemistry, rock samples 64.2 and 21.5 g/t Au
- Initial field assessment to follow-up and extend known prospects

Earaheedy Manganese (and Pb,Zn) Project, WA (ZNC 100%)

- New manganese province discovered by ZNC, potential DSO drill intersections (+40%Mn)
- Target area doubled with recent acquisitions (RIO tenements, Blue Cliffs).
- Mapping, sampling, drilling new ground, beneficiation tests, assess geophysical techniques

Mt Alexander Iron Ore, WA (ZNC 100%)

- JORC magnetite Resource 535 Mt @ 30.0% Fe close to West Pilbara coast, 50% of target untested.
- Seeking development partner/ buyer for project

Other

- Divesting Indonesian coal project – Conditional offer received, US\$500K +royalty US\$1/t
- Evaluating new project opportunities (acquire at bottom of the cycle)

Zenith Minerals Limited

7th October 2014

For further information contact;

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