



ASX & MEDIA RELEASE

Zenith
Minerals
Limited

ABN 96 119 397 938

ASX CODE: ZNC

Activities

Exploration/Development
Mt Alexander Magnetite Iron
Earaheedy Manganese
Snake Well Base Metal/Gold

Details as at June 2011

Issued Shares	81.3 m
Unlisted options	1.05 m
Mkt Cap (\$0.40)	A\$ 32.5 m
Cash June 2011	A\$ 3.16 m
Investments	A\$ 0.18 m
Debt	Nil

Directors

Gary Comb	Chairman
Anthony Hespe	Managing Director
Stan Macdonald	Non Exec Director
Mike Joyce	Non Exec Director

Major Shareholders

HSBC Custody Nom	12.3 %
Giralia (Atlas Iron)	10.8%
Buckley RJH	3.8%
Yandal Inv. PL	3.4%

Contact Us

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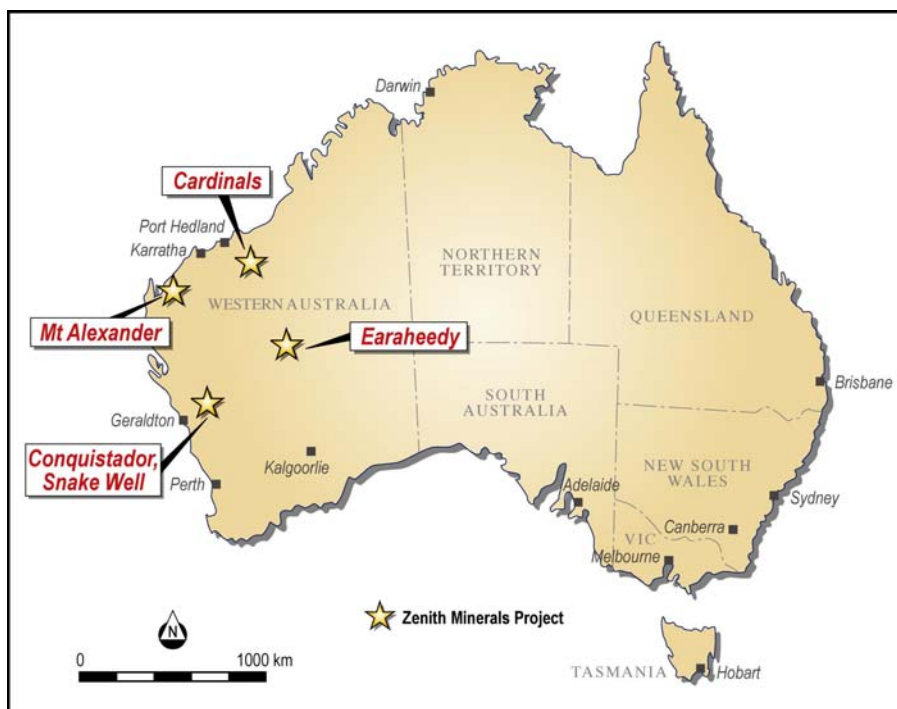
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QUARTERLY ACTIVITY REPORT FOR THE PERIOD ENDING 30 June 2011

HIGHLIGHTS

- Mt Alexander** • Positive scoping study completed on magnetite iron project
- Earaheedy** • Helicopter reconnaissance locates two new manganese prospects and a high grade hematite zone
- Snake Well** • RAB drilling extends Kerbar copper zinc anomaly to 400 metres strike
• Diamond drilling at Kerbar is underway
- Corporate** • Cash and short term deposits at 30 June 2011 were \$3.1 million



Zenith Minerals Project Locations



EXPLORATION PROJECTS

Mt Alexander (Zenith Minerals 100%)

Quarter Activity

During the June Quarter 2011 the Company announced the results of a scoping study by independent consultants ProMet Engineers Pty Ltd on the development of the Mount Alexander project (ASX: 10 May 2011).

The study was based on production of 8 million tonnes per year of blast furnace grade concentrate grading 68.6% Fe and 4.5% SiO₂ (after allowing for plant inefficiencies). Aluminum and phosphorous levels would be minimal. The plant would include a flotation section to reduce sulphur content to less than 0.2%.

The main components of the project as proposed in the study are:

- The pre-strip and establishment costs of an open cut mine at Mount Alexander to be operated by a contract miner
- Ore processing at Mount Alexander including crushing, grinding, wet magnetic separation and sulphur removal by flotation to produce a magnetite concentrate
- Mine infrastructure at Mount Alexander such as accommodation, offices, workshops, tailings storage and bore field
- Transport of the concentrate as a slurry by pipeline to Onslow
- Dewatering and storage in a closed shed at Onslow
- Covered conveyor transport from the shed to a barge port
- Transport by barge to an offshore mooring for transfer into ships for export
- Third party owned/operated 120Mw power station at Onslow
- HV power line from Onslow to Mount Alexander

The project capital cost is estimated at \$1,698 million including a contingency of \$178 million. Operating cost is estimated at \$57/tonne concentrate.

If the project builds and operates the power station capital costs increase to \$1,864 million and operating costs reduces to \$50/tonne concentrate.



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Capital and operating expenditure may be reduced by sharing infrastructure with the development of the Ashburton North Strategic Industrial hydrocarbon hub at Onslow including the power station, barge port and a desalination plant (in lieu of a bore field).

Based on these positive results the Company has commenced seeking a development partner for the project. The Company will continue work to de-risk the project including environmental studies and stakeholder consultation.

