



Zenith
Minerals
Limited

ABN 96 119 397 938

ASX & MEDIA RELEASE

QUARTERLY ACTIVITY REPORT FOR THE PERIOD ENDING 30th JUNE 2015

HIGHLIGHTS

ASX CODE: ZNC

Activities

Exploration / Development

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

Details as at 30th June 2015

Issued Shares	128.6 m
Unlisted options	1.1 m
Mkt. Cap. (\$0.04)	A\$5.0m
Cash as at 30 th Jun 15	A\$0.73m
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 Custody, Nom.	8.4%
Nada Granich	6.2%
GDR PL	4.8%
Miquilini	4.6%
Citicorp Nom Ltd	3.9%

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Exploration and Development

Develin Creek Copper-Zinc-Gold-Silver Massive Sulphide Project Queensland (51% with right to acquire 100%):

- High-grade copper (up to 1.1% Cu) in gossans discovered at the Huntsman Prospect during field reconnaissance mapping only 3km from current Inferred Mineral Resources (JORC 2012) of: 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (2.62% CuEq) (ASX Release 16th June 2015).
 - Second new gossan horizon identified at the Redback Prospect during recent detailed mapping program, assay results are awaited;
- Initial metallurgical testwork results show positive first stage “rougher” recoveries of greater than 90% copper and zinc from Sulphide City massive sulphide RC drill samples (ASX Release 27th May 2015). Open cycle flotation produced commercial grade copper concentrate grades of over 22% copper;
- Following the success of the initial geochemical campaign a further 2400 soil samples have now been collected and are being analysed in an ongoing program to expand geochemical coverage over priority host rock horizons.

Kavaklitepe Gold Project Turkey (earning 70%)

- Conversion from exploration licence to operating licence received.
- Forestry permits and environmental impact assessment application documents for trenching and drilling have been prepared and submitted by Teck Resources Limited on behalf of the JV.

Mt Minnie Gold Project WA (100%)

- Follow-up soils program planned at the Woods prospects where field reconnaissance surface rock chip sampling in late 2014 returned up to 17.65 g/t gold and 11.45g/t gold.

Earahedy Manganese Project WA (100%)

- Field work planned to assess untested prospective zones north of the Bluegrass and Blue Elbow prospects, where surface sampling has previously identified shallow dipping manganese beds grading up to 48.1%Mn and 38.2%Mn respectively.

ZENITH'S EXPLORATION PROJECTS

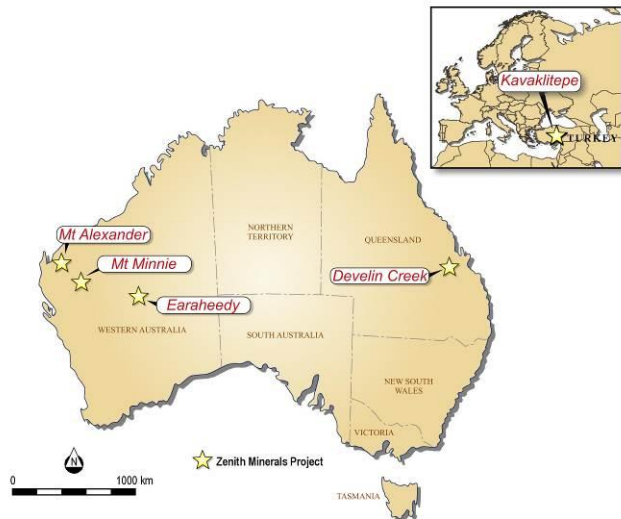


Figure 1: Zenith Project Locations



Huntsman Gossan Sample (1.1% Copper)

DEVELIN CREEK COPPER-ZINC-GOLD-SILVER PROJECT – QUEENSLAND

(Zenith 51%, right to acquire 100%)

- 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 show positive first stage “rougher” recoveries of 90%;
- Highly prospective host rock extends for up to 50km north - south in Develin Creek tenure;
- Ongoing systematic soil geochemical programs proven a successful, initial screening tool;
- Soil sampling has generated several new targets including the Huntsman prospect, where recent follow-up mapping identified gossans containing up to 1.1% copper.

Activities During the Quarter

Huntsman Prospect

Field reconnaissance mapping during the quarter identified float samples of new gossans in an area of poor outcrop (ASX release 16th June 2015) within the centre of the Huntsman soil geochemical anomaly, only 3km from known massive sulphide resources at Develin Creek (Figure 1). Rock chip samples of the gossans (weathered surface expression of sulphide zones) returned copper samples up to 1.1% Cu with associated anomalous pathfinder elements gold, arsenic and zinc. The discovery of well mineralised gossans at Huntsman is an outstanding result and elevated the prospect as a high-priority target for further more detailed exploration follow-up. Detailed mapping and infill soil geochemical sampling has recently been completed. Mapping is being compiled and infill soil samples will be analysed as part of a larger batch of samples in August-September, prior to finalising drill targets.

Metallurgy

Initial sighter metallurgical testwork has been completed on the 2014 Develin Creek drill samples for Zenith by Independent Metallurgical Operations Pty Ltd (IMO) at their Perth testwork facilities on a composite sample prepared from fresh Sulphide City RC drill chips (ASX Release 27th May 2015) .

Open cycle flotation testwork showed positive first stage “rougher” recoveries of greater than 90% copper and zinc and produced commercial grade copper cleaner concentrate grades of >22% copper albeit at modest recoveries of copper. Although it was known that the RC chips are not an optimal medium for metallurgical testwork it was anticipated that the samples would provide an adequate initial indication as to how the copper-zinc sulphides will behave in a flotation recovery process.

Zenith is encouraged by these initial flotation testwork results that show the ability to produce commercial grades of copper concentrate.

Although the RC drill chips have given valuable information on total metal recovery, the samples appear to have been coated with a film of additive during drilling, activating the sulphides so that they can be floated without any collector agents that are normally added by the metallurgists to selectively float the copper, zinc and then iron sulphides. Testwork showed that it was possible to depress the sphalerite and pyrite in the sample to produce a copper concentrate grade of >22% copper at modest copper recoveries, however it is suspected that the actions of the RC drilling fluid inhibit the ability to selectively float the individual sulphide minerals to produce separate copper, zinc and iron rich sulphide concentrates.

Further diamond core drilling is required to provide fresh uncontaminated sulphide samples for future more definitive metallurgical testwork.

Regional Targets

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

Evaluation of the many high-priority regional targets commenced in late 2014 with an initial ~5,000 soil samples collected 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. The initial sampling campaign resulted in the discovery of the Huntsman Prospect referred to in the section above.

A further 2400 soil samples have been collected during the quarter. 1500 of those samples taken to the north of the known massive sulphide deposits have been analysed with anomalous samples again corresponding with known prospects including the Develin Creek East prospect. One new area has also been identified with copper in soils to 235ppm Cu, which has now been the subject of further infill sampling (results are awaited). The remaining 900 samples will be analysed as part of a larger batch of samples in August-September.

Electromagnetic (EM) Surveys

Previous electrical geophysical surveys (EM –electromagnetic and IP - induced polarisation) were mostly completed 20 years ago. Zenith completed a review of historic geophysical programs including re-processing the historic geophysical data using modern computer techniques. The review concluded that IP geophysical surveying can detect the pyrite rich stringer zone underlying the massive copper-zinc sulphides at Develin Creek, however the work also showed that previous airborne and ground based EM surveys were not optimally designed to directly detect the massive copper-zinc sulphides, providing only weak ambiguous responses.

A VTEM SuperMax airborne geophysical trial was completed by Zenith at Develin Creek during the quarter. The survey using a modern high-powered electromagnetic (EM) system was a test case to determine geophysical responses over the known *Sulphide City* and *Scorpion* massive sulphide deposits, *Redback* Prospect and newly defined *Huntsman* Prospect. The survey shows that the VTEM SuperMax system can detect the massive sulphides at Sulphide City showing an early time conductivity anomaly. A second conductive body of a similar character was also identified west of the Huntsman prospect and is being assessed as a future drill target.



**Flotation Cell Containing Sulphide City
Copper Cleaner Concentrate**

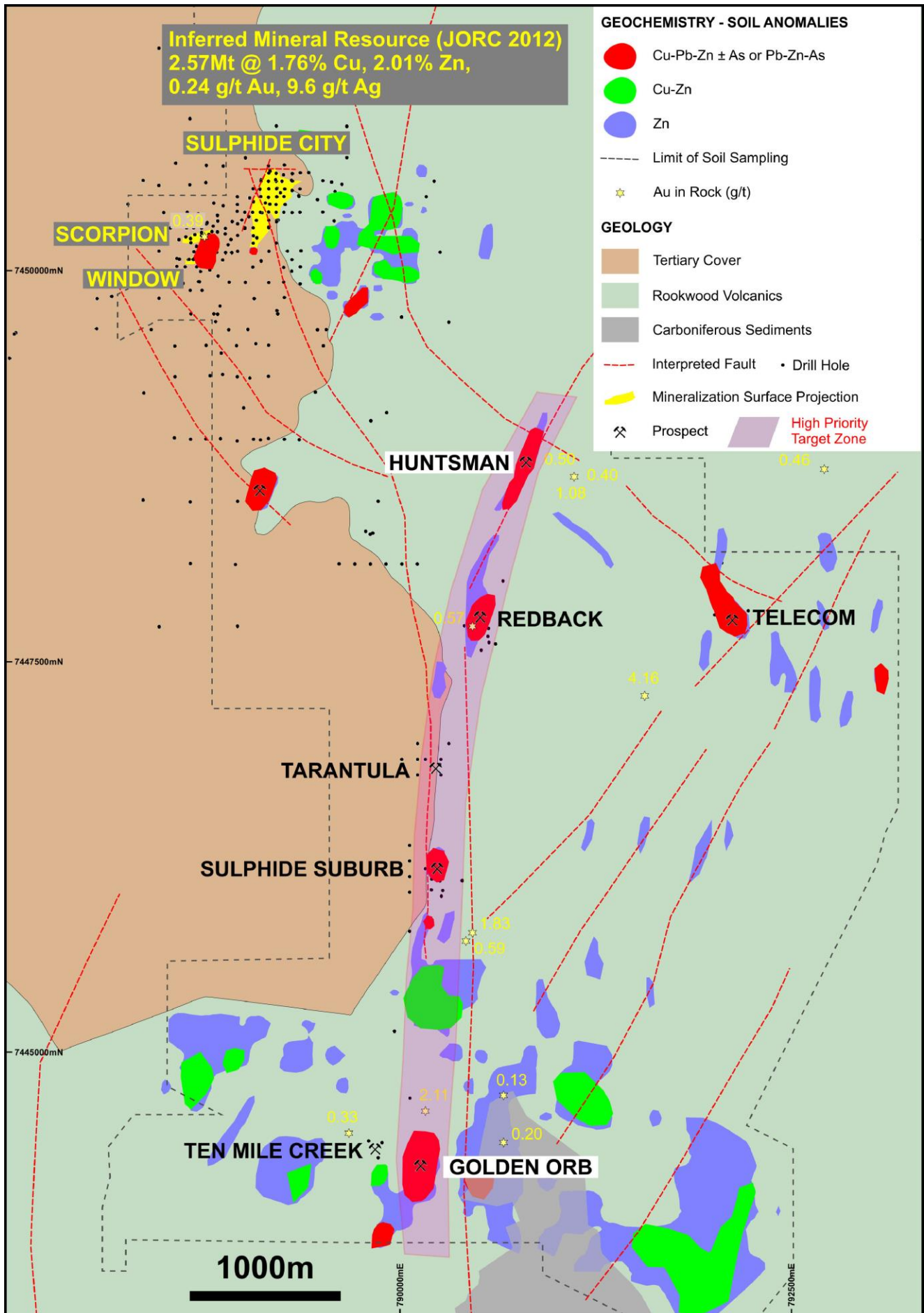


Figure 1: Summary Map of Develin Creek Priority Exploration Targets

Planned Activities

- Expansion of the highly successful soil geochemical coverage into the southern project area;
- Analysis of soil samples collected in the recent field campaigns, including infill sampling at Redback and Huntsman prospects;
- Analysis of the recently collected lithogeochemical, multi-element samples and spectral samples in an attempt to trace the prospective mineralisation horizons around the known copper-zinc-gold-silver deposits of Sulphide City, Scorpion and Window.

