

22 Jan 2018

GALENA MINING LIMITED (G1A)

Abracadabra; the lead balloon floats

Galena Mining Limited (G1A) is developing the 100% owned, historic Abra Lead-Silver deposit in the Gascoyne region of WA, with the plan of defining a high grade resource where previous explorers contemplated a large scale bulk mining operation.

The previously unlisted G1A entered into a share sale agreement to acquire Abra Mining Limited (Abra) prior to listing on the ASX in September 2017. Since then, the Company has identified broad intersections of mineralisation within the large deposit, which may support a medium sized underground operation. G1A has completed a 12 hole, 8,022m diamond drill program at Abra. Some of the more impressive intercepts to date from Galena's drill program include **53.3m @ 10.8% Pb & 20g/t Ag** from 521m (incl. 31.7m @ 13.5% Pb), **64m at 10.6% Pb & 7g/t Ag** from 437m (incl. 31.4m @ 14.5% Pb) and **55.7m @ 7.8% Pb & 20g/t Ag** from 397m.

Potential for a modest 90ktpa+ PbEq operation

We estimate a potential mine inventory of 9.8Mt @ 10% Pb and 15g/t Ag, and have simulated a potential ~1Mtpa underground operation, using estimated opex (A\$140/t) and capex (A\$180M) based largely on comparable Australian operations. We model production of ~91ktpa PbEq (88ktpa Pb and 391kozpa Ag) over a 9 year mine life from a 1Mtpa plant at a conservative LOM Pb price of US\$0.90/lb. Lead recoveries have been modelled at 93% at a head grade of 10% Pb, with 95% payabilities. AISC could be in the region of A\$0.75/lb. We stress that this is highly speculative and assumes the project can be successfully funded into production.

Our model assumes geological modelling and estimation can define high grade Pb-Ag mineralisation within the flat dipping apron zone as well as a portion of the inner core zone adjacent to the apron. A maiden resource is expected in February 2018 and given the drill density, one could expect a large portion to be in the indicated category. First production could occur in early 2021.

High grade approach

There is a dearth of Australian lead operations. The Abra deposit has the potential to be a significant lead-silver play and is poised to take advantage of the buoyant lead prices, should they prevail. G1A's approach of defining a medium sized, high grade lead underground operation, contrasts to previous owners who envisaged a high tonnage, bulk mining operation. The most recent (2008) non-JORC resource for Abra was 93Mt @ 4% Pb and 10g/t Ag.

We initiate coverage with a Speculative Buy

The LME lead price is currently at its highest since August 2011. While we model consensus prices to return to ~US\$0.90/lb over the next 5 years, at the current spot price of US\$1.17/lb, the Abra deposit is severely undervalued if our operational assumptions prove correct. We initiate coverage with a 12-month, fully diluted price target of \$1.58 and a preliminary valuation of \$1.76; \$3.21 at the current spot lead price.

Share Price	\$1.150
Preliminary Valuation	\$1.76
Price Target - 12 months	\$1.58

Brief Business Description:

Single asset, WA focussed, lead-silver (+zinc, copper, gold) explorer/developer

Hartleys Brief Investment Conclusion

The Abra deposit was first drilled in 1981 and has previously been defined to depths of over 500m below surface. ~A\$20M has been spent by previous owners in defining a high tonnage, lower grade deposit. G1A listed in mid-2017 and will attempt to define a higher grade resource while taking advantage of the buoyant Pb price.

Chairman & CEO

Adrian Byass (Non-Exec Chairman)
 Edward Turner (Chief Executive Officer)

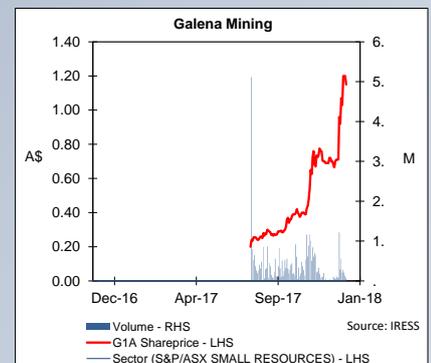
Top Shareholders

Bloomgold Resources Pty Ltd	29.2%
Jonathan Downes	7.2%
Adrian Byass	3.9%
Oliver Cairns	3.7%

Company Address

Level 1, 329 Hay Street
 Subiaco, WA 6008

Issued Capital	56.4m
- fully diluted	62.3m
Market Cap	A\$64.8m
- fully diluted	A\$71.6m
Cash (31 Dec 2017)	A\$2.7m
Debt (31 Dec 2017)	A\$0.0m
EV	A\$62.1m
EV - fully diluted	A\$66.8m



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Hartleys has assisted in the completion of a capital raising for Galena Mining Limited ("Galena") in the last 12 months for which it has earned fees. Hartleys has provided corporate advice within the past 12 months and continues to provide corporate advice to Galena, for which it has earned fees and continues to earn fees.

SUMMARY MODEL

Galena Mining G1A		Share Price \$1.150		22 January 2018 Speculative Buy	
Key Market Information				Directors	
Share Price		\$1.150		Company Details	
Market Capitalisation		\$64.8m		Adrian Byass (Non-Exec Chairman)	Level 1, 329 Hay Street
Market Capitalisation - full dil.		\$71.6m		Jonathan Downes (Non-Exec Director)	Subiaco, WA 6008
Net Cash (debt)		\$2.7m		Oliver Cairns (Non-Exec Director)	P +61 8 6461 6350
Issued Capital		56.4m		Timothy Morrison (Non-Exec Director)	F +61 8 6210 1872
Options		5.95m		Edward Turner (Chief Executive Officer)	
Issued Capital (fully diluted all options)		62.3m		Stephen Brockhurst (Company Secretary)	www.galenamining.com.au
EV				Top Shareholders (est)	
- current		\$62.1m			m shs %
- diluted fully		\$66.8m		Bloomgold Resources Pty Ltd (Timothy Morrison)	16.5 29.2%
12Mth Price Target		\$1.58		Jonathan Downes	4.1 7.2%
				Adrian Byass	2.2 3.9%
				Oliver Cairns	2.1 3.7%
Projects				News flow	
	Interest	Location	Commodity		Project
Mulgul (Abra)	100%	WA	Pb-Ag (Cu-Au-Zn)	Q3 CY17	Drilling commences at the Abra deposit
Jillawarra	100%	WA	Pb-Ag (Cu-Au-Zn, Mn)	Q4 CY17	High grade intersection/additional rig mobilised
				Q4 CY17	Assay results
				Q1 CY18	Drilling completed, additional assays
				Q1 CY18	Maiden JORC Resource at Abra
				Q1 CY18	PFS Commencement
				Q3 CY18	DFS Commencement/off-take discussions
JORC Resources				Unpaid Capital	
	Mt	Grade	Contained Metal		
None current. Maiden resource expected in February 2018					
P&L				Options - unlisted	
	FY2017A	FY2018F	FY2019F	Year Expires	No. (m) \$m Avg. Price % ord
Net Revenue	n/a	n/a	n/a	30-Jun-20	2.35 0.71 0.30 4.2%
Total Costs	n/a	n/a	n/a	30-Jun-21	3.60 1.44 0.40 6.4%
EBITDA	n/a	n/a	n/a	Total	5.95 2.15 0.36 11%
Deprec/Amort	n/a	n/a	n/a	Comments	
EBIT	n/a	n/a	n/a	The Abra deposit was first drilled in 1981 and has previously been defined to depths of over 500m below surface. ~A\$20M has been spent by previous owners in defining a high tonnage, lower grade deposit. G1A listed in mid-2017 and will attempt to define a higher grade resource while taking advantage of the buoyant Pb price.	
Net Interest	n/a	n/a	n/a		
Pre-Tax Profit	n/a	n/a	n/a		
Tax Expense	n/a	n/a	n/a		
NPAT	loss	loss	loss		
Abnormal Items	n/a	n/a	n/a		
Reported Profit	loss	loss	loss		
Analyst: Paul Howard Ph: +61 8 9268 3045				Last Updated: 22/01/2018	
Sources: IRESS, Company Information, Hartleys Research					

BUSINESS OVERVIEW

On 23 February 2017, the unlisted Galena Mining Limited (Galena or G1A) entered into a share sale agreement to acquire all of the issued share capital of Abra Mining Limited (Abra) from Abra's sole shareholder Bloomgold Resources Pty Ltd for A\$3.5m in equity. Abra Mining Limited was the holder of the Mulgul and Jillawarra Projects, located within the Bangemall Basin (Gascoyne Region) of WA. Galena Mining then listed on the ASX in September 2017 and quickly set about defining a high grade resource at the Abra deposit. Previous explorers of the Abra deposit have contemplated a large scale bulk mining operations. G1A has identified broad intersections of structurally constrained mineralisation within the large deposit, which may support a medium sized underground operation premised on a higher grade to that previously contemplated.

Galena entered into a share sale agreement to acquire all of the issued share capital of Abra Mining Limited

MULGUL PROJECT

The Mulgul Project comprises the Abra deposit and a number of neighbouring prospects. Together with the adjacent Jillawarra Project, the package is located 220km north of Meekatharra and can be accessed from Mulgul Station along the Meekatharra-Fortnum-Ashburton Road.

