




---

# ***ADVANCING A LARGE NEAR-SURFACE LEAD-SILVER-ZINC DEPOSIT IN WESTERN AUSTRALIA***

INVESTOR PRESENTATION

NOVEMBER 2019

**Pacificico**  
Minerals Ltd  
ASX:PMY

# DISCLAIMER

## **Forward-Looking Statements**

Certain statements in the presentation are or may be “forward-looking statements” and represent the Company’s intentions, projections, expectations or beliefs concerning, among other things, future operating and exploration results or the Company’s future performance. These forward-looking statements speak, and the presentation generally speaks, only at the date hereof. The projections, estimates and beliefs contained in such forward looking statements necessarily involve known and unknown risks and uncertainties, and are necessarily based on assumptions, which may cause the Company’s actual performance and results in future periods to differ materially from any express or implied estimates or projections.

## **General Disclaimer**

The information in this presentation remains subject to change without notice. This presentation may contain information (including information derived from publicly available sources) that has not been independently verified by the Company.

## **Not an Offer**

This presentation is for information purposes only. The presentation does not comprise a prospectus, product disclosure statement or other offering document under Australian law. The presentation does not constitute or form part of any invitation, offer for sale or subscription or any solicitation for any offer to buy or subscribe for any shares in Pacífico Minerals Limited.

## **No Liability**

Pacífico Minerals Limited has prepared this document based on information available at the time of preparation. No representation or warranty, express or implied is made as to the fairness, accuracy or completeness of the information, opinions and conclusions contained in this presentation. To the maximum extent permitted by law, Pacífico Minerals Limited, its related bodies corporate and the officers, directors, employees, advisers and agents of those entities do not accept any responsibility or liability for any loss arising from the use of the presentation or its contents or otherwise arising in connection with it.

## **Competent Person Statements**

The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the ‘JORC Code’) sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves.

The information in this report that relates to Mineral Resources is based on, and fairly reflects, information compiled by Mr David Williams, a Competent Person, who is an employee of CSA Global Pty Ltd and a Member of the Australian Institute of Geoscientists (#4176). Mr Williams has enough experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Williams consents to the disclosure of information in this report in the form and context in which it appears.

The information in this release that relates to Exploration Results is based on information prepared by Dr Simon Dorling. Dr Dorling is a member of the Australasian Institute of Geoscientists (Member Number: 3101 ). Dr Dorling has 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 a Competent Person as defined in the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Dorling consents to the inclusion in the release of the matters based on their information in the form and context in which it appears.

All parties have consented to the inclusion of their work for the purposes of this announcement. The interpretations and conclusions reached in this presentation are based on current geological theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this announcement will therefore carry an element of risks.

# CORPORATE SNAPSHOT AS AT 18 NOVEMBER 2019

## CAPITAL STRUCTURE

SHARES ON ISSUE (BN, UNDILUTED)	<b>2.9</b>
MARKET CAP (A\$M, AT A\$0.008)	<b>23.1</b>
CASH (A\$M)	<b>4.6</b>
ENTERPRISE VALUE (A\$M)	<b>18.5</b>
OPTIONS (M)	<b>452</b> <sup>^</sup>

<sup>^</sup> **Unlisted Options:** 62.5M Expiring 6/5/20, Exercisable at \$0.015. 2M Expiring 23/4/20, Exercisable at \$0.020. 26.5M Expiring 21/11/20, Exercisable at \$0.015. 10M Expiring 16/10/21, Exercisable at \$0.020.  
**Listed Options:** 351M Expiring 21/11/20, Exercisable at \$0.015.

## SHARE PRICE HISTORY

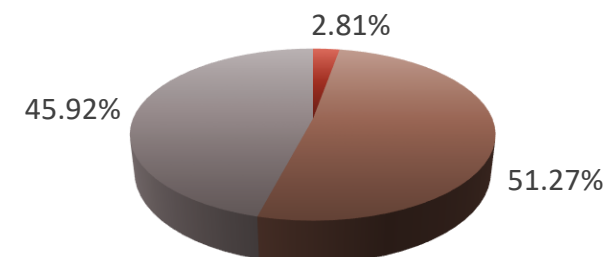


## SIGNIFICANT SHAREHOLDERS

HOLDER	HELD	OWNERSHIP
1. VILLIERS QUEENSLAND PL*	351,092,229	12.16%
2. ZERO NOMINEES PL	255,888,888	8.86%
3. AIGLE ROYAL SUPER FUND PL*	150,000,000	5.19%
<b>TOTAL</b>	<b>756,981,117</b>	<b>26.21%</b>

\* Denotes merged holders.

## SHARE OWNERSHIP STRUCTURE



■ Directors & Management ■ Top 20 Shareholders ■ Other

# BOARD AND MANAGEMENT TEAM



**RICHARD MONTI**  
CHAIRMAN

Geologist with over 30 years' experience in technical, commercial, marketing and finance within the exploration and mining industry.



**SIMON NOON**  
MANAGING DIRECTOR

Simon is an experienced executive with a strong background in strategic management, business planning, building teams, finance and capital raising. Simons has substantial experience in securing and operating joint ventures with mid and top tier miners in a variety of commodities.



**PETER HAROLD**  
NON-EXECUTIVE DIRECTOR

Process Engineer with over 30 years' experience in the minerals industry with extensive experience in development and operation of base and precious metal projects.



**ANDREW PARKER**  
NON-EXECUTIVE DIRECTOR

Lawyer with extensive experience in the exploration and mining industry. Wealth of expertise in corporate advisory, strategic consultancy and vast experience in raising capital.



**AARON KING**  
PROJECT MANAGER

Metallurgist with more than 25 years' experience in the mining and resources sector. Significant experience in study management, detailed engineering design and Project life cycle management.

# SORBY HILLS INVESTMENT HIGHLIGHTS

**Developing a large near-surface and flat lying lead-silver-zinc deposit in WA.**

**Project ideally located close to port and connected by existing roads.**

**JV with China's largest lead smelting and silver producer.**

**EPA approval in place for an open pit operation on pre-native title mining licenses.**



**Compelling economics including modest CAPEX and fast payback.**

**Recent drilling success and substantial resource upgrade to underpin a new PFS in Q1 2020.**

**Resource size and confidence level substantially increasing with each drilling program.**

**Lead batteries are a key element in the transition to a low carbon economy.**



# THE CASE FOR LEAD

## SUPPLY AND DEMAND

- Short-term refined lead stocks are close to record lows.
- Predicted growth in global lead market demand - CAGR of 6.74% between 2018 and 2022<sup>1</sup>.
- Base case shows 'deficit' for mined lead from 2023 without new mine supply.