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	Au g/t
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 2) 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 (Figure 3) to the north and north-east, whilst bedded massive sulphide remain open ended to the north west of the Sulphide City deposit. Incremental resource extensions are likely to the immediate north of the Window resource.

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%)

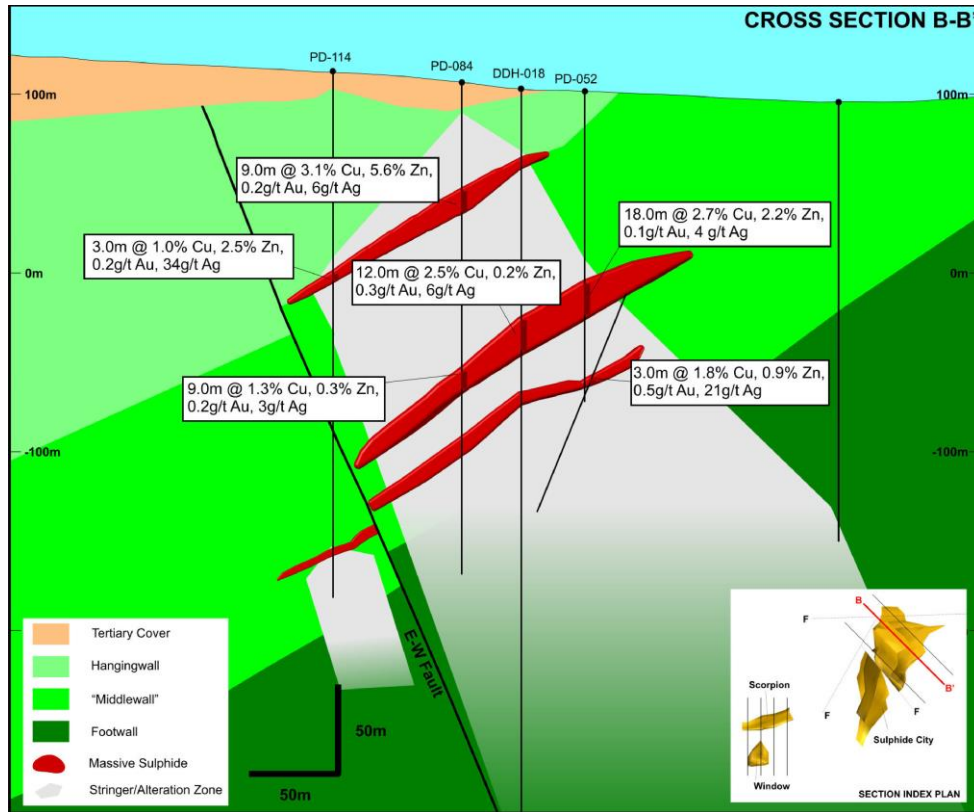


Figure 2: Sulphide City Deposit – Cross Sections

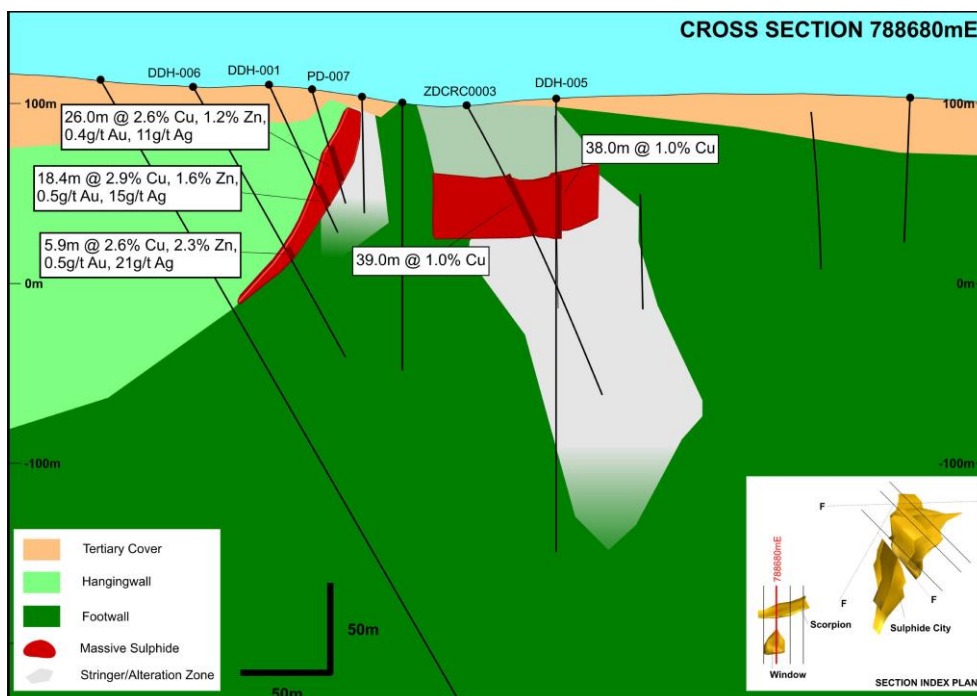


Figure 3: Scorpion-Window Deposit – Cross Section

KAVAKLITEPE GOLD PROJECT – TURKEY (Zenith earning up to 70%)

- Two coherent plus 800 metre long, high order gold in soil anomalies, with peak soil sample values over 1 g/t gold,
- Continuous rock chip traverse of 54.0 metres grading 3.33 g/t gold, including 21.5 metres grading 7.2 g/t gold within the northwest soil anomaly (Kuzey Zone),
- Continuous rock chip traverse of 21 metres grading 2.67 g/t gold at the Discovery Zone,
- Strong chargeable IP geophysical anomaly identified directly beneath high-grade surface rock chip samples (7.68, 22.7 g/t gold) and gold in soil (up to 6.05 g/t gold) at the Kuzey Zone,
- Kavaklitepe has yet to be drilled (only discovered in early 2013).

Activities During the Quarter

Teck Resources Limited through its office in Turkey has provided assistance to Zenith in the permitting process and has confirmed that conversion from exploration licence to operating licence has now been received for the Kavaklitepe project. Forestry permits and environmental impact assessment application documents for trenching and drilling have been prepared and submitted.

The next step in evaluation will include trenching to expose the rock beneath the surface soil cover, followed by drilling. The possibility of using a low impact, small, man-portable, diamond drill rig as an initial screening tool is also being evaluated.

Zenith is considering its options with regards to the ongoing management of the Kavaklitepe Joint Venture.

Background on Kavaklitepe Project

Zenith's wholly owned subsidiary S2M2 Coal Pty Ltd previously announced that it had entered into an exclusive option to earn up to a 70% interest in the Kavaklitepe gold property ("Kavaklitepe" or "the Property") located in western Turkey (see Zenith December 23, 2013 ASX release).

Columbus Copper discovered mineralization at Kavaklitepe by following up a stream sediment anomaly to a stream bed outcrop that returned 5.2 grams per tonne ("g/t") gold. Subsequently a small trench in a nearby road cut returned 2.67 g/t gold over 21 metres of exposure. About 1.4 kilometres northwest from the discovery outcrop four samples from a gold bearing breccia zone returned 28.2 g/t, 21.7 g/t, 6.7 g/t and 3.66 g/t gold respectively (see Columbus Copper release March 1, 2013). Further rock sampling along a road bank in this zone confirmed the presence of high-grade gold mineralization returning 54.0 metres of continuous rock chips with an average grade of 3.33 g/t gold, including 21.5 metres grading 7.2 g/t gold. A total of 2,127 soil samples were also collected on the Property in 50 metre x 50 metre and 100 metre x 100 metre grids covering an area of approximately 11 square kilometres, of which 176 samples returned gold grades higher than 50 ppb, 112 - higher than 100 ppb and 40 - higher than 250 ppb with 9 of these samples containing more than 1000 ppb (1 g/t) gold. The soil sampling outlined a potentially mineralized zone measuring 850 metres by 250 metres and continuing for another 800 metres to the southwest and possibly displaced by a northwest southeast trending fault at its southern margin. There are strong, coincident arsenic and antimony anomalies.

Successful IP geophysical survey trials by Zenith over two of the major gold-in-soil anomalies (Guney and Kuzey) identified strong chargeability anomalies beneath the high-grade gold in soil anomalies. Two survey configurations were tested (a grid of gradient array and single pole-dipole lines) both returning strong to moderate chargeable responses (>20Mv/v). Beneath the Kuzey zone a strong chargeable IP geophysical anomaly was identified directly beneath high-grade surface rock chip samples (7.68, 22.7 g/t gold) and gold in soil (up to 6.05 g/t gold), while a second strong chargeable IP geophysical anomaly was identified beneath the Guney Zone (Figure 4).

At Kuzey the chargeability anomaly lies directly beneath the 900m long (50ppb Au) high-grade gold in soil anomaly (maximum 6050ppb Au, 6.05 g/t Au) and can be detected in the survey data to a depth of at least 100m (Figure 5).

Columbus Copper announced on the 7th January 2015 the sale of the subsidiary that holds the Bursa and Kavaklitepe properties in Turkey to an affiliate of Teck Resources Limited. Under the Turkish Agreement, S2M2 Coal may earn an initial 51% interest in the Property over three years by making a further US\$100,000 cash payment and completing US\$2,500,000 in cumulative exploration expenditures on the Property. If S2M2 earns the initial 51% interest in the

Property, it may elect to earn a further 19%, for 70% in total, by making an additional US\$500,000 payment and by completing a bankable feasibility study within a four year period.