Previous explorers of the Abra deposit have contemplated a large scale bulk mining operations.

Fig. 1: Abra (Mulgul) Project Location



G1A plans to develop a higher grade, underground operation

The project is located 220km north of Meekatharra, WA

Source: Galena Mining Limited

Abra deposit history

The area was first explored by Amoco in 1974. Geopeko Limited entered into a JV with Amoco in 1980 and drilled the discovery hole (AB3) in 1981 by testing a 270m deep magnetic anomaly.

The discovery hole returned 27m at 6.1% Pb from 268m, 194m averaging 3.1% Pb from 318m and 19m averaging 3.7g/t Au and 1.1% Cu from 503m. Between 1981 and 1989, 13 drill holes were completed at the Abra Deposit.

Geopeko was then taken over by North Limited. However, it did not undertake any exploration on account of its focus of IOCG exploration. In the mid 90's, Renison Goldfields Consolidated (RGC) JV'ed into the project and undertook a diamond drilling campaign. With both North Limited and RGC the subject of takeovers, the tenements were relinquished in 1999. Oldcity Nominees Pty Ltd (private company) acquired the tenements in 2000 and vended the project into Abra Mining Limited in 2005. Abra Mining was listed on the ASX but was taken over by Hunan Non-Ferrous Metals in 2011 for ~A\$117m. Hunan is a subsidiary of China Minmetals Corporation and is a major shareholder of MMG.

In 2015 Abra Mining (which was at the time 100% owned by Hunan) signed an option and joint venture agreement with MMG. However, after spending ~A\$2.8m on exploration MMG chose not to move forward with the agreement.

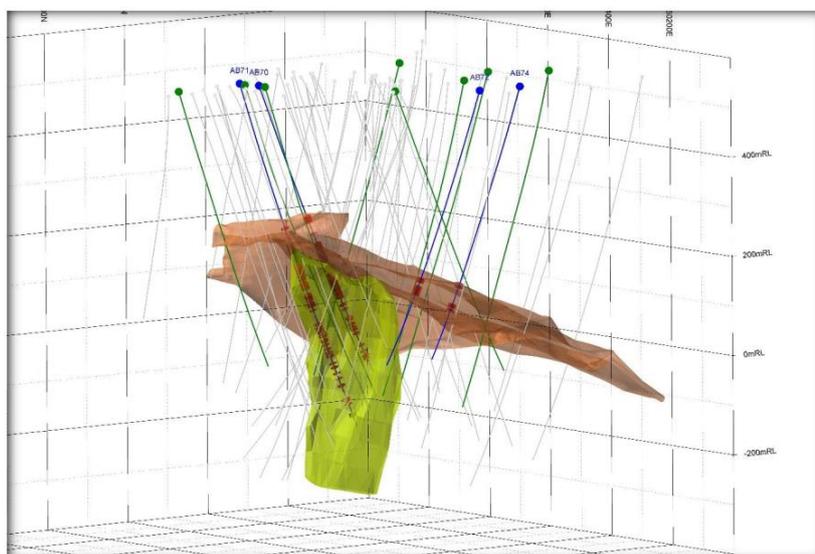
Since the early 1980's, over 38km of drilling has been completed and \$20M spent.

Work completed to date by G1A

Since listing in September 2017, G1A has completed a 12 hole, 8,022m diamond drill program at Abra. As well as aiding the establishment of a JORC resource, the drill program will provide metallurgical and geotechnical data that will be used in the PFS commencing this quarter.

Some of the more impressive intercepts to date from Galena's drill program include **53.3m @ 10.8% Pb & 20g/t Ag** from 521m (incl. 31.7m @ 13.5% Pb) from the core, **64m @ 10.6% Pb & 7g/t Ag** from 437m (incl. 31.4m at 14.5% Pb & 10g/t Ag) (apron) and **55.7m @ 7.8% Pb & 20g/t Ag** from 397m (apron).

Fig. 2: Abra Deposit in 3D looking south east (apron and core zones are visible as well as recent drilling).



Source: Galena Mining Limited

The deposit has passed through numerous owners after being discovered in 1981.

G1A has completed a 12 hole, 8,022m diamond drill program at Abra

G1A results to to-date include:

53.3m @ 10.8% Pb & 20g/t Ag from 521m

64m at 10.6% Pb & 7g/t Ag from 437m

55.7m @ 7.8% Pb & 20g/t Ag from 397m

Abra Deposit Geology

The Abra base metal deposit is an atypical Sedex deposit, hosted within the Jillawarra sub-basin of the Mesoproterozoic Edmund Basin in Central Western Australia. The Edmund Basin is constrained in age between ~1.64Ga and 1Ga, and unconformably overlies the Capricorn Orogen, a metamorphic terrane that represents an amalgamation of the Yilgarn and Pilbara Cratons during the Paleoproterozoic.

The oldest unit exposed within the Abra Project is the Irregully Fm, which is mapped to the east in a small area overlying the Coobarra Dome, and to the west in the core of the Coolina Anticline. Exposures are predominately clastic sediment of the Kiangi Creek Fm, exposed within a saddle anticline between the Coolina Anticline and the Coobarra Dome. The Jillawarra Fm, which is exposed within the southern portion of the project area, may locally be in faulted contact with the Kiangi Creek Fm.

The deposit is a strata-bound sedimentary deposit with mineralisation at least 250m below surface, and is therefore blind, hence it was discovered by drilling a magnetic anomaly.

Mineralisation

Abra mineralisation is a base metal replacement-style deposit, hosted by sediments. It comprises lead-barite-manganese-silver mineralisation associated with a zone of laminated hematite-barite siltstone at the top of the Irregully Fm, underlain by a zone of altered and extensively veined siltstones and sandstones containing variable development of lead, lead-copper and copper-gold mineralisation.

Abra is hosted in two zones; the 'apron' and the 'core'. The apron is a flat dome shaped unit, positioned at least 250m below surface and dipping ~30-40 degrees to the south. Mineralisation in the apron is stratabound and averages ~15m thick. The apron is fed by a conical shaped zone of stringer veins within a sub-vertical 'core' of varying thicknesses and grades. The core extends beneath the apron to over 600m depth and remains open. It can be further subdivided in to the inner and outer core defined by grade and thickness of mineralisation

An interpretation of high grade mineralisation at Abra found that intense silica-quartz alteration is associated with lead mineralisation which has been overprinted by late dolomite-barite-hematite alteration.

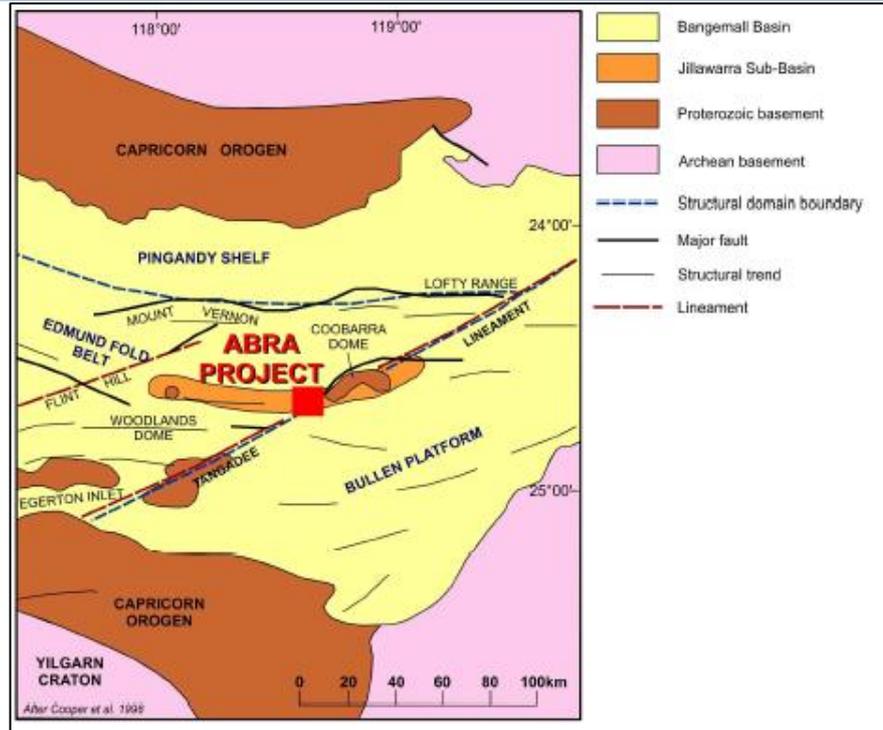
The Abra base metal deposit is an atypical Sedex deposit, hosted within the Jillawarra sub-basin of the Mesoproterozoic Edmund Basin

Mineralisation is a base metal replacement-style deposit, hosted by sediments.

Abra is hosted in two zones; the 'apron' and the 'core'.