Background

The Mount Alexander project is near the port of Onslow, 260 kilometres south west of Karratha and is well located with respect to infrastructure. The North West Coastal Highway is 10 kilometres west of the project and the Dampier Bunbury gas pipeline passes to the west of the highway (Figure 1). The project consists of three exploration licenses owned 100% by Zenith Minerals.

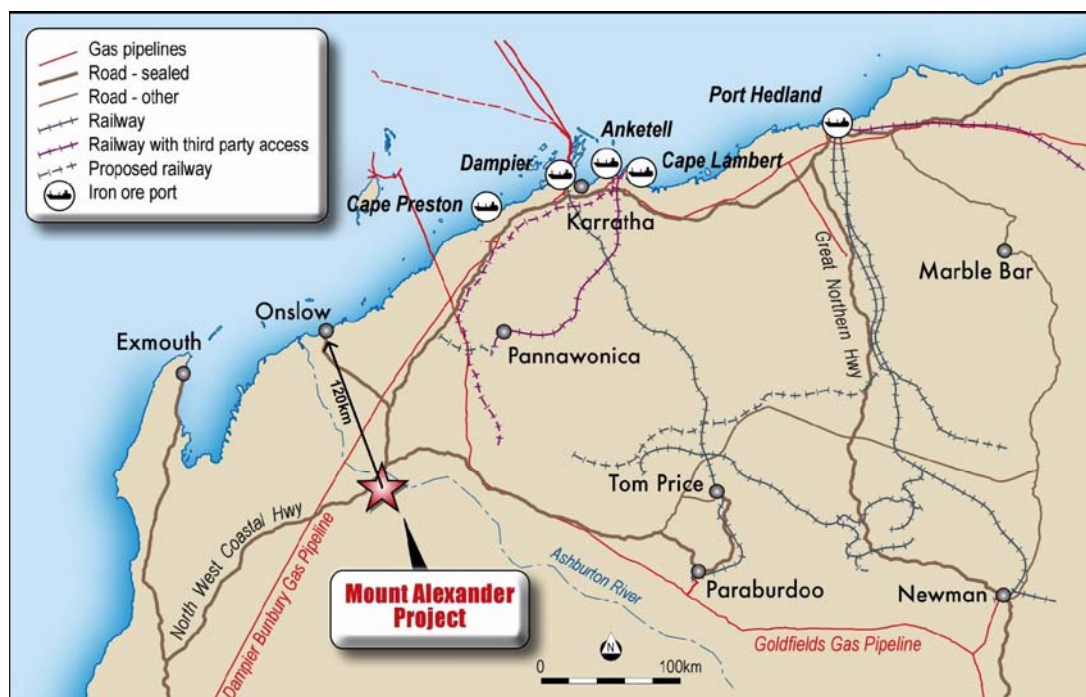


Figure 1 Mount Alexander Project location and proximity to coast and regional infrastructure

On 11 March 2010 Zenith Minerals announced an Exploration Target* at the Mount Alexander Prospect of 0.6 to 1.2 billion tonnes at between 25% and 35% iron. This estimation was based on results from detailed geological mapping, three diamond drill holes, metallurgical testing of core and 580 surface rock samples.



**JORC Statement in relation to the use of the term “Exploration Target”:*

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.

On 14 April 2011 the Company announced a maiden Inferred Mineral Resource for the project which is summarized in the following table:

Mt Alexander Magnetite Project Mineral Resource estimate							
Classification	Tonnes (million)	Fe %	SiO ₂ %	Al ₂ O ₃ %	P %	S %	LOI %
Inferred	392.9	29.5	48.3	2.4	0.10	0.47	-0.7

The Mineral Resource was estimated by independent consultants CSA Global Pty Ltd and was based on diamond and RC drilling, detailed 1:2,500 scale surface mapping and new aeromagnetic data.

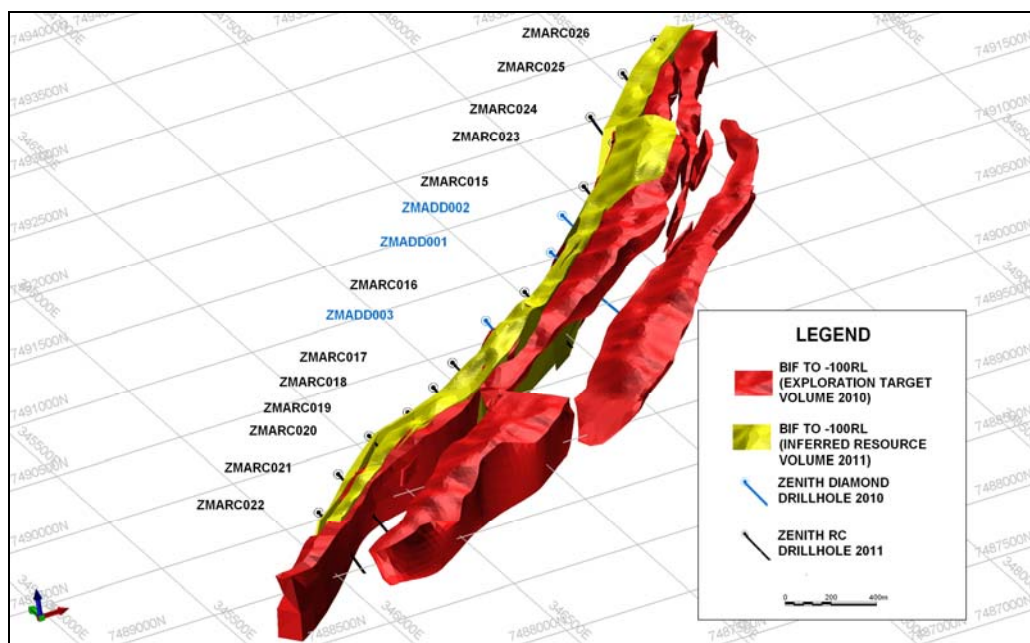


Figure 2 Oblique view looking north east of the maiden Inferred Resource volume (yellow) overlain on Exploration Target volume (red)

The Inferred Mineral Resource is located within the Exploration Target and occupies approximately 40% of the Exploration Target volume as shown in the oblique view in Figure 2. This diagram indicates the potential for further drilling within the Exploration Target volume to define a resource towards the upper range of the Exploration Target tonnage.

