



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 September 2011

Issued Shares	81.3 m
Unlisted options	1.05 m
Mkt Cap (\$0.44)	A\$ 35.8 m
Cash September 2011	A\$ 2.7 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 Nom Aust	11.1 %
Giralia (Atlas Iron)	10.8%
JP Morgan Nom Aust	3.7%
Yandal Inv. PL	3.4%
Buckley, Robert James	3.4%

Contact Us

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Initial drilling results, Black and Blue Prospect, Earaheedy manganese project

- Thick manganese oxide intersections at Black and Blue
- Hole ZBRC006 returned 31 metres @ 7.9% Mn from surface, including 1m @ 22% Mn, 1m @ 15.2% Mn and 3m @ 14.3% Mn
- Test work on low cost beneficiation planned
- Drilling at Red Lake prospect delayed by weather

Initial results are available from drill testing of manganese targets within Zenith's 100% owned Earaheedy Project which commenced at the Black and Blue Prospect. Black and Blue is one of four areas of high grade manganese outcrop discovered by Zenith in the Earaheedy Basin in Western Australia (Figure 2).

In 2010 Zenith mapped outcrops of stratiform supergene manganese and iron oxide over 2.8 strike kilometres at Black and Blue (ASX release 25 Nov 2010).

The current drilling was targeted at the western end of the Black and Blue zone where the manganese outcrops occur in multiple bands over apparent widths up to 80 metres (Figure 3). Eleven RC holes were drilled for a total 876 metres.



Figure 1 Drilling ZBRC003 at Black and Blue Prospect, manganese outcrops in foreground



In the weathered zone (above the base of oxidation) drilling intersected bands of manganese oxide within soft weathered siltstone. In cross section the main zone has a true width of approximately 30 metres and can be broadly correlated with the surface outcrop (Figure 4). The dip is shallow to the south and conformable with the regional dip of the Earacheedy Basin. Below the base of oxidation the manganese occurs as disseminated pink carbonate within siltstone. Strong oxidation occurs to 60 metres vertical depth below surface which is encouraging for development of the higher grade manganese oxide from the primary carbonate mineralisation.

Intersections at 10% Mn cut off are summarised in Table 1. All drill intersections are shown in Table 2.

Hole_ID	from	to	interval	Mn_%	Fe_%	SiO2_%	P_%
ZBRC003	17	18	1	10.3	13.4	48.5	0.20
ZBRC003	24	25	1	10.5	11.1	49.7	0.06
ZBRC006	0	2	2	12.9	12.0	44.8	0.25
ZBRC006	8	10	2	17.1	12.7	39.9	0.28
including	9	10	1	22.1	13.1	32.9	0.29
ZBRC006	12	13	1	15.2	11.0	44.8	0.21
ZBRC006	14	17	3	14.3	13.4	41.8	0.18
ZBRC006	18	19	1	12.9	11.8	46.4	0.20
ZBRC008	48	49	1	16.7	13.6	40.4	0.11

Table 1 Drill intersection composites at 10% Mn cut off

The drilling results indicate that oxide mineralisation occurs over broad intervals and extends for 300 metres down dip. Beneficiation test work is planned to establish whether the mineralisation can be upgraded to a saleable manganese oxide product through simple low cost processing.

Drilling at the Red Lake Prospect (Figure 2) was planned to follow on from Black and Blue. Heavy thunderstorm rain has prevented access to the prospect on two occasions and tracks will not be passable before mid December. The drilling has been postponed until January.

Earaheedy manganese project

In 2010 Zenith identified the western Earacheedy Basin as a potential new manganese province with similarities to the giant Kalahari manganese field in South Africa.

Primary mineralisation is stratiform manganese carbonate and is associated with iron formations in adjacent stratigraphy. This primary mineralisation is a future target for large tonnage manganese deposits.

Zenith's priority target is high grade supergene manganese oxide formed by weathering of the primary carbonate and grading >40% Mn.



As first mover Zenith established a strong land position with tenements covering 75 strike kilometres of prospective stratigraphy.

Zenith Minerals Limited

16 December 2011

For further information contact

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Managing Director

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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. 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

