

Appendix 3

**Tear, S., 2002. Exploration Potential in the Zeehan
Field (Benmore Exploration Pty. Ltd.)**

Exploration Potential in the Zeehan Zinc Field

Introduction

Zeehan Zinc has exploration licences and mining leases covering four significant Pb/Zn prospects/deposits. These are :-

3. Oceana Pb/Zn Deposit
4. Mariposa Pb/Zn Mineralisation

This brief report is an interim summary of the status of each prospect as gleaned from data presented by past workers. Zeehan Zinc personnel are currently assessing the properties to confirm, enhance or deny the prospectivity of the deposits for commercial extraction.

Oceana Pb/Zn Deposit

Geology

Pb/Zn mineralisation is hosted in a steeply dipping sequence of Ordovician-aged Gordon Limestone with the resource fault bounded to the north. The deposit operated as a mine in the late 1950's with previous drilling by competitors including North Broken Hill , Pasmaenco and Amoco.

Mineralisation

Mineralisation consists of galena and sphalerite seemingly in a threefold scenario of epigenetic vein mineralisation, stratabound mineralisation associated with pervasive siderite alteration and secondary sulphide mineralisation resulting from weathering. Past analogies of some of the mineralisation have legitimately been made to Irish-type carbonate hosted Pb/Zn eg Silvermines.

Company	Tonnage Mt	Zn Grade %	Pb Grade %	Ag Grade g/t
Extracted Material (1960)	0.13	N/A	11.5	132
Amoco (1989)	2.45	4	9.4	75
Pasmaenco (1994)	2.45	2.6	7.5	51
Mancala (1999)	0.14	2.8	12	62.4

(The above figures are not necessarily JORC compliant; Pasmaenco reported their figures as an inferred resource but no mention of JORC was made)

Mariposa Pb/Zn Mineralisation

Geology

Pb/Zn mineralisation is hosted in a steeply dipping sequence of Ordovician-aged Gordon Limestone with the sequence fault bounded to the south and possibly to the east. The deposit has operated as a small open cut mine sometime in the past with previous drilling by competitors including North Broken Hill and Amoco

Mineralisation

There are two areas of mineralisation at Mariposa, the Eastern Zone and the Western Lode. The main area of interest is the Western Lode consisting of galena-dominant and sphalerite stratabound mineralisation associated with pervasive siderite alteration over a strike length of 300m, a possible down dip extent of 135m and an estimated width of 3m.

Best drill intercepts include :-

For lead

9m @ 6.39% Pb and 0.85% Zn from 37m DTM9

1.98m @ 9.39% Pb and 2.47% Zn from 59.13m NBH5

For Zinc

1.98m @ 3.71% Zn and 11.6% Pb from 181.36m NBH1
5m @ 2.09% Zn and 1.8% Pb from 48m DTM5

Potential

Areas for increasing the resource lie to the north and south of the current defined lode. There also appears to be down dip potential for the whole strike length of known mineralisation.

Further Work

Assessment of the above four properties is ongoing by Zeehan Zinc personnel and consultants. Immediate future work will include :-

1. Assessment of cross sections for Oceana with added geological value courtesy of Zeehan Zinc. An attempt will be made to repeat the previous workers' figures for the resource, confirm and enhance the geological continuity of mineralisation and identify any near surface high grade zones.
2. Delineate the geological continuity and grade of the Western Lode at Mariposa.

Simon Tear

Consulting Geologist
Benmore Exploration Pty Limited
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