The Mount Alexander 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 folded into a regional scale north east trending



anticline and metamorphosed to upper greenschist and amphibolite grade. The core of the anticline is intruded by the Mortgage monzonite stock which is related to tungsten and lead zinc mineralization in the area.

Earaheedy (Zenith Minerals 100%)

Quarter Activity

Following grant of additional tenements in March 2011 the Company undertook a regional helicopter prospecting program to locate outcrops of supergene manganese (ASX: 4 July 2011). The helicopter program targeted the up dip edge of the stratigraphic position of the manganese mineralisation where it was predicted to occur in the new tenements south east of Lockeridge prospect (ASX: 25 Oct 2010) and across the northern end of the tenement group. Two new areas of manganese mineralisation were located at Red Lake and Blueline (Figure 3). A zone of high grade hematite mineralisation was located adjacent to the Red Lake manganese prospect.

At Red Lake outcrops of supergene manganese grading up to 47.4% Mn were discovered in two locations.

At location "A" (Figure 4) manganese is exposed in a creek as a flat dipping bed at least 1 metre thick. The manganese extends as lag and sub-outcrop for up to 900 metres along strike and intermittently 500 metres across strike south west up a gentle slope. Up this slope it may occur as a continuous bed sub parallel to the land surface or a series of parallel beds.

At location "B" manganese occurs as scattered outcrops protruding through alluvium adjacent to Red Lake.

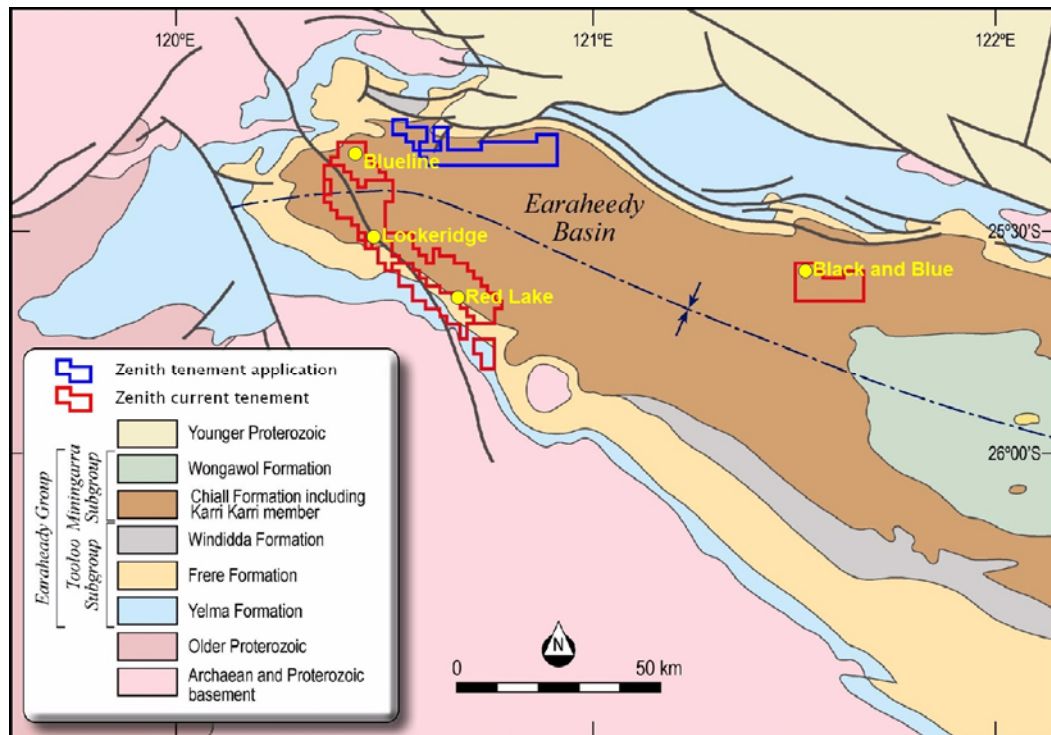


Figure 3 Zenith Tenements and manganese prospects, Western Earraheedy Basin

Haematitic siltstone grading up to 64.2% iron was discovered at location “C” while prospecting for manganese. The hematite mineralisation outcrops on low rises separated along strike by alluvial flats and has the regional basin dip of around 15 degrees to the north east. The outcrop width on the hills is up to 150 metres indicating a true width of up to 30 metres. The strike length of zone “C”, including areas under alluvial cover, is around 5 kilometres.

The manganese at “A” occurs in a fault bounded block oblique to the shallow north east regional dip of the Earraheedy Basin. Evidence for the faulting is offset in the stratigraphy of the strongly outcropping Frere Formation south of Red Lake (Figure 4) and in aeromagnetic trends (Figure 5). This block is interpreted as being in-faulted from a stratigraphic position hanging wall to (i.e. north east of) the hematite unit at C. The block may be in-faulted from the stratigraphic position at location B or, more likely, a position closer to the hematite outcrop.