<sup>1</sup>Business Wire <https://www.businesswire.com/news/home/20180803005303/en/Global-Lead-Market-Analysis-Trends-Forecasts-2018-2022>

<sup>2</sup>[www.kitco.com](http://www.kitco.com)

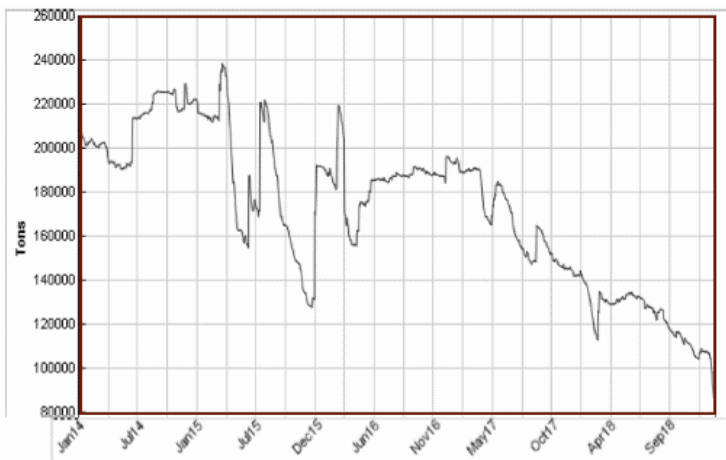
<sup>3</sup>Wood Mackenzie

<sup>4</sup>ILSZG May 2019 Presentation 'Importance of Zinc to the Circular Economy.'

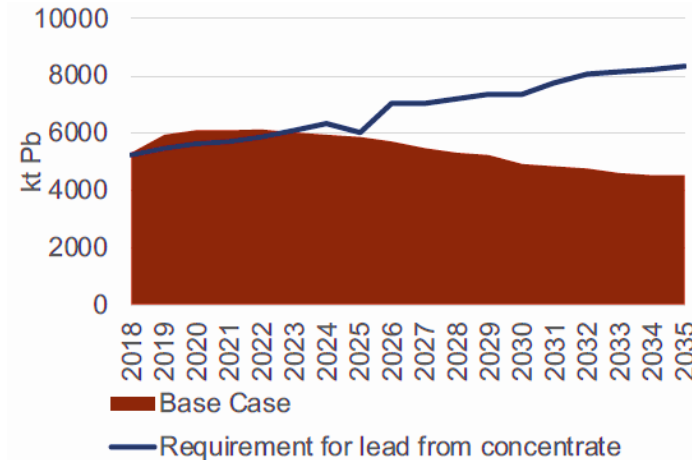
## LEAD BATTERIES SUPPORT THE CLEAN ENERGY TRANSITION

- Lead batteries provide 75% of worldwide rechargeable energy storage<sup>4</sup>.
- Lead batteries are a key element in the transition to a low carbon economy, with unrivalled sustainability credentials (99% of lead batteries are recycled and reused<sup>4</sup>).

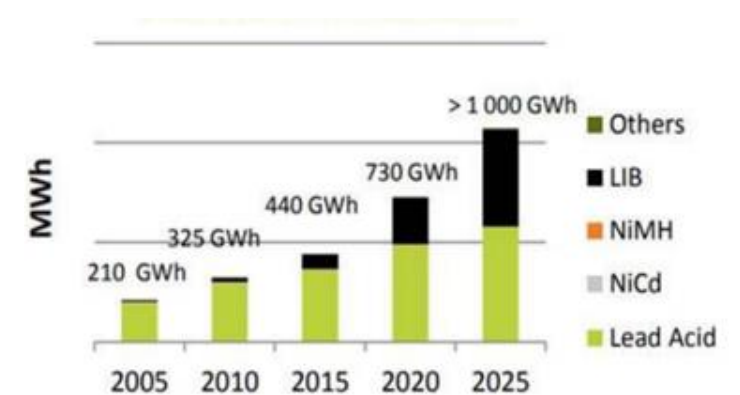
LME LEAD INVENTORY<sup>2</sup>



BASE CASE MINED LEAD PRODUCTION VS. DEMAND<sup>3</sup>



RECHARGEABLE BATTERY GLOBAL MARKET 2000-2025



# LOCATION AND INFRASTRUCTURE

- Located ~50km north-east from the regional centre of Kununurra.
- Existing sealed road to transport concentrate from site to the facilities at Wyndham Port, 150km away.
- Established infrastructure allows for fast tracked production.



Image: Port of Wyndham - Currently Shipping Mineral Concentrates.

