



13th September 2016

Zenith Acquires 100% of the Develin Creek Copper-Zinc-Gold-Silver Project

- Zenith has executed a binding agreement with its joint venture partner 4DS Memory Limited to acquire 4DS Memory Limited's 49% interest in the Develin Creek copper-zinc-gold-silver project located in Queensland;
- Develin Creek contains an Inferred Mineral Resource (JORC 2012) of: 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (2.62% CuEq) released to ASX on the 15th February 2015.
- Mineralisation remains open at all 3 massive sulphide deposits, with upside to resource grades with Zenith RC hole twinning previous 1993 percussion hole returning significantly higher copper, zinc, gold and silver grades (300% to 700% higher);
- Initial metallurgical testwork results on the copper-zinc massive sulphides show positive first stage "rougher" recoveries of 90%;
- Ongoing program to expand geochemical coverage over priority host rock horizons within the highly prospective tenure extending for up to 50km north - south surrounding the Develin Creek deposits; and
- Drill testing planned of Wilsons South target and Sulphide City twin hole drilling program to test historic drilling assay under-call and provide further metallurgical samples.

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to advise that it has executed a binding agreement to acquire the remaining 49% interest in the Develin Creek copper-zinc-gold-silver project located in Queensland for \$A60,000.

As foreshadowed in the Company's June 2016 Quarterly Report, the acquisition of 4DS's 49% interest is the result of negotiations following the election by 4DS not to exercise a buy back option, leaving the Parties to continue in a 51/49 contributing JV. 4DS Memory Limited (ASX:4DS) (formerly named Fitzroy Resources Limited (ASX:FRY)), changed its principal business activities and company name, effective 14 December 2015, following its agreement to acquire a Silicon Valley based memory developer.

Having now secured a 100% interest in the Develin Creek project, the Company plans further exploration activities to unlock the potential of the existing Inferred Mineral Resource (JORC 2012) of: 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (2.62% CuEq) released to ASX on the 15th February 2015, and the highly prospective surrounding tenure. Drill testing is planned of the new Wilsons South target and at Sulphide City where a twin hole drilling program will test historic drilling assay under-call and provide further metallurgical samples. In addition the program

Corporate Details

ASX: ZNC

Issued Shares (ZNC)	172.9 m
Listed options (ZNCO)	22.1 m
Unlisted options	1.1 m
Mkt. Cap. (\$0.10)	A\$ 17.9 m
Cash 30 th Jun 16	A\$1.5 m
Debt	Nil

Directors

Michael Clifford:
Managing Director

Mike Joyce:
Non Exec Chairman

Stan Macdonald:
Non Exec Director

Julian Goldsworthy:
Non Exec Director

Major Shareholders

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

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to expand geochemical coverage over priority host rock horizons within the highly prospective tenure surrounding the Develin Creek deposits remains ongoing.

Background on Develin Creek Project

Located 80km north-west of Rockhampton in Central Queensland, the Develin Creek base metals project hosts several copper-zinc-gold-silver volcanic hosted massive sulphide deposits and covers an extensive belt of underexplored prospective host rocks. Mineralisation comprises massive sulphide, stringer and breccia style copper-zinc-gold-silver deposits, hosted by basalts.

The Develin Creek deposits are of a style similar to those currently being mined by Sandfire Resources NL at DeGrussa and Independence Group NL at Jaguar-Bentley, which are both located in Western Australia. These types of deposits typically occur in clusters making them attractive exploration targets.

On the 15th February 2015 the Company announced a new mineral resource of: 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (2.62% CuEq).

Develin Creek Inferred Mineral Resource (JORC 2012) - February 2015

Deposit	Tonnes	Cu% Grade	Zn% Grade	Ag g/t Grade	Au g/t Grade
SULPHIDE CITY	1,796,700	1.75	2.37	9.7	0.23
SCORPION	548,900	1.98	1.66	13.0	0.36
WINDOW	225,600	1.30	-	0.8	0.02
TOTAL	2,571,200	1.76	2.01	9.6	0.24

The resource is classified under the JORC Code 2012 as Inferred, based on several criteria including drill spacing, continuity of mineralisation, wireframe geometry and confidence in assays from various drilling campaigns. *CuEq refer to JORC Code Reporting Criteria Section 2, ASX Release 15th Feb 2015.