At Blueline, in the north of the tenement block, high grade supergene manganese was discovered in two outcrops 7 kilometres apart at the eastern and western boundaries of the tenement . The central section of the tenement is obscured by sand cover.



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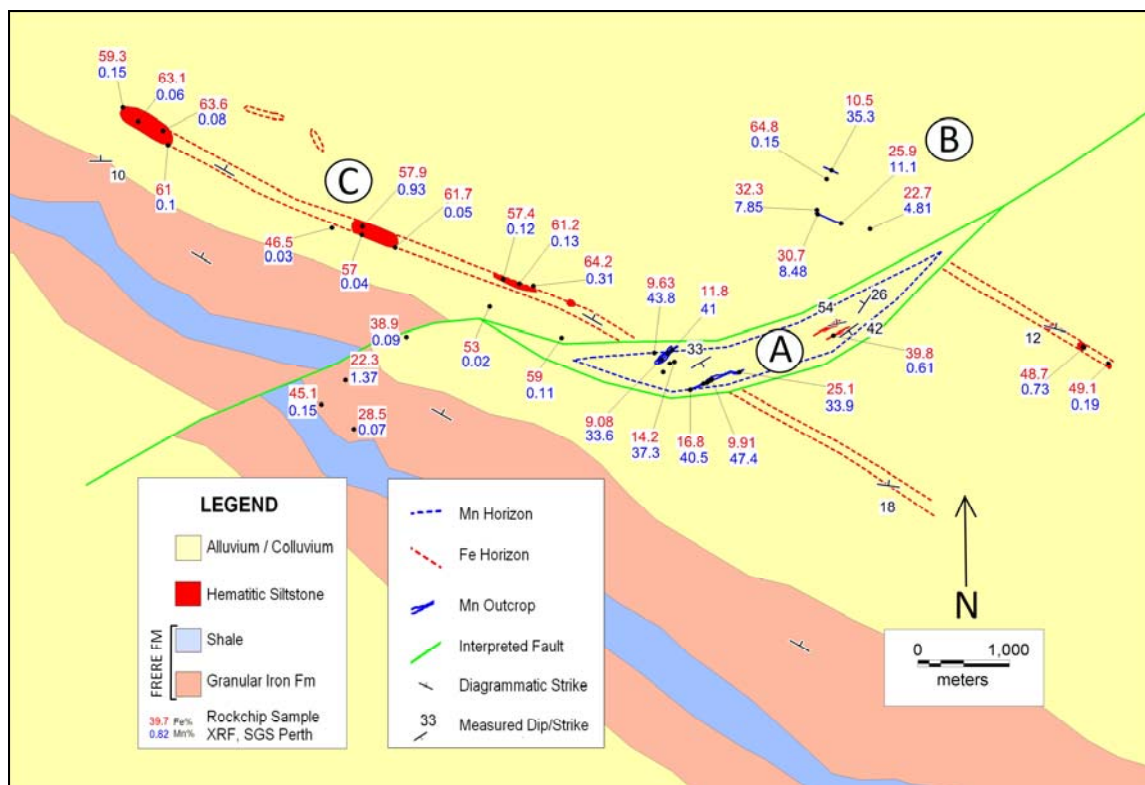