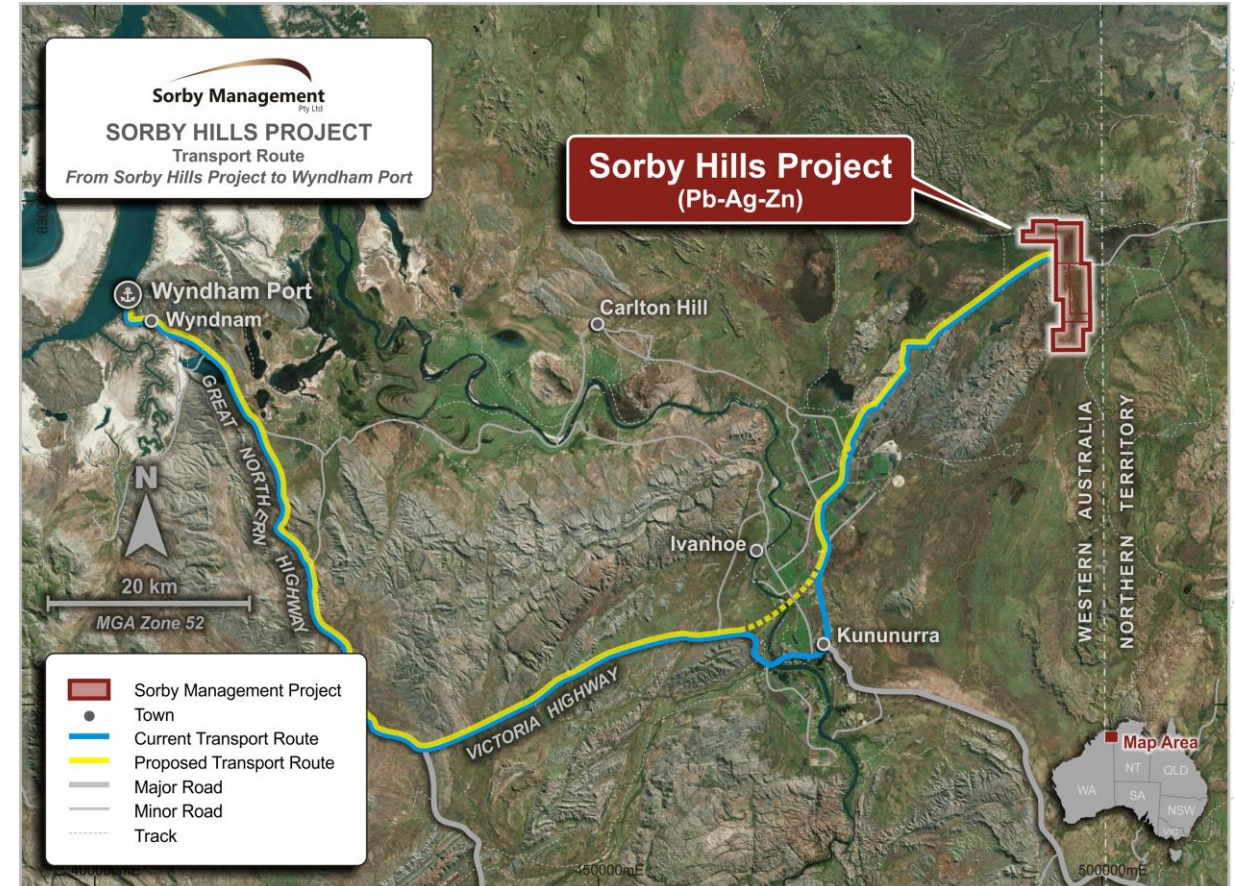
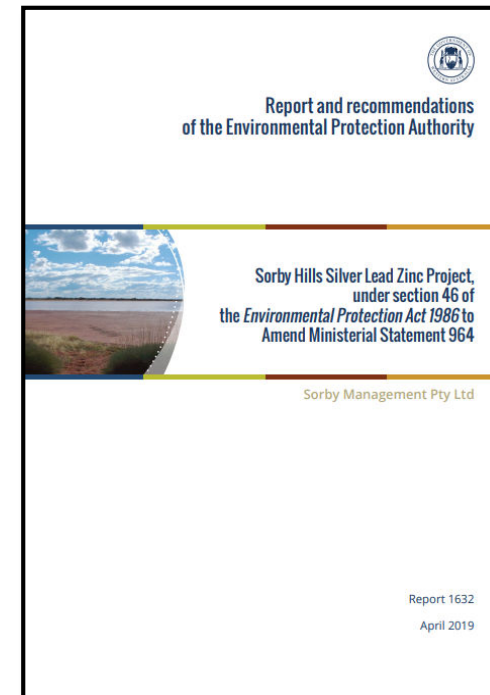
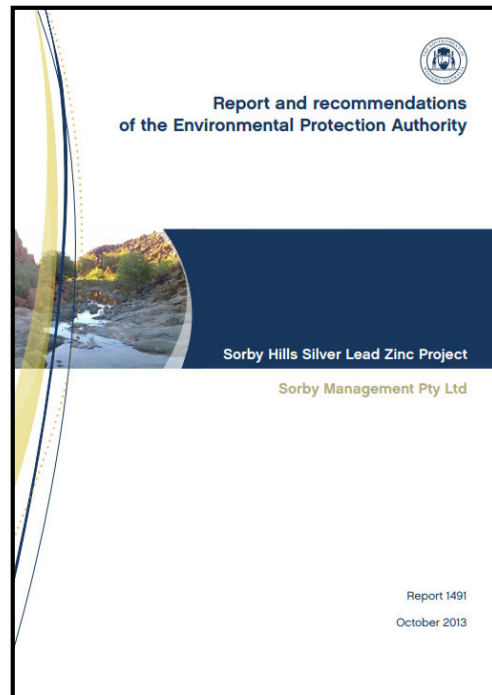


Image: Sorby Hills Regional Location.

# KEY GOVERNMENT APPROVALS SECURED

*“The WA Environmental Protection Authority (EPA) considers that...the Project can be managed in a manner that...avoids significant or unacceptable environmental impacts and risks.”*



*Assessment completed for the development of a lead-silver-zinc open pit mine with infrastructure and processing facilities at the Sorby Hills Joint Venture site.*

Source: PMY ASX Announcements 29 May 2019.



# PRE-FEASIBILITY STUDY HIGHLIGHTS

*“Pre-Feasibility Study returned highly robust financials. Optimised PFS expected Q1 2020.”*

MINING AND PROCESSING		
Initial Mine Life (Years)	8	
Mining Rate (Mtpa)	1	
PRODUCTION		
LOM Lead Metal Production (kt)	249	
LOM Silver Metal Production (Moz)	9.35	
FINANCIAL		
Pre-Production Capital (A\$M)	95.4	
Steady-State Average Cash Flows (A\$M)	60	
KPI ANALYSIS		
	US\$	A\$
Operating Cost \$/lb Lead (Pb in concentrate basis including silver credit)	0.16	0.24
NPV <sub>8</sub> Pre-Tax (A\$M)	243	
IRR Pre-Tax (%)	62	
Payback From Commercial Production (Months)	16	