The resource update followed a successful resource extension drilling campaign (ASX Release 26th Nov 2014) that confirmed the high-grade core of the Sulphide City deposit (Figure 1) extends a further 140m south of the previous resource whilst the thick sub-horizontal copper zone at Window was extended to the north of existing drilling. New results from holes in that drill campaign at Sulphide City included: 5m @ 2.45% copper, 2.14% zinc, 0.4 g/t gold and 30.7 g/t silver and 3m @ 2.63% copper, 0.88% zinc, 0.5 g/t gold and 36.7 g/t silver supporting results from a diamond drill hole completed in 2011 that returned an intersection of 13.2 metres @ 3.3% copper, 4.0% zinc and 0.4g/t gold.

Massive bedded copper-zinc sulphide mineralisation remains open at depth beyond the main Scorpion deposit to the north and north-east, whilst bedded massive sulphide remain open ended



to the north west of the Sulphide City deposit (Figure 2). Incremental resource extensions are likely to the immediate north of the Window resource.

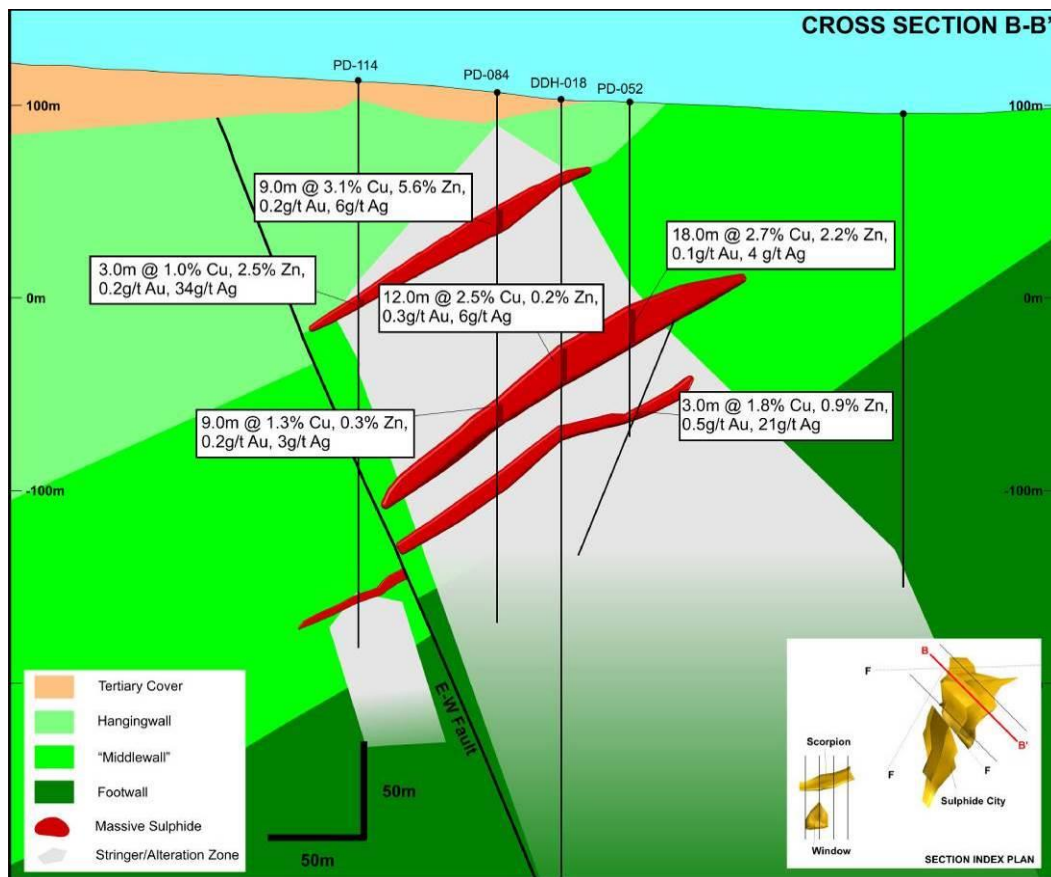


Figure 1: Sulphide City Deposit – Cross Sections

In addition a Zenith RC hole completed in the drill program twinned a 1993 percussion drill hole as the older hole appeared to have anomalously low results compared to the more recent diamond drill holes and other older 1993 diamond drill hole results further to the north. Zenith's new hole returned significantly higher copper, zinc, gold and silver grades (3x copper, 5x zinc, 5x gold and 7x silver) for the equivalent drilled interval. Results from the newer twin hole replaced the older drill hole results allowing a zone of continuous high-grade copper to be defined through the core of the Sulphide City deposit.