Figure 4 Red Lake Prospect

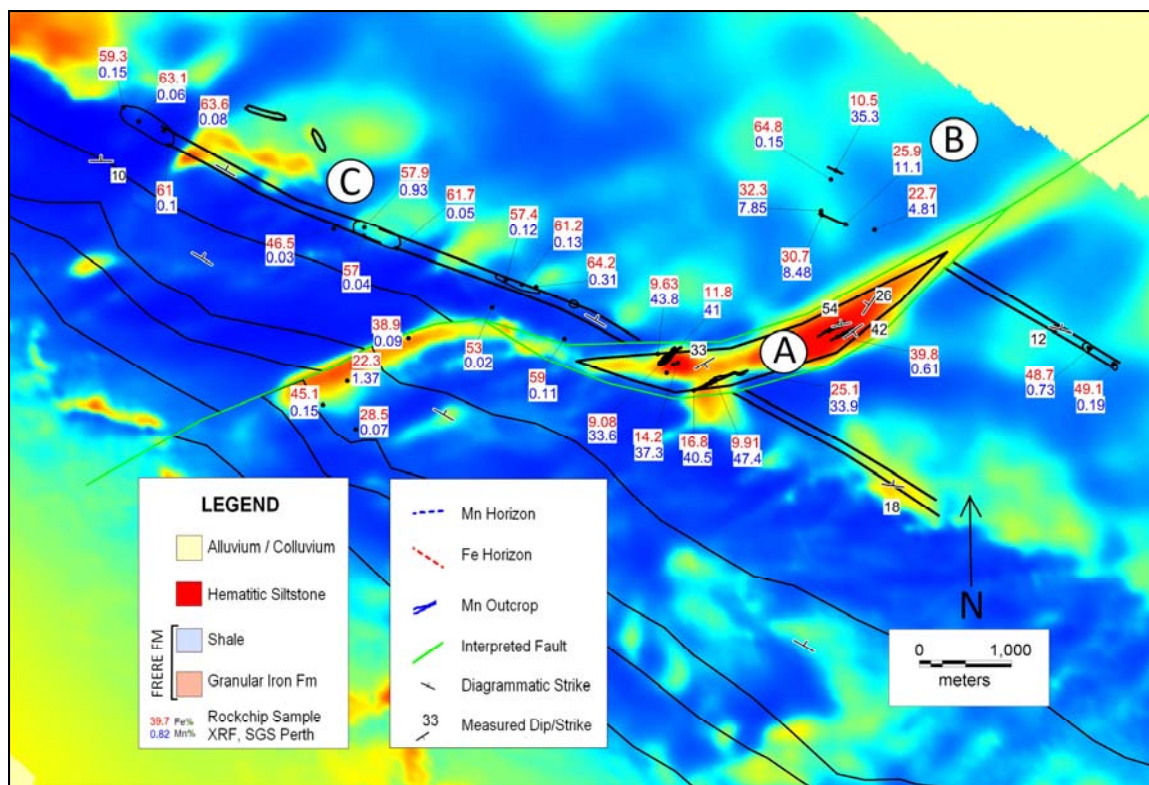


Figure 5 TMI aeromagnetic image over figure 2. The granular iron formation of the Frere Formation is reversely magnetically polarised and shows as a strong magnetic low (blue colour)



The sample locations align with the regional strike and the stratigraphic position of the manganese mineralisation is interpreted to occur across the tenement between the two sample locations.

Permitting is in progress for drilling of manganese and iron targets at Red Lake and of manganese targets at the Black and Blue Prospect (ASX:25 Nov 2010). Further ground prospecting is planned to confirm the extent of manganese mineralisation at Blueline.

Background

Recent exploration at the Lockeridge Prospect has shown the potential for the Earraheedy basin to host deposits of stratabound manganese. The Geological Survey of Western Australia (GSWA) has identified the continental margin tectonic setting of the Earraheedy Basin as having potential for bedded manganese associated with the Superior type iron formations of the Frere Formation of the Earraheedy Group. The manganese mineralisation at Lockeridge is hosted in the Karri Kari Member, a shale unit stratigraphically overlying the Frere Formation.

The Earraheedy project also includes a 30 kilometre long zone of carbonate-hosted zinc (Zn) and lead (Pb) mineralisation in the mid Proterozoic Yelma Formation in the Earraheedy Basin north of Wiluna.

Broadly spaced drilling by RGC Exploration (RGC) from 1992 to 1996 defined several prospects containing oxidised and primary Zn-Pb mineralisation (zinc dominant). At 'Navajoh', an intersection of 7.3 metres @ 6.1 % Zn, 0.77% Pb (including 3.3 metres @ 11.2% Zn, and 0.93% Pb) is untested for 500 metres to 1 kilometre in all directions. At 'Magazine' there are no follow up holes within a 1 kilometre radius of a discovery intersection of 5 metres @ 5.6% Zn +Pb (including 2 metres @ 8.2% Zn, 2.8% Pb). At 'Chinook', intersections include 6 metres @ 3.63% Pb +Zn. These discoveries, along with the Magellan lead mine (operated by TSX listed Ivern West Inc; reserves 16.2 million tonnes @ 6.2% Pb), which is located in outliers of the same rocks just north west of Wiluna, suggest an emerging new base metals province in rocks of the Earraheedy Basin.



Conquistador, Snake Well JV (Zenith Minerals earning up to 75%, Giralia (Atlas Iron) retains certain gold rights)

Quarter Activity

In September 2010 the Company reported drilling results from a RAB line at the Kerbar Prospect indicating the discovery of a blind volcanogenic massive sulphide (VMS) style alteration system. The Snake Well Project includes two other VMS systems in a similar stratigraphic position at A Zone and Conquistador (Figure 6). The volcanic rocks hosting mineralisation over most of the project tenements, including Kerbar, are under shallow transported cover.

The 2010 Kerbar RAB line (Line 20,000E, Figure 8) was designed to test a 3 kilometre long IP chargeability anomaly (Figure 7) interpreted to be due to disseminated sulphides. The drilling intersected strongly anomalous zinc (maximum 0.20%), copper (maximum 0.16%) and gold (maximum 0.65 g/t) over a width of 200 metres in weathered felsic volcanics. There is no previous drilling in this area.

