



Cautionary statement – Reference to FS and Updated Mine Plan. This report refers to the Abra Base Metals Mine ("Abra" or the "Project") Feasibility Study ("FS") (ASX: 22 July 2019) and Updated Mine Plan (ASX: 25 July 2022). A summary of the FS and Updated Mine Plan material assumptions was published by Galena Mining Limited ("Galena") on the 22 July 2019 and 25 July 2022 respectively.

Environmental approvals, mining tenements and approvals, other governmental factors and infrastructure requirements for selected mining methods and for transportation of concentrate to market were all analysed in detail and determined not to pose any practical or economic restrictions to the selected mining and processing model. These aspects of the project have not materially changed from the FS to the Updated Mine Plan.

Other material assumptions in regards to metallurgy, mineralogy and geotechnical factors that were made in the previously announced FS have also not materially changed in the Updated Mine Plan and continue to apply. Mine designs, mining schedules and other mining related assumptions relating to the FS were based on the Abra Mineral Resource estimate dated December 2018. Mine designs, mining schedules and other mining related assumptions relating to the Updated Mine Plan were based on the Abra Mineral Resource estimate dated April 2021. Differences exist between the two separate Mineral Resource estimates which has been reflected in differences between the mining related activities and assumptions associated with the FS and the Updated Mine Plan.

All Financial assumptions used in the Updated Mine Plan have been updated to reflect market conditions and the timing of the Updated Mine Plan and will therefore potentially differ to those presented in the FS.

Process and engineering designs for Abra's FS (July 2019) and Updated Mine Plan (July 2022) were developed to support capital and operating estimates to an accuracy of ±10%. Key assumptions that the FS and Updated Mine Plan was based on (including those defined as Material Assumptions under ASX Listing Rule 5.9.1) are outlined in the ASX announcements of 22 July 2019 and 25 July 2022 respectively. Galena believes the production target, forecast financial information derived from that target and other forward-looking statements included in those announcements and this presentation are based on reasonable grounds.

A number of key steps need to be completed in order to bring Abra into production. Many of these steps are referred to in this announcement. Investors should note that if there are delays associated with completion of those steps, outcomes may not yield the expected results (including the timing and quantum of estimated revenues and cash flows).

The economic outcomes associated with the FS and the Updated Mine Plan are based on certain assumptions made for commodity prices, concentrate treatment and recovery charges, exchange rates and other economic variables, which are not within the Company's control and subject to change from time to time. The assumptions made for each may be different in each case due to the different timing of the work and changing market conditions and economic factors. Changes in such assumptions may have a material impact on the economic outcomes (including the timing and quantum of estimated revenues and cash flows).

To develop the Project as per the assumptions set out in the FS and the Updated Mine Plan may require additional capital. Investors should note that any failure to precure the required additional capital may result in a delay, change in nature and scale, or even suspension of the Project.

Cautionary statement — Reference to FS Mine Model and Updated Mine Plan Mineralised Material. The mineralised material scheduled to be mined and processed in the FS ("FS Mine Model") includes a mix of material taken from Probable Ore Reserves (67%) and Inferred Mineral Resources (33%). The mineralised material scheduled to be mined and processed in the Updated Mine Plan includes a mix of Indicated Mineral Resources (66%) and Inferred Mineral Resources (34%). In both cases no reduction factor has been applied to the tonnes and grades of the Inferred Mineral Resources. Inferred Mineral Resources have a lower level of geological confidence and can't be included in the calculation of Ore Reserves, and there can be no guarantee that a Mineral Resource estimate update will convert Inferred Mineral Resources to Indicated Mineral Resources or return the same grade and tonnage estimation. This may affect mining performance and outcomes (including economic) form those outlined in the FS and the Updated Mine Plan. The Abra Mineral Resource and Ore Reserve will be revised systematically as the project continues considering depletion, new resource definition and mining activities.

Based on the current geological information, Galena believes it has a strong basis for inclusion of certain Inferred Mineral Resource material in both the FS Mine Model and the Updated Mine Plan, at this time whilst remaining within suitable evaluation level tolerances. To further test its basis, Galena ran the financial model on a check scenario assuming a zero grade for any Inferred Mineral Resource material in the FS Mine Model and the Updated Mine Plan, that produced a substantial positive NPV outcome in both cases.

