



Zenith
Minerals
Limited

ABN 96 119 397 938

ASX CODE: ZNC

Activities

Mt Alexander Iron Project
Earaheedy Manganese
Snake Well Base Metals

Details as at May 2011

Issued Shares	81.3 m
Unlisted options	1.05 m
Mkt Cap (\$0.44)	A\$ 35.8 m
Cash May 2011	A\$ 3.1 m
Investments	A\$ 0.20 m
Debt	Nil

Directors

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

Major Shareholders

HSBC Custod	10.9 %
Giralia (Atlas Iron)	10.8%
Buckley RJH	3.8%
Yandal Inv. PL	3.4%

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RAB drilling results extend the Kerbar copper zinc prospect

- **RAB drilling extends Kerbar copper zinc anomaly to 400 metres strike**
- **Anomaly is associated with 3km strike geophysical anomaly**
- **Volcanogenic massive sulphide target**
- **Permitting completed for follow up drilling**

Zenith Minerals is pleased to announce the results of RAB drilling at the Kerbar copper/zinc prospect. Kerbar is within the Snake Well Joint Venture tenements 200km east of Geraldton (Figure 1, 5). Zenith may earn up to a 75% interest in the tenements from Giralia Resources NL (now controlled by Atlas Iron)

Previous RAB drilling at Kerbar

In September 2010 the Company reported RAB drilling results indicating the discovery of a blind volcanogenic massive sulphide (VMS) style alteration system at the Kerbar Prospect. The Snake Well Project includes two other VMS systems in a similar stratigraphic position at A Zone and Conquistador (Figure 1). The volcanic rocks hosting mineralisation over most of the project tenements, including Kerbar, are under shallow transported cover.

The 2010 Kerbar RAB line (20,000E, Figure 3) was designed to test a 3 kilometre long IP chargeability anomaly (Figure 2) 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.



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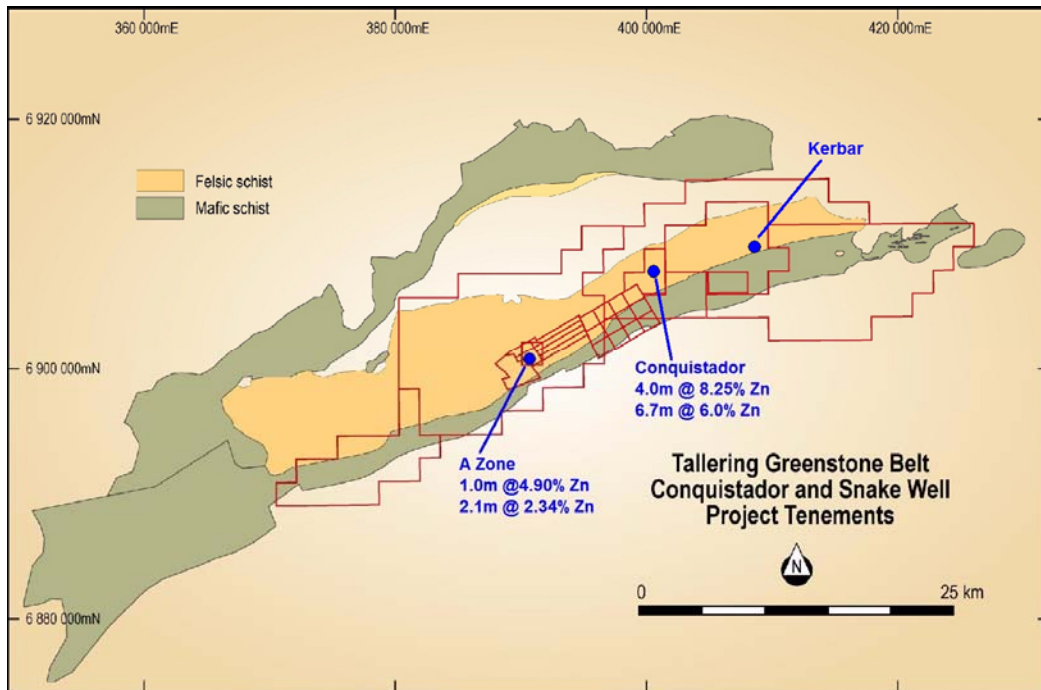