8 Year Initial Mine Life

1 Mtpa Mining Rate

NPV<sub>8</sub> A\$243M

IRR 62%

CAPEX A\$95.4M

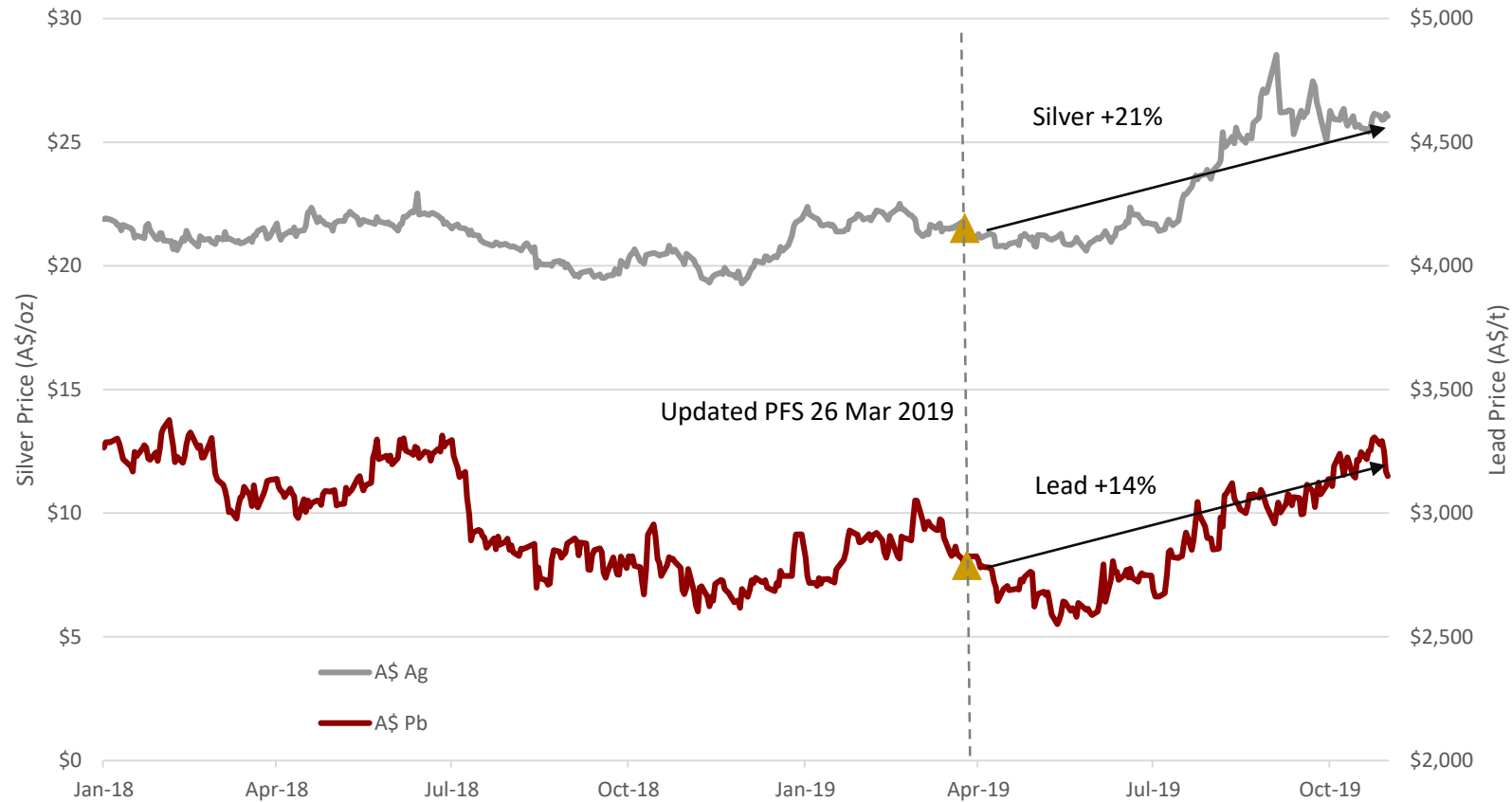
Average Cashflow A\$60M

Capital Payback in 16 Months

Source: PMY ASX announcements 26 March 2019.

Pacífico confirms that all material assumptions underpinning the production target, or the forecast financial information referenced on 26 March 2019, continue to apply and have not materially changed. PFS assumptions include lead price US\$0.92/lb.; Silver price US\$15.40/oz and A\$1=US\$0.70.

# A\$ LEAD AND SILVER PRICES LOOKING GOOD



Source: Terra Studio.

# MINERAL RESOURCE ESTIMATE

JORC MINERAL RESOURCE ESTIMATE AT A 1.0% LEAD CUT-OFF GRADE <sup>1</sup>							
CLASSIFICATION	TONNES (Mt)	Pb %	Ag g/t	Zn %	CONTAINED Pb (Kt)	CONTAINED Zn (Kt)	CONTAINED Ag (Moz)
INDICATED	16.6	3.8	39	0.4	630.8	62.3	20.81
INFERRED	19.4	3.6	38	0.6	707.8	106.7	23.78
<b>TOTAL</b>	<b>36.0</b>	<b>3.7</b>	<b>39</b>	<b>0.5</b>	<b>1,338.5</b>	<b>169.1</b>	<b>44.59</b>

- Global Resource of 36Mt @ 3.7% Pb, 39g/t Ag and 0.5% Zn from 20 metres below surface and open in all directions.
- Resource size and confidence level substantially increasing with each drilling program.