The Sulphide City mineralisation consists of stockwork, disseminated and massive sulphide mineralisation. The main Sulphide City lens, outlined with a 1% copper equivalent cut-off, has a horizontal projection of about 400m x 150m. The lens varies from 2.5m to 29m in thickness, generally dips 25-30° west-northwest and has been intersected at depths between 80m and 200m. Better historic drill intersections (previously reported) include:

- **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 & 1.21g/t Au**
- **PD-052** **15.0m @ 3.1% Cu, 2.3% Zn**



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 and grades up to 6% Cu, 9% Zn, 43g/t Ag and 1g/t Au. Better historic drill results (previously reported) 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 & 0.3g/t Au (includes 16.7m @ 2.1% Cu, 2.0% Zn)**
- **PD-007** **44.0m @ 1.6% Cu, 1.0% Zn, 8g/t Ag & 0.3g/t Au (includes 25.0m @ 2.6% Cu, 1.2% Zn)**

The highly weathered Window mineralisation consists of a ~40m thick sub-horizontal supergene blanket of copper mineralisation at 50m depth within a wider zone of stringer style mineralisation. The location and style of mineralisation indicates that the Window Deposit may be the partially eroded footwall stringer zone to the nearby Scorpion massive sulphide lenses. Better historic drilling results from Window (previously reported) include:

- **PD-012** **84.0m @ 0.8% Cu (includes 48.0m @ 1.2%)**

Wilsons South Prospect

In the Wilsons area, located 30km south of the known Develin Creek copper-zinc-gold-silver deposits Zenith's geochemical sampling program defined a 1000 metre by 500 metre, coincident copper-zinc soil anomaly overlying the Wilsons Copper Prospect where samples of gossans (up to 2.7% copper and 0.4% zinc) were mapped. Based on mapping and historical drilling Zenith's geologists interpret the Wilsons Prospect to represent the footwall stringer or feeder position typically observed below copper-zinc massive sulphide bodies.

In addition to identifying the known prospect at Wilsons, the soil sampling defined a prospective corridor 2000 metres by 750 metres continuing to the south which overlies a discrete EM conductor defined by a HeliTEM geophysical survey. The coincident soil anomaly and EM conductor at Wilsons South are located at higher topographic elevations directly along geological strike from the Wilsons prospect and are therefore considered to be an attractive drill target as preservation of the copper-zinc massive sulphide bodies are considered likely.

Regional Targets

Within the Develin Creek project area, Zenith believes that there is good potential to discover new massive sulphide copper-zinc mineralisation, in the extensive landholdings totalling 300km². Zenith controls over 50km of strike length of prospective volcanic host rock sequence.

To date approximately 11,100 soil samples have been collected and analysed by Zenith as part of a systematic geochemical surveying program. Historically there has been little to no systematic geochemical soil sampling over much of the prospective target horizons, and thus the Zenith program was the first to provide effective regional geochemical coverage over key portions of the target area.