Fig. 3: Regional Geology and Structure

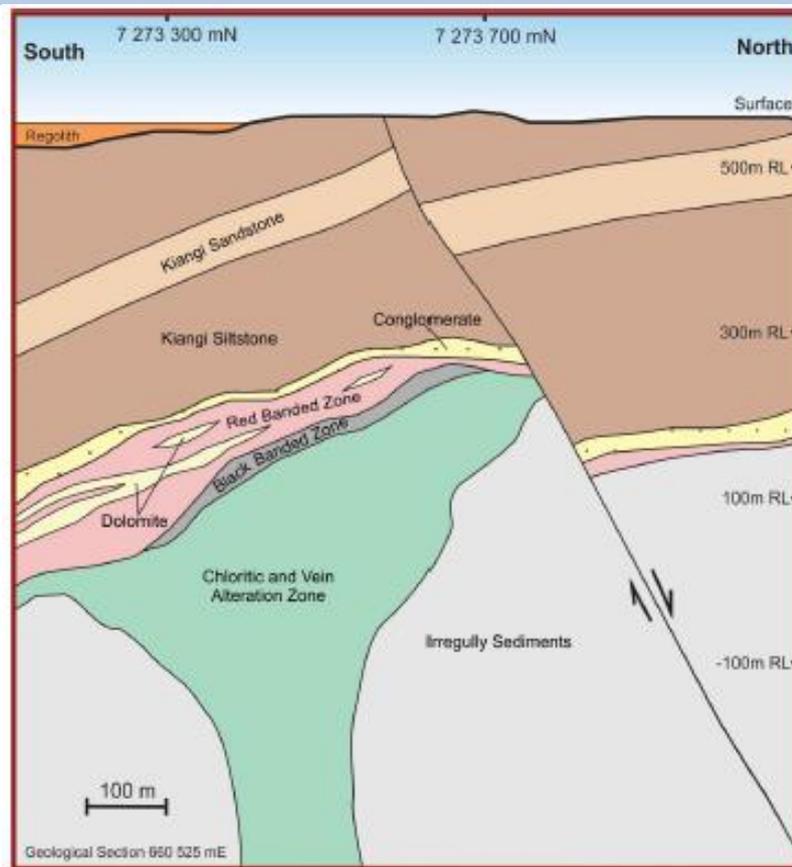
The Edmund Basin unconformably overlies the Capricorn Orogen, a metamorphic terrane that represents an amalgamation of the Yilgarn and Pilbara Cratons during the Paleoproterozoic.



Source: Galena Mining Limited

Fig. 4: Abra mineralisation stratigraphy

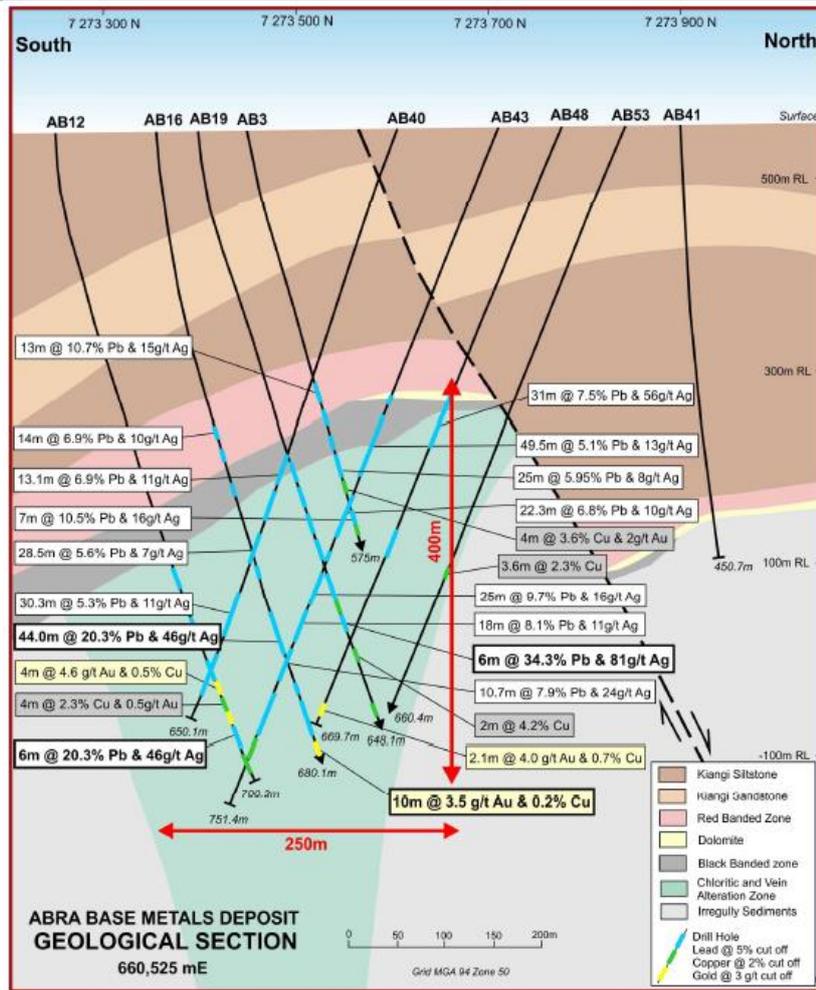
The deposit is a strata-bound sedimentary deposit with mineralisation at least 250m below surface



Source: Galena Mining Limited

Fig. 5: Cross Section 660,525mE (click image to watch video)

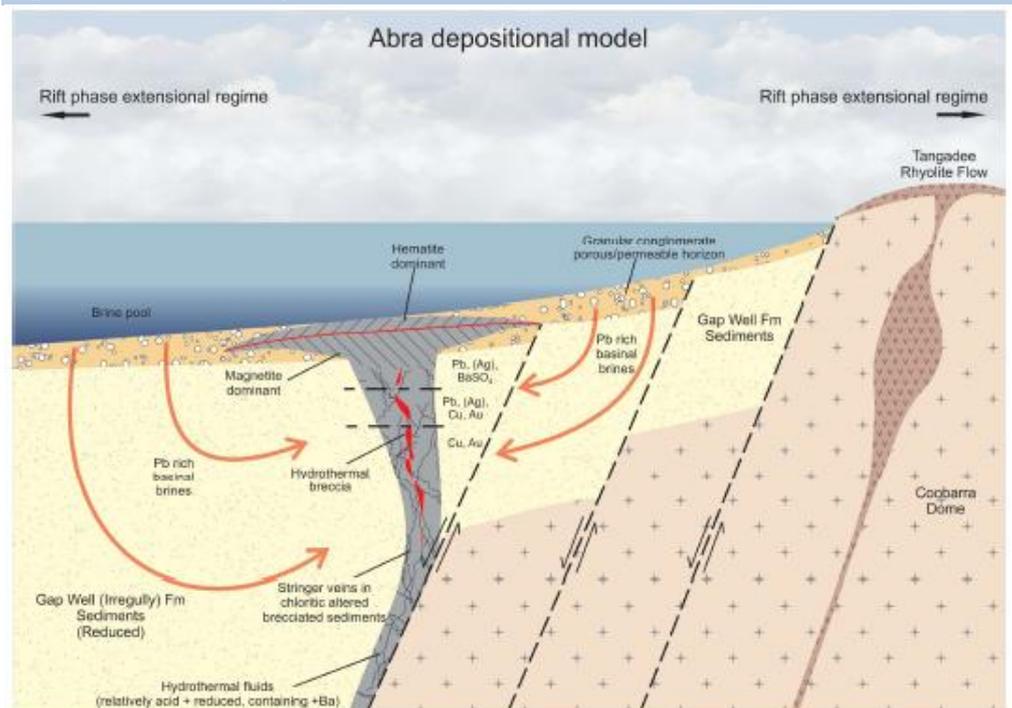
Click on the image to the right to see a flyby of the recent drilling.



Source: Galena Mining Limited

Fig. 6: Abra Depositional Model

The deposit is a strata-bound sedimentary deposit with mineralisation at least 250m below surface



Source: Galena Mining Limited

Resources

Abra Mining generated a historical (Non-JORC) resource of 93Mt at 4% Pb and 10g/t Ag in the upper lead domain and 14Mt at 0.6% Cu and 0.5g/t Au in the lower Cu-Au basal zone.

Historical estimates of the resource (Non-JORC) have been as high as 200Mt at 1.8% Pb, 6g/t Ag, 0.18% Cu, and early concept studies envisaged 4-6Mtpa production from sub level caving, to produce a lead-silver concentrate as opposed to Galena whose goal is to build a smaller high-grade operation (1Mtpa).

G1A anticipates releasing a new resource in February 2018. Given the density of drilling to date, we believe a large component of this may be in the indicated category and the total resource could be in excess of 10Mt at 10% Pb and 15g/t Ag, comprising much of the apron zone and a portion of the core.

Historic, non-JORC resources range from 93-200Mt at grades from 4% Pb down to 1.8% Pb for the higher tonnage estimates

Fig. 7: Abra Deposit Resource (May 2008) – Non JORC

Domain	Cutoff 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 cutoff and the estimation was completed using Ordinary Kriging. The copper and gold mineralisation interpretation was constructed using a 0.4g/t copper cutoff and the estimation was completed using Ordinary Kriging.

Mineral Resource Statement as at 14 May 2008.

Source: Abra Mining Limited

Metallurgy

RSG global conducted preliminary test work on the Abra deposit, which was undertaken as part of a Scoping study.