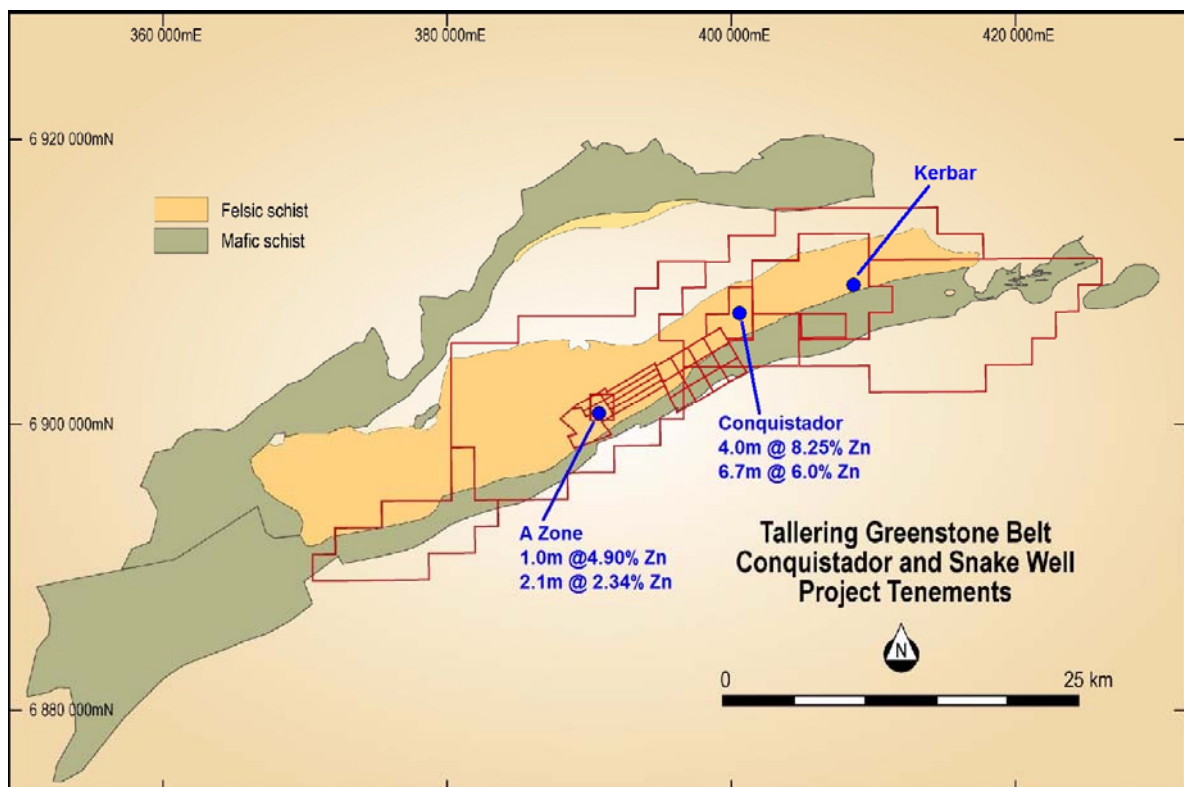


Figure 6
Snake Well Project tenements and VMS occurrences

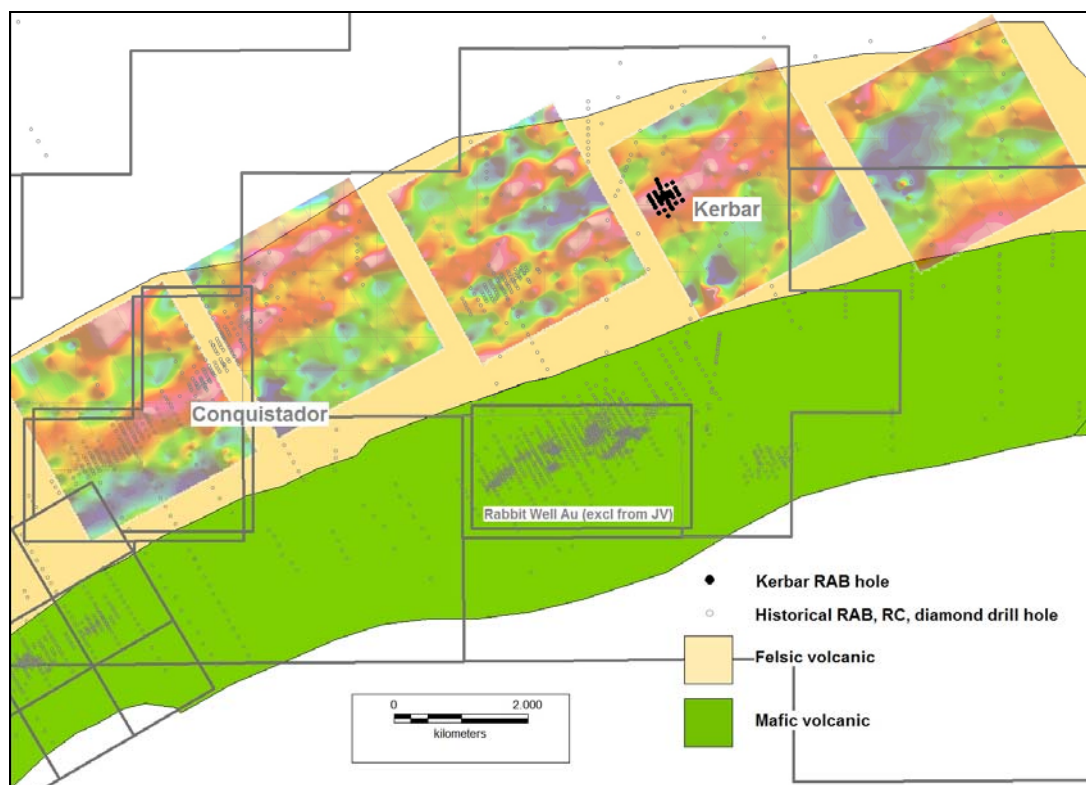


Figure 7

Snake Well East showing location of Kerbar RAB drilling and 2008 gradient array IP geophysical survey
(IP peaks (magenta) are 7 to 9 mV/v against a background (blue) of 3 to 5 mV/v)

In May Zenith extended drilling grid east and west of the 20,000E line with 27 RAB holes (total of 1570 metres). The drilling extended the zone of strongly anomalous geochemistry 200 metres grid east, where it is not closed off, and 200 metres grid west where it is weakening. (Figure 8). The geochemically anomalous zone is 150 metres wide. Copper is dominant and is associated with zinc and silver. There is no outcrop at the prospect but based on strong regional trends the strike is likely to be normal to the grid lines and aligned with the IP geophysical anomaly and the dip is likely to be steep.

The geochemistry occurs in weathered and iron stained felsic volcanic schist. 6 holes intersected massive gossan (Figure 8, 9). The exploration model for the prospect is that the iron stained volcanics represent a footwall alteration system related to massive sulphide zones represented by the gossans. Strong weathering and high water table have dispersed metals through the weathering profile.