Figure 1
Snake Well Project tenements and VMS occurrences

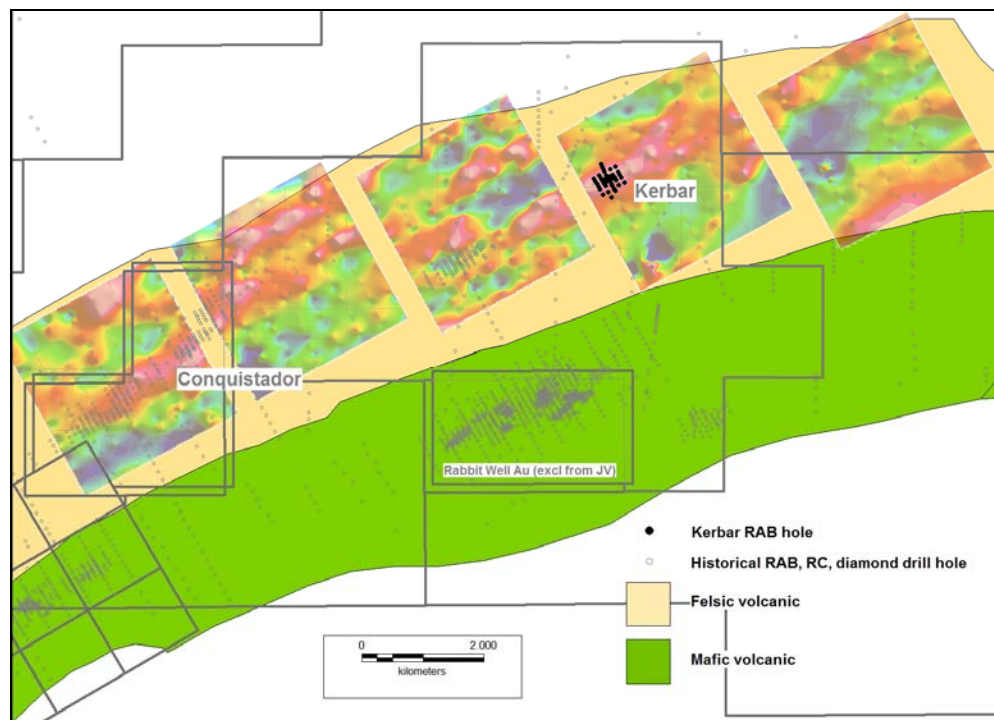


Figure 2
Snake Well East showing location of Kerbar RAB drilling and 2008 gradient array IP geophysical survey
(IP peaks (magenta) are 7 to 9 mV/v against a background (blue) of 3 to 5 mV/v)



Current RAB program

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 3). 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.