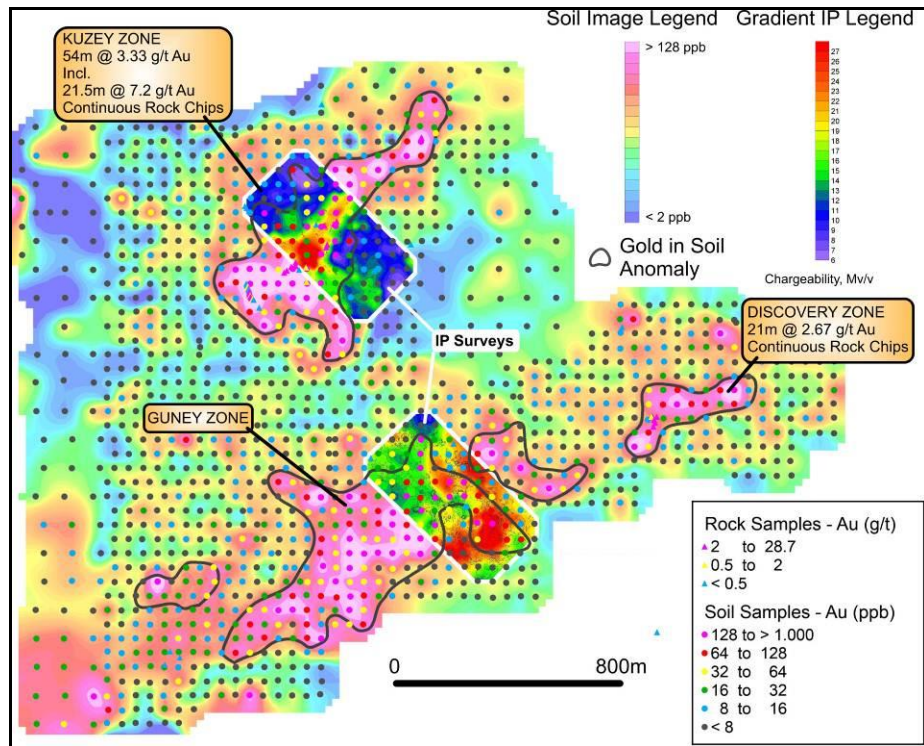


Figure 4: Plan Showing Kavaklitepe Project IP Geophysical Surveys (Images of chargeability at 25m below surface) overlaying Gold in Soil Geochemical Anomaly with Rock Chip Sample Locations

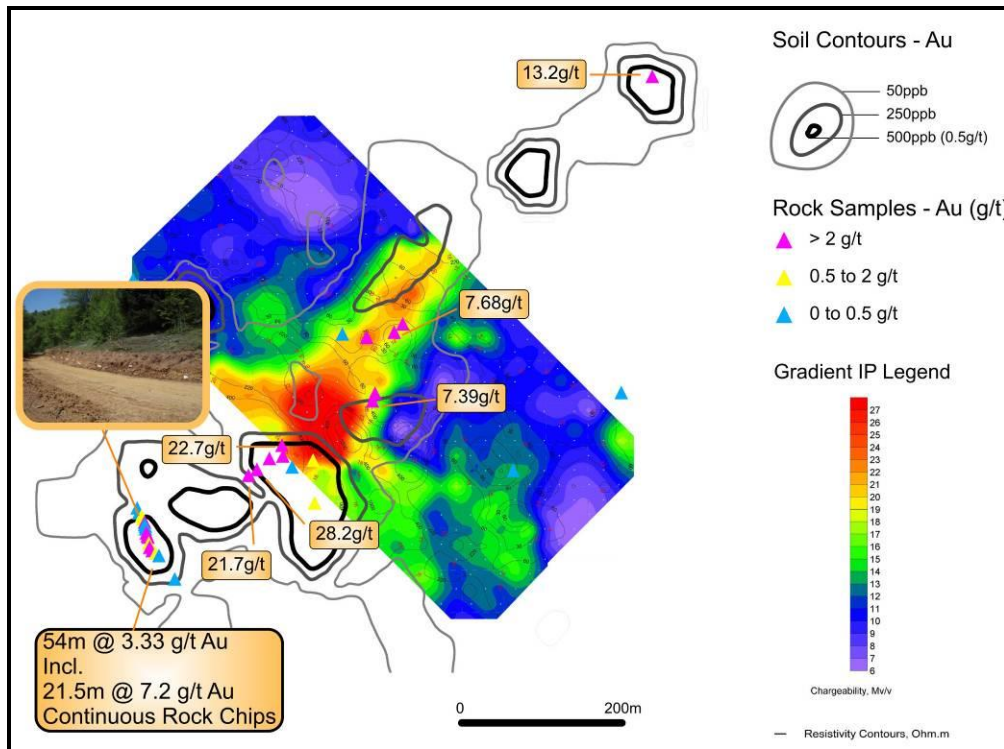


Figure 5: Plan Showing Kuzey Zone Gold in Soil Geochemical Anomaly Contours and Rock Chip Sample Locations overlaying IP Geophysical Survey Image of Chargeability (25m depth slice)

EARAHEEDY MANGANESE PROJECT – WA (Zenith 100%)

- Zenith first mover and dominant landholder, recognised potential new manganese (Mn) province in Earraheedy Basin in 2010,
- Strong tenement position - 100 strike kilometres of target manganese horizon,
- Airborne VTEM survey data covering 30km of strike,
- Mineral Resources at Red Lake and Lockeridge,
- Zenith's priority target is high-grade near surface oxide grading >40% Mn,
- Red Lake 2012 – 1st direct shipping ore (DSO) grade Mn intersected by drilling in Earraheedy Basin;
 - 3m @ 41.0% Mn within 5m @ 34.8% Mn from 22m
 - 1m @ 40.2% Mn within 3m @ 30.7% Mn from 3m.

Activities During the Quarter

No field work during the quarter.

Planned Activities

Field work is planned to assess 7 high-priority manganese targets in the vicinity of the recently discovered Bluegrass and Blue Elbow prospects where outcropping high-grade manganese returned assays up to 48.1% manganese.

Background on Earraheedy Project

The Proterozoic aged Earraheedy Basin north of Wiluna in Western Australia is a potential new manganese province with similarities to the giant Kalahari manganese field in South Africa. As first mover Zenith established a strong land position with tenements now covering ~80 strike kilometres of prospective stratigraphy (Figure 6). Zenith's priority target is high-grade (>40% Mn) manganese oxide formed by weathering or supergene upgrade of primary mineralisation.

Zenith completed the first ever drilling for manganese in the western Earraheedy in late 2010 at the Lockeridge prospect, intersecting a shallow dipping bed of primary manganese carbonate mineralisation. Better results from Lockeridge include: 12m @ 11.1% Mn from 28m depth, and 3m @ 18.0% Mn from 37m depth.

Primary manganese carbonate at Lockeridge is supergene enriched near surface. Previous Zenith drilling completed in 2010 was stepped out more than 250 metres down dip from the outcrop, and intersected primary manganese carbonate with Mn grades in the range 3 to 10% Mn for up to 1.2 km down dip. The 2013 program established potential for supergene manganese oxide with both holes intersecting mineralisation. Hole ZTAC026 (3m @ 25.1% Mn incl. 1m @ 29.6%) intersected the target around 100 metres down dip from the high grade outcrop, and hole ZTAC025 (3m @ 20.2% Mn) hit partially oxidised mineralisation around 150m down dip from surface outcrop.

The first DSO grade Mn drill intersections recorded in the Earraheedy Basin were reported by Zenith in 2012 at the Red Lake prospect. Drilling results include; 3m @ 41% Mn (within 5m @ 34.8% Mn from 22m depth), and 3 metres @ 34.8% Mn from 19 metres, including 1m @ 42.3% Mn. Subsequent drill programs defined continuous near surface high-grade manganese at Red Lake. Based on a revised geological interpretation (ASX Release 9th September 2014) the Red Lake resource is: **1.4Mt @ 19.0% Mn** at a 10% Mn cut-off grade with a higher grade component of 0.2Mt @ 30.0% Mn at a 25% Mn cut-off grade as presented in the Table below. The resource is classified under the JORC Code 2012 as Inferred, based on confidence in, and continuity of, the results from the drilling campaigns, and surface mapping.

Red Lake Manganese Mineral Resource Estimate as at August 2014

Classification	Reporting Cut-off Grade	Tonnes (Mt)	Mn %	Fe %	Si %	Al ₂ O ₃ %	P %	S %	LOI %
Inferred	25% Mn	0.2	30.0	14.1	13.85	7.9	0.24	0.03	12.1
	20% Mn	0.5	25.1	16.1	17.0	8.9	0.25	0.06	11.9
	15% Mn	1.1	20.8	17.7	20.5	9.3	0.24	0.17	11.5
	10% Mn	1.4	19.0	19.1	20.8	9.6	0.26	0.19	11.4

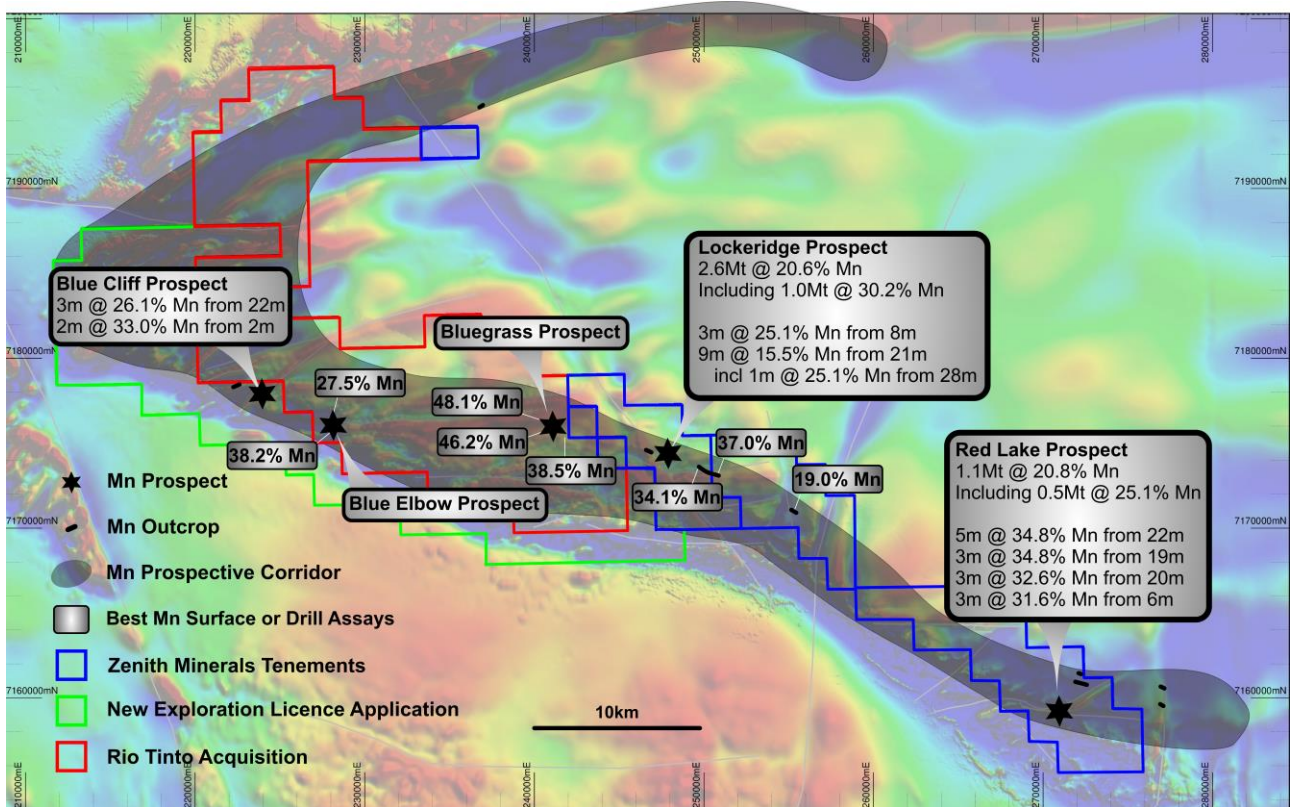


Figure 6. Zenith Tenements and Manganese Prospects, Western Earraheedy Basin

High-grade manganese mineralisation remains open to the northwest and southeast of the existing Red Lake resource and is a priority target for follow-up by Zenith.