Forward looking statements - The contents of this presentation reflect various technical and economic conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly over relatively short periods of time. Consequently, actual results may vary from those in this presentation.

Some statements in this presentation regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "Scheduled", "intends", "anticipates, "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions.



#### **Disclaimer (continued)**

Forward looking statements (continued) - Forward-looking statements, opinions and estimates included in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as guarantee of future performance. Forward-looking statement may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

**Competent Person's statement** - The information in this report related to the Abra Ore Reserve is based on work completed by Mr Roger Bryant, BEng (Mining, Member AUSIMM). Mr Bryant was an employee of Galena Mining Ltd at the time the Ore Reserve was prepared. Mr Bryant has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Bryant consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report related to the Abra April 2021 Resource and underpinning the production target is based on work completed by Mr Angelo Scopel BSc (Geol), MAIG, a fulltime employee of Galena Mining and Mr Mark Drabble B.App.Sci. (Geology), MAIG, MAusIMM, Principal Consultant at Optiro Pty Ltd. Mr Scopel was responsible for data review and QAQC, and. Mr Drabble was responsible for the development of the geological model, resource estimation, classification and reporting. Mr Scopel and Mr Drabble have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Scopel and Mr Drabble consent to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report to which this statement is attached that relates to exploration results and drilling data is based upon information compiled by Mr Angelo Scopel BSc (Geol), MAIG, a fulltime employee of Galena Mining. Mr Scopel has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Scopel consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

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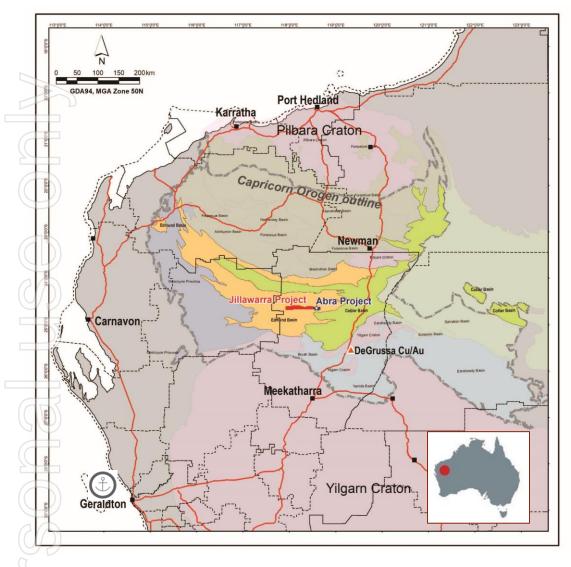
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#### A New Mine in a New Mineral Province in WA



- One of the worlds largest and cleanest undeveloped lead deposits
- Abra is located within Edmund sedimentary basin in the Gascoyne region of WA (approximately 110km NW of Sandfire Resources' DeGrussa Mine)
- On a granted Mining Lease with all major permits and native title arrangements in place
- Accessed by existing roads
- High-grade lead-silver concentrate will be trucked to Port of Geraldton in sealed half-height containers
- Port of Geraldton capacity & access contract in place.
   Port has all permits and infrastructure required to handle Abra's product (it currently handles similar product for other producers)



### **Abra Project Timeline**

#### Apr 2019

\$90M equity investment by Toho Zinc of Japan for 40% ownership in Abra



US\$110M debt facility executed with Taurus











OR ECONOMISSION SERVICE 2019 BRAMININ

Abra DFS 16 year – 1.2 Mtpa U/G A\$553M NPV – 39% IRR

Oct 2019

10-year offtake agreement

with IXM for G1A

concentrate

**Aug – Dec 2020** 

25km infill diamond drilling program



Abra 17% complete Final Investment Decision to complete project construction



Jan 2020

Early construction works including Box-cut, mine village & infrastructure

Aug - Sep 2021

Site access & commencement of major works









## **Abra Construction Progress**<sup>1</sup>



#### **ASX ANNOUNCEMENT**

18 July 2022 ASX: G1A

#### KEY EQUIPMENT ARRIVES AS ABRA REACHES 73% COMPLETE

GALENA MINING LTD. ("Galena" or the "Company") (ASX: G1A) is pleased to announce that the construction progress at its Abra Base Metals Mine ("Abra" or the "Project") has reached 73% complete as of 30 June 2022. Significant equipment arrivals over the last month include the remaining mill equipment, secondary and tertiary cone crushers, and the remaining LNG tanks. The completion of the installation of 16,000 solar panels also delivers another significant construction milestone.

