



Abra Mining Limited

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13 May 2011

The Manager
Company Announcements
Australian Securities Exchange
Level 8, Exchange Plaza
2 The Esplanade
PERTH WA 6000

INDEPENDENT EXPERT CONCLUSIONS IN RELATION TO HNC'S OFFER FOR ABRA SHARES AND OPTIONS

On 4 April 2011 Abra Mining Limited ("**Abra**") and Hunan Nonferrous Metals Corp., Ltd ("**HNC**") announced a proposal for HNC to make offers to:

- 1) acquire all of the issued ordinary shares of Abra not already owned by HNC for \$0.40 per share ("**Share Offer**"); and
- 2) acquire or enter into cancellation deed polls in respect of the 6.125 million Abra options to subscribe for shares in Abra at various prices for the different classes of options ("**Option Offer**").

The Board of Abra announces that BDO Corporate Finance (WA) Pty Limited ("**BDO**"), the independent expert engaged by Abra, has concluded that:

- 1) the Share Offer is fair and reasonable and in the best interests of the shareholders of Abra;
- 2) the Option Offer for Abra class 1 options (as referred to in Abra's joint announcement on 4 April 2011) is fair and reasonable to optionholders; and
- 3) the Option Offer for Abra classes 2 – 9 options (as referred to in Abra's joint announcement of 4 April 2011) is not fair but reasonable to the optionholders.

BDO has assessed the value of Abra shares in the range of \$0.282 and \$0.485 per share, with a preferred value of \$0.384 per share. At \$0.40 per share, the value of the Share Offer exceeds this preferred value.

The Independent Directors continue to:

- 1) recommend that shareholders **accept** the Share Offer and Option Offer in the absence of a superior proposal; and
- 2) intend to **accept** the Share Offer and Option Offer in respect of all the Shares and Options owned or controlled by them in the absence of a superior proposal.



The full text of the BDO independent expert's reports on the Share Offer and the Option Offer is attached to this announcement.

Yours faithfully



Tony Wright
Company Secretary



ABRA MINING LIMITED
Independent Expert's Report

12 May 2011



Financial Services Guide

12 May 2011

BDO Corporate Finance (WA) Pty Ltd ABN 27 124 031 045 ("BDO" or "we" or "us" or "ours" as appropriate) has been engaged by Abra Mining Limited ("Abra") to provide an independent expert's report on Hunan Nonferrous Metals Corporation Limited ("HNC") proposal to acquire all of the shares in Abra for cash consideration of A\$0.40 per share with a concurrent offer to acquire the options. You will be provided with a copy of our report as a retail client because you are a shareholder of Abra.

Financial Services Guide

In the above circumstances we are required to issue to you, as a retail client, a Financial Services Guide ("FSG"). This FSG is designed to help retail clients make a decision as to their use of the general financial product advice and to ensure that we comply with our obligations as financial services licensees.

This FSG includes information about:

- ◆ Who we are and how we can be contacted;
- ◆ The services we are authorised to provide under our Australian Financial Services Licence, Licence No. 316158;
- ◆ Remuneration that we and/or our staff and any associates receive in connection with the general financial product advice;
- ◆ Any relevant associations or relationships we have; and
- ◆ Our internal and external complaints handling procedures and how you may access them.

Information about us

BDO Corporate Finance (WA) Pty Ltd is a member firm of the BDO network in Australia, a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International). The financial product advice in our report is provided by BDO Corporate Finance (WA) Pty Ltd and not by BDO or its related entities. BDO and its related entities provide services primarily in the areas of audit, tax, consulting and financial advisory services.

We do not have any formal associations or relationships with any entities that are issuers of financial products. However, you should note that we and BDO (and its related entities) might from time to time provide professional services to financial product issuers in the ordinary course of business.

Financial services we are licensed to provide

We hold an Australian Financial Services Licence that authorises us to provide general financial product advice for securities to retail and wholesale clients.

When we provide the authorised financial services we are engaged to provide expert reports in connection with the financial product of another person. Our reports indicate who has engaged us and the nature of the report we have been engaged to provide. When we provide the authorised services we are not acting for you.

General Financial Product Advice

We only provide general financial product advice, not personal financial product advice. Our report does not take into account your personal objectives, financial situation or needs.

You should consider the appropriateness of this general advice having regard to your own objectives, financial situation and needs before you act on the advice

Fees, Commissions and Other Benefits that we may receive

We charge fees for providing reports, including this report. These fees are negotiated and agreed with the person who engages us to provide the report. Fees are agreed on an hourly basis or as a fixed amount depending on the terms of the agreement. The fee for this engagement is approximately A\$30,000.

Except for the fees referred to above, neither BDO, nor any of its directors, employees or related entities, receive any pecuniary benefit or other benefit, directly or indirectly, for or in connection with the provision of the report.

Remuneration or other benefits received by our employees

All our employees receive a salary. Our employees are eligible for bonuses based on overall productivity but not directly in connection with any engagement for the provision of a report.

We have received a fee from Abra for our professional services in providing this report. That fee is not linked in any way with our opinion as expressed in this report.

Referrals

We do not pay commissions or provide any other benefits to any person for referring customers to us in connection with the reports that we are licensed to provide.

Complaints resolution

Internal complaints resolution process

As the holder of an Australian Financial Services Licence, we are required to have a system for handling complaints from persons to whom we provide financial product advice. All complaints must be in writing addressed to The Complaints Officer, BDO Corporate Finance (WA) Pty Ltd, PO Box 700 Subiaco WA 6872.

When we receive a written complaint we will record the complaint, acknowledge receipt of the complaint within 15 days and investigate the issues raised. As soon as practical, and not more than 45 days after receiving the written complaint, we will advise the complainant in writing of our determination.

Referral to External Dispute Resolution Scheme

A complainant not satisfied with the outcome of the above process, or our determination, has the right to refer the matter to the Financial Ombudsman Service ("FOS"). FOS is an independent organisation that has been established to provide free advice and assistance to consumers to help in resolving complaints relating to the financial service industry. FOS will be able to advise you as to whether or not they can be of assistance in this matter. Our FOS Membership Number is 12561.

Further details about FOS are available at the FOS website www.fos.org.au or by contacting them directly via the details set out below.

Financial Ombudsman Service
GPO Box 3
Melbourne VIC 3001
Toll free: 1300 78 08 08
Facsimile: (03) 9613 6399
Email: info@fos.org.au

Contact details

You may contact us using the details set out at the top of our letterhead on page 1 of this FSG.



TABLE OF CONTENTS

1.	Introduction	1
2.	Summary and Opinion	1
3.	Scope of the Report	3
4.	Outline of the Offer	5
5.	Profile of Abra Mining Limited	7
6.	Profile of Hunan Nonferrous Metals Corp Limited	14
7.	Economic analysis	15
8.	Industry Analysis	16
9.	Valuation Approach Adopted	22
10.	Valuation of Abra	23
11.	Valuation of Consideration	30
12.	Is the Offer fair?	31
13.	Is the Offer reasonable?	31
14.	Conclusion	32
15.	Sources of information	33
16.	Independence	33
17.	Qualifications	33
18.	Disclaimers and consents	34

Appendix 1 - Glossary

Appendix 2 - Valuation Methodologies

Appendix 3 - Independent Specialist Valuation of Abra's Exploration Assets

12 May 2011

The Directors
Abra Mining Limited
Level 1, 34 Colin Street
West Perth WA 6005

Dear Sirs

INDEPENDENT EXPERT'S REPORT

1. Introduction

On 4 April 2011, Abra Mining Limited ("Abra") or ("the Company") announced a takeover offer from Hunan Nonferrous Metals Corp Limited ("HNC") to acquire all the issued ordinary shares ("Shares") of Abra not already owned by HNC at A\$0.40 per Share ("Share Offer Price") and acquire or enter into cancellation deed polls in respect of the 6,125,000 options ("Options") to subscribe for Shares. The acquisitions will be made pursuant to concurrent takeover bids under Chapter 6 of the Corporations Act.

2. Summary and Opinion

2.1 Purpose of the report

The directors of Abra have requested that BDO Corporate Finance (WA) Pty Ltd ("BDO") prepare an independent expert's report ("our Report") to express an opinion as to whether or not the takeover offer from HNC to acquire all the Shares of Abra not already owned by HNC at A\$0.40 cash per Share ("the Offer") is fair and reasonable to the non associated shareholders of Abra ("the Shareholders").

A separate independent expert's report has been prepared by BDO at the request of the Abra directors to express an opinion as to whether or not the offer from HNC to acquire or enter into cancellation deed polls in respect of the 6,125,000 Abra Options to subscribe for Shares ("the Option Offer") is fair and reasonable to the Shareholders.

Our Report is prepared pursuant to section 640 of the Corporations Act and is to be included in the Target's Statement for Abra in order to assist the Shareholders in their decision whether to accept the Offer.

2.2 Approach

Our Report has been prepared having regard to Australian Securities and Investments Commission ("ASIC") Regulatory Guide 111 ("RG 111"), 'Content of Expert's Reports' and Regulatory Guide 112 ("RG 112") 'Independence of Experts'.

In arriving at our opinion, we have assessed the terms of the Offer as outlined in the body of this report. We have considered:

- How the value of an Abra share compares to the value of the consideration offered by HNC;

- The likelihood of a superior alternative offer being available to Abra;
- Other factors which we consider to be relevant to the Shareholders in their assessment of the Offer; and
- The position of Shareholders should the Offer not proceed.

2.3 Opinion

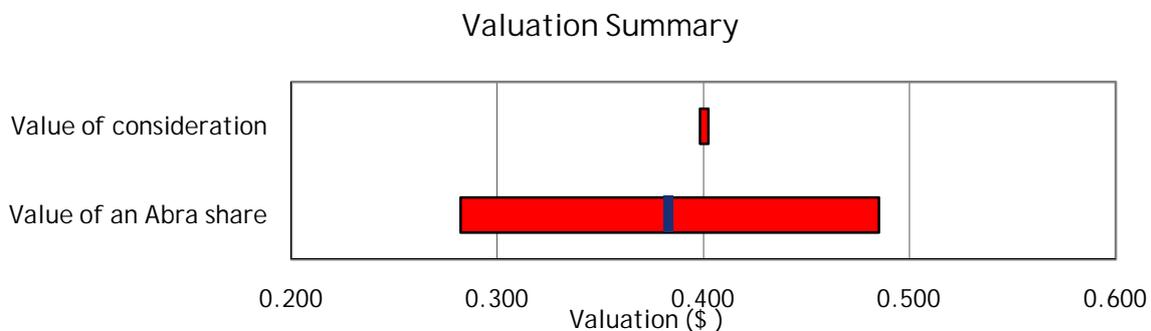
We have considered the terms of the Offer as outlined in the body of this report and have concluded that, in the absence of a superior offer, the Offer is fair and reasonable to Shareholders.

2.4 Fairness

In Section 10 we determined that the Offer consideration compares to the value of an Abra share, as detailed hereunder.

	Ref	Low value A\$	Preferred value A\$	High value A\$
Value of consideration	11	0.400	0.400	0.400
Assessed value of an Abra share	10.3	0.282	0.384	0.485

The above valuation ranges are graphically presented below:



The above pricing indicates that, in the absence of any other relevant information, and a superior offer, the Offer is fair for Shareholders.

2.5 Reasonableness

We have considered the analysis in Section 13 of this report, in terms of both

- advantages and disadvantages of the Offer; and
- alternatives, including the position of Shareholders if the Offer does not proceed.

In our opinion, the advantages outweigh the disadvantages and the position of Shareholders if the Offer is successful is more advantageous than the position if the Offer is not successful. Accordingly, in the absence of any other relevant information and/or a superior proposal we believe that the Offer is reasonable for Shareholders.

The respective advantages and disadvantages considered are summarised below:

ADVANTAGES AND DISADVANTAGES			
Section	Advantages	Section	Disadvantages
13.3	The Offer is fair	13.4	Inability to benefit from potential upside in Abra
13.3	The offer is in cash	13.4	Potential tax implications
13.3	No transaction costs		
13.3	Removes future risks associated with holding Shares in Abra		

Other key matters we have considered include:

Section	Description
13.1	The lack of alternative Offers
13.2	The practical level of control

3. Scope of the Report

3.1 Purpose of the Report

HNC has prepared a Bidder's Statement in accordance with Section 636 of the Corporations Act ("the Act"). Under Section 633 Item 10 of the Act, Abra is required to prepare a Target's Statement in response to the Bidder's Statement.

Section 640 of the Act requires the Target's Statement to include an independent expert's report to shareholders if:

- The bidder's voting power in the target is 30% or more; or
- The bidder and the target have a common director or directors.

HNC is Abra's largest shareholder, holding approximately 74% of all issued Abra shares. Therefore, an independent expert's report is required for inclusion in the Target's Statement. The directors of Abra have engaged BDO to satisfy this requirement.

3.2 Regulatory guidance

The Act does not define the meaning of "fair and reasonable". In determining whether the Offer is fair and reasonable, we have had regard to the views expressed by ASIC in RG 111. This regulatory guide

provides guidance as to what matters an independent expert should consider to assist security holders to make informed decisions about transactions.

This regulatory guide suggests that where the transaction is a control transaction the expert should focus on the substance of the control transaction rather than the legal mechanism to affect it. RG 111 suggests that where a transaction is a control transaction it should be analysed on a basis consistent with a takeover bid.

In our opinion the Offer is a control transaction as defined by RG 111 and we have therefore assessed the Offer to consider whether in our opinion it is fair and reasonable to Shareholders.

3.3 Adopted basis of evaluation

RG 111 states that a transaction is fair if the value of the offer price or consideration is greater than the value of the securities subject of the offer. This comparison should be made assuming a knowledgeable and willing, but not anxious, buyer and a knowledgeable and willing, but not anxious, seller acting at arm's length. When considering the value of the securities subject of the offer in a control transaction the expert should consider this value inclusive of a control premium. Further to this, RG 111 states that a transaction is reasonable if it is fair. It might also be reasonable if despite being 'not fair' the expert believes that there are sufficient reasons for security holders to accept the offer in the absence of any higher bid.

Having regard to the above, BDO has completed this comparison in two parts:

- A comparison between the value of an Abra share and the value of the consideration offered (fairness - see Section 12 "Is the Offer Fair?"); and
- An investigation into other significant factors to which Shareholders might give consideration, prior to accepting the Offer, after reference to the value derived above (reasonableness - see Section 13 "Is the Offer Reasonable?").

This assignment is a Valuation Engagement as defined by APES 225 Valuation Services. A Valuation Engagement means an engagement or assignment to perform a valuation and provide a valuation report where we determine an estimate of value of the Company by performing appropriate valuation procedures and where we apply the valuation approaches and methods that we consider to be appropriate in the circumstances

4. Outline of the Offer

On 4 April 2011, the directors of Abra announced a cash takeover offer from HNC to acquire all the shares of Abra, not already owned by HNC, at A\$0.40 per share and a concurrent offer to acquire or enter into cancellation deed polls in respect of the 6,125,000 options to subscribe for Shares at the following prices:

Option class	Expiry date	Number on issue	Current exercise price (A\$)	Option offer price (A\$)
1	27 June 2011	325,000	0.2500	0.1543
2	31 July 2011	1,000,000	0.3100	0.1103
3	15 May 2012	1,250,000	0.3500	0.1298
4	15 May 2012	750,000	0.5000	0.0778
5	31 July 2011	250,000	0.3500	0.0849
6	31 July 2011	100,000	0.4500	0.0412
7	14 May 2012	150,000	0.3500	0.1297
8	14 May 2012	100,000	0.4500	0.0920
9	3 January 2016	2,200,000	0.3250	0.2345

On 3 April 2011, Abra and HNC entered into a bid implementation agreement ("Bid Implementation Agreement"). The Bid Implementation Agreement commits each party to implement the takeover bids.

The takeover bids will be conditional on:

- Foreign Investment Review Board (FIRB) approval;
- Chinese regulatory approvals;
- No regulatory actions;
- By the end of the offer period HNC having a relevant interest in not less than 93.48% of the Shares (being a level that would allow HNC to proceed to compulsory acquisition of the Shares following the bid);
- By the end of the offer period HNC having a relevant interest in not less than 90% of the Options (being a level that would allow HNC to proceed to compulsory acquisition of the Options following the bid);
- Each Option being an option to subscribe for one Share at the Current Exercise Prices on or prior to the dates noted in the table above;
- ASIC granting modifications to:
 - section 605(2) of the Corporations Act, to allow HNC to treat the different classes of Options as one class for the purpose of the Option Offer;
 - section 619(2) of the Corporations Act, to allow HNC to offer different consideration for each class of Option under the Option Offer; and

- section 618(1) and Chapter 6A of the Corporations Act, to allow HNC to cancel non-transferrable Options under the Option Offer and as part of the compulsory acquisition process;
- No prescribed occurrences (being those occurrences listed in section 652C of the Corporations Act) occurring in relation to Abra or its subsidiaries (except as a result of the exercise of any Options).

This report expresses an opinion as to whether or not the takeover offer from HNC to acquire all the Shares of Abra not already owned by HNC at A\$0.40 per Share ("the Offer") is fair and reasonable to the Shareholders.

A separate independent expert's report has been prepared by BDO at the request of the Abra directors to express an opinion as to whether or not the offer from HNC to acquire or enter into cancellation deed polls in respect of the 6,125,000 Abra Options to subscribe for Shares ("the Option Offer") is fair and reasonable to the Shareholders.



5. Profile of Abra Mining Limited

5.1 History

Abra Mining Limited (“Abra”) listed on the Australian Securities Exchange in April 2005 and was established as an exploration company focusing on projects in Western Australia. Abra’s key assets are lead, silver, zinc, copper and gold deposits located within its Mulgul Project in central Western Australia. In total, the Company has interests in tenements covering an area of more than 1,570 km².

5.2 Corporate Structure

The Company’s Board of Directors comprises the following:

Li Li	Non-executive Chairman
Mingyan Wang	Managing Director
Jeffrey Moore	Non-executive Director
Yingjie Deng	Non-executive Director
James Fang	Non-executive Director
Wenzhong Guo	Non-executive Director
Zhong Jie Sheng	Non-executive Director

5.3 Exploration Projects

Abra’s two main project areas in Western Australia are the South Bangemall Projects and the Havelock Project, near Wiluna which are summarised below (Source: abramining.com.au). For full details see the independent specialist report valuation at Appendix 3.

Mineralisation intersected at drillholes, each more than 2 kilometres from the Abra deposit, suggests that Abra’s assets represent only part of a major base metals mineral system. To most practicably realise early metal production from mining at the Abra deposit, in 2007, pursuant to a Letter of Intent, the Company proposed a Joint Venture (“JV”) with Hunan Nonferrous Metals Corporation Limited over Mining Lease 52/776 (“M52/776”) which covers the 100% owned Abra lead-silver-(zinc)-copper-gold deposit. The proposed JV did not eventuate.

South Bangemall Projects

Mulgul Project

The Mulgul Project includes the Abra Deposit, which is a large mineral resource of disseminated and vein hosted galena and chalcopyrite mineralisation extending over an area of at least 1,000 metres by 800 metres and a thickness of more than 250 metres. The Mineral Resource for each of the mineralisation domains at the Abra deposit amounts to:

ABRA DEPOSIT Indicated and Inferred Mineral Resource								
Domain	Cut-off Grade	Category	Million Tonnes	Pb (%)	Ag (g/t)	Cu (%)	Au (g/t)	Zn (%)
Lead	2.5% Pb	Indicated	33	4.1	10	0.13	0.06	0.1
		Inferred	60	3.9	10	0.12	0.04	0.1
		Total	93	4.0	10	0.12	0.05	0.1
Copper-Gold	0.4% Cu	Indicated	4	0.4	5	0.59	0.56	0.0
		Inferred	10	0.3	4	0.63	0.47	0.0
		Total	14	0.3	4	0.62	0.49	0.0

Source: Abra Mining Limited annual report 2010 (Mineral resource statement as at 14 May 2008)

Jillawarra Project

The Jillawarra project covers the central and western portions of the Jillawarra Sub-basin, covering 1,043.8 km² adjacent to and west of the Mulgool Project. The project consists of four prospects with on-going ground exploration which are summarised below;

- **Woodlands Complex:** A large regional coincident magnetic and gravity anomaly in the western portion of the Jillawarra Sub-basin. The feature hosts six prospects over an area of 6 kilometres east-west and 4 kilometres north-south. Drilling by previous explorers identified significant mineralisation at three of the prospects, 46.40, Woodlands and Leader 18. At Thumbprint (TP), a 1,200 metre deep drillhole intersected magnetite alteration, brecciation and weak lead-barium mineralisation similar in character to that encountered at Woodlands and Leader 18.
- **Copper Chert:** The only prospect where surface secondary mineralisation and pre-existing pitting are evident. Previous drilling of copper geochemical and electrical geophysical anomalies returned a best result of 0.6m @ 2.4% Cu (drillhole 75-8 from 124.5 metres).
- **Quartzite Well:** Mineralisation intersected to date consists of anomalous lead-zinc mineralisation predominantly within tectonic breccias within the steep dipping fault zone. Drilling into the fault zone intersected a number of significant mineralised zones within siliceous and carbonaceous shale and breccia.
- **Manganese Range:** A zone of folded Irregularly Formation rocks in the hanging wall to the Quartzite Well thrust fault. Intense iron-manganese caprocks returned zones highly anomalous in lead (up to 4,000ppm) and 200m to the north, copper (up to 400ppm). Drilling conducted over several phases of work identified three styles of mineralisation:
 1. Lead anomalous mineralisation in strongly clay altered ± iron-manganese stained shales. The best result was 24 metres averaging 0.52% Pb from 8 metres in MR-89-5, including 4 metres averaging 1.3% Pb.
 2. Primary copper±gold mineralisation in fresh quartz-chlorite-magnetite altered rocks. This style of mineralisation returned a best intersection of 35 metres averaging 0.51% Cu from 313 metres in JLWA-77-27, including 9 metres averaging 1.03% Cu and an additional 2 metres averaging 2.09% Cu.
 3. A zone of relatively shallow (<88 metres) gold mineralisation in ironstone and ferruginous clays displaying anomalous gold (up to 0.44g/t Au).

Mount Deverell Project

Located to the south of the Jillawarra project. A first pass NITON soil survey was completed over the Mt Deverell tenements in 2008, with some encouraging anomalism defined.

An infill NITON soil survey and geological mapping programme completed in early 2010 has better defined several strong lead surface anomalies.

The infill lines in Areas 1 and 2 better defined the existing lead anomalies and the geological mapping has enabled a better understanding of the geological setting at each location.

Within Area 1 the peak lead value is 146ppm and the lead anomaly is coincident with a breccia zone comprising sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments. The anomaly occurs within the hinge of a broad north-west trending faulted antiform that onlaps granitic basement. It occurs in a similar stratigraphic and structural setting to the Abra Deposit.

Within Area 2 the peak lead value is 309ppm and the lead anomaly is also coincident with a fault breccia zone comprising sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments and this lead anomaly also occurs within a similar stratigraphic and structural setting to the Abra Deposit

Havelock Project

Located 35km northwest of Wiluna in central Western Australia and approximately 250 kilometres southeast of AML's Abra deposit. A follow up NITON soil sampling and mapping programme was completed during 2010. The program was completed at 50 metres line spacing and 50 metres sample spacing and was designed to better define lead anomalies previously identified to the south of the Magellan mine site. Ninety-three lines were completed for a total of 176 line kilometres with 3,613 readings taken. The peak value returned was 2,565ppm Pb.

5.4 Historical Balance Sheet

Balance Sheet	Unaudited as at 31-Mar-11 A\$	Audited as at 31-Dec-10 A\$	Audited as at 31-Dec-09 A\$
CURRENT ASSETS			
Cash and cash equivalents	3,962,665	4,498,990	8,060,622
Other financial assets	-	118,000	-
Other receivables	105,692	78,483	118,384
Other assets	6,826	16,613	39,154
Total current assets	4,075,182	4,712,086	8,218,160
NON-CURRENT ASSETS			
Plant and equipment	396,146	391,512	496,814
Exploration and evaluation	20,890,549	20,513,946	18,688,334
Total non-current assets	21,286,695	20,905,458	19,185,148
TOTAL ASSETS	25,361,877	25,617,544	27,403,308
CURRENT LIABILITIES			
Trade and other payables	26,176	141,808	130,606
Provisions	88,579	50,518	125,546
Interest bearing borrowings	22,070	11,930	49,484
Total current liabilities	136,825	204,256	305,636
NON-CURRENT LIABILITIES			
Provisions	152,865	34,029	27,184
Interest bearing borrowings	-	14,569	24,286
Total non-current liabilities	152,865	48,598	51,470
TOTAL LIABILITIES	289,690	252,854	357,106
NET ASSETS	25,072,187	25,364,690	27,046,202
EQUITY			
Contributed equity	32,949,397	32,949,397	32,949,397
Reserves	2,898,046	2,518,727	2,518,727
Accumulated losses	(10,775,256)	(10,103,434)	(8,421,922)
TOTAL EQUITY	25,072,187	25,364,690	27,046,202

Source: Audited financial accounts for the years ended 31 December 2009 and 31 December 2010 and management accounts for the period ended 31 March 2011.

We have analysed the management accounts for the period ended 31 March 2011 and are satisfied that the information is not materially misstated. Nothing has come to our attention as a result of our procedures

that would suggest the financial information within the management accounts has not been prepared on a reasonable basis.

5.5 Historical Income Statements

Income Statement	Year ended 31-Dec-10 A\$	Year ended 31-Dec-09 A\$
REVENUE	267,273	519,863
EXPENSES		
Consultant and professional fees	216,618	268,945
Depreciation expense	114,991	206,755
Employee benefit expense	890,407	2,184,227
Impairment of exploration expenditure	241,919	120,441
Finance costs	5,752	5,825
Insurance expense	60,381	38,291
Loss on sale of plant and equipment	-	28,560
Occupancy expense	249,668	169,305
Other expenses	93,927	116,362
Travel and accommodation expense	75,122	118,703
TOTAL EXPENSES	1,948,785	3,257,414
LOSS BEFORE INCOME TAX	(1,681,512)	(2,737,551)
Income tax expense	-	-
NET LOSS	(1,681,512)	(2,737,551)

Source: Audited financial accounts for the years ended 31 December 2009 and 31 December 2010

Revenue decreased 51% from 2009 to 2010 while expenses decreased by 59% resulting in a reduced net loss for the year.

We have not undertaken a review of Abra's unaudited accounts in accordance with the Australian Auditing and Assurance Standard 2405 "Review of Historical Financial Information" and do not express an opinion on this financial information. However, nothing has come to our attention as a result of our procedures that would suggest the financial information within the management accounts has not been prepared on a reasonable basis.

5.6 Capital Structure

The share structure of Abra as at 20 April 2011 is outlined below:

	Number
Total Ordinary Shares on Issue	141,957,504
Top 20 Shareholders	132,996,118
Top 20 Shareholders - % of shares on issue	93.69%

Source: Security Transfer Registrars information provided by Abra management

The range of shares held in Abra as at 20 April 2011 is as follows:

Range of Shares Held	No. of Ordinary Shareholders	No. of Ordinary Shares	% Issued Capital
1-1,000	38	21,919	0.02%
1,001-5,000	165	460,233	0.32%
5,001-10,000	88	685,825	0.48%
10,001-100,000	140	4,432,600	3.12%
100,001 - and over	41	135,356,927	96.05%
TOTAL	472	141,957,504	100.00%

Source: Security Transfer Registrars information provided by Abra management

The ordinary shares held by the most significant shareholders as at 20 April 2011 are detailed below:

Name	No of Ordinary Shares Held	Percentage of Issued Shares (%)
Hunan Nonferrous Metals Ltd	104,927,004	73.91%
AP Energy Investments Ltd	4,186,174	2.95%
Minyan Chen	3,576,040	2.52%
Clema Investments Pty Ltd	3,273,996	2.31%
Total Top 4	115,963,214	81.69%
Others	25,994,290	18.31%
Total Ordinary Shares on Issue	141,957,504	100.00%

Source: Security Transfer Registrars information provided by Abra management

The most significant optionholders of Abra as at 20 April 2011 are outlined below:

Name	Number of Options	Exercise Price (A\$)	Expiry Date
Adrian Hell	50,000	0.450	31-Jul-11
Jacqueline Murphy	50,000	0.450	31-Jul-11
T & L Keay	50,000	0.350	31-Jul-11
Adrian Hell	100,000	0.350	31-Jul-11
Jacqueline Murphy	100,000	0.350	31-Jul-11
E J Turner	100,000	0.450	14-May-12
The Wright Family A/c	125,000	0.250	27-Jun-11
E J Turner	150,000	0.350	14-May-12
C J Stephens Family A/c	200,000	0.250	27-Jun-11
James Fang	700,000	0.330	03-Jan-16
PJ Cranney	750,000	0.500	15-May-12
PJ Cranney	1,000,000	0.310	31-Jul-11
PJ Cranney	1,250,000	0.350	15-May-12
JJ Moore	1,500,000	0.325	03-Jan-16
Total Number of Options	6,125,000		
Cash Raised if Options Exercised	A\$ 2,152,250		

Source: Abra management

6. Profile of Hunan Nonferrous Metals Corp Limited

Hunan Nonferrous Metals Holding Group Co., Ltd. was founded in August 2004 and has ten subsidiaries including Abra. Its holding subsidiary, Hunan Nonferrous Metals Co., Ltd. ("HNC"), was listed on the Hong Kong Exchanges and Clearing Ltd. in March 2006.

HNC is based in Changsha City, the People's Republic of China ("PRC").

HNC engages in the exploration, mining, processing and sale of nonferrous metals including tungsten, zinc, antimony and lead in the PRC. HNC operates in three segments: nonferrous metal mine site segment, which is engaged in the mining and trading of nonferrous metals; nonferrous metal smelting segment, which is engaged in the smelting and trading of nonferrous metals, and cemented carbides, and tungsten, molybdenum, tantalum, niobium and their compounds segment, which is engaged in the manufacture and trading of hard alloys and refractory metal compounds, such as cemented carbides, and tungsten, molybdenum, tantalum, niobium and their compounds.

HNC (and its subsidiaries) is the largest integrated producer of nonferrous metals, excluding aluminium and copper, in the PRC as measured by production volume.

HNC currently hold 73.91% of the issued capital in Abra.

7. Economic analysis

The global economy is continuing its expansion, led by very strong growth in the Asian region. The recent disaster in Japan is having a major impact on Japanese production, and some effects on production of manufactured products further afield. Commodity prices, including oil prices, have generally continued to rise over recent months, pushing up measures of consumer price inflation in many countries. A number of countries have been moving to tighten their monetary policy settings. Overall, though, financial conditions for the global economy remain accommodative. Uncertainty remains over the prospects for resolution of the banking and sovereign debt issues in Europe.

Australia's terms of trade are reaching higher levels than assumed a few months ago, and national income is growing strongly. Private investment is picking up, mainly in the resources sector, in response to high levels of commodity prices. In the household sector thus far, in contrast, there continues to be caution in spending and borrowing, and a higher rate of saving out of current income.

The natural disasters over the summer have reduced output in some key sectors and the resumption of coal production in flooded mines is taking longer than initially expected. It is likely this caused a decline in real GDP in the March quarter. Production levels should, however, recover over the months ahead, and there will be a mild boost to demand from the rebuilding efforts as they get under way. Over the medium term, overall growth is likely to be at trend or higher.

Growth in employment has moderated over recent months and the unemployment rate has been little changed, near 5 per cent. Most leading indicators suggest further growth in employment, though most likely at a slower pace than in 2010. Reports of skills shortages remain confined, at this point, to the resources and related sectors. After the significant decline in 2009, growth in wages has returned to rates seen prior to the downturn.

Overall credit growth remains quite modest. Signs have continued to emerge of some greater willingness to lend, and business credit has resumed growth after a period of contraction. Growth in credit to households, on the other hand, has softened recently, as have housing prices in several cities. The exchange rate has risen further and, in real effective terms, is at its highest level in several decades. This, if sustained, could be expected to exert additional restraint on the traded sector.

Recent data on inflation show the effects of production losses due to the floods and Cyclone Yasi. The affected prices should fall back later in the year, though substantial rises in utilities prices are still occurring. The Bank expects that, as the temporary price shocks dissipate over the coming quarters, CPI inflation will be close to target over the year ahead.

Looking through these short-term movements, however, the recent information suggests that the marked decline in underlying inflation from the peak in 2008 has now run its course. While the rising exchange rate will be helping to hold down prices for some consumer products over the coming few quarters, over the longer term inflation can be expected to increase somewhat if economic conditions evolve broadly as expected.

Source: Statement by Glen Stevens, Governor: Monetary Policy Decision on 3 May 2011 www.rba.gov.au

8. Industry Analysis

Zinc-lead-silver industry analysis

Australia has the world's largest economic resources of both zinc and lead, accounting for more than one quarter of world zinc economic resources and one third of world lead economic resources. In terms of world production, Australia ranks in the top three for zinc and lead. Exports of zinc, lead and silver total \$5 billion annually.

Zinc, Lead and Silver Properties and Uses

Zinc, lead and silver often occur together in mineral deposits. Zinc is widely used in the construction, transport and appliance manufacturing industries as an anti-corrosion on steel with around four million tonnes, or more than half of the world's total zinc consumption used annually in steel coating, or galvanising. Zinc is used also in brass and bronze production as well as in pigments, as oxide additives to rubber and in agricultural chemicals.

Lead is mostly used in batteries for vehicles which accounts for 80 per cent of modern lead usage. The remaining 20 per cent of uses include underwater cable sheathing, solder, casting alloys, chemical compounds, ammunition, glassware and radiation protection. More than half of the lead currently used is from recycling, rather than mining.

Silver's use in jewellery, ornaments and household silverware derives from its attractive appearance, malleability and relative scarcity. Other uses include photographic paper and film, electronics, coatings for mirrors and as an anti-bacterial agent.

Zinc, Lead and Silver Production and Exports

Lead was the first metal mined in Australia at Glen Osmond in South Australia in 1841. In 1901 a flotation process to recover zinc minerals was devised at Broken Hill silver-lead deposit in New South Wales which led to the Australian-developed Jameson flotation cell used world-wide today. Previously the zinc ore at Broken Hill had been consigned to waste dumps.

The Century zinc mine in northwest Queensland close to the Gulf of Carpentaria ranks second globally in zinc production while nearby Cannington mine is a significant producer of zinc and the world's largest single mine producer of both silver and lead. Also significant are the Mount Isa and George Fisher mines, also in northwest Queensland, McArthur River in the Northern Territory, Golden Grove in Western Australia and the Broken Hill deposit.

The zinc content of mine production in Australia is currently about 1300 kilotonne a year which represents about 12 per cent of world zinc production, making Australia the third largest producer after China and Peru. The lead content of mine production in Australia is currently about 600 kilotonne a year, or about 14 per cent of world lead production, making it the second largest producer after China. For silver production, Australia ranks fifth after Peru, China, Mexico and Chile.

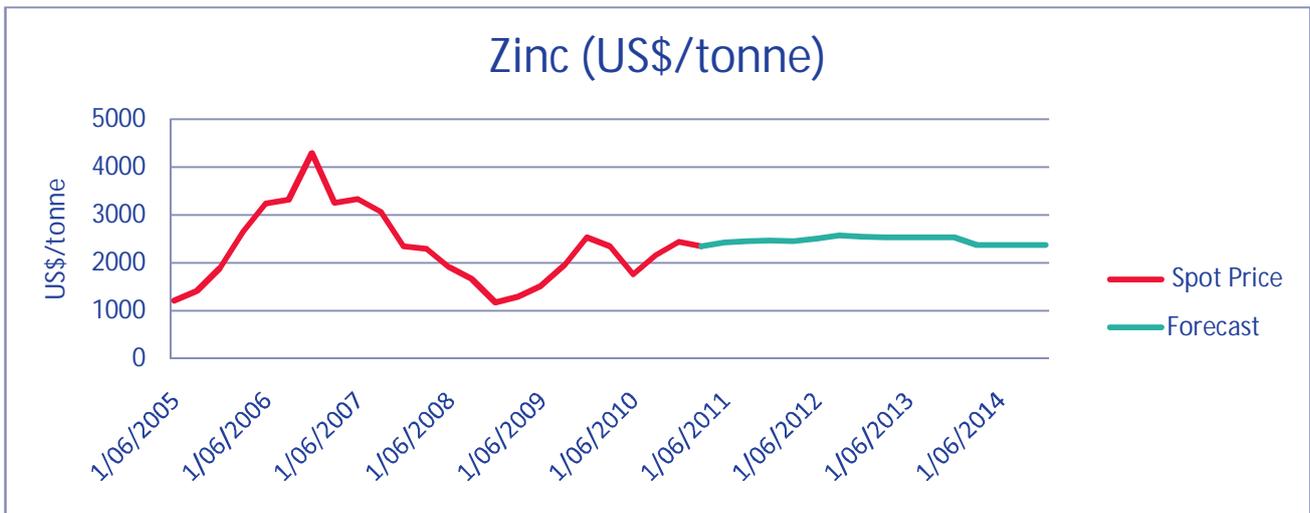
Australian exports of zinc and lead total about \$2 billion each a year while exports of silver total about \$1 billion a year. As a group, zinc, lead and silver represent about three per cent of Australia's total mineral exports. The major markets for zinc exports are China, Korea, Japan and the Netherlands and for lead it is China, the United Kingdom, Korea and Japan.

Zinc, Lead and Silver Resources

Australia ranks first in the world for both zinc and lead resources with a quarter of the world's zinc economic resources and one third of world lead economic resources. Almost two thirds of Australia's zinc and lead Economic Demonstrated Resources (EDR) is in Queensland. Mining occurs in the Northern Territory and all States except Victoria. Australia's national inventory of zinc, lead and silver resources is updated annually in Australia's Identified Mineral Resources.

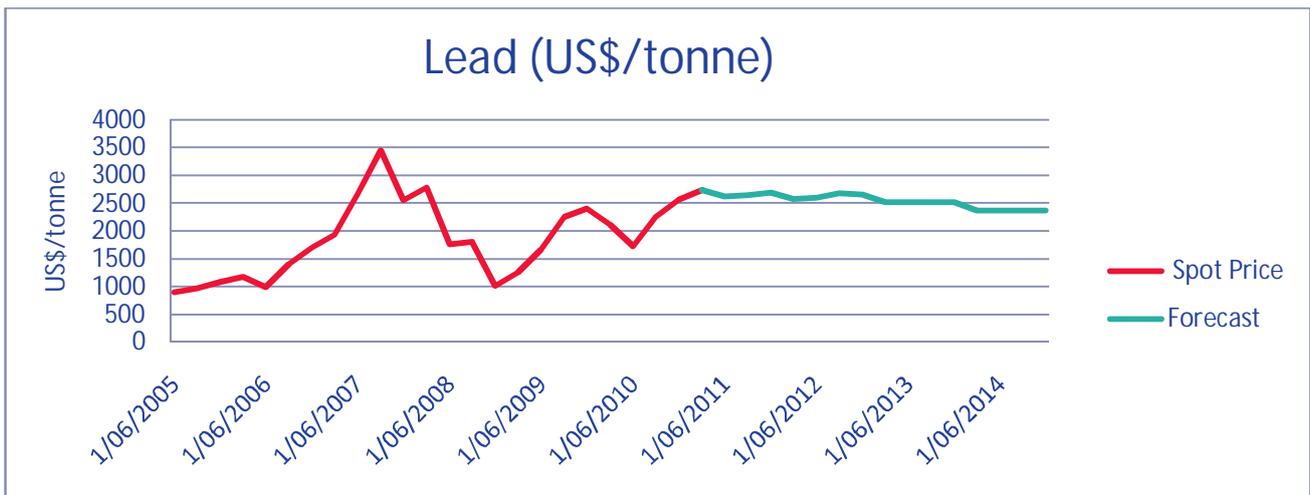
Source: Geoscience Australia (www.ga.gov.au)

Current and future zinc price



Source: Bloomberg

Current and future lead price



Source: Bloomberg

Current and future silver price



Source: Bloomberg

Copper industry analysis

Copper is a soft malleable, ductile metal used primarily for its excellent electrical and thermal conductive properties and its resistance to corrosion. As well as electrical and electronic applications copper is utilised extensively as an alloy. Copper, as a major industrial metal, ranks third after iron and aluminium in terms of quantity consumed (*World Mineral Production 2003-2007*, British Geological Survey).

Copper is produced from an oxide or sulphide ore from which it is converted to copper metal. The majority of copper ore bodies can be classified as either porphyries (where copper occurs in igneous rock), stratabound orebodies (where copper occurs in sedimentary rock), and volcanic hosted massive sulphide deposits (where copper occurs in volcanic rock along with other base metal sulphides). In these deposits copper is mined in very low concentrations and consequently is a volume intensive process. For this reason open pit mining is the preferred method of extraction, however underground mining and leach mining are also used in limited circumstances.

According to the International Copper Study Group ("ICSG"), the global growth in copper demand to exceed global growth in copper production and the annual production deficit, estimated at 250,000 metric tonnes (t) of refined copper in 2010, is expected to be about 380,000 t in 2011.

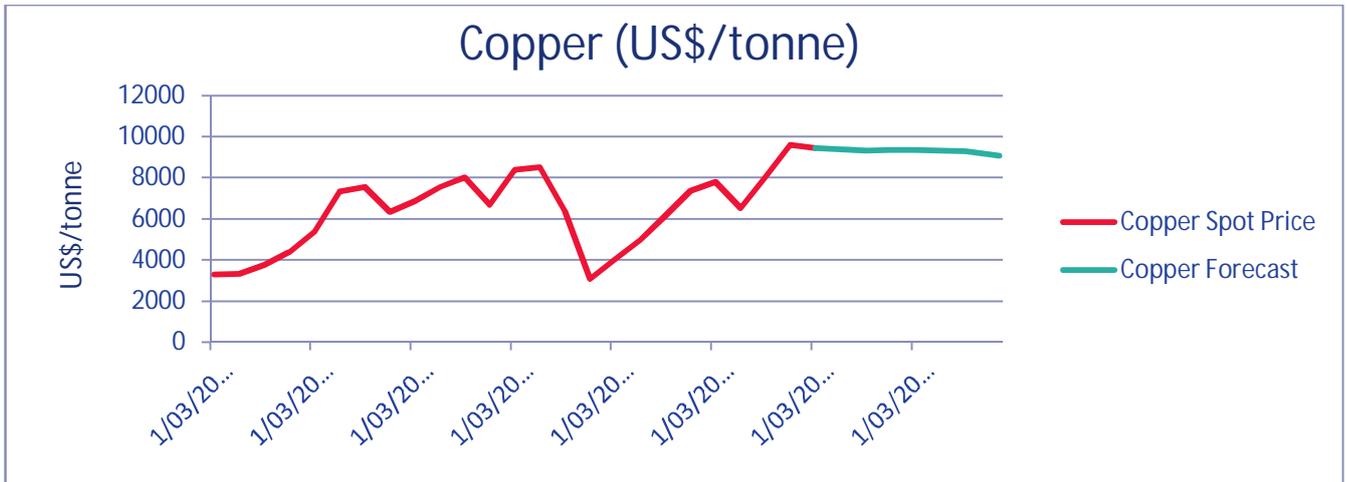
In 2011, China's copper consumption is forecast to increase around 6% on 2010 consumption. In 2010, China accounted for more than 38% of the global copper demand.

Australia's reserves are centred primarily at Olympic Dam, South Australia, and Mount Isa, Queensland. Other significant copper operations are located at Rio Tinto's Northparkes project and Newcrest Mining's Cadia-Ridge project in New South Wales, Newmont Mining's Golden Grove project in Western Australia and Xstrata's Ernest Henry in Northern Queensland.

Current and future copper price

Copper is a global commodity and, as such, prices are determined by global supply and demand factors. Due to this, copper prices have historically reflected global economic cycles and experienced major

fluctuations reflecting equity market movements. At the beginning of 2008, supply concerns, falling inventories and increased demand from emerging economies provoked a significant and accelerated rise in the copper price. Prices increased in the latter half of 2010, peaking at US\$9,600/t in the quarter ended 31 December 2010.



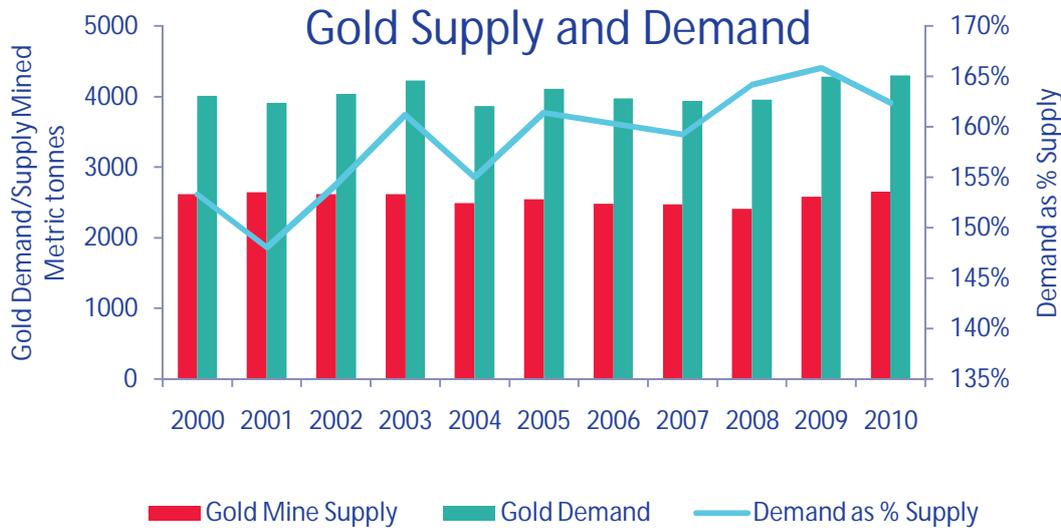
Source: Bloomberg

Looking forward, analysts are predicting the copper price to remain relatively stable with a slight depreciation. Consensus forecasts are around US\$9,366/t, US\$9,318/t and US\$9,071/t for 2011, 2012 and 2013 and respectively (*Bloomberg*).

Gold industry analysis

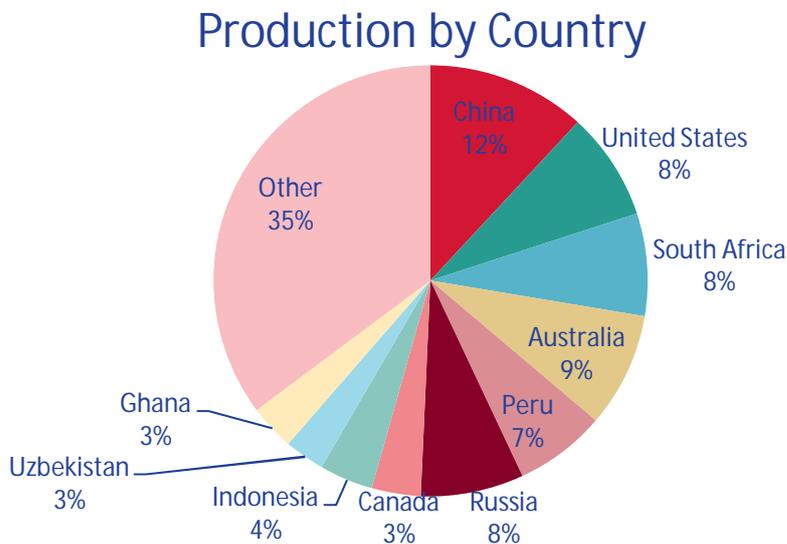
Gold is both a commodity and an international store of monetary value. Once mined, gold continues to exist indefinitely, often melted down and recycled to produce alternative or replacement products. This characteristic means that gold demand is supported by both mine production and gold recycling. According to GFMS Limited, at the end of 2007 the above ground stocks of gold were approximately 161,000 tonnes. Approximately two-thirds of annual demand for gold is driven by jewellery fabrication, with the remainder driven by industrial use and investment in gold.

As illustrated in the chart below, gold mine production was approximately 2,652 metric tonnes in 2010 and gold consumption was 4,306 metric tonnes. Demand for gold has consistently exceeded supply over the last 10 years, and the escalated level of economic and financial uncertainty during the past 18 months has caused investors to move capital from risky assets to gold assets, which are perceived to be a good store of monetary value. As a result, total gold demand increased by 9% between 2008 and 2010, with demand as a percentage of supply increasing from 164.2% in 2008 to 166.5% over the same period.



Source: Bloomberg

Until the late 1980's South Africa produced approximately half of total gold production. More recently, gold production has become geographically segmented, as shown in the chart below. In 2009 production was dominated by China (314 metric tonnes), Australia (227 metric tonnes), USA (216 metric tonnes) and South Africa (205 metric tonnes).



Source: Data from GFMS Limited

Current and future gold price

The price of gold fluctuates on a daily basis depending on global demand and supply factors. As can be seen in the graph below, the value of gold has increased over the past 5 years to USD\$1423.75 per ounce on 6 December 2010. This peak was largely caused by the US Federal Reserve Bank announcing a new round of quantitative easing, but was also driven by contagion concerns in Europe. The price trend over the last 2 years is reflective of weak global economic conditions driving demand. The consensus view is

that gold prices will fall over the next 3 years to approximately \$1168 in 2014. The current forward rate suggests that the price of gold will stabilise at current levels over the next three years.



Source: Bloomberg

9. Valuation Approach Adopted

There are a number of methodologies which can be used to value a business or the shares in a company. The principal methodologies which can be used are as follows:

- Capitalisation of future maintainable earnings ("FME")
- Discounted Cash Flow ("DCF")
- Quoted Market Price Basis ("QMP")
- Net Asset Value ("NAV")
- Market Based Assessment
- Multiple of Exploration Expenditure ("MEE")

A summary of each of these methodologies is outlined in Appendix 2.

Different methodologies are appropriate in valuing particular companies, based on the individual circumstances of that company and available information. In our assessment of the value of Abra shares we have chosen to employ the following methodologies:

- Net Asset Value ("NAV") - Primary methodology
- Quoted Market Price Basis ("QMP") - Supporting methodology

We have chosen these methodologies for the following reasons:

- The most significant assets of Abra are exploration assets and as such require a specialist valuation that may not be accurately provided by other methodologies;
- Abra is listed on the ASX and this provides an indication of the market value where an observable market for the securities exists;
- Abra does not generate regular trading income. Therefore there are no historic profits that could be used to represent future earnings. This means that the FME valuation approach is not appropriate;
- Abra has no foreseeable future net cash inflows and therefore the application of DCF is not possible.

10. Valuation of Abra

10.1 Net Asset Valuation of Abra

The value of Abra's assets on a going concern basis is reflected in our valuation below:

	Unaudited as at 31-Mar-11	Low value	High value	Preferred value
Balance Sheetp	A\$	A\$	A\$	A\$
CURRENT ASSETS				
Cash and cash equivalents	4,190,165	4,190,165	4,190,165	4,190,165
Other financial assets	-	-	-	-
Other receivables	105,692	105,692	105,692	105,692
Other assets	6,826	6,826	6,826	6,826
Total current assets	4,302,683	4,302,683	4,302,683	4,302,683
NON-CURRENT ASSETS				
Plant and equipment	396,146	396,146	396,146	396,146
Exploration and evaluation	20,890,549	35,580,000	64,440,000	50,060,000
Total non-current assets	21,286,695	35,976,146	64,836,146	50,456,146
TOTAL ASSETS	25,589,378	40,278,829	69,138,829	54,758,829
CURRENT LIABILITIES				
Trade and other payables	26,176	26,176	26,176	26,176
Provisions	88,579	88,579	88,579	88,579
Interest Bearing Borrowings	22,070	22,070	22,070	22,070
Total current liabilities	136,825	136,825	136,825	136,825
NON-CURRENT LIABILITIES				
Provisions	152,865	152,865	152,865	152,865
Total non-current liabilities	152,865	152,865	152,865	152,865
TOTAL LIABILITIES	289,690	289,690	289,690	289,690
NET ASSETS	25,299,688	39,989,139	68,849,139	54,469,139
Shares on issue	141,957,504	141,957,504	141,957,504	141,957,504
Value of an Abra share	0.178	0.282	0.485	0.384

We have been advised by Abra that on 19 April 2011, 700,000 options were exercised. These options related to a Director who retired and are not included in the Option Offer from HNC. The options carried an exercise price of A\$0.325. The cash balance and shares on issue at 31 March 2011 have been adjusted to reflect this.

The table above indicates the net asset value of an Abra share is between A\$0.282 and A\$0.485.

The following adjustments were made to the net assets of Abra as at 31 March 2011 in arriving at our valuation:

Note 1

We instructed Xstract Mining Consultants Pty Ltd (“Xstract”) to provide an independent market valuation of the exploration assets held by Abra. Xstract considered a number of different valuation methods when valuing the exploration assets of Abra. Xstract used both market and cost based approaches to arrive at its preferred value. Full details are shown in Appendix 3.

The range of values for each of Abra’s exploration assets as calculated by Xstract is set out below:

Mineral Asset	Low Value A\$m	High Value A\$m	Preferred Value A\$m
Abra Deposit	32.26	58.06	45.16
Mulgul Project	1.07	1.70	1.33
Jillawarra Project	1.80	4.00	3.00
Mount Deverell Project	0.23	0.34	0.29
Havelock Project	0.22	0.34	0.28
TOTAL	35.58	64.44	50.06

The table above indicates a range of values between A\$35.58 million and A\$64.44 million, with a preferred value of A\$50.06 million.

Note 2

The value of an Abra share has been calculated applying the undiluted shares on issue. For all classes of unlisted options, it would be more advantageous for the optionholder to accept the Option Offer Price offered by HNC rather than exercise the option and accept the A\$0.40 cash offer per share because the option offer price is greater than the excess of the cash offer over the current exercise price.

10.2 Quoted Market Prices for Abra Securities

To provide a comparison to the valuation of Abra in Section 10.1, we have also assessed the quoted market price for an Abra share.

The quoted market value of a company's shares is reflective of a minority interest. A minority interest is an interest in a company that is not significant enough for the holder to have an individual influence in the operations and value of that company.

RG 111.11 requires that when considering the value of a company's shares for the purposes of a takeover bid, the expert should consider the value of the target's shares on a control basis. An acquirer could be expected to pay a premium for control due to the advantages they will receive should they obtain 100% control of another company. These advantages include the following:

- control over decision making and strategic direction
- access to underlying cash flows;
- control over dividend policies; and
- access to potential tax losses.

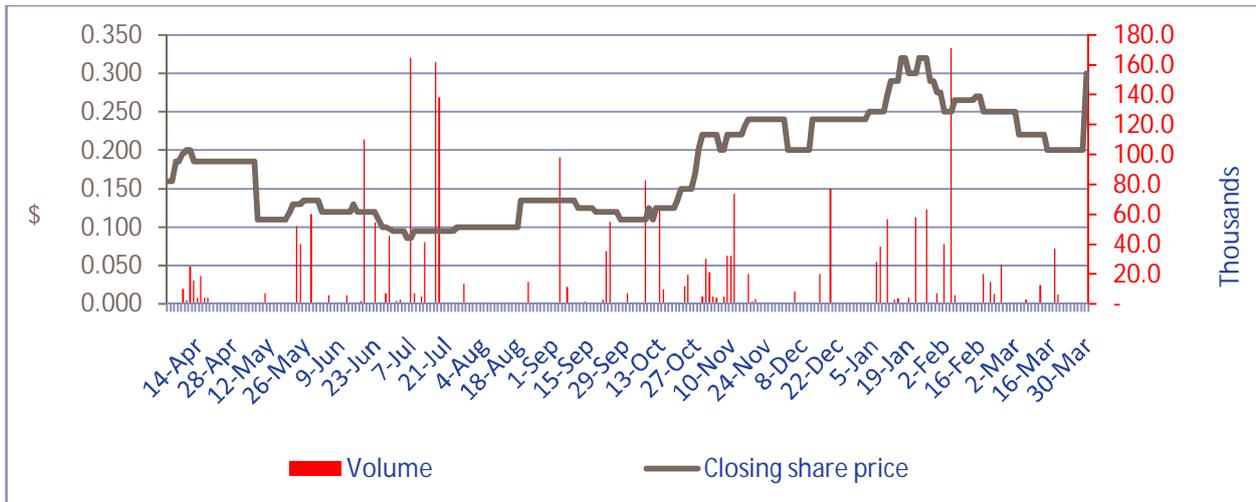
HNC will own 100% of the Company if the Offer is successful. RG 111.13 states that the expert can then consider a bidder's pre-existing voting power in securities in the target when considering reasonableness. Reasonableness has been considered in Section 13.

Therefore, our calculation of the quoted market price of an Abra share including a premium for control has been prepared in two parts. The first part is to calculate the quoted market price on a minority interest basis. The second part is to add a premium for control to the minority interest value to arrive at a quoted market price value that includes a premium for control.

Minority interest value

Our analysis of the quoted market price of an Abra share is based on the pricing prior to the announcement of the Offer. This is because the value of an Abra share after the announcement may include the affects of any change in value as a result of the Offer. However, we have considered the value of an Abra share following the announcement when we have considered reasonableness in Section 13.

Information on the Offer was announced to the market on Monday 4 April 2011. The following chart provides a summary of the share price movement over the year to Wednesday 30 March 2011 which was the last trading day prior to the announcement. The Company was placed in a trading halt on 31 March 2011 pending the announcement to the market on 4 April 2011.



Source: Bloomberg

The daily price of Abra shares from 30 March 2010 to 30 March 2011 ranged from a high of A\$0.320 on 26 January 2011 to a low of A\$0.086 on 7 July 2010.

During this period a number of announcements were made to the market. The key announcements are set out below:

Date	Announcement	Closing share price following announcement	Closing share price three days after the announcement
		A\$ (movement)	A\$ (movement)
31/03/2011	Trading Halt	0.300 (-%)	0.300 (-%)
20/01/2011	Quarterly Activities and Cashflow Report	0.300 (-%)	0.320 (▲ 7%)
26/10/2010	Quarterly Activities and Cashflow Report	0.150 (-%)	0.200 (▲ 33%)
23/07/2010	Quarterly Activities and Cashflow Report	0.095 (-%)	0.100 (▲ 5%)
28/04/2010	Quarterly Activities and Cashflow Reports	0.185 (-%)	0.185 (-%)

Other than the increase in share price three days following the announcement on 26 October 2010, the announcements have had a minimal affect on the Abra share price in the 12 months prior to the announcement.

The jump in price from A\$0.200 on 29 March 2011 to A\$0.300 on 30 March 2011, prior to being placed in a trading halt pending the announcement, and the increased volume of trading, would suggest that there may have been predictions in the market about a possible takeover before the announcement was made on 4 April 2011. This means that the closing price on 31 March 2011 may already include an element of a control premium.

To provide further analysis of the market prices for an Abra share, we have also considered the weighted average market price for 10, 30, 60 and 90 day periods to 30 March 2011:

	30 March 2011	10 Days	30 Days	60 Days	90 Days
Closing Price	A\$0.300				
Weighted Average		A\$0.285	A\$0.258	A\$0.266	A\$0.261

The above weighted average prices are prior to the date of the announcement of the Offer, to avoid the influence of any increase in price of Abra's shares that has occurred since the offer was announced.

An analysis of the volume of trading in Abra's shares for the twelve months to 30 March 2011 is set out below:

	Share price low (A\$)	Share price high (A\$)	VWAP (A\$)	Cumulative Volume traded	As a % of Issued capital	As a % of issued capital excluding HNC's 104,927,004 shares
1 day	\$0.300	\$0.300	\$0.300	130,000	0.09%	0.35%
10 days	\$0.200	\$0.300	\$0.285	130,000	0.09%	0.35%
30 days	\$0.200	\$0.300	\$0.259	237,667	0.17%	0.64%
60 days	\$0.200	\$0.320	\$0.268	671,464	0.48%	1.81%
90 days	\$0.200	\$0.320	\$0.261	843,318	0.60%	2.28%
180 days	\$0.095	\$0.320	\$0.213	1,505,689	1.07%	4.07%
1 year	\$0.086	\$0.320	\$0.174	2,504,342	1.77%	6.76%

This table indicates that Abra's shares display an extremely low level of liquidity, with 1.77% of the Company's current issued capital being traded in a twelve month period and only 6.76% of the issued capital traded excluding shares owned by HNC. For the quoted market price methodology to be reliable there needs to be a 'deep' market in the shares. RG 111.69 indicates that a 'deep' market should reflect a liquid and active market. We consider the following characteristics to be representative of a deep market:

- Regular trading in a company's securities;
- Approximately 1% of a company's securities are traded on a weekly basis;
- The spread of a company's shares must not be so great that a single minority trade can significantly affect the market capitalisation of a company; and
- There are no significant but unexplained movements in share price.

A company's shares should meet all of the above criteria to be considered 'deep', however, failure of a company's securities to exhibit all of the above characteristics does not necessarily mean that the value of its shares cannot be considered relevant.

In the case of Abra, the shares are considered illiquid.

Our assessment is that a range of values for Abra shares based on market pricing, after disregarding post announcement pricing, is between \$0.261 and \$0.300.

Control Premium

We have reviewed the control premiums paid by acquirers of companies listed on the ASX as well as global mining companies. We have summarised our findings below:

Australian nonferrous mining targets:

Transaction Period	Number of Transactions	Average Deal Value (A\$m)	Median Deal Value (A\$m)	Average Control Premium (%)	Median Control Premium (%)
2001	3	287.40	213.17	55.07%	10.29%
2002	1	11.77	11.77	4.17%	4.17%
2003	3	67.61	26.99	37.58%	29.71%
2004	1	5.49	5.49	7.27%	7.27%
2005	5	88.86	49.31	12.57%	9.48%
2006	9	101.21	31.33	27.89%	8.53%
2007	7	293.09	257.325	202.40%	11.55%
2008	2	709.79	709.79	2.51%	2.51%
2009	2	39.36	39.355	460.62%	460.62%
2010	4	276.43	65.17	10.28%	7.49%
Total	37	188.10	44.3325	82.04%	55.16%
Total (excluding outliers in 2007 & 2009)	35	196.82	57.24	25.92%	8.01%

Source: Bloomberg

Given the relatively small sample of Australian nonferrous metal company targets over the past ten year period, less reliance is placed on the control premiums of the Australian nonferrous mining deals. Deal specific reasons leading to a particularly small or large control premium paid, will not be diluted over a small sample the same way it would be in a large sample size. For this reason, we have put less reliance on the control premium shown above.

We have expanded our control premium analysis across ASX listed mining companies that have been acquired between 2000 to 2010. Below is a summary of our findings over the period analysed:

Mining companies listed on the ASX:

Transaction Period	Number of Transactions	Average Deal Value (US\$m)	Median Deal Value (US\$m)	Average Control Premium (%)	Median Control Premium (%)
2000	5	606.98	390.97	34.43%	30.5%
2001	6	112.98	69.82	28.98%	31.25%
2002	6	194.2	19.85	31.62%	23.81%
2003	6	624.03	50.21	6.77%	14.37%
2004	3	25.83	25.83	25.67%	15.5%
2005	13	887.38	62.17	42.42%	29.78%
2006	20	81.85	40.88	31.11%	25.16%
2007	24	432.74	148.31	24.62%	17.68%
2008	9	448.5	265.51	32.8%	36.03%
2009	19	109.9	32.67	32.67%	22.95%
2010	16	888.87	72.18	56.55%	52.98%
Total	127	401.21	107.13	31.60%	27.27%

Source: Bloomberg

Analysis of the transactions showed that control premia varied widely and there did not appear to be a relationship between the type of consideration (ie script v cash) and the level of premium paid. We note that higher premia appear to be paid in circumstances where production is in place or the path to production is more certain. We also noted that where clear strategic factors (such as neighbouring tenements) exist, control premia tended to be higher. Based on the results above, we have concluded that an appropriate control premium to use in our valuation for Abra is between 15% and 30%. This is due to Abra being in exploration phase. We also note that there is certainty in relation to the premium that will be received as the consideration is in the form of cash. From the analysis of Abra's share price pre announcement, we have concluded that the closing share price on 1 April 2011 already incorporates an element of control premium. As such, we believe it is reasonable to apply a control premium of 15% - 20% to the quoted market price value of Abra which lies at the lower end of the observed control premium range.

Quoted market price including control premium

Applying a control premium to Abra's quoted market share price results in the following quoted market price value including a premium for control:

	Low A\$	High A\$
Quoted market price value	0.261	0.300
Control premium	15%	20%
Quoted market price valuation including a premium for control	0.300	0.360

Therefore, our valuation of an Abra share based on the quoted market price method and including a premium for control is between A\$0.300 and A\$0.360.

10.3 Assessment of Abra Value

The results of the valuations performed are summarised in the table below:

	Low A\$	High A\$
Net asset value (Section 10.1)	0.282	0.485
ASX market prices (Section 10.2)	0.300	0.360

Based on the results above we consider the value of a Abra share to be between A\$0.282 and A\$0.485

The primary basis for our value range is the net asset value range. The quoted market price range is based on a very low volume of trading which may not reflect the fair market value of a share. We note that the market prices fall within the net asset value range.

11. Valuation of Consideration

HNC have offered consideration of A\$0.40 cash to shareholders per Abra share.

12. Is the Offer fair?

The value of consideration offered by HNC is compared below to the value of an Abra share:

	Ref	Low value A\$	Preferred value A\$	High value A\$
Value of consideration	11	0.400	0.400	0.400
Assessed value of an Abra share	10.3	0.282	0.384	0.485

As the value of the consideration offered by HNC to shareholders per Abra share falls within the range of the value of an Abra share, we consider the Offer fair.

13. Is the Offer reasonable?

13.1 Alternative Offer

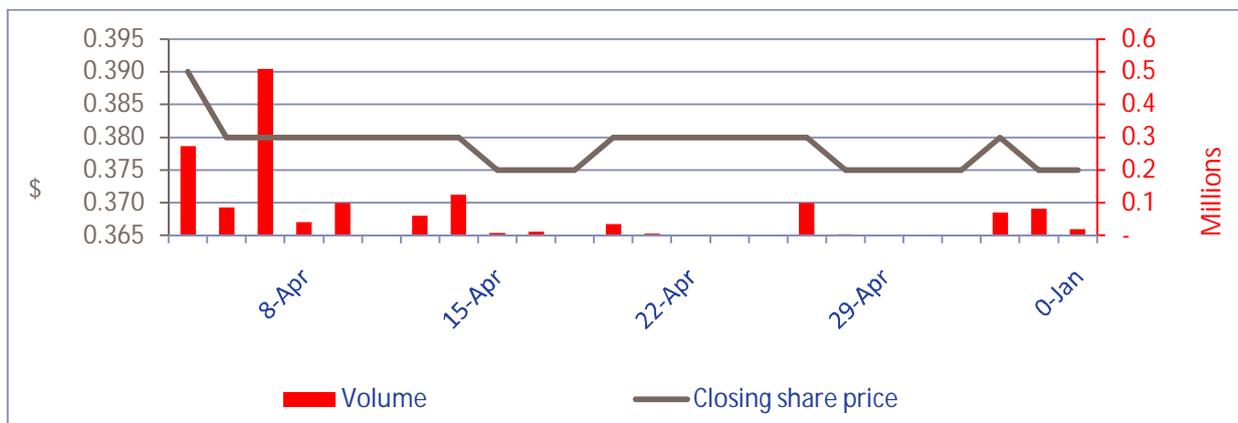
We are unaware of any alternative offers that might offer the Shareholders of Abra a premium over the value ascribed to that resulting from the Offer.

13.2 Practical Level of Control

If the Offer is approved by shareholders owning 93.48% of the shares and the Option offer is approved by optionholders holding 90% of the options then this would allow HNC to proceed to compulsory acquisition of the shares and options. If this occurs, HNC will hold an interest of 100% in Abra.