On the 15th April 2015 Zenith reported an Inferred Mineral Resource (JORC 12) for the near surface oxide portion of the Lockeridge manganese prospect. The maiden estimate is: **2.6Mt @ 20.6% Mn** at a 10%Mn cut-off grade as presented in the Table below. The resource is classified under the JORC Code 2012 as Inferred, based on confidence in, and continuity of, the results from the drilling campaigns, and surface mapping.

Lockeridge Manganese Mineral Resource Estimate as at April 2015									
Classification	Reporting Cut-off Grade	Tonnes (Mt)	Mn %	Fe %	SiO ₂ %	Al ₂ O ₃ %	P %	S %	LOI %
Inferred	20% Mn	1.0	30.2	7.0	18.9	4.1	0.12	0.01	5.7
	15% Mn	1.9	23.4	6.7	25.4	4.7	0.15	0.01	10.4
	10% Mn	2.6	20.6	6.9	27.6	5.1	0.16	0.01	12.0

Note: The Mineral Resource was estimated within constraining wireframe solids based on the specified nominal lower cut-off grade for Mn. The Mineral Resource is quoted from all blocks above the specified Mn cut-off grade %. Differences may occur due to rounding.

Zenith is a successful applicant in Round 10 of the WA Government Co-funded Exploration Incentive Scheme (EIS), under which Zenith plans to drill test 7 high-priority manganese targets in 2015 including two new prospects Bluegrass and Blue Elbow where outcropping high-grade manganese returned assays up to 48.1% manganese.

The drill design is the culmination of Zenith's targeting exercise incorporating recent reconnaissance mapping data with a detailed assessment by Zenith's geophysical consultants of the airborne electromagnetic survey data (VTEM), flown previously by Rio Tinto for iron ore exploration and covering 3 recently acquired exploration licences that contain newly identified high-grade outcropping manganese mineralisation. Assessment of the VTEM data has been highly encouraging with discrete near surface conductors occurring co-incident with surface outcrop of high-grade manganese as well as conductors along strike of the manganese outcrops and a series of additional conductors in areas where field work is yet to be completed. Deeper conductive layers have also been resolved providing insights into the geological architecture of the host sequence and potential manganese accumulation zones.

The Company is excited by the potential for further manganese discoveries within its extensive landholdings with the geophysical review defining greater than 60 new VTEM conductors.

An exploration licence application has been successfully applied for by Zenith to cover the Blue Cliff Manganese prospect where previous drilling by a JV managed by Cazaly Resources Limited intersected: 2 metres @ 33.0% Mn from 2 metres and 3 metres @ 26.1% Mn from 22 metres depth (as announced by Cazaly to the ASX – 27th July 2012). Zenith considers there to be potential for the development of additional Mn along strike of the Blue Cliffs occurrence as well as within the area adjacent to the tenure recently acquired from Rio Tinto.

MT ALEXANDER IRON PROJECT – WA (Zenith 100%)

- **Advantages over other WA magnetite deposits;**
 - Location close to coast and infrastructure (Well located close to sealed roads, gas pipelines and only 120km from coast near Onslow (Mitsui, Chevron ports)
 - Coarser grained = better beneficiation
 - Low waste to ore ratio ~ 1:1, provides a good compact mining shape
- Base case in 2011 Scoping study - slurry pipeline, tranship by barge to vessel offshore
- 80km to API JV (Baosteel-AMCI) West Pilbara proposed railway to Anketell Port – third party access indicated by developers,
- Prominent range, magnetite zone +4 km long and up to 200 metres thick,
- JORC Inferred Resource of 566Mt @ 30 % Fe is only ~ 50% of target iron formation (“BIF”) area. Clear potential to grow resource within significant additional Exploration Target.

Activities During the Quarter

During the quarter the Company completed an update to the Mt Alexander resources and a maiden mineral resource estimate for the adjacent Mt Alexander West magnetite iron prospect.

In May 2013 the Company announced an Inferred Mineral resource for magnetite iron at Mount Alexander of 535 million tonnes @ 30.0% Fe. This mineral resource has now been updated to include magnetite iron zones that extend on to an exploration licence acquired post that May 2013 resource estimate. The new Inferred Mineral resource (JORC12) for magnetite iron at Mount Alexander is: **565.7 million tonnes @ 30.0% Fe**. The resource is the total of the 2013 Inferred Mineral Resource (535.1Mt @ 30.0%Fe) and the updated BIF extensions of the central and south west domains (30.6Mt @ 30.0% Fe). Details are included in JORC Code Reporting Criteria Section 2.

Mount Alexander BIF Inferred Mineral Resource estimate as at June 2015							
		Head Grade					
Classification	Tonnes (Mt)	Fe %	SiO ₂ %	Al ₂ O ₃ %	LOI %	P %	S %
Inferred	565.7	30.0	48.1	2.2	-0.4	0.1	0.46
	DTR	DTR Concentrate Grade					
	Mass Recovery %	Fe %	SiO ₂ %	Al ₂ O ₃ %	LOI %	P %	S %
	24.8	69.9	2.4	0.1	-2.7	0.01	1.1

In addition the Company completed a maiden Inferred Mineral resource estimate for magnetite iron at the Mt Alexander West prospect. The new Inferred Mineral resource (JORC12) for magnetite iron at Mount Alexander West is: **25.9 million tonnes @ 22.7% Fe**. The resource is classified as Inferred based on confidence in, and continuity of, the results from the drilling campaigns, detailed aeromagnetic data and detailed structural surface mapping. A summary is included at the end of this report whilst details are included in JORC Code Reporting Criteria Section 2.

Mount Alexander West BIF Inferred Mineral Resource estimate as at June 2015 (18%Fe cut-off)							
		Head Grade					
Classification	Tonnes (Mt)	Fe %	SiO ₂ %	Al ₂ O ₃ %	LOI %	P %	S %
Inferred	25.9	22.7	50.0	7.9	0.27	0.35	0.04

Substantial additional potential exists for increased tonnage at both Mt Alexander and Mt Alexander West with only ~55% of target BIF drill tested to date. The Company provides here a revised additional **Exploration Target of 510 to 620 million tonnes @ 25 to 35% Fe** (excluding the Inferred Resources), in accordance with Section 17 and Section 38 of the JORC Guidelines 2012. *The potential quantity and grade of this Exploration Target is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. The Exploration Target has been estimated on the basis of 3D modelling of the along strike extensions of resource wireframes at Mt Alexander and Mt Alexander West by using outcrop mapping (by Zenith and by Jigsaw Geoscience, assays from outcrop rock chip samples taken by Zenith, magnetic susceptibility measurements, 2.5D profile and 3D inversion modelling of detailed ground (~100-200m line spacing) and airborne magnetic (~50m line spacing) survey data by Core Geophysics,. A volume for the magnetite mineralisation was calculated to -100mRL and a bulk density range of 3.1g/cc to 3.7g/cc (consistent with a grade of 25-35wt% iron as magnetite) was applied to the volume derived from the modelling. Further drilling to test the validity of the Exploration Target is planned within the next 2 years subject to receipt of the necessary permits and approvals, and the availability of funding.*

Background on Mt Alexander Project

The Mount Alexander Project is 120 km from the port of Onslow, and 260 km south west of Karratha in the West Pilbara region of Western Australia, close to the Pilbara coast, the sealed North West Coastal Highway and the Dampier Bunbury gas pipeline. Planned rail from the nearby West Pilbara Iron Project (Baosteel/AMCI JV) to a new port development at Anketell Point provides a possible alternative infrastructure solution.

Zenith has discovered magnetite iron mineralisation occurs in a banded iron formation (BIF) associated with a sequence of amphibolite, dolomite, schist and quartzite of Proterozoic age in the northern Gascoyne Province.

A Scoping Study by consultants ProMet was reported to ASX on 10 May 2011. The Study assessed the basic mining, processing and infrastructure requirements, and estimated Capital Costs and Operating Costs. Based on detailed test work on diamond drill core the Study applied a weight recovery of 30.2% at p80 minus 40 micron grind and a DTR concentrate grade of 69.9% Fe and 3.0% SiO₂. The Base Case selected included processing by crushing, grinding, wet magnetic separation. The Base Case transport option for the concentrate was by slurry pipeline 120 km to the coast near Onslow, and transport by barge to an offshore mooring for transfer into ships for export (transshipment).

** The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.*

Pre-feasibility study elements undertaken aimed at de-risking the project include; finalised Level 1 and Level 2 flora & flora surveys (which did not identify any major environmental triggers), work on securing access to a project water supply, and investigation of export infrastructure options and bulk material transshipment technology.

MT MINNIE GOLD PROJECT – WA (Zenith 100%)

- Zenith rock chip sampling confirms high-grade gold in quartz veins. New surface rock sample results include: 17.65 g/t gold and 11.45g/t gold;
- Previous high-grade rock samples returned up to 64.2 g/t gold & 21.5 g/t gold;
- Only cursory historic reconnaissance activity by previous explorer;
- Zenith is applying a new geological model to assess gold targets over 25km of strike, prospective for reduced intrusion related gold deposits;
- Zenith's detailed orientation sampling program confirmed that surface soil samples can detect gold mineralisation at the Woods Prospect, whereas historic soil sampling failed to detect the gold rich veins.

Activities During the Quarter

No field work during the quarter.

Planned Activities

Systematic soil geochemical sampling programs are planned to assess the extents of gold mineralisation at the Woods Prospect.

Background on Mt Minnie Project

The Mt Minnie project consisting of one exploration licence is situated approximately 240 km northeast of Carnarvon in Western Australia. The tenement covers a portion of terrain composed predominantly of mid-Proterozoic granite assigned to the Minnie Creek batholith prospective for reduced intrusion related gold deposits.

Previous rock chip sampling at the Woods Prospect identified a zone of very positive gold results up to 21.5 g/t gold (Au). Sampling by Zenith confirmed the high-grade tenor of gold mineralisation at the Woods Prospect with new samples returning: 11.45 and 1.24 g/t Au from the core of a 2-3m wide ferruginous quartz vein over an outcrop strike length of 30 metres with a further sample taken 200 metres north returning 17.65 g/t Au. A continuous rock chip sample across the strike of the vein returned 2 metres @ 1.24 g/t Au. The prospect is on the edge of a soil covered plain and outcrop is sparse.