Managing Director, Tony James commented, "Construction activities are rapidly progressing with concrete poured at 2,378m³ (95% complete) and structural steel installation already up to 237 tonnes (42% complete). Arrival of key overseas supplied equipment being the remaining mill equipment, secondary and tertiary cone crushers, and LNG tanks has certainly reduced risk and energised the remaining work programs.

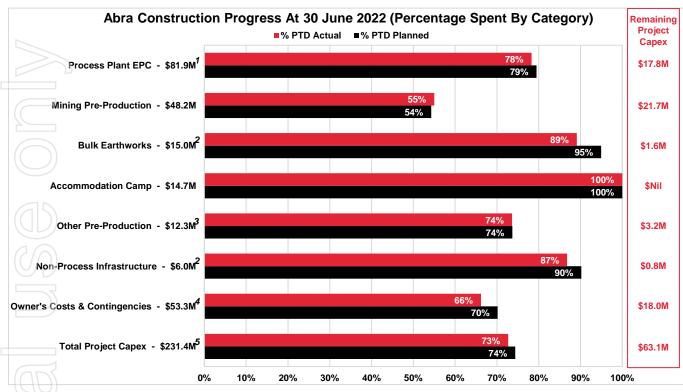
Decline mining delays occurred over 12 days in June, when the decline intercepted an un-grouted drill hole, which produced water, requiring an increase in pumping capacity. This was quickly rectified, and the mine plans were updated to keep the mining schedule aligned with the plant construction and commissioning timeframe. Underground grade control drilling continued in June in preparation for ore mining as planned".

Notes: 1. For more detail please see Galena ASX announcement of 18 July 2022 (Key Equipment Arrives as Abra Reaches 73% Complete)





## Abra Construction Progress (30 June 2022 – 73% Complete)<sup>1</sup>



Notes: (1) Process Plant EPC planned spend is based on the initial estimated planned spend at the commencement of the project and remains slightly ahead of actual spend, even though the processing plant infrastructure work completed remains ahead of the most recent planned work schedule. (2) TSF and NPI construction works were intentionally delayed until the finalisation of designs and award of construction contracts and have now recommenced. (3) Other Pre-Production includes water supply & recovery, vehicles & mobile equipment, initial fills & spare parts, shire road maintenance, paste fill plant acquisition and construction indirect costs. (4) Owner's Costs & Contingencies includes employee & contractor, flights, accommodation, fuel, site management and general & administration costs as well as additional owner's contingencies on the remaining project capex. (5) Total Project Capex includes expenditure from the commencement of the project in July 2019 through to planned practical completion of the process plant in January 2023. As at 30 June 2022, a total of \$168.2M had been spent and the total remaining project capex was \$63.1M.

#### Key equipment order and delivery schedule from overseas suppliers.

Description	Manufacturer	Source Country	Order Date	Completion Date	Forecast On Site Date
Jaw Crushers	Metso Outotec	China	19 Aug 21	<del>10 Jan 22</del>	On Site
Cone Crushers	Metso Outotec	France	19 Aug 21	16 Mar 22	7 July 22
Flotation Cells	Metso Outotec	China	18 Aug 21	1 Jul 22	12 Aug 22 <sup>1</sup>
Thickener	Metso Outotec	China	<del>18 Aug 21</del>	<del>25 Mar 22</del>	On Site
Slurry Analyser	Metso Outotec	Finland	18 Aug 21	10 Jan 22	On Site
Grinding Mill	CITIC HIC	China	23 Jul 21	20 Jun 22	11 Jul 22
Filter	Ishigaki	Japan	<del>26 Jul 21</del>	<del>28 Apr 22</del>	On Site
Regrind Mill	Glencore	Germany	23 Sep 21	15 Jun 22	1 Sep 22 <sup>2</sup>
LNG Storage Tanks	AMG Cryogenics	China	<del>15 Jun 21</del>	28 Apr 22	Perth

Table Notes – All items with strike through have been delivered (1) Flotation cells ready for shipping from China. (2) Regrind Mill ETA Melbourne 13 August for final assembly by Glencore Technology.