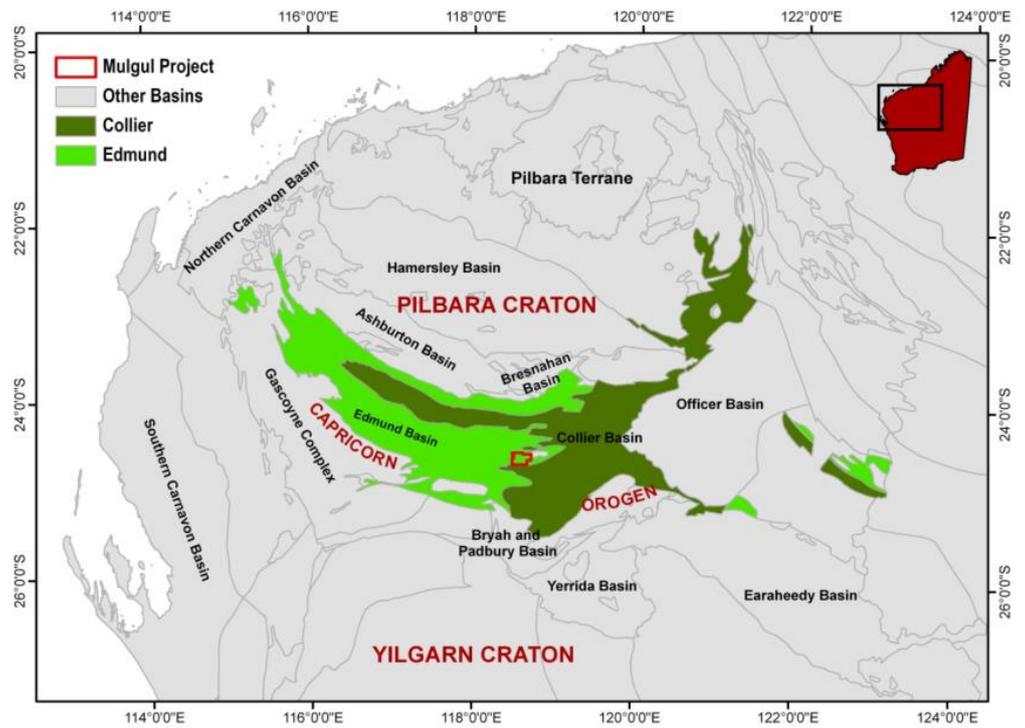
Abra Mining completed (2006) metallurgy test work which indicated lead recoveries of between 88-98% using a single stage flotation technique. We have modelled 93%.

Royalties

As well as the WA state royalty of 5% for concentrates, there is an additional 0.5% of net smelter return (NSR) payable to previous owners, Hunan Nonferrous Metals Corp. Ltd., and a 2.5% NSR royalty payable to the vendors. We model an 8% royalty for the life of mine.

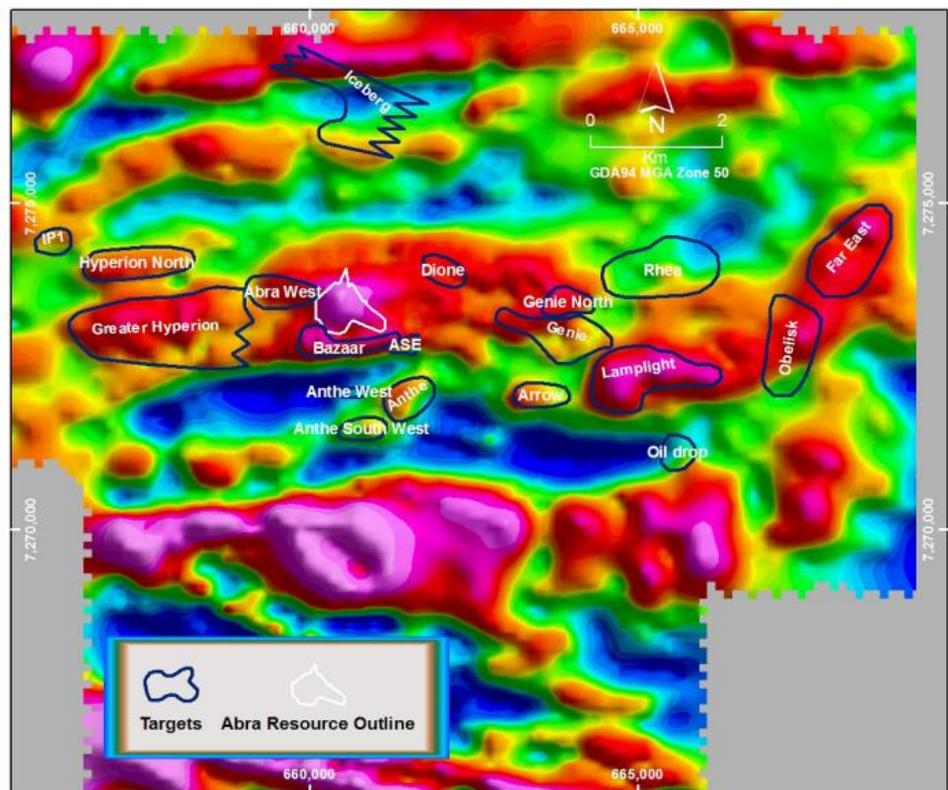
Abra Mining completed (2006) metallurgy test work which indicated lead recoveries of between 88-98% using a single stage flotation technique

Fig. 8: Regional Basins



Source: Abra Mining Limited

Fig. 9: Mulgul regional exploration targets over residual gravity



Source: Abra Mining Limited

Fig. 10: High grade massive galena from the Abra deposit (AB71)



The Jillawarra Project, adjacent to Abra warrants further exploration

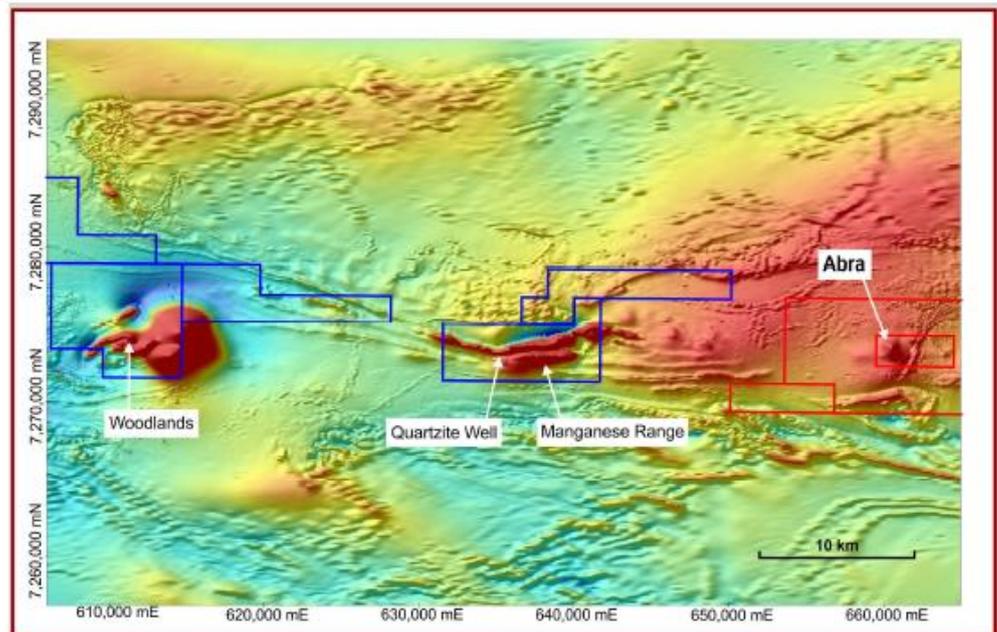
Source: Galena Mining Limited

JILLAWARRA PROJECT

To the west of the Mulgul (Abra) Project, lies the Jillawarra Project. The ground comprises rocks along strike and up-plunge of the sediments that host the Abra deposit. Limited drilling has been undertaken at Jillawarra; however, numerous magnetic anomalies are interpreted as being related to hydrothermal alteration and the introduction of magnetite mineralisation. Prospects including Woodlands, Quartzite Well and Manganese Range are considered to be poorly tested, with soil sampling identifying Pb, Zn and Cu anomalism.

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Fig. 11: The Jillawarra Project and prospects over magnetics



Source: Galena Mining Limited

LEAD MARKET

Currently over 75% of lead demand is used in lead-acid batteries with LME stockpiles falling since 2012. Lead-acid batteries are widely used in the automotive industry for starting cars. Lead is also increasingly being used as a source of power in electric vehicles and thus will be in demand as the world transitions to EVs. Lead-acid batteries will still be required for most auxiliary systems and start/stop technology.

In the past 18 months, lead (and zinc) has outperformed as mine closures (reserve depletion/strategically driven, environmental restrictions in China) have led to concentrate shortages and tightening metal supplies, pointing to a structural dislocation. Since 2015, we have seen at least 125ktpa of supply drop off with the closure of mines like Century (80ktpa) as well as smaller operations such as the Lisheen mine in Ireland (14ktpa). We have also seen treatment costs (TCs) fall as refineries attempt to entice producers. It is estimated that 500ktpa of new mine capacity is required by 2020 and that probable projects can only deliver ~300ktpa. Similarly, ~35% of 2027 mine supply is required from currently uncommitted projects, thus highlighting geological/technical constraints.