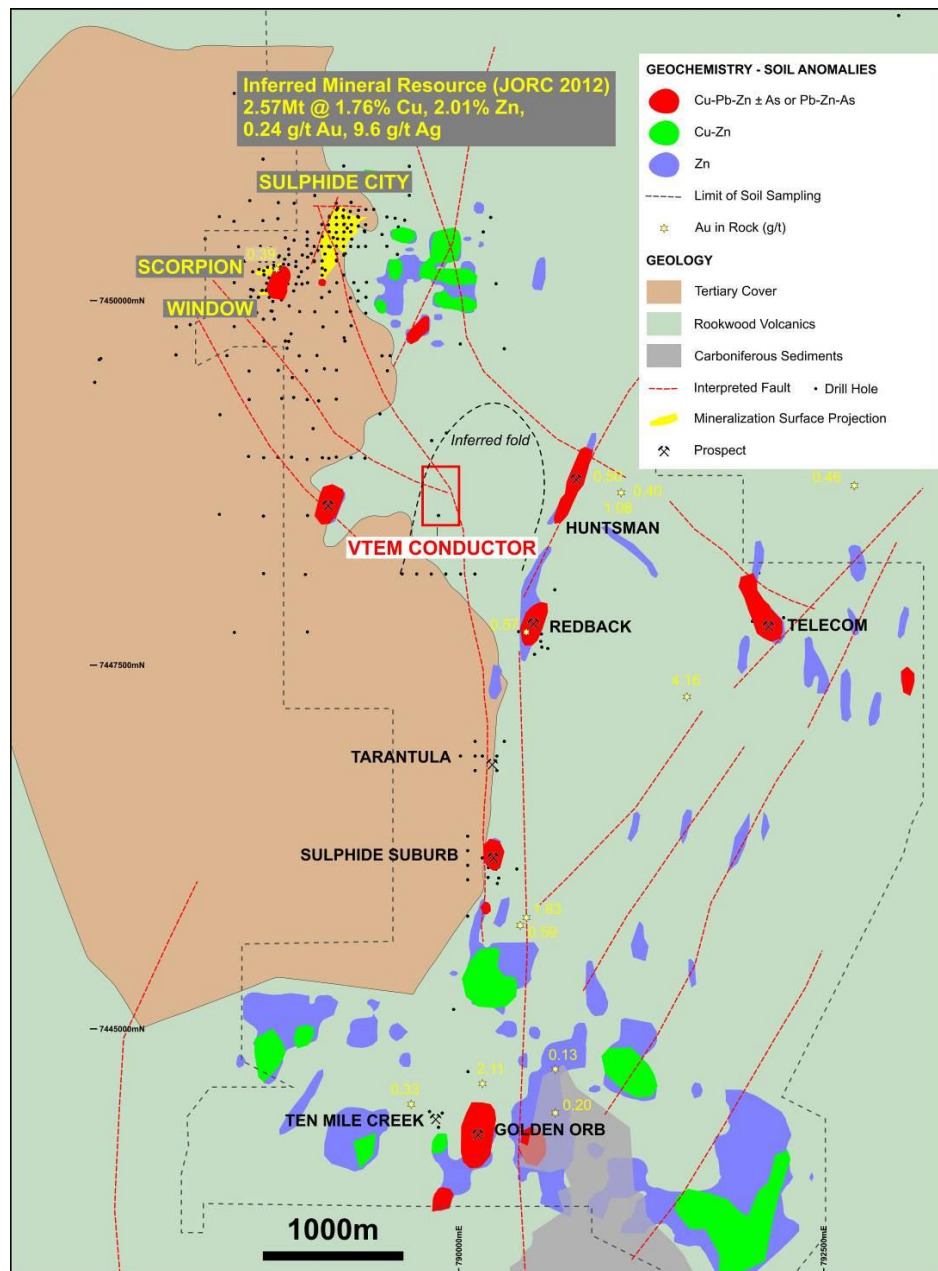


Figure 2: Develin Creek Prospects and Targets

Competent Persons Statement

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.



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About Zenith

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

San Domingo Lithium, Arizona USA (ZNC 100%)

- 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li₂O including 2.4m @ 2.49% Li₂ORock
- Surface sampling in progress

Kavaklitepe Gold Project, Turkey (Teck earning 70%)

- Recent (2013) grass roots gold discovery in Tethyan Belt
- 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
- Initial drill results: 9 m @ 5.2 g/t Au from surface and 7.8 m @ 7.3 g/t Au from 3.3 m below surface
- Drilling in progress

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

- 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%)

- Major regional fault. Alteration, geochemistry, rock samples to 21.5 g/t Au
- Drill testing planned 2016

Earaheedy Manganese Project, WA (ZNC 100%)

- New manganese province discovered by ZNC, potential DSO drill intersections (+40%Mn)

Mt Alexander Iron Ore, WA (ZNC 100%)

- JORC magnetite Resource 566 Mt @ 30.0% Fe close to West Pilbara coast, 50% of target untested.
- Seeking development partner/ buyer for iron project

Other

- Evaluating new lithium project opportunities