## Updated Mine Plan & 2023 Production Guidance<sup>1</sup>

- Abra Project construction is now 75% complete
- Galena confirms first concentrate production remains on-target for Q1 2023 and provides initial production target for CY2023 and an Updated Mine Plan<sup>1</sup>

	Updated Mine Plan Production Guidance CY2023	Updated Mine Plan Average Annual Steady State
Initial Mine Life		13 Years
Mill Throughput	0.8-1.0 Mtpa	1.3 Mtpa
Lead Grade Mined	7.6%	7.6%
Silver Grade Mined	16.6 g/t	16.6 g/t
Lead Metal Production	53-68 ktpa	93 ktpa
Silver Metal Production	325-425 kozpa	553 kozpa
Lead C1 Direct Cash Cost <sup>2</sup>	US\$0.55-0.65/lb	US\$0.50/lb
Average Annual EBITDA	A\$45-55M	A\$100M
Lead Metal Price <sup>3</sup>	US\$0.90/lb	US\$0.90/lb
Exchange rate – US\$ per A\$13	0.68	0.68

#### Table Notes

- 2. Includes a by-product credit for net silver revenue of US\$0.04/lb (A\$0.06/lb).
- 3. Current Lead metal price and exchange rate.

Notes: 1. For more detail please see Galena ASX announcement of 25 July 2022 (Re-Release: Abra Initial Production Guidance)



## **Equity Raising Overview**<sup>1</sup>

Sources & Uses Summary To 30 June 2023			
Sources of Capital	A\$M	Uses of Capital	A\$M
Group Cash at 30 June 2022	48.2	Abra JV Capital Expenditure	63.1
Galena Share Placement (Net of Fees)	16.0	Abra JV Operating Expenditure	59.0
Toho's 40% Contribution to Abra URF	12.0	Galena Corporate Costs	2.6
Taurus Debt Facilities <sup>2</sup>	36.8	Galena & Abra Exploration Costs	1.7
Revenue	68.5	Financing Costs	13.6
		Group Cash at 30 June 20233	41.5
Total Sources of Capital	181.5	Total Uses of Capital	181.5

#### <u> Fable Notes</u>

#### **Use of Proceeds**

- Placement proceeds will be used to fund Galena's 60% of a temporary A\$30M Unsecured Reserve Facility (URF) for Abra (Toho will contribute their 40%)
- URF will be made available during the critical commissioning and initial ramp-up of the Abra mine up until project completion tests under the Taurus Debt Facilities are met (anticipated 2H CY2023)
- Provides a working capital and cost 'buffer' for Abra to draw in the event of unforeseen circumstances and costs such as weather-related road or port closures or other events
- Undrawn amounts will be immediately returned to Galena and Toho whilst any drawn amounts become unsecured shareholder loans to Abra

Notes: 1. For more detail please see Galena ASX announcement of 26 July 2022 (Galena Successfully Raises \$17 Million)

<sup>2.</sup> US\$25M undrawn Taurus Debt Facilities available, subject to final (standard) CP's. Anticipated final draw-down expected end-September 2022.

<sup>3.</sup> Includes unutilised URF funds not yet returned.

<sup>4.</sup> Assumes lead metal price of US\$0.90/lb and AUD:USD exchange rate of 0.68