The LME lead price is currently at its highest since August 2011. While we model consensus prices to return to ~US\$0.90/lb over the next 5 years, at the current spot price of US\$1.17/lb, the Abra deposit is severely undervalued if our operational assumptions prove correct.

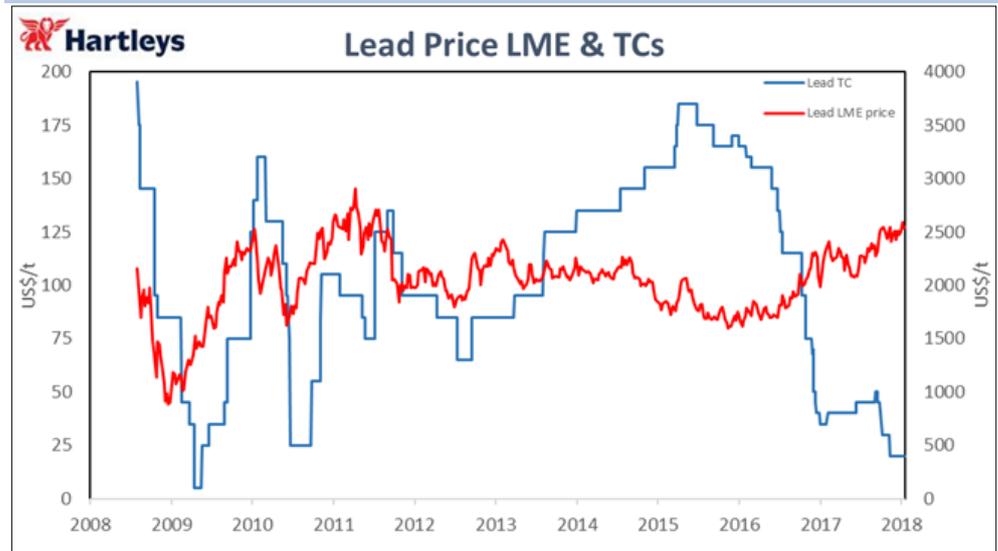
Lead-acid batteries are widely used in the automotive industry for starting cars

Lead is also increasingly being used as a source of power in electric vehicles and thus will be in demand as the world transitions to EVs

Since 2015, we have seen at least 125ktpa of supply drop off with the closure of mines

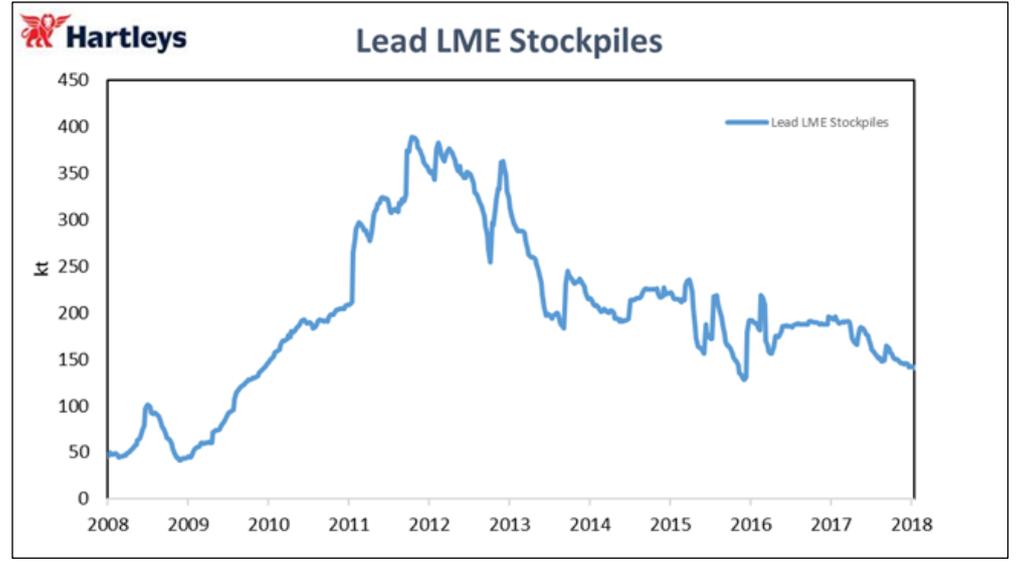
The LME lead price is currently at its highest since August 2011

Fig. 12: Lead Price (LME) & TCs



Source: Hartleys Research

Fig. 13: Lead LME Stockpiles

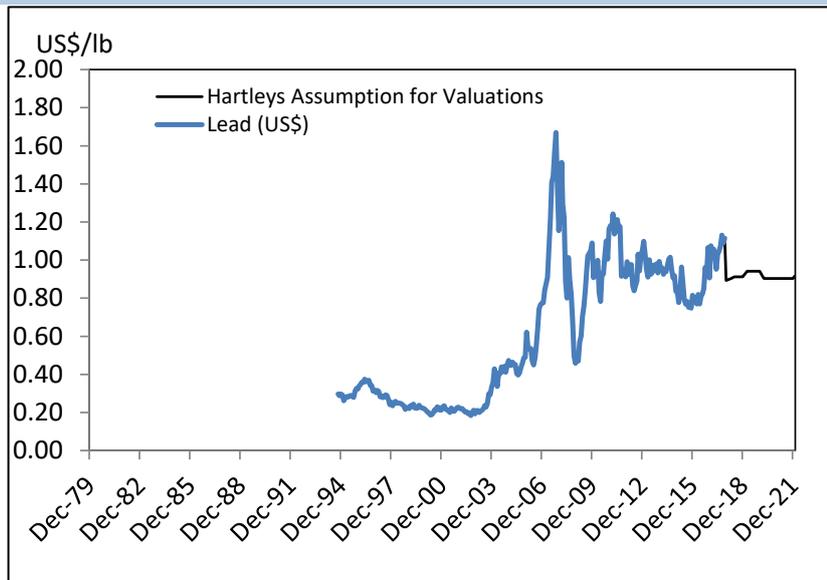


Lead LME stockpiles have been in decline since 2012

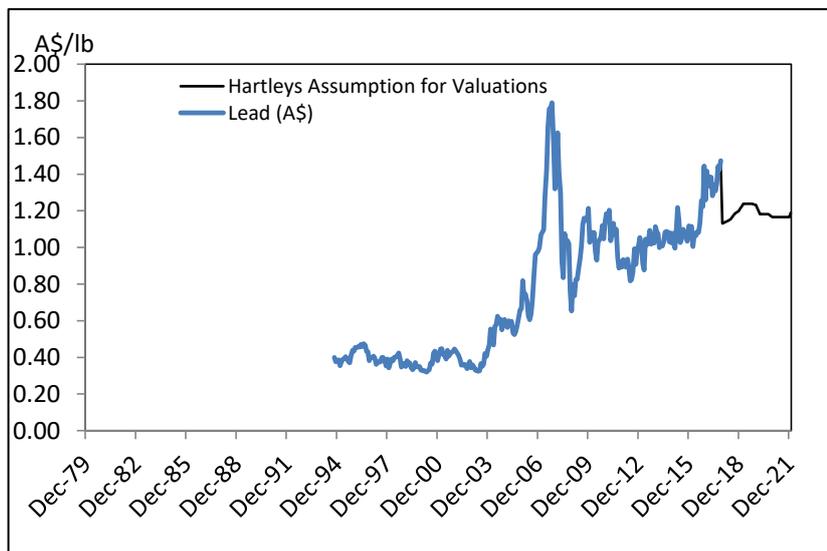
Lead is also increasingly being used as a source of power in electric vehicles and thus will be in demand as the world transitions to EVs

Source: Hartleys Research

Fig. 14: Historic lead price and Hartleys' consensus assumption



We model consensus prices to return to ~US\$0.90/lb over the next 5 years



Source: Hartleys Research

INDUSTRY EXPOSURE

Galena is exposed primarily to lead as it accounts for ~96% of our modelled revenue. It is also exposure to silver given it accounts for ~4% of modelled revenue.

GEOGRAPHIC EXPOSURE

At present, Galena is solely focussed on development within WA; an excellent pro-mining jurisdiction. We envisage a concentrate being trucked from Abra to Geraldton port for export. EMR currently exports its lead concentrate from Geraldton.

PEERS AND COMPETITORS

There is a dearth of lead producers in Australia. We have researched 11 Australian operating mines producing lead and one under care and maintenance (LeadFX's Paroo Station, formerly Magellan). Current information is challenging to obtain due to the size of the organisations, or the fact they are privately held/held by an overseas entity. South 32's (S32.asx) Cannington is the only operation where lead is the primary mineral mined and not a by-product. It produces 7% of the world's lead. We see potential for Abra to be a significant deposit in Australian terms, ranking third behind McArthur River and Cannington in terms of lead reserve size. In terms of lead equivalent (PbEq) reserves, Abra competes with AMI's Hera and RVR's Thalanga but does not yet have a market capitalisation to match these producers. Nevertheless, our preliminary valuation of \$1.76 implies a market cap of ~\$216M (assumes 50% equity funded), which falls nicely between the two producers.