Potential decline in share price

We have analysed movements in Abra's share price since the Offer was announced. A graph of Abra's share price since the announcement is set out below.



Source: Bloomberg

Following the day of the announcement on 4 April 2011, the share price rose from A\$0.380 to A\$0.390. Since 5 April 2011, the share price has declined, closing at A\$0.375 on 6 May 2011.

Given the above analysis it is possible that if the Offer is not approved then Abra's share price may decline.

13.3 Advantages of Approving the Offer

We have considered the following advantages when assessing whether the Offer is reasonable.

Advantage	Description
The Offer is fair	As set out in Section 11, the Offer is fair. RG 111 states that an offer is reasonable if it is fair.
The offer is in cash	Shareholders will receive a cash payment which is a liquid asset available immediately.
No transaction costs	On approval of the Offer, shares in Abra would be converted to cash for the shareholder. No transaction costs, such as brokerage, will apply that would ordinarily apply if the shares were disposed of.
Removes future risks associated with holding Shares in Abra	The Offer removes the risks associated from the continued holding of Shares, including risks associated with future funding of Abra and risks associated with proving up the Resource to Reserve status.

13.4 Disadvantages of Approving the Offer

If the Offer is approved, in our opinion, the potential disadvantages to Shareholders include those listed in the table below:

Disadvantage	Description
Inability to benefit from potential upside in Abra	Shareholders will no longer own shares in the Company and will therefore not benefit from future profits and capital growth of the Company.
Potential tax implications	Potential tax implications associated with selling Abra shares may apply to shareholders such as the immediate realisation of income/loss or capital gains/losses.

14. Conclusion

We have considered the terms of the Offer as outlined in the body of this report and have concluded that the Offer is fair and reasonable and in the best interests to the Shareholders of Abra.

15. Sources of information

This report has been based on the following information:

- Draft Notice of General Meeting and Target's Statement on or about the date of this report;
- Audited financial statements of Abra for the years ended 31 December 2009 and 31 December 2010;
- Unaudited management accounts of Abra for the period ended 31 March 2011;
- Bid implementation agreement between Abra and HNC;
- Independent specialist valuation report prepared by Xstract;
- Share registry information;
- Information in the public domain; and
- Discussions with Directors and Management of Abra.

16. Independence

BDO Corporate Finance (WA) Pty Ltd is entitled to receive a fee of \$30,000 (excluding GST and reimbursement of out of pocket expenses). Except for this fee, BDO Corporate Finance (WA) Pty Ltd has not received and will not receive any pecuniary or other benefit whether direct or indirect in connection with the preparation of this report.

BDO Corporate Finance (WA) Pty Ltd has been indemnified by Abra in respect of any claim arising from BDO Corporate Finance (WA) Pty Ltd's reliance on information provided by the Abra, including the non provision of material information, in relation to the preparation of this report.

Prior to accepting this engagement BDO Corporate Finance (WA) Pty Ltd has considered its independence with respect to Abra and HNC and any of their respective associates with reference to ASIC Regulatory Guide 112 "Independence of Experts". In BDO Corporate Finance (WA) Pty Ltd's opinion it is independence of Abra and HNC and their respective associates.

Neither the two signatories to this report nor BDO Corporate Finance (WA) Pty Ltd, have had within the past two years any professional relationship with Abra, or their associates, other than in connection with the preparation of this report.

A draft of this report was provided to Abra and its advisors for confirmation of the factual accuracy of its contents. No significant changes were made to this report as a result of this review.

BDO is the brand name for the BDO International network and for each of the BDO Member firms.

BDO (Australia) Ltd, an Australian company limited by guarantee, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of Independent Member Firms. BDO in Australia, is a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International).

17. Qualifications

BDO Corporate Finance (WA) Pty Ltd has extensive experience in the provision of corporate finance advice, particularly in respect of takeovers, mergers and acquisitions.



BDO Corporate Finance (WA) Pty Ltd holds an Australian Financial Services Licence issued by the Australian Securities and Investment Commission for giving expert reports pursuant to the Listing rules of the ASX and the Corporations Act.

The persons specifically involved in preparing and reviewing this report were Sherif Andrawes and Adam Myers of BDO Corporate Finance (WA) Pty Ltd. They have significant experience in the preparation of independent expert reports, valuations and mergers and acquisitions advice across a wide range of industries in Australia and were supported by other BDO staff.

Sherif Andrawes is a Fellow of the Institute of Chartered Accountants in England & Wales and a Member of the Institute of Chartered Accountants in Australia. He has over twenty years experience working in the audit and corporate finance fields with BDO and its predecessor firms in London and Perth. He has been responsible for over 150 public company independent expert's reports under the Corporations Act or ASX Listing Rules. These experts' reports cover a wide range of industries in Australia. Sherif Andrawes is the Chairman of BDO in Western Australia.

Adam Myers is a member of the Australian Institute of Chartered Accountants. Adam's career spans 13 years in the Audit and Assurance and Corporate Finance areas. Adam has considerable experience in the preparation of independent expert reports and valuations in general for companies in a wide number of industry sectors.

18. Disclaimers and consents

This report has been prepared at the request of Abra for inclusion in the Target's Statement which will be sent to all Abra Shareholders. Abra engaged BDO Corporate Finance (WA) Pty Ltd to prepare an independent expert's report to consider whether or not the takeover offer from HNC to acquire all the Shares of Abra not already owned by HNC at A\$0.40 per Share ("the Offer") is fair and reasonable to the non associated shareholders of Abra.

A separate independent expert's report has been prepared by BDO at the request of the Abra directors to express an opinion as to whether or not the offer from HNC to acquire or enter into cancellation deed polls in respect of the 6,125,000 Abra Options to subscribe for Shares ("the Option Offer") is fair and reasonable to the Shareholders.

BDO Corporate Finance (WA) Pty Ltd hereby consents to this report accompanying the above Target's Statement. Apart from such use, neither the whole nor any part of this report, nor any reference thereto may be included in or with, or attached to any document, circular resolution, statement or letter without the prior written consent of BDO Corporate Finance (WA) Pty Ltd.

BDO Corporate Finance (WA) Pty Ltd takes no responsibility for the contents of the Target's Statement other than this report.

BDO Corporate Finance (WA) Pty Ltd has not independently verified the information and explanations supplied to us, nor has it conducted anything in the nature of an audit or review of Abra or HNC in accordance with standards issued by the Auditing and Assurance Standards Board. However, we have no reason to believe that any of the information or explanations so supplied are false or that material information has been withheld. It is not the role of BDO Corporate Finance (WA) Pty Ltd acting as an independent expert to perform any due diligence procedures on behalf of the Company. The Directors of the Company are responsible for conducting appropriate due diligence in relation to HNC. BDO Corporate

Finance (WA) Pty Ltd provides no warranty as to the adequacy, effectiveness or completeness of the due diligence process.

The opinion of BDO Corporate Finance (WA) Pty Ltd is based on the market, economic and other conditions prevailing at the date of this report. Such conditions can change significantly over short periods of time.

With respect to taxation implications it is recommended that individual Shareholders obtain their own taxation advice, in respect of the Offer, tailored to their own particular circumstances. Furthermore, the advice provided in this report does not constitute legal or taxation advice to the Shareholders of Abra, or any other party.

BDO Corporate Finance (WA) Pty Ltd has also considered and relied upon an independent specialist valuation prepared by Xstract for mineral assets held by Abra.

Xstract possess the appropriate qualifications and experience in the mineral and resources industry to make such assessments. The approaches adopted and assumptions made in arriving at their conclusions are appropriate for this report. We have received consents from Xstract for the use of the specialist's report in the preparation of this report.

The statements and opinions included in this report are given in good faith and in the belief that they are not false, misleading or incomplete.

The terms of this engagement are such that BDO Corporate Finance (WA) Pty Ltd has no obligation to update this report for events occurring subsequent to the date of this report.

Yours faithfully

BDO CORPORATE FINANCE (WA) PTY LTD

Sherif Andrawes



Director

Adam Myers



Associate Director

Authorised Representative

Appendix 1 – Glossary of Terms

Reference	Definition
The Act	The Corporations Act
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
BDO	BDO Corporate Finance (WA) Pty Ltd
Abra	Abra Mining Limited
The Company	Abra Mining Limited
DCF	Discounted Future Cash Flows
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortisation
FMD	Future Maintainable Dividends
FME	Future Maintainable Earnings
HNC	Hunan Nonferrous Metals Corporation
ROC	Return of Capital
NAV	Net Asset Value
The Offer	The offer from Hunan Nonferrous Metals Corp Limited to acquire all issued ordinary shares of Abra not already owned by HNC at A\$0.40 per share
The Option Offer	The offer from Hunan Nonferrous Metals Corp Limited to acquire or enter into cancellation deed polls in respect of the 6,125,000 options to subscribe for Shares
Our Report	This Independent Expert's Report prepared by BDO
VWAP	Volume Weighted Average Price
Shareholders	Shareholders of Abra not associated with HNC
RG111	Content of expert reports (March 2011)
RG112	Independence of experts (March 2011)

Appendix 2 – Valuation Methodologies

Methodologies commonly used for valuing assets and businesses are as follows:

1 *Net asset value (“NAV”)*

Asset based methods estimate the market value of an entity’s securities based on the realisable value of its identifiable net assets. Asset based methods include:

- Orderly realisation of assets method
- Liquidation of assets method
- Net assets on a going concern method

The orderly realisation of assets method estimates fair market value by determining the amount that would be distributed to entity holders, after payment of all liabilities including realisation costs and taxation charges that arise, assuming the entity is wound up in an orderly manner.

The liquidation method is similar to the orderly realisation of assets method except the liquidation method assumes the assets are sold in a shorter time frame. Since wind up or liquidation of the entity may not be contemplated, these methods in their strictest form may not be appropriate. The net assets on a going concern method estimates the market values of the net assets of an entity but does not take into account any realisation costs.

Net assets on a going concern basis are usually appropriate where the majority of assets consist of cash, passive investments or projects with a limited life. All assets and liabilities of the entity are valued at market value under this alternative and this combined market value forms the basis for the entity’s valuation.

Often the FME and DCF methodologies are used in valuing assets forming part of the overall Net assets on a going concern basis. This is particularly so for exploration and mining companies where investments are in finite life producing assets or prospective exploration areas.

These asset based methods ignore the possibility that the entity’s value could exceed the realisable value of its assets as they do not recognise the value of intangible assets such as management, intellectual property and goodwill. Asset based methods are appropriate when an entity is not making an adequate return on its assets, a significant proportion of the entity’s assets are liquid or for asset holding companies.

2 *Quoted Market Price Basis (“QMP”)*

A valuation approach that can be used in conjunction with (or as a replacement for) other valuation methods is the quoted market price of listed securities. Where there is a ready market for securities such as the ASX, through which shares are traded, recent prices at which shares are bought and sold can be taken as the market value per share. Such market value includes all factors and influences that impact upon the ASX. The use of ASX pricing is more relevant where a security displays regular high volume trading, creating a “deep” market in that security.

3 *Capitalisation of future maintainable earnings (“FME”)*

This method places a value on the business by estimating the likely FME, capitalised at an appropriate rate which reflects business outlook, business risk, investor expectations, future growth prospects and other entity specific factors. This approach relies on the availability and analysis of comparable market data.

The FME approach is the most commonly applied valuation technique and is particularly applicable to profitable businesses with relatively steady growth histories and forecasts, regular capital expenditure requirements and non-finite lives.

The FME used in the valuation can be based on net profit after tax or alternatives to this such as earnings before interest and tax ("EBIT") or earnings before interest, tax, depreciation and amortisation ("EBITDA"). The capitalisation rate or "earnings multiple" is adjusted to reflect which base is being used for FME.

4 Discounted future cash flows ("DCF")

The DCF methodology is based on the generally accepted theory that the value of an asset or business depends on its future net cash flows, discounted to their present value at an appropriate discount rate (often called the weighted average cost of capital). This discount rate represents an opportunity cost of capital reflecting the expected rate of return which investors can obtain from investments having equivalent risks.

Considerable judgement is required to estimate the future cash flows which must be able to be reliably estimated for a sufficiently long period to make this valuation methodology appropriate.

A terminal value for the asset or business is calculated at the end of the future cash flow period and this is also discounted to its present value using the appropriate discount rate.

DCF valuations are particularly applicable to businesses with limited lives, experiencing growth, that are in a start up phase, or experience irregular cash flows.

5 Market Based Assessment

The market based approach seeks to arrive at a value for a business by reference to comparable transactions involving the sale of similar businesses. This is based on the premise that companies with similar characteristics, such as operating in similar industries, command similar values. In performing this analysis it is important to acknowledge the differences between the comparable companies being analysed and the company that is being valued and then to reflect these differences in the valuation.

6 Multiple of Exploration Expenditure ("MEE")

The Past Expenditure method is a method of valuing exploration assets in the resources industry. It is applicable for areas which are at too early a stage of prospectivity to justify the use of alternative valuation methods such as DCF. The Past Expenditure method is often referred to as the Multiple of Exploration Expenditure method.

Past expenditure, or the amount spent on exploration of a tenement, is commonly used as a guide in determining value. The assumption is that well directed exploration adds value to a property. This is not always the case and exploration can also downgrade a property. The Prospectivity Enhancement Multiplier ("PEM") which is applied to the effective expenditure therefore commonly ranges from 0.5 to 3.0. The PEM generally falls within the following ranges:

- 0.5 to 1.0 where work to date or historic data justifies the next stage of exploration;
- to 2.0 where strong indications of potential for economic mineralisation have been identified; and
- to 3.0 where ore grade intersections or exposures indicative of economic resources are present.



Appendix 3 - Independent Specialist Valuation of Abra's Exploration Assets



Independent Valuation

Abra Mining Limited

Prepared for:
BDO Corporate Finance Pty Ltd
May 2011
FINAL

XtractGroup.com

Xtract - Excellence from the outset



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Xstract Mining Consultants Pty Ltd has prepared this report on behalf of BDO Corporate Finance Pty Ltd. Public disclosure, publication, or presentation of any information contained in this document must be accompanied by written consent from Xstract Mining Consultants Pty Ltd.

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Executive summary

At the request of BDO Corporate Finance (WA) Pty Ltd (BDO), Xstract Mining Consultants Pty Ltd (Xstract) has prepared an Independent Valuation Report on the mineral assets of Abra Mining Limited (Abra or the Company) for a proposed transaction. The purpose of this report is to provide an impartial overview and assessment of the technical merits that might reasonably be expected to be applied by the market when considering an investment in Abra. Xstract has reviewed Abra's mineral assets holistically, including:

- Project location, access and supporting infrastructure
- Geological setting
- Exploration/development/mining history
- Mineral Resource estimates
- Potential mining/processing scenarios
- Exploration/development strategy

Abra's mineral assets range from early stage to advanced exploration areas and host numerous targets ranging in maturity from conceptual to defined Indicated and Inferred Resources at the Abra Deposit. To date, the bulk of the company's exploration focus has been directed towards the advancement of the Abra base metal deposit and the identification of extensions to this deposit, as well as prospects offering potential for similar mineralisation in its adjacent tenements. To this end, the Company has completed scoping level assessments at the Abra Deposit and a number of targeting reviews at its Mulgul and Jillawarra Projects. Details of these are discussed elsewhere in this report.

Project overview

Abra has amassed over 1,570 km² across 32 tenements in the Peak Hill and East Murchison Mineral Fields in central Western Australia. Abra's mineral assets have been divided into four projects, namely the Mulgul, Jillawarra, Mount Deverell and Havelock Projects.

Mulgul Project (Abra 100%)

Mulgul, located some 185 km southwest of Newman, is Abra's most advanced project, and contains the polymetallic Abra lead-silver-(zinc)-copper-gold deposit. Drilling by Abra has identified an Indicated and Inferred Mineral Resource comprising:

- 93 million tonnes averaging 4.0% Pb and 10 g/t Ag in an upper lead domain, of which approximately 35% is classified as Indicated; and
- 14 million tonnes averaging 0.6% Cu and 0.5 g/t Au in a lower copper-gold domain, of which approximately 28% is classified as Indicated.

The Mineral Resource remains open to the east, west, and south.

The Company has conducted a number of high level, conceptual studies to evaluate the open pit and underground mining potential of the Abra Deposit. The results of these studies suggest that whilst bulk mining methods such as open pit mining and Sub Level Caving are technically feasible, further infill drilling, geological modelling, optimisation and mine design work is required to provide greater confidence in the assumed parameters and potentially improve project economics.

Jillawarra Project (Abra 90% to 100%)

The Jillawarra Project (including several joint venture tenements) immediately adjoins the Company's Mulgul Project to the west and is considered prospective for Abra style base metal mineralisation. Numerous base metal prospects and geophysical/geochemical anomalies have been outlined within the project area.

Based on the available datasets, the Company has currently identified 119 targets in the area, which have been further refined to 20 priority targets. The Woodlands, Quartzite Well, Copper Chert and Manganese Range are highly prospective anomalies, which have confirmed drilled mineralised intercepts. Xstract notes that the majority of these anomalies remain to be adequately assessed, with detailed geological mapping and sampling planned over the most prospective in order to define further potential drill targets.

Mount Deverell Project (Abra 100%)

The Mount Deverell Project is located 45 km southwest of the Abra Deposit and covers an area selected on the basis of geological similarity to the Abra Deposit. Based on a review of the available technical data, Xstract considers the prospectivity of the Mount Deverell project to be moderate, based on its similarities to the Abra Deposit. Four areas with anomalous lead values (up to 155 ppm lead) have been identified in soil geochemical sampling programmes associated with a coarse sandstone and pebble conglomerate sequence similar to that hosting the Abra Deposit.

Havelock Project (80% to 100%)

The Havelock Project (including three joint venture tenements) is located approximately 30 km west of Wiluna in central Western Australia and surrounds Ivernia Inc's Magellan open-pit lead mine. Because of this proximity, the Havelock Project is targeting lead mineralisation similar to that observed at Magellan. Based on its review of the available technical data, Xstract considers the Havelock Project to represent a conceptual exploration play with the prospectivity considered to be low to moderate. A potential lead deposit within the area is likely to be small and would most likely be suited to treatment at Ivernia's mining operation rather than justifying a stand-alone operation.

Valuation

Xstract has used a variety of valuation methodologies to derive a preferred value and range for Abra's mineral assets. On this basis, Xstract has used both market and cost based approaches to arrive at its preferred value of A\$50.06 M within a range of A\$35.58 M to A\$64.44 M for Abra's mineral assets. Xstract's valuation is summarised in Table 1.

Table 1: Valuation summary – attributable to Abra

Project	Aspect	Values (A\$ M)		
		Low	High	Preferred
Abra Deposit	Mineral Resource	32.26	58.06	45.16
Mulgul Project	Exploration potential	1.07	1.7	1.33
Jillawarra Project	Exploration potential	1.80	4.00	3.00
Mount Deverell Project	Exploration potential	0.23	0.34	0.29
Havelock Project	Exploration potential	0.22	0.34	0.28
	Total	35.58	64.44	50.06

*Any discrepancies between tables is due to rounding.

Contents

Executive summary	i
1 Introduction	1
1.1 Background	2
1.2 Terms of reference	2
1.3 Reporting standard	3
1.4 Data sources	3
2 Technical summary	4
2.1 Tenure considerations	4
2.2 Agreements	6
2.3 Overview of the South Bangemall Projects	6
2.4 Mulgul Project	10
2.5 Mineral Resource	13
2.6 Mining, metallurgical and processing considerations	17
2.7 Xstract's recommendations	20
2.8 Exploration potential	22
2.9 Jillawarra Project	24
2.10 Mount Deverell Project	27
2.11 Havelock Project	27
3 Valuation	31
3.1 Valuation considerations	31
3.2 Income based approach	32
3.3 Market based approach	32
3.4 Cost-based approach	34
3.5 Xstract's technique	36
3.6 Abra Mineral Resource valuation	36
3.7 Exploration potential valuation	41
3.8 Other considerations	44
3.9 Valuation summary	44
4 Declaration	46
4.1 Independence	46
4.2 Qualifications	46
4.3 Competent person statement	47
4.4 Warranties and indemnities	48
4.5 Consent	48
5 Bibliography	49

Tables

Table 2.1: Tenement details	5
Table 2.2: Abra exploration drilling campaigns	13
Table 2.3: Summary of previous resource estimates	13
Table 2.4: Abra 2008 published Mineral Resource	15
Table 2.5: Selected drillhole intervals from within the Jillawarra area	25
Table 2.6: Genetic model for non-sulphide base metal deposits	30
Table 3.1: Mineral asset classification	31
Table 3.2: Valuation approaches for different types of mineral assets	32
Table 3.3: Base metal deposit transactions considered similar to the Abra deposit	37
Table 3.4: Implied metrics from resource transaction data	38
Table 3.5: Market-based valuation summary of the Abra Mineral Resource	38
Table 3.6: Expected value of a 100% interest in the Abra Deposit's Mineral Resource	39
Table 3.7: Abra Mineral Resource valuation summary	41
Table 3.8: Implied metrics from exploration transaction data	42
Table 3.9: Market based valuation of the exploration potential of Abra's projects	42
Table 3.10: Attributable historic and forecast expenditures for Abra's other projects	43
Table 3.11: Estimated Replacement Value for Abra's Projects (excluding Abra deposit)	43
Table 3.12: Exploration valuation summary	44
Table 3.13: Valuation summary – attributable to Abra	45

Figures

Figure 1.1: Location of Abra's projects	1
Figure 2.1: Tenement location map	4
Figure 2.2: The regional setting of the Company's mineral assets	7
Figure 2.3: Regional structural setting	8
Figure 2.4: Representative cross section of the Abra Deposit	10
Figure 2.5: Surface rock chip sampling over total magnetic intensity image (Mulgul Project)	11
Figure 2.6: Isometric view showing inverted chargeability sections	12
Figure 2.7: Abra Deposit drillhole locations and current resource boundary	14
Figure 2.8: Mineral domains of the Abra Deposit	14
Figure 2.9: Lead grade – tonnage curve for the Abra Deposit	19
Figure 2.10: Proposed concentrate pipeline	22
Figure 2.15: M1 Fault and Abra West geochemical target	23
Figure 2.12: Mulgul targets over total carbonate in groundwater	24
Figure 2.13. Significant drilling results in the Jillawarra area	26

Figure 2.14: Top 20 prioritised targets	26
Figure 2.15: Mount Deverell NITON [®] geochemistry results	27
Figure 2.16: Geochemical anomalies within the Havelock Project	28
Figure 2.17: Stratigraphy of the Yerrida Basin, which underlies the Havelock Project	29
Figure 3.1: Vendor and acquirer considerations in the replacement valuation process	36
Figure 3.2: Lead price versus the ASX All Ordinaries Index from January 2007 to April 2011	37

Appendices

- Appendix A Resource Transactions
- Appendix B Exploration Transactions

Glossary

%	Percent, percentage
°	Degrees
°C	Degrees Celsius
A\$	Currency, Australian dollar
AIG	Australian Institute of Geoscientists
Alluvial	Sediment deposited by flowing water, as in a riverbed, flood plain or delta.
Abra or the Company	Abra Mining Limited
Amoco	Amoco Minerals Australia Company
Amphibolites facies	Mineral classification of metamorphic rocks formed under conditions of moderate to high temperatures
Anticline/anticlinal	An upward fold in which strata dip away from one another forming an inverted U
Archaean	A geological time period ranging from 3,800 to 2,500 million years ago
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
Au	Gold
AusIMM	Australasian Institute of Mining and Metallurgy
BDO	BDO Corporate Finance (WA) Pty Ltd
Breccia	A rock composed of angular fragments of minerals or rocks in a matrix (cementing material)
Carbonate	Mineral containing calcium and/or magnesium carbonate
Chert	A crystalline siliceous rock usually of sedimentary origin
CIMVAL	Canadian 2003 Edition of the Standards and Guidelines for Valuation of Mineral Properties
Clastic	Sediments derived from erosion of pre-existing rocks
Company	Abra Mining Limited
Conglomerate	Coarse grained sedimentary rock
Craton	A stable portion of the continental crust
DCF	Discounted cash flow
EL	Exploration licence
EM	Electromagnetic
ESS	electronic single shot
EV	Expected values
g/t	Grams per tonne
Galena	A lead sulphide mineral (PbS)
Geopeko	Geopeko Limited, later North Limited
Gneiss	A rock formed by high-grade regional metamorphic processes from pre-existing formations that were originally either igneous or sedimentary rocks
GPS	Geographic positioning system
Granite or granitoid	An intrusive, felsic, igneous rock generally with a medium to coarse grained texture

Greenfields exploration	Early stage exploration
Greenstone Belt	Volcanic sequence of rocks with associated sedimentary rocks that occur within Archaean and Proterozoic cratons between granite and gneiss bodies
Hangingwall	The mass of rock above a geological structure, deposit, vein or fault
HNC	Hunan Nonferrous Metals Corporation Limited
HNG	Hunan Nonferrous Metals Holdings Group Co.
IER	Independent Experts Report
Indicated Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, and quality can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Mineral Resource	That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or uncertain quality and reliability.
Intrusive	A body of igneous rock formed from a magma which has been emplaced into other rocks
IOCG	Iron oxide copper-gold
IP	Induced polarisation
Ivernia	Ivernia Inc
JJAC	Jidi Jidi Aboriginal Corporation
JJV	Jillawarra Joint Venture
JORC Code	2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
km	Kilometre(s)
km ²	Square kilometre(s)
Laterite	Residual material overlying rock types from which it was derived and out of which silica and aluminium has been leached. Typically iron-rich
Lens(es)	A body of ore or geological feature that is thick in the middle and tapers towards the ends like a convex lens
Lineament	A linear feature, generally recognisable in topography, of regional extent.
Lode	A vein or other tabular mineral deposit with distinct boundaries
m	Metre(s)
M	Million
m ³	Cubic metre(s)
Ma	Million years
Mafic	Igneous rocks composed dominantly of iron and magnesium minerals
MEE	Multiples of exploration expenditure
Mineral Resource	A concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects

	for eventual economic extraction
ML	Mining lease
Mt	Million tonne(s)
Nodular	Small ball-like rock particles
Oldcity	Oldcity Nominees Pty Ltd
Ordinary kriging	A geostatistical method of interpolation which predicts unknown values from data observed at known locations and is used to determine Ore Reserves and Mineral Resources
Orogen	Primary mechanism by which mountains are built on continents
oz	Ounce(s)
Perilya	Perilya Ltd
PL	Prospecting licence
Proterozoic	A geological time period from 2,500 to 542 million years ago
QA	Quality Assurance
QC	Quality Control
Quartzite	A metamorphic rock consisting of essentially quartz
RAB	Rotary air-blast
RC	Reverse circulation
RCG	Renison Goldfields Consolidated Limited
SAMVAL	The South African Code for the Reporting of Mineral Asset Valuation (2008)
Schist	Fine grained, laminated metamorphic rock
SEDEX	Sedimentary exhalative base metal deposit
Sedimentary	Rocks formed by deposition of weathered rock particles carried by air, water or ice
Shear	A zone in which shearing has occurred on a large scale
Silicified	Original minerals have been replaced by silica
Sphalerite	A zinc sulphide mineral (ZnS)
Stockwork	A three-dimensional vein network
Stope	The underground excavation within the deposit where the main production takes place
Stratigraphic	Pertaining to the composition, sequence and correlation of layered rocks
Sub Level Caving	A stoping method in which relatively thin blocks of ore are caused to cave by successively undermining small panels.
t	Metric tonne(s)
Ultramafic	Igneous rocks composed of ferromagnesian minerals
VALMIN Code	The VALMIN Code sets standards for the preparing of Independent Expert Reports for the assessment and/or valuation of mineral or petroleum assets or securities
Xstract	Xstract Mining Consultants Pty Ltd

1 Introduction

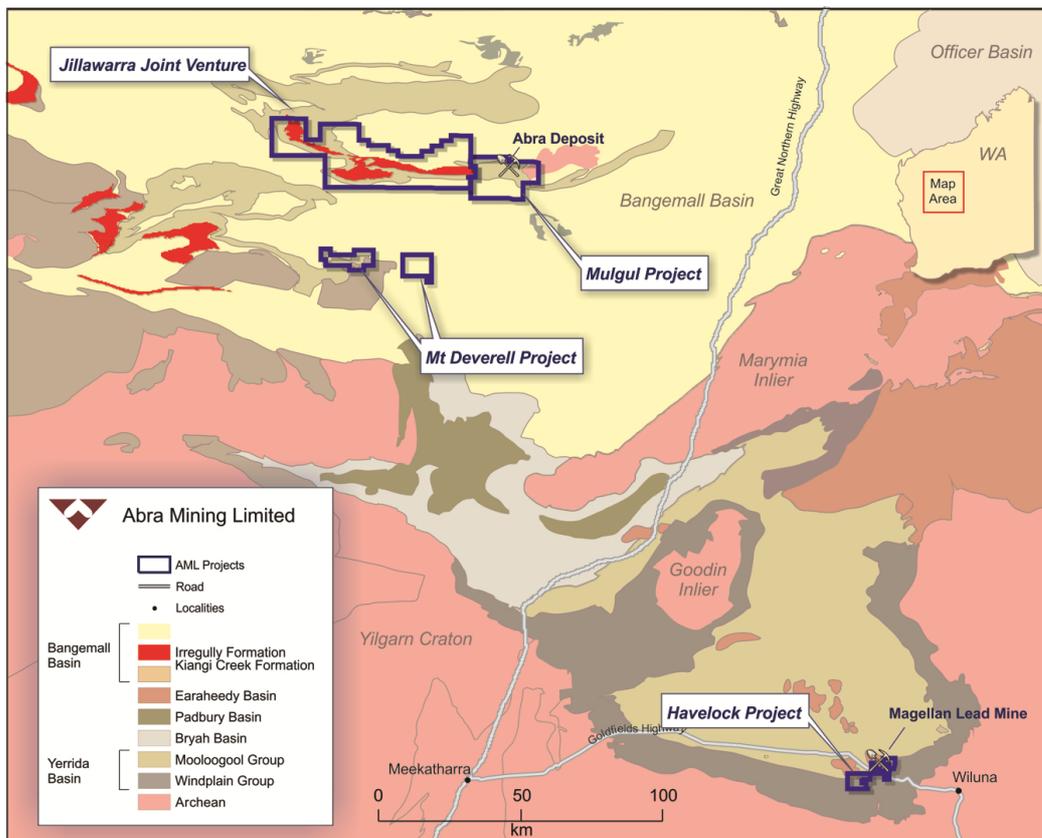
Xstract Mining Consultants Pty Ltd (Xstract) has prepared an Independent Valuation Report on the mineral assets of Abra Mining Limited (Abra or the Company), on the request of BDO Corporate Finance (WA) Pty Ltd (BDO). Xstract understands that this report will be included as an appendix to BDO's Independent Experts' Reports (IERs) relating to a proposed transaction involving Abra's mineral assets.

The mineral assets considered in this report reside in central Western Australia and comprise:

- **Mulgul Project:** A 100% interest in three Exploration Licences (EL), three Prospecting Licences (PL), a Mining Lease (ML) and two infrastructure leases
- **Jillawarra Project:** A 90% interest in four ELs and a 100% interest in 12 PLs
- **Mount Deverell Project:** A 100% interest in two ELs
- **Havelock Project:** A 100% interest in an EL and PL and an 80% interest in an EL and two PLs

The Mulgul, Jillawarra, and Mount Deverell Projects are collectively known as the South Bangemall Projects, and are located between 170 to 230 km north of the regional township of Meekatharra in central Western Australia (Figure 1.1). The Mulgul and Jillawarra Project tenements are contiguous and extend over a combined east-west distance of approximately 100 km. The Mount Deverell Project lies approximately 25 km to the south of the southern boundary to the Jillawarra tenements.

Figure 1.1: Location of Abra's projects



The Mulgul Project contains the *Abra Deposit*, a lead-silver-zinc-copper-gold deposit, which has undergone scoping level studies and has a reported Mineral Resource in accordance to the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

The Havelock Project is located 35 km northwest of Wiluna and approximately 250 km southeast of the Abra Deposit. The project lies adjacent to Ivernia Inc's Magellan lead mine, which was recently placed on care and maintenance.

1.1 Background

Abra is an Australian mineral exploration company, which was incorporated in 2004 and listed on the Australian Securities Exchange in April 2005. The Company's objective is to explore and develop the Abra Deposit and the surrounding landholdings. Since listing, the Company has expanded its tenement holdings, such that it now holds title to or is earning interests in tenements with an area of more than 1,570 km².

In December 2007, Abra proposed a joint venture, pursuant to a Letter of Intent, with Hunan Nonferrous Metals Holdings Group Co., Ltd (HNG) over M52/776, which covers the Abra Deposit. It was subsequently determined that Hunan Nonferrous Metals Corporation Limited (HNC), rather than HNG, would adopt any joint venture obligations and benefits, however the joint venture did not eventuate.

On 13 May 2008, HNC announced that it intended to make a proportional takeover offer for 70% of the shares in Abra, which HNC did not own. Under the Offer, HNC offered A\$0.83 cash per Abra share for 7 of every 10 Abra shares not held by HNC. Following the closure of the offer in September 2008, HNC held 74.28% of Abra. HNC currently holds 73.91% of Abra.

In March 2011, HNC offered to acquire all issued ordinary shares of Abra not already owned by HNC for A\$0.40 per share, with a concurrent offer to acquire all outstanding options at prices determined by the Black and Scholes option pricing model.

1.2 Terms of reference

This technical assessment and valuation report was prepared at BDO's request and is to be included as an appendix to an IER prepared by BDO for inclusion in Abra's targets statements in relation to the HNC takeover offers. Specifically, Xstract was requested to provide an independent opinion on the market valuation of Abra's exploration assets in Western Australia. In completing our mandate we have provided a brief technical overview of the development and exploration assets including:

- the associated mineral licenses
- the geological setting and exploration potential of the projects including an overview of previous resource estimates
- progress and status of exploration projects
- the market value of the South Bangemall and Havelock Projects.

The conclusions expressed in this valuation report have an effective date of 29 April 2011. The valuation is only appropriate for this date and may change in time in response to variations in economic, market, legal, or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in Australian dollars (A\$) unless otherwise stated.

1.3 Reporting standard

This report has been prepared in accordance with:

- the 2005 edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports (the VALMIN Code)
- the JORC Code.

For the purposes of this report, *value* is defined as 'fair market value'. Xstract has endeavoured to assess what a willing buyer and willing seller might agree on in the context of an open and arm's length transaction.

1.4 Data sources

Xstract has based its valuation of these mineral assets on:

- a site visit from 9 to 11 April 2011
- discussions with key company personnel
- a review of technical documents supplied by Abra
- public domain information.

In the execution of its mandate, Xstract has reviewed all relevant technical and corporate information made available by Abra's management. Such information has been accepted by Xstract as being true, accurate, and complete, having made due enquiry.

Xstract has validated information provided by Abra via the Western Australian Government Department of Mines and Petroleum. However, Xstract is not qualified to express legal opinion and has not sought any independent legal advice on the ownership rights and obligations relating to the respective mineral assets under licence, or any other fiscal or legal agreements that Abra may have with any third party.

A draft version of this valuation report was provided to Abra's directors for comment in respect of omission and factual accuracy. Abra has warranted that all material information in its possession has been fully disclosed to Xstract and has agreed to indemnify Xstract from any liability arising from its reliance upon information provided or information not provided.

Xstract conducted a site visit to the Abra Deposit between the 9 to 11 April 2011. None of the other South Bangemall Projects or the Havelock Project was inspected. Xstract is familiar with the project geology and mineralisation of these areas, having previously completed a number of technical reviews and valuations of other third party held assets in the surrounding region. Xstract understands that there have been no material developments on these projects on which to form an opinion over and above that presented in the technical information provided or as available from public sources.

2 Technical summary

2.1 Tenure considerations

As at the 29 April 2011, being the effective date of this valuation, Abra held the tenements as outlined in Table 2.1. The tenements are presented in Figure 2.1.

Figure 2.1: Tenement location map

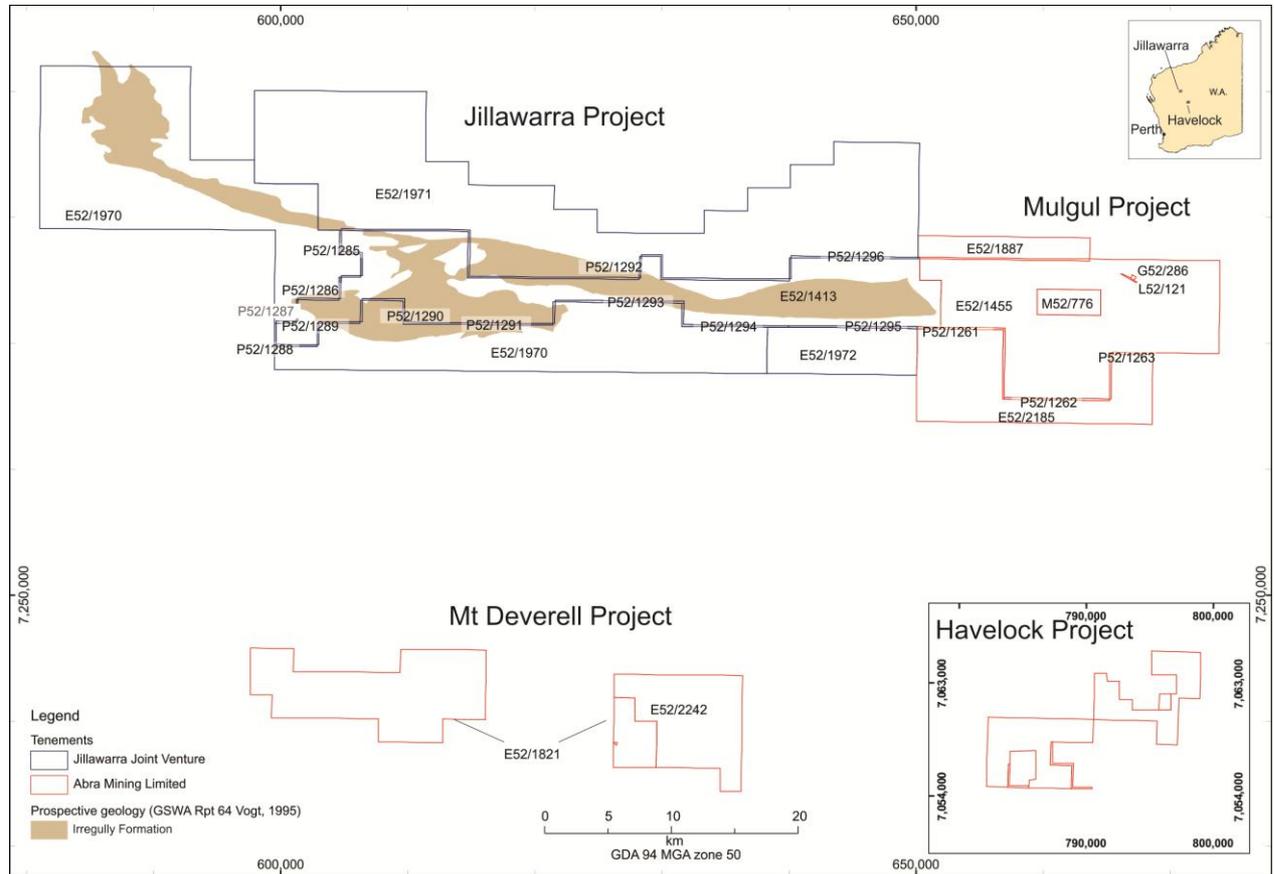


Table 2.1: Tenement details

Project	Tenement	Registered Holders	Abra's Interest	Grant Date	Expiry	Area (km ²)
Mulgul	L52/121	Abra	100%	27-May-10	26-May-31	0.1
	G52/286	Abra	100%	19-Apr-10	18-Apr-31	0.1
	M52/776	Abra	100%	22-Dec-00	21-Dec-21	10
	P52/1261	Abra	100%	14-Jan-09	13-Jan-13	1.8
	P52/1262	Abra	100%	14-Jan-09	13-Jan-13	1.2
	P52/1263	Abra	100%	14-Jan-09	13-Jan-13	0.5
	E52/1455	Abra	100%	20-Apr-00	19-Apr-11*	176.9
	E52/1887	Abra	100%	4-Jan-06	3-Jan-13	24.9
	E52/2185	Abra	100%	4-Jun-08	3-Jun-13	84.0
	Jillawarra	P52/1285	Abra	100%	14-Jan-09	13-Jan-13
P52/1286		Abra	100%	14-Jan-09	13-Jan-13	0.2
P52/1287		Abra	100%	7-Nov-08	6-Nov-12	0.2
P52/1288		Abra	100%	7-Nov-08	6-Nov-12	0.7
P52/1289		Abra	100%	7-Nov-08	6-Nov-12	0.5
P52/1290		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1291		Abra	100%	7-Nov-08	6-Nov-12	1
P52/1292		Abra	100%	7-Nov-08	6-Nov-12	0.2
P52/1293		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1294		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1295		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1296		Abra	100%	7-Nov-08	6-Nov-12	0.2
E52/1413		Abra / Apex	90%	13-Dec-01	12-Dec-11	218
E52/1970		Abra / Apex	90%	10-Oct-06	9-Oct-11	395.5
E52/1971		Abra / Apex	90%	10-Oct-06	9-Oct-11	377.0
E52/1972		Abra / Apex	90%	10-Oct-06	9-Oct-11	43.6
Mount Deverell		E52/1821	Abra	100%	5-Apr-05	4-Apr-13
	E52/2242	Abra	100%	6-Nov-08	5-Nov-13	62.1
Havelock	E53/1130	Abra	100%	20-Jul-05	19-Jul-11	25.9
	E53/1260	Abra / Sammy	80%	21-Mar-07	20-Mar-12	31
	P53/1490	Abra / Cazaly	80%	23-Jul-08	22-Jul-12	0.5
	P53/1492	Abra / Cazaly	80%	23-Jul-08	22-Jul-12	1.0
	P53/1514	Abra	100%	16-Jul-10	15-Jul_14	1.2
Total						1,573.5

Abra = Abra Mining Limited; Apex = Apex Minerals NL; Cazaly = Cazaly Iron Pty Ltd; Sammy = Sammy Resources Pty Ltd
 *Xstract has been informed by Abra that a renewal for E52/1455 has been lodged with the Western Australian Department of Mines and Petroleum.

2.2 Agreements

Exploration activities within all of the tenements comprising the South Bangemall Projects are subject to a Heritage Agreement between Abra and the Jidi Jidi Aboriginal Corporation (JJAC), the latter as representatives for the Nharnuwangga Wajarri Ngarlawangga as Native Title claimants under the (WA) *Aboriginal Heritage Act 1972*. The Agreement was signed on 21 September 2005.

Within the Mulgul Project, M52/776 and E52/1455 are subject to a net smelter royalty payable on any mineral production from these tenements, at a rate yet to be determined.

2.3 Overview of the South Bangemall Projects

Introduction

Abra's South Bangemall Projects lie within the Peak Hill Mineral Field in central Western Australia, some 200 km north of the town of Meekatharra. The projects are covered by the Collier (SG50-4), Mt Egerton (SG50-3), Robinson Range (SG50-7), and Peak Hill (SG50-8) 1:250,000 map sheets and the Mulgul, Calyie, Mount Egerton, Milgun, Mount Vernon, Teano, and Candolle 1:100,000 map sheets.

Access to the area is from the sealed Great Northern Highway and the graded Meekatharra – Mount Augustus – Carnarvon Road. Various station tracks and exploration grids and tracks provide acceptable access throughout the region.

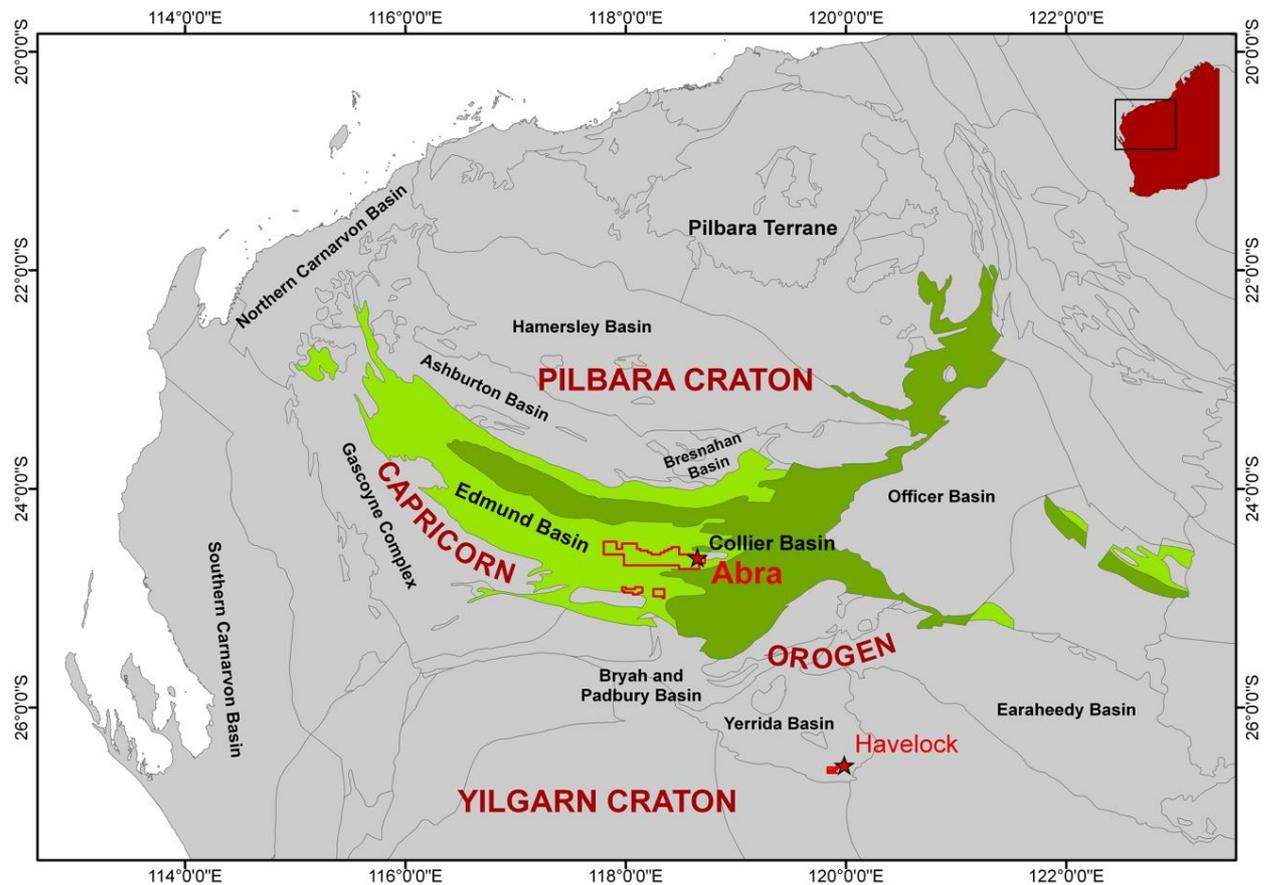
The area is reasonably rugged, being characterised by prominent east trending ridges and scarps. Numerous ephemeral creeks form a dendritic drainage pattern with a few larger creeks in broad colluvial-filled valleys forming part of the Gascoyne and Ashburton River drainages. Streams only flow after heavy rains, although pools are present for most of the year.

The climate is arid to semi-arid with an unreliable and low mean annual rainfall of 200 to 250 mm. The area experiences very hot summers, with average January maximum temperatures between 35° and 40°Celsius. Winters are mild with an average July maximum of 20°Celsius.

Cattle grazing and mineral exploration comprise the main land use in the region. The Company's tenements lie within or are adjacent to the main pastoral stations of Mulgul, Woodlands, Tangadee, and Waldburg.

Geological setting

The Company's South Bangemall Projects are located within the Mesoproterozoic Edmund Basin (formerly known as the Bangemall Basin), one of a series of overlapping sedimentary basins occurring between the Archaean-aged Yilgarn and Pilbara Cratons of Western Australia. The Edmund Basin unconformably overlies the Ashburton and Bresnahan Basins to the north, the Gascoyne Complex to the west and southwest, and the Bryah, Padbury and Earahedy Basins to the south and southeast (Figure 2.2). The Edmund Basin is unconformably overlain by the Officer Basin to the east. The Edmund Basin developed between approximately 1,640 and 1,000 million years ago (Ma), during the Capricorn Orogen.

Figure 2.2: The regional setting of the Company's mineral assets

Within the central Edmund Basin, the Jillawarra Sub-basin is preserved as a 65 km long and 10 km wide sedimentary belt, which has been folded about the Coolina Anticline. The basement is exposed as schist and granitoid in the cores of the Woodlands and Coobarra Domes. From the base upwards, the major stratigraphic units of the Sub-basin comprise the Coobarra Granite, Gap Well Formation, West Creek Formation and overlying Jillawarra Formation, Discovery Chert and Devil Creek Formation. The Gap Well and West Creek Formations represent correlates of the Irregully and Kiangi Creek Formations respectively at the base of the Bangemall Supergroup (Figure 2.3).

These stratigraphic units are described below.

2.3.1 Coobarra Granite

The Coobarra Granite has been dated at 1.78 billion years old and represents basement to the Bangemall Supergroup. It varies from a fine to coarse grained leuco-adamellite to biotite granite, and in places is sheared to a consistent gneissic texture.

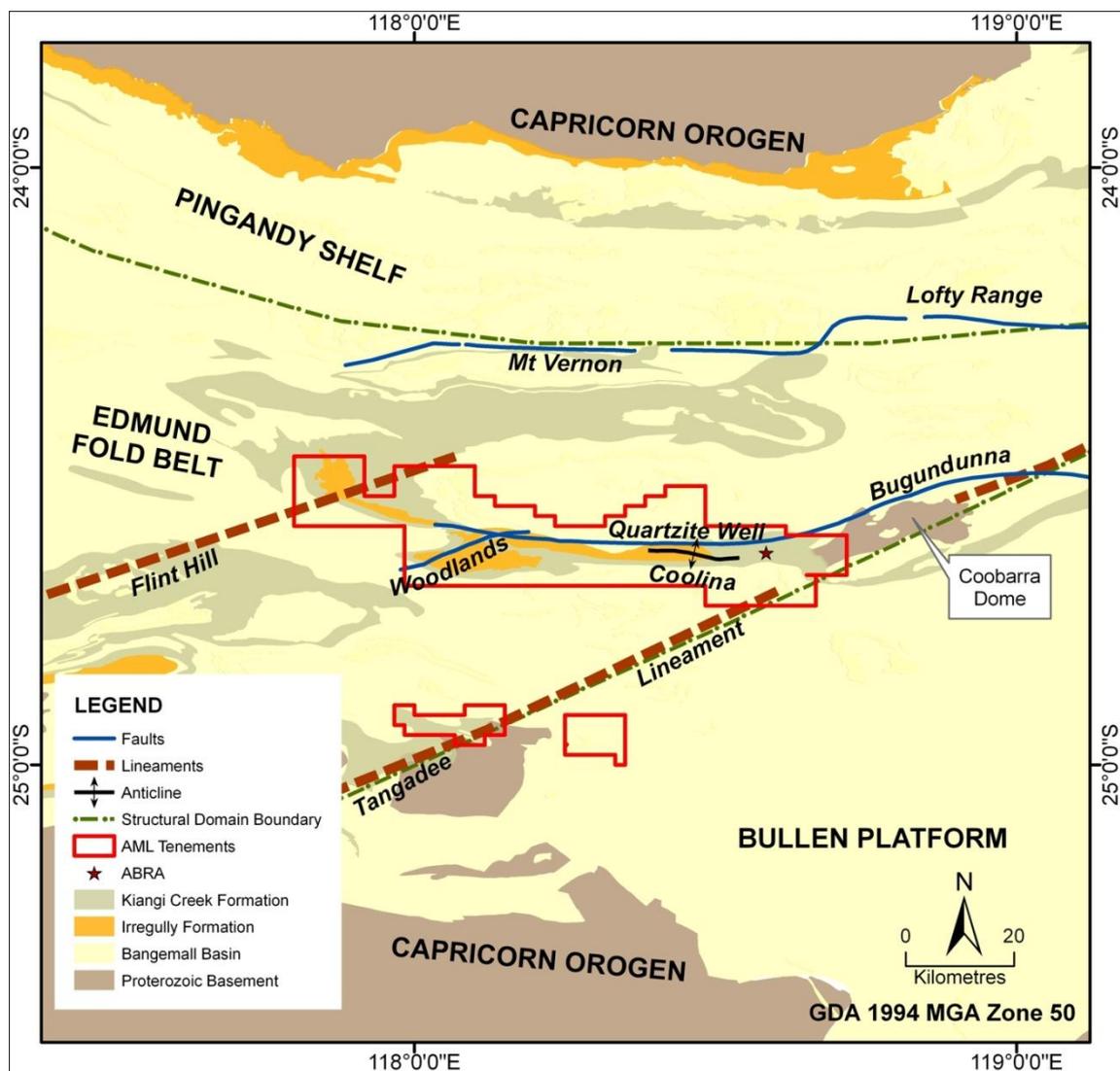
2.3.2 Gap Well Formation

The Gap Well Formation consists of a variably dolomitic siltstone-shale sequence with lesser quartz sandstones and massive dolomites, which were deposited in a lagoonal to shallow marine environment.

The Gap Well Formation is broadly divided into six units, designated GW1 to 6. The lower units, GW1 to 4, are arenaceous, and upper GW5 and 6 units contain carbonate units. GW5 and 6 represent the main mineralised horizons at the Abra Deposit. The Abra Deposit's

mineralised horizon is hosted by sericitic mudstone with chlorite, biotite and detrital quartz, and laminated dolomitic siltstone with micritic dolomite and sparite.

Figure 2.3: Regional structural setting



2.3.3 West Creek Formation

The West Creek Formation consists of a siliclastic sequence of fine to coarse-grained quartz sandstones and wackes with interbedded siltstones, quartzites, minor conglomerates and minor dolomites. Along the southern side of the belt, where the West Creek Formation dips uniformly to the south, the sequence is about 1,300 m thick.

2.3.4 Jillawarra Formation

The Jillawarra Formation is composed of laminated siliceous shale with minor siltstone, fine grained arenite and dolomitic siltstone. The Jillawarra Formation is interpreted as a deeper water marine platform shale sequence. The sequence is intruded in places by dolerite sills, and is moderately folded, particularly along the southeastern margin of the belt.

2.3.5 Discovery Chert

This is a marker horizon within the western part of the Edmund Basin. It consists of grey, black or cream coloured chert and associated shales. In the Jillawarra region, the horizon is a locus for dolerite intrusive sills. The amount of dolerite intrusion and the gradational contact with the Jillawarra Formation makes thickness measurement difficult. Within the Jillawarra area, the Discovery Chert is usually between 100 and 200 m thick.

2.3.6 Devils Creek Formation

The Devils Creek Formation comprises a sequence of laminated dolomitic shales and dolomites of unknown thickness.

Exploration and mining history

The southern Bangemall region has been subject to two major phases of historic exploration. The initial phase (1976 to 1989) of exploration was initiated by Amoco Minerals Australia Company (Amoco), predominantly in areas of exposed prospective host units, and comprised geochemical and geophysical prospecting in areas where the “prospective” Irregully Formation was exposed. Exploration during this period focused on sedimentary exhalative base metal deposit models (SEDEX) based on Mount Isa style mineralisation.

The discovery of the Olympic Dam iron oxide copper-gold (IOCG) deposit in the mid-1970s resulted in a change of exploration focus from stratigraphic lead-zinc-silver targets to regional magnetic geophysical anomalies, which were prospective for copper-gold-uranium mineralisation. As a result, during the 1980s exploration focus changed towards the detection and initial testing of magnetic geophysical anomalies followed by detailed geochemical and geophysical assessment. This led to the discovery of the Abra base metal deposit in 1981 when Geopeko Limited, in joint venture with Amoco, targeted a single diamond drillhole (AB3) into a discrete magnetic anomaly within the eastern, buried portion of the basin. AB3 penetrated approximately 270 m of barren cover sediment before intersecting a sequence of stratabound chlorite-iron oxide-barite altered rocks. Mineralisation included 27 m averaging 6.1% Pb from a downhole depth of 268 m, 194 m averaging 3.1% Pb from 318 m and 19 m averaging 3.68 g/t Au and 1.1% Cu from 503 m.

While exploration continued at the Abra Deposit and within the Jillawarra Sub-basin between 1981 and 1989, a further 13 drillholes were successfully completed at the Abra Deposit, all intersecting a similar sequence of altered and mineralised rocks. During the late 1980s, base metal exploration within the region waned in favour of the gold boom.

A second phase of exploration during the 1990s was dominated by IOCG targets and largely ignored the potential for lead-zinc-silver mineralisation associated with SEDEX models. IOCG exploration activities included regional airborne magnetic, electromagnetic (EM) and gravity geophysical exploration targeting coincident magnetic and gravity geophysical anomalies. Importantly, a few explorers with large landholdings dominated this period.

In 1995, Renison Goldfields Corporation (RGC) joint ventured into the project, then held 100% by North Limited (formerly Geopeko), and completed a single drillhole at the Abra Deposit. AB22A was drilled to the south, the opposite direction to all previous drilling, and intersected a sequence of chlorite-altered sediment largely in the footwall to the lead mineralisation. In 1999, both North Limited and RGC became subject to takeovers and the deposit was relinquished.

Oldcity Nominees Pty Ltd (Oldcity) acquired the project in 2000, acquired much of the existing data and completed in-fill gravity surveying to better define the recognised association of the Abra Deposit with a gravity anomaly. In 2005, the project was acquired by

Abra after its listing on the ASX, and subsequently another 34 drillholes have been completed.

2.4 Mulgul Project

Abra's 100% owned Mulgul Project lies at the eastern end of the Jillarwarra Sub-basin and covers a total area of 299.3 km². The Abra deposit lies within the Mulgul Project.

2.4.1 Local geology and mineralisation

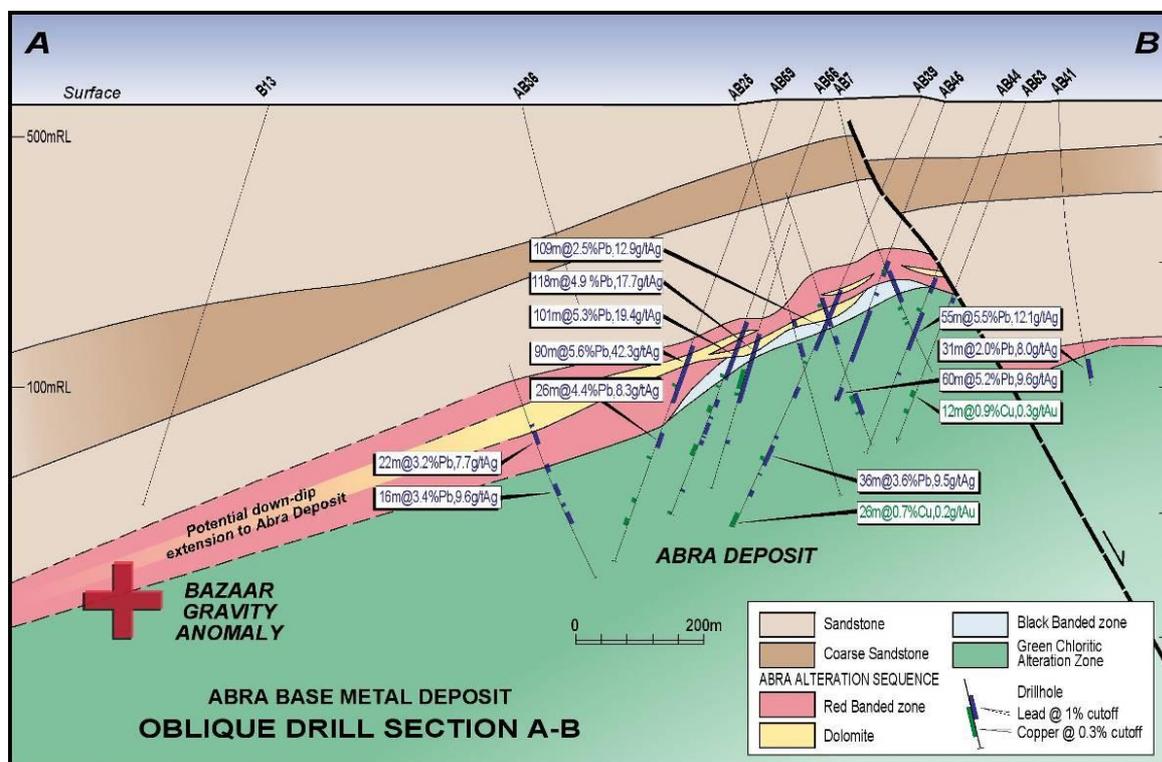
The Abra Deposit is a blind, sedimentary-hosted polymetallic deposit lying at a depth of 200 to 350 m below surface. The deposit is characterised by a funnel shaped brecciated zone, interpreted as a breccia feeder pipe, overlain by stratabound mineralisation (Pirajno et al, 2009).

The deposit is hosted within the Mesoproterozoic Edmund Sub-group, which is the lowest part of the Bangemall Supergroup. The host sequence comprises a lower sequence of dolomite, chert, sandstone, and mudstone and an upper sequence of black shales, mudstones and siltstones. The Edmund Sub-group is overlain by sediments of the Collier Sub-group: shale, siltstone, intercalated carbonates, glauconitic sandstone, turbidites, conglomerates, and chert. Numerous tholeiitic dolerite sills intrude both Sub-groups. This sequence trends eastwest and dips at 10° to 30° south (see Figure 2.4).

The Abra Deposit consists of disseminated and vein hosted galena, chalcopyrite, (and sphalerite) mineralisation. The deposit occurs within a banded, massive, and brecciated, silica-barite-hematite-magnetite-dolomite sequence and an underlying chlorite altered hydrothermal breccia.

In addition to the Abra Deposit, previous drilling programmes have revealed several similar base metal prospects to the west (i.e. Hyperion) and east (i.e. Genie) along an easterly trend.

Figure 2.4: Representative cross section of the Abra Deposit



2.4.2 Exploration history

The area covered by Abra's current Mulgul Project has been held by various owners since the mid-1970s including:

- Amoco
- Geopeko, which became part of North Limited
- RGC
- Oldcity.

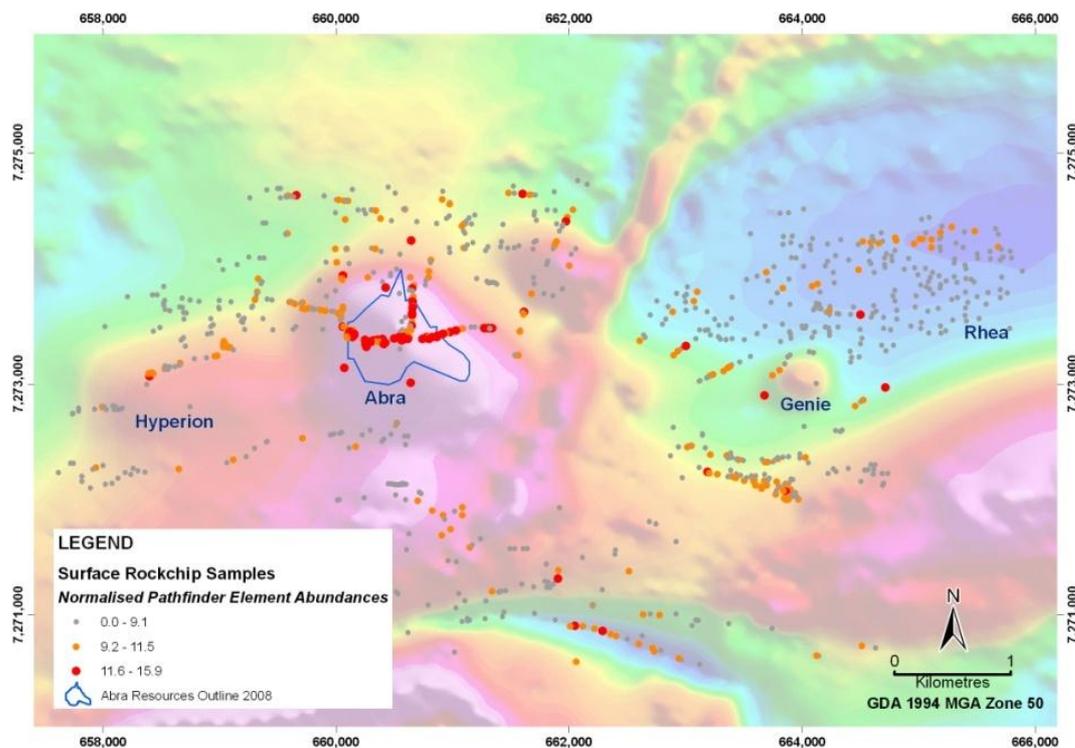
Abra acquired the Mulgul Project tenements from Oldcity in 2005, following its listing on the ASX.

Amoco initiated base metal exploration within the Jillawarra Sub-basin in 1976. Diamond drilling of a discrete magnetic geophysical anomaly within the eastern, buried portion of the basin encountered broad zones of lead-silver and copper-gold mineralisation from a downhole depth of 268 m. Subsequent drilling has confirmed and demonstrated the continuity of the altered and mineralised sequence at the Abra Deposit, as well as outlining various zones of similar but less intense alteration and base metal mineralisation to the east and west of the Abra Deposit.

Since 2005, the Company has completed the following exploration work within its Mulgul Project area:

- a target review and generation exercise on the central part of the Mulgul Project covering an area of 13.6 km east-west by 6 km north-south surrounding the Abra Deposit.
- detailed geological mapping of the Abra Deposit and adjacent areas in conjunction with various rock chip and surface vein geochemical sampling programmes (Figure 2.5).