## **Galena Mining Limited**

# CAPITAL STRUCTURE As at 30 June 2022 Shares on issue 476M Options/rights<sup>1,2,3</sup> 26M Share price A\$ 16.0c

Market capitalisation A\$ 76M

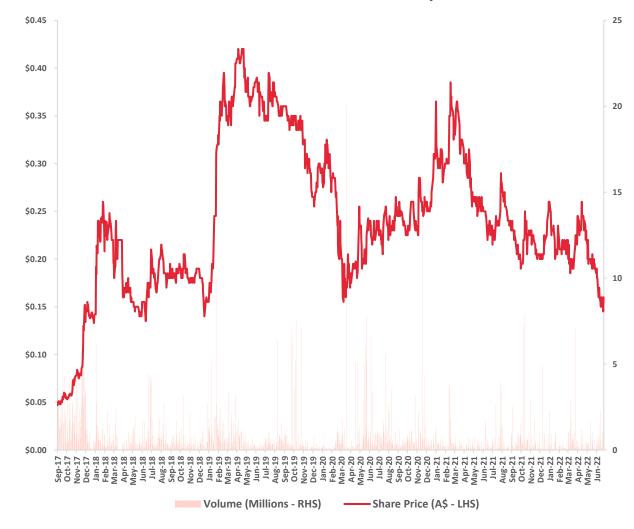
Cash A\$ 48M

Debt A\$ - US\$85M Taurus debt drawn (US\$25M undrawn) 125M

Notes: (1) Options on issue pursuant to Placement in 2019 comprised 1.25M having an exercise price of \$0.50 and expiry date of 26 March 2023, 1.25M having an exercise price \$0.60 and expiry date of 26 March 2023, 1.25M having an exercise price of \$0.50 and expiry date of 17 April 2023 and 1.25M having an exercise price of \$0.60 and expiry date of 17 April 2023. (2) 18.5M contingent performance rights for Directors & Executive. (3) 2.5M employee share appreciation rights.



#### **ASX: G1A Share Price History**





2019 - Abra JV

2010's - Open Rasp mine in NSW(2012), Acquire 100% CBH Resources

2000's - CBH Resources Ltd, Australia. Silver upgrade Chigirishima

- Tianjin & Gunma Kankyo Lead recycling JV's

1990's – JV Dalian Jingya & Guang Ming Co electric components

1980's - Annaka Cadmium Oxide smelter & refinery

1970's - Lead sound insulation boards, SOFT CALM

1960's – Onahama Zinc & Fujioka Iron smelters & refineries established

- Gran Bretana mine Peru & Qaleh Zari mine Iran

1950's – Chigirishima converted from Copper to Lead smelter & refinery

1930's - Toho Zinc Co established from Japan Zinc Smelting Co

Japan contributes 2% of worlds refined lead production (230-250ktpa) Toho top producer in Japan domestic market (100ktpa refined Lead) Toho imports 140-160ktpa Lead concentrate to Chigirishima

TOHO investment in Abra			
Concentrate Supply	Abra	Typical Other	
Time frame	13+ years		
Qty	Min 50ktpa		
Lead grade	75 %	55 - 65 %	
Silver grade	129 g/t	100 - 2,000 g/t	
Deleterious Elements (DE)	1/10 <sup>th</sup> DE	DE	







#### ■ Batteries Automotive (43%) Batteries Other (28%)

■ Export (16%)

Chemicals, Electronics,

Japan Rolled & Extruded Products (4%)



■ China (56%)

■ Germany (3%

■ All Other Countries (6%

Chigirishima Smelter & Refinery, Hiroshima Prefecture

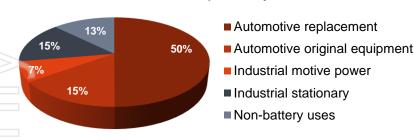


#### **Lead In Our World**

2018 Tesla Model S

87% of lead is used in batteries (lead-acid) as an established 'core' technology

#### Lead consumption by use



- Over 87% of refined lead is used in batteries
  - 65% in the automotive sector as replacement batteries (50%) or original batteries for new vehicles (15%)
  - Growing use in industry for energy storage systems (ESS)



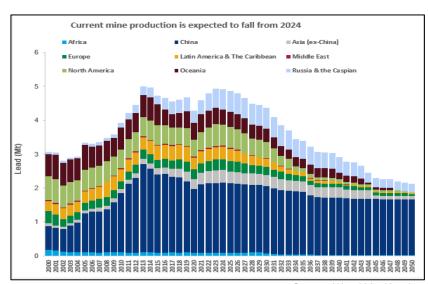
All commercially produced EVs have 12V lead-acid batteries

Source: Wood MacKenzie

~400M lead-acid car batteries are produced each year supplying 1.4 billion vehicles (1 for every 7 humans)

Large majority of commercially produced EVs continue to have 12V lead-acid batteries, to run key functions (including lithium-ion battery management & safety systems) – Lead's low cost, wider variability of operating conditions and dependability are key.