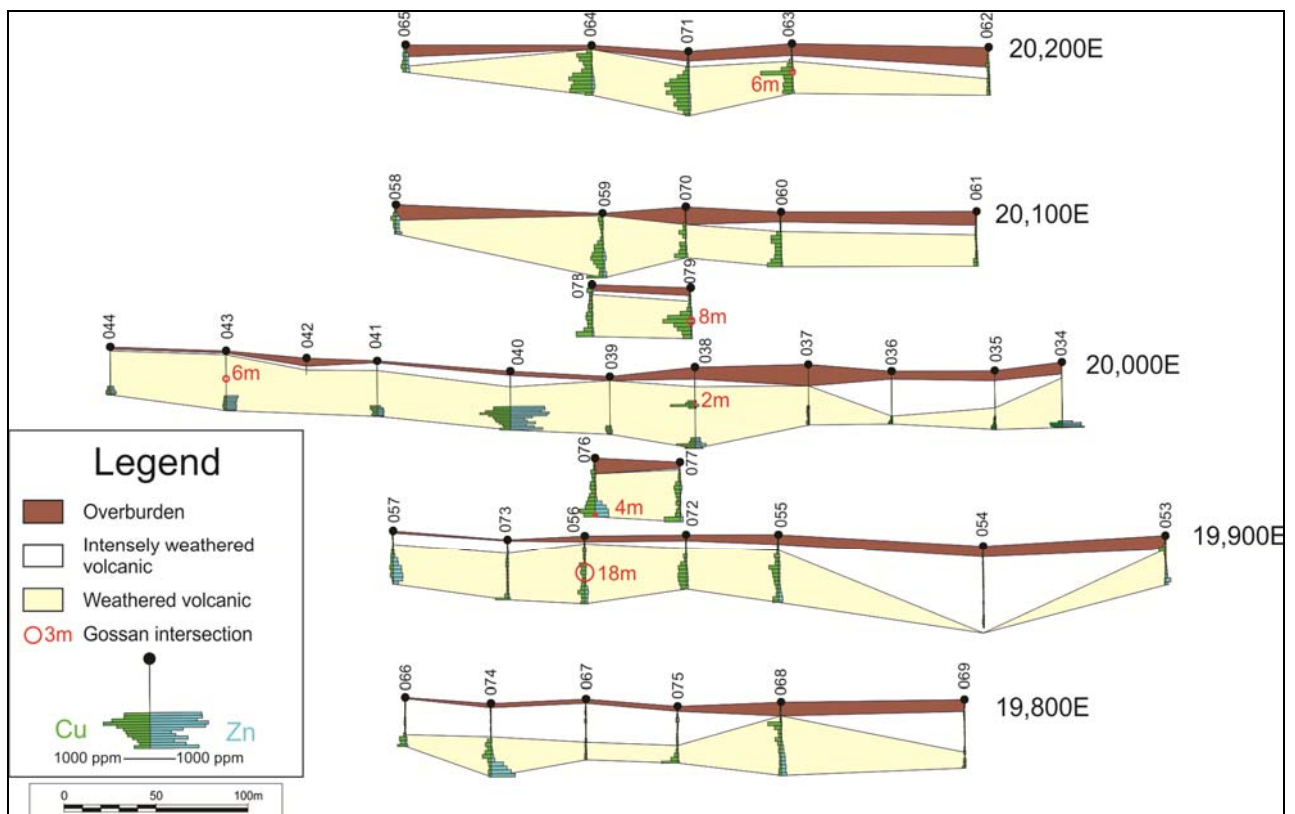


Figure 3 Kerbar RAB drilling summary

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

The geochemistry occurs in weathered and iron stained felsic volcanic schist. 6 holes intersected massive gossan (Figure 3, 4). The exploration model for the prospect is that the iron stained volcanics represent a footwall alteration system related to massive sulphide zones



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represented by the gossans. Strong weathering and high water table have dispersed metals through the weathering profile.



Figure 4

Gossan zone in ZRAB079 from 30m to 38m

28 to 32metres - 5ppm Ag, 1214 ppm Cu; 32 to 35 metres - 5ppm Ag, 1466 ppm Cu; 36 to 50 metres – 0.7 ppm Ag, 894 ppm Cu

The Company has completed permitting to drill the Kerbar Prospect and is seeking a drilling contractor. The drilling will target the massive gossan zones below the weathering profile.

Snake Well Project

The Snake Well Project is in the Archaean Talling Greenstone Belt of the Yilgarn Craton, about 200 kilometres east of Geraldton. It is well situated with regard to current infrastructure and the infrastructure planned to serve the Mid West iron ore province (Figure 5)

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 (Figure 1) 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.

At Conquistador, drilling by previous explorers over 4 strike kilometres intersected zinc, lead and copper sulphides with silver credits in sericite schist after felsic volcanics. Intersections include:

Hole	From (m)	To (m)	Intersection
97CNQRC1	88	92	4m @ 8.25% Zn, 0.63% Pb, 0.53% Cu, 20 ppm Ag
97CNQD2	118.3	125	6.7m @ 6.03% Zn, 0.44% Pb, 0.24% Cu, 14 ppm Ag
Including	118.3	120.3	2.0m @ 18.0 % Zn, 0.65% Pb, 0.72% Cu, 35 ppm Ag
98CNQD3	135.4	137.8	2.4m @ 12.15% Zn, 0.63% Pb, 0.64% Cu, 27.5ppm Ag
98CNQD5	114	118	4m @ 4.2% Zn, 0.17% Pb, 0.20% Cu, 11 ppm Ag
Including	116	117	1m @ 7.11% Zn, 0.20% Pb, 0.29% Cu, 12 ppm Ag
98CNQD6	147.1	152	4.9m @ 4.52% Zn, 0.37% Pb, 0.28% Cu, 13.5 ppm Ag

Zenith Minerals continued drilling in this area during 2007-2008 and obtained results including:

Hole	From (m)	To (m)	Intersection
CNQRC045	134	155	21m @ 2.56% Zn, 0.60% Pb, 0.04% Cu, 0.5 g/t Ag, 1.08 g/t Au
including	146	148	2m @ 8.49% Zn, 2.94% Pb, 0.06% Cu, 0.5 g/t Ag, 0.35 g/t Au
	154	155	1m @ 12.2% Zn, 1.71% Pb, 0.11% Cu, 0.5 g/t Ag, 12.2 g/t Au



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CNQRC050	116	122	6m @ 2.29% Zn, 0.34% Pb, 0.06% Cu, 0.5 g/t Ag, 1.07 g/t Au
ZNCQRD001	184	185	2m @ 3.93% Zn, 0.22% Pb, 0.06% Cu, 13 g/t Ag, 0.03 g/t Au
ZNCQRD001	241	242	1m @ 2.67% Zn, 0.23% Pb, 0.13% Cu, 26 g/t Ag, 0.66 g/t Au

South west of Conquistador historical RC drilling defined an alteration zone over 3 strike kilometres at A Zone prospect. Giralia retains rights to a shallow oxide resource of 51,000 ounces of gold here. Below this is a VMS style footwall alteration zone in sericite schist which includes the following deeper diamond core intersections:

Hole	From (m)	To (m)	Intersection
CWRD180	87	89	2m @ 5.43% Zn, 0.71% Pb, 0.27% Cu, 16 g/t Ag, 0.68 g/t Au
CWRD180	154	155	1m @ 4.90% Zn, 0.90% Pb, 0.51% Cu, 14 g/t Ag, 5.63 g/t Au
CWRD181	131.4	133.5	2.1m @ 2.34% Zn, 0.22% Pb, 0.69% Cu, 14 g/t Ag, 1.81 g/t Au

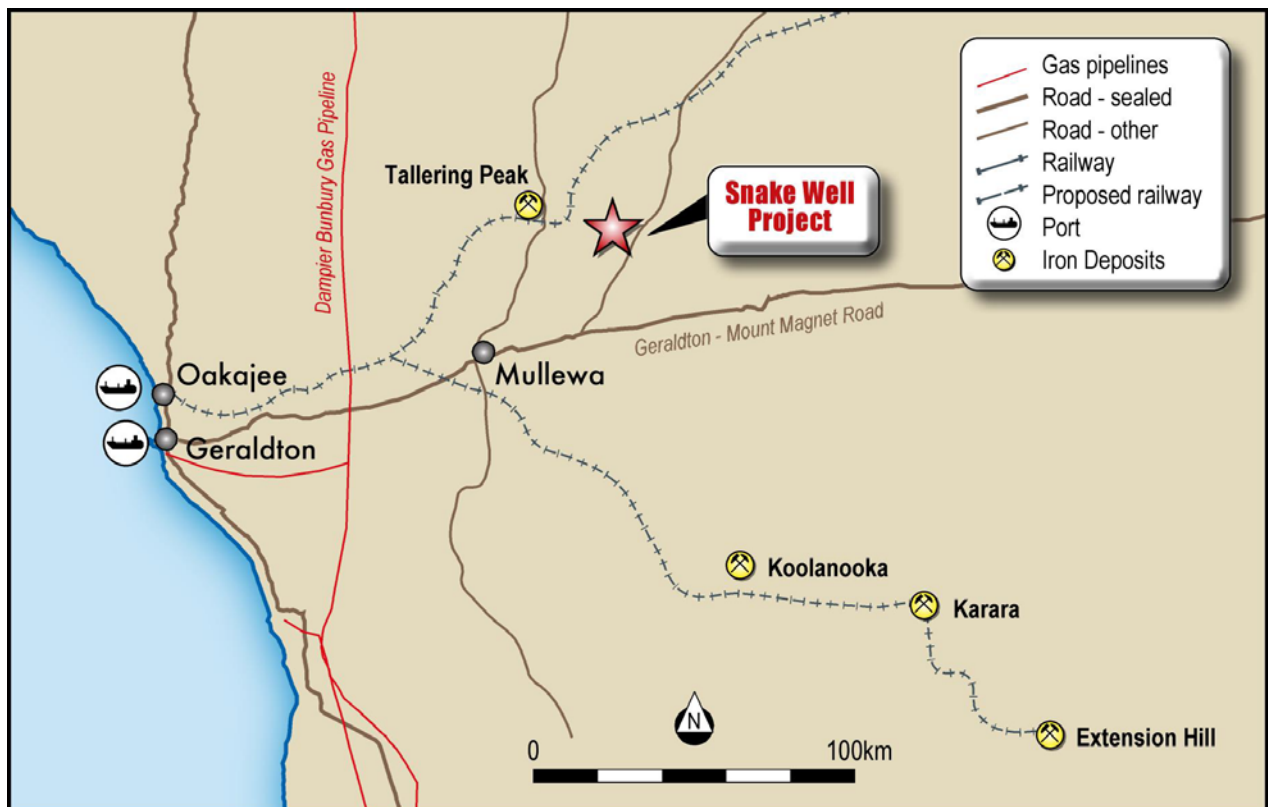


Figure 5 Snake Well Project Location



Zenith Minerals Limited

21 June 2011

For further information contact

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About Zenith Minerals

Zenith is a Perth based company focused on increasing shareholder value by the identification, exploration and development of zinc and other metal deposits, principally in Australia.

Zenith listed as Zinc Co on the Australian Securities Exchange (ASX) in May 2007 (ASX Code **ZNC**) with five projects in Western Australia. All of the projects have significant drill intercepts of zinc mineralisation at relatively shallow depth. In 2009 Zenith reported discovery of an iron deposit at the Mount Alexander project which has potential for a large magnetite resource. In 2010 Zenith reported discovery of high grade manganese in the Earraheedy Basin.

Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources 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 is a full time employee of Zenith and consents to the inclusion in the report of the matters based on his information in the form and context in which it appear