Figure 2.5: Surface rock chip sampling over total magnetic intensity image (Mulgul Project)

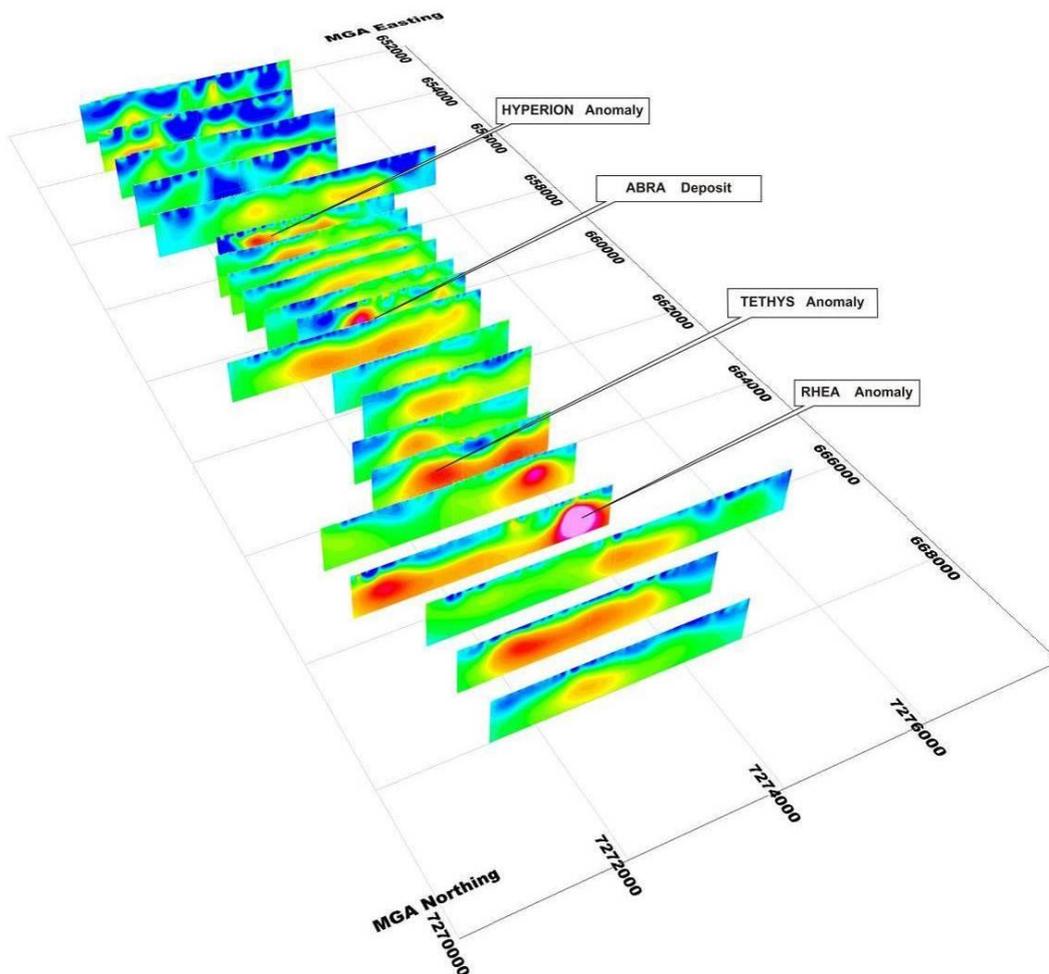


Source: Abra

- Regional gravity coverage over the project area at 200 m by 400 m spacing and acquired additional in-fill gravity at 50 m spacing within the area of the Abra and Genie prospects.
- A wide spaced (800 m) Induced Polarisation (IP) geophysical survey over 7 km of strike centred on the Abra Deposit (Figure 2.6) with subsequent infill over the Rhea and Hyperion prospects.
- Diamond drilling at:
 - the Abra Deposit.
 - the Bazaar Prospect, a prominent east-west trending gravity anomaly located approximately 750 m south of the Abra Deposit. Two holes failed to penetrate the cover sequence.
 - the Hyperion IP anomaly, where broad zones of stratabound lead-silver mineralisation comprising 21.15 m averaging 4.54% Pb and 23 ppm Ag were encountered at a downhole depth of 546.8 m.

The main drilling phases conducted over the Abra Deposit total 62 drillholes, which are summarised in Table 2.2.

Figure 2.6: Isometric view showing inverted chargeability sections



Source: Abra

Table 2.2: Abra Deposit exploration drilling campaigns

Phase	Period	Operator	# of holes	Hole type	Range of hole numbers	Total metres
Unallocated	Unclear	Unclear	11	Unclear	80-5, BI1-BI-3, EP1, JHP16-11, JRP-77-1,	1,837.6
1	1981-1983	Geopeko	8	DDH*	AB1-11	5,428.8
2	1988-1991	Geopeko	7	DDH	AB12-21W	4,083.8
3	1995	RGC	2	DDH	AB22A-22B	1,745
4	2005-2008	AML	34	DDH	AB23-54	19,670.9
Total			62			32,766.1

Source: McDonald Speijers, Resource Estimation, D.C.Speijers, May 2008

*DDH: Diamond drillhole

2.5 Mineral Resource

Over the history of the Abra Deposit, the understanding of the deposit's geology and mineralisation controls has continually improved, culminating in the 2008 scoping level study. Xstract has outlined previous resource methods and models in Table 2.3. However, Xstract notes that the previous resource estimates were for internal purposes and are not in accordance to the current JORC Code reporting guidelines. Further, these estimates have been superseded by the current resource estimate, which was based on considerably more data. Therefore, Xstract has placed no reliance on the previous estimates.

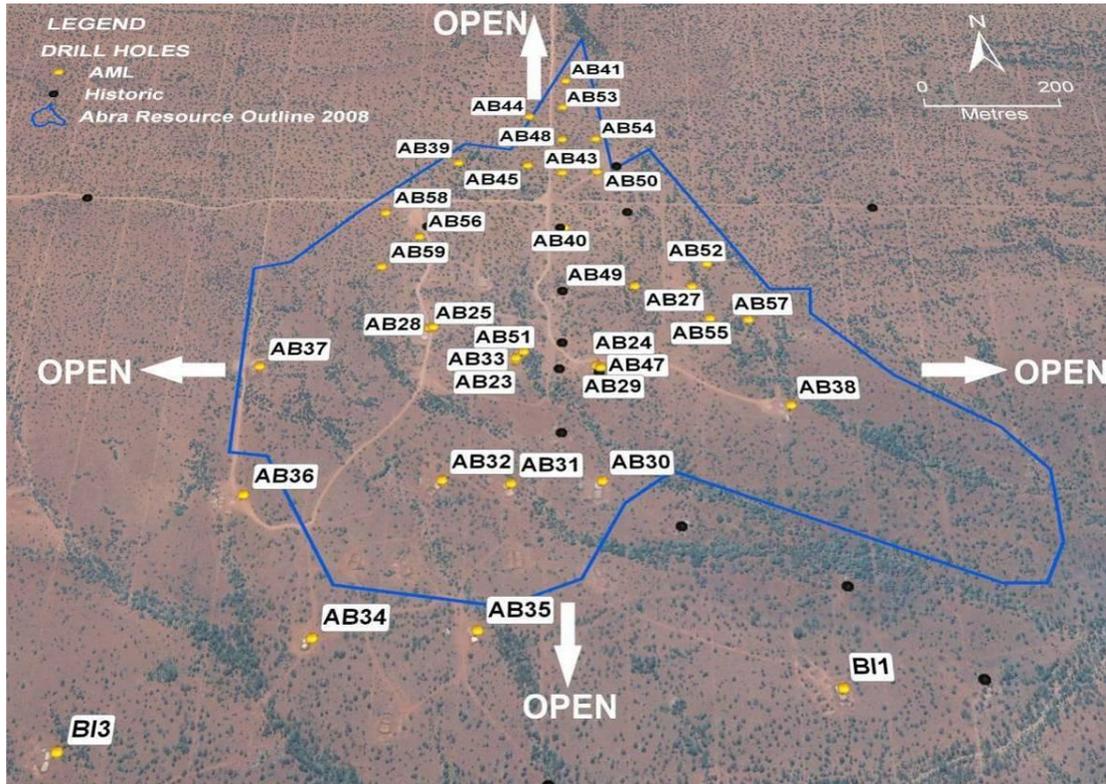
Table 2.3: Summary of previous resource estimates

Date	Description	Category	Source	Method
1990	Geological Estimate	Total	Geopeko	Unknown
1993	High Grade Resource	Pb and Cu-Au Domains	Geopeko	Polygonal
2000		Total	Fractals	Unknown
2006	Block Model	Pb, Pb-Cu & Cu Domains and Total	RSG	Ordinary Kriging

Source: McDonald Speijers, Resource Estimation, D.C.Speijers, May 2008

In 2008, new resource estimation work was completed by McDonald Speijers, based on all drilling data available to 25 April 2008. This included 14 historic diamond core drillholes and 26 diamond core drillholes completed by the Company, 17 more than were available for the previous estimate (Figure 2.7). This drilling density permitted better resolution of mineralisation in the core of the deposit resulting in an upgraded resource category for that portion of the deposit.

Figure 2.7: Abra Deposit drillhole locations and current resource boundary

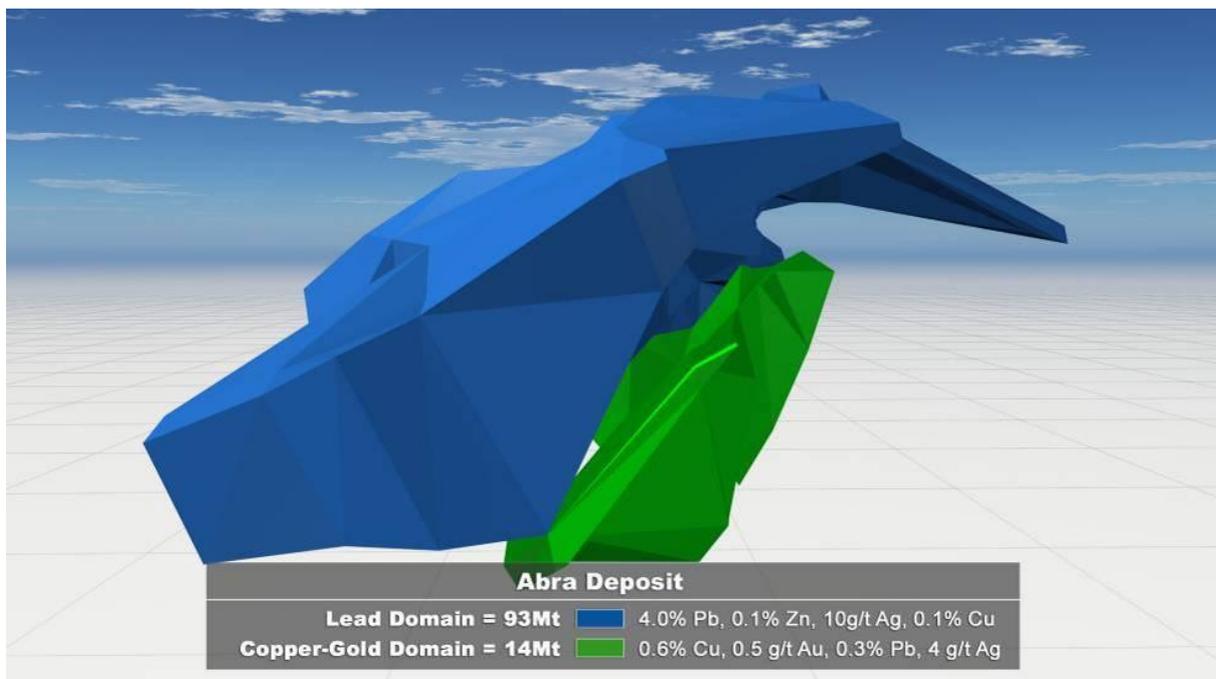


Source: Abra

Two distinct and contiguous mineralised domains were modelled (Figure 2.8) comprising:

- an upper lead domain typically between 200 and 250 m thick
- a lower copper-gold domain up to 100 m thick.

Figure 2.8: Mineral domains of the Abra Deposit



Source: Abra. Looking west showing the May 2008 Mineral Resource Statement

The published Mineral Resource for each of the mineralised domains at the Abra Deposit is presented in Table 2.4.

Table 2.4: Abra Deposit 2008 published Mineral Resource

Domain	Cut-off Grade	Category	Million Tonnes	Pb (%)	Ag (g/t)	Cu (%)	Au (g/t)	Zn (%)
Lead	2.5% Pb	Indicated	33	4.1	10	0.13	0.06	0.1
		Inferred	60	3.9	10	0.12	0.04	0.1
		Total	93	4.0	10	0.12	0.05	0.1
Copper-gold	0.4% Cu	Indicated	4	0.4	5	0.59	0.56	0.0
		Inferred	10	0.3	4	0.63	0.47	0.0
		Total	14	0.3	4	0.62	0.49	0.0

The lead and silver mineralisation interpretation was constructed using a 2.5% lead cut-off and the estimation was completed using Ordinary Kriging. The copper and gold mineralisation interpretation was constructed using a 0.4 g/t copper cut-off and the estimation was completed using Ordinary Kriging.

Mineral Resource Statement as at 14 May 2008.

Source: Abra

2.5.1 High-level review of the 2008 Mineral Resource estimate

Xstract has completed a high-level review of the 2008 Mineral Resource estimate, which remains current. Xstract has grouped its findings according to subject area.

Geological interpretation

The deposit geology was modelled on the recognised primary lithological units (un-mineralised sediments/red banded zone/dolomite zone/black banded zone/baritic stringer zone/stringer zone).

These geological units were interpreted to form two mineralised zones, namely:

- Zone 1 primarily based on a lead grade envelope of 0.5 to 1% Pb
- Zone 2 primarily based on a copper/gold grade envelope of either 0.2% Cu and/or 0.2 g/t Au.

Data quality

- **Survey control:** Most pre-2005 drillhole collars were re-surveyed, although the newer holes (AB50 to AB54) only have hand-held geographic positioning system (GPS) co-ordinates, whose accuracy may vary by several metres. Xstract checked the collar positions of drillholes AB41, AB43, and AB44, using a hand held Garmin 276C GPS, and confirmed the approximate position of these holes.
- **Downhole survey:** Magnetic electronic single shot (ESS) survey data was initially used to determine the downhole location of most drillholes. Given that the Company was testing a magnetic geophysical anomaly, Xstract considers that the ESS results are likely to be spurious. Subsequent gyro (non-magnetic) downhole surveys indicated up to a 40 m difference in the downhole drill position of certain holes. The Company has assumed that this difference was due to a setup error associated with the Gyrometer, and adjusted the downhole positions to be compatible to the magnetic ESS survey

data. This assumption has not been validated and Xstract considers this represents significant potential error in the position of several drillholes at depth.

- **Drilling:** Core recovery is reported by the Company as being acceptable. Xstract's on-site observation of core confirms this. Earlier drilling was found to be orientated sub-parallel to the primary mineralised vein set, which may bias sampling results. The drilling orientation was subsequently changed from grid north to grid south in Abra's more recent holes.
- **Sampling:** Pre-2005 and Abra's 2005 core sampling was completed over regular 2 m intervals, regardless of geological lithology. Since 2007, the Company has sampled within primary geological lithological boundaries, with sample lengths between 0.5 m and 3.0 m.
- **Density:** Historic density measurements were considered by the Company to be compromised, and as such Abra conducted a comprehensive sampling campaign to obtain reliable density measurements in 2008. The results of the 2008 density sampling campaign are considered by Xstract to be suitable for resource estimation purposes.
- **Assay:** Various laboratories, sample preparation and analytical methods have been used to analyse samples from the Abra Deposit, including numerous unknown processes as part of the early exploration activities. Pre-2005 assay quality assurance and quality control (QA/QC) measures comprised 'periodic' submission of duplicates and reference laboratory check assays. However, this remains to be verified as no reports or results are available. A preliminary analysis of available duplicate data suggests significant bias due to insufficient data and a lack of background information, although these results are not conclusive. Xstract considers that Abra's post-2005 samples contained adequate control samples, however, the overall results suggest some negative bias. This results in a marginal underestimation of metal content associated with the primary elements (i.e. lead, copper, silver and gold).
- **Database integrity:** McDonald Speijers conducted a detailed review of the sample database in 2008 and rectified numerous errors to ensure the data was suitable for the determination of a Resource. Xstract considers the database to be sufficiently robust to support the current estimate.

Estimation parameters and process

The published Mineral Resource estimate was determined using ordinary kriging for all elements. The data was composited to 2 m, and a top-cut applied although some remaining isolated high grade samples were noted to unduly influence estimates. Variogram ranges were arbitrarily increased to reduce this effect. This and the model block size may suggest local selectivity, although confidence in such results would currently be low.

Xstract cannot comment on the reliability of the Mineral Resource to represent the interpreted grades as no data or block models were supplied to compare input sample grades with the resource block model estimated grades on a global and/or local basis. However, based on the information in the McDonald Speijers report there is no reason to question this reliability.

Resource classification

The current published classification is based on drillhole spacing, where the central well-drilled portion is classified as Indicated, while zones drilled to a 200 m or more spacing have been classified as Inferred. Extrapolation beyond the confines of drilling has been limited to 100 m down-dip and 50 m in an east-west direction. Xstract considers that the defined resource has been appropriately classified at a global level, however, some localised discrepancies may result from downhole positional inaccuracies. As such the classification is

suitable for scoping level study purposes but may be unable to reliably support detailed mine planning and scheduling. Future studies should evaluate the impact of likely downhole positional inaccuracy and QA/QC problems on the defined resource.

Overall opinion

The stated Mineral Resource for the Abra Deposit appears suitable for scoping level study purposes but further drilling and geological modelling is required before detailed mining and cash flow studies can be reliably conducted.

2.6 Mining, metallurgical and processing considerations

2.6.1 Mining

Xstract has reviewed the following documents:

- Initial scoping study conducted by RSG Consulting (RSG) in February 2008.
- Cutback Consulting (Cutback) scoping study into the open pit mining of the Abra Deposit, June 2008.
- Draft Geotechnical review prepared by AMC Consultants Pty Ltd (AMC) prepared in December 2008.
- Ore Reserve report prepared by McDonald Speijers, May 2008.
- Slurry Systems Engineering Pty Ltd (Slurry Systems) concentrate pipeline scoping study, June 2007.

The review is limited to the assumptions and calculations behind the metal pricing, mining methodology and proposed capital expenditure. The review has not considered any optimisation of the mine design and the studies are considered to be only accurate to a scoping study level.

2.6.2 Summary of proposed operations

The Abra Deposit is of high tonnage and low grade, making it economically amenable to bulk mining methods. A number of mining options have been investigated by Abra, however only two mining methods have been studied further, namely open pit mining and sub-level cave (SLC) mining.

2.6.3 Mining studies undertaken for the Abra Deposit

In February 2008, RSG completed a mining scoping study into the Abra Deposit and concluded that it was most suited to a SLC mining method. This study was followed in mid-2008 with a scoping study by Cutback, who assessed the deposit's suitability to open cut mining methods. Both assessments assumed the following financial assumptions:

- an exchange rate of A\$0.85:US\$1
- lead metal price of US\$0.70/lb
- silver metal price of US\$10.00/lb
- copper metal price of US\$3.00/lb

2.6.4 Open cut mining

RSG designed a conceptual open pit for the Abra Deposit, which indicated that a minimum of 75 million bank cubic metres (Mbcm) of waste would need to be stripped prior to production. RSG estimated that pre-stripping would take two to three years to complete, would cost approximately A\$200 million and require a large mining fleet. This cost is in excess of the cost of establishing a SLC operation. RSG therefore discounted the option, with the proviso that upon an updated resource being developed, a more detailed analysis of open pit mining methods could be conducted.

Following RSG's review, the Company commissioned Cutback to review the deposit's suitability to open cut mining methods in mid-2008. Cutback's review was also at a scoping level of accuracy and assessed two options, one with a pit wall angle of 60 degrees in fresh rock, the other with a pit wall angle at 50 degrees in fresh rock. Cutback assessed the deposit as being economic with open cut mining methods, however the level of financial analysis was not as detailed as RSG's underground study. In particular, Cutback did not account for upfront capital costs, assumed the use of an owner/operator mining fleet, assumed what Xstract considers to be low milling and administration costs and used a low discount rate of 5%. Despite these omissions, Cutback demonstrated that the deposit may be amenable to open cut mining methods. Cutback's analysis was for a 6 million tonne per annum (Mtpa) conceptual project.

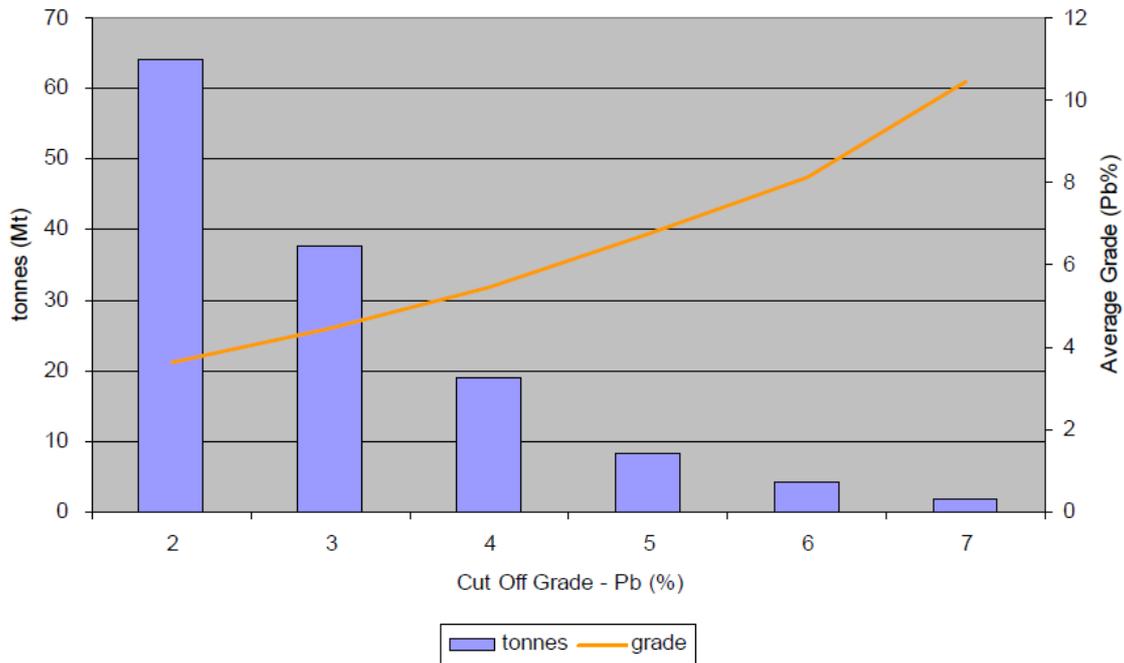
Cutback's pit only considers the lead/silver portion of the Abra Deposit, with the eventual pit bottom then being made available to develop an underground mine for the mining of the lower copper/gold lens. Cutback used a cut-off grade of 0.9% Pb and had an average silver grade of 8.4 g/t Ag. The separate underground mining of the underlying copper/gold lens was not assessed.

2.6.5 Sub-level caving

RSG briefly assessed the Abra Deposit's amenability to other underground mining methods, such as the use of paste and fill and room and pillar mining. These methods were quickly discounted because of their prohibitive operating costs. Therefore, only caving methods were considered economically feasible. RSG refers to the grade-tonnage curve for lead to justify this decision as shown in Figure 2.9.

RSG considered both block cave and SLC mining methods for the deposit and concluded that because of the variability, flat dipping nature and shape of the mineralisation, that the greater flexibility offered by SLC mining was preferable.

An important component of successful caving operations is having rock types of suitable strengths that are weak enough to allow caving. RSG estimates that caving will occur at a hydraulic radius of 50 m at the Abra Deposit. RSG qualified this statement saying a geotechnical assessment of the deposit was required and caving may not occur if the rock types are excessively strong and free of fractures and jointing. Upon this assessment, the Company commissioned AMC to complete a geotechnical assessment of the Abra Deposit in December 2008. AMC's report concluded that the rock mass is of "very good quality" and that "caving would not occur readily." In order to induce caving via a SLC mining method, AMC recommended a modification of RSG's proposed design.

Figure 2.9: Lead grade – tonnage curve for the Abra Deposit

AMC proposed that open stoping be initially employed at the top of the deposit. At the same time as stoping commences, a development drive will be mined in the crown pillar above the top of the open stopes. Once the top three levels of the deposit has commenced stoping and some caving has been induced, a mass blast will be taken in the drive within the crown pillar, in order to cause the pillar to fail and caving proper to be induced.

RSG's scoping study was based on a production rate of 6 Mtpa using a SLC mining method and RSG assessed that mining is currently only economic between the 350 m to 600 m depth levels below surface.

2.6.6 Mineral processing

Limited testwork of the Abra Deposit was undertaken by Amtec, on behalf of RSG. Three core samples from two exploration holes were used for testing. The testwork proved to be promising with a 95% recovery of lead metal in the lead domain and a 97% recovery of copper metal in the copper domain. The testwork showed that the float recovery process was problematic for secondary minerals, although RSG expected a copper recovery of 87%. RSG expected the concentrate grade for the lead deposit to be 65% Pb, 4% Cu and the concentrate grade for the copper deposit to be 23% Cu.

2.6.7 Mineral continuity

Bulk mining methods require a large, continuous mineralised zone as the methods allow for little selectivity in mining. RSG has reviewed the Abra Deposit for continuity and found it to be "sufficiently continuous to support mass mining..." Importantly drilling since 2005 has shown that the mineralisation is potentially larger and therefore continuity becomes less of an issue.

2.7 Xstract's recommendations

Due to the relatively low grade of the deposit, Xstract did not investigate traditional stoping techniques (with backfill/pastefill). Xstract agrees with RSG's analysis that such methods would be prohibitively expensive.

The Abra Deposit is a low grade, high tonnage deposit and is more economically amenable to large scale, bulk mining methods. The Abra Deposit has 250 m of overburden and the uppermost mineralisation is low grade, therefore a combination of open cut/underground mining is not considered feasible. Xstract reviewed and undertook a conceptual financial analysis of both open pit and SLC mining of the Abra Deposit. Due to the large amount of overburden open pit mining has been assessed as uneconomic. SLC is therefore the recommended mining option.

2.7.1 Block cave

AMC's geotechnical review describes the rock type as of "very good quality" and that "caving would not occur readily." Caveability is of utmost importance to the success of block cave operations as stable arches can easily form within the cave, especially in competent rock. Due to the irregular, flat dipping geometry of the Abra Deposit, it is not particularly suited to block cave methods. This coupled with the area's geotechnical competence means Xstract does not consider block cave mining methods to be an option at this stage.

2.7.2 Sub-level caving

Xstract is satisfied with the underlying assumptions behind the SLC mining option as put forward by RSG and refined by AMC. Xstract has some concerns. A dilution factor of 30% is considered appropriate for sub level cave operations, however AMC and RSG have both used a dilution factor of 20% due to the geotechnical competence of the deposit. If upon further geotechnical studies the geotechnical environment is not as competent as currently indicated, Xstract recommends a dilution factor of 30% be used.

Xstract agrees with RSG and AMC's rationale behind employing a SLC mining method, due to the deposit's variability in shape and the geotechnical competence of the deposit. SLC offers greater flexibility, has lower up front capital costs and dramatically reduces the risks of hang ups within the cave as compared to block caving. RSG have only considered the resources between 350 to 600 m below surface in the scoping study. It is Xstract's opinion that a 6 Mtpa production rate from SLC methods is practical and achievable. Extensions to the resource below 600 m depth could be readily exploited using SLC mining. Consideration should be given to potential extensions to the known mineralisation at depth when locating mine infrastructure.

Xstract notes that the proposed materials handling system is largely adopted from Newcrest's Ridgeway operations in NSW, with RSG proposing a conveyor to transport ore to surface. Underground conveyor systems are uncommon in metalliferous mines within Australia, however conveyors are better suited for massive production. A conveyor would allow Abra to avoid a number of the issues surrounding haulage shafts, particularly legislative issues and therefore Xstract considers this to be a sound option. However, Xstract recommends a trade-off study be completed to fully determine the merits of a conveyor system to a shaft hoisting system as the study progresses.

2.7.3 Sub-level caving costs

Xstract considers the costs used by RSG to be generally too low and has re-modelled the Abra project accordingly. Xstract also consider that due to the rock mass strength, considerable blasting will be required in the SLC mining option, increasing mining costs.

2.7.4 Open cut

The ground at the Abra Deposit, as stated by AMC, is very competent and while a more detailed geotechnical review is required before proceeding to a pre-feasibility study, Xstract considers the pit wall angles to be appropriate. Xstract considers Cutback's mining analysis to be fair and reasonable, however believes there is considerable scope to optimise the pit design, especially when a detailed geotechnical review is completed. The Cutback analysis fails to consider the underground mining of the copper/gold lens at the Abra Deposit. Xstract recommends that a study of the underground mining of this lens is undertaken once open cut mining has ceased, in order to fairly value mining via open cut methods. The Cutback model also failed to consider any capital costs.

2.7.5 Mineral processing

Very little metallurgical testwork has taken place on the Abra Deposit, with just two exploration holes being sampled. This presents a risk to the project as stated recoveries and concentrate qualities may not be representative across the entire resource. Xstract recommends further testwork of the deposit's metallurgy and processing as a priority before proceeding to the pre-feasibility study stage with the project.

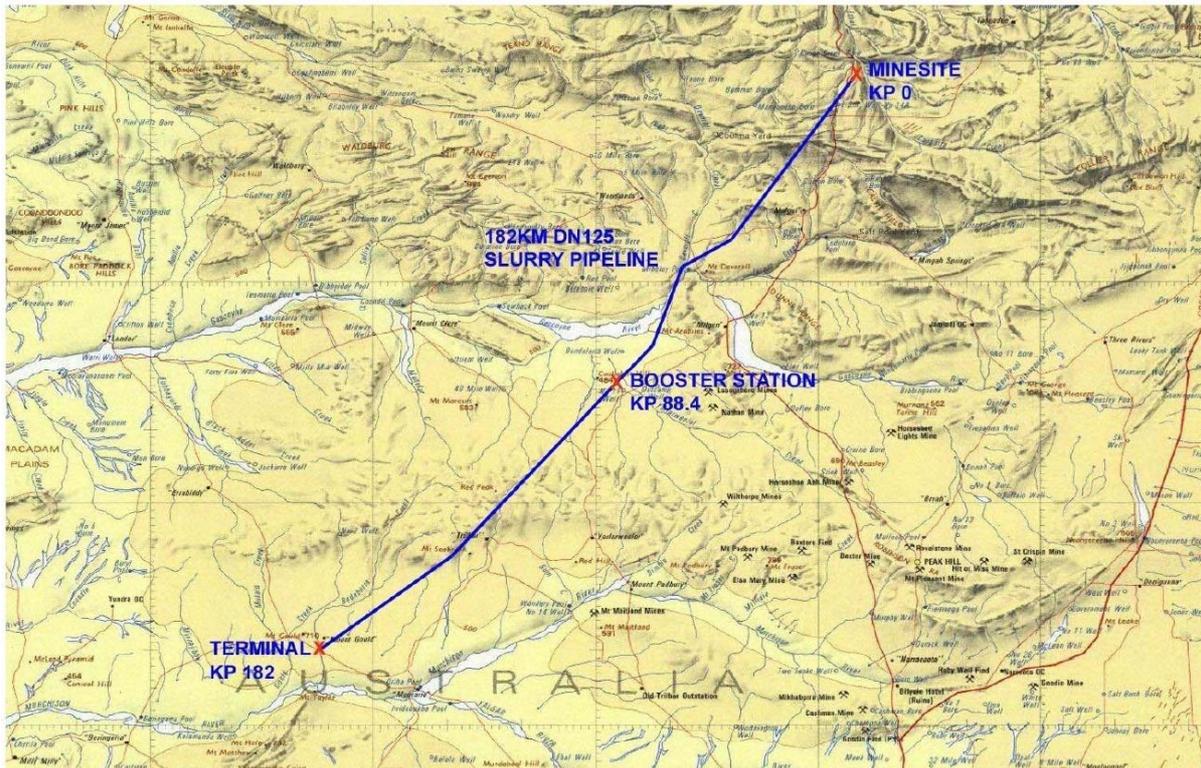
2.7.6 Concentrate transport

The Abra Deposit's remote location makes the transport of concentrate a costly exercise. The proposed 182 km southwest running pipeline is to meet up with the yet to be constructed Murchison Metals railway to Geraldton at Jack Hills or Terminal KP 182 as shown in Figure 2.10. Murchison Metals Limited (Murchison) has publicly indicated its willingness to share the rail line and Xstract consider it reasonable that Murchison will come to an arrangement for the transport of concentrate.

Xstract consider the proposed transport method to be reasonable. Xstract notes that just one vendor quote was obtained for the cost of the proposed slurry pipeline from One Steel. Further estimates are required to better understand the potential cost. Negotiations are yet to commence with tenement holders and graziers for the right to traverse properties with the pipeline, and any diversions may impact on the costs. Xstract recommends that before proceeding to a pre-feasibility study that affected tenement holders and graziers are consulted to gauge their willingness to provide access.

Due to the uncertainty surrounding concentrate transport, Xstract recommends a conservative approach to any concentrate transport cost estimates. If landholder agreements cannot be reached, concentrate may need to be transported by truck.

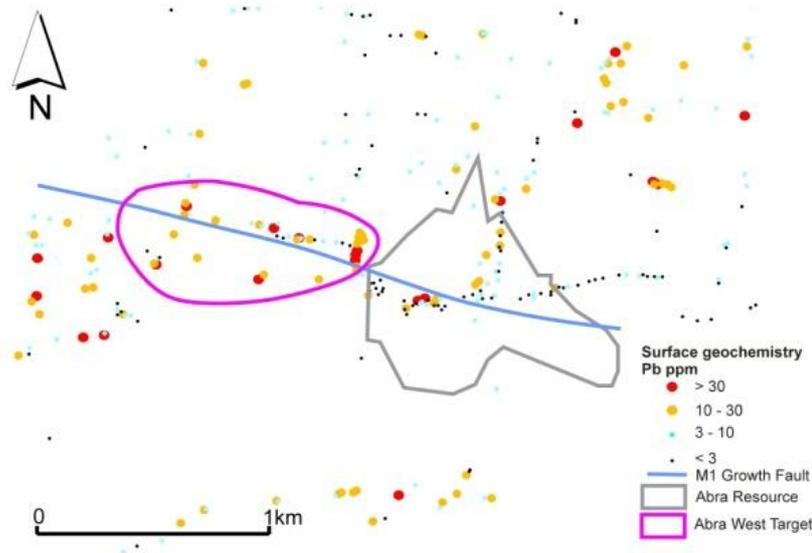
Figure 2.10: Proposed concentrate pipeline



2.8 Exploration potential

2.8.1 Near mine

The Abra Deposit remains open to the east, west, and south. The Company has completed interpretation at the Abra deposit focusing on identifying faults that may have influenced the Abra mineralised system. The M1 Fault was identified as an important structure as it influences the thickness and distribution of some key stratigraphic units and alteration types (Figure 2.15). The M1 Fault is parallel to the main mineralised veins set, and appears to partly control the distribution of metal within the Abra Deposit. Second order faults have also been defined within the Abra Deposit as a result of detailed core and surface mapping programmes. These may be of exploration interest.

Figure 2.11: M1 Fault and Abra West geochemical target

2.8.2 Regional targets

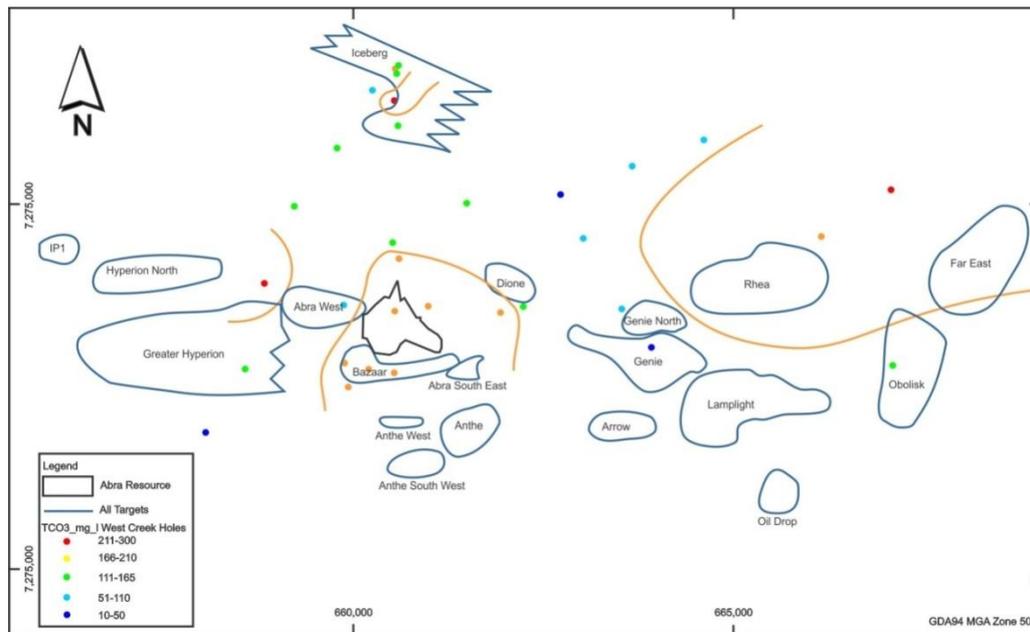
In 2009, Abra completed a target generation and ranking exercise over the Mulgul Project outside of the defined Abra Deposit area. The principal exploration indicators for known mineralisation in the Mulgul Project are:

- basement highs marked by inliers within anticlinal horsts with associated axial faults
- proximity to regional-scale growth faults
- second and third-order syn-depositional faults
- unconformable contact of Gap Well Formation with overlying West Creek Formation
- modest gravity and strong magnetic anomalies associated with stratabound alteration, and
- anomalous surface geochemistry.

As part of this exercise, Abra compiled and reviewed the following exploration datasets:

- **Geology:** Vogt 1:50,000 scale mapping, Jigsaw 1:5,000 mapping, and the Company's 1:1,000 detailed mapping
- **Geophysics:** magnetics, gravity, Geotem, moving loop electro magnetic, and induced polarisation, and
- **Geochemistry:** rock chip sampling, drillhole geochemistry, AMIRA/CSIRO groundwater geochemistry and isotopes analyses.

A total of 18 targets were generated, of which the highest ranked are the Greater Hyperion, Anthe, Genie, Abra West and Bazaar targets (Figure 2.12). All targets remain to be adequately assessed.

Figure 2.12: Mulgul targets over total carbonate in groundwater

(Source: Whitford et al, 1994, modified after Cranney, 2009)

2.9 Jillawarra Project

The Jillawarra Project covers the central and western portions of the Jillawarra Sub-basin and encompasses more than 20 base metal prospects.

Under the terms of a joint venture signed in 2006, Abra had the right to earn a 70% interest in four exploration licences (E52/1413, 1970, 1971 and 1972) through exploration expenditure of A\$1.35 million over four years. Through expenditure and acquisition of interests, Abra now holds a 90% interest in these tenements.

The geology of the Jillawarra Project area is characterised by the units of the West Creek and Gap Well Formations, which are deformed and folded about the eastwest trending Coolina Anticline. The west-southwest trending Quartzite Well Fault is a major cross cutting structure, which is intimately associated with a number of mineralised zones. Other key structures include the southwest trending Woodlands and Manganese Range Faults.

Reported base metal mineralisation within in the Jillawarra area includes:

- chlorite-magnetite-copper-lead-barium Abra-type alteration systems within dolomitic sandstone
- lead-zinc mineralisation in fault brecciated carbonaceous shale units
- stratabound copper mineralisation within the Woodlands Arenite unit
- fault related copper \pm gold mineralisation.

In addition, anomalous gold systems occur at the Manganese Range and Postcutter Bore prospects and manganese has been identified throughout the Jillawarra area, in particular at the Woodland Dome and Manganese Range Prospects.

Exploration since the 1970s has largely focused on extensions to known mineral occurrences between the Woodlands and Abra prospects. Further to the west, airborne geophysical surveying during the 1990s identified a number of prospects. The most significant prospects outlined within the Jillawarra comprise:

- The 46.40, Woodlands and Leader 18 prospects, which are characterised by low grade base metal-magnetite mineralisation occurring within a large regional coincident magnetic and gravity anomaly known as the Woodlands Complex
- The Copper Chert prospect where historic drilling of copper in soil geochemical and electrical geophysical anomalies returned a best result of 0.6 m grading 2.4% Cu at a downhole depth of 124.5 m in drillhole 75-8
- The Quartzite Well Fault hosts a number of lead-zinc prospects associated with a major flexure
- The Manganese Range prospect comprises folded Irregularly Formation rocks in the hangingwall to the Quartzite Well Fault with associated lead, copper \pm gold and gold mineralised zones encountered during previous drilling.

The results of select drillholes within the Jillawarra area are presented in Table 2.5.

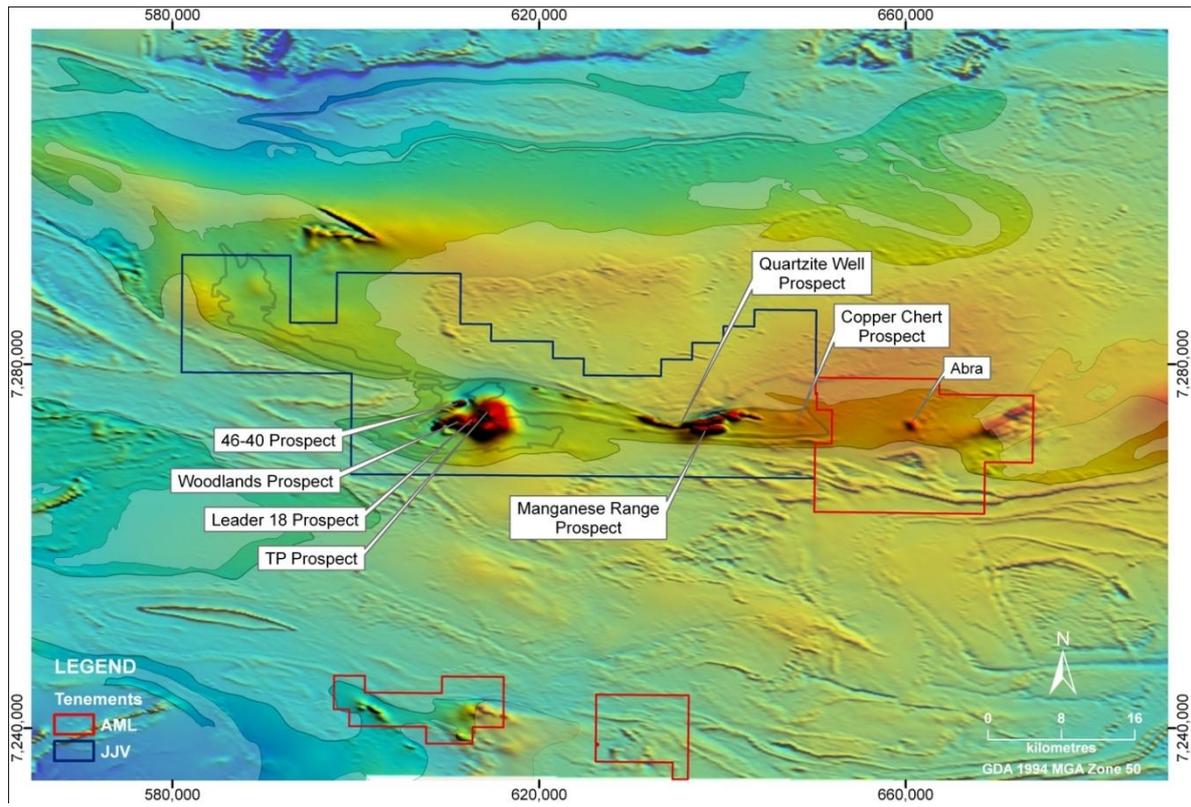
Table 2.5: Selected drillhole intervals from within the Jillawarra area

Prospect	Hole ID	Total depth (m)	From (m)	Intercept
46.40	77-28	308.5	110.0	41m @ 0.8% Pb, 0.2% Cu
46.40	78-34	365.0	185.0	6m @ 1% Cu incl. 1m @ 2.5% Cu, 5.5g/t Au
46.40	78-34	365.0	192.0	35m @ 0.4% Cu
46.40	78-34	365.0	243.0	23m @ 0.3% Cu
Woodlands	77-5	158.0	62.0	96m @ 0.1% Cu
Woodlands	81-5	410.0	372.0	38m @ 0.28% Cu, 5.56% Ba
Leader 18	L18-1	729.5		40m @ 0.39% Cu
Leader 18	WDH-1	650.0		60.5m @ 0.26% Cu incl. 0.4m @ 8.4% Cu
TP	81-8	1,200.0	594.0	4m @ 3.6% Pb, 12.96% Ba
TP	81-8	1,200.0	623.0	2m @ 4.66% Pb
Quartzite Well	75-3	189.0	98.0	2m @ 4.93% Zn, 1.58% Pb
Quartzite Well	75-7	299.0	115.0	34.6m @ 1.10% Zn, 2.00% Pb incl. 8m @ 2.42% Zn, 2.18% Pb
Quartzite Well	76-10	132.1	86.0	6m @ 5.90% Pb incl. 2m @ 10.3% Pb
Quartzite Well	76-13A	192.0	108.0	54m @ 0.28% Zn, 0.83% Pb
Quartzite Well	76-14	304.2	260.0	56m @ 0.53% Zn, 0.51% Pb incl. 1m @ 4.88% Zn, 1.89% Pb incl. 1m @ 7.38% Zn, 0.36% Pb
Quartzite Well	76-17	270.5	231.0	20m @ 0.16% Zn, 0.54% Pb incl. 6m @ 0.24% Zn, 1.28% Pb
Quartzite Well	77-8	158.0	114.0	32m @ 0.87% Zn, 0.45% Pb

(Source: Abra)

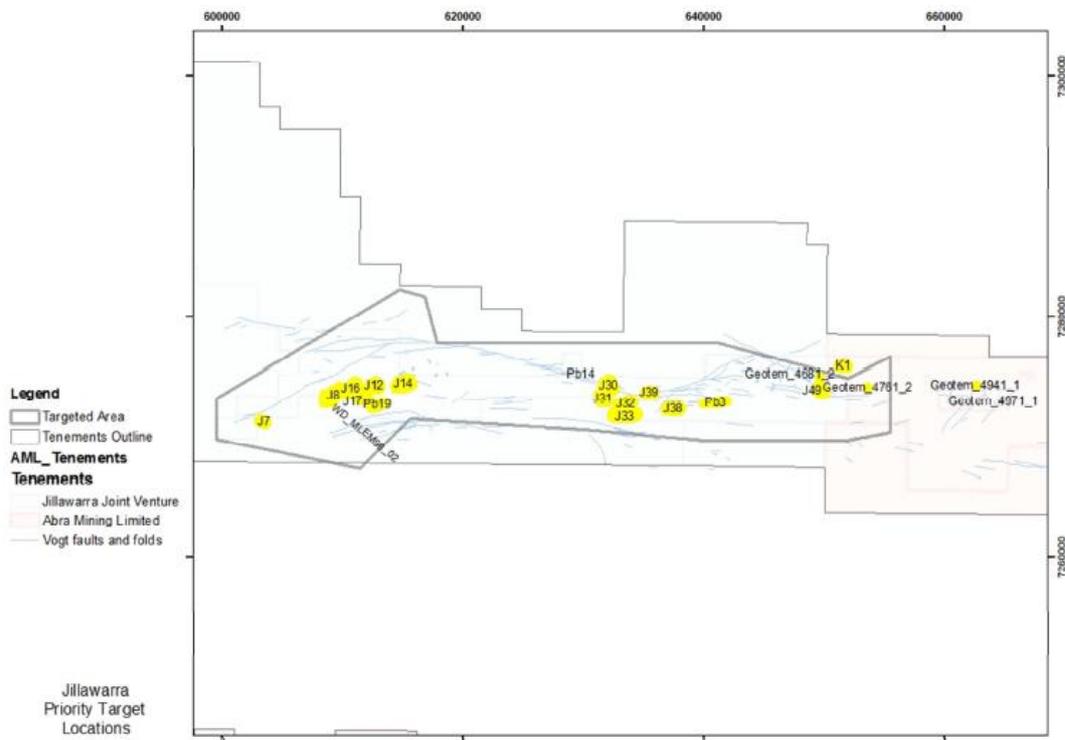
Based on a review of the available exploration datasets, Abra has outlined a total of 119 targets within the Jillawarra area. The top 20 priority targets are shown in Figures 2.13 and 2.14. These remain to be assessed with detailed geological mapping planned over the most prospective in order to define potential drill targets.

Figure 2.13. Significant drilling results in the Jilawarra area



(Source: Abra)

Figure 2.14: Top 20 prioritised targets



(Source: Abra)

2.10 Mount Deverell Project

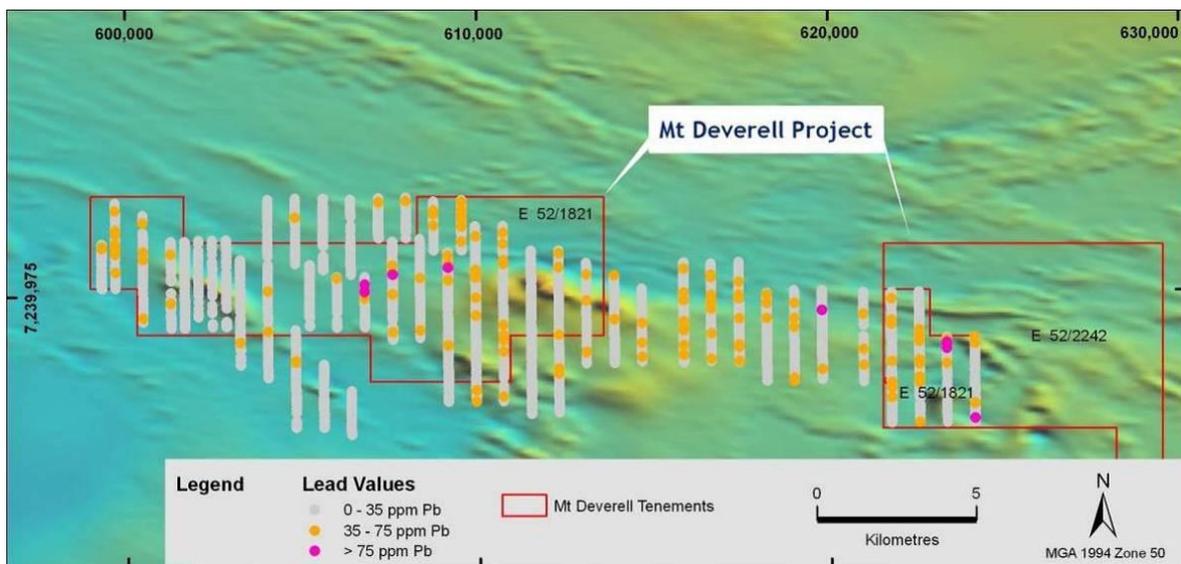
Abra's Mount Deverell Project lies approximately 25 km south of the Jillawarra Project and comprises two granted ELs covering a total area of 170.8 km². The project was acquired from Perilya in 2006 as part of a targeting exercise designed to identify and assess areas with similar structural and geological attributes to the Mulgul Project and the Abra Deposit.

A NITON[®] geochemical sampling programme was completed over the area in 2008 and further infilled in 2010 (Figure 2.15). Several strong lead surface geochemical anomalies have been defined within E52/1821. Geological mapping has been completed over two main areas.

In Area 1, located along the western boundary of E52/1821, the lead geochemical anomaly is coincident with a breccia zone lying within the hinge of a broad west-northwest trending antiform. This structural and stratigraphic setting is considered by the Company to be analogous to that at the Abra Deposit. The breccia hosts sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments.

The second lead anomaly at Area 2, which is centrally located within E52/1821 and some 7 km east of Area 1, is also hosted within a fault breccia zone along the northern limb of an east-west trending antiform.

Figure 2.15: Mount Deverell NITON[®] geochemistry results



(Source: Abra)

Based on a review of the available technical data, Xstract considers the prospectivity of the Mount Deverell project to be moderate, based on its similarities to the Abra Deposit. To date, only cursory exploration has been completed over the western and central portions of the project area. Soil geochemistry anomalies generated within E52/1821 require further assessment, including detailed geological mapping and infill geochemical sampling in order to generate valid drill targets. E52/2242 remains to be adequately investigated, with only reconnaissance activities completed to date.

2.11 Havelock Project

The Havelock Project is located approximately 30 km west of Wiluna in central Western Australia. The Havelock Project surrounds Ivernia's Magellan open pit lead mine.

Access to the Havelock Project is via the Meekatharra-Wiluna section of the Goldfields Highway, which traverses the middle of the project in an eastwest direction. The first 15 km of the Goldfields Highway west of Wiluna is sealed, with the remaining section being well-maintained gravel. There are a number of pastoral accesses and dedicated exploration tracks within the Havelock Project area.

The Havelock Project area has previously been explored by the following companies:

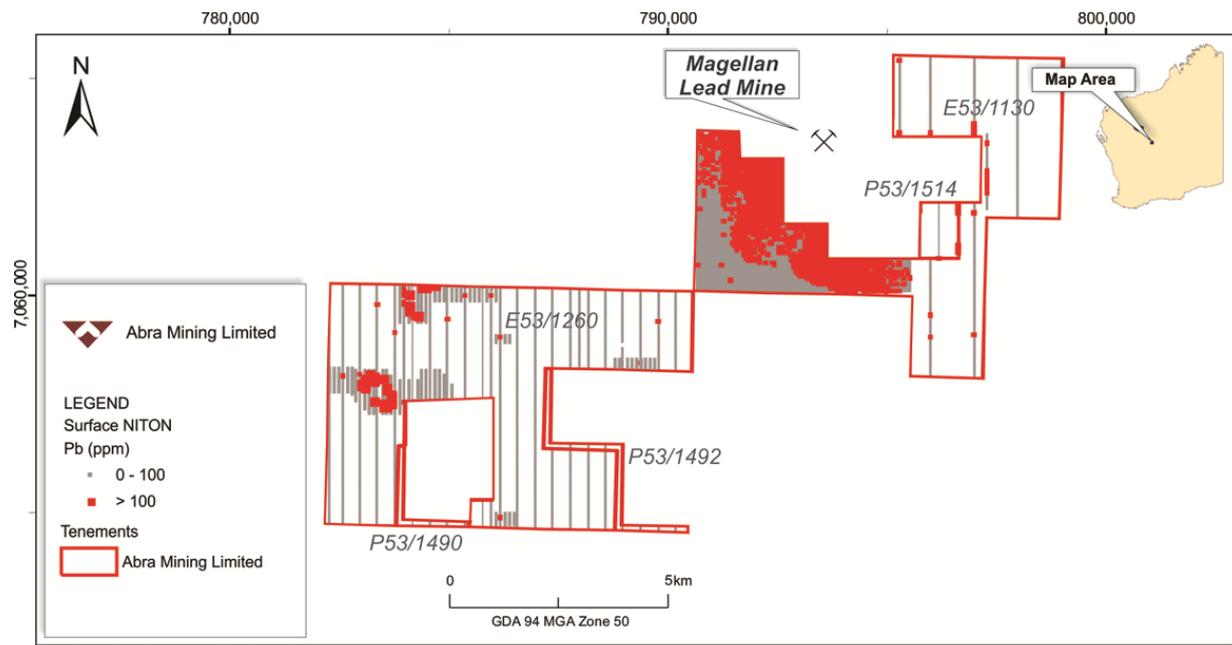
- RGC
- Morning Star Resources NL
- Ivernia.

Most historical work was completed by RGC in the early to mid 1990s. Abra acquired the Havelock Project from Perilya in April 2006 for 3.4 million options exercisable at A\$0.50. The options expired in December 2009.

In January 2007, Abra completed an airborne magnetic and radiometric surveys over the Havelock Project. In 2008, a first pass NITON[®] soil geochemistry programme was undertaken which resulted in the identification of number of lead anomalies within E53/1130 and E53/1260.

In 2009, another NITON[®] survey and 1:20,000 geological mapping was completed over the remainder of E53/1260 and most of the then recently granted E53/1374 (Figure 2.16). The last programmes yielded no significant new anomalies in E53/1374 but did result in lead anomalies being within the northeastern portion of E52/1260.

Figure 2.16: Geochemical anomalies within the Havelock Project



The Havelock Project is located in the Paleoproterozoic-aged Yerrida Basin, which unconformably overlies the Archaean-aged Yilgarn Craton to the south. At depth, the Havelock Project covers the extensions to the Joyners Find and Wiluna Greenstone Belts.

The bulk of the Havelock Project is covered by transported alluvium and deposits of eluvium and colluvium. There is little outcrop within the Havelock Project area, with the exception of the Williamson Range in the south and southwest, and small isolated mesas in the central west.

Sedimentary units of the Earraheedy and Yerrida Groups are present within the Havelock Project (Figure 2.17). The Yelma Formation of the Earraheedy Group hosts the Magellan lead deposit and comprises clastic and dolomitic sediments. The sequence consists of basal conglomerate, quartz arenite, stromatolitic dolomite and chert breccia. The Yelma Formation is lithologically similar to the Bubble Well Member of the Windplain Subgroup, a silicified carbonate and evaporite rock unit, comprising chert breccia and chert replaced stromatolitic dolomite. The Maralouou Formation, which underlies the Yelma Formation, does not host Magellan-style lead mineralisation.

Structurally, there is an east trending system of faults inferred from the presence of dolerite dykes in the southern part of the Yerrida Basin. These faults may be growth faults associated with rifting (Pirajno and Adamides, 2000). A large structure is interpreted along the contact of the Finlayson Member and the overlying Maralouou Formation, within and near the project area. These structures are important in controlling lead mineralisation at the Magellan Deposit.

Figure 2.17: Stratigraphy of the Yerrida Basin, which underlies the Havelock Project

Yerrida Basin Stratigraphy				Project Area Stratigraphy	Mineralisation
Group	Formation	Description	Formation		
Earraheedy Group	Mount Leake Formation	Quartz Arenite			
	Yelma Formation	Stromatolitic chert breccia	Yelma Formation (2.00 Ga)		Magellan Lead Deposit (1.65 Ga)
Unconformity					
(Yerrida Group)	Mooloogool Subgroup	Maralouou Formation	Siltstone and shale	Maralouou Formation	
		Killara Formation	Mafic igneous rocks, sediments, chert, etc	Lost due to unconformity or faulting	
		Doolgunna Formation	Arkosic sandstone and quartz wacke		
		Thaduna Formation	Lithic sandstone, siltstone and wacke		
	Windplain Subgroup	Johnson Cairn Formation	Shale and siltstone		
		Juderina Formation	Quartz arenite		
		Bubble Well Member	Stromatolitic carbonate, chert breccia	Bubble Well Member (2.17 Ga)	
Finlayson Member	Quartz arenite, bedded	Finlayson Member			
Unconformity					
Archaean	Granitoid and greenstones of the Joyners Find Belt			Archaean gold, base metals and iron-ore	

After Pirajno and Adamides, 2000.

The Havelock Project is being targeted by Abra for lead mineralisation similar to that observed at Ivernia's Magellan deposit. The Magellan mineralisation is atypical in its expression [Williams et al. 2011]. The known lead mineralisation is hosted within the oxide zone and is expressed as carbonate and lead mineral species. No lead sulphide, or zinc mineralisation occurs within the Magellan deposit. The Magellan deposit may be a result of a mature wall rock replacement type of supergene deposits, where mineralisation precipitates from adjacent or down ground-water flow sulphide deposits. If these deposits become progressively oxidised by acidic ground waters, the zinc may migrate out leaving behind the lead as the sole element of potential economic interest (Table 2.6).

Table 2.6: Genetic model for non-sulphide base metal deposits

Maturity:	Early	—————→			Late
Expression	Sulphide body	Zn-Pb(Ag)-Cu gossan	Pb(Ag)-Cu-Zn gossan	Pb(Ag)-Cu gossan	Pb(Ag) gossan
Mineralogy	Sphalerite	Smithsonite	Hemimorphite	Hydrozincite	Chalcedonic silica
	Galena	Goethite	Smithsonite	(hemimorphite)	Haematite
	Chalcopyrite	Haematite	(hydrozincite)	Haematite	Litharge
	Pyrite	Galena	Haematite	Cerussite	Cerussite
		Anglesite	Goethite	Cu oxides/ carbonates	Cu oxides/ carbonates
		Chalcopyrite	Anglesite		
Chalcocite		Cerussite (galena)	Chalcocite		
		Cu oxides/ carbonates			

Based on its review of the available technical data, Xstract considers Abra's Havelock Project to be a conceptual exploration play with low to moderate prospectivity. The soil geochemistry anomalies in E53/1130 require validation to ensure that these are not sediment contamination from the neighbouring Magellan lead mine. A potential lead deposit within the project area is likely to be small given the size of the known soil anomalies and that the exploration model is constrained to near surface. In the event of a discovery of a deposit, it would most likely be suited to treatment at Ivernia's mining operation rather than justify a stand-alone operation.

3 Valuation

3.1 Valuation considerations

The VALMIN Code classifies mineral assets according to the maturity of the asset. The term *mineral asset* refers to all property held for the purpose of near term or eventual mineral extraction including but not limited to:

- real property
- intellectual property
- tenements, plant, equipment and associated infrastructure.

Most mineral assets can be classified as outlined in Table 3.1 (VALMIN, 2005).

Table 3.1: Mineral asset classification

Project development stage	Criterion
Exploration areas	Mineralisation may or may not have been defined, but where a Mineral Resource has not been identified.
Advanced exploration areas	Considerable exploration has been undertaken and specific targets identified. Sufficient work has been completed on at least one prospect to provide a good geological understanding and encouragement that further work is likely to result in the determination of a Mineral Resource.
Pre-development / resource	Mineral Resources and/or Ore Reserves have been identified and their extent estimated. A positive development decision has not been made. This includes properties where a development decision has been negative and properties are either on care and maintenance or held on retention titles.
Development	Committed to production but not yet commissioned or not initially operating at design levels.
Operating	Mineral properties, in particular mines and processing plants, which have been fully commissioned and are in production.

The VALMIN Code defines *value* as the Fair Market Value of a mineral asset. The Fair Market Value is the amount of money or the cash equivalent for which the mineral asset should change hands on the Valuation Date between a willing buyer and a willing seller in an arm's length transaction. Each party is assumed to have acted knowledgeably, prudently and without compulsion. In essence, the fair market value of the mineral asset comprises:

- **The underlying or 'technical value'**, which is an assessment of a mineral asset's future economic benefit under a set of assumptions, excluding any premium or discount for market, strategic or other considerations
- **The market component**, which is a premium relating to market, strategic or other considerations which depending on circumstances at the Valuation Date, can be either positive, negative or zero.

To determine the market value, all Material information should be presented and discussed.

As more advanced projects may contain extensive technical detail, the valuer must determine what is Material on the basis that if it were omitted from a report, it may cause the reader to arrive at a different conclusion. As a rough rule-of-thumb, if the omission of an item results in a change of:

- less than 5%, the information is generally not Material
- between 5% and 10% it may be Material
- more than 10% it is Material.

There are three generally accepted approaches to valuing a mineral asset, based on income, cost, and the open market. Each approach may contain a number of methodologies that are suited to different times and circumstances. As the VALMIN Code is not prescriptive regarding the appropriate valuation approaches, the more prescriptive 2008 Edition of The South African Code for the Reporting of Mineral Asset Valuation (SAMVAL) and the Canadian 2003 Edition of the Standards and Guidelines for Valuation of Mineral Properties (CIMVAL) provide insight into what may be applicable, as shown in Table 3.2 (CIMVAL, 2003).

Table 3.2: Valuation approaches for different types of mineral assets

Approach	Project development stage			
	Exploration	Resource	Development	Operating
Income	No	Rarely	Yes	Yes
Cost	Yes	Rarely	No	No
Market	Yes	Yes	Yes	Yes

3.2 Income based approach

The income based approach is based on the assumption that using the information available at the time of valuation, economic returns can be modelled over the useful life of the mineral asset (SAMVAL, 2008). The income-based approach is suited for the valuation of individual assets for which a large amount of technical data has already been collected or can be preliminarily estimated. An income-based valuation generally involves the construction of a discounted cash flow (DCF) model based on a preliminary or more advanced project development concept and may include sophisticated risk analysis and simulation such as Monte Carlo simulations, modern asset pricing and real options analysis.

Despite having various levels of sophistication, the income-based approach has limitations in that it:

- may not fully reflect the marketable value (e.g. the market may attribute a discount or premium to the income-based value)
- relies on a number of critical but subjective inputs (e.g. the appropriate discount rate) despite using extensive amounts of technical detail
- excludes numerous assets with lower levels of development as specific technical detail is rarely available at the exploration or pre-scoping study level.

3.3 Market based approach

The market based approach uses the transaction prices of projects in similar geographical, geopolitical and geological environments to derive a market value using a process similar to that is used in the real estate industry (CIMVAL, 2003). The market-based approach may use

the assumption either of joint venture terms or outright acquisitions, and can be presented in range of unitised values including on a dollar per ounce or tonne of contained metal/mineral; dollar per square kilometre; or as a percentage of the prevailing commodity price.

In Xstract's opinion, a market based approach is well suited to establishing a likely value for base metal deposits and exploration projects. This approach's strength is that it is designed to include all value drivers, and because of its simplicity, has an in-built 'reality check' that helps ensure that the science of the methodology does not dominate the assessment (O'Connor and McMahon, 1994). The market based approach is easy to calculate and communicate and does not require in-depth project specific knowledge, except insofar as geologically, geographically and/or commercially similar assets to the one being valued are sought for comparable values. Notwithstanding this practicality, the market based approach relies on a number of assumptions and often lacks true comparability with the assets being valued. Moreover, where only small datasets are available the negotiating ability of the parties to broker a deal may distort the dataset's statistics. Despite its documented shortcomings, there is significant merit in using market based benchmarks for valuations (Grant, 1994).

By undertaking a qualitative analysis of comparable transactions, it is possible to develop a 'gut feel' for likely market price responses to varying levels of equity interest. However, the intuitive approach is limited by the variability of values obtained across a range of investments, which makes it difficult to consistently and robustly decipher the value of control premia or any other aspect, which contributes to the value of a project.

Furthermore, market-based methodologies often have a common underlying weakness: heuristics and bias. Heuristics concerns the use of rules of thumb or mental shortcuts, which enable valuers to undertake pattern recognition within incomplete datasets (Tversky and Kahneman, 1974). Heuristics can introduce serious bias. On one hand, the valuer is shielded from technical uncertainty in that all projects are subject to the same judgments; on the other hand the valuer has to contend with applying poorly quantified value drivers to uncertain inputs. As discussed in detail by McCuaig, Kreuzer and Brown (2007), the most common sources of bias in heuristic judgements are:

- **Representivity** – based on limited, imperfect datasets, there is a tendency to over-generalise based on a few data points. Consequently, data density and quality can have big impacts on interpretation.
- **Availability** – the outcomes are usually based upon personal experience, resulting in the full range of possibilities being truncated.
- **Anchoring** – Initial impressions anchor subsequent perceptions and influence outcomes. Any adjustments to the initial impression are often insufficient, narrow and biased towards the anchor.
- **Salience** – the most recent and prominent information overly influences judgement and there is a resistance to change once a model is established.

The reliance on heuristics is not confined to geologists and valuers; rather it has been shown that even experienced statisticians cannot avoid intuitive judgments. Valuers need to be ever-cognisant of the bias associated with the use of heuristics and to maintain an open mind to opinions outside of their own. Unfortunately, running contrary to this notion is that "*the more we publicly defend (or promote) a particular model, the more difficult it is to radically challenge it*" (Vann, 2005).⁵

⁵ A more thorough discussion on the merits and limitations of the market-based approach are presented in Lawrence (2001).

3.3.1 Comparable transactions method

The comparable transaction approach is an adaptation of the common real estate method to valuation. For the purposes of mineral asset valuation, a practitioner compiles and analyses 100% equity acquisitions of projects of similar nature, time, and circumstance with a view to establishing a range of values that the market is likely to pay for a project. The comparable transactions method:

- is intuitive, easily understood and readily applied
- implies a market premium/discount for the prevailing sovereign risk
- captures market sentiment for specific commodities or locations
- accounts for intangible aspects of a transaction (i.e. intellectual property).

The transactions deemed to be analogous to the mineral asset being valued are used to determine a unit price (e.g. A\$/km² or A\$/oz gold) for the asset being valued. However, there is an intricate value dynamic between the quantity (size) and quality (grade or prospectivity) that may result in the exclusion of a large number of comparable transactions which in turn may undermine the accuracy of this method. It is also important to note that transactions may include provisions for additional factors such as arrangement of debt financing, marketing rights, contingent payments and future royalties. Therefore, the price disclosed as paid for an asset may not necessarily equate to the value of the tenement, as there may be other circumstances or conditions that may have influenced calculation of the implied value.

The comparable transactions method is widely used throughout the minerals industry; however, the valuer must take into account that it is largely retrospective and may not take into account anticipated or recent commodity or other variable value drivers.