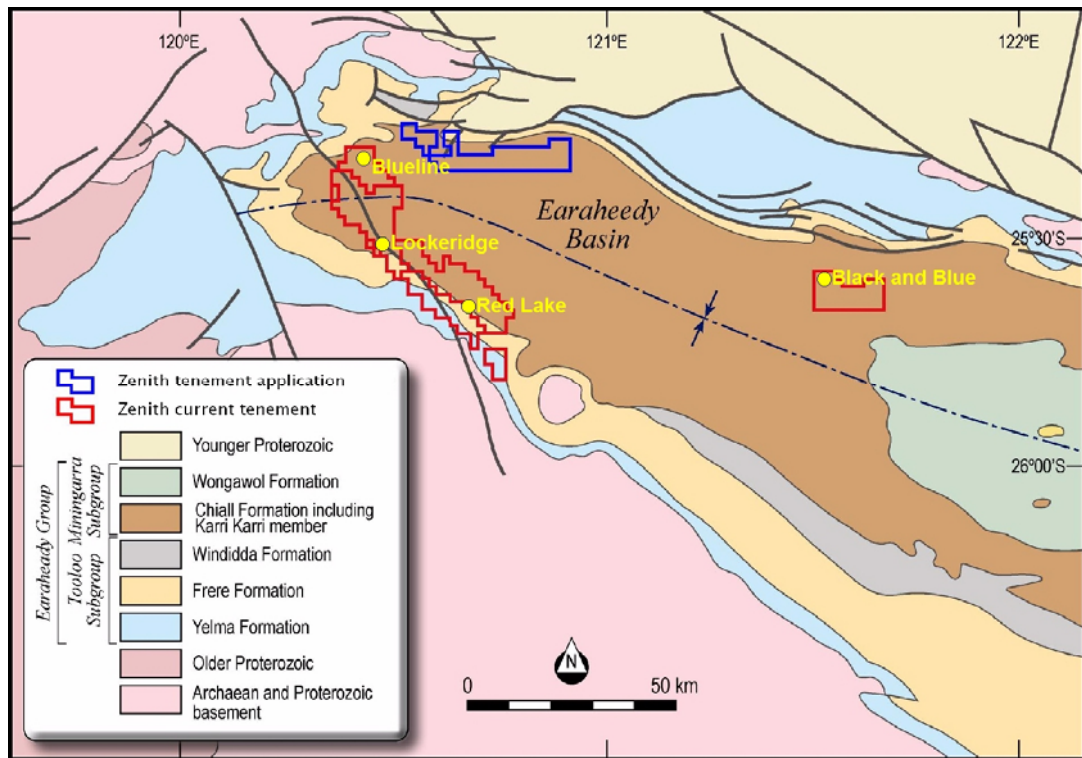


Figure 2 Zenith tenements and manganese prospects, Western Earraheedy Basin

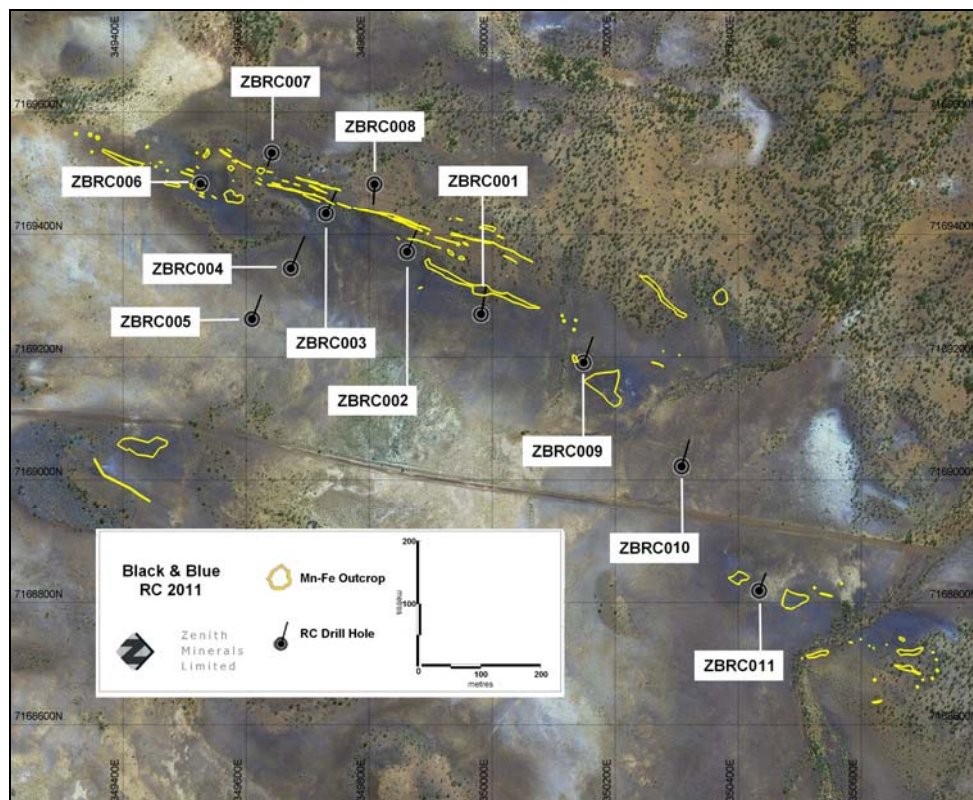


Fig 3 Drill hole locations and manganese outcrops, Black and Blue Prospect
All holes drilled at -60 degrees dip except ZBRC006 drilled at -80 degrees