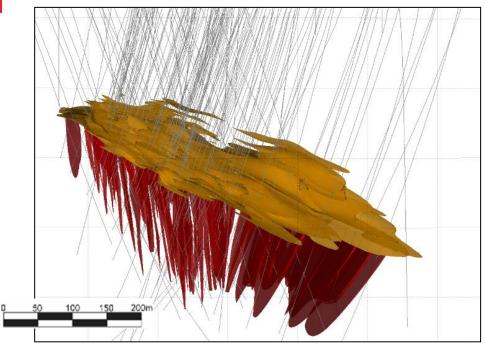
- The lead market is growing Wood MacKenzie predicts demand to be up by 24% by 2031
- Demand
  - Strong demand growth in Asia Continued above trend growth in China and India
  - New growth in non-traditional applications such as battery requirements for mobile phone towers with global 5G roll-out and stationary storage applications, and lead use in photovoltaic cells for solar
- Supply
  - 50 60% comes from re-cycling, new mine supply required for the rest
  - Overall mine production grows near term and then falls from 2024
  - Abra timing & supply included in forecast mine production



Source: Wood MacKenzie

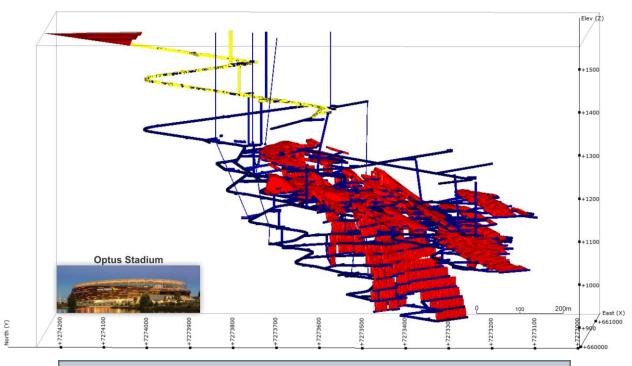


# **Abra Mineral Resource & Updated Mine Plan**



JORC Mineral Resource estimate (April 2021 Resource) at a 5% lead cut-off grade <sup>1</sup>			
Resource classification	Tonnes (Mt)	<u>Lead</u> grade (%)	<u>Silver</u> grade (g/t)
Indicated	16.9	7.4	17
Inferred	17.5	7.0	15
Total	34.5	7.2	16

Notes: 1. For more detail on Mineral Resource Estimate please see Galena ASX announcement of 28 April 2021.



Update Mine Plan– Production metrics <sup>2</sup>			
Mill throughput	1.3Mtpa		
Initial mine life	13-years		
Average LOM lead metal production	93ktpa		
Average LOM silver metal production	553kozpa		

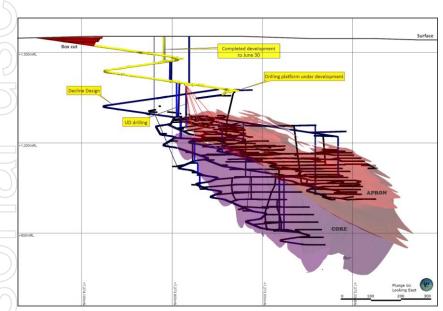
Notes: 2. For more detail please see Galena ASX announcement of 25 July 2022 (Updated Mine Plan)





## **Underground Development**

- First Cut on 5<sup>th</sup> October 2021
- Development to date 1,910m
- Commenced grade control drilling UpperApron (2023 production area)
- First development ore target November 2022



Abra Mine Schematic (June 2022)



Abra Box-Cut, July 2020





## **Abra Processing & Concentrate Production**

- Metallurgical testing confirms high recoveries –
   94% used in FS recovery work
- Conventional 3-stage crushing, grinding, flotation and filtration
- Product to be highest grade primary lead
   concentrate available globally 75% lead and
   80 200g/t silver
- 40% of concentrate production to Toho Zinc on benchmark terms
- 60% of concentrate being Galena portion committed to IXM under 10-year contract providing a significant premium to benchmark (high quality concentrate)



Flotation Test Work.