3.3.2 Joint venture terms method

The joint venture terms method is a variation of the comparable transaction method. This technique involves transactions where only partial ownership of a project is acquired. The joint venture terms method provides the valuer with a larger acquisitions dataset than the comparable market value method, and consequently these approaches are often used simultaneously in mineral asset valuations. It is widely recognised that the market will attribute a sliding-scale premium in accordance with the level of ownership acquired. For example, a joint venture agreement for a 51% interest in a project may attract a market value significantly above that for an identical project in which a 49% interest is acquired. Therefore, the valuer needs to account for any potential of ownership premiums.

3.4 Cost based approach

The cost based approach is based on the notion that a return is expected from an investment such as mineral exploration. This approach can be both retrospective and forward looking. By taking the position of the vendor who is likely to seek re-imburement of sunk costs with a risk premium, a possible market position may be determined. By analysing the future costs associated with a project, and the anticipated risk-adjusted returns, the acquiring party's view of value may be quantified. The three common cost-based methods are based on expected values (EV), multiples of exploration expenditure (MEE) and geoscience rating criteria.

3.4.1 Expected values method

The EV method uses probability theory to quantify an exploration project's value by determining the likely 'pay-off' for each step in the exploration process. The EV is the sum

of the probabilities of each possible outcome multiplied by the outcome value (or pay-off) less the implementation costs at each stage (Kreuzer et al., 2008).

A valuer can form an opinion on whether the proposed exploration budget for a project is prudent and warranted, as unlike the coin tossing game, exploration is not mutually exclusive and collectively exhaustive (i.e. each exploration programme changes the probability of successfully finding a deposit).

As an exploration programme is a staged process, wherein the most cost effective techniques typically precede more expensive but often more definitive exploration techniques, a tree-diagram can be constructed of possible outcomes, their payoffs and associated costs.

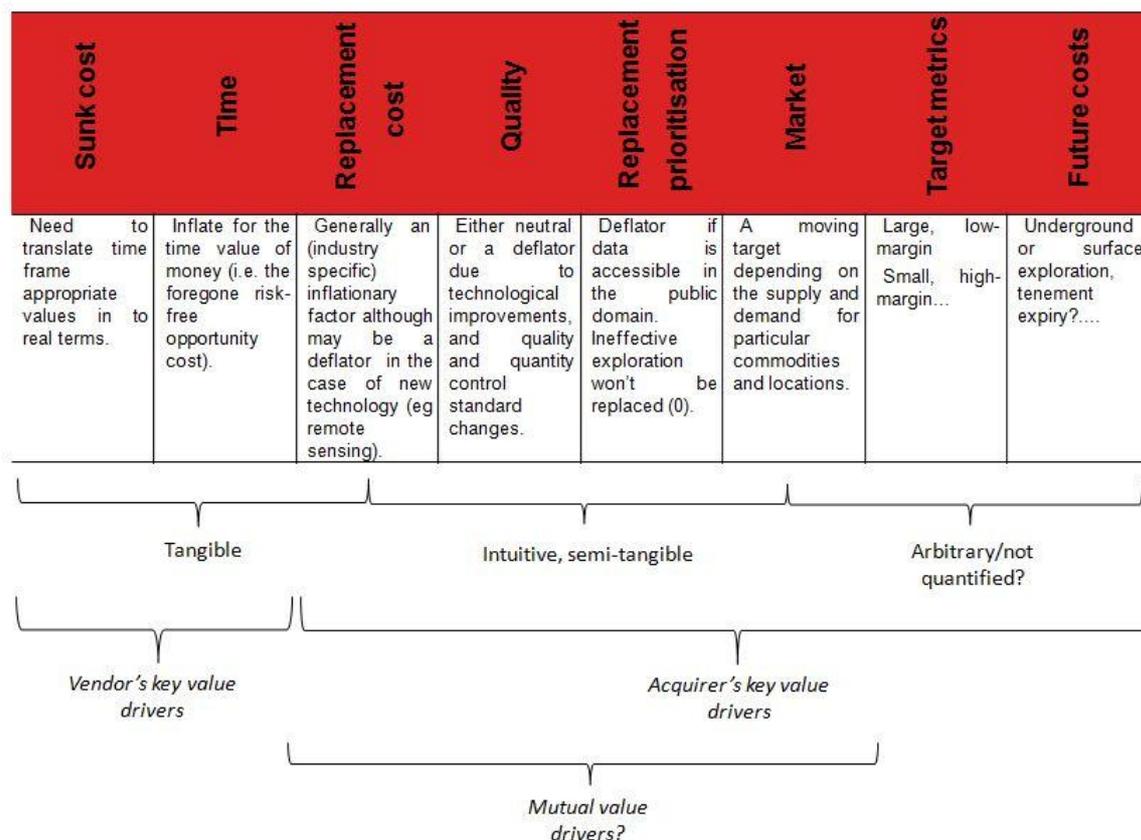
The strength of the EV method lies in its transparency and ability to replicate exactly how an exploration manager would intuitively assess the value of a project. While it may be possible to estimate the amount of metal remaining in a mineral belt (Guj et al., 2009), the main drawback of the method is that it is not always possible to confidently gauge the value of a discovery, especially in areas where there has previously been little mining activity. Furthermore, the technical value determined by the EV method may not reflect market value due to among other things, supply and demand forces.

3.4.2 Multiple of exploration expenditure method

The MEE method (or replacement value) is largely based on vendor psychology. Vendors will typically seek a return on sunk investments and as a result multipliers are used to estimate the possible market value (Onley, 1994). Some valuers may also include warranted future expenditure in the calculations, thereby taking into account some of the acquirer's position. The process of establishing the replacement/retrospective value is relatively intuitive, however the potential future value of a project based on existing expenditure is somewhat ambiguous. The research by Wastell et al. (2010) found that there is no statistically significant relationship between probability estimates of finding a commercially viable deposit and justified future expenditure commitments. It is also suggested that despite mounting negative exploration results, they did not affect the probability estimation in a manner that is akin to 'Gambler's Ruin'. The illogical interaction between mounting exploration expenditure and static probability estimates raises concern over what constitutes warranted expenditure. As a consequence, the MEE method is considered by some Australian practitioners as a method of last resort for estimating market values (Etheridge, 2009). Yet the method appears to be more accepted by Canadian practitioners despite the regulatory authorities being more resistant (Spence, 2007).

The main considerations in determining the appropriate MEE multipliers are shown in Figure 3.1 (after Bell, Ghandar and Guj, in prep). Xstract is aware of descriptive matrices, however there is no empirical evidence supporting the multiplicative weights used and as a consequence are not used by Xstract. This lack of transparency is partly due to the lack of publically available information, which can directly be correlated with the comparable transactions method.

Figure 3.1: Vendor and acquirer considerations in the replacement valuation process



3.5 Xstract's technique

In Xstract's opinion, there is no sufficiently detailed or accurate information available to reliably forecast the future cashflow from the Company's mineral assets. This opinion is based on the:

- status of concept level studies completed at the Abra Deposit
- the early exploration status of the Company's other projects.

As such, Xstract does not consider it appropriate to adopt an income approach to evaluate the Company's mineral assets.

As a result, Xstract has used a combination of the comparable transactions, joint venture terms, expected values and replacement cost methods to determine the current market value of the Company's mineral assets.

3.6 Abra Deposit Mineral Resource valuation

3.6.1 Market based approach

To help determine an appropriate market value for the Mineral Resource currently defined at the Abra Deposit, Xstract has reviewed recent comparable transactions and joint venture terms involving Australian base metal deposits. To obtain a dataset that is relevant under current time and circumstances, Xstract has only selected transactions that occurred after March 2009 when the ASX All Ordinaries Index began to recover from a major downturn (Figure 3.2).

Figure 3.2: Lead price versus the ASX All Ordinaries Index from January 2007 to April 2011

Xstract’s qualitative review of the transactions, outlined in Appendix A, resulted in four transactions it considered as being broadly similar to the defined Mineral Resources at the Abra Deposit (Table 3.3). These transactions have been converted to a lead equivalent (Pb Eq) based on the prevailing metal prices at the time of the transaction. These “similar” transactions have a market range of A\$6.88/t Pb Eq to A\$15.71/t Pb Eq with an average of A\$10.04/t Pb Eq and a median of A\$8.78/t Pb Eq.

Table 3.3: Base metal deposit transactions considered similar to the Abra deposit

Date	Project	Contained metal (Mt Pb Eq)	Deposit grade (% Pb Eq)	Implied unit value (A\$/t Pb Eq)
February 2011	Manbarrum	0.57	2.34%	9.38
October, 2010	Myrtle	2.18	5.00%	6.88
October, 2010	Copper Strike	1.59	5.97%	8.17
April, 2010	Sorby Hills	1.15	6.79%	15.71

As an alternative way of interrogating the data within Appendix A, Xstract considered the transactions where its qualitative analysis suggests the Abra Deposit should achieve either a higher or lower price per tonne of contained lead equivalent metal (Table 3.4). The transaction dataset identified only one asset as having less desirable qualities with a value of A\$8.25/t Pb Eq. The more desirable dataset comprised ten transactions and had a minimum value of A\$6.19/t Pb Eq, an average of A\$27.38/t Pb Eq and a median of A\$30.26/t Pb Eq.

Table 3.4: Implied metrics from resource transaction data

Item	Implied Values (A\$ /t Pb Eq)					
	Low	High	Range	Mean	Median	Weighted
All assets	6.19	115.00	108.81	27.20	18.20	21.00
Similar assets	6.88	15.71	8.83	10.04	8.78	9.36
Less desirable assets				8.25		
More desirable assets	6.19	115.00	108.81	33.92	30.26	32.94

*Weighted by total reported Mineral Resource tonnage according to deposit size

Furthermore, Xstract notes the following:

- The defined mineralisation associated with the “similar” transactions is typically for near-surface deposits, unlike the Abra Deposit.
- The resource categories for these assets are similar to that at the Abra Deposit, this being largely Indicated and Inferred material.
- While all deposits are polymetallic, the Abra Deposit typically has lower silver ± zinc, copper, and gold grades than these “similar” transactions.
- All the transactions considered involve appreciably smaller total Mineral Resource tonnages than at the Abra Deposit.
- The February 2011 transaction for Manbarrum may include a premium to account for synergies flowing to the Sorby Hill Joint Venture partners, given the proximity of Manbarrum to Sorby Hills (30 km apart). Both projects are undeveloped, shallow and close to established road and port infrastructure.
- In May 2010, TNG entered into a sale and purchase agreement for the Manbarrum project with Teng Fei Mining Limited (Appendix A). Whilst this transaction eventually collapsed, the implied value of A\$17.0/t Pb Eq is supportive of the valuation metrics for similar assets.
- Teck’s October 2010 transaction with Rox (Appendix A) may also be valued using a 5% Pb sample boundary cut-off (compared to 3% cut-off used in Xstract’s analysis). On this basis, the implied value was A\$14.4/t Pb Eq (compared to A\$6.90/t Pb Eq used). Xstract selected the lower cut-off grade as it is more consistent with that applied by the Company at the Abra Deposit.

Based on the market transactions, Xstract’s preferred unit value for the Abra Deposit is A\$10.00/t Pb Eq in the range A\$6.00/t Pb Eq to A\$15.00/t Pb Eq based on the median and range of implied values for similar assets. A summary of Xstract’s market based valuation of the defined resources at the Abra Deposit is presented in Table 3.5.

Table 3.5: Market based valuation summary of the Mineral Resource at the Abra Deposit

Item	Abra Deposit			Values (A\$ M)		
	Tonnage (Mt)	Grade (% Pb Eq)	In-situ Metal (Mt Pb Eq)	Low	High	Preferred
Abra Mineral Resource	107	6.89%	7.38	44.3	110.7	73.8

*Pb Eq conversion is based on prices as at 27 April 2011: lead price = US\$2,595/t, Zinc price = US\$2,243/t, copper price = US\$9,250/t, silver price = US\$45/ounce and gold price = US\$1,503/ounce.

3.6.2 Expected value method

In order to verify its valuation using the market based approach, Xstract has also considered the EV of a conceptual incorporation of the Abra Deposit's defined resources into a future mining operation. Xstract considers that the EV method has merit, given the Abra Deposit's near term exploration programme is targeting exactly such a conversion.

In forming its opinion on the EV of the hypothetical outcome from Abra's intended exploration programme, Xstract has developed a conceptual, costed drill plan designed to upgrade the status of Abra Deposit, such that it can be evaluated for mining. This conceptual exploration programme comprised two sequential drilling campaigns totalling A\$12 M over two years.

In order to derive the EV of the Abra Deposit, Xstract created a decision tree based on likely probabilities, cost and pay-off for the conversion of resources to reserves. Based on the assumptions outlined in Table 3.6, Xstract has derived an EV for the Abra Deposit of A\$29.0 M, within a range of A\$17.9 M to A\$45.6 M. Xstract notes that the EV represents a technical value and is likely to be towards the lower end of the current market value range.

Table 3.6: Expected value of a 100% interest in the Abra Deposit's Mineral Resource

Programme	Type	Input			Payoff
		Low	High	Preferred	
Infill drilling	Cost	A\$4 M			
	Probability of advancing to next stage	80%			
Detailed drilling and reserve conversion	Cost	A\$8 M			
	Probability of large pay-off	10%	20%	20%	A\$140 M
	Probability of medium pay-off	30%	30%	60%	A\$70 M
	Probability of small pay-off	60%	50%	20%	A\$20 M
Technical value		A\$17.9 M	A\$45.6 M	A\$29.0 M	

3.6.3 Replacement value method

To validate its opinion of the Abra Deposit's possible market value determined by the comparable transactions and EV methods, Xstract also reviewed the exploration expenditure history, which has a mixed-nominal total of A\$12.51 M for M52/776. Based on the Mineral Tenements Online system of the WA Department of Mines and Petroleum and Abra's proposed 2011 budget, the expenditure details for M52/776 (which contains the Abra Deposit) are:

- 2011: A\$0.1 M (Abra's budgeted amount)
- 2010: A\$0.2 M
- 2009: A\$0.67 M
- 2008: A\$4.36 M
- 2007: A\$3.27 M
- 2006: A\$1.68 M
- 2005: A\$2.01 M
- 2004: A\$0.09 M
- 2003: A\$0.02 M
- 2002: A\$0.02 M
- 2001: A\$0.09 M

In estimating a technical value for the Abra Deposit, Xstract used:

- 15% per annum for its time-inflation rate. This figure is higher than the normal +6% above the risk-free rate demanded by the market. This additional discount margin reflects the mineral risk premium.
- Half the time taken to collect the information for its time discount period. This reflects the benefit of hindsight and the targeted nature of any conceptual replacement programme.
- Consumer price index inflation rates sourced from the Reserve Bank of Australia (RBA, 2011).
- 3% per annum for the industry specific inflation. While qualitative in origin, Xstract considers this to be a reasonable rate over the last decade which was marked by significant industry inflation especially between 2005 and 2008.
- 15% per annum to reflect the affect of age on the usefulness of old data in the mineral estimate process.
- 90% replacement factor to account for the proportion of the work which would be reproduced with the benefit of hindsight. This arbitrary figure is used to reflect that much of the prior expenditure is associated with current resources. A range of 85% to 95% is used to define the lower and upper values for the replacement value.

Based on the above assumptions, Xstract estimates the replacement based technical value for a 100% interest in the Abra Deposit Mineral Resource is approximately A\$8.7 M within a range of A\$8.2 M and A\$9.2 M. As this is a technical value that cannot be reliably converted to a market value, Xstract considers the replacement value represents a minimum value for the defined resources and hence is a useful guide in validating its assumptions and conclusions drawn from other valuation methodologies.

3.6.4 Resource valuation summary

In forming its opinion of the market value of the Abra Deposit Mineral Resource, Xstract has taken guidance from the comparable transactions, joint-venture terms, expected values and replacement cost methodologies.

Furthermore, Xstract notes the following:

- The Abra Deposit is located at significant depth with future development likely to require significant capital expenditure regardless of whether open pit or underground techniques are eventually selected.
- In contrast to the majority of recent base metal transactions as highlighted in Appendix A, the Abra Deposit is a lead dominated system with lesser amounts of zinc, copper, silver and gold. Xstract considers such mineralisation is likely to have a lower appeal in the current market relative to zinc or copper rich systems.
- In terms of payable metal, only the lead and silver content of the lead concentrate and copper, gold and silver content of the copper concentrate are considered by Xstract to be likely to ultimately contribute to any future cash flows emanating from a mining operation at the Abra Deposit.
- Globally, Xstract knows of no stand-alone mines operating at a combined lead and zinc grades of less than 6% Pb + Zn.
- Due to greater public scrutiny and regulatory compliance requirements, lead mines tend to be higher cost / lower margin relative to other base metal (i.e. zinc/copper) mining operations.

- An optimal mining and infrastructure solution remains to be determined for the Abra Deposit.

With these factors in mind, Xstract considers the market-based approach to be the most instructive in determining the current market value, albeit tempered by the results of the EV and replacement value methods. As such, Xstract has elected to apply a discount to the implied unit value for the defined Mineral Resources at the Abra Deposit using the market-based approach (refer Section 3.6.1). Xstract considers that the current market would pay A\$7.00/t Pb Eq within the range A\$5.00/t Pb Eq to A\$9.00/t Pb Eq for the payable metal contained within the Abra Deposit (i.e. 6.45 Mt Pb Eq as opposed to the 7.38 Mt of in-situ Pb Eq metal outlined in Table 3.5).

A summary of Xstract's valuation of the Abra Deposit's Mineral Resource is presented in Table 3.7.

Table 3.7: Abra Mineral Resource valuation summary

Approach	Method	Values (A\$ M)		
		Low	High	Preferred
Market-based	Comparable + joint venture terms	44.3	110.7	73.8
Cost-based	Expected values	17.9	45.6	29.0
Cost-based	Replacement value	8.2	9.2	8.7
Xstract's Preferred Value		32.3	58.1	45.2

*Any discrepancies between tables is due to rounding.

3.7 Exploration potential valuation

3.7.1 Comparable transactions method

Xstract has elected to value the project tenements using multiples implied by recent Australian transactions for early-stage base metal exploration projects (Appendix B). Xstract has considered 100% equity, comparable market transactions involving Australian early-stage base metal exploration projects that occurred after March 2009, when the ASX All Ordinaries Index and metal prices began to recover from a major downturn (Figure 3.2). Xstract considers that while commodities markets have improved significantly since March 2009, the market for early-stage exploration assets remains subdued due to the prevailing market's aversion to risky investments.

To assist in identifying the market signals contained within the dataset, Xstract has:

- Compared each transaction based on its geoscientific rating;
- Used an unweighted score where the geoscientific descriptive text for each transaction matches that for the Abra Deposit. This ensures that the same value drivers are identified and that the geoscientific rating is not a product of completely different value driver. This rating was based on descriptions matching minor off-project workings, abundant project workings, targets identified and generally favourable geology and areas between 350 and 450 km² (i.e. ± 50 km²).
- Used a manual qualitative analysis to examine the merits and peculiarities of each transaction. This is undertaken to take into account the practitioner's experience and judgment as to whether each transaction is representative of the broader market. As part of this process, projects that are similar, less or more desirable than the Abra Deposit's exploration potential were identified. The range of values suggested by the

'similar' assets is tested by examining the upper value range indicated in the less desirable assets and the lower value range suggested by the more desirable assets. This technique ensures that information from all three data subsets is taken into account.

Xstract's manual 'geoscientific' analysis of the transactions identified in Appendix B suggests that Australian early-stage, base metal exploration projects similar to the Mulgul Project may attract market values in the range A\$400 to A\$6,200/km² (Table 3.8).

Table 3.8: Implied metrics from exploration transaction data

Item	Implied Values (A\$/km ²)					
	Low	High	Range	Mean	Median	Weighted
All assets	350	401,591	401,240	23,560	3,251	9,938
Similar assets	400	6,200	5,800	2,870	2,292	1,776
Less desirable assets	350	3,880	3,530	1,514	992	2,100
More desirable assets	7,169	401,591	394,422	79,860	10,706	59,970

Based on its review of the available data, Xstract has elected to assign a value based on the perceived maturity and exploration potential of the Company's projects. Xstract considers that the current market would pay in the range A\$2,000 to A\$6,000/km² for Abra's Mulgul and Jillawarra Projects, A\$1,000 to A\$4,000/km² for Abra's Havelock Project (given the location of this early stage exploration project relative to the Magellan mine), and A\$500 to A\$2,000/km² for the Mount Deverell Project.

A summary of Xstract's market based valuation approach is presented in Table 3.9.

Table 3.9: Market based valuation of the exploration potential of Abra's projects

Project	Applied Value Range (A\$/km ²)	Area (km ²)	100% Equity basis			Attributable		
			Low (A\$ M)	High (A\$ M)	Preferred (A\$ M)	Low (A\$ M)	High (A\$ M)	Preferred (A\$ M)
Mulgul	\$2000 to \$6,000	289.3*	0.58	1.74	1.16	0.58	1.74	1.16
Jillawarra	\$2000 to \$6,000	1,043.8	2.09	6.26	4.18	1.88	5.64	3.76
Mount Deverell	\$500 to \$2,000	170.8	0.09	0.34	0.21	0.09	0.34	0.21
Havelock	\$1000 to \$4,000	59.6	0.06	0.24	0.15	0.05	0.21	0.13
Total			2.82	8.58	5.70	2.60	7.93	5.26

* excludes M52/776 (evaluated in Section 2.6) and associated infrastructure leases L52/121 and G52/286 (which have nominal value on the basis that they do not convey rights to minerals and are only of use if, and when, the Abra Deposit is developed).

3.7.2 Replacement value method

To validate its opinion of the possible market value determined by the comparable transactions method for the Company's other assets, Xstract also reviewed the exploration expenditure history for each project. Based on the Mineral Tenements Online system of the

WA Department of Mines and Petroleum and Abra's proposed 2011 budget, the expenditure details are shown in Table 3.10:

Table 3.10: Attributable historic and forecast expenditures for Abra's other exploration projects

Year	Mulgul	Jillawarra*	Mount Deverell	Havelock*
2011	\$513,313	\$668,209	\$218,100	\$188,822
2010	\$375,615	\$889,886	\$105,504	\$93,093
2009	\$541,388	\$939,846	\$133,683	\$138,810
2008	\$465,398	\$1,067,726	\$73,612	\$83,551
2007	\$648,442	\$839,038	\$45,530	\$74,251
2006	\$279,652	\$126,900	\$23,593	\$16,123
2005	\$57,280	\$67,316		
2004	\$45,021	\$61,842		
2003	\$104,400	\$450,135		
2002	\$34,903	\$179,532		
2001	\$73,778			
Total	\$3,139,190	\$5,290,430	\$600,022	\$594,650

*Adjusted to account for Abra's equity position in the joint venture tenements.

In estimating a technical value for the Company's other projects outside of the Abra Deposit, Xstract has applied the same assumptions as for the Abra Deposit, with the exception of the replacement factor where a 50% factor was used. This factor reflects that much of the prior expenditure is associated with target generation and initial reconnaissance assessment and hence is unlikely to be replicated. A range of 40% to 60% is used to define the lower and upper values for the replacement value.

Based on the above assumptions, Xstract estimates the replacement based technical value for a 100% interest in the Company's other mineral assets is approximately A\$4.13 M within a range of A\$3.31 M and A\$4.96 M, as outlined in Table 3.11. Xstract notes that while this is a technical value it provides a useful guide in validating the assumptions and conclusions drawn from other valuation methodologies.

Table 3.11: Estimated replacement value for Abra's projects (excluding the Abra Deposit)

Project	Values (A\$ M)		
	Low	High	Preferred
Mulgul	1.07	1.60	1.33
Jillawarra*	1.79	2.68	2.23
Mount Deverell	0.23	0.34	0.29
Havelock*	0.22	0.34	0.28
	3.31	4.96	4.13

*Adjusted to account for Abra's equity position in any joint venture tenements.

3.7.3 Exploration valuation summary

Xstract's opinion of the possible market value of the exploration potential associated with Abra's project areas is summarised in Table 3.12. In determining its preferred, lower and

upper values, Xstract has relied upon a combination of the comparable transactions and replacement value methodologies.

Table 3.12: Exploration valuation summary

Method	Project	Attributable (A\$ M)		
		Low	High	Preferred
Comparable transactions	Mulgul	0.58	1.74	1.16
	Jillawarra	1.88	5.64	3.76
	Mount Deverell	0.09	0.34	0.21
	Havelock	0.05	0.21	0.13
		2.60	7.93	5.26
Replacement value	Mulgul	1.07	1.60	1.33
	Jillawarra	1.79	2.68	2.23
	Mount Deverell	0.23	0.34	0.29
	Havelock	0.22	0.34	0.28
		3.31	4.96	4.13
Xstract's Preferred Values	Mulgul	1.07	1.70	1.33
	Jillawarra	1.80	4.00	3.00
	Mount Deverell	0.23	0.34	0.29
	Havelock	0.22	0.34	0.28
		3.32	6.38	4.90

*Any discrepancies between tables is due to rounding.

3.8 Other considerations

3.8.1 Previous valuations

Having made due enquiry of the Company's management, Xstract is not aware of any recent valuations of Abra's mineral assets which are of relevance to this report.

3.9 Valuation summary

In deriving its preferred value and range for Abra's mineral assets, Xstract has used a variety of valuation methodologies. As each valuation methodology has its own strengths and weaknesses, and hence it is generally accepted as best practice to apply as many methods as possible under the relevant time and circumstances. On this basis, Xstract has used both market and cost based approaches to arrive at its preferred value of A\$50.06 M within a range of A\$35.58 M to A\$64.44 M for Abra's mineral assets. Xstract's valuation is summarised in Table 3.13.

Table 3.13: Valuation summary – attributable to Abra

Project	Aspect	Values (A\$ M)		
		Low	High	Preferred
Abra Deposit	Mineral Resource	32.26	58.06	45.16
Mulgul Project	Exploration potential	1.07	1.70	1.33
Jillawarra Project	Exploration potential	1.80	4.00	3.00
Mount Deverell Project	Exploration potential	0.23	0.34	0.29
Havelock Project	Exploration potential	0.22	0.34	0.28
	Total	35.58	64.44	50.06

*Any discrepancies between tables is due to rounding.

4 Declaration

4.1 Independence

Xstract is a privately owned and operated mining and resource industry consultancy providing independent, strategic and tactical advice and personalised professional services to exploration and mining companies, engineering firms, financial institutions and investors. We operate through our offices in Brisbane and Perth. Our corporate services include technical audits, project reviews, valuations, independent expert reports, project management plans and corporate advice.

Xstract personnel have extensive experience in the preparation of independent valuations for a variety of commodities including coal, gold, base metal, platinum, diamonds and iron.

This report has been prepared independently and in accordance with the VALMIN and JORC Codes. The authors do not hold any interest in Abra, related parties, or in any of the mineral properties or interested parties, which are the subject of this report. Xstract personnel involved in the preparation of this report have not previously been engaged on any consulting assignments involving Abra or its mineral assets.

Xstract notes however, that in undertaking this assignment it has had to establish clear demarcation lines and separation of duties to ensure that no potential conflicts of interest may arise. In particular, Xstract has compiled the valuation section of this report from its Brisbane office as there is a relationship between a senior Perth-based Xstract employee and an Abra employee. The Xstract employee has not contributed to, been involved in the preparation of or otherwise influenced this report whatsoever.

Fees for the preparation of this report are being charged at Xstract's standard rates, whilst expenses are being reimbursed at cost. Payment of fees and expenses is in no way contingent upon the conclusions drawn in this report.

4.2 Qualifications

Patrick Rice (Principal Consultant – Geology, Perth)

Patrick has over 30 years' experience in the mining industry, during which time he gained a wealth of experience in various roles within the Anglo American group of companies, in the fields of Exploration, Geo-sciences and Mineral Resources, Surveying and Mine Planning, as well as Mining Economic assessments. This broad range of skills and extensive experience base offers unique flexibility, specifically in broad based due diligence studies, corporate governance / technical reviews, and asset optimisation reviews, which are Patrick's speciality's. Patrick holds a MEng (Mineral Resources), a Grad Dip Eng. (Geostatistics/Geology), is a registered professional natural scientist (Pr.Sci.Nat) at the South African Council for Natural Scientific Professions (SACNASP), a registered Mine Surveyor with the South African Council for Professional Land and Technical Surveyors (PLATO), and a Fellow of the AusIMM (FAusIMM).

Xavier Hill (Senior Consultant – Mining, Perth)

Xavier has seven years experience within the mining industry, primarily in underground metalliferous operations. Upon graduating, Xavier worked at Newmont's Jundee and Pajingo operations, where he completed his underground time and worked as a development engineer. He then went on to work at BHPBilliton's Leinster operations where he gained experience as a planning and production engineer. In early 2007, Xavier left Leinster to join Jubilee Mines at its Cosmos operation, where he undertook various roles in mine planning,

mine feasibility, project management and operating as underground manager. In his time at Cosmos Xavier realised a number of operational savings and saw through the initial design work, to the completion of the AM2 and AM5 Disseminated orebodies. Xavier holds a Bachelor of Engineering (Mining), an MBA and member of the AusIMM.

Manish Garg (Principal Consultant – Corporate Services)

Manish has some 20 years mining experience in mining operations, marketing, corporate roles and consulting. Before joining Xtract Manish has managed business analysis, planning and improvement functions at Rio Tinto Coal, BHP Billiton Illawarra Coal, WMC Resources, Oceanagold and Pasminco apart from working as Metallurgy Manager at base metal operations. Manish's experience includes market intelligence, due diligence, metal and concentrate marketing, valuation, strategic planning and optimizing business performance. He seeks to enhance business performance and profitability by analysing business performance and deploying appropriate business planning and improvement systems. Manish has managed and worked on due diligences, feasibility studies and reviews for banks, financial investors and mining companies on worldwide projects including Australia, New Zealand, India, South Africa, Congo, Zambia, Kazakhstan, Peru and Bolivia. Manish is a BEng (Hons) (Metallurgical Engineering), Master of Applied Finance, and a member of the Financial Services Institute of Australia.

Jeames McKibben (General Manager/Principal Consultant – Corporate Services)

During more than 17 years in the mining and mineral industry, Jeames has served in a diverse range of roles including corporate consultant, project manager, geologist and analyst. Jeames' most recent role was as the Divisional Manager for Snowden Mining Industry Consultants Pty Ltd's Corporate Services Division. He has a strong record in project due diligence, independent technical review, valuation, deposit evaluation and the promotion of best practice strategies in the workplace. As a corporate consultant he specialises in valuations and Mineral Expert Reports for equity transactions and Independent Technical Reports in support of project finance. He has assisted numerous mineral companies, financial and legal institutions in securing regulatory approvals for IPOs and other secondary filings on the following international exchanges: Australian Securities Exchange, Alternative Investment Market, London Stock Exchange, Johannesburg Securities Exchange and Toronto Stock Exchange. Other mandates include technical due diligence in support of information memoranda, divestments, acquisitions and mergers, Pre-Feasibility Studies and independent Competent Persons' Reports. Jeames has a MBA and a BSc (First Class Honours), and is a member of the AIG and the AusIMM. Jeames was recently appointed to a joint AusIMM/AIG Committee to review the VALMIN Code and he currently sits on the VALMIN Conference Organising Committee.

4.3 Competent person statement

The information in this report that relates to Mineral Resources is based on information compiled by Mr M.J McDonald and Mr D.C. Speijers, who are both Fellows of the Australasian Institute of Mining and Metallurgy. Mr McDonald and Mr Speijers are Principal Consultants at McDonald Speijers consultants, who have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

The information in this report that relates to Exploration Results is based on information compiled by Mr Paul Cranney, Consulting Geologist. Mr Cranney is a Member of the

Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Cranney has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities undertaken 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 Cranney 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 Exploration Results and Mineral Resources is based on information compiled, which has been reviewed by Mr Patrick Rice, who is a full time employee of Xstact and a Fellow of the AusIMM.

4.4 Warranties and indemnities

Abra has represented in writing to Xstact that full disclosure has been made of all material information and that to the best of its knowledge and understanding, such information is complete, accurate and true.

As recommended in Section 39 of the VALMIN Code, Abra has provided Xstact with an indemnity under which Xstact is to be compensated for any liability and/or any additional work or expenditure resulting from any additional work required which:

- results from Xstact’s reliance on information provided by Abra and/or Independent consultants that is materially inaccurate or incomplete, or
- relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

4.5 Consent

Xstact consents to this report being included in BDO’s IERs (for inclusion in Abra’s target statements in relation to the takeover offers from HNC) in the form and context in which it is provided, and not for any other purpose. Xstact provides this consent on the basis that the technical assessments and opinions expressed elsewhere in the IER are considered with, and not independently of, the information set out in Xstact’s complete report.

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Appendix A

Resource Transactions

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In April 2011, Argent Minerals Ltd acquired from Golden Cross Resource Ltd the 30% interest it didn't already own in the Kempfield project for A\$1.00 M cash, A\$1.00 M in shares and a further A\$1.00 M in cash five days prior to a decision to mine (excluded from this valuation calculation).</p>	<p>The 129 km² Kempfield project is located about 30 km south of Blayney in New South Wales, Australia. The open pit feasibility study project contained an oxide and mixed Measured Mineral Resource of 2.1 Mt grading 70.3 g/t Ag, and 0.1 g/t Au; an Indicated Mineral Resource of 2.7 Mt grading 52.4 g/t Ag and 0.1 g/t Au; and an Inferred Mineral Resource of 1.0 Mt grading 45.5 g/t Ag and 0.1 g/t Au. The project also contained a primary Measured Mineral Resource of 2.1 Mt grading 60.2 g/t Ag, 0.1 g/t Au, 0.64% Pb and 1.08% Zn; an Indicated Mineral Resource of 7.5 Mt grading 45.7 g/t Ag, 0.1 g/t Au, 0.59% Pb and 1.21% Zn; and an Inferred Mineral Resource of 4.8 Mt grading 38.5 g/t Ag, 0.1 g/t Au, 0.60% Pb and 1.24% Zn. Based on an April 2010 scoping study, the project may have been able to support a 10.5 year mine life with an initial CapEx of A\$42 M, a 1.6:1.0 strip ratio for an NPV10% of A\$80.6 M. Using November 2010 metal prices, the NPV10% rose to A\$185.0 M.</p>	<p>0.81 Mt @ 4%</p> <p>Measured – 23% Indicated – 50% Inferred – 27%</p> <p>Lead – 10.7%</p>	<p>8.3</p>
<p>In March 2011, Laconia Resources Ltd acquired from Jabiru Metals Ltd a 95% interest in the Lennon's Find project for 10.00 M shares deemed A\$0.083/share which were subject to a 6 month escrow period.</p>	<p>The Lennon's Find project is located about 40 km southeast of Marble Bar and 230 km southeast of Port Hedland in the Pilbara region of Western Australia. The VHMS advanced exploration project contained an Inferred Mineral Resource of 0.85 Mt grading 7.7% Zn, 1.8% Pb, 0.7% Cu and 115 g/t Ag. The known mineralisation occurred within two zones which outcropped at surface. The Lennon's Find mineralisation was discovered in 1907 and was subject to small scale mining between 1954 and 1963 which yielded 30.5 t Cu ore and 20.3 t of Zn ore from shallow open pits.</p>	<p>0.14 Mt @ 4%</p> <p>Inferred – 100%</p> <p>Lead – 10.9%</p>	<p>6.2</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In February 2011, Kimberley Metals Ltd and Henan Yuguang Gold & Lead Co Ltd obtained from TNG Resources Ltd the right to earn an undivided 51% interest in the Manbarrum project for A\$2.50 M cash and by spending A\$2.00 M on exploration over two years.</p>	<p>The 407 km² Manbarrum project is located about 80 km northeast of Kununurra in the Kimberley region of Western Australia. Based on a March 2010, estimate, the project contained an oxide hosted Indicated Mineral Resource of 0.58 Mt grading 1.45% Zn, 0.043% Pb and 5.14 g/t Ag; and an Inferred Mineral Resource of 0.88 Mt grading 1.34% Zn, 0.34% Pb and 3.24 g/t Ag. The project also contained a primary Indicated Mineral Resource of 12.91 Mt grading 2.07% Zn, 0.57% Pb and 4.77 g/t Ag; and an Inferred Mineral Resource of 10.02 Mt grading 1.84% Zn, 0.45% Pb and 4.61 g/t Ag. Most of the know mineralisation was located within 200 m below surface and contained high-grade zones which were to be evaluated for open pit mining potential.</p>	<p>0.57 Mt @ 5%</p> <p>Indicated – 64%</p> <p>Inferred – 36%</p> <p>Lead – 19.0%</p>	<p>9.4</p>
<p>In February 2011, Xstrata Plc acquired from Cape Lambert Resources Ltd the 25% interest it did not already own in the Lady Loretta project for A\$30.0 M cash.</p>	<p>The 253 km² Lady Loretta project is located in Western Queensland, Australia. The underground feasibility study project is located adjacent to the Lady Annie mining project and contained a Measured Resource of 7.5 Mt grading 17.4% Zn, 6.7% Pb and 105 g/t Ag, an Indicated Resource of 5.1 Mt grading 16.3% Zn, 4.7% Pb and 84 g/t Ag and an Inferred Resource of 1.1 Mt grading 16.9% Zn, 4.6% Pb and 86 g/t Ag.</p>	<p>3.43 Mt @ 17%</p> <p>Measured – 58%</p> <p>Indicated – 34%</p> <p>Inferred – 8%</p> <p>Lead – 23.1%</p>	<p>35.0</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In October 2010, Teck Resources Ltd obtained from Rox Resources Ltd the option to earn a staged 70% interest in the Myrtle project by spending A\$15.00 M on exploration over eight years.</p>	<p>The 669 km² Myrtle project is located within 20 km south of Xstrata Plc's Macarthur River min in the Northern Territory, Australia. Using a 3% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 5.8 Mt grading 3.56% Zn and 0.90% Pb; and an Inferred Mineral Resource of 37.8 Mt grading 4.17% Zn and 0.95% Pb. Using a 5% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 1.2 Mt grading 5.38% Zn and 1.42% Pb; and an Inferred Mineral Resource of 14.1 Mt grading 5.45% Zn and 1.39% Pb. <u>The 3% cut-off is used in this valuation calculation.</u> The known mineralisation may have conceptually been amenable to both underground and open pit mining techniques.</p>	<p>2.18 Mt @ 5%</p> <p>Indicated – 12%</p> <p>Inferred – 88%</p> <p>Lead – 18.9%</p>	<p>6.9</p>
<p>In October 2010, Teck Resources Ltd obtained from Rox Resources Ltd the option to earn a staged 70% interest in the Myrtle project by spending A\$15.00 M on exploration over eight years.</p>	<p>The 669 km² Myrtle project is located within 20 km south of Xstrata Plc's Macarthur River mine in the Northern Territory, Australia. Using a 3% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 5.8 Mt grading 3.56% Zn and 0.90% Pb; and an Inferred Mineral Resource of 37.8 Mt grading 4.17% Zn and 0.95% Pb. Using a 5% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 1.2 Mt grading 5.38% Zn and 1.42% Pb; and an Inferred Mineral Resource of 14.1 Mt grading 5.45% Zn and 1.39% Pb. <u>The 5% cut-off is used in this valuation calculation.</u> The known mineralisation may have conceptually been amenable to both underground and open pit mining techniques.</p>	<p>1.04 Mt @ 7%</p> <p>Indicated – 8%</p> <p>Inferred – 92%</p> <p>Lead – 20.5%</p>	<p>14.4</p>
<p>In October 2010, Kagara Ltd offered to acquire the 82.78% interest it didn't already own in Copper Strike Ltd for A\$0.11 cash per acquired share. As of September 2010, Copper Strike Ltd was composed of 116.46 M shares and 2.20 M unlisted options. On 30 June 2010, Copper Strike Ltd had A\$2.59 M cash within</p>	<p>The principal assets of Copper Strike Ltd are its 100% interest in the >260 km² Einasleigh project and 30% interest in the 210 km² Walford Creek projects located in Queensland, Australia. The Einasleigh project is located about 350 km northwest of Townsville and contained a number of deposits. The Kaiser Bill deposit contained an Indicated Mineral Resource of 13.5 Mt grading 0.84% Cu, 0.13 g/t Au and 6 g/t Ag; and an Inferred Mineral Resource of 1.5 Mt grading 0.85% Cu, 0.08 g/t Au and 11 g/t Ag. The Einasleigh former mine</p>	<p>1.60 Mt @ 6%</p> <p>Indicated – 54%</p> <p>Inferred – 46%</p> <p>Lead – 12.9%</p>	<p>8.2</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>current assets of A\$2.71 M which were offset by liabilities of A\$0.22 M. The ordinary shares and current assets less liabilities position are used in this valuation calculation.</p>	<p>contained an Indicated Mineral Resource of 0.5 Mt grading 4.0% Cu, 0.22 g/t Au and 18 g/t Ag; and an Inferred Mineral Resource of 0.6 Mt grading 1.9% Cu, 0.10 g/t Au and 8 g/t Ag. Based on a 2009 feasibility study, the underground Einasleigh and open pit Kaiser Bill projects may have been able to support a 9 year mining operation with a CapEx of A\$122.0 for an NPV10% of A\$81.0 M and a 26% IRR. Other deposits within the Einasleigh project include the Chloe, Jackson, Stella and Railway Flat deposits. The Chloe deposits contained an Indicated Mineral Resource of 2.2 Mt grading 0.2% Cu, 39 g/t Ag, 4.7% Zn and 2.0% Pb. The Jackson deposit contained an Indicated Mineral Resource of 1.1 Mt grading 0.1% Cu, 78 g/t Ag, 4.6% Zn and 2.4% Pb; and an Inferred Mineral Resource of 0.4 Mt grading 0.2% Cu, 64 g/t Ag, 4.6% Zn and 1.4% Pb. The Stella deposit contained an Inferred Mineral Resource of 0.4 Mt grading 0.2% Cu, 51 g/t Ag, 3.9% Zn and 1.8% Pb. The Railway Flat project contained and Inferred Mineral Resource of 0.9 Mt grading 0.2% Cu, 16 g/t Ag, 3.4% Zn and 0.9% Pb. The Walford Creek project is located about 300 km north-northwest of Mt Isa and contained a near surface, Inferred Mineral Resource of 6.5 Mt grading 0.6% Cu, 1.6% Pb, 2.1% Zn, 25 g/t Ag and 0.07% Co.</p>		
<p>In June 2010, Ivernia Inc obtained from Prairie Downs Metals Ltd the option to earn a staged 80% interest in the Prairie Downs project for A\$10.00 M cash and by spending A\$10.00 M on exploration over five years.</p>	<p>The 550 km² Prairie Downs project is located about 60 km southwest of Newman in the Pilbara region of Western Australia. Based on a June 2010 updated estimate announcement, the project contained an Indicated Mineral Resource of 2.28 Mt grading 5.22% Zn, 1.59% Pb and 15 g/t Ag; and an Inferred Mineral Resource of 0.70 Mt grading 4.03% Zn, 1.58% Pb and 14.9 g/t Ag. Prairie Downs Metals Ltd reported that the project area was also prospective for gold, uranium and iron mineralisation.</p>	<p>0.22 Mt @ 7% Indicated – 80% Inferred – 20% Lead – 21.7%</p>	<p>115</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In April 2010, Toho Zinc Co Ltd offered to acquire the 75.9% it didn't already own in CBH Resources Ltd for A\$0.24/share. As at 31 June 2009, CBH Resource Ltd was comprised of 887.74 M ordinary shares and 13.05 M options. As at 31 March 2010, CBH Resources Ltd had about A\$37.6 M cash excluding restricted cash of A\$12.1 M. The fully diluted shares are used and the entire cash position are used in this valuation calculation.</p>	<p>The principal assets of CBH Resources Ltd are its 100% interest in the Endeavour and Rasp projects in New South Wales, 100% interest in the Panorama and 60% interest in the Kangaroo Caves and Brents projects in Western Australia. The Endeavour underground mine contained a Proven Ore Reserve of 1.8 Mt grading 7.7% Zn, 5.0% Pb, 66 g/t Ag and 0.2% Cu and a Probable Ore Reserve of 5.8 Mt grading 7.5% Zn, 4.8% Pb, 108 g/t Ag and 0.2% Cu; contained within a Measured Mineral Resource of 10.0 Mt grading 6.6% Zn, 3.9% Pb, 61 g/t Ag and 0.19% Cu and an Indicated Mineral Resource of 15.7 Mt grading 6.8% Zn, 4.2% Pb, 62 g/t Ag and 0.18% Cu. The Endeavour project also contained an Inferred Mineral Resource of 0.5 Mt grading 7.5% Zn, 5.1% Pb, 90 g/t Ag and 0.19% Cu. The Rasp underground development project contained a Probable Ore Reserve of 3.17 Mt grading 6.0% Zn, 4.6% Pb and 64 g/t Ag contained within an Indicated Mineral Resource of 6.85 Mt grading 6.2% Zn, 5.0% Pb and 85 g/t Ag. In addition, the Rasp project contained an Inferred Mineral Resource of 9.66 Mt grading 6.9% Zn, 5.2% Pb and 92 g/t Ag. The Panorama underground scoping study project contained a Measured Mineral Resource of 4.5 Mt grading 3.2% Zn and 0.6% Cu, an Indicated Mineral Resource of 10.5 Mt grading 3.5% Zn and 1.2% Pb and an Inferred Mineral Resource of 4.3 Mt grading 2.2% Zn and 0.6% Cu. The Kangaroo Caves advanced exploration project contained a near surface Indicated Mineral Resource of 4.3 Mt grading 3.4% Zn and 0.6% Cu and an Inferred Mineral Resource of 2.0 Mt grading 3.3% Zn and 0.3% Cu. The Brents advanced exploration project contained an Inferred Mineral Resource of 0.6 Mt grading 7.8% Zn and 0.7% Cu.</p>	<p>7.61 Mt @ 11%</p> <p>Proved – 4% Probable – 17% Measured – 22% Indicated – 54% Inferred – 24%</p> <p>Lead – 25.2%</p>	<p>29.4</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In April 2010, Henan Yuguang Lead & Gold Co Ltd obtained from Kimberley Metal Ltd the right to earn an undivided 25% interest in the Sorby Hills project by spending A\$5.00 M on feasibility studies (no time frame identified).</p>	<p>The 136 km² Sorby Hills project is located between 50 and 100 km northeast of Kununurra in the Kimberley region of Western Australia. The project contained a near-surface Inferred Mineral Resource of 16.9 Mt grading 4.60% Pb, 56g/t Ag and 0.7% Zn. The project had a long exploration history, including the development of an underground exploration, which was to resolve grade continuity, geotechnical and hydrogeological uncertainties. The decline was abandoned due to poor ground conditions and ground water inflow.</p>	<p>1.15 Mt @ 7% Inferred – 100% Lead – 67.8%</p>	<p>15.7</p>
<p>In January 2010, Toho Zinc Co Ltd offered to acquire from CBH Resources Ltd a 50% interest in the Rasp project for A\$57.5 M cash.</p>	<p>The Rasp project is located in Broken Hill in New South Wales, Australia. The underground development project contained a Probable Ore Reserve of 3.17 Mt grading 6.0% Zn, 4.6% Pb and 64 g/t Ag contained within an Indicated Mineral Resource of 6.85 Mt grading 6.2% Zn, 5.0% Pb and 85g/t Ag. In addition, the Rasp project contained an Inferred Mineral Resource of 9.66 Mt grading 6.9% Zn, 5.2% Pb and 92 g/t Ag. The Rasp project was based on a new underground development focussed on mining high-grade pillars and the unmined Western Mineralisation associated with the Centenary deposits. The project was expected commence production in 2010 and support a 15 year mine life and process about 0.75 Mtpa.</p>	<p>2.39 Mt @ 14% Probable – 17% Indicated – 40% Inferred – 60% Lead – 35.4%</p>	<p>48.2</p>
<p>In December 2009, Kagara Ltd acquired from Liontown Resources Ltd a 100% interest in the Liontown project for A\$2.25 M cash and a further A\$2.25 M on commencement on mining operations (excluded from this valuation calculation).</p>	<p>The 51.5 km² Liontown project is located approximately 30 km from Kagara Ltd's Thalanga concentrator, south of Charters Towers in Queensland, Australia. The Liontown project contained a near surface, oxide Inferred Mineral Resource of 0.21 Mt grading 7.4% Zn, 1.1% Cu, 3.1% Pb, 31 g/t Ag and 0.96 g/t Au. The project also contained a sulphide hosted Indicated Mineral Resource of 0.73 Mt grading 7.3% Zn, 0.5% Cu, 2.5% Pb, 27g/t Ag and 0.71g/t Au; and an Inferred Mineral Resource of 0.91 Mt grading 7.6% Zn, 0.5% Cu, 2.2% Pb, 28 g/t Ag and 0.33 g/t Au. The known mineralisation remained open along strike and at depth. Anomalous geochemical soil samples could be traced for up to 2 km from the deposit.</p>	<p>0.25 Mt @ 14% Indicated – 39% Inferred – 61% Lead – 17.9%</p>	<p>9.0</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In November 2009, BHP Billiton Ltd obtained from Breakaway Resources Ltd the right to earn a 70% interest in the non-gold and copper rights to the Altia project by spending A\$10.0 M on exploration over five years.</p>	<p>The 8.0 sm² Altia project is located approximately 4 km southwest of Breakaway Resources Ltd's Eloise copper mine in the Cloncurry district of Queensland, Australia. The project contained an aggregate Inferred Resource of 5.78 Mt grading 40.3 g/t Ag, 3.96% Pb and 0.49% Zn. The known mineralisation was of the 'Cannington-style' and associated with a sequence of intercalated arenite and BIF rock units.</p>	<p>0.31 Mt @ 5%</p> <p>Inferred – 100%</p> <p>Lead – 73.3%</p>	<p>37.8</p>
<p>In July 2009, Hunan Nonferrous acquired a 45% interest in Meridian Minerals Ltd by subscribing to 131.25 M ordinary shares with a stated value of A\$0.08/share. As at 31 December 2009, Meridian Minerals Ltd held approximately A\$0.46 M cash and in April 2009 had raised an additional A\$0.71 M cash. The cash position is included in this valuation calculation.</p>	<p>The principal assets of Meridian Minerals Ltd are its right to earn a 100% interest in the 485 sm² Lennard Shelf project in Western Australia; a 100% interest in the 1,400 km² Lachlan Fold Belt project in New South Wales; a 100% interest in the 6,300 km² Gawler Craton project in South Australia; 100% interest in the roughly 890 km² Thomson Fold Belt project in New South Wales; and a 100% interest in the 300 km² Running River project in the Northern Territory, Australia. The Lennard Shelf former underground mining project contained an aggregate Measured Resource of 0.024 Mt grading 6.82% Zn and 9.77% Pb; an Indicated Resource of 3.04 Mt grading 7.70% Zn, 2.51% Pb and 22.63 g/t Ag; and an Inferred Resource of 5.14 Mt grading 7.17% Zn, 6.35% Pb, 0.06% Cu and 36.11 g/t Ag. Meridian Minerals Ltd's other project areas largely remained at an early-stage of exploration for gold, copper, uranium and/or tin.</p>	<p>1.07 Mt @ 13%</p> <p>Indicated – 30%</p> <p>Inferred – 70%</p> <p>Lead – 37.7%</p>	<p>20.6</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
In June 2009, YTC Resources Ltd acquired from CHB Resources Ltd a 100% interest in the Hera and 80% interest in the Nymagee projects for A\$12.0 M cash and a 5% royalty on future gold doré production.	The contiguous Hera and Nymagee projects are located approximately 100 km east of Cobar in western New South Wales, Australia. The Hera former underground mine contains an Indicated Resource of 1.7 Mt grading 2.81 g/t Au, 0.18% Cu, 2.59% Pb, 3.26% Zn and 13.48 g/t Ag; and an Inferred Resource of 1.6 Mt grading 2.52 g/t Au, 0.17% Cu, 2.86% Pb, 3.45% Zn and 16.88 g/t Ag.	0.39 Mt @ 12% Indicated – 52% Inferred – 48% Lead – 23.3%	31.1
In April 2009, Meridian Minerals Ltd obtained from Xstrata Plc and Teck Cominco Ltd the right to earn a 100% interest in the Kutarta and Fossil Downs projects for 25.0 M shares (deemed A\$0.02/share) and by spending A\$3.0 M on exploration and development (no time frame identified).	The Kutarta and Fossil Downs projects are located in the Kimberley Region of Western Australia. The Kurtata project contained an Indicated Resource of 1.91 Mt grading 7.4% Zn, 0.6% Pb and 36 g/t Ag; and an Inferred Resource of 0.43 Mt grading 6.4% Zn, 0.2% Pb and 53 g/t Ag. The Fossil Downs project contained an Inferred Resource of 2.15 Mt grading 9.5% Zn, 2.1% Pb and 50 g/t Ag.	0.47 Mt @ 11% Indicated – 35% Inferred – 65% Lead – 12.1%	6.8

Source: Alexander Research

Appendix B

Exploration Transactions

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
<p>In April 2009, Silver City Mining Ltd obtained from CBH Resources Ltd the option to earn a staged 65% interest in an unnamed project by spending A\$1.1 M on exploration over within 4.5 years. CBH Resources Ltd retains a 50% claw-back right involving reimbursement of four times the expenditure if a deposit with an in-situ value of more than A\$150 M is defined (excluded from this valuation).</p>	<p>The 376 km² project is located within 10 km northwest (but not along strike) of the Broken Hill mining operations in New South Wales, Australia. Previous mapping and geochemical exploration programmes defined a number of base metal anomalies associated with weathered rock outcrops.</p>	3.20	401,600
<p>In April 2009, Capital Mining Ltd obtained from Monaro Mining NL the option to earn a staged 75% interest in the Mayfield project by spending A\$0.2 M on exploration (no time frame identified).</p>	<p>The 50 km² Mayfield project is located near Braidwood in southeastern New South Wales, Australia. Based on historical exploration drilling programmes, the project is known to contain near surface low-grade gold and copper mineralisation. The known mineralisation is associated with metasomatised limestone skarn. Capital Mining Ltd reported that the project area contained numerous historic workings on gold, copper, lead and zinc occurrences.</p>	4.54	5,300
<p>In May 2009, Deep Yellow Ltd acquired from the receivers and managers of Matrix Metals Ltd the 49% interest it didn't already own in EPMS 14916, 14281 and EPMA 17000 for A\$1.4 M cash. Deep Yellow Ltd had the right to earn up to an 80% interest in the project (disregarded from this valuation).</p>	<p>The 813 km² EPMS 14916, 14281 and EPMA 17000 project area is located approximately 75 km north of Mt Isa in Queensland, Australia. In 2008, exploration drilling programmes intersected shallow, chloritic shear zone hosted uranium mineralisation with grades up to 1,975 ppm U₃O₈.</p>	3.19	3,500
<p>In June 2009, Dominion Mining Ltd obtained from Rubicon Resources Ltd the right to earn an undivided 70% interest in the Yalla Burra project by spending A\$0.6 M on exploration over 4 years.</p>	<p>The 126 km² Yalla Burra project is located approximately 100 km southeast of Kalgoorlie in Western Australia. At the time of announcement, no project specific detail was identified, however the surrounding area is known to be prospective for lode gold, VMS related base metal and komatiite hosted nickel</p>	1.88	6,200

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
	<p>sulphide mineralisation.</p> <p>The approximately 1,111 km² Club Terrace project is located near Orbost in northeastern Victoria, Australia. Oroya Mining Ltd reported that the project is prospective for large, sediment-hosted gold and base metal deposits associated with the Combienbar-Buldah fault system. The project area contained historical artisanal workings (circa 1950-1960's) and geochemical soil and rockchip anomalies.</p>	1.41	1,800
<p>In June 2009, Independence Group Ltd obtained from Oroya Mining Ltd the right to earn an undivided 70% interest in the Club Terrace project by spending A\$1.57 M on exploration over 4 years.</p>			
<p>In July 2009, Panoramic Resources Ltd obtained from Thundelarra Exploration Ltd the right to earn a 61% interest in the East Kimberley project by spending A\$3.0 M on exploration within 4 years.</p>	<p>The approximately 2,804 km² East Kimberley project is located in the East Kimberley Region of northern Western Australia. Thundelarra Exploration Ltd reported that the project is prospective for nickel sulphide, copper, base metal, platinum and iron mineralisation. The project surrounds the Copernicus nickel mine.</p>	1.50	1,600
<p>In August 2009, Cape Lambert Iron Ore Ltd offered to acquire the unlisted MOJO Minerals Ltd for 3.98 M shares with a stated value of A\$0.44/share.</p>	<p>The principal asset of MOJO Mining Ltd is its 100% interest in a 5,000 km² tenement holding located within the southern Mt Isa Block of Queensland, Australia. Cape Lambert Iron Ore Ltd reported that the project had previously been subject to aeromagnetic, radiometric and gravity assessment exploration programmes that identified geophysical anomalies which it considered to be prospective for copper, zinc-lead-silver, phosphate and uranium mineralisation. The acquired tenement holding is adjacent to Cape Lambert Iron Ore Ltd's existing 38,000 km² tenement holding.</p>	2.25	400
<p>In August 2009, Dominion Mining Ltd obtained from Iron Mountain Mining Ltd and Red River Resources Ltd the right to earn an undivided 80% interest in the Wongan Hills project by spending A\$0.4 M on exploration (no time frame identified).</p>	<p>The 218 km² Wongan Hills project is located in the Wheatbelt region of Western Australia. Previous exploration drilling programmes south of the project area (and held by Dominion Mining Ltd) intersected shallow, low-grade copper-gold mineralisation and VMS related pathfinder elements. No additional project specific detail was identified.</p>	1.10	2,300

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
<p>In August 2009, China Railway Resources Group Co Ltd offered to acquire an additional 71.04% interest (already held 11.2%) in RMA Energy Ltd. As at 30 June 2009, RMA Energy was comprised of 322.0 M ordinary shares and 42.0 M options. RMA Energy Ltd also had A\$1.18 M cash on hand. The fully diluted shares and the cash on hand are included in this valuation calculation.</p>	<p>The principal assets of RMA Energy Ltd are its 100% interest in the 241.5 km² McCauley Creek, 240 km² Coane Range, 287.5 km² Clifffdale Creek, 460 km² Emerald, 1,636 km² Moonie and 2,803 km² Buylburrum projects located in Queensland, Australia. The McCauley Creek, Coane Range and Clifffdale Creek early-stage exploration projects are prospective for uranium base metals and tin mineralisation. Based on The Emerald, Moone and Buylburrum projects are known to contain coal seams based on water bores or previous reconnaissance scale exploration programmes. The Emerald project is located adjacent to the third party Taraborah coal deposit.</p>	1.41	3,900
<p>In October 2009, Western Metals Ltd obtained from Graynic Metals Ltd the option to earn a staged 75% interest in the Koonenberry project by spending A\$1.0 M on exploration over 4 years.</p>	<p>The 157 km² Koonenberry project is located approximately 170 km northeast of Broken Hill in western New South Wales, Australia. The project lies along strike of Black Range Minerals Ltd's Grasmere deposit (Inferred Resource of 0.55 Mt grading 2.5% Cu, 0.9% Zn and 5.3 g/t Ag). The project contained a cupiferous shear and had been subject to historical artisanal mining activity. Graynic Metals Ltd reported that the project had not been properly explored using modern exploration techniques.</p>	1.60	7,700
<p>In October 2009, Meridian Minerals Ltd acquired from Zinc Co Australia Ltd a 100% interest in extensions to its Kapok project for A\$0.15 M cash and 2.00 M shares (deemed A\$0.066/share).</p>	<p>The 244 km² extension to the Kapok project is located in the Kimberley region of Western Australia. Meridian Minerals Ltd reported that the project contained extensions to its zinc-lead resources held within the main Kapok project area.</p>	6.00	1,200
<p>In October 2009, Fortuna Minerals Ltd acquired from Pilbara Mining Pty Ltd a 100% interest in the West Pilbara project for A\$0.6 M cash and 12.0 M shares (deemed A\$1.0/share).</p>	<p>The 1,095 km² West Pilbara project is located in the Pilbara region of Western Australia. Fortuna Minerals Ltd reported that the project had not previously been subject to systematic exploration programmes but was prospective for iron, gold, base metal and nickel sulphide mineralisation.</p>	1.41	11,500

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km²)
In November 2009, Minerals and Metals Group Australia Ltd obtained from Golden Cross Resources Ltd the option to earn a staged 90% interest in the Northern Rasp project by spending A\$4.5 M on exploration over ten years.	The 384 km ² Northern Rasp project is located southeast of Cobar in central New South Wales, Australia. Golden Cross Resources Ltd reported that the early-stage exploration project was prospective for base metals, gold and silver mineralisation.	0.75	9,900
In December 2009, ORT Ltd obtained from Oroya Mining Ltd the right to earn an undivided 70% interest in the Sofala project by spending A\$1.5 M on exploration over two years.	The 2,000 km ² Sofala project is located in the Lachlan Fold Belt in New South Wales, Australia. Previous geochemical soil sampling programmes within the project area identified six targets prospective for large, disseminated and vein-hosted gold and base metal mineralisation.	2.25	1,000
In January 2010, Hillgrove Resources Ltd obtained from Auzex Resources Ltd the right to earn an 80% interest in the Cu-Pb-Zn-Ni mineralisation and 50% interest in the Au-Ag mineralisation contained within the Khartoum project for A\$0.05 M cash, A\$0.05 M shares and by spending A\$0.50 M on exploration over two years. The 80% base metal rights are used in this valuation calculation.	The 244 km ² Khartoum project is located about 100 km southwest of Cairns in Queensland, Australia. The lithology of the project area is dominated by highly fractionated coarse-grained granites which contain an exploration target of 80 Mt to 100 Mt grading 0.2% to 0.3% Sn (excluded from this valuation calculation).	0.75	3,000
In February 2010, Eagle Nickel Ltd acquired from an undisclosed vendor a 70% interest in the Lady Sampson project for A\$0.08 M cash.	The 60 km ² Lady Sampson project is located about 40 km northeast of Geraldton, Western Australia. The project contains a portion of the Yandi fault zone which Eagle Nickel Ltd reported to have the potential to host localised massive galena (lead) mineralisation.	0.56	2,000
In March 2010, Xstrata Plc obtained from Argo Exploration Ltd the option to earn a staged 75% interest in the Intercept Hill project by spending A\$7.50 M on exploration over 7.5 years.	The 423 km ² Intercept Hill project is located about 20 km east of Woomera and 25 km west of Teck Resources Inc's Carrapateena project in South Australia. Based on geophysical surveys, previous drilling and structural interpretations, Argo Exploration Ltd considered the	2.40	41,300

Transaction Details	Project Details	Kilburn (Count* / Kilburn score)	Time discounted unit value (\$/km2)
	project to be prospective for iron oxide copper gold, stratabound copper-lead-zinc, secondary uranium and lode-gold mineralisation.		
In March 2010, Tectonic Resources Ltd obtained from Traka Resources Ltd the right to earn an undivided 70% interest in the Trilogy East project by spending A\$0.76 M on exploration within five years.	The 186 km ² Trilogy East project is located in the Phillips River area about 20 km southeast of Ravensthorpe in Western Australia. Historical exploration drilling programmes within the project area intersected VMS related mineralisation including 10 m grading 1.01 g/t Au, 25.9 m grading g1.76% Pb and 17.0 m grading 0.83% Cu (no hole numbers or depths noted). The Trilogy East project complements Tectonic Resources Ltd's existing Trilogy and Kundip project areas.	0.83	5,200
In August 2010, Blackcrest Resources Ltd offered to acquire ARK Mines Ltd for A\$0.225 M cash and 19.00 M shares (deemed A\$0.017/share).	The principal assets of ARK Mines Ltd are its 100% interest in the 696 km ² Bald Hill, Byrock, Babinda, Nangerybone and Gundabooka projects located in central and northern New South Wales, Australia. The early-stage exploration projects were reported by Blackcrest Resources Ltd to be prospective for epithermal-porphyry gold, VMS related base metal as well as uranium and molybdenum mineralisation.	1.80	1,000
In September 2010, Uranium Exploration Australia Ltd obtained from Teck Resources Ltd the option to earn a staged 100% interest in the Mundi Plains and Junction Dam projects by spending A\$4.00 M on exploration over four years.	The Mundi Plains and Junction Dam project area is located about 50 km northwest of Broken Hill in New South Wales, Australia. Previous exploration drilling programmes within the project area intersected narrow, flat lying, high-grade MVT related zinc-lead-silver mineralisation.		-
In September 2010, Minerals and Metals Group obtained from Westgold Resources Ltd the option to earn a staged 80% interest in the McArthur project by spending A\$5.00 M on exploration over more than three years.	The 758 km ² McArthur project is located in the southern portion of the McArthur Basin of northern Northern Territory, Australia. Little additional project specific detail was identified at the time of announcement.	5.00	7,200

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
In October 2010, Rox Resources Ltd acquired from Legend International Holdings Inc a 100% interest in the Mitchell Yard and Teena projects for 3.00 M shares (deemed A\$0.031/share) and a 2% NSR.	The 182 km ² Mitchell Yard and Teena project area is located adjacent to Rox Resources Ltd's Myrtle zinc-lead deposit in the Northern Territory, Australia. The project contained geochemical soil and costean base metal anomalies.	6.00	500
In February 2011, Meridian Minerals Ltd acquired from Cullen Resources Ltd a 100% interest in extensions to the Emanuel Range project for A\$0.10 M cash and 2.00 M shares (deemed A\$0.13/share).	The 675 km ² Emanuel Range project is located adjacent to Meridian Minerals Ltd's Lennard Shelf MVT deposit in the Kimberley region of Western Australia. The acquisition created a near-contiguous tenement holding by linking with Meridian Minerals Ltd's existing tenements.	8.00	400
In April 2010, Ausmon Resources Ltd acquired from Robust Resources Ltd the 15% interest it didn't already own in EL6413, 6416 and 6417 and a 100% interest in EL7564 for 0.40 M shares (deemed A\$0.20/share).	The tenements are located near Cobar and Orange in New South Wales, Australia. Ausmon Resource Ltd reported that the tenements were prospective for base and precious metal mineralisation. Little additional technical detail was identified at the time of announcement.		-

Source: Alexander Research



ABRA MINING LIMITED
Independent Expert's Report

12 May 2011



Financial Services Guide

12 May 2011

BDO Corporate Finance (WA) Pty Ltd ABN 27 124 031 045 ("BDO" or "we" or "us" or "ours" as appropriate) has been engaged by Abra Mining Limited ("Abra") to provide an independent expert's report on Hunan Nonferrous Metals Corporation Limited ("HNC") offer to acquire all the options in Abra. You will be provided with a copy of our report as a retail client because you are an optionholder of Abra.

Financial Services Guide

In the above circumstances we are required to issue to you, as a retail client, a Financial Services Guide ("FSG"). This FSG is designed to help retail clients make a decision as to their use of the general financial product advice and to ensure that we comply with our obligations as financial services licensees.

This FSG includes information about:

- ◆ Who we are and how we can be contacted;
- ◆ The services we are authorised to provide under our Australian Financial Services Licence, Licence No. 316158;
- ◆ Remuneration that we and/or our staff and any associates receive in connection with the general financial product advice;
- ◆ Any relevant associations or relationships we have; and
- ◆ Our internal and external complaints handling procedures and how you may access them.

Information about us

BDO Corporate Finance (WA) Pty Ltd is a member firm of the BDO network in Australia, a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International). The financial product advice in our report is provided by BDO Corporate Finance (WA) Pty Ltd and not by BDO or its related entities. BDO and its related entities provide services primarily in the areas of audit, tax, consulting and financial advisory services.

We do not have any formal associations or relationships with any entities that are issuers of financial products. However, you should note that we and BDO (and its related entities) might from time to time provide professional services to financial product issuers in the ordinary course of business.