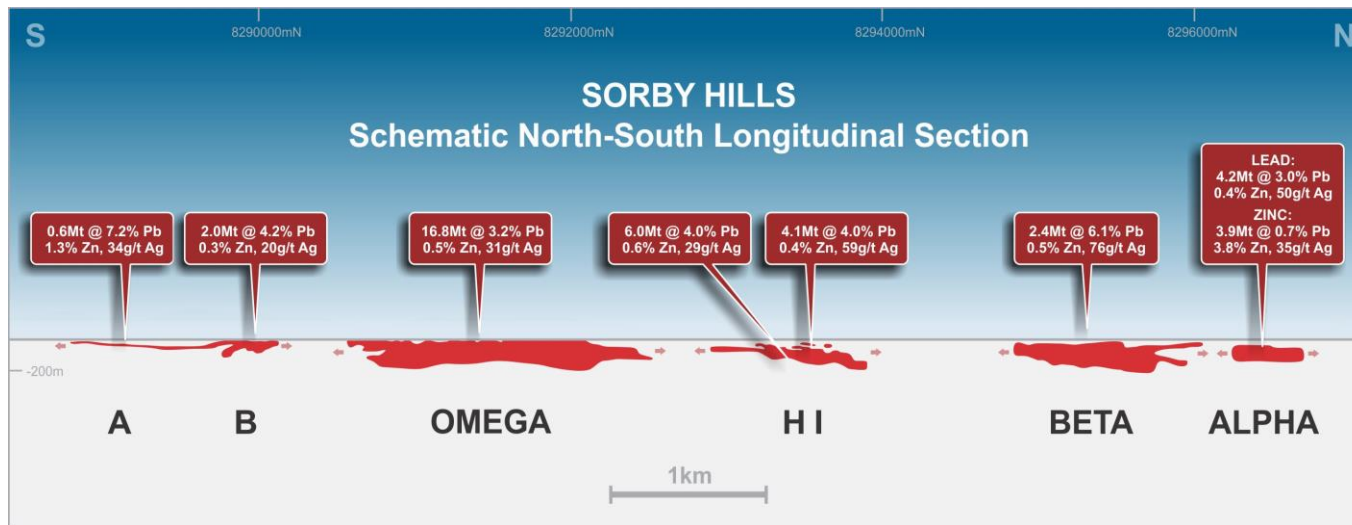
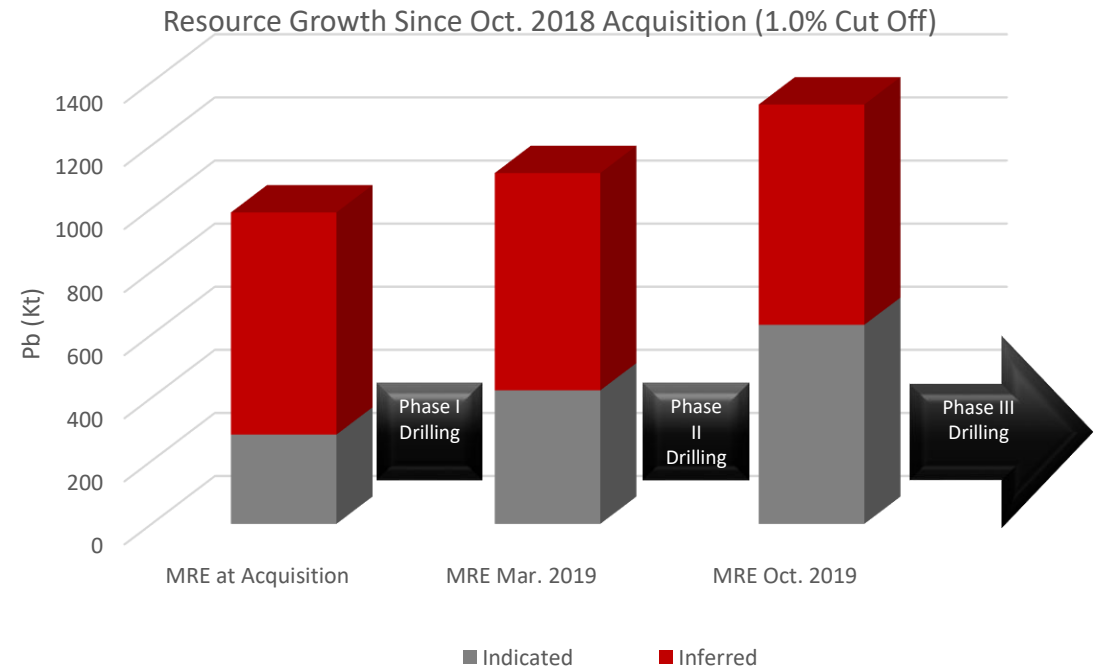


Image: Sorby Hills Looking West Showing Mineralisation. Red Blocks Represent Mineralisation from the Block Model of the MRE.

Source: PMY ASX Announcements 31 October 2019 <sup>(1)</sup>

Pacifco confirms that all material assumptions referenced on 31 October 2019, continue to apply and have not materially changed.



# MINING, METALLURGY, AND PROCESSING

**“Open pit mining, high recoveries and simple processing to produce high quality concentrate.”**

## MINING

- Initial production from 3 open pits over initial 8-year mine life.
- Flat topography and easy free dig in first 30m enables low cost pre-strip and access to ore.
- Flat to gently dipping, shallow-depth lead-silver-zinc deposits minable 5 metre benches.
- Waste rock to be returned to exhausted pits to reduce rehabilitation.

## METALLURGY

- Rougher flotation with sulphidisation testwork confirms up to 96% Pb and 95% Ag recovery on Fresh composites.
- Flotation testwork indicates a concentrate grade of 65% Pb can be produced.
- Simple lead sulphide mineralogy allows low cost beneficiation before grind and flotation.
- Soft ore work index of just 9.7kWh/t.
- Coarse galena with primary grind size of 75 -106mm.

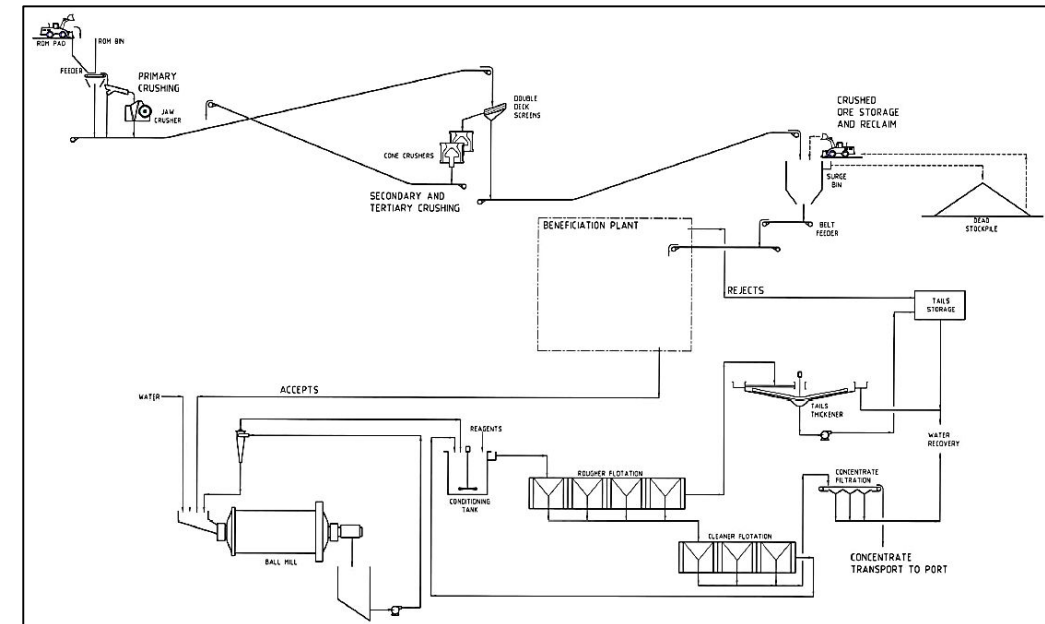


Image: Treatment Plant – Lycopodium Designed Conceptual Flow Sheet.