Zenith's field crew also conducted a detailed orientation soil sampling program over the Woods Prospect and confirmed that analysis of certain size fractions of surface soil samples can detect the gold mineralisation, whereas a previous explorer's attempt at soil geochemistry failed to detect the gold rich veins. This technical breakthrough provides Zenith with a cost effective, rapid screening tool to assess the size potential of the Woods Prospect and other gold mineralised veins systems in the project area.

SUNGAI ROI COAL PROJECT – INDONESIA (Zenith Right to earn 90%)

- Coal concession in East Barito, Kalimantan, Indonesia,
- Multiple, flat lying high-grade thermal coal seams crop out over 3km of strike,
- Close to existing infrastructure including haul roads and barge loading facilities.

Activities During the Quarter

No field activities were conducted during the quarter.

Background on Sungai Roi Project

The Sungai Roi coal concession in East Barito, Kalimantan, Indonesia contains an Exploration Target estimated in accordance with Section 17 and Section 38 of the JORC Guidelines 2012 of approximately 1 to 1.2 million tonnes of high-grade (6800 - 6900 kcal/kg GAR) thermal coal. *The potential quantity and grade of this Exploration Target is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

The Exploration Target was estimated by Zenith subsidiary, S2M2 Coal based on detailed mapping and sampling of 14 shallow dipping coal seams exposures over a strike length of 3km within a width of 800m and a 40m vertical range based on topographic contours. Cumulative coal seam thickness is up to 1.87m. Drilling to test the validity of the Exploration Target is recommended subject to receipt of necessary permits and approvals.

S2M2 Coal has the exclusive right to conduct due diligence on the Sungai Roi coal concession and the option, at its election, to acquire a 90% interest in the company owning the Sungai Roi coal concession. The multiple, flat lying coal seams on the concession crop out over 3km of strike within an area of gently undulating topography. The project is also close to existing infrastructure including haul roads and barge loading facilities that have the potential to reduce the upfront capital costs and time frame for development of the project.

In October 2013, S2M2 Coal received a conditional offer from an Indonesian entity to purchase S2M2 Coal's rights in respect of the Sungai Roi Coal Project for consideration of US\$500,000 in staged payments and a US\$1.00 royalty per tonne of coal mined. The company is awaiting confirmation of clean and clear title to the coal license.

Given the lack of progress in obtaining a clean and clear certificate, the current low coal prices and gloomy outlook for coal futures, going forward further reporting on Sungai Roi will only occur once a significant positive change in project status occurs.

OTHER

Following a compilation of historic exploration activity, assessment of the exploration potential and a ranking of project priorities exploration licence application E57/1010 Penny Well South was relinquished.

NEW OPPORTUNITIES

The Company is continuing to assess resource opportunities that have both synergies with existing Zenith projects or that will enhance the Company's existing project portfolio. The focus is on gold and copper projects in which 100% ownership can be secured.

CORPORATE

The Company completed a share placement of 2,500,000 shares at \$0.08 per share to overseas sophisticated investor BMC (UK) Ltd. The shares were issued within the Company's 15% capacity, pursuant to ASX Listing Rule 7.1. BMC Minerals group is a London based group focussed on identification of near-term development base metals deposits, with a particular focus on deposits containing zinc as the dominant metal. The group parent company, BMC (UK) Limited, is a partnership between management and Barclays Natural Resource Investments Inc ("BNRI"), an investment vehicle of Barclays Bank Plc.

Zenith Minerals Limited

29th July 2015

For further information contact;

Directors Michael Clifford or Mike Joyce

Phone 08 9226 1110

COMPETENT PERSONS STATEMENTS

The information in this report that relates to Zenith Exploration Results and Exploration Targets 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.

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 Mineral Resources at Zenith's Red Lake Earraheedy project is based on information compiled by Mr Dmitry Pertel, a Competent Person who is a fulltime employee of CSA Global Pty Ltd and a member of the Australian Institute of Geoscientists (AIG). Mr Pertel has sufficient experience 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 Mineral Resources and Ore Reserves". Mr Pertel consents to the inclusion of such information in this report in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Zenith's Lockeridge - Earraheedy project, Mt Alexander project and Mt Alexander West project is based on information compiled by Mr Rodney Michael Joyce, a Competent Person who is a director of the Company and a Member of the AusIMM. Mr Joyce has sufficient experience 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 Mineral Resources and Ore Reserves". Mr Joyce consents to the inclusion of such information in this report in the form and context in which it appears.

The information in this report that relates to Zenith Exploration Targets at Mt Alexander is based on information compiled by R M Joyce, who is a director of the Company and a Member of the AusIMM. Mr Joyce 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 Joyce consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

Mt Alexander West - Maiden Inferred Mineral Resource Estimate - Summary

Geology and Geological Interpretation	<p>Magnetite iron mineralisation at Mt Alexander West is restricted to a well-defined package of ferruginous shale and Banded Iron Formation (BIF) unit occurs as elongated outcrops up to 2km in length.</p> <p>The greatest thicknesses and highest magnetite contents appear to have formed in the hinge zones of a D1 antiform-synform pair that have steep plunging NNE hinges.</p> <p>The increased thickness of the BIF in the hinge zones is likely to be a function of flexural flow processes during D1 shearing and folding, with the BIF-shale package being attenuated on the limbs and thickened in the hinges. It is likely to have behaved in a more ductile fashion than the relatively rigid amphibolite country rock. The increased magnetite content of the BIF in hinge zones appears to be controlled by the remobilisation of silica (being removed) and iron (being added), through chemical and/or structural means.</p>
Sampling and Sub-sampling Techniques	<p>Industry standard practices for sampling techniques for the style of mineralisation were employed at the Mt Alexander West deposit.</p> <p>RC samples collected averaged about 3kg after passing through a riffle or rotary cone splitter at 2m intervals. Mineralised samples were kept as 2m samples, whereas non-mineralised samples were made into 8 m composites using a spear. Samples were dispatched to Spectrolab (Geraldton) where they were dried and a sub-sample was pulverised to a nominal 90% passing 100µm.</p>
Drilling Techniques	<p>The deposit was sampled using Reverse Circulation (RC) drill holes over one drilling campaign with a nominal 400m x 600m grid spacing over the magnetite iron mineralised zone of interest. 12 RC holes were drilled for a total of 2,304m in the prospect area. All holes were drilled angled to the south east at -55°.</p>
Criteria used for Classification	<p>The resource is classified under the JORC Code 2012 as Inferred, based on several criteria including drill spacing, continuity of mineralisation, and wireframe geometry.</p>
Sample Analysis Method	<p>The analytical technique used X-Ray fluorescence at Spectrolab laboratories (Geraldton). Appropriate certified reference material was included with each batch of samples. No DTR's have yet been completed on these samples.</p>
Estimation Methodology	<p>Grade estimation was by Inverse Distance to the power of 2 (IDW) completed using Micromine software for Fe, SiO₂, Al₂O₃, P, S and LOI. IDW was chosen as there was insufficient data from within the mineralisation domains to generate sufficiently robust variograms to allow estimation by means of Ordinary Kriging (OK).</p> <p>The interpretation was extended perpendicular to the north-eastern and south western most cross sections by 250m.</p> <p>The general direction and dip of the envelopes was maintained. No high-grade cutting or restricting was considered necessary.</p> <p>The block model was constructed using a 20mE x 20mN x 4mRL parent block size, with sub-celling to 2mE x 2mN x 1mRL for domain volume resolution. The parent cell size was chosen on the basis of the general morphology of mineralised bodies and in order to avoid the generation of too large block models. The sub-celling size was chosen to maintain the resolution of the mineralised bodies at wireframe edges.</p> <p>Search ellipse orientations were defined based on the spatial distribution of the Fe grades, within four separate and individually modelled domains. The majority of the mineralisation is steeply north-north west dipping and search ellipses were orientated towards (235° - 245°), with search radii of 450m x 200m x 20m.</p>

	<p>A minimum of 8 samples and a maximum of 20 samples were used to estimate the sample grades into each block.</p> <p>An assumed bulk density of 2.9 to 3.2 g/cm³ was assigned to the blocks of the various Domains based on a density Fe grade formula.</p>
<i>Cut-off grades</i>	<p>The classified Mineral Resource of magnetite Fe mineralisation is reported beneath a surface approximately 25m below surface topography surface using a 10%Fe cut-off. The 25m zone was excluded as it contained variable portions of hematite, goethite and weathered magnetite. Statistical analysis showed a natural break in the Fe grade population distribution at approximately 10%, which formed the basis for the decision regarding determination of mineralisation envelope cut off grades.</p> <p>This cut-off grade was also chosen to reflect the reasonable prospect for economic extraction.</p>
<i>Mining and Metallurgical Modifying factors</i>	<p>No mining dilution or ore loss factors have been considered in the MRE. Davis Tube Recovery Testwork (DTR's) and a scoping study have been completed for the nearby Mt Alexander Magnetite Iron Project, which contains the immediate along strike extensions of the same BIF units.</p> <p>The maximum vertical depth of the block model below surface is 300m.</p>

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	The deposit was sampled using Reverse Circulation (RC) drill holes over one drilling campaigns (1 2 RC). Drill holes were generally drilled 200-300m apart. RC holes were drilled for a total of 2,304m. The majority of the holes were drilled towards the southeast with dips of -55°.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	RC samples were collected at 2m by rotary cone splitter. Appropriate QAQC protocols were followed, including submission of field duplicates and insertion of commercial standards
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	RC samples were obtained from the rig in 2m samples using a rotary cone splitter. RC samples were crushed and ground to obtain a representative fraction of greater than 500g. This fraction was then dried to constant mass at 105°C. The representative fraction was ground to 90% passing 100 micron using a laboratory mill. The samples were weighed and mixed with a 12:22 Lithium Metaborate/Lithium Tetraborate Flux containing 4% Lithium Nitrate as an oxidising agent. The flux/sample mixture was then fused at 1050°C. All elements were determined by X-ray Fluorescence Spectrometry (XRF). LOI was determined gravimetrically in a muffle furnace at 1000°C.

Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	RC drilling comprised a nominal 5 1/2 inch diameter face sampling hammer. Hole depths average 190m.
Drill sample Sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	RC recovery was visually assessed and considered to be acceptable within the mineralized zones.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC samples were visually checked for recovery, moisture and contamination. A cone splitter was used to provide a uniform sample and these were routinely cleaned.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Sample Recovery is generally very high within the ore zone. No significant bias is expected, and any potential bias is not considered material at this stage of resource development.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	RC drill chips underwent detailed logging through the entire hole (at 2m intervals for RC chips), with record kept of colour, lithology, degree of oxidation, water table etc. RC Chip trays have been stored in Perth for future reference.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	RC chip logging included records of lithology, oxidation state, colour, mineralisation, alteration and veining.
	The total length and percentage of the relevant intersections logged.	All drill holes were logged in full.
	If core, whether cut or sawn and whether quarter, half or all core taken.	No diamond core
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC samples were collected on the rig using cone splitters. Samples were generally dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were crushed to -3mm and riffle or cone split to obtain a representative fraction of >500g. Samples were then dried and ground to 90% passing 100 microns using laboratory mills for XRF analysis.