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We hold an Australian Financial Services Licence that authorises us to provide general financial product advice for securities to retail and wholesale clients.

When we provide the authorised financial services we are engaged to provide expert reports in connection with the financial product of another person. Our reports indicate who has engaged us and the nature of the report we have been engaged to provide. When we provide the authorised services we are not acting for you.

General Financial Product Advice

We only provide general financial product advice, not personal financial product advice. Our report does not take into account your personal objectives, financial situation or needs.

You should consider the appropriateness of this general advice having regard to your own objectives, financial situation and needs before you act on the advice

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Except for the fees referred to above, neither BDO, nor any of its directors, employees or related entities, receive any pecuniary benefit or other benefit, directly or indirectly, for or in connection with the provision of the report.

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We have received a fee from Abra for our professional services in providing this report. That fee is not linked in any way with our opinion as expressed in this report.

Referrals

We do not pay commissions or provide any other benefits to any person for referring customers to us in connection with the reports that we are licensed to provide.

Complaints resolution

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As the holder of an Australian Financial Services Licence, we are required to have a system for handling complaints from persons to whom we provide financial product advice. All complaints must be in writing addressed to The Complaints Officer, BDO Corporate Finance (WA) Pty Ltd, PO Box 700 Subiaco WA 6872.

When we receive a written complaint we will record the complaint, acknowledge receipt of the complaint within 15 days and investigate the issues raised. As soon as practical, and not more than 45 days after receiving the written complaint, we will advise the complainant in writing of our determination.

Referral to External Dispute Resolution Scheme

A complainant not satisfied with the outcome of the above process, or our determination, has the right to refer the matter to the Financial Ombudsman Service ("FOS"). FOS is an independent organisation that has been established to provide free advice and assistance to consumers to help in resolving complaints relating to the financial service industry. FOS will be able to advise you as to whether or not they can be of assistance in this matter. Our FOS Membership Number is 12561.

Further details about FOS are available at the FOS website www.fos.org.au or by contacting them directly via the details set out below.

Financial Ombudsman Service
GPO Box 3
Melbourne VIC 3001
Toll free: 1300 78 08 08
Facsimile: (03) 9613 6399
Email: info@fos.org.au

Contact details

You may contact us using the details set out at the top of our letterhead on page 1 of this FSG.



TABLE OF CONTENTS

1.	Introduction	1
2.	Summary and Opinion	1
3.	Scope of the Report	6
4.	Outline of the Offer	8
5.	Profile of Abra Mining Limited	10
6.	Profile of Hunan Nonferrous Metals Corp Limited	17
7.	Economic analysis	18
8.	Industry Analysis	19
9.	Valuation Approach Adopted	24
10.	Valuation of Abra	25
11.	Valuation of Abra Options	27
12.	Valuation of Consideration	28
13.	Is the Option Offer fair?	28
14.	Is the Option Offer reasonable?	30
15.	Conclusion	31
16.	Sources of information	32
17.	Independence	32
18.	Qualifications	33
19.	Disclaimers and consents	33

Appendix 1 - Glossary

Appendix 2 - Valuation Methodologies

Appendix 3 - Valuation of unlisted Abra options

Appendix 4 - Independent Specialist Valuation of Abra's Exploration Assets

12 May 2011

The Directors
Abra Mining Limited
Level 1, 34 Colin Street
West Perth WA 6005

Dear Sirs

INDEPENDENT EXPERT'S REPORT

1. Introduction

On 4 April 2011, Abra Mining Limited ("Abra") or ("the Company") announced a takeover offer from Hunan Nonferrous Metals Corp Limited ("HNC") to acquire all the issued ordinary shares ("Shares") of Abra not already owned by HNC at A\$0.40 per Share ("Share Offer Price") and acquire or enter into cancellation deed polls in respect of the 6,125,000 options ("Options") to subscribe for Shares. The acquisitions will be made pursuant to concurrent takeover bids under Chapter 6 of the Corporations Act.

2. Summary and Opinion

2.1 Purpose of the report

The directors of Abra have requested that BDO Corporate Finance (WA) Pty Ltd ("BDO") prepare an independent expert's report ("our Report") to express an opinion as to whether or not the offer from HNC to acquire or enter into cancellation deed polls in respect of the 6,125,000 Abra Options to subscribe for Shares ("the Option Offer") is fair and reasonable to the optionholders of Abra ("the Optionholders").

A separate independent expert's report has been prepared by BDO at the request of the Abra directors to express an opinion as to whether or not the takeover offer from HNC to acquire all the Shares of Abra not already owned by HNC at A\$0.40 per Share ("the Offer") is fair and reasonable to the shareholders of Abra.

Our Report is prepared pursuant to section 640 of the Corporations Act and is to be included in the Target's Statement for Abra in order to assist the optionholders in their decision whether to accept the Option Offer.

2.2 Approach

Our Report has been prepared having regard to Australian Securities and Investments Commission ("ASIC") Regulatory Guide 111 ("RG 111"), 'Content of Expert's Reports' and Regulatory Guide 112 ("RG 112") 'Independence of Experts'.

In arriving at our opinion, we have assessed the terms of the Option Offer as outlined in the body of this report. We have considered:

- How the values of the Abra options compare to the value of the consideration offered by HNC;

- The likelihood of a superior alternative offer being available to Abra Optionholders;
- Other factors which we consider to be relevant to the Optionholders in their assessment of the Option Offer; and
- The position of Optionholders should the Option Offer not proceed.

2.3 Opinion

We have considered the terms of the Option Offer as outlined in the body of this report and have concluded that, in the absence of a superior offer, the Option Offers are as follows;

Options	Opinion
Class 1	Fair and reasonable to the Optionholders
Class 2	Not fair but reasonable to the Optionholders
Class 3	Not fair but reasonable to the Optionholders
Class 4	Not fair but reasonable to the Optionholders
Class 5	Not fair but reasonable to the Optionholders
Class 6	Not fair but reasonable to the Optionholders
Class 7	Not fair but reasonable to the Optionholders
Class 8	Not fair but reasonable to the Optionholders
Class 9	Not fair but reasonable to the Optionholders

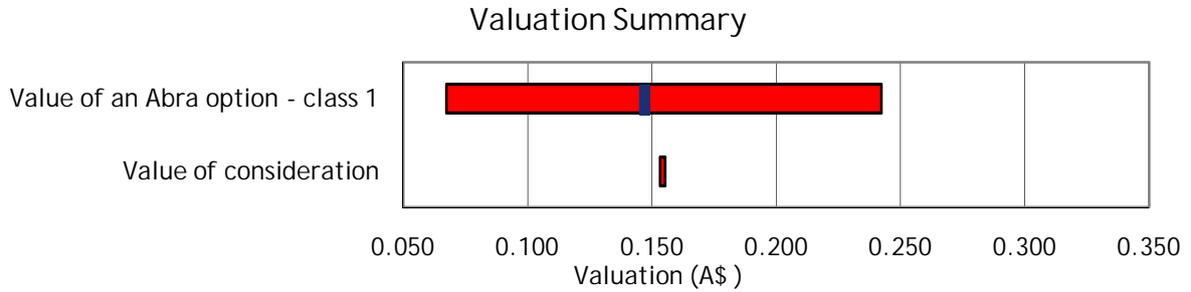
2.4 Fairness

In Section 13 we determined that the Option Offer consideration compares to the value of an Abra option, as detailed hereunder.

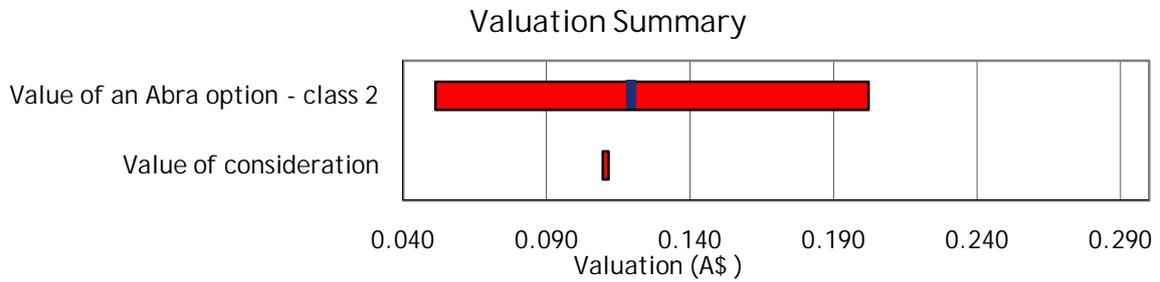
Options	Low value of an Abra Option A\$	Preferred value of an Abra Option A\$	High value of an Abra Option A\$	Value of consideration A\$	Opinion
Class 1	\$0.067	\$0.149	\$0.242	\$0.1543	Fair
Class 2	\$0.051	\$0.119	\$0.202	\$0.1103	Not fair
Class 3	\$0.094	\$0.165	\$0.243	\$0.1298	Not fair
Class 4	\$0.066	\$0.123	\$0.189	\$0.0778	Not fair
Class 5	\$0.040	\$0.099	\$0.175	\$0.0849	Not fair
Class 6	\$0.021	\$0.061	\$0.121	\$0.0412	Not fair
Class 7	\$0.094	\$0.165	\$0.243	\$0.1297	Not fair
Class 8	\$0.074	\$0.135	\$0.205	\$0.0920	Not fair
Class 9	\$0.201	\$0.290	\$0.381	\$0.2345	Not fair

The valuation ranges are graphically presented below:

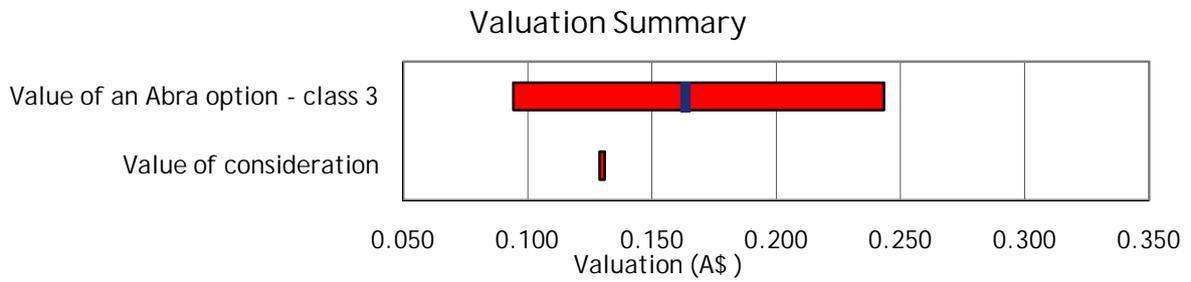
Class 1 options



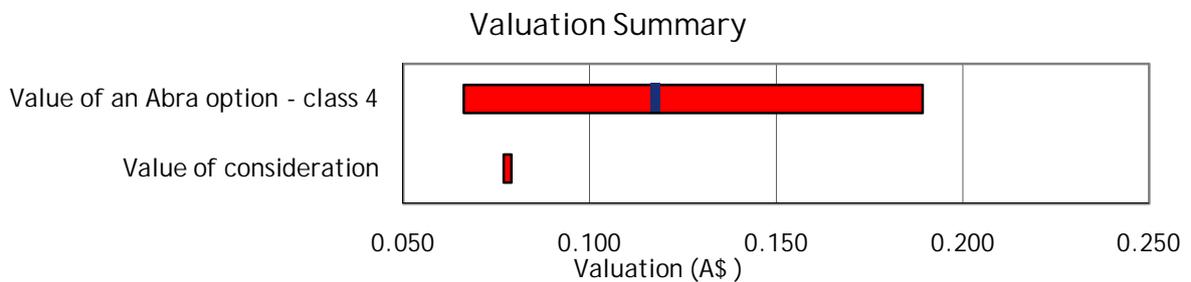
Class 2 options



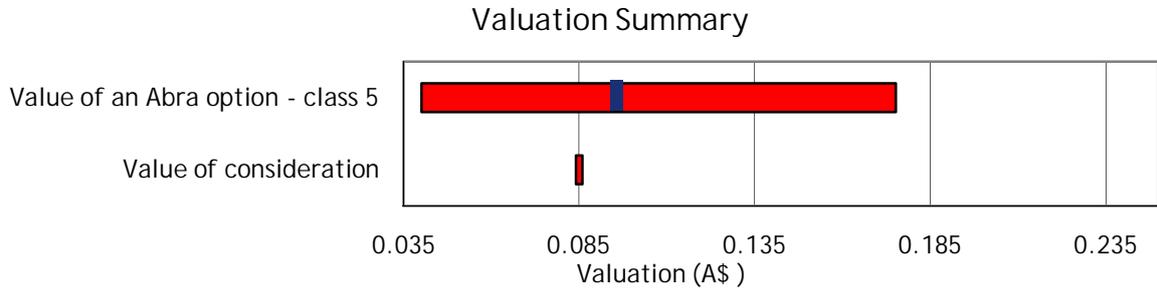
Class 3 options



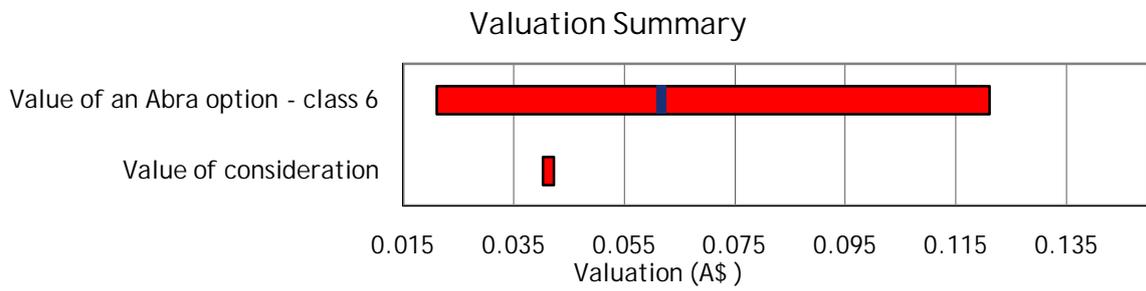
Class 4 options



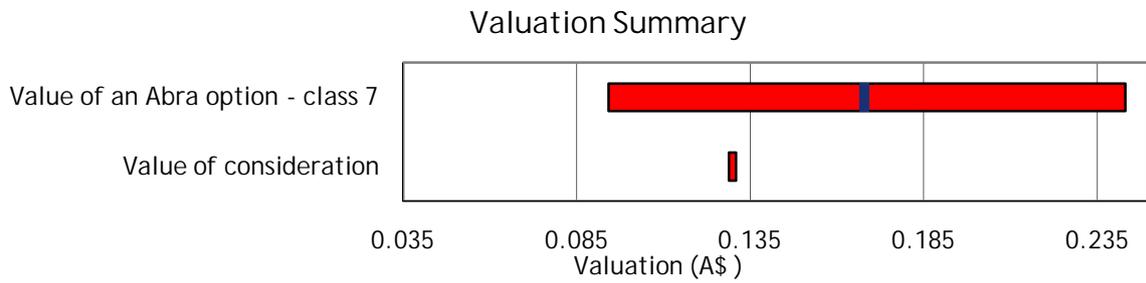
Class 5 options



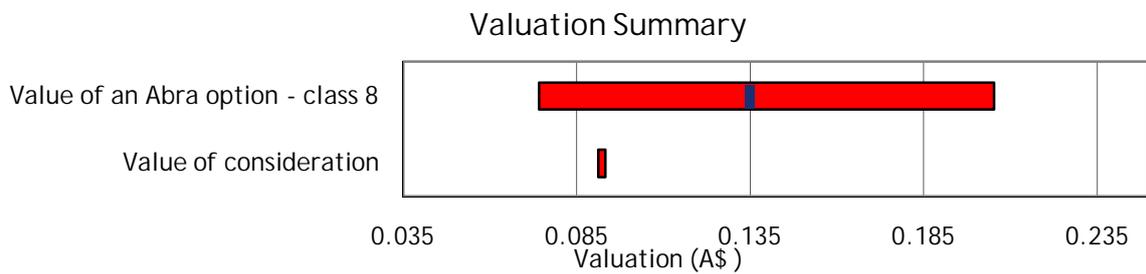
Class 6 options



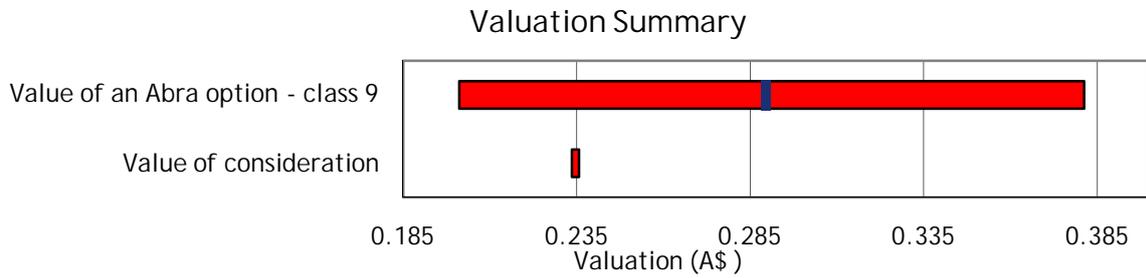
Class 7 options



Class 8 options



Class 9 options



2.5 Reasonableness

We have considered the analysis in Section 14 of this report, in terms of both

- advantages and disadvantages of the Option Offer; and
- alternatives, including the position of Optionholders if the Option Offer does not proceed.

In our opinion, the position of Optionholders if the Option Offer is successful is more advantageous than the position if the Option Offer is not successful. Accordingly, in the absence of any other relevant information and/or a superior proposal we believe that the Option Offer is reasonable for Optionholders.

The respective advantages and disadvantages considered are summarised below:

ADVANTAGES AND DISADVANTAGES			
Section	Advantages	Section	Disadvantages
14.3	The Option Offer is fair (Class 1 only)	14.4	Inability to benefit from potential upside in Abra
14.3	Cash available for other investments	14.4	Potential tax implications
14.3	No transaction costs	14.4	The Option Offer is not fair (Classes 2 - 9)
14.3	Holder's of the Options can monetise their investments		
14.3	Removes future risks associated with holding the Options in Abra		
14.3	Greater benefit in accepting the Option Offer over exercising and accepting the cash per share Offer.		

Other key matters we have considered include:

Section	Description
14.1	The lack of alternative offers
14.2	The practical level of control

3. Scope of the Report

3.1 Purpose of the Report

HNC has prepared a Bidder's Statement in accordance with Section 636 of the Corporations Act ("the Act"). Under Section 633 Item 10 of the Act, Abra is required to prepare a Target's Statement in response to the Bidder's Statement.

Section 640 of the Act requires the Target's Statement to include an independent expert's report to shareholders if:

- The bidder's voting power in the target is 30% or more; or
- The bidder and the target have a common director or directors.

HNC is Abra's largest shareholder, holding approximately 74% of all issued Abra shares. Therefore, an independent expert's report is required for inclusion in the Target's Statement. The directors of Abra have engaged BDO to satisfy this requirement.

3.2 Regulatory guidance

The Act does not define the meaning of "fair and reasonable". In determining whether the Option Offer is fair and reasonable, we have had regard to the views expressed by ASIC in RG 111. This regulatory guide provides guidance as to what matters an independent expert should consider to assist security holders to make informed decisions about transactions.

This regulatory guide suggests that where the transaction is a control transaction the expert should focus on the substance of the control transaction rather than the legal mechanism to affect it. RG 111 suggests that where a transaction is a control transaction it should be analysed on a basis consistent with a takeover bid.

In our opinion the Option Offer is a control transaction as defined by RG 111 and we have therefore assessed the Option Offer to consider whether in our opinion it is fair and reasonable to Optionholders.

3.3 Adopted basis of evaluation

RG 111 states that a transaction is fair if the value of the offer price or consideration is greater than the value of the securities subject of the offer. This comparison should be made assuming a knowledgeable and willing, but not anxious, buyer and a knowledgeable and willing, but not anxious, seller acting at arm's length. When considering the value of the securities subject of the offer in a control transaction the expert should consider this value inclusive of a control premium. Further to this, RG 111 states that a

transaction is reasonable if it is fair. It might also be reasonable if despite being 'not fair' the expert believes that there are sufficient reasons for security holders to accept the offer in the absence of any higher bid.

Having regard to the above, BDO has completed this comparison in two parts:

- A comparison between the value of an Abra option and the value of the consideration offered (fairness - see Section 13 "Is the Option Offer Fair?"); and
- An investigation into other significant factors to which Optionholders might give consideration, prior to accepting the Offer, after reference to the value derived above (reasonableness - see Section 14 "Is the Option Offer Reasonable?").

This assignment is a Valuation Engagement as defined by APES 225 Valuation Services. A Valuation Engagement means an engagement or assignment to perform a valuation and provide a valuation report where we determine an estimate of value of the Company by performing appropriate valuation procedures and where we apply the valuation approaches and methods that we consider to be appropriate in the circumstances

4. Outline of the Offer

On 4 April 2011, the directors of Abra announced a cash takeover offer from HNC to acquire all the shares of Abra, not already owned by HNC, at A\$0.40 per share and a concurrent offer to acquire or enter into cancellation deed polls in respect of the 6,125,000 options to subscribe for Shares at the following prices:

Option class	Expiry date	Number on issue	Current exercise price (A\$)	Option offer price (A\$)
1	27 June 2011	325,000	0.2500	0.1543
2	31 July 2011	1,000,000	0.3100	0.1103
3	15 May 2012	1,250,000	0.3500	0.1298
4	15 May 2012	750,000	0.5000	0.0778
5	31 July 2011	250,000	0.3500	0.0849
6	31 July 2011	100,000	0.4500	0.0412
7	14 May 2012	150,000	0.3500	0.1297
8	14 May 2012	100,000	0.4500	0.0920
9	3 January 2016	2,200,000	0.3250	0.2345

On 3 April 2011, Abra and HNC entered into a bid implementation agreement ("Bid Implementation Agreement"). The Bid Implementation Agreement commits each party to implement the takeover bids.

The takeover bids will be conditional on:

- Foreign Investment Review Board (FIRB) approval;
- Chinese regulatory approvals;
- No regulatory actions;
- By the end of the offer period HNC having a relevant interest in not less than 93.48% of the Shares (being a level that would allow HNC to proceed to compulsory acquisition of the Shares following the bid);
- By the end of the offer period HNC having a relevant interest in not less than 90% of the Options (being a level that would allow HNC to proceed to compulsory acquisition of the Options following the bid);
- Each Option being an option to subscribe for one Share at the Current Exercise Prices on or prior to the dates noted in the table above;
- ASIC granting modifications to:
 - section 605(2) of the Corporations Act, to allow HNC to treat the different classes of Options as one class for the purpose of the Option Offer;
 - section 619(2) of the Corporations Act, to allow HNC to offer different consideration for each class of Option under the Option Offer; and

- o section 618(1) and Chapter 6A of the Corporations Act, to allow HNC to cancel non-transferrable Options under the Option Offer and as part of the compulsory acquisition process;
- No prescribed occurrences (being those occurrences listed in section 652C of the Corporations Act) occurring in relation to Abra or its subsidiaries (except as a result of the exercise of any Options).



5. Profile of Abra Mining Limited

5.1 History

Abra Mining Limited (“Abra”) listed on the Australian Securities Exchange in April 2005 and was established as an exploration company focusing on projects in Western Australia. Abra’s key assets are lead, silver, zinc, copper and gold deposits located within its Mulgul Project in central Western Australia. In total, the Company has interests in tenements covering an area of more than 1,570 km².

5.2 Corporate Structure

The Company’s Board of Directors comprises the following:

Li Li	Non-executive Chairman
Mingyan Wang	Managing Director
Jeffrey Moore	Non-executive Director
Yingjie Deng	Non-executive Director
James Fang	Non-executive Director
Wenzhong Guo	Non-executive Director
Zhong Jie Sheng	Non-executive Director

5.3 Exploration Projects

Abra’s two main project areas in Western Australia are the South Bangemall Projects and the Havelock Project, near Wiluna which are summarised below (Source: abramining.com.au). For full details see the independent specialist report valuation at Appendix 4.

Mineralisation intersected at drillholes, each more than 2 kilometres from the Abra deposit, suggests that Abra’s assets represent only part of a major base metals mineral system. To most practicably realise early metal production from mining at the Abra deposit, in 2007, pursuant to a Letter of Intent, the Company proposed a Joint Venture (“JV”) with Hunan Nonferrous Metals Corporation Limited over Mining Lease 52/776 (“M52/776”) which covers the 100% owned Abra lead-silver-(zinc)-copper-gold deposit. The proposed JV did not eventuate.

South Bangemall Projects

Mulgul Project

The Mulgul Project includes the Abra Deposit, which is a large mineral resource of disseminated and vein hosted galena and chalcopryrite mineralisation extending over an area of at least 1,000 metres by 800 metres and a thickness of more than 250 metres. The Mineral Resource for each of the mineralisation domains at the Abra deposit amounts to:

Indicated and Inferred Mineral Resource								
Domain	Cut-off Grade	Category	Million Tonnes	Pb (%)	Ag (g/t)	Cu (%)	Au (g/t)	Zn (%)
Lead	2.5% Pb	Indicated	33	4.1	10	0.13	0.06	0.1
		Inferred	60	3.9	10	0.12	0.04	0.1
		Total	93	4.0	10	0.12	0.05	0.1
Copper-Gold	0.4% Cu	Indicated	4	0.4	5	0.59	0.56	0.0
		Inferred	10	0.3	4	0.63	0.47	0.0
		Total	14	0.3	4	0.62	0.49	0.0

Source: Abra Mining Limited annual report 2010 (Mineral resource statement as at 14 May 2008)

Jillawarra Project

The Jillawarra project covers the central and western portions of the Jillawarra Sub-basin, covering 1,043.8 km² adjacent to and west of the Mulgul Project. The project consists of four prospects with on-going ground exploration which are summarised below;

- **Woodlands Complex:** A large regional coincident magnetic and gravity anomaly in the western portion of the Jillawarra Sub-basin. The feature hosts six prospects over an area of 6 kilometres east-west and 4 kilometres north-south. Drilling by previous explorers identified significant mineralisation at three of the prospects, 46.40, Woodlands and Leader 18. At Thumbprint (TP), a 1,200 metre deep drillhole intersected magnetite alteration, brecciation and weak lead-barium mineralisation similar in character to that encountered at Woodlands and Leader 18.
- **Copper Chert:** The only prospect where surface secondary mineralisation and pre-existing pitting are evident. Previous drilling of copper geochemical and electrical geophysical anomalies returned a best result of 0.6m @ 2.4% Cu (drillhole 75-8 from 124.5 metres).
- **Quartzite Well:** Mineralisation intersected to date consists of anomalous lead-zinc mineralisation predominantly within tectonic breccias within the steep dipping fault zone. Drilling into the fault zone intersected a number of significant mineralised zones within siliceous and carbonaceous shale and breccia.
- **Manganese Range:** A zone of folded Irregularly Formation rocks in the hanging wall to the Quartzite Well thrust fault. Intense iron-manganese caprocks returned zones highly anomalous in lead (up to 4,000ppm) and 200m to the north, copper (up to 400ppm). Drilling conducted over several phases of work identified three styles of mineralisation:
 1. Lead anomalous mineralisation in strongly clay altered ± iron-manganese stained shales. The best result was 24 metres averaging 0.52% Pb from 8 metres in MR-89-5, including 4 metres averaging 1.3% Pb.
 2. Primary copper±gold mineralisation in fresh quartz-chlorite-magnetite altered rocks. This style of mineralisation returned a best intersection of 35 metres averaging 0.51% Cu from 313 metres in JLWA-77-27, including 9 metres averaging 1.03% Cu and an additional 2 metres averaging 2.09% Cu.
 3. A zone of relatively shallow (<88 metres) gold mineralisation in ironstone and ferruginous clays displaying anomalous gold (up to 0.44g/t Au).

Mount Deverell Project

Located to the south of the Jillawarra project. A first pass NITON soil survey was completed over the Mt Deverell tenements in 2008, with some encouraging anomalism defined.

An infill NITON soil survey and geological mapping programme completed in early 2010 has better defined several strong lead surface anomalies.

The infill lines in Areas 1 and 2 better defined the existing lead anomalies and the geological mapping has enabled a better understanding of the geological setting at each location.

Within Area 1 the peak lead value is 146ppm and the lead anomaly is coincident with a breccia zone comprising sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments. The anomaly occurs within the hinge of a broad north-west trending faulted antiform that onlaps granitic basement. It occurs in a similar stratigraphic and structural setting to the Abra Deposit.

Within Area 2 the peak lead value is 309ppm and the lead anomaly is also coincident with a fault breccia zone comprising sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments and this lead anomaly also occurs within a similar stratigraphic and structural setting to the Abra Deposit

Havelock Project

Located 35km northwest of Wiluna in central Western Australia and approximately 250 kilometres southeast of AML's Abra deposit. A follow up NITON soil sampling and mapping programme was completed during 2010. The program was completed at 50 metres line spacing and 50 metres sample spacing and was designed to better define lead anomalies previously identified to the south of the Magellan mine site. Ninety-three lines were completed for a total of 176 line kilometres with 3,613 readings taken. The peak value returned was 2,565ppm Pb.

5.4 Historical Balance Sheet

Balance Sheet	Unaudited as at 31-Mar-11 A\$	Audited as at 31-Dec-10 A\$	Audited as at 31-Dec-09 A\$
CURRENT ASSETS			
Cash and cash equivalents	3,962,665	4,498,990	8,060,622
Other financial assets	-	118,000	-
Other receivables	105,692	78,483	118,384
Other assets	6,826	16,613	39,154
Total current assets	4,075,182	4,712,086	8,218,160
NON-CURRENT ASSETS			
Plant and equipment	396,146	391,512	496,814
Exploration and evaluation	20,890,549	20,513,946	18,688,334
Total non-current assets	21,286,695	20,905,458	19,185,148
TOTAL ASSETS	25,361,877	25,617,544	27,403,308
CURRENT LIABILITIES			
Trade and other payables	26,176	141,808	130,606
Provisions	88,579	50,518	125,546
Interest bearing borrowings	22,070	11,930	49,484
Total current liabilities	136,825	204,256	305,636
NON-CURRENT LIABILITIES			
Provisions	152,865	34,029	27,184
Interest bearing borrowings	-	14,569	24,286
Total non-current liabilities	152,865	48,598	51,470
TOTAL LIABILITIES	289,690	252,854	357,106
NET ASSETS	25,072,187	25,364,690	27,046,202
EQUITY			
Contributed equity	32,949,397	32,949,397	32,949,397
Reserves	2,898,046	2,518,727	2,518,727
Accumulated losses	(10,775,256)	(10,103,434)	(8,421,922)
TOTAL EQUITY	25,072,187	25,364,690	27,046,202

Source: Audited financial accounts for the years ended 31 December 2009 and 31 December 2010 and management accounts for the period ended 31 March 2011.

We have analysed the management accounts for the period ended 31 March 2011 and are satisfied that the information is not materially misstated. Nothing has come to our attention as a result of our procedures



that would suggest the financial information within the management accounts has not been prepared on a reasonable basis.

5.5 Historical Income Statements

Income Statement	Year ended 31-Dec-10 A\$	Year ended 31-Dec-09 A\$
REVENUE	267,273	519,863
EXPENSES		
Consultant and professional fees	216,618	268,945
Depreciation expense	114,991	206,755
Employee benefit expense	890,407	2,184,227
Impairment of exploration expenditure	241,919	120,441
Finance costs	5,752	5,825
Insurance expense	60,381	38,291
Loss on sale of plant and equipment	-	28,560
Occupancy expense	249,668	169,305
Other expenses	93,927	116,362
Travel and accommodation expense	75,122	118,703
TOTAL EXPENSES	1,948,785	3,257,414
LOSS BEFORE INCOME TAX	(1,681,512)	(2,737,551)
Income tax expense	-	-
NET LOSS	(1,681,512)	(2,737,551)

Source: Audited financial accounts for the years ended 31 December 2009 and 31 December 2010

Revenue decreased 51% from 2009 to 2010 while expenses decreased by 59% resulting in a reduced net loss for the year.

We have not undertaken a review of Abra's unaudited accounts in accordance with the Australian Auditing and Assurance Standard 2405 "Review of Historical Financial Information" and do not express an opinion on this financial information. However, nothing has come to our attention as a result of our procedures that would suggest the financial information within the management accounts has not been prepared on a reasonable basis.

5.6 Capital Structure

The share structure of Abra as at 20 April 2011 is outlined below:

	Number
Total Ordinary Shares on Issue	141,957,504
Top 20 Shareholders	132,996,118
Top 20 Shareholders - % of shares on issue	93.69%

Source: Security Transfer Registrars information provided by Abra management

The range of shares held in Abra as at 20 April 2011 is as follows:

Range of Shares Held	No. of Ordinary Shareholders	No. of Ordinary Shares	% Issued Capital
1-1,000	38	21,919	0.02%
1,001-5,000	165	460,233	0.32%
5,001-10,000	88	685,825	0.48%
10,001-100,000	140	4,432,600	3.12%
100,001 - and over	41	135,356,927	96.05%
TOTAL	472	141,957,504	100.00%

Source: Security Transfer Registrars information provided by Abra management

The ordinary shares held by the most significant shareholders as at 20 April 2011 are detailed below:

Name	No of Ordinary Shares Held	Percentage of Issued Shares (%)
Hunan Nonferrous Metals Ltd	104,927,004	73.91%
AP Energy Investments Ltd	4,186,174	2.95%
Minyan Chen	3,576,040	2.52%
Clema Investments Pty Ltd	3,273,996	2.31%
Total Top 4	115,963,214	81.69%
Others	25,994,290	18.31%
Total Ordinary Shares on Issue	141,957,504	100.00%

Source: Security Transfer Registrars information provided by Abra management

The most significant optionholders of Abra as at 20 April 2011 are outlined below:

Name	Number of Options	Exercise Price (A\$)	Expiry Date
Adrian Hell	50,000	0.450	31-Jul-11
Jacqueline Murphy	50,000	0.450	31-Jul-11
T & L Keay	50,000	0.350	31-Jul-11
Adrian Hell	100,000	0.350	31-Jul-11
Jacqueline Murphy	100,000	0.350	31-Jul-11
E J Turner	100,000	0.450	14-May-12
The Wright Family A/c	125,000	0.250	27-Jun-11
E J Turner	150,000	0.350	14-May-12
C J Stephens Family A/c	200,000	0.250	27-Jun-11
James Fang	700,000	0.330	03-Jan-16
PJ Cranney	750,000	0.500	15-May-12
PJ Cranney	1,000,000	0.310	31-Jul-11
PJ Cranney	1,250,000	0.350	15-May-12
JJ Moore	1,500,000	0.325	03-Jan-16
Total Number of Options	6,125,000		
Cash Raised if Options Exercised	A\$ 2,152,250		

Source: Abra management

6. Profile of Hunan Nonferrous Metals Corp Limited

Hunan Nonferrous Metals Holding Group Co., Ltd. was founded in August 2004 and has ten subsidiaries including Abra. Its holding subsidiary, Hunan Nonferrous Metals Co., Ltd. ("HNC"), was listed on the Hong Kong Exchanges and Clearing Ltd. in March 2006.

HNC is based in Changsha City, the People's Republic of China ("PRC").

HNC engages in the exploration, mining, processing and sale of nonferrous metals including tungsten, zinc, antimony and lead in the PRC. HNC operates in three segments: nonferrous metal mine site segment, which is engaged in the mining and trading of nonferrous metals; nonferrous metal smelting segment, which is engaged in the smelting and trading of nonferrous metals, and cemented carbides, and tungsten, molybdenum, tantalum, niobium and their compounds segment, which is engaged in the manufacture and trading of hard alloys and refractory metal compounds, such as cemented carbides, and tungsten, molybdenum, tantalum, niobium and their compounds.

HNC (and its subsidiaries) is the largest integrated producer of nonferrous metals, excluding aluminium and copper, in the PRC as measured by production volume.

HNC currently hold 73.91% of the issued capital in Abra.

7. Economic analysis

The global economy is continuing its expansion, led by very strong growth in the Asian region. The recent disaster in Japan will have a noticeable effect on Japanese production in the near term, although the impact on the broader Asian region is expected to be limited. Commodity prices, including oil prices, have risen over recent months, pushing up measures of consumer price inflation in many countries. A number of countries have been moving to tighten their monetary policy settings. Overall, though, financial conditions for the global economy remain accommodative.

Australia's terms of trade are at their highest level since the early 1950s and national income is growing strongly. Private investment is picking up, mainly in the resources sector, in response to high levels of commodity prices. In the household sector thus far, in contrast, there continues to be caution in spending and borrowing, and a higher rate of saving out of current income. The natural disasters over the summer have reduced output and the resumption of coal production in flooded mines is taking longer than initially expected. Production levels should, however, recover over the months ahead, and there will be a mild boost to demand from the rebuilding efforts as they get under way.

Asset values have generally been little changed over recent months and overall credit growth remains quite subdued, notwithstanding evidence of some greater willingness to lend. Business balance sheets generally are being strengthened, and the run-up in household leverage has abated.

Growth in employment has moderated over recent months and the unemployment rate has held steady at 5 per cent. Most leading indicators suggest further growth in employment, though most likely at a slower pace than in 2010. Reports of skills shortages remain confined, at this point, to the resources and related sectors. After the significant decline in 2009, growth in wages has returned to rates seen prior to the downturn.

Inflation is consistent with the medium-term objective of monetary policy, having declined significantly from its peak in 2008. These moderate outcomes are being assisted by the high level of the exchange rate, the earlier decline in wages growth and strong competition in some key markets, which have worked to offset large rises in utilities prices. Production losses due to weather are temporarily raising prices for some agricultural produce, which will boost the March quarter CPI, but these prices should fall back later in the year. Overall, looking through these temporary effects, the Bank expects that inflation over the year ahead will continue to be consistent with the 2-3 per cent target.

Source: Statement by Glen Stevens, Governor: Monetary Policy Decision on 5 April 2011 www.rba.gov.au

8. Industry Analysis

Zinc-lead-silver industry analysis

Australia has the world's largest economic resources of both zinc and lead, accounting for more than one quarter of world zinc economic resources and one third of world lead economic resources. In terms of world production, Australia ranks in the top three for zinc and lead. Exports of zinc, lead and silver total \$5 billion annually.

Zinc, Lead and Silver Properties and Uses

Zinc, lead and silver often occur together in mineral deposits. Zinc is widely used in the construction, transport and appliance manufacturing industries as an anti-corrosion on steel with around four million tonnes, or more than half of the world's total zinc consumption used annually in steel coating, or galvanising. Zinc is used also in brass and bronze production as well as in pigments, as oxide additives to rubber and in agricultural chemicals.

Lead is mostly used in batteries for vehicles which accounts for 80 per cent of modern lead usage. The remaining 20 per cent of uses include underwater cable sheathing, solder, casting alloys, chemical compounds, ammunition, glassware and radiation protection. More than half of the lead currently used is from recycling, rather than mining.

Silver's use in jewellery, ornaments and household silverware derive from its attractive appearance, malleability and relative scarcity. Other uses include photographic paper and film, electronics, coatings for mirrors and as an anti-bacterial agent.

Zinc, Lead and Silver Production and Exports

Lead was the first metal mined in Australia at Glen Osmond in South Australia in 1841. In 1901 a flotation process to recover zinc minerals was devised at Broken Hill silver-lead deposit in New South Wales which led to the Australian-developed Jameson flotation cell used world-wide today. Previously the zinc ore at Broken Hill had been consigned to waste dumps.

The Century zinc mine in northwest Queensland close to the Gulf of Carpentaria ranks second globally in zinc production while nearby Cannington mine is a significant producer of zinc and the world's largest single mine producer of both silver and lead. Also significant are the Mount Isa and George Fisher mines, also in northwest Queensland, McArthur River in the Northern Territory, Golden Grove in Western Australia and the Broken Hill deposit.

The zinc content of mine production in Australia is currently about 1300 kilotonne a year which represents about 12 per cent of world zinc production, making Australia the third largest producer after China and Peru. The lead content of mine production in Australia is currently about 600 kilotonne a year, or about 14 per cent of world lead production, making it the second largest producer after China. For silver production, Australia ranks fifth after Peru, China, Mexico and Chile.

Australian exports of zinc and lead total about \$2 billion each a year while exports of silver total about \$1 billion a year. As a group, zinc, lead and silver represent about three per cent of Australia's total mineral exports. The major markets for zinc exports are China, Korea, Japan and the Netherlands and for lead it is China, the United Kingdom, Korea and Japan.

Zinc, Lead and Silver Resources

Australia ranks first in the world for both zinc and lead resources with a quarter of the world's zinc economic resources and one third of world lead economic resources. Almost two thirds of Australia's zinc and lead Economic Demonstrated Resources (EDR) is in Queensland. Mining occurs in the Northern Territory and all States except Victoria. Australia's national inventory of zinc, lead and silver resources is updated annually in Australia's Identified Mineral Resources.

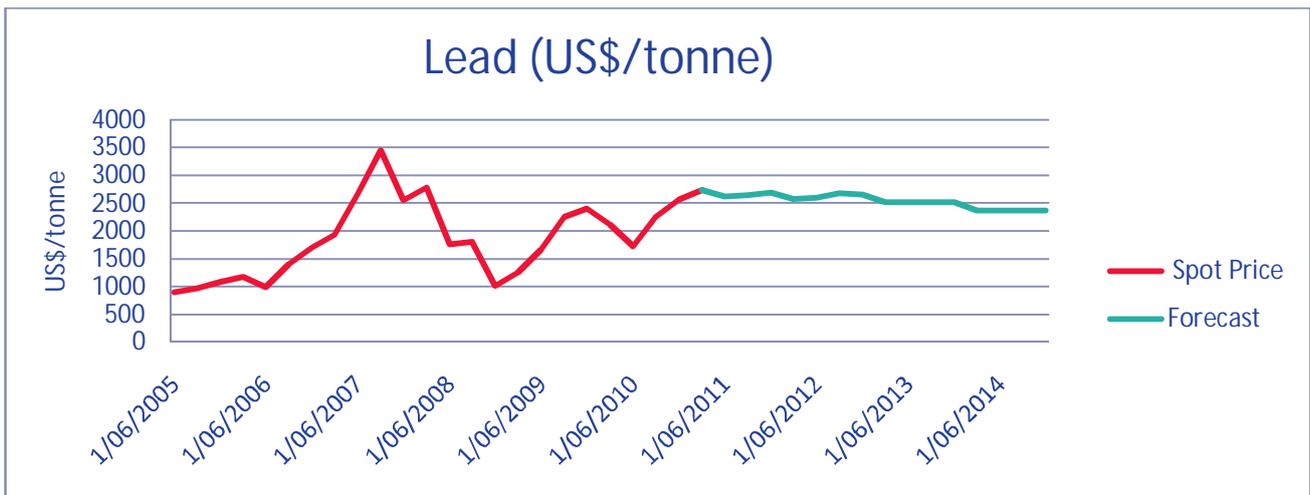
Source: Geoscience Australia (www.ga.gov.au)

Current and future zinc price



Source: Bloomberg

Current and future lead price



Source: Bloomberg

Current and future silver price



Source: Bloomberg

Copper industry analysis

Copper is a soft malleable, ductile metal used primarily for its excellent electrical and thermal conductive properties and its resistance to corrosion. As well as electrical and electronic applications copper is utilised extensively as an alloy. Copper, as a major industrial metal, ranks third after iron and aluminium in terms of quantity consumed (*World Mineral Production 2003-2007*, British Geological Survey).

Copper is produced from an oxide or sulphide ore from which it is converted to copper metal. The majority of copper ore bodies can be classified as either porphyries (where copper occurs in igneous rock), stratabound orebodies (where copper occurs in sedimentary rock), and volcanic hosted massive sulphide deposits (where copper occurs in volcanic rock along with other base metal sulphides). In these deposits copper is mined in very low concentrations and consequently is a volume intensive process. For this reason open pit mining is the preferred method of extraction, however underground mining and leach mining are also used in limited circumstances.

According to the International Copper Study Group ("ICSG"), the global growth in copper demand to exceed global growth in copper production and the annual production deficit, estimated at 250,000 metric tonnes (t) of refined copper in 2010, is expected to be about 380,000 t in 2011.

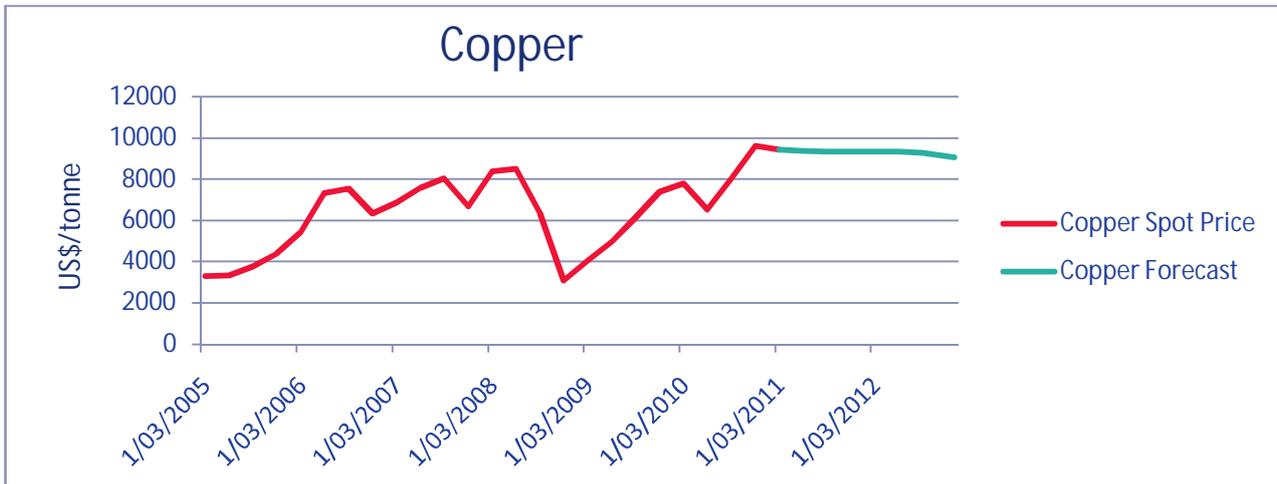
In 2011, China's copper consumption is forecast to increase around 6% on 2010 consumption. In 2010, China accounted for more than 38% of the global copper demand.

Australia's reserves are centred primarily at Olympic Dam, South Australia, and Mount Isa, Queensland. Other significant copper operations are located at Rio Tinto's Northparkes project and Newcrest Mining's Cadia-Ridge project in New South Wales, Newmont Mining's Golden Grove project in Western Australia and Xstrata's Ernest Henry in Northern Queensland.

Current and future copper price

Copper is a global commodity and, as such, prices are determined by global supply and demand factors. Due to this, copper prices have historically reflected global economic cycles and experienced major fluctuations reflecting equity market movements. At the beginning of 2008, supply concerns, falling

inventories and increased demand from emerging economies provoked a significant and accelerated rise in the copper price. Prices increased in the latter half of 2010, peaking at US\$9,600/t in the quarter ended 31 December 2010.



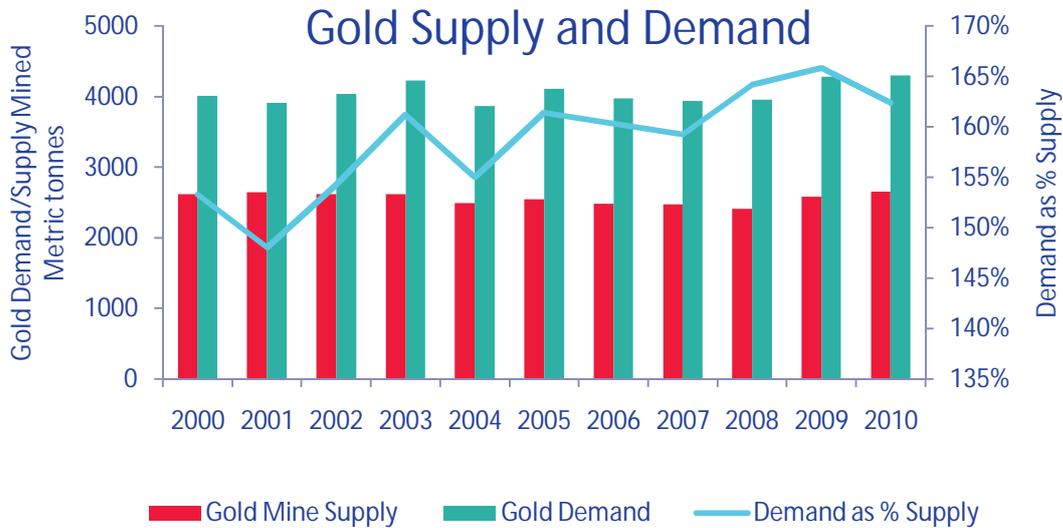
Source: Bloomberg

Looking forward, analysts are predicting the copper price to remain relatively stable with a slight depreciation. Consensus forecasts are around US\$9,366/t, US\$9,318/t and US\$9,071/t for 2011, 2012 and 2013 and respectively (*Bloomberg*).

Gold industry analysis

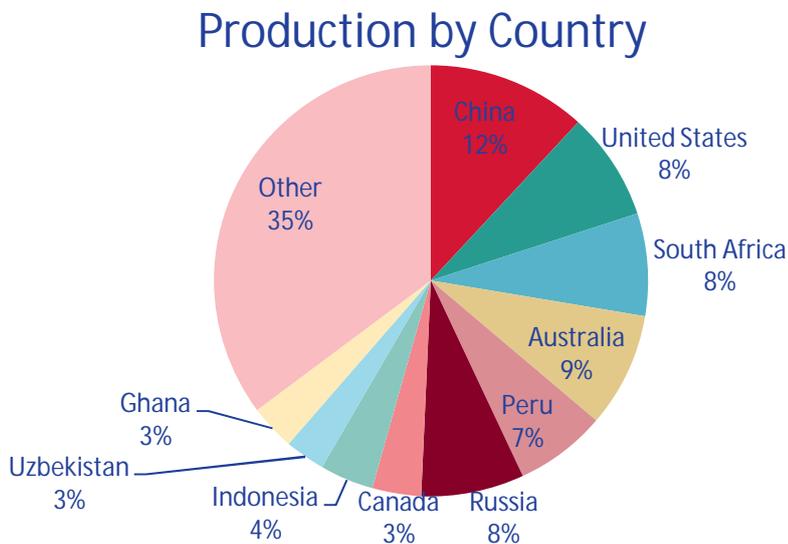
Gold is both a commodity and an international store of monetary value. Once mined, gold continues to exist indefinitely, often melted down and recycled to produce alternative or replacement products. This characteristic means that gold demand is supported by both mine production and gold recycling. According to GFMS Limited, at the end of 2007 the above ground stocks of gold were approximately 161,000 tonnes. Approximately two-thirds of annual demand for gold is driven by jewellery fabrication, with the remainder driven by industrial use and investment in gold.

As illustrated in the chart below, gold mine production was approximately 2,652 metric tonnes in 2010 and gold consumption was 4,306 metric tonnes. Demand for gold has consistently exceeded supply over the last 10 years, and the escalated level of economic and financial uncertainty during the past 18 months has caused investors to move capital from risky assets to gold assets, which are perceived to be a good store of monetary value. As a result, total gold demand increased by 9% between 2008 and 2010, with demand as a percentage of supply increasing from 164.2% in 2008 to 166.5% over the same period.



Source: Bloomberg

Until the late 1980's South Africa produced approximately half of total gold production. More recently, gold production has become geographically segmented, as shown in the chart below. In 2009 production was dominated by China (314 metric tonnes), Australia (227 metric tonnes), USA (216 metric tonnes) and South Africa (205 metric tonnes).

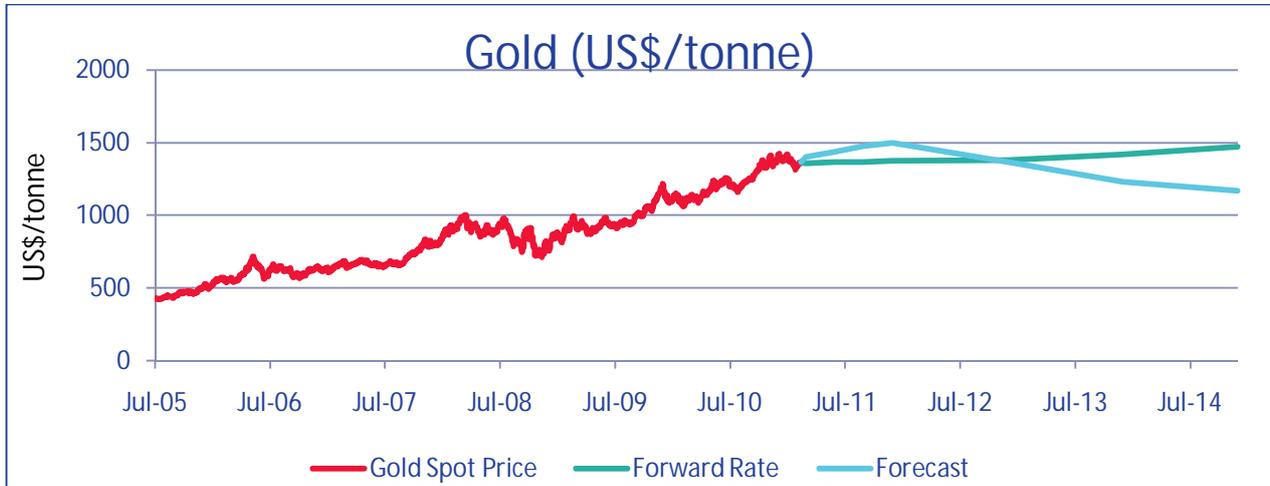


Source: Data from GFMS Limited

Current and future gold price

The price of gold fluctuates on a daily basis depending on global demand and supply factors. As can be seen in the graph below, the value of gold has increased over the past 5 years to USD\$1423.75 per ounce on 6 December 2010. This peak was largely caused by the US Federal Reserve Bank announcing a new round of quantitative easing, but was also driven by contagion concerns in Europe. The price trend over the last 2 years is reflective of weak global economic conditions driving demand. The consensus view is

that gold prices will fall over the next 3 years to approximately \$1168 in 2014. The current forward rate suggests that the price of gold will stabilise at current levels over the next three years.



Source: Bloomberg

9. Valuation Approach Adopted

We have used the Black Scholes option pricing model as a secondary approach to validate the values obtained from our primary approach, the Binomial option pricing model. Full details of the Option valuation can be found in Appendix 3.

We have applied the high and low net asset value of an Abra share as the underlying value of an Abra share in our calculation.

In order to derive the underlying value of an Abra share, we employed the Net Asset Value (“NAV”) methodology.

We have chosen this methodology for the following reasons:

- The most significant assets of Abra are exploration assets and as such require a specialist valuation that may not be accurately provided by other methodologies;
- Abra is listed on the ASX and this provides an indication of the market value where an observable market for the securities exists;
- Abra does not generate regular trading income. Therefore there are no historic profits that could be used to represent future earnings. This means that the FME valuation approach is not appropriate;
- Abra has no foreseeable future net cash inflows and therefore the application of DCF is not possible.

Further explanations of valuation methodologies can be found in Appendix 2.

10. Valuation of Abra

10.1 Net Asset Valuation of Abra

The value of Abra's assets on a going concern basis is reflected in our valuation below:

	Unaudited as at 31-Mar-11	Low value	High value	Preferred value
Balance Sheet	A\$	A\$	A\$	A\$
CURRENT ASSETS				
Cash and cash equivalents	4,190,165	4,190,165	4,190,165	4,190,165
Other financial assets	-	-	-	-
Other receivables	105,692	105,692	105,692	105,692
Other assets	6,826	6,826	6,826	6,826
Total current assets	4,302,683	4,302,683	4,302,683	4,302,683
NON-CURRENT ASSETS				
Plant and equipment	396,146	396,146	396,146	396,146
Exploration and evaluation	20,890,549	35,580,000	64,440,000	50,060,000
Total non-current assets	21,286,695	35,976,146	64,836,146	50,456,146
TOTAL ASSETS	25,589,378	40,278,829	69,138,829	54,758,829
CURRENT LIABILITIES				
Trade and other payables	26,176	26,176	26,176	26,176
Provisions	88,579	88,579	88,579	88,579
Interest Bearing Borrowings	22,070	22,070	22,070	22,070
Total current liabilities	136,825	136,825	136,825	136,825
NON-CURRENT LIABILITIES				
Provisions	152,865	152,865	152,865	152,865
Total non-current liabilities	152,865	152,865	152,865	152,865
TOTAL LIABILITIES	289,690	289,690	289,690	289,690
NET ASSETS	25,299,688	39,989,139	68,849,139	54,469,139
Shares on issue	141,957,504	141,957,504	141,957,504	141,957,504
Value of an Abra share	0.178	0.282	0.485	0.384

We have been advised by Abra that on 19 April 2011, 700,000 options were exercised. These options related to a Director who retired and are not included in the Option Offer from HNC. The options carried an exercise price of A\$0.325. The cash balance and shares on issue at 31 March 2011 have been adjusted to reflect this.

The table above indicates the net asset value of an Abra share is between A\$0.282 and A\$0.485. The low and high values have been used as the value of the underlying share prices of Abra in option value calculation.

The following adjustments were made to the net assets of Abra as at 31 March 2011 in arriving at our valuation:

Note 1

We instructed Xstract Mining Consultants Pty Ltd ("Xstract") to provide an independent market valuation of the exploration assets held by Abra. Xstract considered a number of different valuation methods when valuing the exploration assets of Abra. Xstract used both market and cost based approaches to arrive at its preferred value. Full details are shown in Appendix 4.

The range of values for each of Abra's exploration assets as calculated by Xstract is set out below:

Mineral Asset	Low Value A\$m	High Value A\$m	Preferred Value A\$m
Abra Deposit	32.26	58.06	45.16
Mulgul Project	1.07	1.70	1.33
Jillawarra Project	1.80	4.00	3.00
Mount Deverell Project	0.23	0.34	0.29
Havelock Project	0.22	0.34	0.28
TOTAL	35.58	64.44	50.06

The table above indicates a range of values between A\$35.58 million and A\$64.44 million, with a preferred value of A\$50.06 million.

Note 2

The value of an Abra share has been calculated applying the undiluted shares on issue. For all classes of unlisted options, it would be more advantageous for the optionholder to accept the Option Offer Price offered by HNC rather than exercise the option and accept the A\$0.40 cash offer per share. This is shown in the table below:

Options	Current exercise price (A\$)	Consideration per Abra share per the Offer from HNC (A\$)	Net position if options are exercised and A\$0.40 cash Offer is accepted (A\$)	Option Offer consideration (A\$)
Class 1	0.250	0.400	0.1500	0.1543
Class 2	0.310	0.400	0.0900	0.1103
Class 3	0.350	0.400	0.0500	0.1298
Class 4	0.500	0.400	-0.1000	0.0778
Class 5	0.350	0.400	0.0500	0.0849
Class 6	0.450	0.400	-0.0500	0.0412
Class 7	0.350	0.400	0.0500	0.1297
Class 8	0.450	0.400	-0.0500	0.0920
Class 9	0.325	0.400	0.0750	0.2345

11. Valuation of Abra Options

We have used the Black Scholes option pricing model to validate the valuation prices of unlisted Abra options calculated by the Binomial option pricing model.

The table below shows the option valuation for the nine classes of unlisted Abra options. The key inputs and assumptions around the key inputs are set out in Appendix 3:

Options	Low value of an Abra Option A\$	Preferred value of an Abra Option A\$	High value of an Abra Option A\$
Class 1	\$0.067	\$0.149	\$0.242
Class 2	\$0.051	\$0.119	\$0.202
Class 3	\$0.094	\$0.165	\$0.243
Class 4	\$0.066	\$0.123	\$0.189
Class 5	\$0.040	\$0.099	\$0.175
Class 6	\$0.021	\$0.061	\$0.121
Class 7	\$0.094	\$0.165	\$0.243
Class 8	\$0.074	\$0.135	\$0.205
Class 9	\$0.201	\$0.290	\$0.381

12. Valuation of Consideration

The following prices have been offered by HNC as consideration for the Abra options:

Option class	Expiry date	Number on issue	Current exercise price (A\$)	Option offer price (A\$)
1	27 June 2011	325,000	0.2500	0.1543
2	31 July 2011	1,000,000	0.3100	0.1103
3	15 May 2012	1,250,000	0.3500	0.1298
4	15 May 2012	750,000	0.5000	0.0778
5	31 July 2011	250,000	0.3500	0.0849
6	31 July 2011	100,000	0.4500	0.0412
7	14 May 2012	150,000	0.3500	0.1297
8	14 May 2012	100,000	0.4500	0.0920
9	3 January 2016	2,200,000	0.3200	0.2345

13. Is the Option Offer fair?

The value of consideration offered for the options is compared below to our calculation of the options:

Options	Low value of an Abra Option A\$	Preferred value of an Abra Option A\$	High value of an Abra Option A\$	Value of consideration A\$
Class 1	\$0.067	\$0.149	\$0.242	\$0.1543
Class 2	\$0.051	\$0.119	\$0.202	\$0.1103
Class 3	\$0.094	\$0.165	\$0.243	\$0.1298
Class 4	\$0.066	\$0.123	\$0.189	\$0.0778
Class 5	\$0.040	\$0.099	\$0.175	\$0.0849
Class 6	\$0.021	\$0.061	\$0.121	\$0.0412
Class 7	\$0.094	\$0.165	\$0.243	\$0.1297
Class 8	\$0.074	\$0.135	\$0.205	\$0.0920
Class 9	\$0.201	\$0.290	\$0.381	\$0.2345

We note from the results shown in the table above that the consideration for each class of Option falls within our valuation range of the Abra Options, however only the consideration for Class 1 falls above our preferred valuation of the classes. Our opinions are summarised in the table below;

Options	Opinion
Class 1	Fair
Class 2	Not fair to the Optionholders
Class 3	Not fair to the Optionholders
Class 4	Not fair to the Optionholders
Class 5	Not fair to the Optionholders
Class 6	Not fair to the Optionholders
Class 7	Not fair to the Optionholders
Class 8	Not fair to the Optionholders
Class 9	Not fair to the Optionholders

14. Is the Option Offer reasonable?

14.1 Alternative Offer

We are unaware of any alternative offers that might offer the Optionholders of Abra a premium over the value ascribed to that resulting from the Option Offer.

14.2 Practical Level of Control

If the Option Offer is approved by Optionholders owning 90% of the options then this would allow HNC to proceed to compulsory acquisition of the options.

14.3 Advantages of Accepting the Option Offer

We have considered the following advantages when assessing whether the Option Offer is reasonable.

Advantage	Description
The Option Offer is fair (Class 1 only)	As set out in Section 13, the Option Offer is fair (Class 1 only). RG 111 states that an offer is reasonable if it is fair.
Cash available for other investments	Optionholders will receive cash payment which can be used for alternate investments
No transaction costs	On approval of the Option Offer, options in Abra would be converted to cash for the Optionholder. No transaction costs, such as brokerage, will apply that would ordinarily apply if the options were exercised and the shares were disposed of.
Holders of the Options can monetise their investments	Given the historical low level of liquidity of Abra shares and the fact that the options are unlisted, the Option Offer represents an opportunity for holders of Options to monetise their investment in Abra at a premium.
Removes future risks associated with holding Options in Abra	The Option Offer removes the risks associated from the continued holding of Options including risks associated with future funding of Abra, and risks associated with proving up the Resource to Reserve status.
Greater benefit in accepting the Option Offer over exercising and accepting the cash per share Offer.	Greater monetary gain when Optionholders accept the Option Offer over exercising and accepting the A\$0.40 cash per share Offer.

14.4 Disadvantages of Accepting the Option Offer

If the Option Offer is accepted, in our opinion, the potential disadvantages to Optionholders include those listed in the table below:

Disadvantage	Description
Inability to benefit from potential upside in Abra	Optionholders will no longer own the right to acquire shares in the Company and will therefore not benefit from the potential capital growth and future profits of the Company.
Potential tax implications	Potential tax implications associated with selling Abra options may apply to Optionholders such as the immediate realisation of income/loss or capital gains/losses.
The Option Offer is not fair	As set out in Section 13, the Option offer is not fair (Classes 2 - 9)

15. Conclusion

We have considered the terms of the Option Offer as outlined in the body of this report and have concluded that the Option Offer is as follows;

Options	Opinion
Class 1	Fair and reasonable to the Optionholders
Class 2	Not fair but reasonable to the Optionholders
Class 3	Not fair but reasonable to the Optionholders
Class 4	Not fair but reasonable to the Optionholders
Class 5	Not fair but reasonable to the Optionholders
Class 6	Not fair but reasonable to the Optionholders
Class 7	Not fair but reasonable to the Optionholders
Class 8	Not fair but reasonable to the Optionholders
Class 9	Not fair but reasonable to the Optionholders

Although the consideration offered by HNC for Optionholders holding Classes 2 - 9 options is not fair, we consider the Option Offer to be reasonable for all Optionholders. For all classes of unlisted options, it would be more advantageous for the Optionholder to accept the Option Offer Price offered by HNC rather than exercise the option and accept the A\$0.40 cash offer per share. If the Optionholders decide to vote against the Option Offer and hold their options, they may be subject to compulsory acquisition if HNC have a relevant interest in not less than 90% of the options by then end of the offer period.

16. Sources of information

This report has been based on the following information:

- Draft Notice of General Meeting and Target's Statement on or about the date of this report;
- Audited financial statements of Abra for the years ended 31 December 2009 and 31 December 2010;
- Unaudited management accounts of Abra for the period ended 31 March 2011;
- Bid implementation agreement between Abra and HNC;
- Independent specialist valuation report prepared by Xstract;
- Share registry information;
- Information in the public domain; and
- Discussions with Directors and Management of Abra.

17. Independence

BDO Corporate Finance (WA) Pty Ltd is entitled to receive a fee of \$30,000 (excluding GST and reimbursement of out of pocket expenses). Except for this fee, BDO Corporate Finance (WA) Pty Ltd has not received and will not receive any pecuniary or other benefit whether direct or indirect in connection with the preparation of this report.

BDO Corporate Finance (WA) Pty Ltd has been indemnified by Abra in respect of any claim arising from BDO Corporate Finance (WA) Pty Ltd's reliance on information provided by the Abra, including the non provision of material information, in relation to the preparation of this report.

Prior to accepting this engagement BDO Corporate Finance (WA) Pty Ltd has considered its independence with respect to Abra and HNC and any of their respective associates with reference to ASIC Regulatory Guide 112 "Independence of Experts". In BDO Corporate Finance (WA) Pty Ltd's opinion it is independence of Abra and HNC and their respective associates.

Neither the two signatories to this report nor BDO Corporate Finance (WA) Pty Ltd, have had within the past two years any professional relationship with Abra, or their associates, other than in connection with the preparation of this report.

A draft of this report was provided to Abra and its advisors for confirmation of the factual accuracy of its contents. No significant changes were made to this report as a result of this review.

BDO is the brand name for the BDO International network and for each of the BDO Member firms.

BDO (Australia) Ltd, an Australian company limited by guarantee, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of Independent Member Firms. BDO in Australia, is a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International).



18. Qualifications

BDO Corporate Finance (WA) Pty Ltd has extensive experience in the provision of corporate finance advice, particularly in respect of takeovers, mergers and acquisitions.

BDO Corporate Finance (WA) Pty Ltd holds an Australian Financial Services Licence issued by the Australian Securities and Investment Commission for giving expert reports pursuant to the Listing rules of the ASX and the Corporations Act.