# SORBY HILLS MVT GEOLOGY

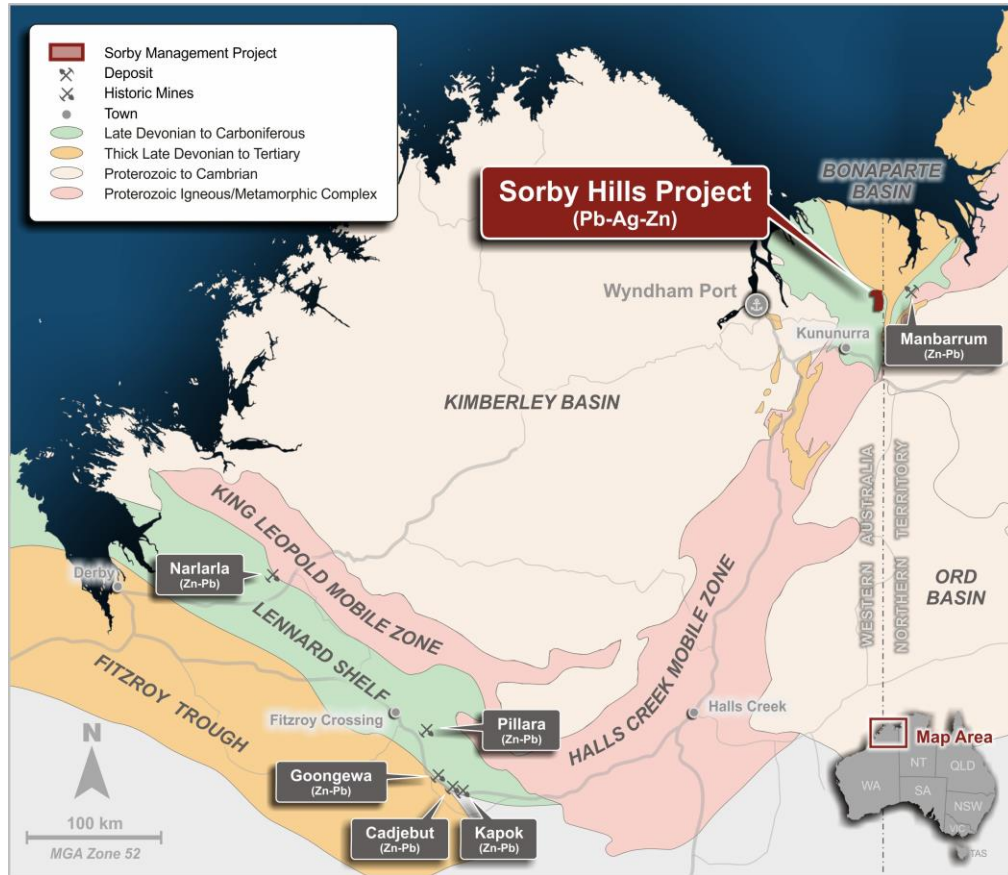
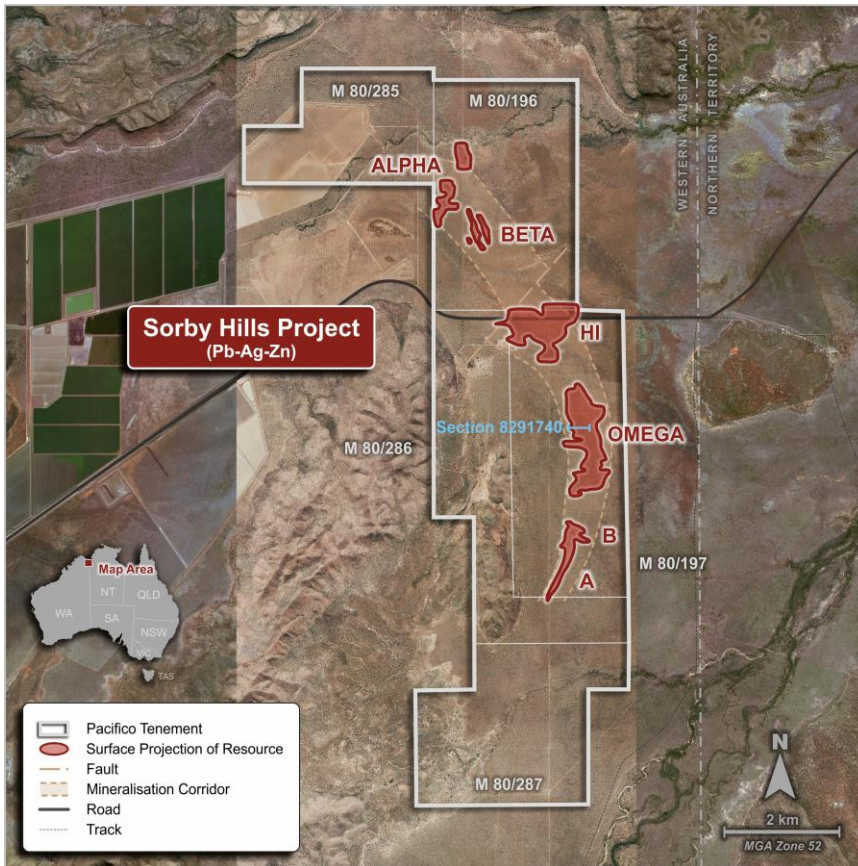


Image: Regional Geological Map.

Source: PMY ASX Announcement 26 March 2019.