<i>techniques and sample preparation</i>	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QAQC procedures included the insertion of field duplicates and commercial standards for RC sampling. Standards were inserted at a rate a bit over 1 per hole (about 1 every 44 samples). Field duplicates were inserted at a rate slightly over 1 per hole (about 1 every 28 samples) Select RC samples were sent to umpire laboratories for assaying.
<i>Sub-sampling techniques and sample preparation - continued</i>	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	RC field duplicates were taken from 2m cone split samples at the rig. No twinned hole was drilled.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered to be appropriate to accurately represent the magnetite Fe mineralisation at Mt Alexander based on the thickness and consistency of the intersections, the sampling methodology and the percent value assay ranges for the primary elements.
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The analytical technique used X-Ray fluorescence which is industry standard for Iron Ore. Results provide the total contained amount of each element in the suite.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	A handheld magnetic susceptibility meter (KT-10) was used to measure magnetic susceptibility for every sample. Data is stored in Zenith database.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Field QAQC procedures included the insertion of field duplicates and commercial standards. Assay results have been generally satisfactory demonstrating acceptable levels of accuracy and precision. However, phosphorus displayed a bias with time during the first phase of RC drilling. Some Fe and SiO ₂ values from standards were lower than expected in the RC drilling.
	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	At least two different company personnel visually verified intersections in both diamond core and RC chips. Magnetic susceptibility data also helped reviewing the mineralized intervals.
	<i>The use of twinned holes.</i>	No Twinned hole was used during the program.

sampling and assaying	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded on hardcopies (geological logging, sampling intervals, etc.) using a set of standard Excel templates, then manually entered into Excel spread sheets. Data were then sent to Maxwell Geoservices for storage into a relational database. Assay files were sent to Maxwell Geoservices upon receipt from the laboratories. Validation of data was performed by Maxwell Geoservices. Data was later uploaded into the Zenith Access database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made, other than for values below the assay detection limit which have been entered as the negative of the detection limit
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Drill hole collars were surveyed by handheld GPS with horizontal accuracies of about 5m. A down hole survey point was taken every 50m by means of a Reflex EZ-TRAC tool by the drilling contractor.
	<i>Specification of the grid system used.</i>	The grid system is MGA_GDA94 Zone 50
Location of data points - continued	<i>Quality and adequacy of topographic control.</i>	The topographic surface has been generated from 5m topographic contours obtained during an aeromagnetic survey completed in 2010 by Fugro. All collar locations have been picked up by means of hand held GPS with elevations corrected to the topographic surface.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Drill holes were generally drilled 300m apart.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised horizon to support the definition of Inferred Mineral Resources under the 2012 JORC code.
	<i>Whether sample compositing has been applied.</i>	2m samples out of the rig were composited into 4m composite for non-mineralised intervals.
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Drilling sections are orientated North West to South East with respect to grid north. This orientation is perpendicular to the strike of the BIF units observed at Mt Alexander West. The majority of the drilling is angled to the South East, dipping at -55° to return BIF intervals with thickness as true as possible.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	The drilling orientation is unlikely to introduce any significant bias regarding the orientation of the BIF unit.
Sample security	<i>The measures taken to ensure sample security.</i>	Chain of Custody is managed by Zenith. Samples are stored on site and delivered to the assay laboratory in Perth by Toll Ipec or by transporter. Samples submission sheets are in place to track the progress of every batches of samples.

<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p>Sampling techniques are consistent with industry standards. Consistency of data was validated by Maxwell Geoservices while loading into the database (Depth from < Depth to; interval is within hole depth, check for overlapping samples or intervals, etc.). Any data which fails the database constraints and cannot be loaded is returned to Zenith for validation, etc.). Global consistency was also checked later on by plotting sections using the database and reconciling assays against geology.</p>
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Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The deposit is located within the 100% Zenith owned exploration licence E08/1972. Zenith has signed heritage agreement with the Thalanyji People whose Native Title claim covers this tenement. The prospect is located within the Nanutarra Pastoral Lease.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is in good standing with no known impediment to future grant of a mining lease
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The tenement has not been explored for Fe in the past. Some exploration for base metals was completed by several companies
Geology	Deposit type, geological setting and style of mineralisation.	The Mount Alexander magnetite mineralisation occurs in a banded iron formation (BIF) associated with a sequence of amphibolite, dolomite, schist and quartzite of Proterozoic age in the northern Gascoyne Province. These rocks have been metamorphosed to upper greenschist and amphibolite grade.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	Adequately reported in previous ASX releases by Zenith.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No metal equivalent was used. No high-grade cutting was deemed necessary.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.	Drill hole angles of -55° toward the south east are adequate to drill the steeply dipping to north west units.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Not reporting exploration results.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not reporting exploration results.

<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to diagrams in body of text
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	Not reporting exploration results.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Surface sampling and mapping were completed over different field campaigns by Zenith Minerals. Jigsaw Geoscience was contracted to complete detailed mapping of the project. An aeromagnetic survey of the project was completed in 2010 giving further insight over the extension of magnetite BIF.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).</i>	Metallurgical test work will be completed on the recently drilled resource area following further diamond core drilling. Some more RC drilling is planned in untested areas to upgrade the resource.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in body of text



Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i>	Data used in the Mineral Resource estimate is sourced from a data base dump, provided in the form of an MS Access database. Relevant tables from the data base are exported to MS Excel format and converted to csv format for import into Micromine software for use in the Mineral Resource estimate. Validation protocols for the data entered to the database are described in Section 1
	<i>Data validation procedures used.</i>	Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars. The de-surveyed drill holes were then also verified against the provided paper sections containing the lithological interpretation for consistency.
Site visits	<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<p>A site visit was undertaken by the Competent Person.</p> <p>There is also sufficient documented work on geophysical and geological interpretations provided by independent consultants in concert with the Zenith supplied data to conclude that the current extents and grade of the interpreted mineralised BIF horizons are reasonable and have good prospects for further extensions to be defined with additional work.</p>
Geological interpretation	<p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p> <p><i>Nature of the data used and of any assumptions made.</i></p>	There is a reasonable level of confidence in the geological interpretation of magnetite Fe enriched BIF horizons traceable over numerous drill holes and drill sections and in surface mapping with concordant magnetic anomalies. Additional work is required to better define exact geometry and depth extents of the interpreted mineralised horizons. Further work is also needed to better define the structural geological framework. Any additional work is expected to have a reasonable prospect of increasing the interpreted total mineralised BIF volumes in the tenement as significant areas with mapped magnetic anomalies that have not yet been drill tested exist adjacent to and along strike from the currently interpreted horizons. Surface mapping of mineralised outcrop, drill hole intercept logging and assay results, structural interpretations and results from helicopter borne magnetic surveying have formed basis for the geological interpretation.



	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	The precise limits and geometry cannot be absolutely defined due to the limitations of the current drill coverage. Further work is required to better define the geometry and limits of the mineralised BIF horizons but no significant downside changes to the interpreted mineralised volume are anticipated.
<i>Geological interpretation - continued</i>	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	The lithological interpretation forms the basis for the modelling. Lithological envelopes defining the prospective BIF horizons, offset and limited using the available structural information have been defined, within which the grade estimation has been completed.
	<i>The factors affecting continuity both of grade and geology.</i>	The mineralised lithological unit is clearly affected by folding and faulting with further work required to define the structural geological framework of the deposit and thus refine the lithological interpretation. The magnetic anomalies do give confidence with respect to the extents and continuity of the magnetite mineralised BIF horizons.
<i>Dimensions</i>	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	The currently interpreted northern BIF horizons extend for approximately 2 km along strike bearing roughly 325° with dip nominally 63° to 235° and are affected by folding as demonstrated in the cross section figures in the accompanying documentation. They are roughly 25 - 50m thick on average with the depth extent limited to a fixed -100 m RL or on average roughly 300 m below surface. The southern BIF horizons extend for approximately 2km along strike bearing roughly 325° with dip nominally 63° to 235° and are affected by folding as demonstrated in the cross section figures in the accompanying documentation. They are roughly 25-50m thick on average with the depth extent limited to a fixed -100 m RL or on average roughly 300 m below surface.
<i>Estimation and modelling techniques</i>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	<p>Grade estimation was by inverse distance weighting (ID2) using Micromine version 15.0.3 (no block modelling) and Micromine version 12.0 (for block modelling). The estimates were completed for four domains separately using hard boundaries on all zones.</p> <p>No top cuts were applied.</p> <p>The interpreted BIF zones have been extended down to a uniform RL of -100m which is roughly 300m below surface. Along strike the interpretation was extended roughly 250m where the magnetic anomalies are continuous past the last drill hole.</p>



<i>Estimation and modelling techniques - continued</i>	<i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>	No mining has taken place in this deposit. A previous estimate for the adjacent Mt Alexander Deposit was reported in 2013, with an Inferred classification of 535.1 Mt @ 30.0 % Fe. This estimate was based on the DTR head grade assay results.
	<i>The assumptions made regarding recovery of by-products.</i>	No assumptions have been made regarding by-products
	<i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i>	SiO ₂ , Al ₂ O ₃ , P, S and LOI (head and concentrate) were also estimated. The results of the estimation of the grades indicate that no contaminant is elevated in the raw rock but this may vary in any magnetite concentrate. Further metallurgical testwork is required to assess concentrate penalty elements.
	<i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	The block model was constructed using a 20mE x 20mN x 4mRL parent block size, with sub-celling to 4mE x 4mN x 1mRL for domain volume resolution. The parent block size is based on a section interval of roughly 300m. Estimation was completed at the parent block scale. 4 separate search ellipse orientations have been defined to accommodate the slight change in strike between the north, hinge, central and south zones. Search ellipse dimensions are 450m x 200m x 20m.
	<i>Any assumptions behind modelling of selective mining units.</i>	No selective mining units were assumed in this estimate.
	<i>Any assumptions about correlation between variables.</i>	No assumptions have been made regarding correlations between variables.
	<i>Description of how the geological interpretation was used to control the resource estimates.</i>	Estimates are completed for all blocks within the boundaries of the interpreted mineralised BIF horizons.
<i>Estimation and modelling techniques - continued</i>	<i>Discussion of basis for using or not using grade cutting or capping.</i>	All grade variables had generally low coefficient of variation. No outliers were observed and no top or bottom cuts were applied.
	<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	Validation of the block model consisted of comparison of the block model volume to the wireframe volume. Grade estimates were validated by statistical comparison with the drill data, visual comparison of grade trends in the model with the drill data trends. No reconciliation data is available at this early stage of the project.



Moisture	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	The tonnages are estimated on a dry basis
Cut-off parameters	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	No cut-off grade has been applied with all blocks from within the interpreted mineralisation zones reported.
Mining factors or assumptions	<i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i>	At this stage of resource development it is assumed that mining would be by open pit methods. It has been assumed that the full strike length, width and depth of the modelled mineralisation can be economically mined.
Metallurgical factors or assumptions	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	Metallurgical testwork has been completed on the immediate strike extensions of the BIF. That material demonstrates that at a 80% passing 40µm grind magnetic separation provides recovery of saleable quality concentrates that may require reverse flotation to remove S. The assumption is that even after allowing for plant inefficiencies a high grade product (>68.5% Fe) can be produced.
Environmental factors or assumptions - continued	<i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i>	No detailed assumption regarding possible waste and process residue disposal options have been made at this stage. Level 1 and Level 2 environmental surveys across the project area encompassing sites of potential mining activities and related infrastructure have been completed and to date no significant issues have been identified. Heritage clearance surveys have been completed prior to each round of drilling and no heritage site as defined by Section 5 of the <i>Aboriginal Heritage Act 1972</i> was identified during any of the surveys.