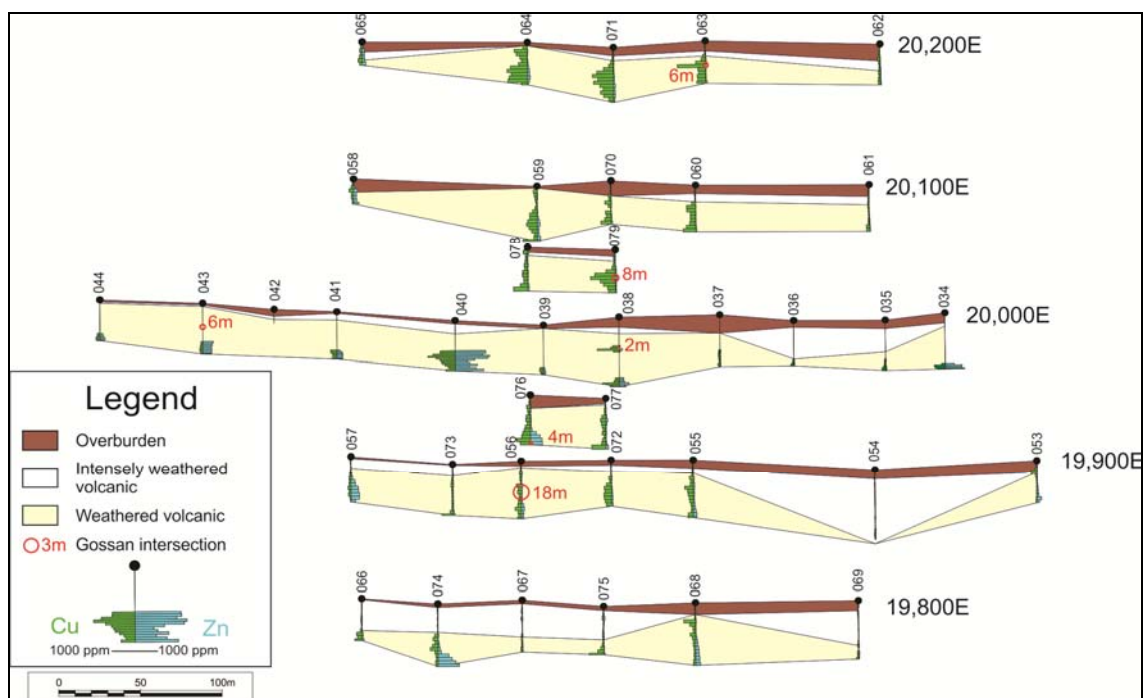


Figure 8 Kerbar RAB drilling summary

2010 RAB drilling (20,000E) – selective sampling, 2m assay samples composited from 1m drill samples

2011 RAB drilling – continuous sampling, 4m assay samples composited from 1m drill samples

Assays by SGS Perth; Gold – 50g fire assay; base metals - four acid digest, ICPAES



Figure 9

Gossan zone in ZRAB079 from 30m to 38m

28 to 32metres - 5ppm Ag, 1214 ppm Cu; 32 to 36 metres - 5ppm Ag, 1466 ppm Cu; 36 to 40 metres – 0.7 ppm Ag, 894 ppm Cu



Diamond drilling at Kerbar is underway. The drilling will target the massive gossan zones below the weathering profile.

Background

The Snake Well Project is in the Talling Greenstone Belt of the Yilgarn Craton, about 200 kilometres east of Geraldton. The project is well situated with regard to current infrastructure and the infrastructure planned to serve the Mid West iron ore province. The tenements are explored in a Joint Venture with Giralia Resources NL (now controlled by Atlas Iron Ltd). Zenith Minerals has the right to earn up to a 75% interest, excluding certain gold rights.

The tenements cover 30 strike kilometres of Archaean volcanic rocks which have strong indications of volcanic hosted massive sulphide (“VMS”) mineralisation similar to the Golden Grove deposits 150 kilometres to the south east. Features of this style of deposit include high zinc grades, other base metal and precious metal by-product credits, multiple ore bodies located at a specific stratigraphic horizon within the volcanic package and large footwall alteration zones.

The target volcanic rocks in the project area are mostly covered by 5 to 30 metres of overburden. Information on mineralisation is derived mainly from drilling and geophysics. Several Pb isotope determinations on galena indicate that the sulphide mineralisation is the same age as the host rocks, strongly supporting the interpretation of the project area as a VMS belt.

Cardinals (Zenith Minerals earning up to 75%, Atlas retaining nickel exploration rights.)

Quarter Activity

Zenith is in discussion with project owner Atlas Iron about re-negotiating the terms of the Cardinals Joint Venture. Zenith did not complete the expenditure required to earn an initial 51% interest in the Cardinals tenement E45/2984. This expenditure became due in February



2011. Zenith continues to explore for volcanogenic massive sulphide deposits in the district on its wholly owned tenement E45/3449.

Background

The Cardinals Project is located in the east Pilbara and is prospective for volcanic hosted copper zinc lead (silver, gold) deposits within the Archaean Kangaroo Caves Formation.

CORPORATE

At 30 June 2011 Zenith had \$3.1 million in cash and cash equivalents on deposit.