- Located in a **world-class Mississippi Valley Type ('MVT')** district.
- **Several MVT deposits** have been mined previously in the Kimberly region.
- Mineralisation is typical **carbonate-replacement style** located at the transition between dolomites in the footwall and overlying siltstones.
- Mostly lead dominant system with high silver tenor within the galena.
- Mineralisation open along strike and down dip

# EXPLORATION UPSIDE



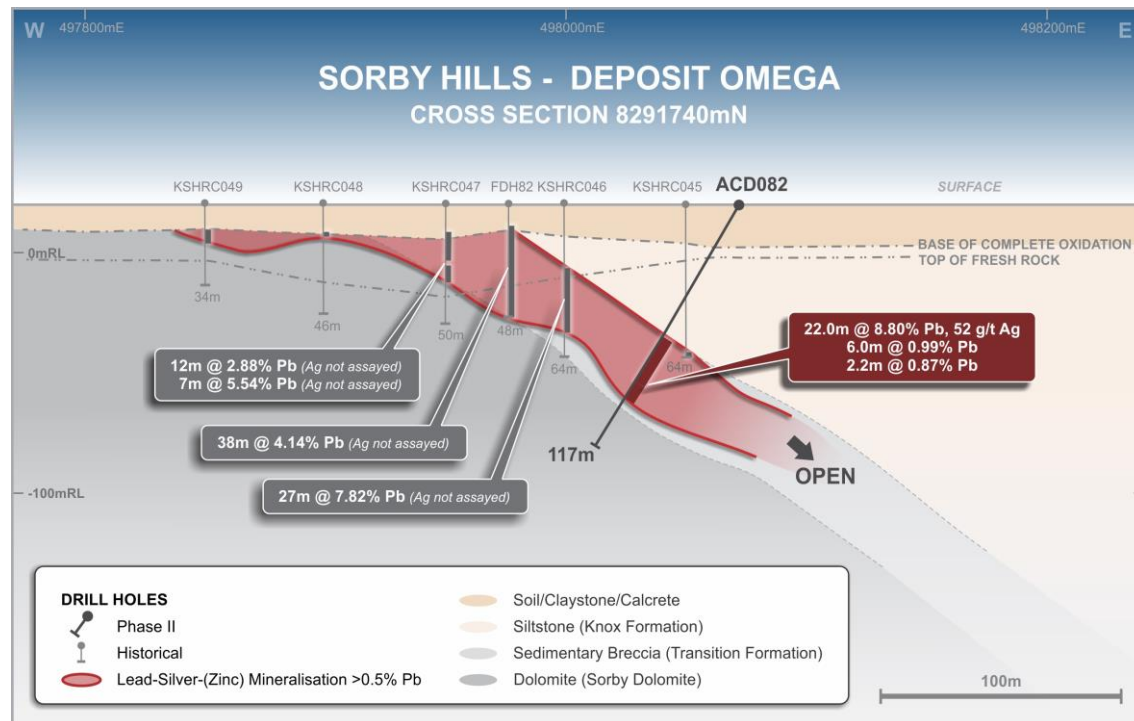
*Image: Sorby Hills Mineralised Corridor Showing Lead-Silver Deposits.*

- Historical information has proved valuable in defining expansions of the resource and as a result the confidence in the model and targeting has increased.
- The Sorby Hills deposit has excellent potential to grow as extensions and targets outside of the main defined deposits are drilled.
- Deposits HI and AB have great potential to be upgraded and expanded into the Omega deposit with further drilling.
- In parallel with advancing its mining studies Pacifico plans to drill priority targets in Q2 2020 aimed at increasing both size and the confidence in the MRE.
- Priority drill targets also include zinc dominant mineralisation at the Alpha deposit, and targets outside of the defined deposits.

Source: PMY ASX Announcements 24 July 2019 and 14 August 2019.

# PACIFICO'S DRILLING HIGHLIGHTS

*“Pacífico’s Phase I and II drilling programs confirmed continuity between deposits C, DE, and F which is now referred to as the Omega deposit with a strike length of 1.7km.”*



Significant intercepts from Phase I and II drilling programs include:

- 20.0m at 7.3% Pb, 56 g/t Ag 0.4% Zn from 11m – Omega Deposit hole ACD046<sup>1</sup>.
- 11.7m at 10.8% Pb, 105 g/t Ag 0.4% Zn from 75.7m – Omega Deposit hole AF005<sup>1</sup>.
- 14.0m at 13.0% Pb 89g/t Ag 1.0% Zn from 24m – Omega Deposit drill hole ACD080<sup>2</sup>.
- 23.0m at 9.0% Pb, 88g/t Ag 1.2% Zn from 59m – Omega Deposit drill hole ACD071<sup>2</sup>.
- 21.0m at 5.0% Pb, 21g/t Ag 0.5% Zn from 23m – Omega Deposit drill hole ACD056<sup>2</sup>
- 22.0m at 8.8% Pb 52g/t Ag 0.3% Zn from 68m (including 16m at 11.7% Pb, 68g/t Ag 0.37% Zn from 63m) – Omega Deposit in drill hole ACD082<sup>2</sup>.
- 11.0m at 6.9% Pb, 26g/t Ag 0.1% Zn from 29m – B Deposit drill hole AB050<sup>2</sup>.



*Image: Crystalline Galena in ACD080 32.8m (Freshly Broken Core). Part of an Interval 25.7m to 37.9m<sup>3</sup>.*

*“Phase III drilling program underway!”*

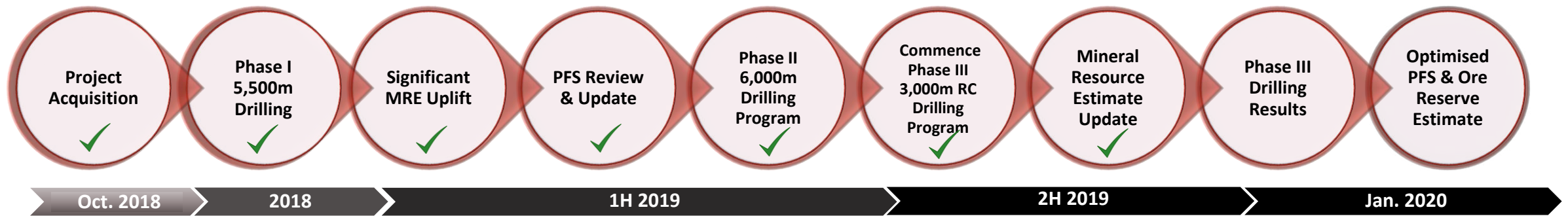
<sup>1</sup> PMY ASX Announcement 14 February 2019.

<sup>2</sup> PMY ASX Announcement 14 August 2019 and 12 September 2019.

<sup>3</sup> PMY ASX Announcement 24 July 2019.

# KEY MILESTONES AND NEWSFLOW

*“Outstanding progress made since Project acquisition. On track for DFS in 2020.”*



## NEAR TERM NEWSFLOW

- Phase III drill program update (Dec. 2019);
- Phase III drilling results (Dec. 2019 / Jan. 2020);
- Optimised Pre-Feasibility Study and Ore Reserve Estimate (Q1 2020); and
- Offtake and strategic investment and financing discussions ongoing.