Bulk density	<i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i>	<p>20 density measurements have been taken using non-wax immersion by Ammtec laboratory on the adjacent Mt Alexander Deposit. Of these 17 measurement were from BIF intersections and the average of these measurements (3.44 t/m^3). The average from the 3 samples outside the BIF of 2.8 t/m^3 have been applied to the waste.</p> <p>A density of 2.9 t/m^3 has been applied to the north, central and hinge domains, whilst a density of 3.2 t/m^3 has been applied to the southern domain.</p>
	<i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</i>	Refer to above measurements have been taken on the competent non-porous mineralised BIF that forms the deposit. While structural features and effects may have introduced fracturing related voids a negligible impact on the overall bulk density is expected. The drill hole logging has shown that the top 25m on average is weathered and this zone has not been estimated or reported in this estimate.
	<i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i>	Bulk densities have not been estimated. The density measurements taken thus far show a reasonably good correlation with the Fe grade but there are not enough samples to allow sufficient confidence in the linear regression to apply it to the individual blocks in the model. Densities were applied as follows: north, hinge and central domains 2.9g/cm^3 and south 3.2g/cm^3 .
Classification	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	The Inferred Mineral Resource classification is based on the evidence from the available drill sampling, surface mapping and helimag data. This evidence is sufficient to imply but not verify geological and grade continuity.
	<i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i>	The Inferred classification has taken into account all available geological and sampling information, and the classification level is considered appropriate for the current stage of this project.
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i>	The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	No audits of the Mineral Resource estimate have been undertaken at this time
Discussion of relative accuracy/	<i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i>	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource to an Inferred classification as per the guidelines of the 2012 JORC Code



confidence	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	The statement refers to global estimation of tonnes and grade
	<i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	No production data is available.



MT ALEXANDER MINERAL RESOURCE - JORC Code Reporting Criteria Sections 1 – 3

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	The deposit was sampled using both Diamond and Reverse Circulation (RC) drill holes over three drilling campaigns (1 diamond, 2 RC). Drill holes were generally drilled 200-300m apart. A total of 3 Diamond holes and 20 RC holes were drilled for a total of 5,501.90m (798.90m diamond; 4703m RC). The majority of the holes were drilled towards the southeast with dips varying between -50 and -60°.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	RC samples were collected at 1 or 2m by rotary cone splitter. Diamond core provided Zenith with high quality samples. Appropriate QAQC protocols were followed, including submission of field duplicates and insertion of commercial standards
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	Diamond core in ore was NQ2 size, sampled every 2 to 4m in the ore zone, cut into half, whereas RC samples were obtained by compositing 1 or 2m samples from the rig into 4m samples using either a spear sampler or a lab riffle splitter. Preliminary composite samples from both Diamond and first RC programmes were crushed and ground to obtain a representative fraction of greater than 500g. This fraction was then dried to constant mass at 105°C. The representative fraction was ground to 90% passing 100 micron using a laboratory mill. The samples were weighed and mixed with a 12:22 Lithium Metaborate/Lithium Tetraborate Flux containing 4% Lithium Nitrate as an oxidising agent. The flux/sample mixture was then fused at 1050°C. All elements were determined by X-ray Fluorescence Spectrometry (XRF). LOI was determined gravimetrically in a muffle furnace at 1000°C. Selected mineralised samples from all the programmes were composited into 8m (diamond) or 4m (RC) samples and analysed by XRF following Davis Tube Recovery. A representative fraction of 150g was control ground 80% passing 40 microns. A 20g sub-sample was then used for Davis tube recovery according to the following conditions: <ul style="list-style-type: none"> o Magnetic Field Strength: 3000 Gauss o Washing Time: 20 minutes o Tube Angle: 45 Degrees o Wash Water Flow-rate: 540ml/Minute o Tube Oscillation/Stroke: 60 cycles per minute The resulting concentrate from the Davis Tube was collected and weighed. Non-magnetics were not collected. Samples were then assayed by XRF as above. Size Fractions were determined by wet screening (at 45 and 38microns).
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	Diamond drilling comprises HQ and NQ2 sized core. Drilling involved rock rolling down to depth comprised between 15 and 18m; then HQ down to depth ranging from 48.1 to 83.8m and finally NQ2 to end of hole. Hole depths range from 212.8 to 345.4m. Core was oriented using a Reflex ACT II orientation tool. RC drilling comprised a nominal 5 ½ inch diameter face sampling hammer. Hole depths range from 144m to 286m.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Diamond core recovery is logged and recorded in the database. No significant core loss issue exists. RC recovery was visually assessed and considered to be acceptable



		within the mineralized zones.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Diamond core was reconstructed into continuous runs for orientation marking, depths being checked against the depth marked on the core blocks. RC samples were visually checked for recovery, moisture and contamination. A cyclone and splitter were used to provide a uniform sample and these were routinely cleaned.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	Sample Recovery is generally very high within the ore zone. No significant bias is expected, and any potential bias is not considered material at this stage of resource development. Average Fe assay grades returned from diamond core is marginally higher than average Fe assay grade for RC chip sampling.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	Diamond core and RC drill chips underwent detailed logging through the entire hole (at 1m intervals for RC chips), with record kept of colour, lithology, degree of oxidation, water table etc. Diamond core was geotechnically logged for recovery and RQD. Information on structure type and orientation are recorded in the database. Drill holes were relogged at a later date to ensure consistency between geologists and drill programmes. Diamond core and RC Chip trays have been stored in Perth for future reference.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Diamond core and RC chip logging included records of lithology, oxidation state, colour, mineralisation, alteration and veining. Core was photographed in both dry and wet form.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes were logged in full.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Diamond core was sawn in half
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	RC samples were collected on the rig using cone splitters. Samples were generally dry.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Samples were crushed to -3mm and riffle or cone split to obtain a representative fraction of >500g. Samples were then dried and ground to 90% passing 100 microns using laboratory mills for XRF analysis. Samples for DTR were instead ground to 80% passing 40 microns before undergoing DTR.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QAQC procedures included the insertion of field duplicates and commercial standards for RC sampling. No field duplicate or standard was inserted with the core samples. Standards were inserted at a rate a bit over 1 per hole (about 1 every 44 samples). Field duplicates were not inserted in the first phase of RC drilling and inserted at a rate slightly over 1 per hole (about 1 every 28 samples) during the second phase. During the first phase of RC drilling, both raw and head assays were obtained for mineralized intervals. 48 RC samples were sent to umpire laboratories for assaying. 10 pulp samples (both from "head" and "DTR" assays) from the diamond drilling programme were sent to an umpire laboratory for XRF analysis.
Sub-sampling techniques and sample preparation - continued	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	RC field duplicates were taken from 1m cone split samples at the rig and composited into 4m samples using a spear sampler or a riffle splitter. Diamond holes were sampled at 2-4m intervals for raw assays and samples were then composited to 8m for DTR (which included another head assay). During the first phase of RC drilling, both raw and head assays were obtained for mineralized intervals. No twinned hole was drilled.



	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered to be appropriate to accurately represent the Fe oxide mineralisation at Mt Alexander based on the thickness and consistency of the intersections, the sampling methodology and the percent value assay ranges for the primary elements.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The analytical technique used X-Ray fluorescence which is industry standard for Iron Ore. Results provide the total contained amount of each element in the suite.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	A handheld magnetic susceptibility meter (KT-10) was used to measure magnetic susceptibility for every sample. Data is stored in Zenith database.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Field QAQC procedures included the insertion of field duplicates and commercial standards. External laboratory checks were performed on samples from the 3 phases of drilling. Assay results have been generally satisfactory demonstrating acceptable levels of accuracy and precision. However, phosphorus displayed a bias with time during the first phase of RC drilling. Some Fe and SiO ₂ values from standards were lower than expected in the second phase of RC drilling.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	At least two different company personnel visually verified intersections in both diamond core and RC chips. Magnetic susceptibility data also helped reviewing the mineralized intervals.
	<i>The use of twinned holes.</i>	No Twinned hole was used during any of the programmes. One vertical RC hole was drilled on the same pad as a previous angled hole to check for continuity of the ore and to assist with geological interpretation.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded on hardcopies (geological logging, sampling intervals, etc.) using a set of standard Excel templates, then manually entered into Excel spread sheets. Data were then sent to Maxwell Geoservices for storage into a relational database. Assay files were sent to Maxwell Geoservices upon receipt from the laboratories. Validation of data was performed by Maxwell Geoservices.
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made, other than for values below the assay detection limit which have been entered as the negative of the detection limit
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Drill hole collars were surveyed by handheld GPS with horizontal accuracies of about 5m. A down hole survey point was taken every 50m by means of a single shot camera tool by the drilling contractor.
	<i>Specification of the grid system used.</i>	The grid system is MGA_GDA94 Zone 50
Location of data points - continued	<i>Quality and adequacy of topographic control.</i>	The topographic surface has been generated from 5m topographic contours obtained during an aeromagnetic survey completed in 2010 by Fugro. All collar locations have been picked up by means of hand held GPS with elevations corrected to the topographic surface.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Drill holes were generally drilled 200-300m apart.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised horizon to support the definition of Inferred Mineral Resources under the 2012 JORC code.
	<i>Whether sample compositing has been applied.</i>	1 or 2m samples out of the rig were composited into 8m composite for diamond core and 4m composites for RC.



Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Drilling sections are orientated North West to South East with respect to grid north. This orientation is perpendicular to the strike of the BIF units observed at Mt Alexander. The majority of the drilling is angled to the South East, dipping between -50 and -60° to return BIF intervals with thickness as true as possible. Diamond core observation confirmed the pertinence of this hole orientation.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	Diamond drilling confirmed that drilling orientation did not introduce any bias regarding the orientation of the BIF unit.
Sample security	<i>The measures taken to ensure sample security.</i>	Chain of Custody is managed by Zenith. Samples are stored on site and delivered to the assay laboratory in Perth by Toll Ipec or by transporter. Samples submission sheets are in place to track the progress of every batches of samples.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards. Consistency of data was validated by Maxwell Geoservices while loading into the database (Depth from < Depth to; interval is within hole depth, check for overlapping samples or intervals, etc.). Any data which fails the database constraints and cannot be loaded is returned to Zenith for validation, etc.). Global consistency was also checked later on by plotting sections using the database and reconciling assays against geology.