In terms of future production, Abra again ranks third with respect to lead produced per annum (~90ktpa). We expect it to produce lead equivalent tonnes greater than AMI.asx (Hera) and RVR.asx as well as LFX.tsx's Paroo Station mine if it were to reopen.

KEY SUPPLIERS & CUSTOMERS

Given the project's infancy, G1A is yet to secure offtake partners but anticipates the commencement of offtake discussions in the latter half of CY18.

We see potential for Abra to be a significant deposit in Australian terms, ranking third behind McArthur River and Cannington in terms of lead reserve size.

Fig. 15: Australian Operating Lead Mines

Company	Project	Reserve (Mt)	Pb%	Ag g/t	Zn%	Cu%	Au g/t	Reserve PbEq (kt)	Future Production (ktpa)						
									Pb	Ag (koz)	Zn	Cu	Au (koz)	PbEq	
G1A	Abra	9.8	10.0%	15.0				1,011	87.9	391					90
GLEN	McArthur River	71.2	5.0%	5.0	10.6%			13,703	42.0	1,400	200.0				318
GLEN	George Fisher	17.2	4.4%	90.7	7.4%			2,785	143.0	7,330	290.0				579
S32	Cannington	23.0	5.6%	190.0	3.5%			3,284	125.0	14,360	65.0				307
RVR	Thalanga	2.1	1.9%	58.0	6.5%	1.1%	0.2	318	4.1	350	26.0	5.7			57
CBH	Endeavor	5.1	4.8%	68.0	7.4%			822	17.0		35.0				64
CBH	Rasp	3.2	4.6%	64.0	6.0%			443	18.0	1,000	28.0				62
AMI	Hera	1.5	2.7%	20.9	4.1%		3.5	217	10.0	50	10.0		41.0		45
PEM	Broken Hill	11.7	4.8%	50.0	6.2%			1,654	40.0	850	85.0				159
MMG	Rosebery	5.6	3.3%	123.0	8.6%	0.2%	1.4	1,142	25.0		70.0	1.2			122
MMG	Dugald River	32.8	2.2%	44.0	11.9%			6,236	28	900	210				314
EMR	Golden Grove	1.9	1.5%	98.0	11.8%	0.8%	2.9	500	4.0		14.0	4.0			34
LFX	Paroo (Magellan)	6.8	7.0%					476	69.9						70

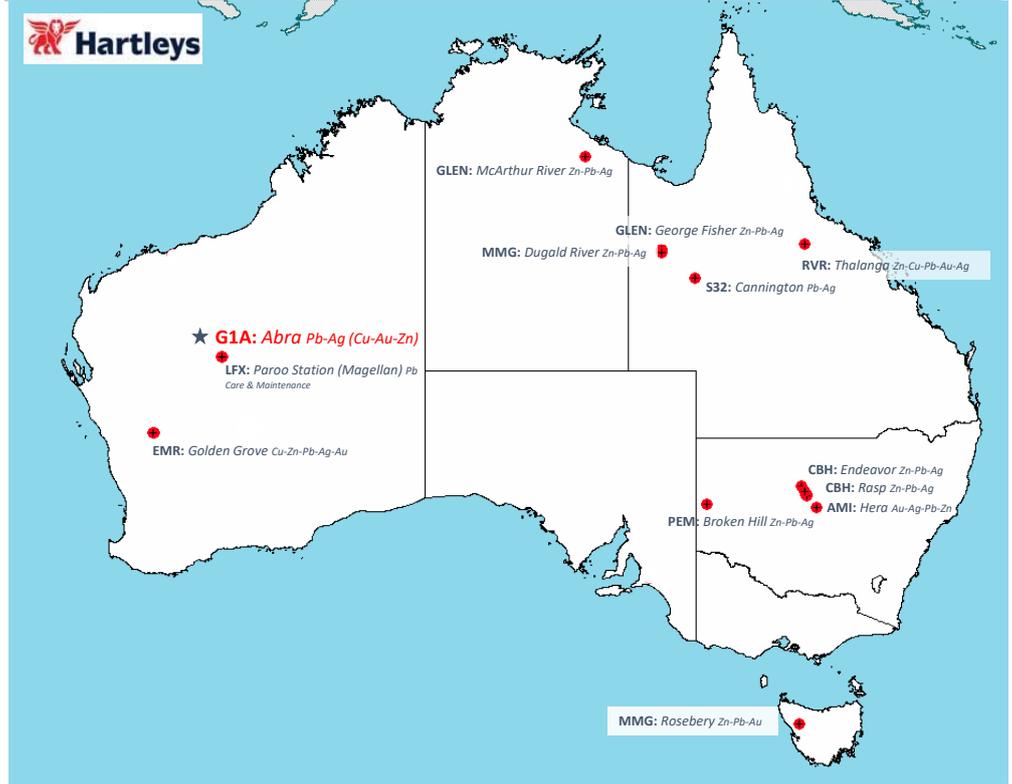
Note: Abra does not have an Ore Reserve.

Broken Hill is the 2001 Reserve, Rasp is the 2009 Reserve, Endeavour is the 2011 Reserve, Golden Grove is the 2016 MMG Reserve. These deposits are either privately owned or owned by foreign listed entities.

Paroo Station (formerly Magellan) is currently under care and maintenance as of January 2015

Source: Hartleys Research

Fig. 16: Australian Operating Lead Mines - map

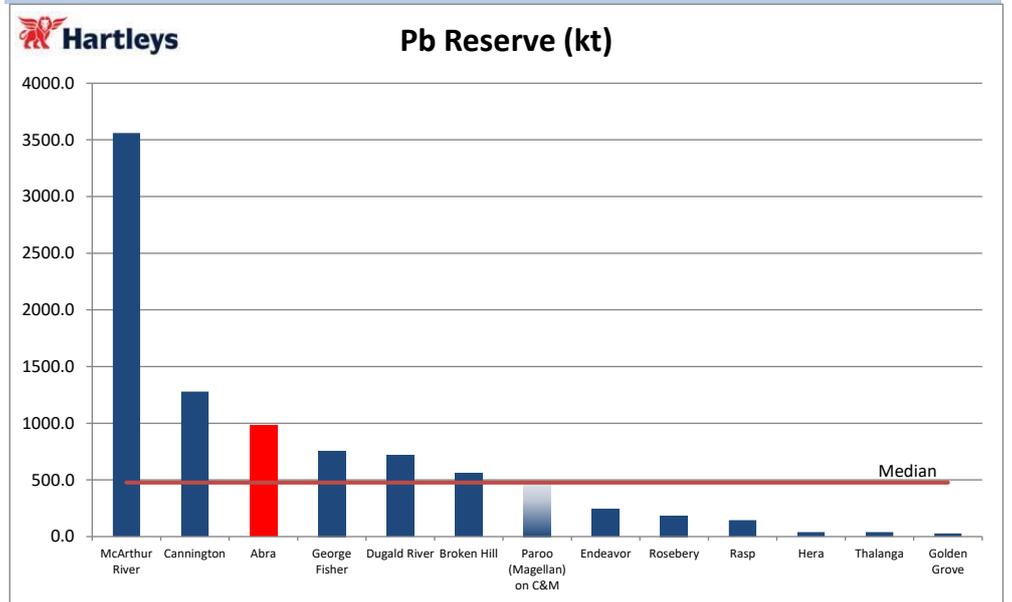


We have researched 11 Australian operating mines producing lead.

S32's Cannington is the only operation where lead is the primary commodity.

Source: Hartleys Research

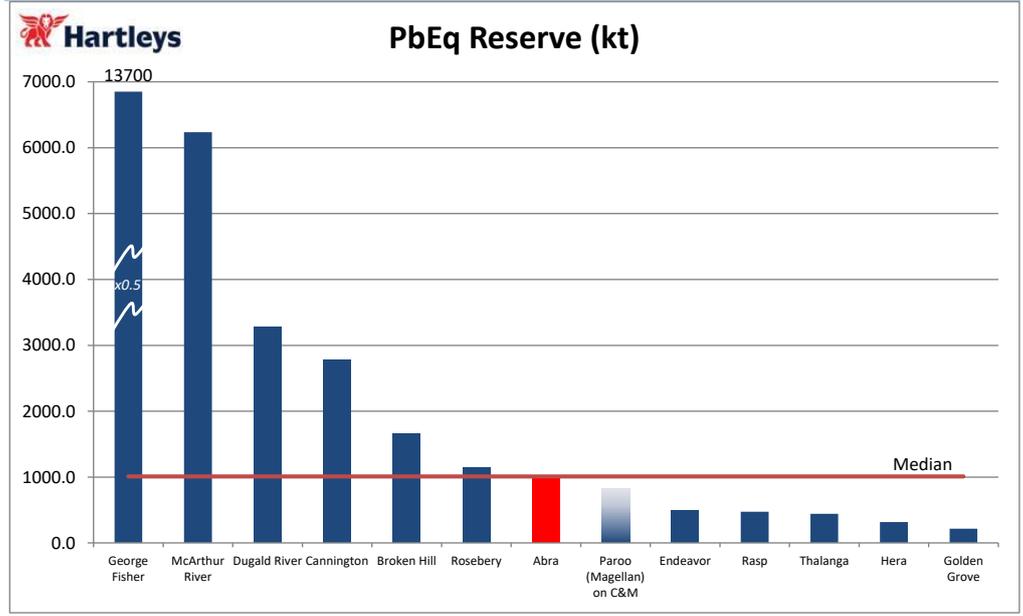
Fig. 17: Australian Lead Ore Reserves



Abra has the potential to host Australia's third largest Pb reserve.