## CONTACT US



Level 10, 105 St Georges Tce, Perth WA 6000



61 8 6268 0449



[info@pacificominerals.com.au](mailto:info@pacificominerals.com.au)



[www.pacificominerals.com.au](http://www.pacificominerals.com.au)



---

# APPENDICES

# CAPITAL INVESTMENT AND OPERATING COSTS

PRE-PRODUCTION CAPITAL EXPENDITURE (A\$M)	
ON-SITE CAPITAL EXPENDITURE	52
EPCM	8
OWNER'S PROJECT COSTS	10
MINING (INC. DE-WATERING, PRE-STRIP)	14.9
CONTINGENCY	10.5
TOTAL PRE-PRODUCTION CAPEX	95.4

OPERATING COST ESTIMATES		
	A\$/lb	US\$/lb
MINING	0.31	0.22
PROCESSING	0.11	0.07
TCRCs AND OUTBOUND LOGISTICS	0.16	0.11
G & A	0.01	0.01
BY-PRODUCT DEDUCTION FOR NET SILVER REVENUE	-0.36	-0.25
LEAD C1 (ROUNDED UP)	0.24	0.16
ROYALTIES PAYABLE	0.09	0.06

Source: PMY ASX Announcement 26 March 2019.

# OCTOBER MRE AT SELECTED CUT OFF GRADES

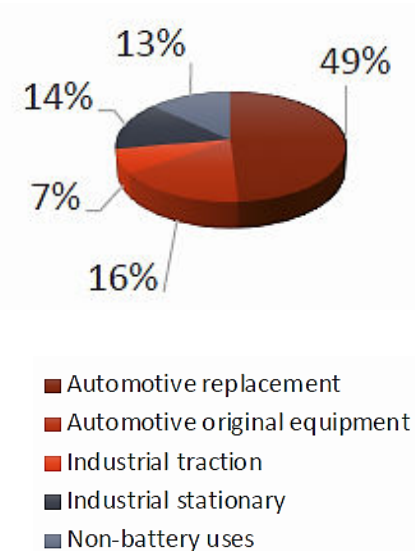
Cut-Off Grade Pb%	JORC Classification	Tonnes (Mt)	Pb %	Zn %	Ag g/t	Contained Pb (Kt)	Contained Zn (Kt)	Contained Ag (Moz)
1.0	Indicated	16.6	3.8	0.4	39	630.8	62.3	20.81
	Inferred	19.4	3.6	0.5	38	707.8	106.7	23.78
	Total	36.0	3.7	0.5	39	1,338.5	169.1	44.59
1.5	Indicated	14.9	4.1	0.4	42	610.1	58.1	20.11
	Inferred	17.0	4.0	0.6	40	675.9	97.6	21.99
	Total	31.9	4.0	0.5	41	1,286.0	155.7	42.10
2.0	Indicated	12.9	4.5	0.4	46	575.2	52.3	18.98
	Inferred	13.5	4.6	0.6	45	616.7	79.6	19.65
	Total	26.4	4.5	0.5	45	1,191.8	132.0	38.63
2.5	Indicated	11.2	4.8	0.4	49	536.9	45.9	17.69
	Inferred	12.3	4.8	0.6	47	589.9	72.8	18.54
	Total	23.5	4.8	0.5	48	1,126.8	120.0	36.23

Note: Tonnes and grades are rounded. Does not include Zn Mineral Resource from the Alpha Zn deposit.  
For further information on the Mineral Resource Estimate refer to PMY ASX announcement 31 October 2019.



# LEAD MARKET OPPORTUNITY – DEMAND BY APPLICATION

## LEAD CONSUMPTION BY SECTOR



- Largest sector of lead demand is automotive (AV) batteries, accounting for more than 86% of refined lead (of which 64% is used in replacement batteries)<sup>1</sup>.
- Wood Mackenzie therefore expects automotive demand to boost lead battery production across 2019<sup>2</sup>. Car ownership in China reached 240M units by the end of 2018 – up 10.5% from 2017.
- EVs require a separate energy storage system to power the lithium-ion propulsion batteries that run their battery management computers and safety systems (i.e. electric braking). Lead is significantly cheaper per unit of storage so it remains the core technology for this application.
- Start-stop automotive technology is becoming more common and places greater power demands on lead batteries – these vehicles will therefore contain 25% more lead per battery<sup>3</sup>. It is forecast that globally approximately 50% of all new vehicles will be SSVs by 2020.
- Rollout of 5G networks will also support demand for lead in 2019 as base stations currently use lead batteries<sup>1</sup>. In China alone, base station production rose by 134% in 2018<sup>4</sup>.
- Lead-acid has a role in the electrification of bikes. There are roughly 15M e-bikes are sold in China alone each year.
- There is growing use of lead in industry for energy storage systems in 2019. Australia alone is tipped to add more than 70,000 home batteries in 2019 due to government subsidies and incentives<sup>3</sup>.

<sup>1</sup> SMM Information & Technology Co Ltd 2018 (<https://news.metal.com/newscontent/100847146/smm-price-forecast-conference-2019--slowing-demand-new-capacity-to-grow-lead-supply-surplus/>)

<sup>2</sup> Wood Mackenzie January 2019 Report 'Lead: 5 things to look for in 2019.'

<sup>3</sup> The Assay Group Mining Magazine (<https://www.theassay.com/articles/lead-5-things-to-look-for-in-2019/>)

<sup>4</sup> RenewEconomy (<https://reneweconomy.com.au/australia-tipped-to-add-70000-home-batteries-in-2019-lead-global-demand-64414/>)

# NON-CORE ASSETS

*“Exploring opportunities to sell or establish Joint Ventures for our non-core assets to realise shareholder value.”*

## BORROLOOLA WEST JOINT VENTURE (NORTHERN TERRITORY)

- Joint Venture Project in the McArthur Basin with Sandfire Resources NL (PMY 51%, SFR 49%).
- Potential for Mt Isa style copper-cobalt-zinc.

## SOUTH AUSTRALIA TENEMENTS

- Prospective for battery minerals (Co, Cu, Mn).

## COLOMBIAN PROJECTS

- Berrio, Urrao and Natagaima Projects are highly prospective for the discovery of economic copper-gold deposits.