Zenith Minerals Limited

11 July 2011

For further information contact

Michael Joyce
Director
08 9481 4440

Anthony Hespe
Managing Director
08 9226 1110

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by A M Hespe, who is a Member of the Australasian Institute of Geoscientists. Mr Hespe 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Hespe 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 is based on information compiled by Grant Louw of CSA Global. Grant Louw takes overall responsibility for the Mineral Resource Estimate. He is a Member of the Australian Institute of Geoscientists and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he 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 2004 Edition). Grant Louw consents to the inclusion of such information in this Report in the form and context in which it appears.

APPENDIX 5B
CONSOLIDATED STATEMENT OF CASH FLOWS
For Quarter Ended 30 June 2011

	Current Quarter \$A'000	Year to Date (12 months) \$A'000
CASH FLOWS RELATED TO OPERATING ACTIVITIES		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for: (i) exploration and evaluation	(481)	(1,985)
(ii) development	-	-
(iii) production	-	-
(iv) administration	(110)	(417)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	37	96
1.5 Interest and other costs of finance paid	-	-
1.6 GST and Taxation (paid)/received	12	(25)
1.7 Other (provide details if material) – GST (net)	-	-
NET OPERATING CASH FLOWS	<u>(542)</u>	<u>(2,331)</u>
CASH FLOWS RELATED TO INVESTING ACTIVITIES		
1.8 Payment for purchases of: (i) prospect	-	-
(ii) equity investments	-	-
(iii) other fixed assets	(11)	(70)
1.9 Proceeds from sale of: (i) prospects	-	-
(ii) equity investments	-	-
(iii) other fixed assets	-	-
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other - Acquisition costs	-	-
NET INVESTING CASH FLOWS	<u>(11)</u>	<u>(70)</u>
1.13 Total Operating & Investing Cash Flows	(553)	(2,401)
CASH FLOWS RELATED TO FINANCING ACTIVITIES		
1.14 Proceeds from issues of shares, options, etc.	-	3,125
1.15 Proceeds from sale of forfeited shares	-	-
1.16 Proceeds from borrowings	-	-
1.17 Repayment of borrowings	-	-
1.18 Dividends paid	-	-
1.19 Other – Expenses of issue	-	-
NET FINANCING CASH FLOWS	<u>-</u>	<u>3,125</u>
NET INCREASE (DECREASE) IN CASH HELD	(553)	724
1.20 Cash at beginning of quarter/year to date	3,661	2,384
1.21 Exchange rate adjustments to Item 1.19 above	-	-
1.22 CASH AT END OF QUARTER	<u>3,108</u>	<u>3,108</u>

PAYMENTS TO DIRECTORS OF THE ENTITY AND ASSOCIATES OF THE DIRECTORS

PAYMENTS TO RELATED ENTITIES OF THE ENTITY AND ASSOCIATES OF THE RELATED ENTITIES

	Current Quarter \$A'000
1.23 Aggregate amount of payments to the parties included in item 1.2	67
1.24 Aggregate amount of loans to the parties included in item 1.10	-
1.25 Explanation necessary for an understanding of the transactions: Reimbursement of administration and exploration expenses incurred on behalf of the Company and for the payment of director services.	- 67

NON-CASH FINANCING AND INVESTING ACTIVITIES

- 2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows: -
- 2.2 Details of outlays made by other entities to establish or increase their shares in projects in which the reporting entity has an interest: -

FINANCING FACILITIES AVAILABLE

Provide details of used and unused loan facilities and credit standby arrangements, adding such notes as are necessary for an understanding of the position	Amount Available \$A'000	Amount Used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements	-	-

ESTIMATED OUTLAYS FOR CURRENT AND FOLLOWING QUARTERS

Estimated Outlays	Current Quarter \$A'000	Following Quarter \$A'000
4.1 Exploration and evaluation	600	500
4.2 Development	-	-
4.3 Production	-	-
4.4 Administration	110	120
TOTAL	710	620

RECONCILIATION OF CASH

Reconciliation of cash at the end of the quarter (as shown in the statement of cash flows) to the related items in the accounts as follows:	Current Quarter \$A'000	Previous Quarter \$A'000
5.1 Cash on hand and at bank	147	100
5.2 Deposits at call	2,961	3,561
5.3 Bank overdraft	-	-
5.4 Other – Bank Bills (various)	-	-
TOTAL :CASH AT END OF QUARTER (Item 1.22)	3,108	3,661

CHANGES IN INTERESTS IN MINING TENEMENTS

	Tenement Reference	Nature of Interest	Interest at Beginning of Quarter	Interest at End of Quarter
6.1 Interests in mining tenements relinquished, reduced and/or lapsed	-	-	-	-
6.2 Interests in mining tenements acquired and/or increased	-	-	-	-

ISSUED AND QUOTED SECURITIES AT END OF CURRENT QUARTER

Category of Securities	Number Issued	Number Quoted	Issue Price Per Security (cents)	Amount Paid-Up Per Security (cents)
7.1 Ordinary shares:	81,305,378	81,305,378		
7.2 Changes during quarter:				
(a) Increases through issues	-	-	-	-
(b) Exercise of options	-	-	-	-
7.3 Options:			<i>Exercise Price</i>	<i>Expiry Date</i>
	550,000	-	\$0.16	01 Feb 2013
	500,000	-	\$0.14	31 Dec 2013
7.4 Issued during quarter	-	-	-	-
7.5 Exercised during quarter	-	-	-	-
7.6 Expired during quarter	-	-	-	-

COMPLIANCE STATEMENT

1. This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Law or other standards acceptable to ASX.
2. This statement does give a true and fair view of the matters disclosed.

Sign here:



Date: 11 July 2011

 Director/Company Secretary
Print name: A Dermedgoglou