The persons specifically involved in preparing and reviewing this report were Sherif Andrawes and Adam Myers of BDO Corporate Finance (WA) Pty Ltd. They have significant experience in the preparation of independent expert reports, valuations and mergers and acquisitions advice across a wide range of industries in Australia and were supported by other BDO staff.

Sherif Andrawes is a Fellow of the Institute of Chartered Accountants in England & Wales and a Member of the Institute of Chartered Accountants in Australia. He has over twenty years experience working in the audit and corporate finance fields with BDO and its predecessor firms in London and Perth. He has been responsible for over 150 public company independent expert's reports under the Corporations Act or ASX Listing Rules. These experts' reports cover a wide range of industries in Australia. Sherif Andrawes is the Chairman of BDO in Western Australia.

Adam Myers is a member of the Australian Institute of Chartered Accountants. Adam's career spans 13 years in the Audit and Assurance and Corporate Finance areas. Adam has considerable experience in the preparation of independent expert reports and valuations in general for companies in a wide number of industry sectors.

19. Disclaimers and consents

This report has been prepared at the request of Abra for inclusion in the Target's Statement which will be sent to all Abra Shareholders. Abra engaged BDO Corporate Finance (WA) Pty Ltd to prepare an independent expert's report to consider whether or not the takeover offer from HNC to acquire or enter into cancellation deed polls in respect of the 6,125,000 options to subscribe for Shares ("the Option Offer") is fair and reasonable to the non associated shareholders of Abra.

BDO Corporate Finance (WA) Pty Ltd hereby consents to this report accompanying the above Target's Statement. Apart from such use, neither the whole nor any part of this report, nor any reference thereto may be included in or with, or attached to any document, circular resolution, statement or letter without the prior written consent of BDO Corporate Finance (WA) Pty Ltd.

BDO Corporate Finance (WA) Pty Ltd takes no responsibility for the contents of the Target's Statement other than this report.

BDO Corporate Finance (WA) Pty Ltd has not independently verified the information and explanations supplied to us, nor has it conducted anything in the nature of an audit or review of Abra or HNC in accordance with standards issued by the Auditing and Assurance Standards Board. However, we have no reason to believe that any of the information or explanations so supplied are false or that material information has been withheld. It is not the role of BDO Corporate Finance (WA) Pty Ltd acting as an independent expert to perform any due diligence procedures on behalf of the Company. The Directors of the Company are responsible for conducting appropriate due diligence in relation to HNC. BDO Corporate

Finance (WA) Pty Ltd provides no warranty as to the adequacy, effectiveness or completeness of the due diligence process.

The opinion of BDO Corporate Finance (WA) Pty Ltd is based on the market, economic and other conditions prevailing at the date of this report. Such conditions can change significantly over short periods of time.

With respect to taxation implications it is recommended that individual Optionholders and Shareholders obtain their own taxation advice, in respect of the Option Offer, tailored to their own particular circumstances. Furthermore, the advice provided in this report does not constitute legal or taxation advice to the Optionholders and Shareholders of Abra, or any other party.

BDO Corporate Finance (WA) Pty Ltd has also considered and relied upon an independent specialist valuation prepared by Xstract for mineral assets held by Abra.

Xstract possess the appropriate qualifications and experience in the mineral and resources industry to make such assessments. The approaches adopted and assumptions made in arriving at their conclusions are appropriate for this report. We have received consents from Xstract for the use of the specialist's report in the preparation of this report.

The statements and opinions included in this report are given in good faith and in the belief that they are not false, misleading or incomplete.

The terms of this engagement are such that BDO Corporate Finance (WA) Pty Ltd has no obligation to update this report for events occurring subsequent to the date of this report.

Yours faithfully

BDO CORPORATE FINANCE (WA) PTY LTD

Sherif Andrawes



Director

Adam Myers



Associate Director

Authorised Representative

Appendix 1 – Glossary of Terms

Reference	Definition
The Act	The Corporations Act
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
BDO	BDO Corporate Finance (WA) Pty Ltd
Abra	Abra Mining Limited
The Company	Abra Mining Limited
DCF	Discounted Future Cash Flows
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortisation
FMD	Future Maintainable Dividends
FME	Future Maintainable Earnings
HNC	Hunan Nonferrous Metals Corporation
ROC	Return of Capital
NAV	Net Asset Value
The Option Offer	The offer from Hunan Nonferrous Metals Corp Limited to acquire or enter into cancellation deed polls in respect of the 6,125,000 options to subscribe for Shares
The Offer	The offer from Hunan Nonferrous Metals Corp Limited to acquire all issued ordinary shares of Abra not already owned by HNC at A\$0.40 per share
Our Report	This Independent Expert's Report prepared by BDO
VWAP	Volume Weighted Average Price
Shareholders	Shareholders of Abra not associated with HNC
RG111	Content of expert reports (March 2011)
RG112	Independence of experts (March 2011)

Appendix 2 – Valuation Methodologies

Methodologies commonly used for valuing assets and businesses are as follows:

1 *Net asset value (“NAV”)*

Asset based methods estimate the market value of an entity’s securities based on the realisable value of its identifiable net assets. Asset based methods include:

- Orderly realisation of assets method
- Liquidation of assets method
- Net assets on a going concern method

The orderly realisation of assets method estimates fair market value by determining the amount that would be distributed to entity holders, after payment of all liabilities including realisation costs and taxation charges that arise, assuming the entity is wound up in an orderly manner.

The liquidation method is similar to the orderly realisation of assets method except the liquidation method assumes the assets are sold in a shorter time frame. Since wind up or liquidation of the entity may not be contemplated, these methods in their strictest form may not be appropriate. The net assets on a going concern method estimates the market values of the net assets of an entity but does not take into account any realisation costs.

Net assets on a going concern basis are usually appropriate where the majority of assets consist of cash, passive investments or projects with a limited life. All assets and liabilities of the entity are valued at market value under this alternative and this combined market value forms the basis for the entity’s valuation.

Often the FME and DCF methodologies are used in valuing assets forming part of the overall Net assets on a going concern basis. This is particularly so for exploration and mining companies where investments are in finite life producing assets or prospective exploration areas.

These asset based methods ignore the possibility that the entity’s value could exceed the realisable value of its assets as they do not recognise the value of intangible assets such as management, intellectual property and goodwill. Asset based methods are appropriate when an entity is not making an adequate return on its assets, a significant proportion of the entity’s assets are liquid or for asset holding companies.

2 *Quoted Market Price Basis (“QMP”)*

A valuation approach that can be used in conjunction with (or as a replacement for) other valuation methods is the quoted market price of listed securities. Where there is a ready market for securities such as the ASX, through which shares are traded, recent prices at which shares are bought and sold can be taken as the market value per share. Such market value includes all factors and influences that impact upon the ASX. The use of ASX pricing is more relevant where a security displays regular high volume trading, creating a “deep” market in that security.

3 *Capitalisation of future maintainable earnings (“FME”)*

This method places a value on the business by estimating the likely FME, capitalised at an appropriate rate which reflects business outlook, business risk, investor expectations, future growth prospects and other entity specific factors. This approach relies on the availability and analysis of comparable market data.

The FME approach is the most commonly applied valuation technique and is particularly applicable to profitable businesses with relatively steady growth histories and forecasts, regular capital expenditure requirements and non-finite lives.

The FME used in the valuation can be based on net profit after tax or alternatives to this such as earnings before interest and tax ("EBIT") or earnings before interest, tax, depreciation and amortisation ("EBITDA"). The capitalisation rate or "earnings multiple" is adjusted to reflect which base is being used for FME.

4 Discounted future cash flows ("DCF")

The DCF methodology is based on the generally accepted theory that the value of an asset or business depends on its future net cash flows, discounted to their present value at an appropriate discount rate (often called the weighted average cost of capital). This discount rate represents an opportunity cost of capital reflecting the expected rate of return which investors can obtain from investments having equivalent risks.

Considerable judgement is required to estimate the future cash flows which must be able to be reliably estimated for a sufficiently long period to make this valuation methodology appropriate.

A terminal value for the asset or business is calculated at the end of the future cash flow period and this is also discounted to its present value using the appropriate discount rate.

DCF valuations are particularly applicable to businesses with limited lives, experiencing growth, that are in a start up phase, or experience irregular cash flows.

5 Market Based Assessment

The market based approach seeks to arrive at a value for a business by reference to comparable transactions involving the sale of similar businesses. This is based on the premise that companies with similar characteristics, such as operating in similar industries, command similar values. In performing this analysis it is important to acknowledge the differences between the comparable companies being analysed and the company that is being valued and then to reflect these differences in the valuation.

6 Multiple of Exploration Expenditure ("MEE")

The Past Expenditure method is a method of valuing exploration assets in the resources industry. It is applicable for areas which are at too early a stage of prospectivity to justify the use of alternative valuation methods such as DCF. The Past Expenditure method is often referred to as the Multiple of Exploration Expenditure method.

Past expenditure, or the amount spent on exploration of a tenement, is commonly used as a guide in determining value. The assumption is that well directed exploration adds value to a property. This is not always the case and exploration can also downgrade a property. The Prospectivity Enhancement Multiplier ("PEM") which is applied to the effective expenditure therefore commonly ranges from 0.5 to 3.0. The PEM generally falls within the following ranges:

- 0.5 to 1.0 where work to date or historic data justifies the next stage of exploration;
- to 2.0 where strong indications of potential for economic mineralisation have been identified; and
- to 3.0 where ore grade intersections or exposures indicative of economic resources are present.

Appendix 3 – Valuation of unlisted Abra Options

Options without market based vesting conditions can be exercised at any time following vesting up to expiry date, and as such are more suitably valued using a binomial option pricing model.

Option pricing models assume that the exercise of an option does not affect the value of the underlying asset.

We have used the Black Scholes option pricing model to validate the valuation prices calculated by the binomial option pricing model.

Under AASB 2 'Share Based Payments' and option valuation theory, no discount is made to the fundamental value derived from the option valuation model for unlisted options over listed shares.

Key inputs:

Underlying share price - The high and low net asset valuation of an Abra share as calculated in Section 10.1 are the values of the Company's share that we have adopted for our valuation.

Value date - We have adopted the announcement date of 4 April 2011 as the value date of all nine classes of options.

The life of the options - We have estimated the life of the Options for the purpose of our valuation. The minimum life of the Options is the length of any vesting period. The maximum life is based on the expiry date. For the purpose of valuing these Options we have estimated an exercise date as the expiry date.

Volatility - Expected volatility is a measure of the amount by which a price is expected to fluctuate during a period. The measure of volatility used in option pricing models is the annualised standard deviation of the continuously compounded rates of return on the share over a period of time. The recent volatility of the share price of Abra was calculated by Hoadley's volatility calculator for a two year period, using data extracted from Bloomberg. For the purpose of our valuation, we used a future estimated volatility level of 95% for Abra in our pricing model.

Risk free rate - We have used the Australian Government two year bond rate of 4.93% and five year bond rate of 5.25% as at the date of the announcement as inputs to our option pricing model.

Item	Class 1 - low	Class 1 - preferred	Class 1 - high	Class 2 - low	Class 2 - preferred	Class 2 - high
Underlying Security spot price	\$0.282	\$0.384	\$0.485	\$0.282	\$0.384	\$0.485
Exercise price	\$0.250	\$0.250	\$0.250	\$0.310	\$0.310	\$0.310
Value date	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11
Expiration date	27-Jun-11	27-Jun-11	27-Jun-11	31-Jul-11	31-Jul-11	31-Jul-11
Life of the Options	0.230	0.230	0.230	0.323	0.323	0.323
Volatility	95%	95%	95%	95%	95%	95%
Risk free rate	4.93%	4.93%	4.93%	4.93%	4.93%	4.93%
Number of Options	325,000	325,000	325,000	1,000,000	1,000,000	1,000,000
Valuation per Option	\$0.067	\$0.149	\$0.242	\$0.051	\$0.119	\$0.202
Valuation per Class	\$21,775	\$48,425	\$78,650	\$51,000	\$119,000	\$202,000

Item	Class 3 - low	Class 3 - preferred	Class 3 - high	Class 4 - low	Class 4 - preferred	Class 4 - high
Underlying Security spot price	\$0.282	\$0.384	\$0.485	\$0.282	\$0.384	\$0.485
Exercise price	\$0.350	\$0.350	\$0.350	\$0.500	\$0.500	\$0.500
Value date	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11
Expiration date	15-May-12	15-May-12	15-May-12	15-May-12	15-May-12	15-May-12
Life of the Options	1.115	1.115	1.115	1.115	1.115	1.115
Volatility	95%	95%	95%	95%	95%	95%
Risk free rate	4.93%	4.93%	4.93%	4.93%	4.93%	4.93%
Number of Options	1,250,000	1,250,000	1,250,000	750,000	750,000	750,000
Valuation per Option	\$0.094	\$0.165	\$0.243	\$0.066	\$0.123	\$0.189
Valuation per Class	\$117,500	\$206,250	\$303,750	\$49,500	\$92,250	\$141,750

Item	Class 5 - low	Class 5 - preferred	Class 5 - high	Class 6 - low	Class 6 - preferred	Class 6 - high
Underlying Security spot price	\$0.282	\$0.384	\$0.485	\$0.282	\$0.384	\$0.485
Exercise price	\$0.350	\$0.350	\$0.350	\$0.450	\$0.450	\$0.450
Value date	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11
Expiration date	31-Jul-11	31-Jul-11	31-Jul-11	31-Jul-11	31-Jul-11	31-Jul-11
Life of the Options	0.323	0.323	0.323	0.323	0.323	0.323
Volatility	95%	95%	95%	95%	95%	95%
Risk free rate	4.93%	4.93%	4.93%	4.93%	4.93%	4.93%



Number of Options	250,000	250,000	250,000	100,000	100,000	100,000
Valuation per Option	\$0.040	\$0.099	\$0.175	\$0.021	\$0.061	\$0.121
Valuation per Class	\$10,000	\$24,750	\$43,750	\$2,100	\$6,100	\$12,100

Item	Class 7 - low	Class 7 - preferred	Class 7 - high	Class 8 - low	Class 8 - preferred	Class 8 - high
Underlying Security spot price	\$0.282	\$0.384	\$0.485	\$0.282	\$0.384	\$0.485
Exercise price	\$0.350	\$0.350	\$0.350	\$0.450	\$0.450	\$0.450
Value date	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11	4-Apr-11
Expiration date	14-May-12	14-May-12	14-May-12	14-May-12	14-May-12	14-May-12
Life of the Options	1.112	1.112	1.112	1.112	1.112	1.112
Volatility	95%	95%	95%	95%	95%	95%
Risk free rate	4.93%	4.93%	4.93%	4.93%	4.93%	4.93%

Number of Options	150,000	150,000	150,000	100,000	100,000	100,000
Valuation per Option	\$0.094	\$0.165	\$0.243	\$0.074	\$0.135	\$0.205
Valuation per Class	\$14,100	\$24,750	\$36,450	\$7,400	\$13,500	\$20,500

Item	Class 9 - low	Class 9 - preferred	Class 9 - high
Underlying Security spot price	\$0.282	\$0.384	\$0.485
Exercise price	\$0.325	\$0.325	\$0.325
Value date	4-Apr-11	4-Apr-11	4-Apr-11
Expiration date	3-Jan-16	3-Jan-16	3-Jan-16
Life of the Options	4.753	4.753	4.753
Volatility	95%	95%	95%
Risk free rate	5.25%	5.25%	5.25%

Number of Options	2,200,000	2,200,000	2,200,000
Valuation per Option	\$0.201	\$0.290	\$0.381
Valuation per Class	\$442,200	\$638,000	\$838,200



Appendix 4 - Independent Specialist Valuation of Abra's Exploration Assets



Independent Valuation

Abra Mining Limited

Prepared for:
BDO Corporate Finance Pty Ltd
May 2011
FINAL

XtractGroup.com

Xtract - Excellence from the outset



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Executive summary

At the request of BDO Corporate Finance (WA) Pty Ltd (BDO), Xstract Mining Consultants Pty Ltd (Xstract) has prepared an Independent Valuation Report on the mineral assets of Abra Mining Limited (Abra or the Company) for a proposed transaction. The purpose of this report is to provide an impartial overview and assessment of the technical merits that might reasonably be expected to be applied by the market when considering an investment in Abra. Xstract has reviewed Abra's mineral assets holistically, including:

- Project location, access and supporting infrastructure
- Geological setting
- Exploration/development/mining history
- Mineral Resource estimates
- Potential mining/processing scenarios
- Exploration/development strategy

Abra's mineral assets range from early stage to advanced exploration areas and host numerous targets ranging in maturity from conceptual to defined Indicated and Inferred Resources at the Abra Deposit. To date, the bulk of the company's exploration focus has been directed towards the advancement of the Abra base metal deposit and the identification of extensions to this deposit, as well as prospects offering potential for similar mineralisation in its adjacent tenements. To this end, the Company has completed scoping level assessments at the Abra Deposit and a number of targeting reviews at its Mulgul and Jillawarra Projects. Details of these are discussed elsewhere in this report.

Project overview

Abra has amassed over 1,570 km² across 32 tenements in the Peak Hill and East Murchison Mineral Fields in central Western Australia. Abra's mineral assets have been divided into four projects, namely the Mulgul, Jillawarra, Mount Deverell and Havelock Projects.

Mulgul Project (Abra 100%)

Mulgul, located some 185 km southwest of Newman, is Abra's most advanced project, and contains the polymetallic Abra lead-silver-(zinc)-copper-gold deposit. Drilling by Abra has identified an Indicated and Inferred Mineral Resource comprising:

- 93 million tonnes averaging 4.0% Pb and 10 g/t Ag in an upper lead domain, of which approximately 35% is classified as Indicated; and
- 14 million tonnes averaging 0.6% Cu and 0.5 g/t Au in a lower copper-gold domain, of which approximately 28% is classified as Indicated.

The Mineral Resource remains open to the east, west, and south.

The Company has conducted a number of high level, conceptual studies to evaluate the open pit and underground mining potential of the Abra Deposit. The results of these studies suggest that whilst bulk mining methods such as open pit mining and Sub Level Caving are technically feasible, further infill drilling, geological modelling, optimisation and mine design work is required to provide greater confidence in the assumed parameters and potentially improve project economics.

Jillawarra Project (Abra 90% to 100%)

The Jillawarra Project (including several joint venture tenements) immediately adjoins the Company's Mulgul Project to the west and is considered prospective for Abra style base metal mineralisation. Numerous base metal prospects and geophysical/geochemical anomalies have been outlined within the project area.

Based on the available datasets, the Company has currently identified 119 targets in the area, which have been further refined to 20 priority targets. The Woodlands, Quartzite Well, Copper Chert and Manganese Range are highly prospective anomalies, which have confirmed drilled mineralised intercepts. Xstract notes that the majority of these anomalies remain to be adequately assessed, with detailed geological mapping and sampling planned over the most prospective in order to define further potential drill targets.

Mount Deverell Project (Abra 100%)

The Mount Deverell Project is located 45 km southwest of the Abra Deposit and covers an area selected on the basis of geological similarity to the Abra Deposit. Based on a review of the available technical data, Xstract considers the prospectivity of the Mount Deverell project to be moderate, based on its similarities to the Abra Deposit. Four areas with anomalous lead values (up to 155 ppm lead) have been identified in soil geochemical sampling programmes associated with a coarse sandstone and pebble conglomerate sequence similar to that hosting the Abra Deposit.

Havelock Project (80% to 100%)

The Havelock Project (including three joint venture tenements) is located approximately 30 km west of Wiluna in central Western Australia and surrounds Ivernia Inc's Magellan open-pit lead mine. Because of this proximity, the Havelock Project is targeting lead mineralisation similar to that observed at Magellan. Based on its review of the available technical data, Xstract considers the Havelock Project to represent a conceptual exploration play with the prospectivity considered to be low to moderate. A potential lead deposit within the area is likely to be small and would most likely be suited to treatment at Ivernia's mining operation rather than justifying a stand-alone operation.

Valuation

Xstract has used a variety of valuation methodologies to derive a preferred value and range for Abra's mineral assets. On this basis, Xstract has used both market and cost based approaches to arrive at its preferred value of A\$50.06 M within a range of A\$35.58 M to A\$64.44 M for Abra's mineral assets. Xstract's valuation is summarised in Table 1.

Table 1: Valuation summary – attributable to Abra

Project	Aspect	Values (A\$ M)		
		Low	High	Preferred
Abra Deposit	Mineral Resource	32.26	58.06	45.16
Mulgul Project	Exploration potential	1.07	1.7	1.33
Jillawarra Project	Exploration potential	1.80	4.00	3.00
Mount Deverell Project	Exploration potential	0.23	0.34	0.29
Havelock Project	Exploration potential	0.22	0.34	0.28
	Total	35.58	64.44	50.06

*Any discrepancies between tables is due to rounding.

Contents

Executive summary	i
1 Introduction	1
1.1 Background	2
1.2 Terms of reference	2
1.3 Reporting standard	3
1.4 Data sources	3
2 Technical summary	4
2.1 Tenure considerations	4
2.2 Agreements	6
2.3 Overview of the South Bangemall Projects	6
2.4 Mulgul Project	10
2.5 Mineral Resource	13
2.6 Mining, metallurgical and processing considerations	17
2.7 Xstract's recommendations	20
2.8 Exploration potential	22
2.9 Jillawarra Project	24
2.10 Mount Deverell Project	27
2.11 Havelock Project	27
3 Valuation	31
3.1 Valuation considerations	31
3.2 Income based approach	32
3.3 Market based approach	32
3.4 Cost-based approach	34
3.5 Xstract's technique	36
3.6 Abra Mineral Resource valuation	36
3.7 Exploration potential valuation	41
3.8 Other considerations	44
3.9 Valuation summary	44
4 Declaration	46
4.1 Independence	46
4.2 Qualifications	46
4.3 Competent person statement	47
4.4 Warranties and indemnities	48
4.5 Consent	48
5 Bibliography	49

Tables

Table 2.1: Tenement details	5
Table 2.2: Abra exploration drilling campaigns	13
Table 2.3: Summary of previous resource estimates	13
Table 2.4: Abra 2008 published Mineral Resource	15
Table 2.5: Selected drillhole intervals from within the Jillawarra area	25
Table 2.6: Genetic model for non-sulphide base metal deposits	30
Table 3.1: Mineral asset classification	31
Table 3.2: Valuation approaches for different types of mineral assets	32
Table 3.3: Base metal deposit transactions considered similar to the Abra deposit	37
Table 3.4: Implied metrics from resource transaction data	38
Table 3.5: Market-based valuation summary of the Abra Mineral Resource	38
Table 3.6: Expected value of a 100% interest in the Abra Deposit's Mineral Resource	39
Table 3.7: Abra Mineral Resource valuation summary	41
Table 3.8: Implied metrics from exploration transaction data	42
Table 3.9: Market based valuation of the exploration potential of Abra's projects	42
Table 3.10: Attributable historic and forecast expenditures for Abra's other projects	43
Table 3.11: Estimated Replacement Value for Abra's Projects (excluding Abra deposit)	43
Table 3.12: Exploration valuation summary	44
Table 3.13: Valuation summary – attributable to Abra	45

Figures

Figure 1.1: Location of Abra's projects	1
Figure 2.1: Tenement location map	4
Figure 2.2: The regional setting of the Company's mineral assets	7
Figure 2.3: Regional structural setting	8
Figure 2.4: Representative cross section of the Abra Deposit	10
Figure 2.5: Surface rock chip sampling over total magnetic intensity image (Mulgul Project)	11
Figure 2.6: Isometric view showing inverted chargeability sections	12
Figure 2.7: Abra Deposit drillhole locations and current resource boundary	14
Figure 2.8: Mineral domains of the Abra Deposit	14
Figure 2.9: Lead grade – tonnage curve for the Abra Deposit	19
Figure 2.10: Proposed concentrate pipeline	22
Figure 2.15: M1 Fault and Abra West geochemical target	23
Figure 2.12: Mulgul targets over total carbonate in groundwater	24
Figure 2.13. Significant drilling results in the Jillawarra area	26

Figure 2.14: Top 20 prioritised targets	26
Figure 2.15: Mount Deverell NITON [®] geochemistry results	27
Figure 2.16: Geochemical anomalies within the Havelock Project	28
Figure 2.17: Stratigraphy of the Yerrida Basin, which underlies the Havelock Project	29
Figure 3.1: Vendor and acquirer considerations in the replacement valuation process	36
Figure 3.2: Lead price versus the ASX All Ordinaries Index from January 2007 to April 2011	37

Appendices

- Appendix A Resource Transactions
- Appendix B Exploration Transactions

Glossary

%	Percent, percentage
°	Degrees
°C	Degrees Celsius
A\$	Currency, Australian dollar
AIG	Australian Institute of Geoscientists
Alluvial	Sediment deposited by flowing water, as in a riverbed, flood plain or delta.
Abra or the Company	Abra Mining Limited
Amoco	Amoco Minerals Australia Company
Amphibolites facies	Mineral classification of metamorphic rocks formed under conditions of moderate to high temperatures
Anticline/anticlinal	An upward fold in which strata dip away from one another forming an inverted U
Archaean	A geological time period ranging from 3,800 to 2,500 million years ago
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
Au	Gold
AusIMM	Australasian Institute of Mining and Metallurgy
BDO	BDO Corporate Finance (WA) Pty Ltd
Breccia	A rock composed of angular fragments of minerals or rocks in a matrix (cementing material)
Carbonate	Mineral containing calcium and/or magnesium carbonate
Chert	A crystalline siliceous rock usually of sedimentary origin
CIMVAL	Canadian 2003 Edition of the Standards and Guidelines for Valuation of Mineral Properties
Clastic	Sediments derived from erosion of pre-existing rocks
Company	Abra Mining Limited
Conglomerate	Coarse grained sedimentary rock
Craton	A stable portion of the continental crust
DCF	Discounted cash flow
EL	Exploration licence
EM	Electromagnetic
ESS	electronic single shot
EV	Expected values
g/t	Grams per tonne
Galena	A lead sulphide mineral (PbS)
Geopeko	Geopeko Limited, later North Limited
Gneiss	A rock formed by high-grade regional metamorphic processes from pre-existing formations that were originally either igneous or sedimentary rocks
GPS	Geographic positioning system
Granite or granitoid	An intrusive, felsic, igneous rock generally with a medium to coarse grained texture

Greenfields exploration	Early stage exploration
Greenstone Belt	Volcanic sequence of rocks with associated sedimentary rocks that occur within Archaean and Proterozoic cratons between granite and gneiss bodies
Hangingwall	The mass of rock above a geological structure, deposit, vein or fault
HNC	Hunan Nonferrous Metals Corporation Limited
HNG	Hunan Nonferrous Metals Holdings Group Co.
IER	Independent Experts Report
Indicated Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, and quality can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Mineral Resource	That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or uncertain quality and reliability.
Intrusive	A body of igneous rock formed from a magma which has been emplaced into other rocks
IOCG	Iron oxide copper-gold
IP	Induced polarisation
Ivernia	Ivernia Inc
JJAC	Jidi Jidi Aboriginal Corporation
JJV	Jillawarra Joint Venture
JORC Code	2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
km	Kilometre(s)
km ²	Square kilometre(s)
Laterite	Residual material overlying rock types from which it was derived and out of which silica and aluminium has been leached. Typically iron-rich
Lens(es)	A body of ore or geological feature that is thick in the middle and tapers towards the ends like a convex lens
Lineament	A linear feature, generally recognisable in topography, of regional extent.
Lode	A vein or other tabular mineral deposit with distinct boundaries
m	Metre(s)
M	Million
m ³	Cubic metre(s)
Ma	Million years
Mafic	Igneous rocks composed dominantly of iron and magnesium minerals
MEE	Multiples of exploration expenditure
Mineral Resource	A concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects

	for eventual economic extraction
ML	Mining lease
Mt	Million tonne(s)
Nodular	Small ball-like rock particles
Oldcity	Oldcity Nominees Pty Ltd
Ordinary kriging	A geostatistical method of interpolation which predicts unknown values from data observed at known locations and is used to determine Ore Reserves and Mineral Resources
Orogen	Primary mechanism by which mountains are built on continents
oz	Ounce(s)
Perilya	Perilya Ltd
PL	Prospecting licence
Proterozoic	A geological time period from 2,500 to 542 million years ago
QA	Quality Assurance
QC	Quality Control
Quartzite	A metamorphic rock consisting of essentially quartz
RAB	Rotary air-blast
RC	Reverse circulation
RCG	Renison Goldfields Consolidated Limited
SAMVAL	The South African Code for the Reporting of Mineral Asset Valuation (2008)
Schist	Fine grained, laminated metamorphic rock
SEDEX	Sedimentary exhalative base metal deposit
Sedimentary	Rocks formed by deposition of weathered rock particles carried by air, water or ice
Shear	A zone in which shearing has occurred on a large scale
Silicified	Original minerals have been replaced by silica
Sphalerite	A zinc sulphide mineral (ZnS)
Stockwork	A three-dimensional vein network
Stope	The underground excavation within the deposit where the main production takes place
Stratigraphic	Pertaining to the composition, sequence and correlation of layered rocks
Sub Level Caving	A stoping method in which relatively thin blocks of ore are caused to cave by successively undermining small panels.
t	Metric tonne(s)
Ultramafic	Igneous rocks composed of ferromagnesian minerals
VALMIN Code	The VALMIN Code sets standards for the preparing of Independent Expert Reports for the assessment and/or valuation of mineral or petroleum assets or securities
Xstract	Xstract Mining Consultants Pty Ltd

1 Introduction

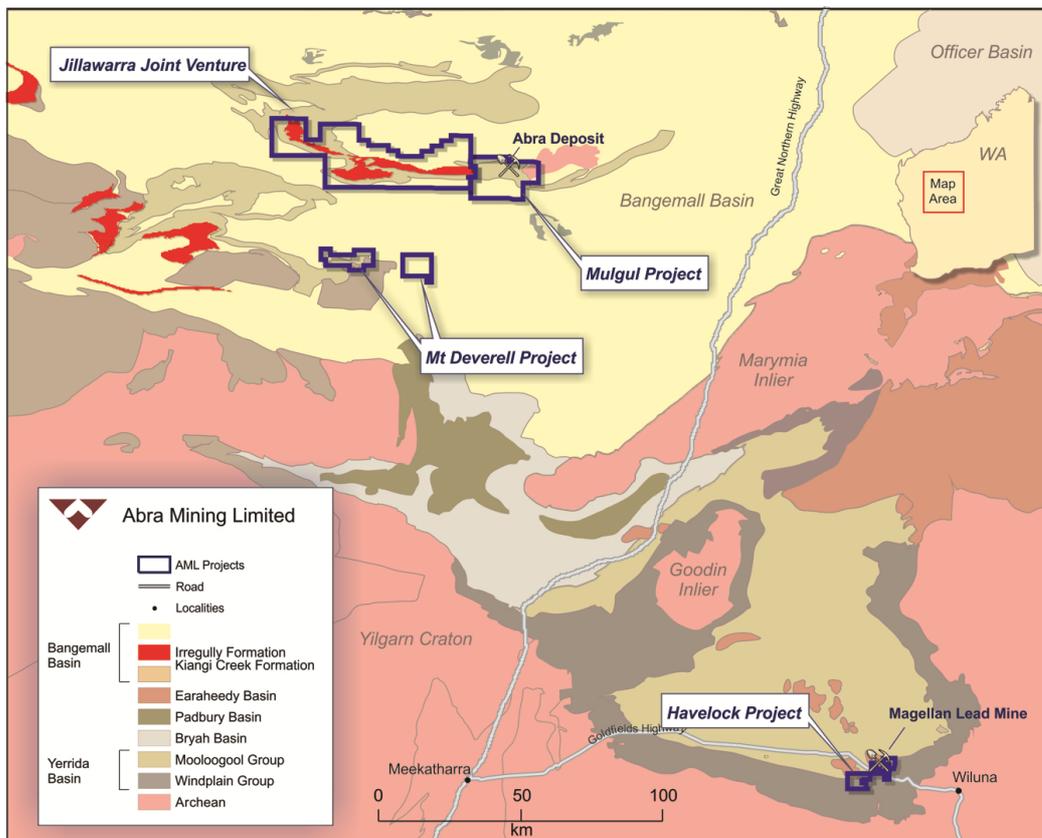
Xstract Mining Consultants Pty Ltd (Xstract) has prepared an Independent Valuation Report on the mineral assets of Abra Mining Limited (Abra or the Company), on the request of BDO Corporate Finance (WA) Pty Ltd (BDO). Xstract understands that this report will be included as an appendix to BDO's Independent Experts' Reports (IERs) relating to a proposed transaction involving Abra's mineral assets.

The mineral assets considered in this report reside in central Western Australia and comprise:

- **Mulgul Project:** A 100% interest in three Exploration Licences (EL), three Prospecting Licences (PL), a Mining Lease (ML) and two infrastructure leases
- **Jillawarra Project:** A 90% interest in four ELs and a 100% interest in 12 PLs
- **Mount Deverell Project:** A 100% interest in two ELs
- **Havelock Project:** A 100% interest in an EL and PL and an 80% interest in an EL and two PLs

The Mulgul, Jillawarra, and Mount Deverell Projects are collectively known as the South Bangemall Projects, and are located between 170 to 230 km north of the regional township of Meekatharra in central Western Australia (Figure 1.1). The Mulgul and Jillawarra Project tenements are contiguous and extend over a combined east-west distance of approximately 100 km. The Mount Deverell Project lies approximately 25 km to the south of the southern boundary to the Jillawarra tenements.

Figure 1.1: Location of Abra's projects



The Mulgul Project contains the *Abra Deposit*, a lead-silver-zinc-copper-gold deposit, which has undergone scoping level studies and has a reported Mineral Resource in accordance to the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

The Havelock Project is located 35 km northwest of Wiluna and approximately 250 km southeast of the Abra Deposit. The project lies adjacent to Ivernia Inc's Magellan lead mine, which was recently placed on care and maintenance.

1.1 Background

Abra is an Australian mineral exploration company, which was incorporated in 2004 and listed on the Australian Securities Exchange in April 2005. The Company's objective is to explore and develop the Abra Deposit and the surrounding landholdings. Since listing, the Company has expanded its tenement holdings, such that it now holds title to or is earning interests in tenements with an area of more than 1,570 km².

In December 2007, Abra proposed a joint venture, pursuant to a Letter of Intent, with Hunan Nonferrous Metals Holdings Group Co., Ltd (HNG) over M52/776, which covers the Abra Deposit. It was subsequently determined that Hunan Nonferrous Metals Corporation Limited (HNC), rather than HNG, would adopt any joint venture obligations and benefits, however the joint venture did not eventuate.

On 13 May 2008, HNC announced that it intended to make a proportional takeover offer for 70% of the shares in Abra, which HNC did not own. Under the Offer, HNC offered A\$0.83 cash per Abra share for 7 of every 10 Abra shares not held by HNC. Following the closure of the offer in September 2008, HNC held 74.28% of Abra. HNC currently holds 73.91% of Abra.

In March 2011, HNC offered to acquire all issued ordinary shares of Abra not already owned by HNC for A\$0.40 per share, with a concurrent offer to acquire all outstanding options at prices determined by the Black and Scholes option pricing model.

1.2 Terms of reference

This technical assessment and valuation report was prepared at BDO's request and is to be included as an appendix to an IER prepared by BDO for inclusion in Abra's targets statements in relation to the HNC takeover offers. Specifically, Xstract was requested to provide an independent opinion on the market valuation of Abra's exploration assets in Western Australia. In completing our mandate we have provided a brief technical overview of the development and exploration assets including:

- the associated mineral licenses
- the geological setting and exploration potential of the projects including an overview of previous resource estimates
- progress and status of exploration projects
- the market value of the South Bangemall and Havelock Projects.

The conclusions expressed in this valuation report have an effective date of 29 April 2011. The valuation is only appropriate for this date and may change in time in response to variations in economic, market, legal, or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in Australian dollars (A\$) unless otherwise stated.

1.3 Reporting standard

This report has been prepared in accordance with:

- the 2005 edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports (the VALMIN Code)
- the JORC Code.

For the purposes of this report, *value* is defined as 'fair market value'. Xstract has endeavoured to assess what a willing buyer and willing seller might agree on in the context of an open and arm's length transaction.

1.4 Data sources

Xstract has based its valuation of these mineral assets on:

- a site visit from 9 to 11 April 2011
- discussions with key company personnel
- a review of technical documents supplied by Abra
- public domain information.

In the execution of its mandate, Xstract has reviewed all relevant technical and corporate information made available by Abra's management. Such information has been accepted by Xstract as being true, accurate, and complete, having made due enquiry.

Xstract has validated information provided by Abra via the Western Australian Government Department of Mines and Petroleum. However, Xstract is not qualified to express legal opinion and has not sought any independent legal advice on the ownership rights and obligations relating to the respective mineral assets under licence, or any other fiscal or legal agreements that Abra may have with any third party.

A draft version of this valuation report was provided to Abra's directors for comment in respect of omission and factual accuracy. Abra has warranted that all material information in its possession has been fully disclosed to Xstract and has agreed to indemnify Xstract from any liability arising from its reliance upon information provided or information not provided.

Xstract conducted a site visit to the Abra Deposit between the 9 to 11 April 2011. None of the other South Bangemall Projects or the Havelock Project was inspected. Xstract is familiar with the project geology and mineralisation of these areas, having previously completed a number of technical reviews and valuations of other third party held assets in the surrounding region. Xstract understands that there have been no material developments on these projects on which to form an opinion over and above that presented in the technical information provided or as available from public sources.

2 Technical summary

2.1 Tenure considerations

As at the 29 April 2011, being the effective date of this valuation, Abra held the tenements as outlined in Table 2.1. The tenements are presented in Figure 2.1.

Figure 2.1: Tenement location map

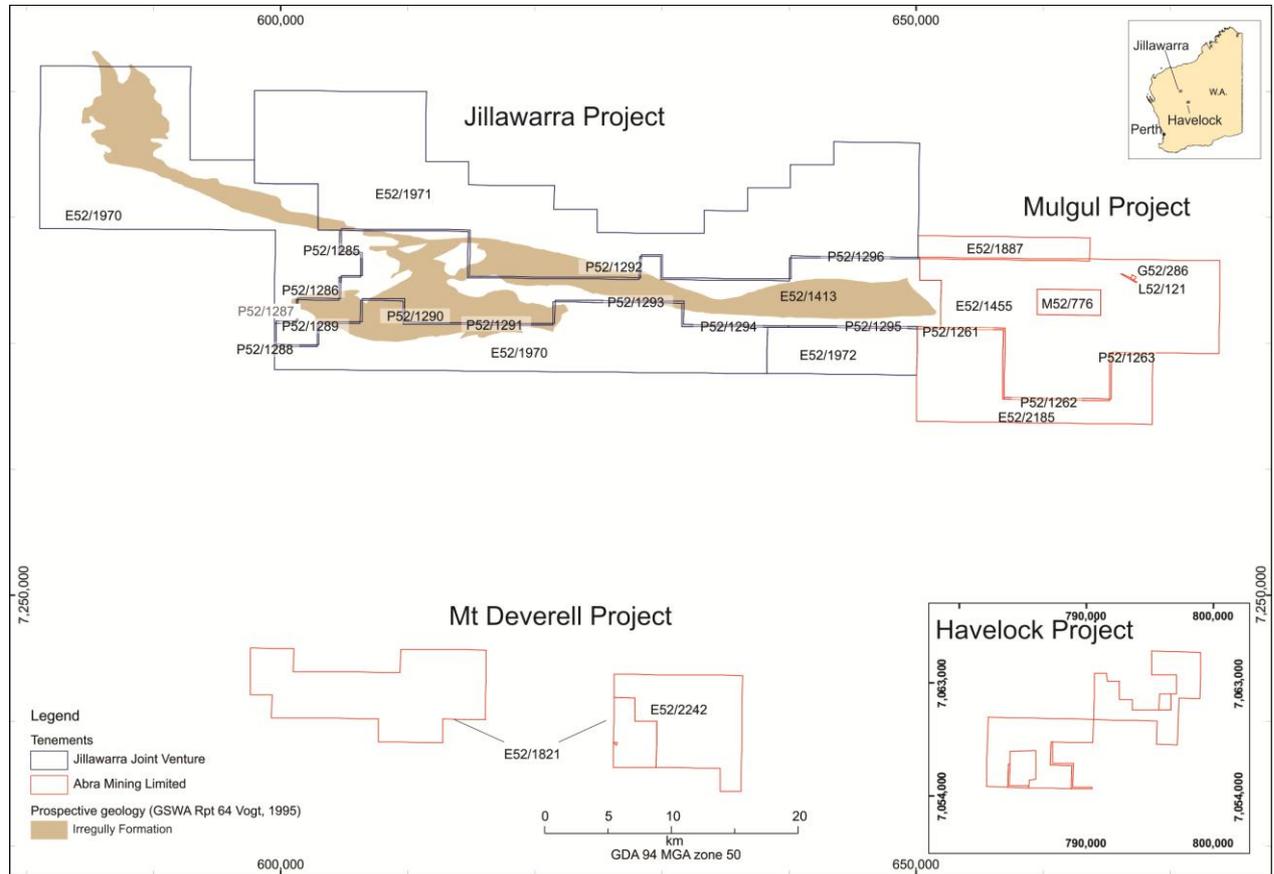


Table 2.1: Tenement details

Project	Tenement	Registered Holders	Abra's Interest	Grant Date	Expiry	Area (km ²)
Mulgul	L52/121	Abra	100%	27-May-10	26-May-31	0.1
	G52/286	Abra	100%	19-Apr-10	18-Apr-31	0.1
	M52/776	Abra	100%	22-Dec-00	21-Dec-21	10
	P52/1261	Abra	100%	14-Jan-09	13-Jan-13	1.8
	P52/1262	Abra	100%	14-Jan-09	13-Jan-13	1.2
	P52/1263	Abra	100%	14-Jan-09	13-Jan-13	0.5
	E52/1455	Abra	100%	20-Apr-00	19-Apr-11*	176.9
	E52/1887	Abra	100%	4-Jan-06	3-Jan-13	24.9
	E52/2185	Abra	100%	4-Jun-08	3-Jun-13	84.0
	Jillawarra	P52/1285	Abra	100%	14-Jan-09	13-Jan-13
P52/1286		Abra	100%	14-Jan-09	13-Jan-13	0.2
P52/1287		Abra	100%	7-Nov-08	6-Nov-12	0.2
P52/1288		Abra	100%	7-Nov-08	6-Nov-12	0.7
P52/1289		Abra	100%	7-Nov-08	6-Nov-12	0.5
P52/1290		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1291		Abra	100%	7-Nov-08	6-Nov-12	1
P52/1292		Abra	100%	7-Nov-08	6-Nov-12	0.2
P52/1293		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1294		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1295		Abra	100%	7-Nov-08	6-Nov-12	1.5
P52/1296		Abra	100%	7-Nov-08	6-Nov-12	0.2
E52/1413		Abra / Apex	90%	13-Dec-01	12-Dec-11	218
E52/1970		Abra / Apex	90%	10-Oct-06	9-Oct-11	395.5
E52/1971		Abra / Apex	90%	10-Oct-06	9-Oct-11	377.0
E52/1972		Abra / Apex	90%	10-Oct-06	9-Oct-11	43.6
Mount Deverell		E52/1821	Abra	100%	5-Apr-05	4-Apr-13
	E52/2242	Abra	100%	6-Nov-08	5-Nov-13	62.1
Havelock	E53/1130	Abra	100%	20-Jul-05	19-Jul-11	25.9
	E53/1260	Abra / Sammy	80%	21-Mar-07	20-Mar-12	31
	P53/1490	Abra / Cazaly	80%	23-Jul-08	22-Jul-12	0.5
	P53/1492	Abra / Cazaly	80%	23-Jul-08	22-Jul-12	1.0
	P53/1514	Abra	100%	16-Jul-10	15-Jul_14	1.2
Total						1,573.5

Abra = Abra Mining Limited; Apex = Apex Minerals NL; Cazaly = Cazaly Iron Pty Ltd; Sammy = Sammy Resources Pty Ltd
 *Xstract has been informed by Abra that a renewal for E52/1455 has been lodged with the Western Australian Department of Mines and Petroleum.

2.2 Agreements

Exploration activities within all of the tenements comprising the South Bangemall Projects are subject to a Heritage Agreement between Abra and the Jidi Jidi Aboriginal Corporation (JJAC), the latter as representatives for the Nharnuwangga Wajarri Ngarlawangga as Native Title claimants under the (WA) *Aboriginal Heritage Act 1972*. The Agreement was signed on 21 September 2005.

Within the Mulgul Project, M52/776 and E52/1455 are subject to a net smelter royalty payable on any mineral production from these tenements, at a rate yet to be determined.

2.3 Overview of the South Bangemall Projects

Introduction

Abra's South Bangemall Projects lie within the Peak Hill Mineral Field in central Western Australia, some 200 km north of the town of Meekatharra. The projects are covered by the Collier (SG50-4), Mt Egerton (SG50-3), Robinson Range (SG50-7), and Peak Hill (SG50-8) 1:250,000 map sheets and the Mulgul, Calyie, Mount Egerton, Milgun, Mount Vernon, Teano, and Candolle 1:100,000 map sheets.

Access to the area is from the sealed Great Northern Highway and the graded Meekatharra – Mount Augustus – Carnarvon Road. Various station tracks and exploration grids and tracks provide acceptable access throughout the region.

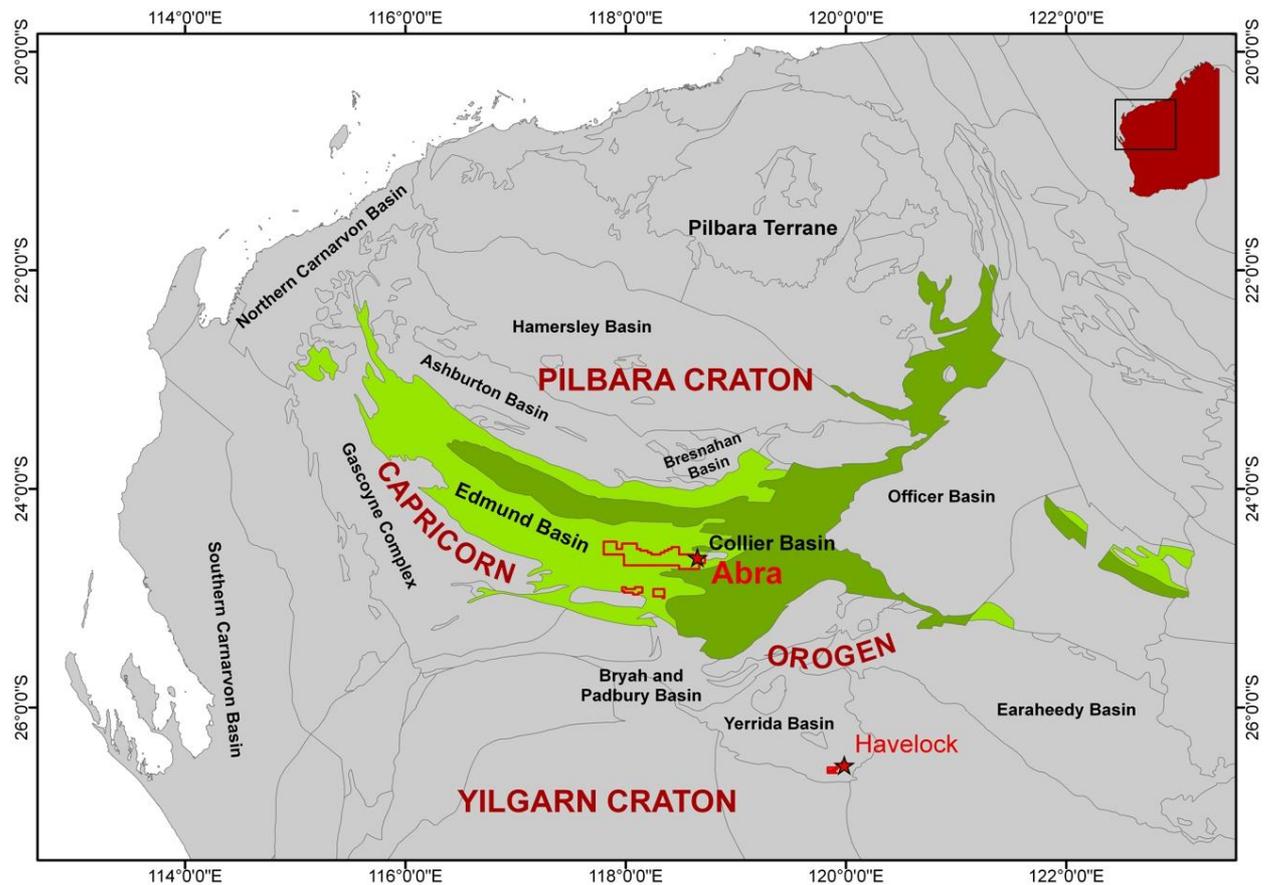
The area is reasonably rugged, being characterised by prominent east trending ridges and scarps. Numerous ephemeral creeks form a dendritic drainage pattern with a few larger creeks in broad colluvial-filled valleys forming part of the Gascoyne and Ashburton River drainages. Streams only flow after heavy rains, although pools are present for most of the year.

The climate is arid to semi-arid with an unreliable and low mean annual rainfall of 200 to 250 mm. The area experiences very hot summers, with average January maximum temperatures between 35° and 40°Celsius. Winters are mild with an average July maximum of 20°Celsius.

Cattle grazing and mineral exploration comprise the main land use in the region. The Company's tenements lie within or are adjacent to the main pastoral stations of Mulgul, Woodlands, Tangadee, and Waldburg.

Geological setting

The Company's South Bangemall Projects are located within the Mesoproterozoic Edmund Basin (formerly known as the Bangemall Basin), one of a series of overlapping sedimentary basins occurring between the Archaean-aged Yilgarn and Pilbara Cratons of Western Australia. The Edmund Basin unconformably overlies the Ashburton and Bresnahan Basins to the north, the Gascoyne Complex to the west and southwest, and the Bryah, Padbury and Earahedy Basins to the south and southeast (Figure 2.2). The Edmund Basin is unconformably overlain by the Officer Basin to the east. The Edmund Basin developed between approximately 1,640 and 1,000 million years ago (Ma), during the Capricorn Orogen.

Figure 2.2: The regional setting of the Company's mineral assets

Within the central Edmund Basin, the Jillawarra Sub-basin is preserved as a 65 km long and 10 km wide sedimentary belt, which has been folded about the Coolina Anticline. The basement is exposed as schist and granitoid in the cores of the Woodlands and Coobarra Domes. From the base upwards, the major stratigraphic units of the Sub-basin comprise the Coobarra Granite, Gap Well Formation, West Creek Formation and overlying Jillawarra Formation, Discovery Chert and Devil Creek Formation. The Gap Well and West Creek Formations represent correlates of the Irregully and Kiangi Creek Formations respectively at the base of the Bangemall Supergroup (Figure 2.3).

These stratigraphic units are described below.

2.3.1 Coobarra Granite

The Coobarra Granite has been dated at 1.78 billion years old and represents basement to the Bangemall Supergroup. It varies from a fine to coarse grained leuco-adamellite to biotite granite, and in places is sheared to a consistent gneissic texture.

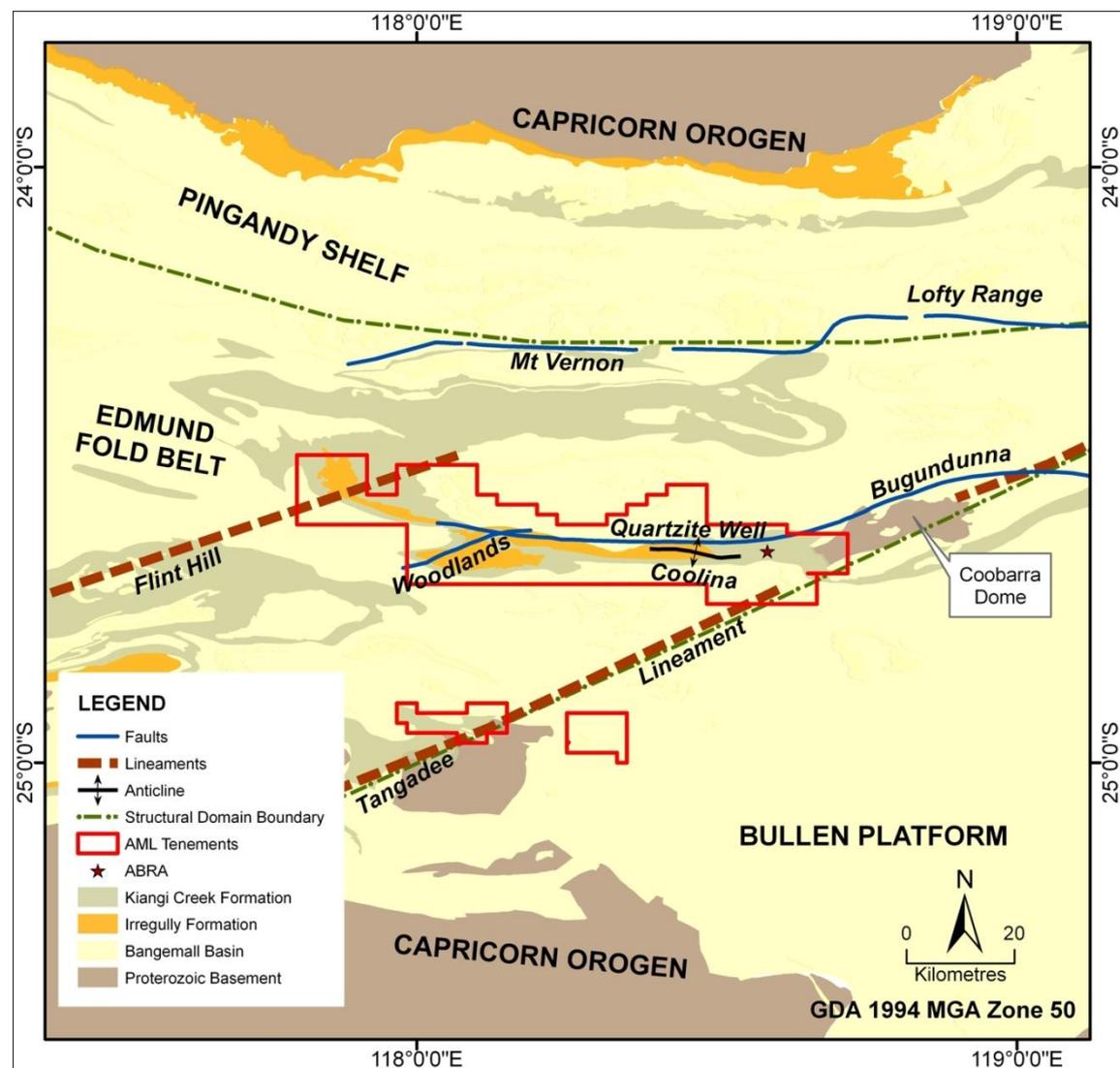
2.3.2 Gap Well Formation

The Gap Well Formation consists of a variably dolomitic siltstone-shale sequence with lesser quartz sandstones and massive dolomites, which were deposited in a lagoonal to shallow marine environment.

The Gap Well Formation is broadly divided into six units, designated GW1 to 6. The lower units, GW1 to 4, are arenaceous, and upper GW5 and 6 units contain carbonate units. GW5 and 6 represent the main mineralised horizons at the Abra Deposit. The Abra Deposit's

mineralised horizon is hosted by sericitic mudstone with chlorite, biotite and detrital quartz, and laminated dolomitic siltstone with micritic dolomite and sparite.

Figure 2.3: Regional structural setting



2.3.3 West Creek Formation

The West Creek Formation consists of a siliclastic sequence of fine to coarse-grained quartz sandstones and wackes with interbedded siltstones, quartzites, minor conglomerates and minor dolomites. Along the southern side of the belt, where the West Creek Formation dips uniformly to the south, the sequence is about 1,300 m thick.

2.3.4 Jillawarra Formation

The Jillawarra Formation is composed of laminated siliceous shale with minor siltstone, fine grained arenite and dolomitic siltstone. The Jillawarra Formation is interpreted as a deeper water marine platform shale sequence. The sequence is intruded in places by dolerite sills, and is moderately folded, particularly along the southeastern margin of the belt.

2.3.5 Discovery Chert

This is a marker horizon within the western part of the Edmund Basin. It consists of grey, black or cream coloured chert and associated shales. In the Jillawarra region, the horizon is a locus for dolerite intrusive sills. The amount of dolerite intrusion and the gradational contact with the Jillawarra Formation makes thickness measurement difficult. Within the Jillawarra area, the Discovery Chert is usually between 100 and 200 m thick.

2.3.6 Devils Creek Formation

The Devils Creek Formation comprises a sequence of laminated dolomitic shales and dolomites of unknown thickness.

Exploration and mining history

The southern Bangemall region has been subject to two major phases of historic exploration. The initial phase (1976 to 1989) of exploration was initiated by Amoco Minerals Australia Company (Amoco), predominantly in areas of exposed prospective host units, and comprised geochemical and geophysical prospecting in areas where the “prospective” Irregully Formation was exposed. Exploration during this period focused on sedimentary exhalative base metal deposit models (SEDEX) based on Mount Isa style mineralisation.

The discovery of the Olympic Dam iron oxide copper-gold (IOCG) deposit in the mid-1970s resulted in a change of exploration focus from stratigraphic lead-zinc-silver targets to regional magnetic geophysical anomalies, which were prospective for copper-gold-uranium mineralisation. As a result, during the 1980s exploration focus changed towards the detection and initial testing of magnetic geophysical anomalies followed by detailed geochemical and geophysical assessment. This led to the discovery of the Abra base metal deposit in 1981 when Geopeko Limited, in joint venture with Amoco, targeted a single diamond drillhole (AB3) into a discrete magnetic anomaly within the eastern, buried portion of the basin. AB3 penetrated approximately 270 m of barren cover sediment before intersecting a sequence of stratabound chlorite-iron oxide-barite altered rocks. Mineralisation included 27 m averaging 6.1% Pb from a downhole depth of 268 m, 194 m averaging 3.1% Pb from 318 m and 19 m averaging 3.68 g/t Au and 1.1% Cu from 503 m.

While exploration continued at the Abra Deposit and within the Jillawarra Sub-basin between 1981 and 1989, a further 13 drillholes were successfully completed at the Abra Deposit, all intersecting a similar sequence of altered and mineralised rocks. During the late 1980s, base metal exploration within the region waned in favour of the gold boom.

A second phase of exploration during the 1990s was dominated by IOCG targets and largely ignored the potential for lead-zinc-silver mineralisation associated with SEDEX models. IOCG exploration activities included regional airborne magnetic, electromagnetic (EM) and gravity geophysical exploration targeting coincident magnetic and gravity geophysical anomalies. Importantly, a few explorers with large landholdings dominated this period.

In 1995, Renison Goldfields Corporation (RGC) joint ventured into the project, then held 100% by North Limited (formerly Geopeko), and completed a single drillhole at the Abra Deposit. AB22A was drilled to the south, the opposite direction to all previous drilling, and intersected a sequence of chlorite-altered sediment largely in the footwall to the lead mineralisation. In 1999, both North Limited and RGC became subject to takeovers and the deposit was relinquished.

Oldcity Nominees Pty Ltd (Oldcity) acquired the project in 2000, acquired much of the existing data and completed in-fill gravity surveying to better define the recognised association of the Abra Deposit with a gravity anomaly. In 2005, the project was acquired by

Abra after its listing on the ASX, and subsequently another 34 drillholes have been completed.

2.4 Mulgul Project

Abra's 100% owned Mulgul Project lies at the eastern end of the Jillarwarra Sub-basin and covers a total area of 299.3 km². The Abra deposit lies within the Mulgul Project.

2.4.1 Local geology and mineralisation

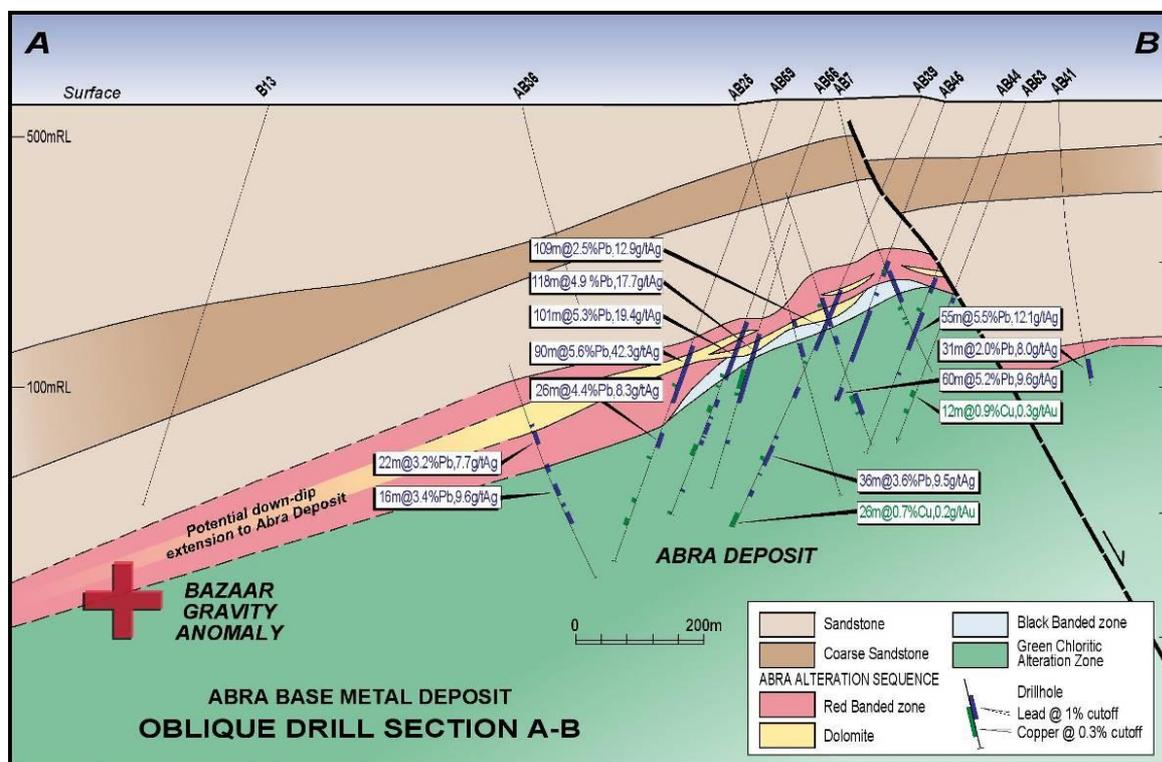
The Abra Deposit is a blind, sedimentary-hosted polymetallic deposit lying at a depth of 200 to 350 m below surface. The deposit is characterised by a funnel shaped brecciated zone, interpreted as a breccia feeder pipe, overlain by stratabound mineralisation (Pirajno et al, 2009).

The deposit is hosted within the Mesoproterozoic Edmund Sub-group, which is the lowest part of the Bangemall Supergroup. The host sequence comprises a lower sequence of dolomite, chert, sandstone, and mudstone and an upper sequence of black shales, mudstones and siltstones. The Edmund Sub-group is overlain by sediments of the Collier Sub-group: shale, siltstone, intercalated carbonates, glauconitic sandstone, turbidites, conglomerates, and chert. Numerous tholeiitic dolerite sills intrude both Sub-groups. This sequence trends eastwest and dips at 10° to 30° south (see Figure 2.4).

The Abra Deposit consists of disseminated and vein hosted galena, chalcopyrite, (and sphalerite) mineralisation. The deposit occurs within a banded, massive, and brecciated, silica-barite-hematite-magnetite-dolomite sequence and an underlying chlorite altered hydrothermal breccia.

In addition to the Abra Deposit, previous drilling programmes have revealed several similar base metal prospects to the west (i.e. Hyperion) and east (i.e. Genie) along an easterly trend.

Figure 2.4: Representative cross section of the Abra Deposit



2.4.2 Exploration history

The area covered by Abra's current Mulgul Project has been held by various owners since the mid-1970s including:

- Amoco
- Geopeko, which became part of North Limited
- RGC
- Oldcity.

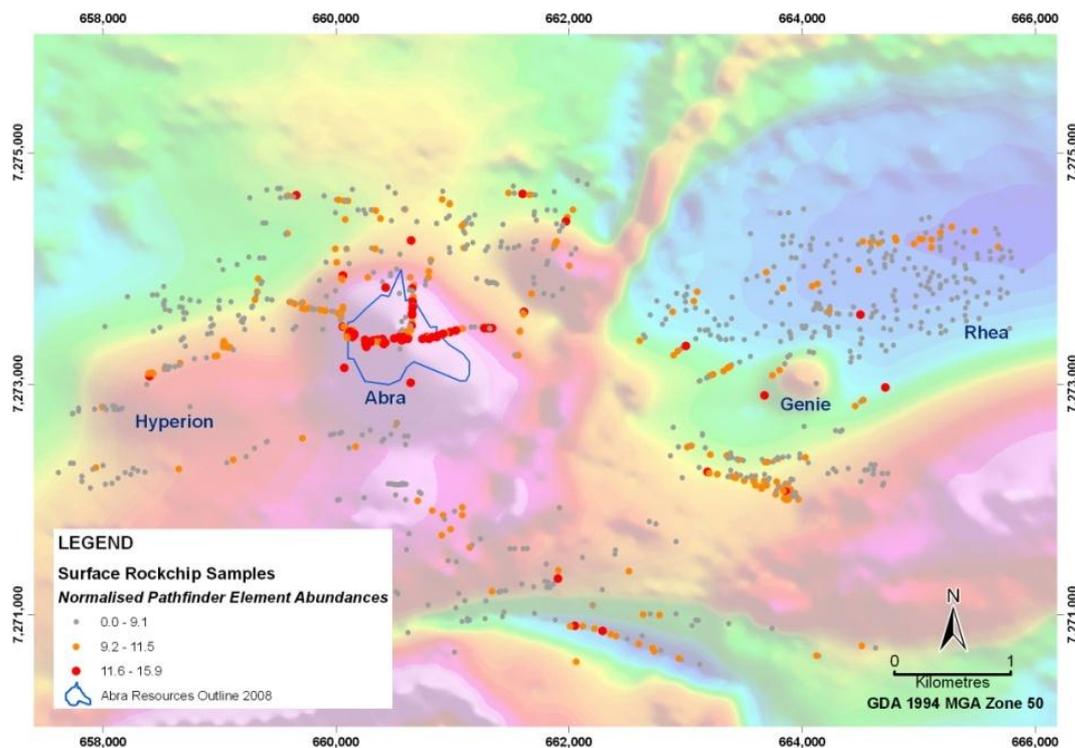
Abra acquired the Mulgul Project tenements from Oldcity in 2005, following its listing on the ASX.

Amoco initiated base metal exploration within the Jilawarra Sub-basin in 1976. Diamond drilling of a discrete magnetic geophysical anomaly within the eastern, buried portion of the basin encountered broad zones of lead-silver and copper-gold mineralisation from a downhole depth of 268 m. Subsequent drilling has confirmed and demonstrated the continuity of the altered and mineralised sequence at the Abra Deposit, as well as outlining various zones of similar but less intense alteration and base metal mineralisation to the east and west of the Abra Deposit.

Since 2005, the Company has completed the following exploration work within its Mulgul Project area:

- a target review and generation exercise on the central part of the Mulgul Project covering an area of 13.6 km east-west by 6 km north-south surrounding the Abra Deposit.
- detailed geological mapping of the Abra Deposit and adjacent areas in conjunction with various rock chip and surface vein geochemical sampling programmes (Figure 2.5).