Source: Hartleys Research

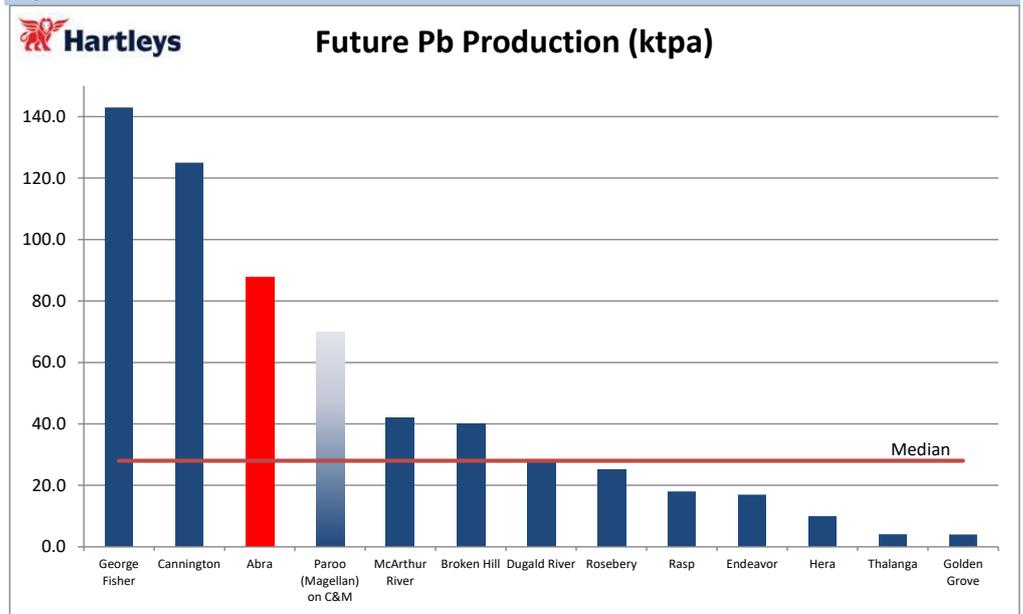
Fig. 18: Australian Lead Equivalent Ore Reserves



On PbEq terms, Abra ranks above AMI's Hera and RVR's Thalanga

Source: Hartleys Research

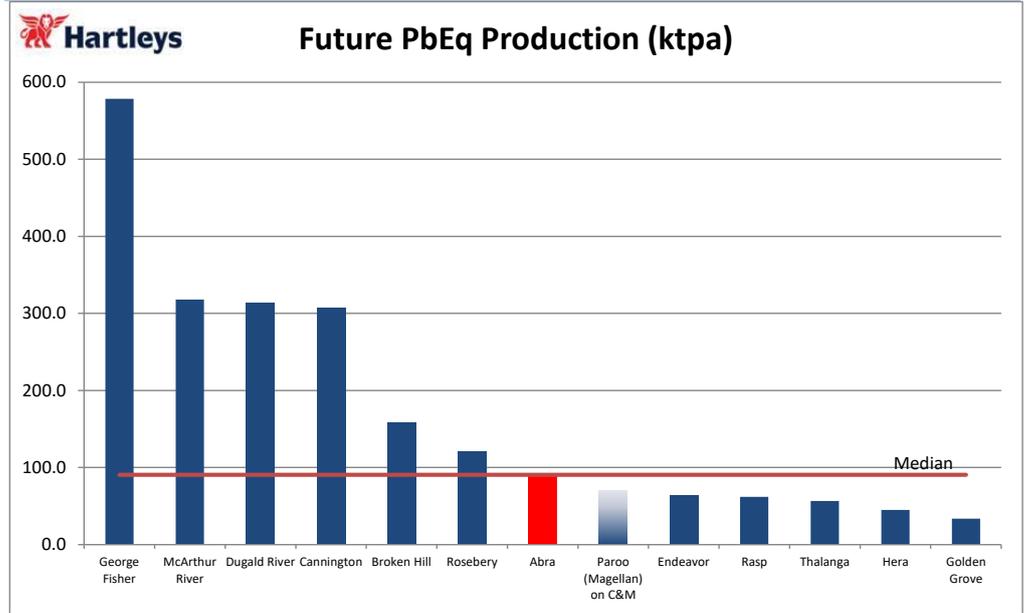
Fig. 19: Australian Lead Future Production



Abra also has the potential to produce in excess of 90kt of PbEq per annum.

Source: Hartleys Research

Fig. 20: Australian Lead Equivalent Future Production



Source: Hartleys Research

MANAGEMENT, DIRECTORS AND MAJOR SHAREHOLDERS

Fig. 21: Economic exposure of Board & Management

Economic Exposure of Board and key management					
Directors	Position	Total Options	Shares Direct & Indirect	Total	Rank
Adrian Byass	Non-Exec Chairman	1,500,000	2,220,000	3,720,000	3
Jonathan Downes	Non-Exec Director	1,500,000	4,072,590	5,572,590	2
Oliver Cairns	Non-Exec Director	1,500,000	2,082,000	3,582,000	4
Timothy Morrison	Non-Exec Director		16,450,000	16,450,000	1
Edward Turner	Chief Executive Officer	500,000		500,000	5
Stephen Brockhurst	Company Secretary	150,000		150,000	6
		5,150,000	24,824,590	29,974,590	

Source: Galena Mining Limited

Directors (as summarised on the Galena Mining website/prospectus)

Adrian Byass BSc Geol Hons, B. Econ, FSEG and MAIG, Non-Executive Chairman

Mr Byass has over 20 years' experience in the mining and minerals industry. This experience has principally been gained through evaluation and development of mining projects for a range of base, precious and specialty metals and bulk commodities. Due to his experience in resource estimation and professional association membership, Mr Byass is a competent person for reporting to the ASX for certain minerals. Mr Byass has also gained experience in corporate finance, capital raising, permitting and delivery of production-ready mining projects. Mr Byass is the Executive Chairman of Plymouth Minerals Limited and is a nonexecutive director of Corazon Mining Limited and Fertoz Limited.

Jonathan Downes BSc Geol, MAIG, Non-Executive Director

Mr Downes has over 20 years' experience in the minerals industry and has worked in various geological and corporate capacities. Experienced with nickel, gold and base metals, he has also been intimately involved with numerous private and public capital raisings. Mr Downes is on the board of several ASX-listed companies; he is a founding director of Moly Mines Limited, Siberia Mining Corporation Limited, Wolf Minerals

G1A directors and management own 48% (fully diluted) of the Company

Limited and Ironbark Zinc Limited and he is currently the managing director of Ironbark Zinc Limited and is a non-executive director of Corazon Mining Limited.

Oliver Cairns MSI, **Non-Executive Director**

Mr Cairns has over 17 years' experience in the small to mid-cap corporate and capital markets space. A corporate financier, he was a Nominated Advisor for AIM companies in London for over eight years before relocating to Perth in 2007 where he established Pursuit Capital, a corporate and strategic advisory firm. His wide experience covers international capital raisings, M&A, IPOs, regulatory advice, investor relations and corporate governance. Mr Cairns is a non-executive director of Vmoto Limited and is a member of the Securities Institute (UK).

Timothy Morrison, **Non-Executive Director**

Mr Morrison Co-Founded Empire Equity Limited a Merchant Banking and Corporate Advisory firm in 2008. Mr Morrison has extensive capital raising and management experience across multiple sectors and has worked as CEO, Executive and non-executive director for a number of ASX companies. Previously Mr Morrison worked with Westscheme Superannuation to establish and manage a Private Equity Fund targeting early stage venture opportunities. Mr Morrison has an MBA from the University of Western Australia. Mr Morrison is currently a non-executive director of Titan Minerals Limited (formally, Minera Gold Limited). The Directors do not consider that Mr Morrison's other directorship will affect his ability to act as a Non-Executive Director of the Company

Edward Turner B App Sc (Geol), MAIG, **Chief Executive Officer**

Mr Turner has 30 years' experience as a Geologist in Europe, South America, Africa and Australia. His roles have covered exploration and development of base, precious and specialty metals for leading mining companies. Mr Turner has extensive experience in the economic studies of base-metal deposits in open-pit and underground scenarios and related mining experience. He is the former Exploration Manager for Abra from 2008-2011. The Directors consider that Mr Turner brings a wealth of experience in relation to the Abra Deposit, its exploration history and the ability to efficiently advance the Project.

Stephen Brockhurst BComm, **Company Secretary**

Mr Brockhurst has 15 years' experience in the finance and corporate advisory industry and has been responsible for the preparation of the due diligence process and prospectuses on a number of initial public offers. His experience includes corporate and capital structuring, corporate advisory and company secretarial services, capital raising, ASX and ASIC compliance requirements. Mr Brockhurst has served on the board and acted as Company Secretary for numerous ASX listed companies. He is currently a Director of Estrella Resources Limited, Roto-Gro International Limited and International Goldfields Limited and Company Secretary of Jacka Resources Limited, Lindian Resources Limited, Volt Resources Limited, Cabral Resources Limited, Raptor Resources Limited and Estrella Resources Limited.