Section 2 Reporting of Exploration

Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The deposit is located within the 100% Zenith owned exploration licences E08/1410, E08/1987 and E08/1410. Zenith has signed heritage agreement with the Thalanyji People whose Native Title claim covers these tenements. The prospect is located within the Nanutarra Pastoral Lease.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing with no known impediment to future grant of a mining lease.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The tenements have not been explored for Fe in the past. Some exploration for base metals was completed by several companies
Geology	Deposit type, geological setting and style of mineralisation.	The Mount Alexander magnetite mineralisation occurs in a banded iron formation (BIF) associated with a sequence of amphibolite, dolomite, schist and quartzite of Proterozoic age in the northern Gascoyne Province. These rocks have been metamorphosed to upper greenschist and amphibolite grade.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	In the company's opinion this material has been adequately reported in previous announcements and the detail is not relevant for reporting of Mineral Resources
	o easting and northing of the drill hole collar	
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	o dip and azimuth of the hole	
	o down hole length and interception depth	
	o hole length.	
Data aggregation methods	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Not reporting exploration results.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not reporting exploration results.



<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents have been used
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	Drill hole angles of between -50° and -60° toward the south east are adequate to drill the steeply dipping to north west units.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	Not reporting exploration results.
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	Not reporting exploration results.
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to diagrams in body of text
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	Not reporting exploration results.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Surface sampling and mapping were completed over different field campaigns by Zenith Minerals. Jigsaw Geoscience was contracted to complete detailed mapping of the project. An aeromagnetic survey of the project was completed in 2010 giving further insight over the extension of magnetite BIF. Sulphur values are high in the project. Metallurgical advice is that simple sulphide flotation of the magnetite concentrate should have no difficulty in reducing sulphur to the desirable level for a concentrate.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Metallurgical test work has been completed on the drilled resource area. More RC drilling is planned in untested areas to upgrade the resource.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in body of text



Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i>	Data used in the Mineral Resource estimate is sourced from a data base dump, provided in the form of an MS Access database, from the Datashed relational database formerly hosted by Maxwell Geoservices. Relevant tables from the data base are exported to MS Excel format and converted to csv format for import into Micromine software for use in the Mineral Resource estimate.
	<i>Data validation procedures used.</i>	Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars. The desurveyed drill holes were then also verified against the provided paper sections containing the lithological interpretation for consistency.
Site visits	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i>	The Competent Person has visited the site on 3 separate field trips.
	<i>If no site visits have been undertaken indicate why this is the case.</i>	A site visit was undertaken.
Geological interpretation	<i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i>	There is a reasonable level of confidence in the geological interpretation of magnetite Fe enriched BIF horizons traceable over numerous drill holes and drill sections and in surface mapping with concordant magnetic anomalies. Additional work is required to better define exact geometry and depth extents of the interpreted mineralised horizons. Further work is also needed to better define the structural geological framework. Any additional work is expected to have a reasonable prospect of increasing the interpreted total mineralised BIF volumes in the tenement as significant areas with mapped magnetic anomalies that have not yet been drill tested exist adjacent to and along strike from the currently interpreted horizons.
	<i>Nature of the data used and of any assumptions made.</i>	Surface mapping of mineralised outcrop, drill hole intercept logging and assay results, structural interpretations and results from helicopter borne magnetic surveying have formed basis for the geological interpretation.
	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	The precise limits and geometry cannot be absolutely defined due to the limitations of the current drill coverage. Further work is required to better define the geometry and limits of the mineralised BIF horizons but no significant downside changes to the interpreted mineralised volume are anticipated.
Geological interpretation - continued	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	The lithological interpretation forms the basis for the modelling. Lithological envelopes defining the prospective BIF horizons, offset and limited using the available structural information have been defined, within which the grade estimation has been completed.



	<i>The factors affecting continuity both of grade and geology.</i>	The mineralised lithological unit is clearly affected by folding and faulting with further work required to define the structural geological framework of the deposit and thus refine the lithological interpretation. The magnetic anomalies do give confidence with respect to the extents and continuity of the magnetite mineralised BIF horizons.
<i>Dimensions</i>	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	The currently interpreted northern BIF horizons extend for approximately 4 km along strike bearing roughly 040° with dip nominally 70° to 310° and are affected by folding as demonstrated in the original 2013 MRE report. They are roughly 100m thick on average with the depth extent limited to a fixed -100 m RL or on average roughly 250 to 300 m below surface. The southern BIF horizons extend for approximately 2km along strike bearing roughly 045° with dip nominally 70° to 315° and are affected by folding. They are roughly 100m thick on average with the depth extent limited to a fixed -100 m RL or on average roughly 250 to 300 m below surface.
<i>Estimation and modelling techniques</i>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	Grade estimation for the updated portion of the MRE was by Inverse Distance to the power 2 (IDW2) using Micromine software in the extended precision environment for Fe, SiO ₂ , Al ₂ O ₃ , P, S and LOI for both the feed (or head) and concentrate assay grades from the Davis Tube Recovery (DTR) testwork and for the mass recovery result of the DTR testwork. The estimates were completed for the extensions to the north horizon using hard boundaries between the north and south zones but with soft boundaries between the individual lenses within the north and south zones. Grade variable data for the north zone was separately analysed and top or bottom cuts were applied where necessary to the grade variables to reduce the effect of outlier values on the grade estimation as shown in the table in the accompanying technical summary. The interpreted BIF zones have been extended down to a uniform RL of -100m which is roughly 15m below the deepest BIF intercept in the drill holes. Along strike the interpretation was extended 300m where the magnetic anomalies are continuous past the last drill hole or it was terminated against interpreted structures where the anomaly is offset or fading.
<i>Estimation and modelling techniques - continued</i>	<i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>	No mining has taken place in this deposit. A previous estimate for the BIF horizons was reported in 2013, with an Inferred classification of 535.1 Mt @ 30.0 % Fe. This estimate was based on the DTR head grade assay results.
	<i>The assumptions made regarding recovery of by-products.</i>	No assumptions have been made.



	<i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i>	SiO ₂ , Al ₂ O ₃ , P, S and LOI (head and concentrate) were also estimated. The results of the estimation of the concentrate grades indicate that S is the only contaminant that is elevated in the concentrate product, at 1.1 %, with P at 0.01%, Al ₂ O ₃ at 0.1%, and SiO ₂ at 2.4%. Zenith has included this factor as part of their scoping study completed in 2011 with plans to remove S by means of a reverse flotation plant.
	<i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	The block model was constructed using a 100mE x 100mN x 8mRL parent block size, with subcelling to 5mE x 5mN x 2mRL for domain volume resolution. The parent block size is based on a section interval of roughly 200m for about one third of the modelled strike length, with the remainder being nominally 300m apart. Estimation was completed at the parent block scale. 2 separate search ellipse orientations have been defined to accommodate the slight change in strike between the central and south west domains. The search ellipse for the central domain has the major axis bearing 040°, and the semi major axis at 70° dip towards 310°. The search ellipse for the south west domain has the major axis bearing 045°, and the semi major axis at 70° dip towards 315°. Search ellipse dimensions are 800m x 300m x 60m for both domains.
	<i>Any assumptions behind modelling of selective mining units.</i>	No selective mining units were assumed in this estimate.
	<i>Any assumptions about correlation between variables.</i>	Statistical analysis has demonstrated good correlations between the raw assay and DTR head grade assays. There are fair to reasonable correlations between the head and concentrate grade of Fe compared to the head grades for SiO ₂ , Al ₂ O ₃ and Mass Recovery, and poor to no correlation between the head grade of Fe and head grades of S and P. In the case of the LOI head grade after removal of a small number of outlier values above 1.5% a reasonable correlation with the Fe head grade was also shown. Similar correlations exist for the concentrate grades.
	<i>Description of how the geological interpretation was used to control the resource estimates.</i>	Estimates are completed for all blocks within the boundaries of the interpreted mineralised BIF horizons.
<i>Estimation and modelling techniques - continued</i>	<i>Discussion of basis for using or not using grade cutting or capping.</i>	While most grade variables had generally low coefficient of variation, some outlier values were noted that required top or bottom cuts to prevent undue influence of these outlier grades on the grade estimation. The cuts applied are presented in table format in the resource update report.
	<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	Validation of the block model consisted of comparison of the block model volume to the wireframe volume. Grade estimates were validated by statistical comparison with the drill data, visual comparison of grade trends in the model with the drill data trends. No reconciliation data is available at this early stage of the project.
<i>Moisture</i>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	The tonnages are estimated on a dry basis.
<i>Cut-off parameters</i>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	A cut-off grade of 20%Fe has been applied with all blocks from within the interpreted mineralisation zones reported.



Mining factors or assumptions	<p>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</p>	<p>At this stage of resource development it is assumed that mining would be by open pit methods. It has been assumed that the full strike length, width and depth of the modelled mineralisation can be economically mined. To test this the assumption of an open pit with 45° pit walls would give a volume stripping ratio of roughly 3:1 which is considered likely to be economically viable for this mineralisation type.</p>
Metallurgical factors or assumptions	<p>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</p>	<p>Metallurgical testwork has been completed that demonstrate that at a 80% passing 40µm grind magnetic separation provides recovery of saleable quality concentrates that will require reverse flotation to remove S. The weight recovery and concentrate grades have been estimated in the model and the assumption is that even after allowing for plant inefficiencies a high grade product (>68.5% Fe) can be produced.</p>
Environmental factors or assumptions - continued	<p>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</p>	<p>No detailed assumption regarding possible waste and process residue disposal options have been made at this stage. An in-house project development layout has been developed that demonstrates there is adequate area within the 100% owned Zenith tenure for waste dumps, tailings facilities, process plant site and associated project development infrastructure.</p> <p>Level 1 and Level 2 environmental surveys across the project area encompassing sites of potential mining activities and related infrastructure have been completed and to date no significant issues have been identified. Heritage clearance surveys have been completed prior to each round of drilling and no heritage site as defined by Section 5 of the <i>Aboriginal Heritage Act 1972</i> was identified during any of the surveys.</p>
Bulk density	<p>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</p>	<p>20 density measurements have been taken using non-wax immersion by Ammtec laboratory. Of these 17 measurements were from BIF intersections and the average of these measurements (3.44 t/m³) has been rounded to 3.4 t/m³ and applied to all mineralised material in the central domain, and density of 3.3 t/m³ was applied to all blocks in the south west domain to account for a slightly lower average iron grade in this domain. The average from the 3 samples outside the BIF of 2.8 t/m³ has been applied to the waste.</p>
	<p>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</p>	<p>Measurements have been taken on the competent non-porous mineralised BIF that forms the deposit. While structural features and effects may have introduced fracturing related voids a negligible impact on the overall bulk density is expected. The drill hole logging has shown that the top 25m on average is weathered and this zone has not been estimated or reported in this estimate.</p>
	<p>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</p>	<p>Bulk densities have not been estimated. The density measurements taken thus far show a reasonably good correlation with the Fe grade but there are not enough samples to allow sufficient confidence in the linear regression to apply it to the model.</p>



Classification	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	The Inferred Mineral Resource classification is based on the evidence from the available drill sampling, surface mapping and helimag data. This evidence is sufficient to imply but not verify geological and grade continuity.
	<i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i>	The Inferred classification has taken into account all available geological and sampling information, and the classification level is considered appropriate for the current stage of this project.
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i>	The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	No audits of the Mineral Resource estimate have been undertaken at this time
Discussion of relative accuracy/ confidence	<i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i>	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource to an Inferred classification as per the guidelines of the 2012 JORC Code
	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	The statement refers to global estimation of tonnes and grade
	<i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	No production data is available.