Figure 2.5: Surface rock chip sampling over total magnetic intensity image (Mulgul Project)

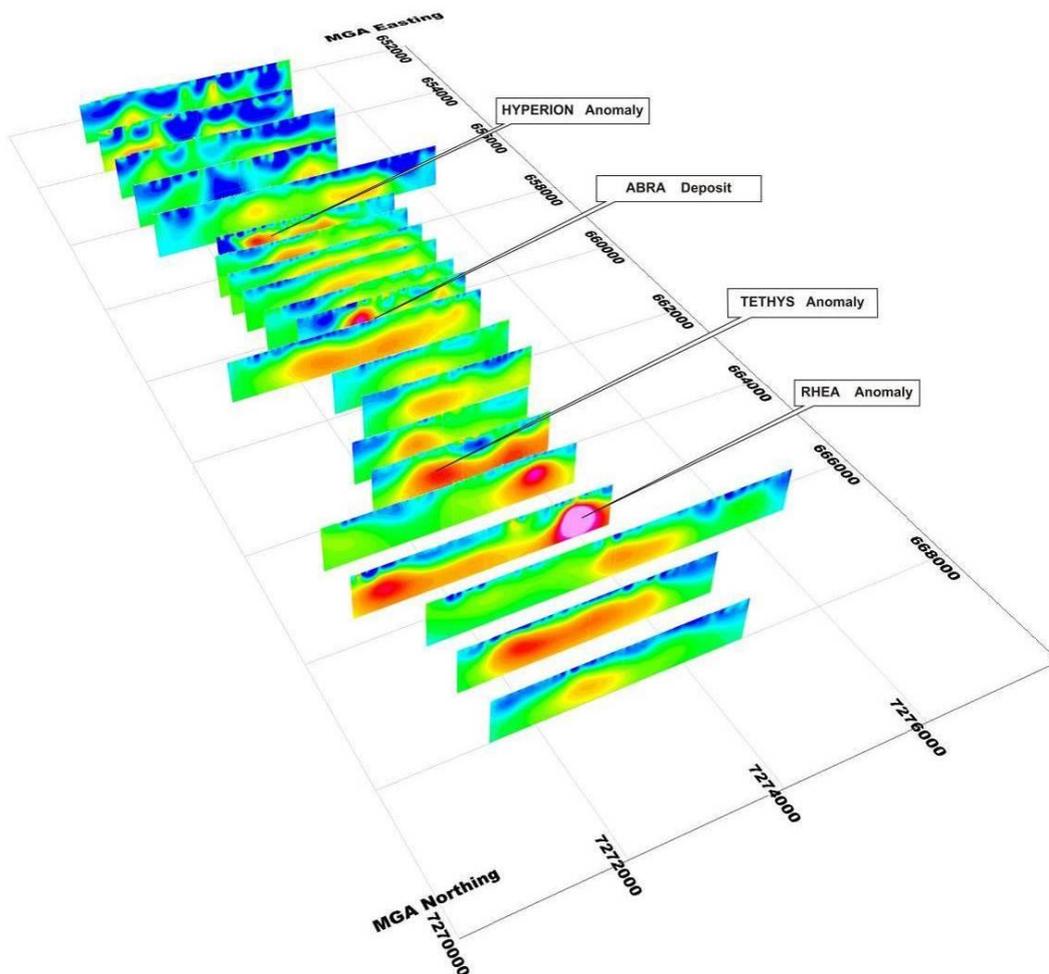


Source: Abra

- Regional gravity coverage over the project area at 200 m by 400 m spacing and acquired additional in-fill gravity at 50 m spacing within the area of the Abra and Genie prospects.
- A wide spaced (800 m) Induced Polarisation (IP) geophysical survey over 7 km of strike centred on the Abra Deposit (Figure 2.6) with subsequent infill over the Rhea and Hyperion prospects.
- Diamond drilling at:
 - the Abra Deposit.
 - the Bazaar Prospect, a prominent east-west trending gravity anomaly located approximately 750 m south of the Abra Deposit. Two holes failed to penetrate the cover sequence.
 - the Hyperion IP anomaly, where broad zones of stratabound lead-silver mineralisation comprising 21.15 m averaging 4.54% Pb and 23 ppm Ag were encountered at a downhole depth of 546.8 m.

The main drilling phases conducted over the Abra Deposit total 62 drillholes, which are summarised in Table 2.2.

Figure 2.6: Isometric view showing inverted chargeability sections



Source: Abra

Table 2.2: Abra Deposit exploration drilling campaigns

Phase	Period	Operator	# of holes	Hole type	Range of hole numbers	Total metres
Unallocated	Unclear	Unclear	11	Unclear	80-5, BI1-BI-3, EP1, JHP16-11, JRP-77-1,	1,837.6
1	1981-1983	Geopeko	8	DDH*	AB1-11	5,428.8
2	1988-1991	Geopeko	7	DDH	AB12-21W	4,083.8
3	1995	RGC	2	DDH	AB22A-22B	1,745
4	2005-2008	AML	34	DDH	AB23-54	19,670.9
Total			62			32,766.1

Source: McDonald Speijers, Resource Estimation, D.C.Speijers, May 2008

*DDH: Diamond drillhole

2.5 Mineral Resource

Over the history of the Abra Deposit, the understanding of the deposit's geology and mineralisation controls has continually improved, culminating in the 2008 scoping level study. Xstract has outlined previous resource methods and models in Table 2.3. However, Xstract notes that the previous resource estimates were for internal purposes and are not in accordance to the current JORC Code reporting guidelines. Further, these estimates have been superseded by the current resource estimate, which was based on considerably more data. Therefore, Xstract has placed no reliance on the previous estimates.

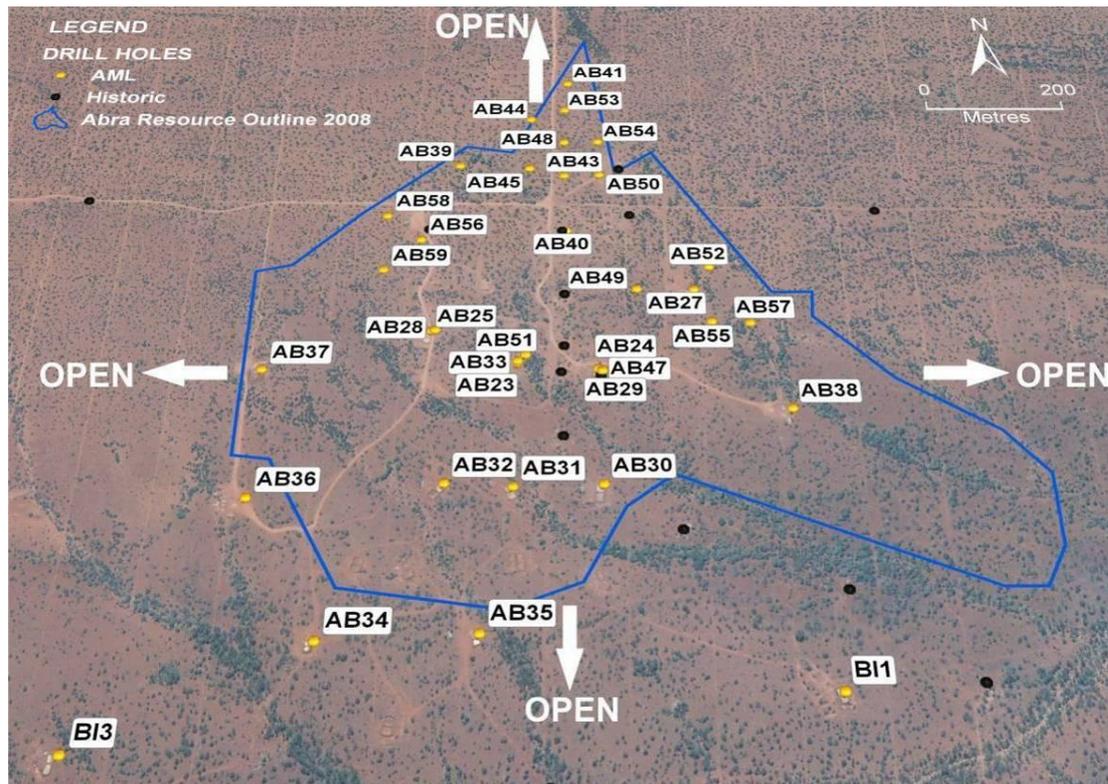
Table 2.3: Summary of previous resource estimates

Date	Description	Category	Source	Method
1990	Geological Estimate	Total	Geopeko	Unknown
1993	High Grade Resource	Pb and Cu-Au Domains	Geopeko	Polygonal
2000		Total	Fractals	Unknown
2006	Block Model	Pb, Pb-Cu & Cu Domains and Total	RSG	Ordinary Kriging

Source: McDonald Speijers, Resource Estimation, D.C.Speijers, May 2008

In 2008, new resource estimation work was completed by McDonald Speijers, based on all drilling data available to 25 April 2008. This included 14 historic diamond core drillholes and 26 diamond core drillholes completed by the Company, 17 more than were available for the previous estimate (Figure 2.7). This drilling density permitted better resolution of mineralisation in the core of the deposit resulting in an upgraded resource category for that portion of the deposit.

Figure 2.7: Abra Deposit drillhole locations and current resource boundary

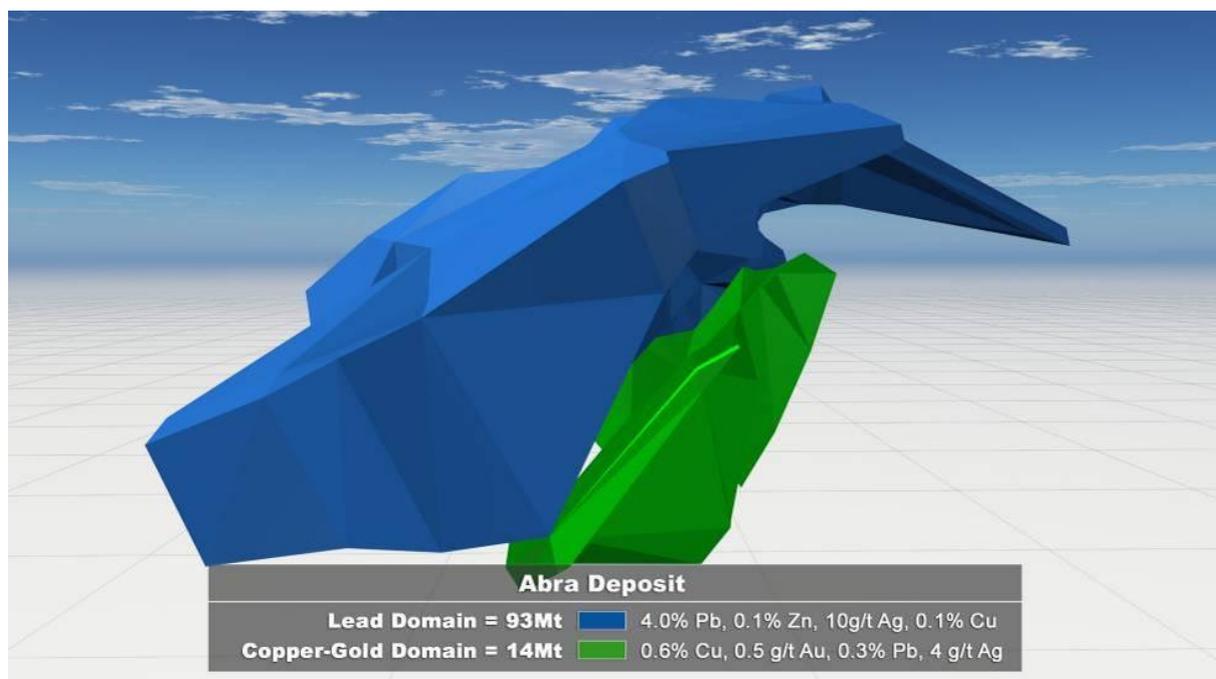


Source: Abra

Two distinct and contiguous mineralised domains were modelled (Figure 2.8) comprising:

- an upper lead domain typically between 200 and 250 m thick
- a lower copper-gold domain up to 100 m thick.

Figure 2.8: Mineral domains of the Abra Deposit



Source: Abra. Looking west showing the May 2008 Mineral Resource Statement

The published Mineral Resource for each of the mineralised domains at the Abra Deposit is presented in Table 2.4.

Table 2.4: Abra Deposit 2008 published Mineral Resource

Domain	Cut-off Grade	Category	Million Tonnes	Pb (%)	Ag (g/t)	Cu (%)	Au (g/t)	Zn (%)
Lead	2.5% Pb	Indicated	33	4.1	10	0.13	0.06	0.1
		Inferred	60	3.9	10	0.12	0.04	0.1
		Total	93	4.0	10	0.12	0.05	0.1
Copper-gold	0.4% Cu	Indicated	4	0.4	5	0.59	0.56	0.0
		Inferred	10	0.3	4	0.63	0.47	0.0
		Total	14	0.3	4	0.62	0.49	0.0

The lead and silver mineralisation interpretation was constructed using a 2.5% lead cut-off and the estimation was completed using Ordinary Kriging. The copper and gold mineralisation interpretation was constructed using a 0.4 g/t copper cut-off and the estimation was completed using Ordinary Kriging.

Mineral Resource Statement as at 14 May 2008.

Source: Abra

2.5.1 High-level review of the 2008 Mineral Resource estimate

Xstract has completed a high-level review of the 2008 Mineral Resource estimate, which remains current. Xstract has grouped its findings according to subject area.

Geological interpretation

The deposit geology was modelled on the recognised primary lithological units (un-mineralised sediments/red banded zone/dolomite zone/black banded zone/baritic stringer zone/stringer zone).

These geological units were interpreted to form two mineralised zones, namely:

- Zone 1 primarily based on a lead grade envelope of 0.5 to 1% Pb
- Zone 2 primarily based on a copper/gold grade envelope of either 0.2% Cu and/or 0.2 g/t Au.

Data quality

- **Survey control:** Most pre-2005 drillhole collars were re-surveyed, although the newer holes (AB50 to AB54) only have hand-held geographic positioning system (GPS) co-ordinates, whose accuracy may vary by several metres. Xstract checked the collar positions of drillholes AB41, AB43, and AB44, using a hand held Garmin 276C GPS, and confirmed the approximate position of these holes.
- **Downhole survey:** Magnetic electronic single shot (ESS) survey data was initially used to determine the downhole location of most drillholes. Given that the Company was testing a magnetic geophysical anomaly, Xstract considers that the ESS results are likely to be spurious. Subsequent gyro (non-magnetic) downhole surveys indicated up to a 40 m difference in the downhole drill position of certain holes. The Company has assumed that this difference was due to a setup error associated with the Gyrometer, and adjusted the downhole positions to be compatible to the magnetic ESS survey

data. This assumption has not been validated and Xstract considers this represents significant potential error in the position of several drillholes at depth.

- **Drilling:** Core recovery is reported by the Company as being acceptable. Xstract's on-site observation of core confirms this. Earlier drilling was found to be orientated sub-parallel to the primary mineralised vein set, which may bias sampling results. The drilling orientation was subsequently changed from grid north to grid south in Abra's more recent holes.
- **Sampling:** Pre-2005 and Abra's 2005 core sampling was completed over regular 2 m intervals, regardless of geological lithology. Since 2007, the Company has sampled within primary geological lithological boundaries, with sample lengths between 0.5 m and 3.0 m.
- **Density:** Historic density measurements were considered by the Company to be compromised, and as such Abra conducted a comprehensive sampling campaign to obtain reliable density measurements in 2008. The results of the 2008 density sampling campaign are considered by Xstract to be suitable for resource estimation purposes.
- **Assay:** Various laboratories, sample preparation and analytical methods have been used to analyse samples from the Abra Deposit, including numerous unknown processes as part of the early exploration activities. Pre-2005 assay quality assurance and quality control (QA/QC) measures comprised 'periodic' submission of duplicates and reference laboratory check assays. However, this remains to be verified as no reports or results are available. A preliminary analysis of available duplicate data suggests significant bias due to insufficient data and a lack of background information, although these results are not conclusive. Xstract considers that Abra's post-2005 samples contained adequate control samples, however, the overall results suggest some negative bias. This results in a marginal underestimation of metal content associated with the primary elements (i.e. lead, copper, silver and gold).
- **Database integrity:** McDonald Speijers conducted a detailed review of the sample database in 2008 and rectified numerous errors to ensure the data was suitable for the determination of a Resource. Xstract considers the database to be sufficiently robust to support the current estimate.

Estimation parameters and process

The published Mineral Resource estimate was determined using ordinary kriging for all elements. The data was composited to 2 m, and a top-cut applied although some remaining isolated high grade samples were noted to unduly influence estimates. Variogram ranges were arbitrarily increased to reduce this effect. This and the model block size may suggest local selectivity, although confidence in such results would currently be low.

Xstract cannot comment on the reliability of the Mineral Resource to represent the interpreted grades as no data or block models were supplied to compare input sample grades with the resource block model estimated grades on a global and/or local basis. However, based on the information in the McDonald Speijers report there is no reason to question this reliability.

Resource classification

The current published classification is based on drillhole spacing, where the central well-drilled portion is classified as Indicated, while zones drilled to a 200 m or more spacing have been classified as Inferred. Extrapolation beyond the confines of drilling has been limited to 100 m down-dip and 50 m in an east-west direction. Xstract considers that the defined resource has been appropriately classified at a global level, however, some localised discrepancies may result from downhole positional inaccuracies. As such the classification is

suitable for scoping level study purposes but may be unable to reliably support detailed mine planning and scheduling. Future studies should evaluate the impact of likely downhole positional inaccuracy and QA/QC problems on the defined resource.

Overall opinion

The stated Mineral Resource for the Abra Deposit appears suitable for scoping level study purposes but further drilling and geological modelling is required before detailed mining and cash flow studies can be reliably conducted.

2.6 Mining, metallurgical and processing considerations

2.6.1 Mining

Xstract has reviewed the following documents:

- Initial scoping study conducted by RSG Consulting (RSG) in February 2008.
- Cutback Consulting (Cutback) scoping study into the open pit mining of the Abra Deposit, June 2008.
- Draft Geotechnical review prepared by AMC Consultants Pty Ltd (AMC) prepared in December 2008.
- Ore Reserve report prepared by McDonald Speijers, May 2008.
- Slurry Systems Engineering Pty Ltd (Slurry Systems) concentrate pipeline scoping study, June 2007.

The review is limited to the assumptions and calculations behind the metal pricing, mining methodology and proposed capital expenditure. The review has not considered any optimisation of the mine design and the studies are considered to be only accurate to a scoping study level.

2.6.2 Summary of proposed operations

The Abra Deposit is of high tonnage and low grade, making it economically amenable to bulk mining methods. A number of mining options have been investigated by Abra, however only two mining methods have been studied further, namely open pit mining and sub-level cave (SLC) mining.

2.6.3 Mining studies undertaken for the Abra Deposit

In February 2008, RSG completed a mining scoping study into the Abra Deposit and concluded that it was most suited to a SLC mining method. This study was followed in mid-2008 with a scoping study by Cutback, who assessed the deposit's suitability to open cut mining methods. Both assessments assumed the following financial assumptions:

- an exchange rate of A\$0.85:US\$1
- lead metal price of US\$0.70/lb
- silver metal price of US\$10.00/lb
- copper metal price of US\$3.00/lb

2.6.4 Open cut mining

RSG designed a conceptual open pit for the Abra Deposit, which indicated that a minimum of 75 million bank cubic metres (Mbcm) of waste would need to be stripped prior to production. RSG estimated that pre-stripping would take two to three years to complete, would cost approximately A\$200 million and require a large mining fleet. This cost is in excess of the cost of establishing a SLC operation. RSG therefore discounted the option, with the proviso that upon an updated resource being developed, a more detailed analysis of open pit mining methods could be conducted.

Following RSG's review, the Company commissioned Cutback to review the deposit's suitability to open cut mining methods in mid-2008. Cutback's review was also at a scoping level of accuracy and assessed two options, one with a pit wall angle of 60 degrees in fresh rock, the other with a pit wall angle at 50 degrees in fresh rock. Cutback assessed the deposit as being economic with open cut mining methods, however the level of financial analysis was not as detailed as RSG's underground study. In particular, Cutback did not account for upfront capital costs, assumed the use of an owner/operator mining fleet, assumed what Xstract considers to be low milling and administration costs and used a low discount rate of 5%. Despite these omissions, Cutback demonstrated that the deposit may be amenable to open cut mining methods. Cutback's analysis was for a 6 million tonne per annum (Mtpa) conceptual project.

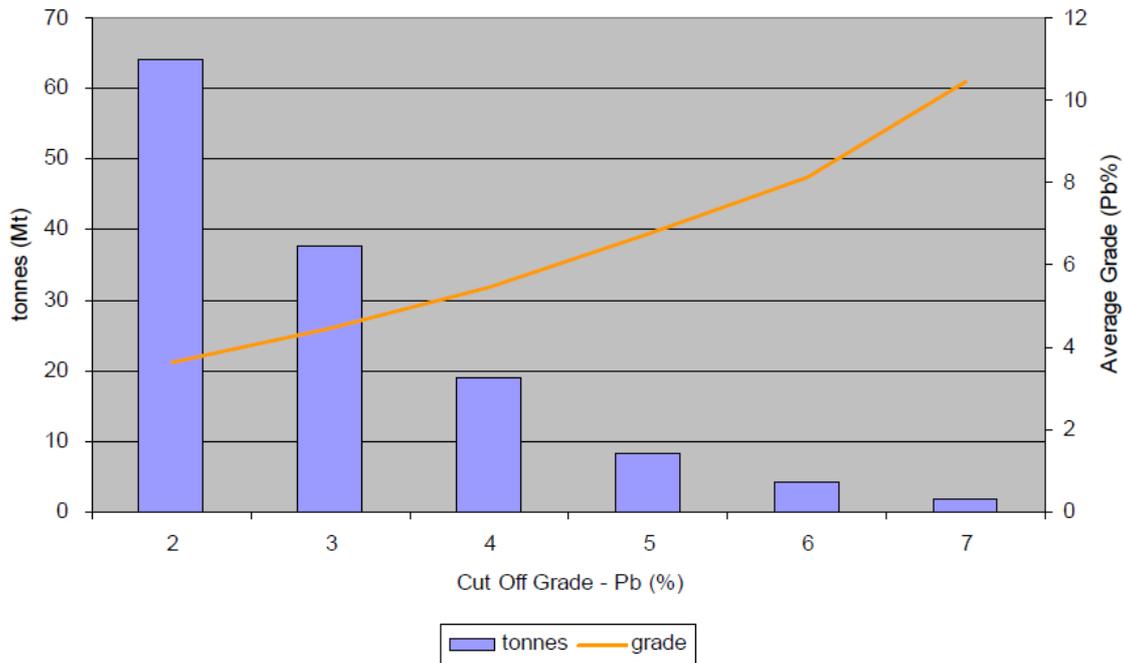
Cutback's pit only considers the lead/silver portion of the Abra Deposit, with the eventual pit bottom then being made available to develop an underground mine for the mining of the lower copper/gold lens. Cutback used a cut-off grade of 0.9% Pb and had an average silver grade of 8.4 g/t Ag. The separate underground mining of the underlying copper/gold lens was not assessed.

2.6.5 Sub-level caving

RSG briefly assessed the Abra Deposit's amenability to other underground mining methods, such as the use of paste and fill and room and pillar mining. These methods were quickly discounted because of their prohibitive operating costs. Therefore, only caving methods were considered economically feasible. RSG refers to the grade-tonnage curve for lead to justify this decision as shown in Figure 2.9.

RSG considered both block cave and SLC mining methods for the deposit and concluded that because of the variability, flat dipping nature and shape of the mineralisation, that the greater flexibility offered by SLC mining was preferable.

An important component of successful caving operations is having rock types of suitable strengths that are weak enough to allow caving. RSG estimates that caving will occur at a hydraulic radius of 50 m at the Abra Deposit. RSG qualified this statement saying a geotechnical assessment of the deposit was required and caving may not occur if the rock types are excessively strong and free of fractures and jointing. Upon this assessment, the Company commissioned AMC to complete a geotechnical assessment of the Abra Deposit in December 2008. AMC's report concluded that the rock mass is of "very good quality" and that "caving would not occur readily." In order to induce caving via a SLC mining method, AMC recommended a modification of RSG's proposed design.

Figure 2.9: Lead grade – tonnage curve for the Abra Deposit

AMC proposed that open stoping be initially employed at the top of the deposit. At the same time as stoping commences, a development drive will be mined in the crown pillar above the top of the open stopes. Once the top three levels of the deposit has commenced stoping and some caving has been induced, a mass blast will be taken in the drive within the crown pillar, in order to cause the pillar to fail and caving proper to be induced.

RSG’s scoping study was based on a production rate of 6 Mtpa using a SLC mining method and RSG assessed that mining is currently only economic between the 350 m to 600 m depth levels below surface.

2.6.6 Mineral processing

Limited testwork of the Abra Deposit was undertaken by Amtec, on behalf of RSG. Three core samples from two exploration holes were used for testing. The testwork proved to be promising with a 95% recovery of lead metal in the lead domain and a 97% recovery of copper metal in the copper domain. The testwork showed that the float recovery process was problematic for secondary minerals, although RSG expected a copper recovery of 87%. RSG expected the concentrate grade for the lead deposit to be 65% Pb, 4% Cu and the concentrate grade for the copper deposit to be 23% Cu.

2.6.7 Mineral continuity

Bulk mining methods require a large, continuous mineralised zone as the methods allow for little selectivity in mining. RSG has reviewed the Abra Deposit for continuity and found it to be “sufficiently continuous to support mass mining...” Importantly drilling since 2005 has shown that the mineralisation is potentially larger and therefore continuity becomes less of an issue.

2.7 Xstract's recommendations

Due to the relatively low grade of the deposit, Xstract did not investigate traditional stoping techniques (with backfill/pastefill). Xstract agrees with RSG's analysis that such methods would be prohibitively expensive.

The Abra Deposit is a low grade, high tonnage deposit and is more economically amenable to large scale, bulk mining methods. The Abra Deposit has 250 m of overburden and the uppermost mineralisation is low grade, therefore a combination of open cut/underground mining is not considered feasible. Xstract reviewed and undertook a conceptual financial analysis of both open pit and SLC mining of the Abra Deposit. Due to the large amount of overburden open pit mining has been assessed as uneconomic. SLC is therefore the recommended mining option.

2.7.1 Block cave

AMC's geotechnical review describes the rock type as of "very good quality" and that "caving would not occur readily." Caveability is of utmost importance to the success of block cave operations as stable arches can easily form within the cave, especially in competent rock. Due to the irregular, flat dipping geometry of the Abra Deposit, it is not particularly suited to block cave methods. This coupled with the area's geotechnical competence means Xstract does not consider block cave mining methods to be an option at this stage.

2.7.2 Sub-level caving

Xstract is satisfied with the underlying assumptions behind the SLC mining option as put forward by RSG and refined by AMC. Xstract has some concerns. A dilution factor of 30% is considered appropriate for sub level cave operations, however AMC and RSG have both used a dilution factor of 20% due to the geotechnical competence of the deposit. If upon further geotechnical studies the geotechnical environment is not as competent as currently indicated, Xstract recommends a dilution factor of 30% be used.

Xstract agrees with RSG and AMC's rationale behind employing a SLC mining method, due to the deposit's variability in shape and the geotechnical competence of the deposit. SLC offers greater flexibility, has lower up front capital costs and dramatically reduces the risks of hang ups within the cave as compared to block caving. RSG have only considered the resources between 350 to 600 m below surface in the scoping study. It is Xstract's opinion that a 6 Mtpa production rate from SLC methods is practical and achievable. Extensions to the resource below 600 m depth could be readily exploited using SLC mining. Consideration should be given to potential extensions to the known mineralisation at depth when locating mine infrastructure.

Xstract notes that the proposed materials handling system is largely adopted from Newcrest's Ridgeway operations in NSW, with RSG proposing a conveyor to transport ore to surface. Underground conveyor systems are uncommon in metalliferous mines within Australia, however conveyors are better suited for massive production. A conveyor would allow Abra to avoid a number of the issues surrounding haulage shafts, particularly legislative issues and therefore Xstract considers this to be a sound option. However, Xstract recommends a trade-off study be completed to fully determine the merits of a conveyor system to a shaft hoisting system as the study progresses.

2.7.3 Sub-level caving costs

Xstract considers the costs used by RSG to be generally too low and has re-modelled the Abra project accordingly. Xstract also consider that due to the rock mass strength, considerable blasting will be required in the SLC mining option, increasing mining costs.

2.7.4 Open cut

The ground at the Abra Deposit, as stated by AMC, is very competent and while a more detailed geotechnical review is required before proceeding to a pre-feasibility study, Xstract considers the pit wall angles to be appropriate. Xstract considers Cutback's mining analysis to be fair and reasonable, however believes there is considerable scope to optimise the pit design, especially when a detailed geotechnical review is completed. The Cutback analysis fails to consider the underground mining of the copper/gold lens at the Abra Deposit. Xstract recommends that a study of the underground mining of this lens is undertaken once open cut mining has ceased, in order to fairly value mining via open cut methods. The Cutback model also failed to consider any capital costs.

2.7.5 Mineral processing

Very little metallurgical testwork has taken place on the Abra Deposit, with just two exploration holes being sampled. This presents a risk to the project as stated recoveries and concentrate qualities may not be representative across the entire resource. Xstract recommends further testwork of the deposit's metallurgy and processing as a priority before proceeding to the pre-feasibility study stage with the project.

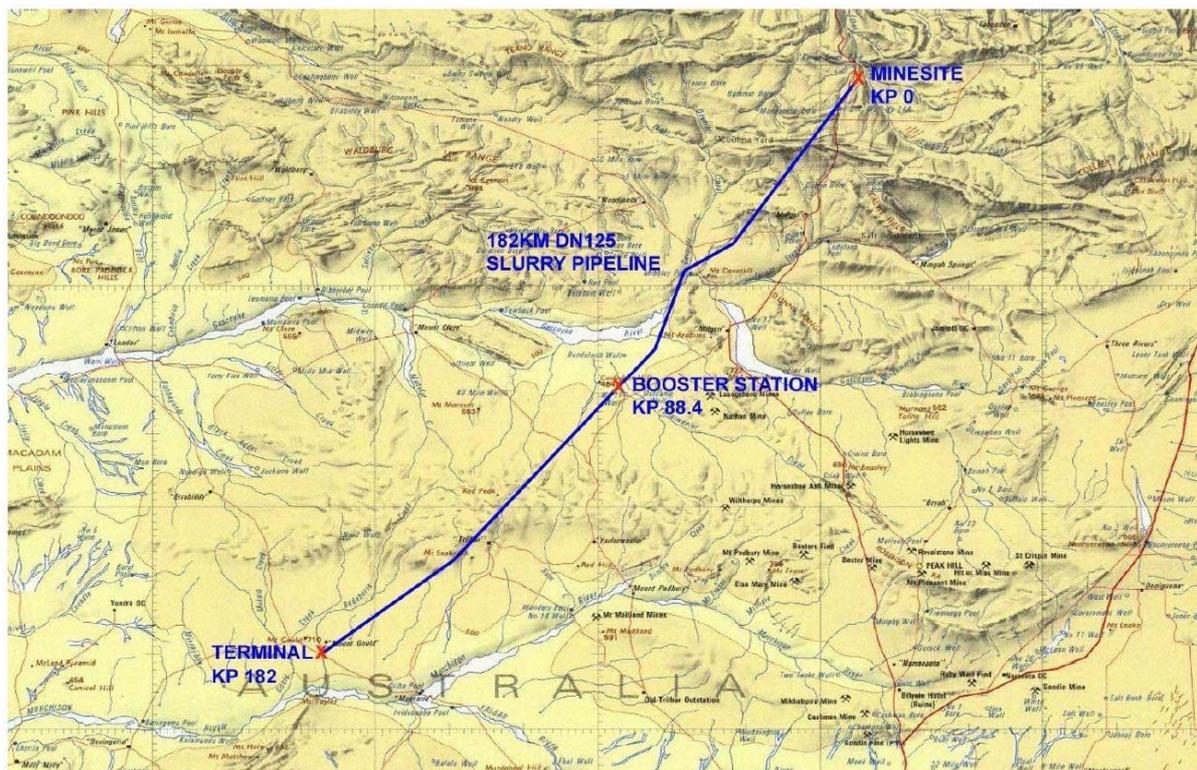
2.7.6 Concentrate transport

The Abra Deposit's remote location makes the transport of concentrate a costly exercise. The proposed 182 km southwest running pipeline is to meet up with the yet to be constructed Murchison Metals railway to Geraldton at Jack Hills or Terminal KP 182 as shown in Figure 2.10. Murchison Metals Limited (Murchison) has publicly indicated its willingness to share the rail line and Xstract consider it reasonable that Murchison will come to an arrangement for the transport of concentrate.

Xstract consider the proposed transport method to be reasonable. Xstract notes that just one vendor quote was obtained for the cost of the proposed slurry pipeline from One Steel. Further estimates are required to better understand the potential cost. Negotiations are yet to commence with tenement holders and graziers for the right to traverse properties with the pipeline, and any diversions may impact on the costs. Xstract recommends that before proceeding to a pre-feasibility study that affected tenement holders and graziers are consulted to gauge their willingness to provide access.

Due to the uncertainty surrounding concentrate transport, Xstract recommends a conservative approach to any concentrate transport cost estimates. If landholder agreements cannot be reached, concentrate may need to be transported by truck.

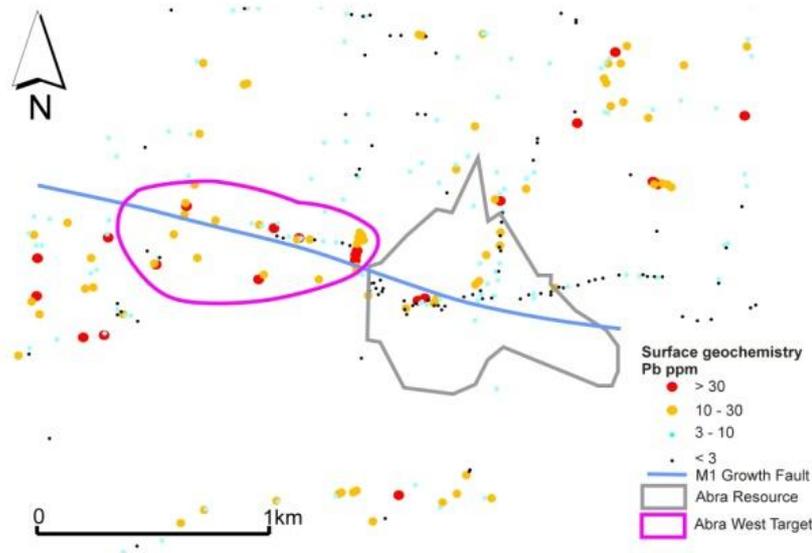
Figure 2.10: Proposed concentrate pipeline



2.8 Exploration potential

2.8.1 Near mine

The Abra Deposit remains open to the east, west, and south. The Company has completed interpretation at the Abra deposit focusing on identifying faults that may have influenced the Abra mineralised system. The M1 Fault was identified as an important structure as it influences the thickness and distribution of some key stratigraphic units and alteration types (Figure 2.15). The M1 Fault is parallel to the main mineralised veins set, and appears to partly control the distribution of metal within the Abra Deposit. Second order faults have also been defined within the Abra Deposit as a result of detailed core and surface mapping programmes. These may be of exploration interest.

Figure 2.11: M1 Fault and Abra West geochemical target

2.8.2 Regional targets

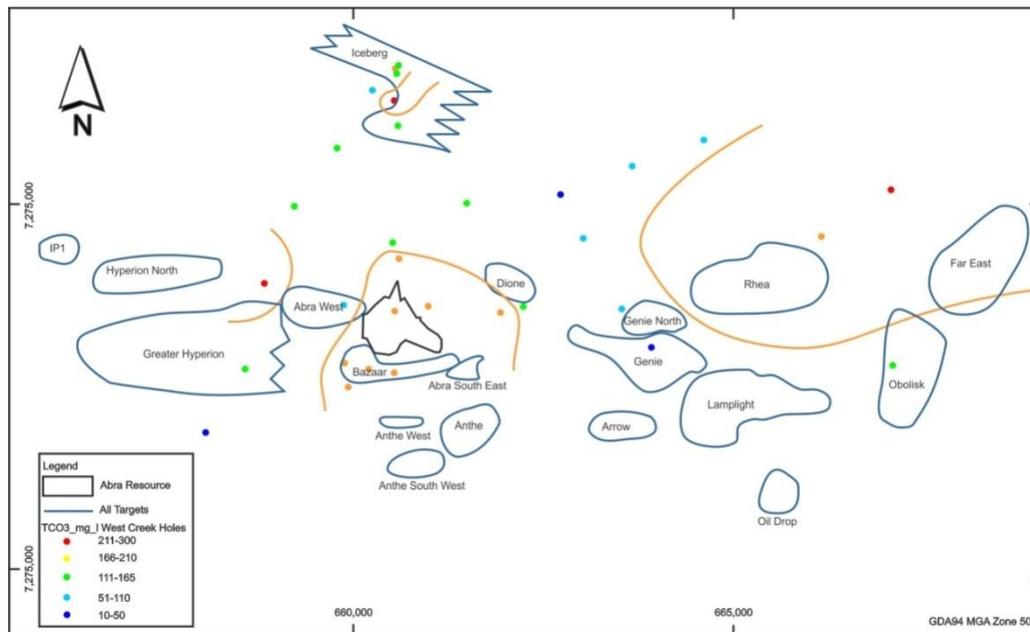
In 2009, Abra completed a target generation and ranking exercise over the Mulgul Project outside of the defined Abra Deposit area. The principal exploration indicators for known mineralisation in the Mulgul Project are:

- basement highs marked by inliers within anticlinal horsts with associated axial faults
- proximity to regional-scale growth faults
- second and third-order syn-depositional faults
- unconformable contact of Gap Well Formation with overlying West Creek Formation
- modest gravity and strong magnetic anomalies associated with stratabound alteration, and
- anomalous surface geochemistry.

As part of this exercise, Abra compiled and reviewed the following exploration datasets:

- **Geology:** Vogt 1:50,000 scale mapping, Jigsaw 1:5,000 mapping, and the Company's 1:1,000 detailed mapping
- **Geophysics:** magnetics, gravity, Geotem, moving loop electro magnetic, and induced polarisation, and
- **Geochemistry:** rock chip sampling, drillhole geochemistry, AMIRA/CSIRO groundwater geochemistry and isotopes analyses.

A total of 18 targets were generated, of which the highest ranked are the Greater Hyperion, Anthe, Genie, Abra West and Bazaar targets (Figure 2.12). All targets remain to be adequately assessed.

Figure 2.12: Mulgul targets over total carbonate in groundwater

(Source: Whitford et al, 1994, modified after Cranney, 2009)

2.9 Jillawarra Project

The Jillawarra Project covers the central and western portions of the Jillawarra Sub-basin and encompasses more than 20 base metal prospects.

Under the terms of a joint venture signed in 2006, Abra had the right to earn a 70% interest in four exploration licences (E52/1413, 1970, 1971 and 1972) through exploration expenditure of A\$1.35 million over four years. Through expenditure and acquisition of interests, Abra now holds a 90% interest in these tenements.

The geology of the Jillawarra Project area is characterised by the units of the West Creek and Gap Well Formations, which are deformed and folded about the eastwest trending Coolina Anticline. The west-southwest trending Quartzite Well Fault is a major cross cutting structure, which is intimately associated with a number of mineralised zones. Other key structures include the southwest trending Woodlands and Manganese Range Faults.

Reported base metal mineralisation within in the Jillawarra area includes:

- chlorite-magnetite-copper-lead-barium Abra-type alteration systems within dolomitic sandstone
- lead-zinc mineralisation in fault brecciated carbonaceous shale units
- stratabound copper mineralisation within the Woodlands Arenite unit
- fault related copper \pm gold mineralisation.

In addition, anomalous gold systems occur at the Manganese Range and Postcutter Bore prospects and manganese has been identified throughout the Jillawarra area, in particular at the Woodland Dome and Manganese Range Prospects.

Exploration since the 1970s has largely focused on extensions to known mineral occurrences between the Woodlands and Abra prospects. Further to the west, airborne geophysical surveying during the 1990s identified a number of prospects. The most significant prospects outlined within the Jillawarra comprise:

- The 46.40, Woodlands and Leader 18 prospects, which are characterised by low grade base metal-magnetite mineralisation occurring within a large regional coincident magnetic and gravity anomaly known as the Woodlands Complex
- The Copper Chert prospect where historic drilling of copper in soil geochemical and electrical geophysical anomalies returned a best result of 0.6 m grading 2.4% Cu at a downhole depth of 124.5 m in drillhole 75-8
- The Quartzite Well Fault hosts a number of lead-zinc prospects associated with a major flexure
- The Manganese Range prospect comprises folded Irregularly Formation rocks in the hangingwall to the Quartzite Well Fault with associated lead, copper \pm gold and gold mineralised zones encountered during previous drilling.

The results of select drillholes within the Jillawarra area are presented in Table 2.5.

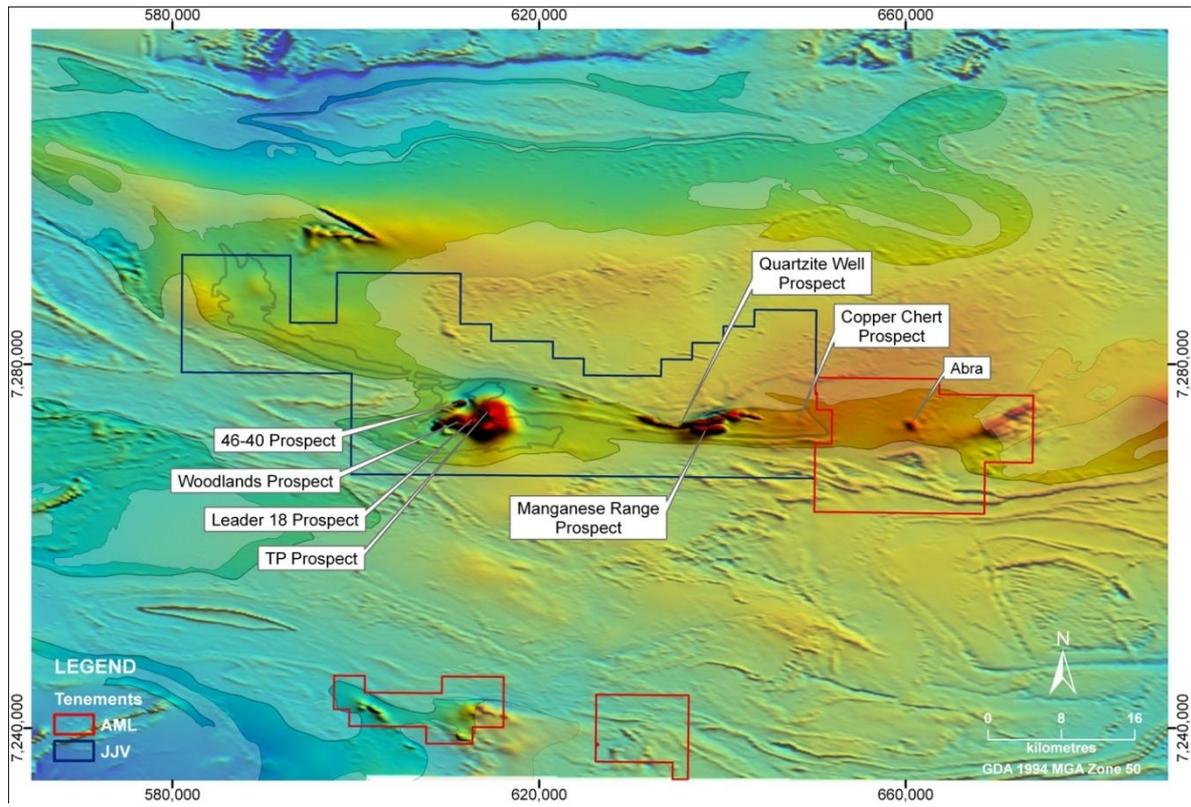
Table 2.5: Selected drillhole intervals from within the Jillawarra area

Prospect	Hole ID	Total depth (m)	From (m)	Intercept
46.40	77-28	308.5	110.0	41m @ 0.8% Pb, 0.2% Cu
46.40	78-34	365.0	185.0	6m @ 1% Cu incl. 1m @ 2.5% Cu, 5.5g/t Au
46.40	78-34	365.0	192.0	35m @ 0.4% Cu
46.40	78-34	365.0	243.0	23m @ 0.3% Cu
Woodlands	77-5	158.0	62.0	96m @ 0.1% Cu
Woodlands	81-5	410.0	372.0	38m @ 0.28% Cu, 5.56% Ba
Leader 18	L18-1	729.5		40m @ 0.39% Cu
Leader 18	WDH-1	650.0		60.5m @ 0.26% Cu incl. 0.4m @ 8.4% Cu
TP	81-8	1,200.0	594.0	4m @ 3.6% Pb, 12.96% Ba
TP	81-8	1,200.0	623.0	2m @ 4.66% Pb
Quartzite Well	75-3	189.0	98.0	2m @ 4.93% Zn, 1.58% Pb
Quartzite Well	75-7	299.0	115.0	34.6m @ 1.10% Zn, 2.00% Pb incl. 8m @ 2.42% Zn, 2.18% Pb
Quartzite Well	76-10	132.1	86.0	6m @ 5.90% Pb incl. 2m @ 10.3% Pb
Quartzite Well	76-13A	192.0	108.0	54m @ 0.28% Zn, 0.83% Pb
Quartzite Well	76-14	304.2	260.0	56m @ 0.53% Zn, 0.51% Pb incl. 1m @ 4.88% Zn, 1.89% Pb incl. 1m @ 7.38% Zn, 0.36% Pb
Quartzite Well	76-17	270.5	231.0	20m @ 0.16% Zn, 0.54% Pb incl. 6m @ 0.24% Zn, 1.28% Pb
Quartzite Well	77-8	158.0	114.0	32m @ 0.87% Zn, 0.45% Pb

(Source: Abra)

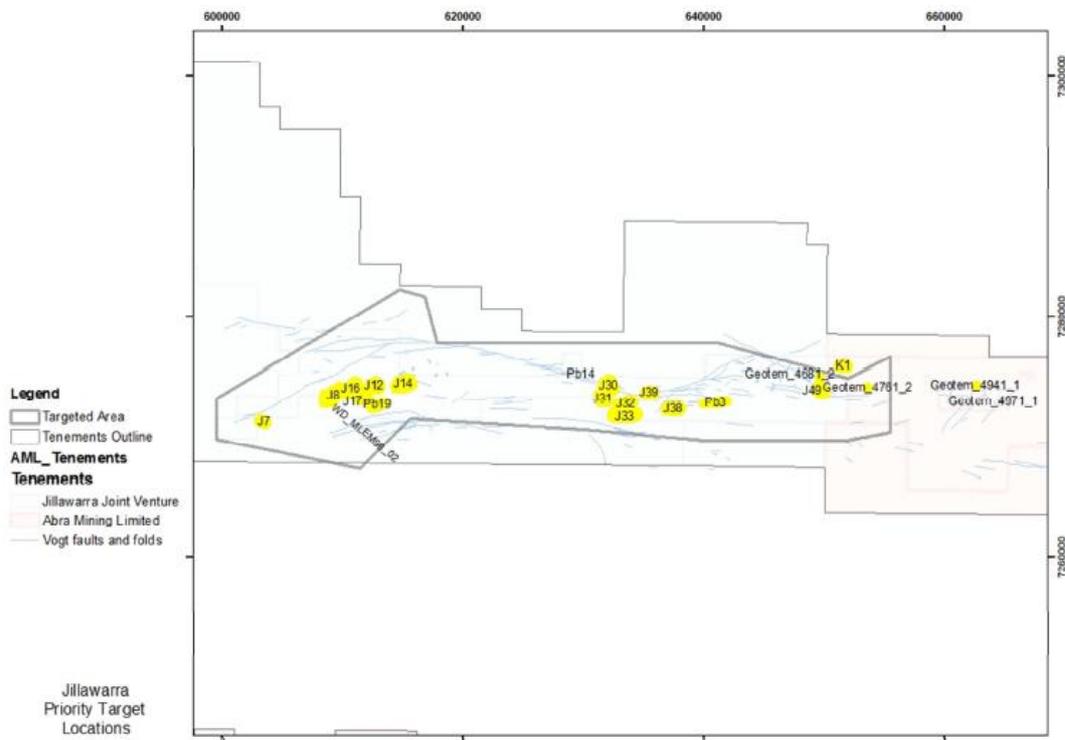
Based on a review of the available exploration datasets, Abra has outlined a total of 119 targets within the Jillawarra area. The top 20 priority targets are shown in Figures 2.13 and 2.14. These remain to be assessed with detailed geological mapping planned over the most prospective in order to define potential drill targets.

Figure 2.13. Significant drilling results in the Jilawarra area



(Source: Abra)

Figure 2.14: Top 20 prioritised targets



(Source: Abra)

2.10 Mount Deverell Project

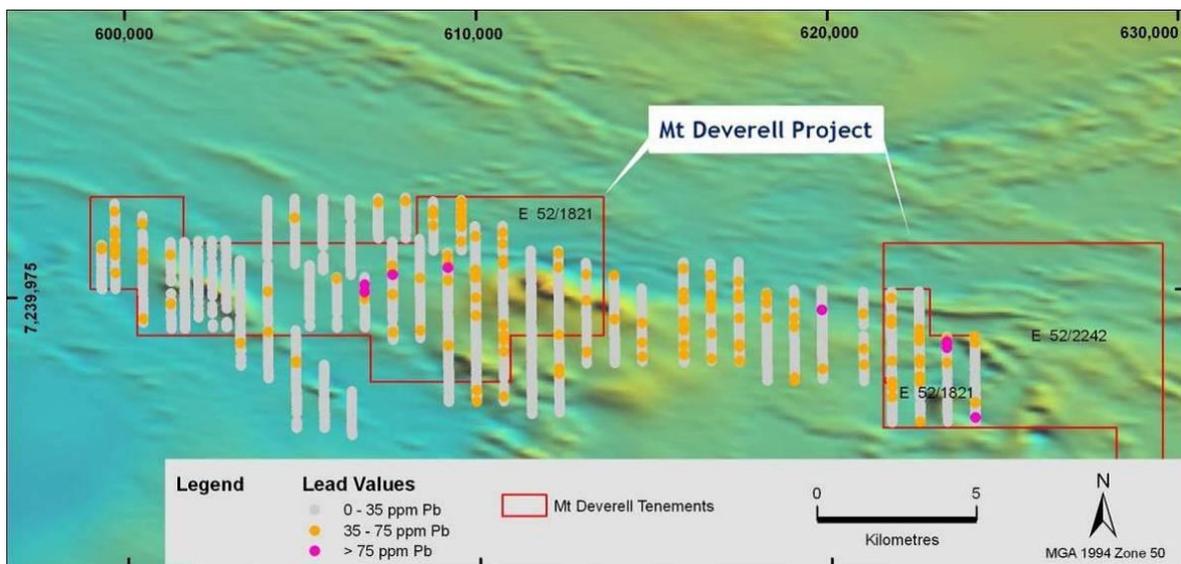
Abra's Mount Deverell Project lies approximately 25 km south of the Jillawarra Project and comprises two granted ELs covering a total area of 170.8 km². The project was acquired from Perilya in 2006 as part of a targeting exercise designed to identify and assess areas with similar structural and geological attributes to the Mulgul Project and the Abra Deposit.

A NITON[®] geochemical sampling programme was completed over the area in 2008 and further infilled in 2010 (Figure 2.15). Several strong lead surface geochemical anomalies have been defined within E52/1821. Geological mapping has been completed over two main areas.

In Area 1, located along the western boundary of E52/1821, the lead geochemical anomaly is coincident with a breccia zone lying within the hinge of a broad west-northwest trending antiform. This structural and stratigraphic setting is considered by the Company to be analogous to that at the Abra Deposit. The breccia hosts sandstone and quartz clasts derived from the surrounding Kiangi Creek sediments.

The second lead anomaly at Area 2, which is centrally located within E52/1821 and some 7 km east of Area 1, is also hosted within a fault breccia zone along the northern limb of an east-west trending antiform.

Figure 2.15: Mount Deverell NITON[®] geochemistry results



(Source: Abra)

Based on a review of the available technical data, Xstract considers the prospectivity of the Mount Deverell project to be moderate, based on its similarities to the Abra Deposit. To date, only cursory exploration has been completed over the western and central portions of the project area. Soil geochemistry anomalies generated within E52/1821 require further assessment, including detailed geological mapping and infill geochemical sampling in order to generate valid drill targets. E52/2242 remains to be adequately investigated, with only reconnaissance activities completed to date.

2.11 Havelock Project

The Havelock Project is located approximately 30 km west of Wiluna in central Western Australia. The Havelock Project surrounds Ivernia's Magellan open pit lead mine.

Access to the Havelock Project is via the Meekatharra-Wiluna section of the Goldfields Highway, which traverses the middle of the project in an eastwest direction. The first 15 km of the Goldfields Highway west of Wiluna is sealed, with the remaining section being well-maintained gravel. There are a number of pastoral accesses and dedicated exploration tracks within the Havelock Project area.

The Havelock Project area has previously been explored by the following companies:

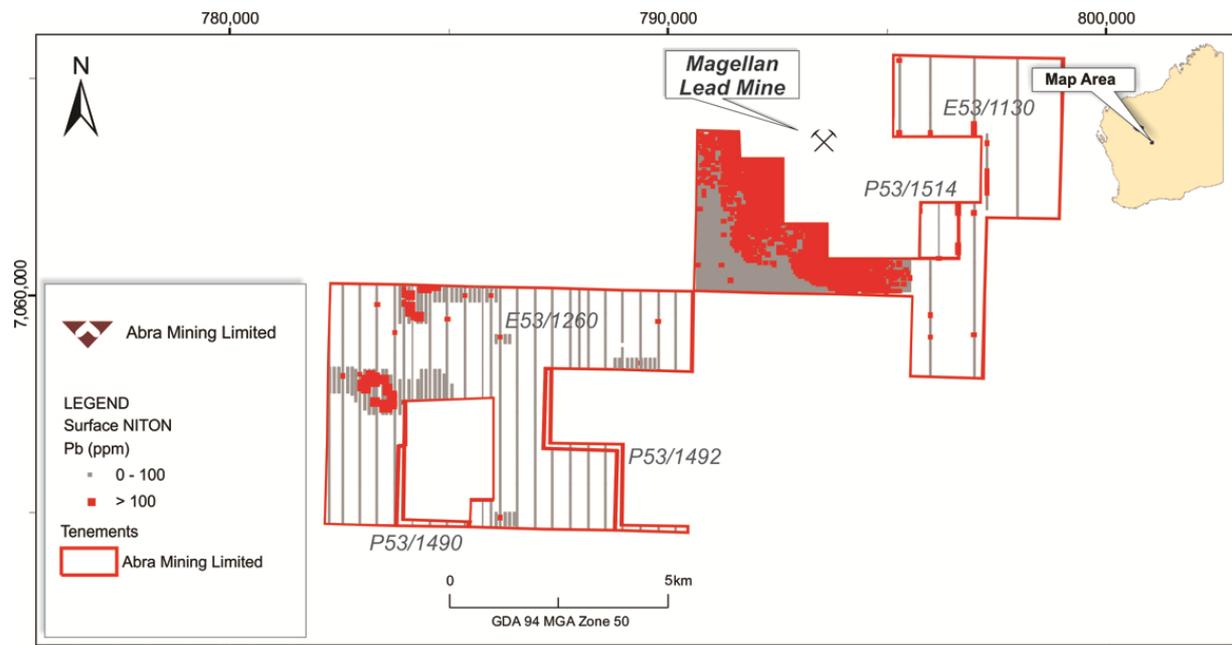
- RGC
- Morning Star Resources NL
- Ivernia.

Most historical work was completed by RGC in the early to mid 1990s. Abra acquired the Havelock Project from Perilya in April 2006 for 3.4 million options exercisable at A\$0.50. The options expired in December 2009.

In January 2007, Abra completed an airborne magnetic and radiometric surveys over the Havelock Project. In 2008, a first pass NITON[®] soil geochemistry programme was undertaken which resulted in the identification of number of lead anomalies within E53/1130 and E53/1260.

In 2009, another NITON[®] survey and 1:20,000 geological mapping was completed over the remainder of E53/1260 and most of the then recently granted E53/1374 (Figure 2.16). The last programmes yielded no significant new anomalies in E53/1374 but did result in lead anomalies being within the northeastern portion of E52/1260.

Figure 2.16: Geochemical anomalies within the Havelock Project



The Havelock Project is located in the Paleoproterozoic-aged Yerrida Basin, which unconformably overlies the Archaean-aged Yilgarn Craton to the south. At depth, the Havelock Project covers the extensions to the Joyners Find and Wiluna Greenstone Belts.

The bulk of the Havelock Project is covered by transported alluvium and deposits of eluvium and colluvium. There is little outcrop within the Havelock Project area, with the exception of the Williamson Range in the south and southwest, and small isolated mesas in the central west.

Sedimentary units of the Earraheedy and Yerrida Groups are present within the Havelock Project (Figure 2.17). The Yelma Formation of the Earraheedy Group hosts the Magellan lead deposit and comprises clastic and dolomitic sediments. The sequence consists of basal conglomerate, quartz arenite, stromatolitic dolomite and chert breccia. The Yelma Formation is lithologically similar to the Bubble Well Member of the Windplain Subgroup, a silicified carbonate and evaporite rock unit, comprising chert breccia and chert replaced stromatolitic dolomite. The Maralouou Formation, which underlies the Yelma Formation, does not host Magellan-style lead mineralisation.

Structurally, there is an east trending system of faults inferred from the presence of dolerite dykes in the southern part of the Yerrida Basin. These faults may be growth faults associated with rifting (Pirajno and Adamides, 2000). A large structure is interpreted along the contact of the Finlayson Member and the overlying Maralouou Formation, within and near the project area. These structures are important in controlling lead mineralisation at the Magellan Deposit.

Figure 2.17: Stratigraphy of the Yerrida Basin, which underlies the Havelock Project

Yerrida Basin Stratigraphy				Project Area Stratigraphy	Mineralisation
Group	Formation	Description	Formation		
Earraheedy Group	Mount Leake Formation	Quartz Arenite			
	Yelma Formation	Stromatolitic chert breccia	Yelma Formation (2.00 Ga)		Magellan Lead Deposit (1.65 Ga)
Unconformity					
(Yerrida Group)	Mooloogool Subgroup	Maralouou Formation	Siltstone and shale	Maralouou Formation	
		Killara Formation	Mafic igneous rocks, sediments, chert, etc	Lost due to unconformity or faulting	
		Doolgunna Formation	Arkosic sandstone and quartz wacke		
		Thaduna Formation	Lithic sandstone, siltstone and wacke		
	Windplain Subgroup	Johnson Cairn Formation	Shale and siltstone		
		Juderina Formation	Quartz arenite		
		Bubble Well Member	Stromatolitic carbonate, chert breccia	Bubble Well Member (2.17 Ga)	
Finlayson Member	Quartz arenite, bedded	Finlayson Member			
Unconformity					
Archaean	Granitoid and greenstones of the Joyners Find Belt			Archaean gold, base metals and iron-ore	

After Pirajno and Adamides, 2000.

The Havelock Project is being targeted by Abra for lead mineralisation similar to that observed at Ivernia's Magellan deposit. The Magellan mineralisation is atypical in its expression [Williams et al. 2011]. The known lead mineralisation is hosted within the oxide zone and is expressed as carbonate and lead mineral species. No lead sulphide, or zinc mineralisation occurs within the Magellan deposit. The Magellan deposit may be a result of a mature wall rock replacement type of supergene deposits, where mineralisation precipitates from adjacent or down ground-water flow sulphide deposits. If these deposits become progressively oxidised by acidic ground waters, the zinc may migrate out leaving behind the lead as the sole element of potential economic interest (Table 2.6).

Table 2.6: Genetic model for non-sulphide base metal deposits

Maturity:	Early	—————→			Late
Expression	Sulphide body	Zn-Pb(Ag)-Cu gossan	Pb(Ag)-Cu-Zn gossan	Pb(Ag)-Cu gossan	Pb(Ag) gossan
Mineralogy	Sphalerite	Smithsonite	Hemimorphite	Hydrozincite	Chalcedonic silica
	Galena	Goethite	Smithsonite	(hemimorphite)	Haematite
	Chalcopyrite	Haematite	(hydrozincite)	Haematite	Litharge
	Pyrite	Galena	Haematite	Cerussite	Cerussite
		Anglesite	Goethite	Cu oxides/ carbonates	Cu oxides/ carbonates
		Chalcopyrite	Anglesite		
Chalcocite		Cerussite (galena)	Chalcocite		
		Cu oxides/ carbonates			

Based on its review of the available technical data, Xstract considers Abra's Havelock Project to be a conceptual exploration play with low to moderate prospectivity. The soil geochemistry anomalies in E53/1130 require validation to ensure that these are not sediment contamination from the neighbouring Magellan lead mine. A potential lead deposit within the project area is likely to be small given the size of the known soil anomalies and that the exploration model is constrained to near surface. In the event of a discovery of a deposit, it would most likely be suited to treatment at Ivernia's mining operation rather than justify a stand-alone operation.

3 Valuation

3.1 Valuation considerations

The VALMIN Code classifies mineral assets according to the maturity of the asset. The term *mineral asset* refers to all property held for the purpose of near term or eventual mineral extraction including but not limited to:

- real property
- intellectual property
- tenements, plant, equipment and associated infrastructure.

Most mineral assets can be classified as outlined in Table 3.1 (VALMIN, 2005).

Table 3.1: Mineral asset classification

Project development stage	Criterion
Exploration areas	Mineralisation may or may not have been defined, but where a Mineral Resource has not been identified.
Advanced exploration areas	Considerable exploration has been undertaken and specific targets identified. Sufficient work has been completed on at least one prospect to provide a good geological understanding and encouragement that further work is likely to result in the determination of a Mineral Resource.
Pre-development / resource	Mineral Resources and/or Ore Reserves have been identified and their extent estimated. A positive development decision has not been made. This includes properties where a development decision has been negative and properties are either on care and maintenance or held on retention titles.
Development	Committed to production but not yet commissioned or not initially operating at design levels.
Operating	Mineral properties, in particular mines and processing plants, which have been fully commissioned and are in production.

The VALMIN Code defines *value* as the Fair Market Value of a mineral asset. The Fair Market Value is the amount of money or the cash equivalent for which the mineral asset should change hands on the Valuation Date between a willing buyer and a willing seller in an arm's length transaction. Each party is assumed to have acted knowledgeably, prudently and without compulsion. In essence, the fair market value of the mineral asset comprises:

- **The underlying or 'technical value'**, which is an assessment of a mineral asset's future economic benefit under a set of assumptions, excluding any premium or discount for market, strategic or other considerations
- **The market component**, which is a premium relating to market, strategic or other considerations which depending on circumstances at the Valuation Date, can be either positive, negative or zero.

To determine the market value, all Material information should be presented and discussed.

As more advanced projects may contain extensive technical detail, the valuer must determine what is Material on the basis that if it were omitted from a report, it may cause the reader to arrive at a different conclusion. As a rough rule-of-thumb, if the omission of an item results in a change of:

- less than 5%, the information is generally not Material
- between 5% and 10% it may be Material
- more than 10% it is Material.

There are three generally accepted approaches to valuing a mineral asset, based on income, cost, and the open market. Each approach may contain a number of methodologies that are suited to different times and circumstances. As the VALMIN Code is not prescriptive regarding the appropriate valuation approaches, the more prescriptive 2008 Edition of The South African Code for the Reporting of Mineral Asset Valuation (SAMVAL) and the Canadian 2003 Edition of the Standards and Guidelines for Valuation of Mineral Properties (CIMVAL) provide insight into what may be applicable, as shown in Table 3.2 (CIMVAL, 2003).

Table 3.2: Valuation approaches for different types of mineral assets

Approach	Project development stage			
	Exploration	Resource	Development	Operating
Income	No	Rarely	Yes	Yes
Cost	Yes	Rarely	No	No
Market	Yes	Yes	Yes	Yes

3.2 Income based approach

The income based approach is based on the assumption that using the information available at the time of valuation, economic returns can be modelled over the useful life of the mineral asset (SAMVAL, 2008). The income-based approach is suited for the valuation of individual assets for which a large amount of technical data has already been collected or can be preliminarily estimated. An income-based valuation generally involves the construction of a discounted cash flow (DCF) model based on a preliminary or more advanced project development concept and may include sophisticated risk analysis and simulation such as Monte Carlo simulations, modern asset pricing and real options analysis.

Despite having various levels of sophistication, the income-based approach has limitations in that it:

- may not fully reflect the marketable value (e.g. the market may attribute a discount or premium to the income-based value)
- relies on a number of critical but subjective inputs (e.g. the appropriate discount rate) despite using extensive amounts of technical detail
- excludes numerous assets with lower levels of development as specific technical detail is rarely available at the exploration or pre-scoping study level.

3.3 Market based approach

The market based approach uses the transaction prices of projects in similar geographical, geopolitical and geological environments to derive a market value using a process similar to that is used in the real estate industry (CIMVAL, 2003). The market-based approach may use

the assumption either of joint venture terms or outright acquisitions, and can be presented in range of unitised values including on a dollar per ounce or tonne of contained metal/mineral; dollar per square kilometre; or as a percentage of the prevailing commodity price.

In Xstract's opinion, a market based approach is well suited to establishing a likely value for base metal deposits and exploration projects. This approach's strength is that it is designed to include all value drivers, and because of its simplicity, has an in-built 'reality check' that helps ensure that the science of the methodology does not dominate the assessment (O'Connor and McMahon, 1994). The market based approach is easy to calculate and communicate and does not require in-depth project specific knowledge, except insofar as geologically, geographically and/or commercially similar assets to the one being valued are sought for comparable values. Notwithstanding this practicality, the market based approach relies on a number of assumptions and often lacks true comparability with the assets being valued. Moreover, where only small datasets are available the negotiating ability of the parties to broker a deal may distort the dataset's statistics. Despite its documented shortcomings, there is significant merit in using market based benchmarks for valuations (Grant, 1994).

By undertaking a qualitative analysis of comparable transactions, it is possible to develop a 'gut feel' for likely market price responses to varying levels of equity interest. However, the intuitive approach is limited by the variability of values obtained across a range of investments, which makes it difficult to consistently and robustly decipher the value of control premia or any other aspect, which contributes to the value of a project.

Furthermore, market-based methodologies often have a common underlying weakness: heuristics and bias. Heuristics concerns the use of rules of thumb or mental shortcuts, which enable valuers to undertake pattern recognition within incomplete datasets (Tversky and Kahneman, 1974). Heuristics can introduce serious bias. On one hand, the valuer is shielded from technical uncertainty in that all projects are subject to the same judgments; on the other hand the valuer has to contend with applying poorly quantified value drivers to uncertain inputs. As discussed in detail by McCuaig, Kreuzer and Brown (2007), the most common sources of bias in heuristic judgements are:

- **Representivity** – based on limited, imperfect datasets, there is a tendency to over-generalise based on a few data points. Consequently, data density and quality can have big impacts on interpretation.
- **Availability** – the outcomes are usually based upon personal experience, resulting in the full range of possibilities being truncated.
- **Anchoring** – Initial impressions anchor subsequent perceptions and influence outcomes. Any adjustments to the initial impression are often insufficient, narrow and biased towards the anchor.
- **Salience** – the most recent and prominent information overly influences judgement and there is a resistance to change once a model is established.