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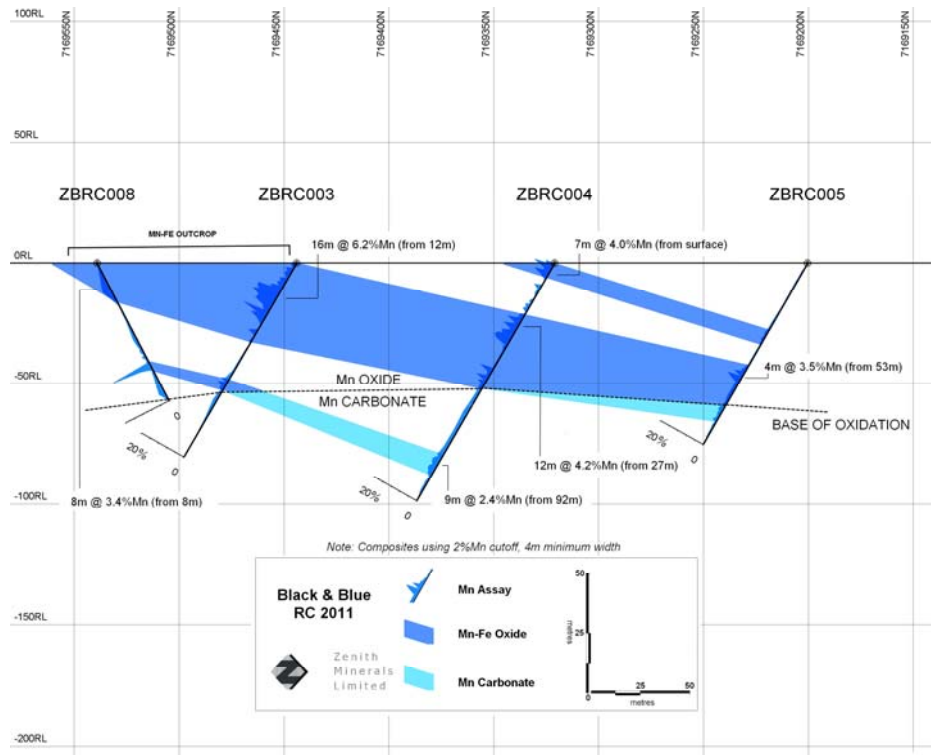


Fig 4 Black and Blue Prospect drill section



Fig 5 Drilling hole ZBRC006, manganese outcrops in the foreground



Hole_ID	EAST GDA94 51	NORTH GDA94 51	Total Depth	from	to	interval	Mn_%	Fe_%	SiO2_%	P_%
ZBRC001	349982	7169270	102	80	87	7	2.7	3.7	20.6	0.14
ZBRC002	349862	7169372	102	4	13	9	3.9	8.4	61.4	0.07
and				81	88	7	2.7	4.9	22.4	0.18
ZBRC003	349730	7169434	93	12	28	16	6.3	10.0	56.3	0.13
including				17	18	1	10.3	13.4	48.5	0.20
including				24	25	1	10.5	11.1	49.7	0.06
ZBRC004	349673	7169345	72	0	7	7	4.0	6.9	59.8	0.10
and				27	39	12	4.2	8.3	59.1	0.11
and				92	101	9	2.4	3.8	34.5	0.08
ZBRC005	349610	7169262	87	53	57	4	3.5	7.1	60.8	0.11
ZBRC006	349526	7169483	62	0	31	31	7.9	10.1	54.0	0.15
including				0	2	2	12.9	12.0	44.8	0.25
including				8	9	1	12.0	12.2	46.9	0.26
including				9	10	1	22.1	13.1	32.9	0.29
including				12	13	1	15.2	11.0	44.8	0.21
including				14	17	3	14.3	13.4	41.8	0.18
including				18	19	1	12.9	11.8	46.4	0.20
ZBRC007	349642	7169533	48	north of mineralised zone						
ZBRC008	349809	7169482	66	8	16	8	3.4	10.6	59.2	0.14
and				48	50	2	10.8	12.0	49.6	0.10
including				48	49	1	16.7	13.6	40.4	0.11
ZBRC009	350149	7169191	90	no intervals > 4m and >2% Mn						
ZBRC010	350308	7169022	91	no intervals > 4m and >2% Mn						
ZBRC011	350434	7168819	63	no intervals > 4m and >2% Mn						
All holes drilled at minus 60 degrees dip except ZBRC006 drilled at -80 degrees										
The mineralised zone was sampled at 1m intervals using a rotary splitter on the cyclone.										
Samples were assayed by SGS Perth using method XRF780 - Borate fused disc										
Intersections were composited at 2% Mn cut off and minimum width of 4 metres. Internal waste of up to 1m at less than 2% Mn was included.										

Table 2 Black and Blue drilling results