MAJOR SHAREHOLDERS

Bloomgold Resources Pty Ltd, of which Timothy Morrison is a Director, is a substantial shareholder of G1A, with 29.2%. Bloomgold was the sole shareholder of Abra Mining prior to the share sale agreement, in which Galena Mining acquired Abra Mining in early 2017. Jonathan Downes holds 7.2% of Galena through direct and indirect (Kiandra Nominees Pty Ltd) holdings.

Fig. 22: Galena Top 20 Shareholders – 5 September 2017

Shareholder	Number of Shares	% Issued Capital
1 Bloomgold Resources Pty Ltd	16,450,000	29.2%
2 Silverlight Holdings Pty Ltd	1,650,000	2.9%
3 Kiandra Nominees Pty Ltd	1,500,000	2.7%
4 National Nominees Ltd <DB A/C>	1,475,000	2.6%
5 Morgan Stanley Aust Sec <No 1 A/C>	1,450,000	2.6%
6 Valiant Equity Management Pty Ltd	1,400,000	2.5%
7 A22 Pty Ltd	1,175,000	2.1%
8 Jetosea Pty Ltd	1,125,000	2.0%
9 Lido Trading Ltd	1,099,910	2.0%
10 Pershing Australia Nominees Pty Ltd <Accum A/C>	885,000	1.6%
11 McMahon Nicholas <McMahon Family A/C>	700,000	1.2%
12 HSBC Custody Nominees Aust Ltd	625,000	1.1%
13 Lake Springs Pty Ltd <Lake Springs S/F A/C>	525,000	0.9%
14 Kiandra Nominees PL	500,000	0.9%
15 Merrill Lynch Aust	500,000	0.9%
16 Gurravembi Inv PL	500,000	0.9%
17 Wissemann Arnold	500,000	0.9%
18 CS Third Nom PL <HSBC Cust Nom Aus Ltd>	450,000	0.8%
19 BNP Paribas Nom PL <Global Prime Omni>	450,000	0.8%
20 Primston PL	427,500	0.8%
Total Top 20	33,387,410	59.25%

Source: Galena Mining Limited

OPTIONS, CONVERTIBLES AND UNPAID CAPITAL

The option table below includes 5.95M options @ 36cps, over a 2 year period.

Fig. 23: Options on issue or to-be-issued

Unpaid Capital				
Year Expires	No. (m)	\$m	Avg price	% ord
30-Jun-18	0.0	0.0	0.00	0%
30-Jun-19	0.0	0.0	0.00	0%
30-Jun-20	2.35	0.7	0.30	4.2%
30-Jun-21	3.6	1.4	0.40	6.4%
30-Jun-22	0.0	0.0	0.00	0%
TOTAL	5.95	2.1	0.36	10.6%

Source: Galena Mining Limited

PRELIMINARY PRICE TARGET

METHODOLOGY

Our G1A valuation and price target is considered highly speculative.

Considering 62.3M, fully diluted, shares on issue and a potential mine inventory of 9.8Mt @ 10% Pb and 15g/t Ag, we have simulated a potential ~1Mtpa underground operation, using estimated opex and capex based largely on comparable Australian operations. We model production of ~91Ktpa PbEq (88ktpa Pb and 391kozpa Ag) over a 9 year mine life from a 1Mtpa plant at a conservative LOM Pb price of US\$0.90/lb. Lead recoveries have been modelled at 93% at a head grade of 10% Pb, with 95% payabilities. We stress that this is highly speculative and assumes the project can be successfully funded into production.

Our model assumes geological modelling and estimation can define high grade Pb-Ag mineralisation within the flat dipping apron zone as well as a portion of the inner core zone adjacent to the apron. A maiden resource is expected in February 2018 and given the drill density, one could expect a large portion to be in the indicated category. Any potential resource could be further enhanced through definition of economic zinc, copper and gold mineralisation. The zinc mineralisation appears to be associated with the highest grades of lead mineralisation, in what could be a secondary mineralisation event that upgraded lead while emplacing zinc rich hydrothermal fluids. Further work is required to validate this theory. A copper-gold mineralisation event also appears present at depth and can further augment to Abra deposit through additional drilling and resource definition.

Even if development studies are fast tracked, we suspect first production would not be until 1H21 following an 18-month development phase in which a decline would need to descend 300m below surface (2.2km long at a 1:7 gradient). Galena is very much a brownfields explorer/developer with a lead-silver project which may be commercially viable. A discount rate of 14% is used, since the project is at a pre-study stage.

Our preliminary, fully diluted price target of \$1.58 is derived from a blended scenario comprised of a discounted cashflow analysis of a Pb-Ag operation at Abra, a base case at consensus and spot pricing, a scenario where G1A does not develop the project (exploration value), and a net cash backing case.

Fig. 24: Hartleys G1A Price Target

Price Target Methodology	Weighting	Spot	12 Month
Abra NPV @ 14% - Base Case, assuming equity dilution	50%	\$1.76	\$1.96
NPV at spot commodity and fx prices	10%	\$2.86	\$3.18
Exploration value - no development	25%	\$0.98	\$0.98
Net cash backing	15%	\$0.05	\$0.05
Risk weighted composite		\$1.45	
12 Months Price Target		\$1.58	
Shareprice - Last		\$1.150	
12 mth total return (% to 12mth target + dividend)		37%	

Source: Hartleys Estimate

Our G1A valuation and price target is considered highly speculative

We model production of ~91Ktpa PbEq (88ktpa Pb and 391kozpa Ag) over a 9 year mine life from a 1Mtpa plant at a conservative LOM Pb price of US\$0.90/lb

Our preliminary, fully diluted price target of \$1.58

RECOMMENDATION & RISKS

INVESTMENT THESIS & RECOMMENDATION

We initiate coverage of Galena Mining Limited with a Speculative Buy recommendation with a 12-month price target of \$1.58.

The Abra deposit has the potential to be a significant lead-silver play and is poised to take advantage of the buoyant lead prices, should they prevail. G1A's approach of defining a medium sized, high grade lead underground operation, contrasts to previous owners who envisaged a high tonnage, bulk mining operation.

While no JORC resource exists for a high grade domain within the apron (and core), we see potential for a mine inventory of ~10Mt at ~10% Pb and 15g/t Ag.

Considering that ~35% of 2027 mine supply is required from currently uncommitted projects and that probable projects can only deliver ~300ktpa on an estimated 500ktpa of new mine capacity in 2020, there is certainly room for Abra to enter the market. At current prices, it would appear that Abra is economic but clearly a lot more work is required. It is early days but Abra may emerge and present itself as a credible, high grade lead asset in a favourable mining jurisdiction.

We initiate with a Speculative Buy recommendation

SIMPLE S.W.O.T. TABLE

Strengths	<ul style="list-style-type: none"> - <i>Potentially significant Pb-Ag project</i> - <i>Buoyant Pb price</i> - <i>Dearth of Australian Pb projects</i> - <i>New approach: high grade, low tonnage</i> - <i>Experienced management</i> - <i>Flat orebody (apron)</i>
Weaknesses	<ul style="list-style-type: none"> - <i>No resource/reserve</i> - <i>Deep: 300m below surface</i> - <i>No cash flow generation until 2021</i>
Opportunities	<ul style="list-style-type: none"> - <i>Cu-Au, Zn mineralisation to be defined</i> - <i>SFR plant at DeGrussa may have capacity</i> - <i>Exploration upside on adjacent tenure</i>
Threats	<ul style="list-style-type: none"> - <i>Exploration downside</i> - <i>Commodity prices and market sentiment</i> - <i>Potential takeover</i> - <i>Metallurgy</i> - <i>FX</i> - <i>Uses for lead; rise of electric vehicles</i>

Source: Hartleys Research

RISKS

Key risks for Galena include establishing resources which can be converted to reserves, development studies, funding (both for ongoing exploration activities and any potential future development) and commodity sentiment/demand.

Fig. 25: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
~91kt PbEq for ~9 years	Moderate	Meaningful	We assume G1A can define a mine inventory of ~10Mt @ 10% Pb and 15g/t Ag
Metallurgy	Low	Meaningful	While previous work suggests the metallurgy is relatively benign, it is a key consideration with all base metal projects.
Exploration Upside	Moderate	Moderate	We assume a high level of exploration upside for G1A. We have assumed a \$80m value on the exploration potential at Abra and on adjacent projects.
Lead Price	Moderate	High	Our lead price forecasts are in line with sell side consensus. However, this is currently ~30% lower than spot.
Funding	Moderate	High	We assume a ~91ktpa PbEq operation at Abra could be funded through a debt:equity ratio of 50:50.
Lead demand	Moderate	High	The emergence of the EV space puts lead (batteries) demand at risk.
<i>Conclusion</i>	<i>The assumptions we have made have a low to moderate risk of not being. We believe is the highest risk to our valuation of G1A is commodity prices and demand.</i>		

Source: Hartleys Research

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Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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