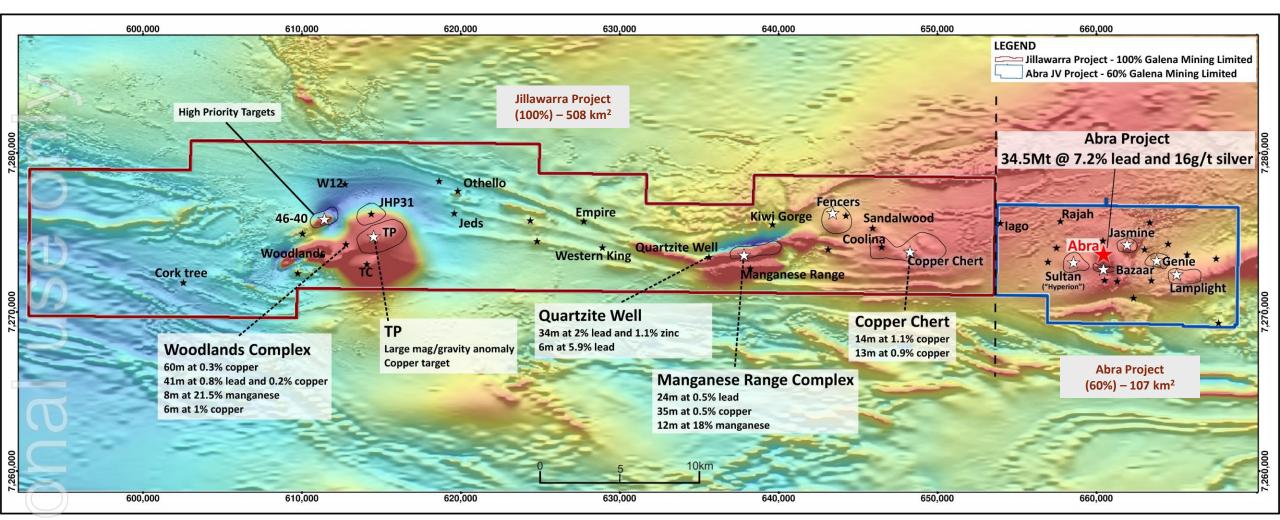


Processing Plant Construction - July 2022





## Mine Being Built Within Potential "Cluster" of Deposits



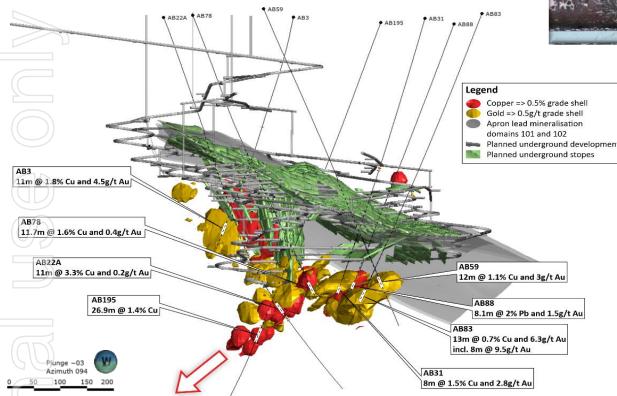
For more detail please reference G1A Investor Update – August 2021, slides 16 to 19 (ASX: 2 Aug 2021)





## Copper - Gold





First ever hole specifically targeting copper and gold, (AB195) provided assay results in February 2021 delivering multiple copper and gold intersections

- Significant intersection showing massive and disseminated chalcopyrite between 360m to 795m down-hole
  - 3.0m @ 4.2g/t gold and 1.1% copper from 671m
  - 1.7m @ 6.9% copper from 698m
  - 8.9m @ 2.3% copper from 773m
  - 26.9m @ 1.4% copper from 764m, including 0.8m at 8.5% copper from 773m
- Next stage work planning is waiting results from down-hole EM survey of AB195 (August 2021)



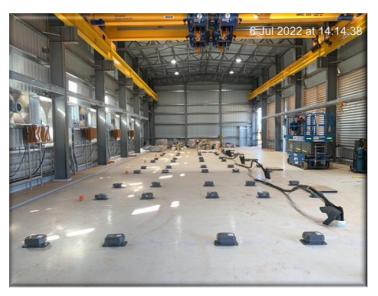


TSF – under construction

16,000 solar panels installed



Core racks & exploration buildings



Power station gas engine shed







Boxcut

**Underground Development** 

Plant Screening Section



Surface Infrastructure





Abra airstrip, July 2022



Abra 280 person village, July 2022



Surface Infill drilling, 2020