The reliance on heuristics is not confined to geologists and valuers; rather it has been shown that even experienced statisticians cannot avoid intuitive judgments. Valuers need to be ever-cognisant of the bias associated with the use of heuristics and to maintain an open mind to opinions outside of their own. Unfortunately, running contrary to this notion is that "*the more we publicly defend (or promote) a particular model, the more difficult it is to radically challenge it*" (Vann, 2005).⁵

⁵ A more thorough discussion on the merits and limitations of the market-based approach are presented in Lawrence (2001).

3.3.1 Comparable transactions method

The comparable transaction approach is an adaptation of the common real estate method to valuation. For the purposes of mineral asset valuation, a practitioner compiles and analyses 100% equity acquisitions of projects of similar nature, time, and circumstance with a view to establishing a range of values that the market is likely to pay for a project. The comparable transactions method:

- is intuitive, easily understood and readily applied
- implies a market premium/discount for the prevailing sovereign risk
- captures market sentiment for specific commodities or locations
- accounts for intangible aspects of a transaction (i.e. intellectual property).

The transactions deemed to be analogous to the mineral asset being valued are used to determine a unit price (e.g. A\$/km² or A\$/oz gold) for the asset being valued. However, there is an intricate value dynamic between the quantity (size) and quality (grade or prospectivity) that may result in the exclusion of a large number of comparable transactions which in turn may undermine the accuracy of this method. It is also important to note that transactions may include provisions for additional factors such as arrangement of debt financing, marketing rights, contingent payments and future royalties. Therefore, the price disclosed as paid for an asset may not necessarily equate to the value of the tenement, as there may be other circumstances or conditions that may have influenced calculation of the implied value.

The comparable transactions method is widely used throughout the minerals industry; however, the valuer must take into account that it is largely retrospective and may not take into account anticipated or recent commodity or other variable value drivers.

3.3.2 Joint venture terms method

The joint venture terms method is a variation of the comparable transaction method. This technique involves transactions where only partial ownership of a project is acquired. The joint venture terms method provides the valuer with a larger acquisitions dataset than the comparable market value method, and consequently these approaches are often used simultaneously in mineral asset valuations. It is widely recognised that the market will attribute a sliding-scale premium in accordance with the level of ownership acquired. For example, a joint venture agreement for a 51% interest in a project may attract a market value significantly above that for an identical project in which a 49% interest is acquired. Therefore, the valuer needs to account for any potential of ownership premiums.

3.4 Cost based approach

The cost based approach is based on the notion that a return is expected from an investment such as mineral exploration. This approach can be both retrospective and forward looking. By taking the position of the vendor who is likely to seek re-imburement of sunk costs with a risk premium, a possible market position may be determined. By analysing the future costs associated with a project, and the anticipated risk-adjusted returns, the acquiring party's view of value may be quantified. The three common cost-based methods are based on expected values (EV), multiples of exploration expenditure (MEE) and geoscience rating criteria.

3.4.1 Expected values method

The EV method uses probability theory to quantify an exploration project's value by determining the likely 'pay-off' for each step in the exploration process. The EV is the sum

of the probabilities of each possible outcome multiplied by the outcome value (or pay-off) less the implementation costs at each stage (Kreuzer et al., 2008).

A valuer can form an opinion on whether the proposed exploration budget for a project is prudent and warranted, as unlike the coin tossing game, exploration is not mutually exclusive and collectively exhaustive (i.e. each exploration programme changes the probability of successfully finding a deposit).

As an exploration programme is a staged process, wherein the most cost effective techniques typically precede more expensive but often more definitive exploration techniques, a tree-diagram can be constructed of possible outcomes, their payoffs and associated costs.

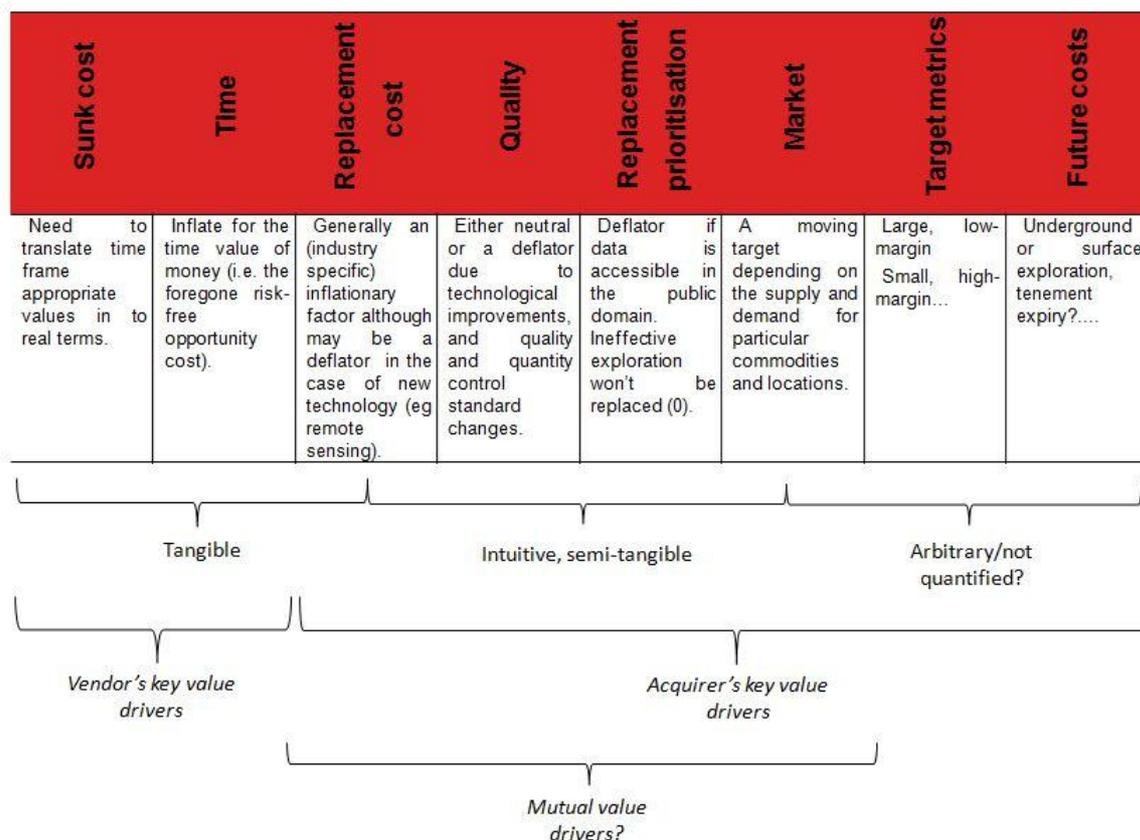
The strength of the EV method lies in its transparency and ability to replicate exactly how an exploration manager would intuitively assess the value of a project. While it may be possible to estimate the amount of metal remaining in a mineral belt (Guj et al., 2009), the main drawback of the method is that it is not always possible to confidently gauge the value of a discovery, especially in areas where there has previously been little mining activity. Furthermore, the technical value determined by the EV method may not reflect market value due to among other things, supply and demand forces.

3.4.2 Multiple of exploration expenditure method

The MEE method (or replacement value) is largely based on vendor psychology. Vendors will typically seek a return on sunk investments and as a result multipliers are used to estimate the possible market value (Onley, 1994). Some valuers may also include warranted future expenditure in the calculations, thereby taking into account some of the acquirer's position. The process of establishing the replacement/retrospective value is relatively intuitive, however the potential future value of a project based on existing expenditure is somewhat ambiguous. The research by Wastell et al. (2010) found that there is no statistically significant relationship between probability estimates of finding a commercially viable deposit and justified future expenditure commitments. It is also suggested that despite mounting negative exploration results, they did not affect the probability estimation in a manner that is akin to 'Gambler's Ruin'. The illogical interaction between mounting exploration expenditure and static probability estimates raises concern over what constitutes warranted expenditure. As a consequence, the MEE method is considered by some Australian practitioners as a method of last resort for estimating market values (Etheridge, 2009). Yet the method appears to be more accepted by Canadian practitioners despite the regulatory authorities being more resistant (Spence, 2007).

The main considerations in determining the appropriate MEE multipliers are shown in Figure 3.1 (after Bell, Ghandar and Guj, in prep). Xstract is aware of descriptive matrices, however there is no empirical evidence supporting the multiplicative weights used and as a consequence are not used by Xstract. This lack of transparency is partly due to the lack of publically available information, which can directly be correlated with the comparable transactions method.

Figure 3.1: Vendor and acquirer considerations in the replacement valuation process



3.5 Xstract's technique

In Xstract's opinion, there is no sufficiently detailed or accurate information available to reliably forecast the future cashflow from the Company's mineral assets. This opinion is based on the:

- status of concept level studies completed at the Abra Deposit
- the early exploration status of the Company's other projects.

As such, Xstract does not consider it appropriate to adopt an income approach to evaluate the Company's mineral assets.

As a result, Xstract has used a combination of the comparable transactions, joint venture terms, expected values and replacement cost methods to determine the current market value of the Company's mineral assets.

3.6 Abra Deposit Mineral Resource valuation

3.6.1 Market based approach

To help determine an appropriate market value for the Mineral Resource currently defined at the Abra Deposit, Xstract has reviewed recent comparable transactions and joint venture terms involving Australian base metal deposits. To obtain a dataset that is relevant under current time and circumstances, Xstract has only selected transactions that occurred after March 2009 when the ASX All Ordinaries Index began to recover from a major downturn (Figure 3.2).

Figure 3.2: Lead price versus the ASX All Ordinaries Index from January 2007 to April 2011

Xstract’s qualitative review of the transactions, outlined in Appendix A, resulted in four transactions it considered as being broadly similar to the defined Mineral Resources at the Abra Deposit (Table 3.3). These transactions have been converted to a lead equivalent (Pb Eq) based on the prevailing metal prices at the time of the transaction. These “similar” transactions have a market range of A\$6.88/t Pb Eq to A\$15.71/t Pb Eq with an average of A\$10.04/t Pb Eq and a median of A\$8.78/t Pb Eq.

Table 3.3: Base metal deposit transactions considered similar to the Abra deposit

Date	Project	Contained metal (Mt Pb Eq)	Deposit grade (% Pb Eq)	Implied unit value (A\$/t Pb Eq)
February 2011	Manbarrum	0.57	2.34%	9.38
October, 2010	Myrtle	2.18	5.00%	6.88
October, 2010	Copper Strike	1.59	5.97%	8.17
April, 2010	Sorby Hills	1.15	6.79%	15.71

As an alternative way of interrogating the data within Appendix A, Xstract considered the transactions where its qualitative analysis suggests the Abra Deposit should achieve either a higher or lower price per tonne of contained lead equivalent metal (Table 3.4). The transaction dataset identified only one asset as having less desirable qualities with a value of A\$8.25/t Pb Eq. The more desirable dataset comprised ten transactions and had a minimum value of A\$6.19/t Pb Eq, an average of A\$27.38/t Pb Eq and a median of A\$30.26/t Pb Eq.

Table 3.4: Implied metrics from resource transaction data

Item	Implied Values (A\$ /t Pb Eq)					
	Low	High	Range	Mean	Median	Weighted
All assets	6.19	115.00	108.81	27.20	18.20	21.00
Similar assets	6.88	15.71	8.83	10.04	8.78	9.36
Less desirable assets				8.25		
More desirable assets	6.19	115.00	108.81	33.92	30.26	32.94

*Weighted by total reported Mineral Resource tonnage according to deposit size

Furthermore, Xstract notes the following:

- The defined mineralisation associated with the “similar” transactions is typically for near-surface deposits, unlike the Abra Deposit.
- The resource categories for these assets are similar to that at the Abra Deposit, this being largely Indicated and Inferred material.
- While all deposits are polymetallic, the Abra Deposit typically has lower silver ± zinc, copper, and gold grades than these “similar” transactions.
- All the transactions considered involve appreciably smaller total Mineral Resource tonnages than at the Abra Deposit.
- The February 2011 transaction for Manbarrum may include a premium to account for synergies flowing to the Sorby Hill Joint Venture partners, given the proximity of Manbarrum to Sorby Hills (30 km apart). Both projects are undeveloped, shallow and close to established road and port infrastructure.
- In May 2010, TNG entered into a sale and purchase agreement for the Manbarrum project with Teng Fei Mining Limited (Appendix A). Whilst this transaction eventually collapsed, the implied value of A\$17.0/t Pb Eq is supportive of the valuation metrics for similar assets.
- Teck’s October 2010 transaction with Rox (Appendix A) may also be valued using a 5% Pb sample boundary cut-off (compared to 3% cut-off used in Xstract’s analysis). On this basis, the implied value was A\$14.4/t Pb Eq (compared to A\$6.90/t Pb Eq used). Xstract selected the lower cut-off grade as it is more consistent with that applied by the Company at the Abra Deposit.

Based on the market transactions, Xstract’s preferred unit value for the Abra Deposit is A\$10.00/t Pb Eq in the range A\$6.00/t Pb Eq to A\$15.00/t Pb Eq based on the median and range of implied values for similar assets. A summary of Xstract’s market based valuation of the defined resources at the Abra Deposit is presented in Table 3.5.

Table 3.5: Market based valuation summary of the Mineral Resource at the Abra Deposit

Item	Abra Deposit			Values (A\$ M)		
	Tonnage (Mt)	Grade (% Pb Eq)	In-situ Metal (Mt Pb Eq)	Low	High	Preferred
Abra Mineral Resource	107	6.89%	7.38	44.3	110.7	73.8

*Pb Eq conversion is based on prices as at 27 April 2011: lead price = US\$2,595/t, Zinc price = US\$2,243/t, copper price = US\$9,250/t, silver price = US\$45/ounce and gold price = US\$1,503/ounce.

3.6.2 Expected value method

In order to verify its valuation using the market based approach, Xstract has also considered the EV of a conceptual incorporation of the Abra Deposit's defined resources into a future mining operation. Xstract considers that the EV method has merit, given the Abra Deposit's near term exploration programme is targeting exactly such a conversion.

In forming its opinion on the EV of the hypothetical outcome from Abra's intended exploration programme, Xstract has developed a conceptual, costed drill plan designed to upgrade the status of Abra Deposit, such that it can be evaluated for mining. This conceptual exploration programme comprised two sequential drilling campaigns totalling A\$12 M over two years.

In order to derive the EV of the Abra Deposit, Xstract created a decision tree based on likely probabilities, cost and pay-off for the conversion of resources to reserves. Based on the assumptions outlined in Table 3.6, Xstract has derived an EV for the Abra Deposit of A\$29.0 M, within a range of A\$17.9 M to A\$45.6 M. Xstract notes that the EV represents a technical value and is likely to be towards the lower end of the current market value range.

Table 3.6: Expected value of a 100% interest in the Abra Deposit's Mineral Resource

Programme	Type	Input			Payoff
		Low	High	Preferred	
Infill drilling	Cost	A\$4 M			
	Probability of advancing to next stage	80%			
Detailed drilling and reserve conversion	Cost	A\$8 M			
	Probability of large pay-off	10%	20%	20%	A\$140 M
	Probability of medium pay-off	30%	30%	60%	A\$70 M
	Probability of small pay-off	60%	50%	20%	A\$20 M
Technical value		A\$17.9 M	A\$45.6 M	A\$29.0 M	

3.6.3 Replacement value method

To validate its opinion of the Abra Deposit's possible market value determined by the comparable transactions and EV methods, Xstract also reviewed the exploration expenditure history, which has a mixed-nominal total of A\$12.51 M for M52/776. Based on the Mineral Tenements Online system of the WA Department of Mines and Petroleum and Abra's proposed 2011 budget, the expenditure details for M52/776 (which contains the Abra Deposit) are:

- 2011: A\$0.1 M (Abra's budgeted amount)
- 2010: A\$0.2 M
- 2009: A\$0.67 M
- 2008: A\$4.36 M
- 2007: A\$3.27 M
- 2006: A\$1.68 M
- 2005: A\$2.01 M
- 2004: A\$0.09 M
- 2003: A\$0.02 M
- 2002: A\$0.02 M
- 2001: A\$0.09 M

In estimating a technical value for the Abra Deposit, Xstract used:

- 15% per annum for its time-inflation rate. This figure is higher than the normal +6% above the risk-free rate demanded by the market. This additional discount margin reflects the mineral risk premium.
- Half the time taken to collect the information for its time discount period. This reflects the benefit of hindsight and the targeted nature of any conceptual replacement programme.
- Consumer price index inflation rates sourced from the Reserve Bank of Australia (RBA, 2011).
- 3% per annum for the industry specific inflation. While qualitative in origin, Xstract considers this to be a reasonable rate over the last decade which was marked by significant industry inflation especially between 2005 and 2008.
- 15% per annum to reflect the affect of age on the usefulness of old data in the mineral estimate process.
- 90% replacement factor to account for the proportion of the work which would be reproduced with the benefit of hindsight. This arbitrary figure is used to reflect that much of the prior expenditure is associated with current resources. A range of 85% to 95% is used to define the lower and upper values for the replacement value.

Based on the above assumptions, Xstract estimates the replacement based technical value for a 100% interest in the Abra Deposit Mineral Resource is approximately A\$8.7 M within a range of A\$8.2 M and A\$9.2 M. As this is a technical value that cannot be reliably converted to a market value, Xstract considers the replacement value represents a minimum value for the defined resources and hence is a useful guide in validating its assumptions and conclusions drawn from other valuation methodologies.

3.6.4 Resource valuation summary

In forming its opinion of the market value of the Abra Deposit Mineral Resource, Xstract has taken guidance from the comparable transactions, joint-venture terms, expected values and replacement cost methodologies.

Furthermore, Xstract notes the following:

- The Abra Deposit is located at significant depth with future development likely to require significant capital expenditure regardless of whether open pit or underground techniques are eventually selected.
- In contrast to the majority of recent base metal transactions as highlighted in Appendix A, the Abra Deposit is a lead dominated system with lesser amounts of zinc, copper, silver and gold. Xstract considers such mineralisation is likely to have a lower appeal in the current market relative to zinc or copper rich systems.
- In terms of payable metal, only the lead and silver content of the lead concentrate and copper, gold and silver content of the copper concentrate are considered by Xstract to be likely to ultimately contribute to any future cash flows emanating from a mining operation at the Abra Deposit.
- Globally, Xstract knows of no stand-alone mines operating at a combined lead and zinc grades of less than 6% Pb + Zn.
- Due to greater public scrutiny and regulatory compliance requirements, lead mines tend to be higher cost / lower margin relative to other base metal (i.e. zinc/copper) mining operations.

- An optimal mining and infrastructure solution remains to be determined for the Abra Deposit.

With these factors in mind, Xstract considers the market-based approach to be the most instructive in determining the current market value, albeit tempered by the results of the EV and replacement value methods. As such, Xstract has elected to apply a discount to the implied unit value for the defined Mineral Resources at the Abra Deposit using the market-based approach (refer Section 3.6.1). Xstract considers that the current market would pay A\$7.00/t Pb Eq within the range A\$5.00/t Pb Eq to A\$9.00/t Pb Eq for the payable metal contained within the Abra Deposit (i.e. 6.45 Mt Pb Eq as opposed to the 7.38 Mt of in-situ Pb Eq metal outlined in Table 3.5).

A summary of Xstract's valuation of the Abra Deposit's Mineral Resource is presented in Table 3.7.

Table 3.7: Abra Mineral Resource valuation summary

Approach	Method	Values (A\$ M)		
		Low	High	Preferred
Market-based	Comparable + joint venture terms	44.3	110.7	73.8
Cost-based	Expected values	17.9	45.6	29.0
Cost-based	Replacement value	8.2	9.2	8.7
Xstract's Preferred Value		32.3	58.1	45.2

*Any discrepancies between tables is due to rounding.

3.7 Exploration potential valuation

3.7.1 Comparable transactions method

Xstract has elected to value the project tenements using multiples implied by recent Australian transactions for early-stage base metal exploration projects (Appendix B). Xstract has considered 100% equity, comparable market transactions involving Australian early-stage base metal exploration projects that occurred after March 2009, when the ASX All Ordinaries Index and metal prices began to recover from a major downturn (Figure 3.2). Xstract considers that while commodities markets have improved significantly since March 2009, the market for early-stage exploration assets remains subdued due to the prevailing market's aversion to risky investments.

To assist in identifying the market signals contained within the dataset, Xstract has:

- Compared each transaction based on its geoscientific rating;
- Used an unweighted score where the geoscientific descriptive text for each transaction matches that for the Abra Deposit. This ensures that the same value drivers are identified and that the geoscientific rating is not a product of completely different value driver. This rating was based on descriptions matching minor off-project workings, abundant project workings, targets identified and generally favourable geology and areas between 350 and 450 km² (i.e. ± 50 km²).
- Used a manual qualitative analysis to examine the merits and peculiarities of each transaction. This is undertaken to take into account the practitioner's experience and judgment as to whether each transaction is representative of the broader market. As part of this process, projects that are similar, less or more desirable than the Abra Deposit's exploration potential were identified. The range of values suggested by the

‘similar’ assets is tested by examining the upper value range indicated in the less desirable assets and the lower value range suggested by the more desirable assets. This technique ensures that information from all three data subsets is taken into account.

Xstract’s manual ‘geoscientific’ analysis of the transactions identified in Appendix B suggests that Australian early-stage, base metal exploration projects similar to the Mulgul Project may attract market values in the range A\$400 to A\$6,200/km² (Table 3.8).

Table 3.8: Implied metrics from exploration transaction data

Item	Implied Values (A\$/km ²)					
	Low	High	Range	Mean	Median	Weighted
All assets	350	401,591	401,240	23,560	3,251	9,938
Similar assets	400	6,200	5,800	2,870	2,292	1,776
Less desirable assets	350	3,880	3,530	1,514	992	2,100
More desirable assets	7,169	401,591	394,422	79,860	10,706	59,970

Based on its review of the available data, Xstract has elected to assign a value based on the perceived maturity and exploration potential of the Company’s projects. Xstract considers that the current market would pay in the range A\$2,000 to A\$6,000/km² for Abra’s Mulgul and Jillawarra Projects, A\$1,000 to A\$4,000/km² for Abra’s Havelock Project (given the location of this early stage exploration project relative to the Magellan mine), and A\$500 to A\$2,000/km² for the Mount Deverell Project.

A summary of Xstract’s market based valuation approach is presented in Table 3.9.

Table 3.9: Market based valuation of the exploration potential of Abra’s projects

Project	Applied Value Range (A\$/km ²)	Area (km ²)	100% Equity basis			Attributable		
			Low (A\$ M)	High (A\$ M)	Preferred (A\$ M)	Low (A\$ M)	High (A\$ M)	Preferred (A\$ M)
Mulgul	\$2000 to \$6,000	289.3*	0.58	1.74	1.16	0.58	1.74	1.16
Jillawarra	\$2000 to \$6,000	1,043.8	2.09	6.26	4.18	1.88	5.64	3.76
Mount Deverell	\$500 to \$2,000	170.8	0.09	0.34	0.21	0.09	0.34	0.21
Havelock	\$1000 to \$4,000	59.6	0.06	0.24	0.15	0.05	0.21	0.13
Total			2.82	8.58	5.70	2.60	7.93	5.26

* excludes M52/776 (evaluated in Section 2.6) and associated infrastructure leases L52/121 and G52/286 (which have nominal value on the basis that they do not convey rights to minerals and are only of use if, and when, the Abra Deposit is developed).

3.7.2 Replacement value method

To validate its opinion of the possible market value determined by the comparable transactions method for the Company’s other assets, Xstract also reviewed the exploration expenditure history for each project. Based on the Mineral Tenements Online system of the

WA Department of Mines and Petroleum and Abra's proposed 2011 budget, the expenditure details are shown in Table 3.10:

Table 3.10: Attributable historic and forecast expenditures for Abra's other exploration projects

Year	Mulgul	Jillawarra*	Mount Deverell	Havelock*
2011	\$513,313	\$668,209	\$218,100	\$188,822
2010	\$375,615	\$889,886	\$105,504	\$93,093
2009	\$541,388	\$939,846	\$133,683	\$138,810
2008	\$465,398	\$1,067,726	\$73,612	\$83,551
2007	\$648,442	\$839,038	\$45,530	\$74,251
2006	\$279,652	\$126,900	\$23,593	\$16,123
2005	\$57,280	\$67,316		
2004	\$45,021	\$61,842		
2003	\$104,400	\$450,135		
2002	\$34,903	\$179,532		
2001	\$73,778			
Total	\$3,139,190	\$5,290,430	\$600,022	\$594,650

*Adjusted to account for Abra's equity position in the joint venture tenements.

In estimating a technical value for the Company's other projects outside of the Abra Deposit, Xstract has applied the same assumptions as for the Abra Deposit, with the exception of the replacement factor where a 50% factor was used. This factor reflects that much of the prior expenditure is associated with target generation and initial reconnaissance assessment and hence is unlikely to be replicated. A range of 40% to 60% is used to define the lower and upper values for the replacement value.

Based on the above assumptions, Xstract estimates the replacement based technical value for a 100% interest in the Company's other mineral assets is approximately A\$4.13 M within a range of A\$3.31 M and A\$4.96 M, as outlined in Table 3.11. Xstract notes that while this is a technical value it provides a useful guide in validating the assumptions and conclusions drawn from other valuation methodologies.

Table 3.11: Estimated replacement value for Abra's projects (excluding the Abra Deposit)

Project	Values (A\$ M)		
	Low	High	Preferred
Mulgul	1.07	1.60	1.33
Jillawarra*	1.79	2.68	2.23
Mount Deverell	0.23	0.34	0.29
Havelock*	0.22	0.34	0.28
	3.31	4.96	4.13

*Adjusted to account for Abra's equity position in any joint venture tenements.

3.7.3 Exploration valuation summary

Xstract's opinion of the possible market value of the exploration potential associated with Abra's project areas is summarised in Table 3.12. In determining its preferred, lower and

upper values, Xstract has relied upon a combination of the comparable transactions and replacement value methodologies.

Table 3.12: Exploration valuation summary

Method	Project	Attributable (A\$ M)		
		Low	High	Preferred
Comparable transactions	Mulgul	0.58	1.74	1.16
	Jillawarra	1.88	5.64	3.76
	Mount Deverell	0.09	0.34	0.21
	Havelock	0.05	0.21	0.13
		2.60	7.93	5.26
Replacement value	Mulgul	1.07	1.60	1.33
	Jillawarra	1.79	2.68	2.23
	Mount Deverell	0.23	0.34	0.29
	Havelock	0.22	0.34	0.28
		3.31	4.96	4.13
Xstract's Preferred Values	Mulgul	1.07	1.70	1.33
	Jillawarra	1.80	4.00	3.00
	Mount Deverell	0.23	0.34	0.29
	Havelock	0.22	0.34	0.28
		3.32	6.38	4.90

*Any discrepancies between tables is due to rounding.

3.8 Other considerations

3.8.1 Previous valuations

Having made due enquiry of the Company's management, Xstract is not aware of any recent valuations of Abra's mineral assets which are of relevance to this report.

3.9 Valuation summary

In deriving its preferred value and range for Abra's mineral assets, Xstract has used a variety of valuation methodologies. As each valuation methodology has its own strengths and weaknesses, and hence it is generally accepted as best practice to apply as many methods as possible under the relevant time and circumstances. On this basis, Xstract has used both market and cost based approaches to arrive at its preferred value of A\$50.06 M within a range of A\$35.58 M to A\$64.44 M for Abra's mineral assets. Xstract's valuation is summarised in Table 3.13.

Table 3.13: Valuation summary – attributable to Abra

Project	Aspect	Values (A\$ M)		
		Low	High	Preferred
Abra Deposit	Mineral Resource	32.26	58.06	45.16
Mulgul Project	Exploration potential	1.07	1.70	1.33
Jillawarra Project	Exploration potential	1.80	4.00	3.00
Mount Deverell Project	Exploration potential	0.23	0.34	0.29
Havelock Project	Exploration potential	0.22	0.34	0.28
	Total	35.58	64.44	50.06

*Any discrepancies between tables is due to rounding.

4 Declaration

4.1 Independence

Xstract is a privately owned and operated mining and resource industry consultancy providing independent, strategic and tactical advice and personalised professional services to exploration and mining companies, engineering firms, financial institutions and investors. We operate through our offices in Brisbane and Perth. Our corporate services include technical audits, project reviews, valuations, independent expert reports, project management plans and corporate advice.

Xstract personnel have extensive experience in the preparation of independent valuations for a variety of commodities including coal, gold, base metal, platinum, diamonds and iron.

This report has been prepared independently and in accordance with the VALMIN and JORC Codes. The authors do not hold any interest in Abra, related parties, or in any of the mineral properties or interested parties, which are the subject of this report. Xstract personnel involved in the preparation of this report have not previously been engaged on any consulting assignments involving Abra or its mineral assets.

Xstract notes however, that in undertaking this assignment it has had to establish clear demarcation lines and separation of duties to ensure that no potential conflicts of interest may arise. In particular, Xstract has compiled the valuation section of this report from its Brisbane office as there is a relationship between a senior Perth-based Xstract employee and an Abra employee. The Xstract employee has not contributed to, been involved in the preparation of or otherwise influenced this report whatsoever.

Fees for the preparation of this report are being charged at Xstract's standard rates, whilst expenses are being reimbursed at cost. Payment of fees and expenses is in no way contingent upon the conclusions drawn in this report.

4.2 Qualifications

Patrick Rice (Principal Consultant – Geology, Perth)

Patrick has over 30 years' experience in the mining industry, during which time he gained a wealth of experience in various roles within the Anglo American group of companies, in the fields of Exploration, Geo-sciences and Mineral Resources, Surveying and Mine Planning, as well as Mining Economic assessments. This broad range of skills and extensive experience base offers unique flexibility, specifically in broad based due diligence studies, corporate governance / technical reviews, and asset optimisation reviews, which are Patrick's speciality's. Patrick holds a MEng (Mineral Resources), a Grad Dip Eng. (Geostatistics/Geology), is a registered professional natural scientist (Pr.Sci.Nat) at the South African Council for Natural Scientific Professions (SACNASP), a registered Mine Surveyor with the South African Council for Professional Land and Technical Surveyors (PLATO), and a Fellow of the AusIMM (FAusIMM).

Xavier Hill (Senior Consultant – Mining, Perth)

Xavier has seven years experience within the mining industry, primarily in underground metalliferous operations. Upon graduating, Xavier worked at Newmont's Jundee and Pajingo operations, where he completed his underground time and worked as a development engineer. He then went on to work at BHPBilliton's Leinster operations where he gained experience as a planning and production engineer. In early 2007, Xavier left Leinster to join Jubilee Mines at its Cosmos operation, where he undertook various roles in mine planning,

mine feasibility, project management and operating as underground manager. In his time at Cosmos Xavier realised a number of operational savings and saw through the initial design work, to the completion of the AM2 and AM5 Disseminated orebodies. Xavier holds a Bachelor of Engineering (Mining), an MBA and member of the AusIMM.

Manish Garg (Principal Consultant – Corporate Services)

Manish has some 20 years mining experience in mining operations, marketing, corporate roles and consulting. Before joining Xtract Manish has managed business analysis, planning and improvement functions at Rio Tinto Coal, BHP Billiton Illawarra Coal, WMC Resources, Oceanagold and Pasminco apart from working as Metallurgy Manager at base metal operations. Manish's experience includes market intelligence, due diligence, metal and concentrate marketing, valuation, strategic planning and optimizing business performance. He seeks to enhance business performance and profitability by analysing business performance and deploying appropriate business planning and improvement systems. Manish has managed and worked on due diligences, feasibility studies and reviews for banks, financial investors and mining companies on worldwide projects including Australia, New Zealand, India, South Africa, Congo, Zambia, Kazakhstan, Peru and Bolivia. Manish is a BEng (Hons) (Metallurgical Engineering), Master of Applied Finance, and a member of the Financial Services Institute of Australia.

Jeames McKibben (General Manager/Principal Consultant – Corporate Services)

During more than 17 years in the mining and mineral industry, Jeames has served in a diverse range of roles including corporate consultant, project manager, geologist and analyst. Jeames' most recent role was as the Divisional Manager for Snowden Mining Industry Consultants Pty Ltd's Corporate Services Division. He has a strong record in project due diligence, independent technical review, valuation, deposit evaluation and the promotion of best practice strategies in the workplace. As a corporate consultant he specialises in valuations and Mineral Expert Reports for equity transactions and Independent Technical Reports in support of project finance. He has assisted numerous mineral companies, financial and legal institutions in securing regulatory approvals for IPOs and other secondary filings on the following international exchanges: Australian Securities Exchange, Alternative Investment Market, London Stock Exchange, Johannesburg Securities Exchange and Toronto Stock Exchange. Other mandates include technical due diligence in support of information memoranda, divestments, acquisitions and mergers, Pre-Feasibility Studies and independent Competent Persons' Reports. Jeames has a MBA and a BSc (First Class Honours), and is a member of the AIG and the AusIMM. Jeames was recently appointed to a joint AusIMM/AIG Committee to review the VALMIN Code and he currently sits on the VALMIN Conference Organising Committee.

4.3 Competent person statement

The information in this report that relates to Mineral Resources is based on information compiled by Mr M.J McDonald and Mr D.C. Speijers, who are both Fellows of the Australasian Institute of Mining and Metallurgy. Mr McDonald and Mr Speijers are Principal Consultants at McDonald Speijers consultants, who have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

The information in this report that relates to Exploration Results is based on information compiled by Mr Paul Cranney, Consulting Geologist. Mr Cranney is a Member of the

Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Cranney has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities undertaken 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 Cranney 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 Exploration Results and Mineral Resources is based on information compiled, which has been reviewed by Mr Patrick Rice, who is a full time employee of Xstact and a Fellow of the AusIMM.

4.4 Warranties and indemnities

Abra has represented in writing to Xstact that full disclosure has been made of all material information and that to the best of its knowledge and understanding, such information is complete, accurate and true.

As recommended in Section 39 of the VALMIN Code, Abra has provided Xstact with an indemnity under which Xstact is to be compensated for any liability and/or any additional work or expenditure resulting from any additional work required which:

- results from Xstact’s reliance on information provided by Abra and/or Independent consultants that is materially inaccurate or incomplete, or
- relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

4.5 Consent

Xstact consents to this report being included in BDO’s IERs (for inclusion in Abra’s target statements in relation to the takeover offers from HNC) in the form and context in which it is provided, and not for any other purpose. Xstact provides this consent on the basis that the technical assessments and opinions expressed elsewhere in the IER are considered with, and not independently of, the information set out in Xstact’s complete report.

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Appendix A

Resource Transactions

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In April 2011, Argent Minerals Ltd acquired from Golden Cross Resource Ltd the 30% interest it didn't already own in the Kempfield project for A\$1.00 M cash, A\$1.00 M in shares and a further A\$1.00 M in cash five days prior to a decision to mine (excluded from this valuation calculation).</p>	<p>The 129 km² Kempfield project is located about 30 km south of Blayney in New South Wales, Australia. The open pit feasibility study project contained an oxide and mixed Measured Mineral Resource of 2.1 Mt grading 70.3 g/t Ag, and 0.1 g/t Au; an Indicated Mineral Resource of 2.7 Mt grading 52.4 g/t Ag and 0.1 g/t Au; and an Inferred Mineral Resource of 1.0 Mt grading 45.5 g/t Ag and 0.1 g/t Au. The project also contained a primary Measured Mineral Resource of 2.1 Mt grading 60.2 g/t Ag, 0.1 g/t Au, 0.64% Pb and 1.08% Zn; an Indicated Mineral Resource of 7.5 Mt grading 45.7 g/t Ag, 0.1 g/t Au, 0.59% Pb and 1.21% Zn; and an Inferred Mineral Resource of 4.8 Mt grading 38.5 g/t Ag, 0.1 g/t Au, 0.60% Pb and 1.24% Zn. Based on an April 2010 scoping study, the project may have been able to support a 10.5 year mine life with an initial CapEx of A\$42 M, a 1.6:1.0 strip ratio for an NPV10% of A\$80.6 M. Using November 2010 metal prices, the NPV10% rose to A\$185.0 M.</p>	<p>0.81 Mt @ 4%</p> <p>Measured – 23% Indicated – 50% Inferred – 27%</p> <p>Lead – 10.7%</p>	<p>8.3</p>
<p>In March 2011, Laconia Resources Ltd acquired from Jabiru Metals Ltd a 95% interest in the Lennon's Find project for 10.00 M shares deemed A\$0.083/share which were subject to a 6 month escrow period.</p>	<p>The Lennon's Find project is located about 40 km southeast of Marble Bar and 230 km southeast of Port Hedland in the Pilbara region of Western Australia. The VHMS advanced exploration project contained an Inferred Mineral Resource of 0.85 Mt grading 7.7% Zn, 1.8% Pb, 0.7% Cu and 115 g/t Ag. The known mineralisation occurred within two zones which outcropped at surface. The Lennon's Find mineralisation was discovered in 1907 and was subject to small scale mining between 19541 and 1963 which yielded 30.5 t Cu ore and 20.3 t of Zn ore from shallow open pits.</p>	<p>0.14 Mt @ 4%</p> <p>Inferred – 100%</p> <p>Lead – 10.9%</p>	<p>6.2</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
In February 2011, Kimberley Metals Ltd and Henan Yuguang Gold & Lead Co Ltd obtained from TNG Resources Ltd the right to earn an undivided 51% interest in the Manbarrum project for A\$2.50 M cash and by spending A\$2.00 M on exploration over two years.	The 407 km ² Manbarrum project is located about 80 km northeast of Kununurra in the Kimberley region of Western Australia. Based on a March 2010, estimate, the project contained an oxide hosted Indicated Mineral Resource of 0.58 Mt grading 1.45% Zn, 0.043% Pb and 5.14 g/t Ag; and an Inferred Mineral Resource of 0.88 Mt grading 1.34% Zn, 0.34% Pb and 3.24 g/t Ag. The project also contained a primary Indicated Mineral Resource of 12.91 Mt grading 2.07% Zn, 0.57% Pb and 4.77 g/t Ag; and an Inferred Mineral Resource of 10.02 Mt grading 1.84% Zn, 0.45% Pb and 4.61 g/t Ag. Most of the know mineralisation was located within 200 m below surface and contained high-grade zones which were to be evaluated for open pit mining potential.	0.57 Mt @ 5% Indicated – 64% Inferred – 36% Lead – 19.0%	9.4
In February 2011, Xstrata Plc acquired from Cape Lambert Resources Ltd the 25% interest it did not already own in the Lady Loretta project for A\$30.0 M cash.	The 253 km ² Lady Loretta project is located in Western Queensland, Australia. The underground feasibility study project is located adjacent to the Lady Annie mining project and contained a Measured Resource of 7.5 Mt grading 17.4% Zn, 6.7% Pb and 105 g/t Ag, an Indicated Resource of 5.1 Mt grading 16.3% Zn, 4.7% Pb and 84 g/t Ag and an Inferred Resource of 1.1 Mt grading 16.9% Zn, 4.6% Pb and 86 g/t Ag.	3.43 Mt @ 17% Measured – 58% Indicated – 34% Inferred – 8% Lead – 23.1%	35.0

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
In October 2010, Teck Resources Ltd obtained from Rox Resources Ltd the option to earn a staged 70% interest in the Myrtle project by spending A\$15.00 M on exploration over eight years.	The 669 km ² Myrtle project is located within 20 km south of Xstrata Plc's Macarthur River min in the Northern Territory, Australia. Using a 3% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 5.8 Mt grading 3.56% Zn and 0.90% Pb; and an Inferred Mineral Resource of 37.8 Mt grading 4.17% Zn and 0.95% Pb. Using a 5% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 1.2 Mt grading 5.38% Zn and 1.42% Pb; and an Inferred Mineral Resource of 14.1 Mt grading 5.45% Zn and 1.39% Pb. <u>The 3% cut-off is used in this valuation calculation.</u> The known mineralisation may have conceptually been amenable to both underground and open pit mining techniques.	2.18 Mt @ 5% Indicated – 12% Inferred – 88% Lead – 18.9%	6.9
In October 2010, Teck Resources Ltd obtained from Rox Resources Ltd the option to earn a staged 70% interest in the Myrtle project by spending A\$15.00 M on exploration over eight years.	The 669 km ² Myrtle project is located within 20 km south of Xstrata Plc's Macarthur River mine in the Northern Territory, Australia. Using a 3% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 5.8 Mt grading 3.56% Zn and 0.90% Pb; and an Inferred Mineral Resource of 37.8 Mt grading 4.17% Zn and 0.95% Pb. Using a 5% Zn+Pb cut-off, the project contained an Indicated Mineral Resource of 1.2 Mt grading 5.38% Zn and 1.42% Pb; and an Inferred Mineral Resource of 14.1 Mt grading 5.45% Zn and 1.39% Pb. <u>The 5% cut-off is used in this valuation calculation.</u> The known mineralisation may have conceptually been amenable to both underground and open pit mining techniques.	1.04 Mt @ 7% Indicated – 8% Inferred – 92% Lead – 20.5%	14.4
In October 2010, Kagara Ltd offered to acquire the 82.78% interest it didn't already own in Copper Strike Ltd for A\$0.11 cash per acquired share. As of September 2010, Copper Strike Ltd was composed of 116.46 M shares and 2.20 M unlisted options. On 30 June 2010, Copper Strike Ltd had A\$2.59 M cash within	The principal assets of Copper Strike Ltd are its 100% interest in the >260 km ² Einasleigh project and 30% interest in the 210 km ² Walford Creek projects located in Queensland, Australia. The Einasleigh project is located about 350 km northwest of Townsville and contained a number of deposits. The Kaiser Bill deposit contained an Indicated Mineral Resource of 13.5 Mt grading 0.84% Cu, 0.13 g/t Au and 6 g/t Ag; and an Inferred Mineral Resource of 1.5 Mt grading 0.85% Cu, 0.08 g/t Au and 11 g/t Ag. The Einasleigh former mine	1.60 Mt @ 6% Indicated – 54% Inferred – 46% Lead – 12.9%	8.2

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>current assets of A\$2.71 M which were offset by liabilities of A\$0.22 M. The ordinary shares and current assets less liabilities position are used in this valuation calculation.</p>	<p>contained an Indicated Mineral Resource of 0.5 Mt grading 4.0% Cu, 0.22 g/t Au and 18 g/t Ag; and an Inferred Mineral Resource of 0.6 Mt grading 1.9% Cu, 0.10 g/t Au and 8 g/t Ag. Based on a 2009 feasibility study, the underground Einasleigh and open pit Kaiser Bill projects may have been able to support a 9 year mining operation with a CapEx of A\$122.0 for an NPV10% of A\$81.0 M and a 26% IRR. Other deposits within the Einasleigh project include the Chloe, Jackson, Stella and Railway Flat deposits. The Chloe deposits contained an Indicated Mineral Resource of 2.2 Mt grading 0.2% Cu, 39 g/t Ag, 4.7% Zn and 2.0% Pb. The Jackson deposit contained an Indicated Mineral Resource of 1.1 Mt grading 0.1% Cu, 78 g/t Ag, 4.6% Zn and 2.4% Pb; and an Inferred Mineral Resource of 0.4 Mt grading 0.2% Cu, 64 g/t Ag, 4.6% Zn and 1.4% Pb. The Stella deposit contained an Inferred Mineral Resource of 0.4 Mt grading 0.2% Cu, 51 g/t Ag, 3.9% Zn and 1.8% Pb. The Railway Flat project contained and Inferred Mineral Resource of 0.9 Mt grading 0.2% Cu, 16 g/t Ag, 3.4% Zn and 0.9% Pb. The Walford Creek project is located about 300 km north-northwest of Mt Isa and contained a near surface, Inferred Mineral Resource of 6.5 Mt grading 0.6% Cu, 1.6% Pb, 2.1% Zn, 25 g/t Ag and 0.07% Co.</p>		
<p>In June 2010, Ivernia Inc obtained from Prairie Downs Metals Ltd the option to earn a staged 80% interest in the Prairie Downs project for A\$10.00 M cash and by spending A\$10.00 M on exploration over five years.</p>	<p>The 550 km² Prairie Downs project is located about 60 km southwest of Newman in the Pilbara region of Western Australia. Based on a June 2010 updated estimate announcement, the project contained an Indicated Mineral Resource of 2.28 Mt grading 5.22% Zn, 1.59% Pb and 15 g/t Ag; and an Inferred Mineral Resource of 0.70 Mt grading 4.03% Zn, 1.58% Pb and 14.9 g/t Ag. Prairie Downs Metals Ltd reported that the project area was also prospective for gold, uranium and iron mineralisation.</p>	<p>0.22 Mt @ 7% Indicated – 80% Inferred – 20% Lead – 21.7%</p>	<p>115</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In April 2010, Toho Zinc Co Ltd offered to acquire the 75.9% it didn't already own in CBH Resources Ltd for A\$0.24/share. As at 31 June 2009, CBH Resource Ltd was comprised of 887.74 M ordinary shares and 13.05 M options. As at 31 March 2010, CBH Resources Ltd had about A\$37.6 M cash excluding restricted cash of A\$12.1 M. The fully diluted shares are used and the entire cash position are used in this valuation calculation.</p>	<p>The principal assets of CBH Resources Ltd are its 100% interest in the Endeavour and Rasp projects in New South Wales, 100% interest in the Panorama and 60% interest in the Kangaroo Caves and Brents projects in Western Australia. The Endeavour underground mine contained a Proven Ore Reserve of 1.8 Mt grading 7.7% Zn, 5.0% Pb, 66 g/t Ag and 0.2% Cu and a Probable Ore Reserve of 5.8 Mt grading 7.5% Zn, 4.8% Pb, 108 g/t Ag and 0.2% Cu; contained within a Measured Mineral Resource of 10.0 Mt grading 6.6% Zn, 3.9% Pb, 61 g/t Ag and 0.19% Cu and an Indicated Mineral Resource of 15.7 Mt grading 6.8% Zn, 4.2% Pb, 62 g/t Ag and 0.18% Cu. The Endeavour project also contained an Inferred Mineral Resource of 0.5 Mt grading 7.5% Zn, 5.1% Pb, 90 g/t Ag and 0.19% Cu. The Rasp underground development project contained a Probable Ore Reserve of 3.17 Mt grading 6.0% Zn, 4.6% Pb and 64 g/t Ag contained within an Indicated Mineral Resource of 6.85 Mt grading 6.2% Zn, 5.0% Pb and 85 g/t Ag. In addition, the Rasp project contained an Inferred Mineral Resource of 9.66 Mt grading 6.9% Zn, 5.2% Pb and 92 g/t Ag. The Panorama underground scoping study project contained a Measured Mineral Resource of 4.5 Mt grading 3.2% Zn and 0.6% Cu, an Indicated Mineral Resource of 10.5 Mt grading 3.5% Zn and 1.2% Pb and an Inferred Mineral Resource of 4.3 Mt grading 2.2% Zn and 0.6% Cu. The Kangaroo Caves advanced exploration project contained a near surface Indicated Mineral Resource of 4.3 Mt grading 3.4% Zn and 0.6% Cu and an Inferred Mineral Resource of 2.0 Mt grading 3.3% Zn and 0.3% Cu. The Brents advanced exploration project contained an Inferred Mineral Resource of 0.6 Mt grading 7.8% Zn and 0.7% Cu.</p>	<p>7.61 Mt @ 11%</p> <p>Proved – 4% Probable – 17% Measured – 22% Indicated – 54% Inferred – 24%</p> <p>Lead – 25.2%</p>	<p>29.4</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
In April 2010, Henan Yuguang Lead & Gold Co Ltd obtained from Kimberley Metal Ltd the right to earn an undivided 25% interest in the Sorby Hills project by spending A\$5.00 M on feasibility studies (no time frame identified).	The 136 km ² Sorby Hills project is located between 50 and 100 km northeast of Kununurra in the Kimberley region of Western Australia. The project contained a near-surface Inferred Mineral Resource of 16.9 Mt grading 4.60% Pb, 56g/t Ag and 0.7% Zn. The project had a long exploration history, including the development of an underground exploration, which was to resolve grade continuity, geotechnical and hydrogeological uncertainties. The decline was abandoned due to poor ground conditions and ground water inflow.	1.15 Mt @ 7% Inferred – 100% Lead – 67.8%	15.7
In January 2010, Toho Zinc Co Ltd offered to acquire from CBH Resources Ltd a 50% interest in the Rasp project for A\$57.5 M cash.	The Rasp project is located in Broken Hill in New South Wales, Australia. The underground development project contained a Probable Ore Reserve of 3.17 Mt grading 6.0% Zn, 4.6% Pb and 64 g/t Ag contained within an Indicated Mineral Resource of 6.85 Mt grading 6.2% Zn, 5.0% Pb and 85g/t Ag. In addition, the Rasp project contained an Inferred Mineral Resource of 9.66 Mt grading 6.9% Zn, 5.2% Pb and 92 g/t Ag. The Rasp project was based on a new underground development focussed on mining high-grade pillars and the unmined Western Mineralisation associated with the Centenary deposits. The project was expected commence production in 2010 and support a 15 year mine life and process about 0.75 Mtpa.	2.39 Mt @ 14% Probable – 17% Indicated – 40% Inferred – 60% Lead – 35.4%	48.2
In December 2009, Kagara Ltd acquired from Liontown Resources Ltd a 100% interest in the Liontown project for A\$2.25 M cash and a further A\$2.25 M on commencement on mining operations (excluded from this valuation calculation).	The 51.5 km ² Liontown project is located approximately 30 km from Kagara Ltd's Thalanga concentrator, south of Charters Towers in Queensland, Australia. The Liontown project contained a near surface, oxide Inferred Mineral Resource of 0.21 Mt grading 7.4% Zn, 1.1% Cu, 3.1% Pb, 31 g/t Ag and 0.96 g/t Au. The project also contained a sulphide hosted Indicated Mineral Resource of 0.73 Mt grading 7.3% Zn, 0.5% Cu, 2.5% Pb, 27g/t Ag and 0.71g/t Au; and an Inferred Mineral Resource of 0.91 Mt grading 7.6% Zn, 0.5% Cu, 2.2% Pb, 28 g/t Ag and 0.33 g/t Au. The known mineralisation remained open along strike and at depth. Anomalous geochemical soil samples could be traced for up to 2 km from the deposit.	0.25 Mt @ 14% Indicated – 39% Inferred – 61% Lead – 17.9%	9.0

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
<p>In November 2009, BHP Billiton Ltd obtained from Breakaway Resources Ltd the right to earn a 70% interest in the non-gold and copper rights to the Altia project by spending A\$10.0 M on exploration over five years.</p>	<p>The 8.0 sm² Altia project is located approximately 4 km southwest of Breakaway Resources Ltd's Eloise copper mine in the Cloncurry district of Queensland, Australia. The project contained an aggregate Inferred Resource of 5.78 Mt grading 40.3 g/t Ag, 3.96% Pb and 0.49% Zn. The known mineralisation was of the 'Cannington-style' and associated with a sequence of intercalated arenite and BIF rock units.</p>	<p>0.31 Mt @ 5%</p> <p>Inferred – 100%</p> <p>Lead – 73.3%</p>	<p>37.8</p>
<p>In July 2009, Hunan Nonferrous acquired a 45% interest in Meridian Minerals Ltd by subscribing to 131.25 M ordinary shares with a stated value of A\$0.08/share. As at 31 December 2009, Meridian Minerals Ltd held approximately A\$0.46 M cash and in April 2009 had raised an additional A\$0.71 M cash. The cash position is included in this valuation calculation.</p>	<p>The principal assets of Meridian Minerals Ltd are its right to earn a 100% interest in the 485 sm² Lennard Shelf project in Western Australia; a 100% interest in the 1,400 km² Lachlan Fold Belt project in New South Wales; a 100% interest in the 6,300 km² Gawler Craton project in South Australia; 100% interest in the roughly 890 km² Thomson Fold Belt project in New South Wales; and a 100% interest in the 300 km² Running River project in the Northern Territory, Australia. The Lennard Shelf former underground mining project contained an aggregate Measured Resource of 0.024 Mt grading 6.82% Zn and 9.77% Pb; an Indicated Resource of 3.04 Mt grading 7.70% Zn, 2.51% Pb and 22.63 g/t Ag; and an Inferred Resource of 5.14 Mt grading 7.17% Zn, 6.35% Pb, 0.06% Cu and 36.11 g/t Ag. Meridian Minerals Ltd's other project areas largely remained at an early-stage of exploration for gold, copper, uranium and/or tin.</p>	<p>1.07 Mt @ 13%</p> <p>Indicated – 30%</p> <p>Inferred – 70%</p> <p>Lead – 37.7%</p>	<p>20.6</p>

Transaction Details	Project Details	Metal and grade (% Pb Eq) Estimate contributions Lead contribution	Time discounted unit value A\$/t Pb Eq
In June 2009, YTC Resources Ltd acquired from CHB Resources Ltd a 100% interest in the Hera and 80% interest in the Nymagee projects for A\$12.0 M cash and a 5% royalty on future gold doré production.	The contiguous Hera and Nymagee projects are located approximately 100 km east of Cobar in western New South Wales, Australia. The Hera former underground mine contains an Indicated Resource of 1.7 Mt grading 2.81 g/t Au, 0.18% Cu, 2.59% Pb, 3.26% Zn and 13.48 g/t Ag; and an Inferred Resource of 1.6 Mt grading 2.52 g/t Au, 0.17% Cu, 2.86% Pb, 3.45% Zn and 16.88 g/t Ag.	0.39 Mt @ 12% Indicated – 52% Inferred – 48% Lead – 23.3%	31.1
In April 2009, Meridian Minerals Ltd obtained from Xstrata Plc and Teck Cominco Ltd the right to earn a 100% interest in the Kutarta and Fossil Downs projects for 25.0 M shares (deemed A\$0.02/share) and by spending A\$3.0 M on exploration and development (no time frame identified).	The Kutarta and Fossil Downs projects are located in the Kimberley Region of Western Australia. The Kurtata project contained an Indicated Resource of 1.91 Mt grading 7.4% Zn, 0.6% Pb and 36 g/t Ag; and an Inferred Resource of 0.43 Mt grading 6.4% Zn, 0.2% Pb and 53 g/t Ag. The Fossil Downs project contained an Inferred Resource of 2.15 Mt grading 9.5% Zn, 2.1% Pb and 50 g/t Ag.	0.47 Mt @ 11% Indicated – 35% Inferred – 65% Lead – 12.1%	6.8

Source: Alexander Research

Appendix B

Exploration Transactions

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km ²)
<p>In April 2009, Silver City Mining Ltd obtained from CBH Resources Ltd the option to earn a staged 65% interest in an unnamed project by spending A\$1.1 M on exploration over within 4.5 years. CBH Resources Ltd retains a 50% claw-back right involving reimbursement of four times the expenditure if a deposit with an in-situ value of more than A\$150 M is defined (excluded from this valuation).</p>	<p>The 376 km² project is located within 10 km northwest (but not along strike) of the Broken Hill mining operations in New South Wales, Australia. Previous mapping and geochemical exploration programmes defined a number of base metal anomalies associated with weathered rock outcrops.</p>	3.20	401,600
<p>In April 2009, Capital Mining Ltd obtained from Monaro Mining NL the option to earn a staged 75% interest in the Mayfield project by spending A\$0.2 M on exploration (no time frame identified).</p>	<p>The 50 km² Mayfield project is located near Braidwood in southeastern New South Wales, Australia. Based on historical exploration drilling programmes, the project is known to contain near surface low-grade gold and copper mineralisation. The known mineralisation is associated with metasomatised limestone skarn. Capital Mining Ltd reported that the project area contained numerous historic workings on gold, copper, lead and zinc occurrences.</p>	4.54	5,300
<p>In May 2009, Deep Yellow Ltd acquired from the receivers and managers of Matrix Metals Ltd the 49% interest it didn't already own in EPMS 14916, 14281 and EPMA 17000 for A\$1.4 M cash. Deep Yellow Ltd had the right to earn up to an 80% interest in the project (disregarded from this valuation).</p>	<p>The 813 km² EPMS 14916, 14281 and EPMA 17000 project area is located approximately 75 km north of Mt Isa in Queensland, Australia. In 2008, exploration drilling programmes intersected shallow, chloritic shear zone hosted uranium mineralisation with grades up to 1,975 ppm U₃O₈.</p>	3.19	3,500
<p>In June 2009, Dominion Mining Ltd obtained from Rubicon Resources Ltd the right to earn an undivided 70% interest in the Yalla Burra project by spending A\$0.6 M on exploration over 4 years.</p>	<p>The 126 km² Yalla Burra project is located approximately 100 km southeast of Kalgoorlie in Western Australia. At the time of announcement, no project specific detail was identified, however the surrounding area is known to be prospective for lode gold, VMS related base metal and komatiite hosted nickel</p>	1.88	6,200

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
	<p>sulphide mineralisation.</p> <p>The approximately 1,111 km² Club Terrace project is located near Orbost in northeastern Victoria, Australia. Oroya Mining Ltd reported that the project is prospective for large, sediment-hosted gold and base metal deposits associated with the Combienbar-Buldah fault system. The project area contained historical artisanal workings (circa 1950-1960's) and geochemical soil and rockchip anomalies.</p>	1.41	1,800
<p>In June 2009, Independence Group Ltd obtained from Oroya Mining Ltd the right to earn an undivided 70% interest in the Club Terrace project by spending A\$1.57 M on exploration over 4 years.</p>			
<p>In July 2009, Panoramic Resources Ltd obtained from Thundelarra Exploration Ltd the right to earn a 61% interest in the East Kimberley project by spending A\$3.0 M on exploration within 4 years.</p>	<p>The approximately 2,804 km² East Kimberley project is located in the East Kimberley Region of northern Western Australia. Thundelarra Exploration Ltd reported that the project is prospective for nickel sulphide, copper, base metal, platinum and iron mineralisation. The project surrounds the Copernicus nickel mine.</p>	1.50	1,600
<p>In August 2009, Cape Lambert Iron Ore Ltd offered to acquire the unlisted MOJO Minerals Ltd for 3.98 M shares with a stated value of A\$0.44/share.</p>	<p>The principal asset of MOJO Mining Ltd is its 100% interest in a 5,000 km² tenement holding located within the southern Mt Isa Block of Queensland, Australia. Cape Lambert Iron Ore Ltd reported that the project had previously been subject to aeromagnetic, radiometric and gravity assessment exploration programmes that identified geophysical anomalies which it considered to be prospective for copper, zinc-lead-silver, phosphate and uranium mineralisation. The acquired tenement holding is adjacent to Cape Lambert Iron Ore Ltd's existing 38,000 km² tenement holding.</p>	2.25	400
<p>In August 2009, Dominion Mining Ltd obtained from Iron Mountain Mining Ltd and Red River Resources Ltd the right to earn an undivided 80% interest in the Wongan Hills project by spending A\$0.4 M on exploration (no time frame identified).</p>	<p>The 218 km² Wongan Hills project is located in the Wheatbelt region of Western Australia. Previous exploration drilling programmes south of the project area (and held by Dominion Mining Ltd) intersected shallow, low-grade copper-gold mineralisation and VMS related pathfinder elements. No additional project specific detail was identified.</p>	1.10	2,300

Transaction Details	Project Details	Kilburn (Count* / Kilburn score)	Time discounted unit value (\$/km2)
<p>In August 2009, China Railway Resources Group Co Ltd offered to acquire an additional 71.04% interest (already held 11.2%) in RMA Energy Ltd. As at 30 June 2009, RMA Energy was comprised of 322.0 M ordinary shares and 42.0 M options. RMA Energy Ltd also had A\$1.18 M cash on hand. The fully diluted shares and the cash on hand are included in this valuation calculation.</p>	<p>The principal assets of RMA Energy Ltd are its 100% interest in the 241.5 km² McCauley Creek, 240 km² Coane Range, 287.5 km² Clifffdale Creek, 460 km² Emerald, 1,636 km² Moonie and 2,803 km² Buylburrum projects located in Queensland, Australia. The McCauley Creek, Coane Range and Clifffdale Creek early-stage exploration projects are prospective for uranium base metals and tin mineralisation. Based on The Emerald, Moone and Buylburrum projects are known to contain coal seams based on water bores or previous reconnaissance scale exploration programmes. The Emerald project is located adjacent to the third party Taraborah coal deposit.</p>	1.41	3,900
<p>In October 2009, Western Metals Ltd obtained from Graynic Metals Ltd the option to earn a staged 75% interest in the Koonenberry project by spending A\$1.0 M on exploration over 4 years.</p>	<p>The 157 km² Koonenberry project is located approximately 170 km northeast of Broken Hill in western New South Wales, Australia. The project lies along strike of Black Range Minerals Ltd's Grasmere deposit (Inferred Resource of 0.55 Mt grading 2.5% Cu, 0.9% Zn and 5.3 g/t Ag). The project contained a cupiferous shear and had been subject to historical artisanal mining activity. Graynic Metals Ltd reported that the project had not been properly explored using modern exploration techniques.</p>	1.60	7,700
<p>In October 2009, Meridian Minerals Ltd acquired from Zinc Co Australia Ltd a 100% interest in extensions to its Kapok project for A\$0.15 M cash and 2.00 M shares (deemed A\$0.066/share).</p>	<p>The 244 km² extension to the Kapok project is located in the Kimberley region of Western Australia. Meridian Minerals Ltd reported that the project contained extensions to its zinc-lead resources held within the main Kapok project area.</p>	6.00	1,200
<p>In October 2009, Fortuna Minerals Ltd acquired from Pilbara Mining Pty Ltd a 100% interest in the West Pilbara project for A\$0.6 M cash and 12.0 M shares (deemed A\$1.0/share).</p>	<p>The 1,095 km² West Pilbara project is located in the Pilbara region of Western Australia. Fortuna Minerals Ltd reported that the project had not previously been subject to systematic exploration programmes but was prospective for iron, gold, base metal and nickel sulphide mineralisation.</p>	1.41	11,500

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km²)
In November 2009, Minerals and Metals Group Australia Ltd obtained from Golden Cross Resources Ltd the option to earn a staged 90% interest in the Northern Rasp project by spending A\$4.5 M on exploration over ten years.	The 384 km ² Northern Rasp project is located southeast of Cobar in central New South Wales, Australia. Golden Cross Resources Ltd reported that the early-stage exploration project was prospective for base metals, gold and silver mineralisation.	0.75	9,900
In December 2009, ORT Ltd obtained from Oroya Mining Ltd the right to earn an undivided 70% interest in the Sofala project by spending A\$1.5 M on exploration over two years.	The 2,000 km ² Sofala project is located in the Lachlan Fold Belt in New South Wales, Australia. Previous geochemical soil sampling programmes within the project area identified six targets prospective for large, disseminated and vein-hosted gold and base metal mineralisation.	2.25	1,000
In January 2010, Hillgrove Resources Ltd obtained from Auzex Resources Ltd the right to earn an 80% interest in the Cu-Pb-Zn-Ni mineralisation and 50% interest in the Au-Ag mineralisation contained within the Khartoum project for A\$0.05 M cash, A\$0.05 M shares and by spending A\$0.50 M on exploration over two years. The 80% base metal rights are used in this valuation calculation.	The 244 km ² Khartoum project is located about 100 km southwest of Cairns in Queensland, Australia. The lithology of the project area is dominated by highly fractionated coarse-grained granites which contain an exploration target of 80 Mt to 100 Mt grading 0.2% to 0.3% Sn (excluded from this valuation calculation).	0.75	3,000
In February 2010, Eagle Nickel Ltd acquired from an undisclosed vendor a 70% interest in the Lady Sampson project for A\$0.08 M cash.	The 60 km ² Lady Sampson project is located about 40 km northeast of Geraldton, Western Australia. The project contains a portion of the Yandi fault zone which Eagle Nickel Ltd reported to have the potential to host localised massive galena (lead) mineralisation.	0.56	2,000
In March 2010, Xstrata Plc obtained from Argo Exploration Ltd the option to earn a staged 75% interest in the Intercept Hill project by spending A\$7.50 M on exploration over 7.5 years.	The 423 km ² Intercept Hill project is located about 20 km east of Woomera and 25 km west of Teck Resources Inc's Carrapateena project in South Australia. Based on geophysical surveys, previous drilling and structural interpretations, Argo Exploration Ltd considered the	2.40	41,300

Transaction Details	Project Details	Kilburn (Count* / Kilburn score)	Time discounted unit value (\$/km2)
	project to be prospective for iron oxide copper gold, stratabound copper-lead-zinc, secondary uranium and lode-gold mineralisation.		
In March 2010, Tectonic Resources Ltd obtained from Traka Resources Ltd the right to earn an undivided 70% interest in the Trilogy East project by spending A\$0.76 M on exploration within five years.	The 186 km ² Trilogy East project is located in the Phillips River area about 20 km southeast of Ravensthorpe in Western Australia. Historical exploration drilling programmes within the project area intersected VMS related mineralisation including 10 m grading 1.01 g/t Au, 25.9 m grading g1.76% Pb and 17.0 m grading 0.83% Cu (no hole numbers or depths noted). The Trilogy East project complements Tectonic Resources Ltd's existing Trilogy and Kundip project areas.	0.83	5,200
In August 2010, Blackcrest Resources Ltd offered to acquire ARK Mines Ltd for A\$0.225 M cash and 19.00 M shares (deemed A\$0.017/share).	The principal assets of ARK Mines Ltd are its 100% interest in the 696 km ² Bald Hill, Byrock, Babinda, Nangerybone and Gundabooka projects located in central and northern New South Wales, Australia. The early-stage exploration projects were reported by Blackcrest Resources Ltd to be prospective for epithermal-porphyry gold, VMS related base metal as well as uranium and molybdenum mineralisation.	1.80	1,000
In September 2010, Uranium Exploration Australia Ltd obtained from Teck Resources Ltd the option to earn a staged 100% interest in the Mundi Plains and Junction Dam projects by spending A\$4.00 M on exploration over four years.	The Mundi Plains and Junction Dam project area is located about 50 km northwest of Broken Hill in New South Wales, Australia. Previous exploration drilling programmes within the project area intersected narrow, flat lying, high-grade MVT related zinc-lead-silver mineralisation.		-
In September 2010, Minerals and Metals Group obtained from Westgold Resources Ltd the option to earn a staged 80% interest in the McArthur project by spending A\$5.00 M on exploration over more than three years.	The 758 km ² McArthur project is located in the southern portion of the McArthur Basin of northern Northern Territory, Australia. Little additional project specific detail was identified at the time of announcement.	5.00	7,200

Transaction Details	Project Details	Kilburn (Count*/ Kilburn score)	Time discounted unit value (\$/km2)
In October 2010, Rox Resources Ltd acquired from Legend International Holdings Inc a 100% interest in the Mitchell Yard and Teena projects for 3.00 M shares (deemed A\$0.031/share) and a 2% NSR.	The 182 km ² Mitchell Yard and Teena project area is located adjacent to Rox Resources Ltd's Myrtle zinc-lead deposit in the Northern Territory, Australia. The project contained geochemical soil and costean base metal anomalies.	6.00	500
In February 2011, Meridian Minerals Ltd acquired from Cullen Resources Ltd a 100% interest in extensions to the Emanuel Range project for A\$0.10 M cash and 2.00 M shares (deemed A\$0.13/share).	The 675 km ² Emanuel Range project is located adjacent to Meridian Minerals Ltd's Lennard Shelf MVT deposit in the Kimberley region of Western Australia. The acquisition created a near-contiguous tenement holding by linking with Meridian Minerals Ltd's existing tenements.	8.00	400
In April 2010, Ausmon Resources Ltd acquired from Robust Resources Ltd the 15% interest it didn't already own in EL6413, 6416 and 6417 and a 100% interest in EL7564 for 0.40 M shares (deemed A\$0.20/share).	The tenements are located near Cobar and Orange in New South Wales, Australia. Ausmon Resource Ltd reported that the tenements were prospective for base and precious metal mineralisation. Little additional technical detail was identified at the time of announcement.		-

Source: Alexander Research