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## UPDATED PRE-FEASIBILITY STUDY CONFIRMS STRONG ECONOMICS OF SORBY HILLS BASE METAL DEPOSIT

Updated Pre-Feasibility Study into the production of high quality, high grade lead-silver concentrate has confirmed the economic viability of a scalable, production opportunity in Western Australia.

### Highlights<sup>1</sup>

- **1Mtpa operation** producing high grade concentrate containing **249kt of lead and 9.35Moz of silver**.
- Initial **8 year open pit mine** life based solely on Indicated Resources.
- Outstanding economics, with **pre-tax NPV (8% discount rate) of A\$243M** and **pre-tax IRR of 62%**.
- Pre-production capital expenditure **A\$95.4M including A\$10.5M contingency**.
- **Pre-tax Payback 16 months** from commercial production.
- Shallow open pit mining with **C1 direct cash cost of production of US\$0.06/lb** including silver credits.
- EPA approval and granted mining leases in place allowing for rapid completion of remaining permitting and other pre-development works.
- Infill drilling program planned for May 2019 targeting an upgrade in Mineral Resource to support **higher throughput in an optimised PFS in Q4 2019**.
- Offtake discussions underway with JV partner (**largest lead smelting company and silver producer in China**).
- Definitive Feasibility Study programs underway.

Pacifico Minerals Limited (ASX: PMY) ('**Pacifico**' or the '**Company**') is pleased to announce the results of an updated Pre-Feasibility Study ('**PFS**') for its 75% owned Sorby Hills Project. The results of the PFS confirm that Sorby Hills is a high quality, high margin base metals project. With mining leases and key permits in place, Sorby Hills is strongly positioned for development.

### Commenting on the results, Managing Director Simon Noon stated:

*"Following a substantial upgrade to the Mineral Resource Estimate in early March 2019, the economic outcomes of this study are compelling and represent an important milestone towards the development of Sorby Hills. Our efforts are now firmly focused on completing phase II of the planned infill and expansion drilling program and again upgrading the Mineral Resource Estimate and targeting an optimised PFS with higher throughput in Q4 this year as well as advancing the Definitive Feasibility Study work programs that have already begun."*

<sup>1</sup>The Pre-Feasibility update is based on 100% of the Project and is not subject to inflation or escalation factors. Pacifico Minerals Limited owns 75% of the Sorby Hills Project. All years are calendar years. All cash costs are calculated on a 100% payability basis. NPV and cashflow numbers quoted in this section include an A\$10.5m capital contingency allowance. Cautionary Statement: 100% of the Mineral Resource Estimate contained in the current mining schedule for Sorby Hills PFS update is classified as Indicated. Process and engineering designs for the Sorby Hills' PFS were developed to support capital and operating estimates to an accuracy of +30% / -20%. Critical assumptions that the PFS was based on are outlined in the body of this announcement. The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement.

The PFS proposes an open-pit operation and a 1.0Mt per annum plant that applies conventional flotation processing. Product will be transported along an existing sealed road to the Port of Wyndham, which is located approximately 150 km from the proposed mine site.

Feed to the mill for the proposed 8 year mine life is comprised of 8.64 Mt of Indicated Mineral Resources. No Inferred Resources were considered for the PFS.

**PFS Cautionary Statement:** The Company believes that the production target, forecast financial information derived from that target and other forward looking statements included in this announcement are based on reasonable grounds. However, neither the Company nor any other person involved in advising on the PFS makes or gives any representation, assurance or guarantee that the production target or expected outcomes reflected in this announcement in relation to the production target will ultimately be achieved.

Investors should note that the Company believes the commodity prices, AUD: USD exchange rate and other variables that have been assumed to estimate the potential revenues, cash flows and other financial information are based on reasonable grounds as at the date of this announcement. However, actual commodity prices, exchange rates and other variables may differ materially over the contemplated mine life and, accordingly, the potential revenue, cash flow figures and other financial information provided in discussions set out in this announcement should be considered as an estimate only that may differ materially from actual results. The Company cautions investors from relying on the forecast information in this announcement and investors should not make any investment decisions based solely on the results.

A number of key steps need to be completed in order to bring Sorby Hills into production. Many of those steps are referred to in this announcement. Investors should note that if there are any delays associated with completing those steps, or completion of the steps does not yield the expected results, the revenue and cash flow figures may differ materially from actual results.

Funding in the order of A\$95.4 million will likely be required to achieve the range of outcomes indicated in this announcement. Investors should note there is no certainty that the Company will be able to raise any additional funding if needed. It is also possible that funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

### Overview of Key PFS Outcomes

Sorby Hills is a large near surface lead-silver deposit in the East Kimberley region of Western Australia, with five granted mining leases. The excellent PFS outcomes confirm the technical and economic robustness of developing an integrated mining and processing operation to produce a high-value, high grade lead-silver concentrate. Key outcomes of the PFS are presented in Tables 1 and 2 below.

Table 1: Key PFS Outcomes - Production Metrics		
	Annual	LOM
Mill throughput	1.0Mt	8.64Mt
Diluted mined ore grade		
- Lead		3.50%
- Silver		43g/t
Life of Mine (LOM)		8 years
Production (metal in concentrate)		
- Lead	31.125kt	249kt
- Silver	1.17Moz	9.35Moz

Table 1: Key PFS Outcomes - Production Metrics		
High-value lead-silver concentrate grade:		
- Lead		65%
- Silver		1270g/t

Table 2: Key PFS Outcomes - Capital Investment, Operating Cost and Project Economics	
	LOM
Capital investment assumptions	
Pre-production capital expenditure	A\$95.4M
Construction Period	12 months
<u>Operating Cost</u>	
Lead C1 direct cost of production <sup>1</sup>	US\$0.06/lb
<u>Financial assumptions and Project economics</u>	
Lead Metal Price	US\$0.92/lb
Silver Metal Price	US\$15.40/oz
Exchange Rate (AUD: USD)	0.70
Pre-tax net present value (NPV) (8% discount rate)	A\$243M
Pre-tax internal rate of return (IRR)	62%
Pre-tax Payback from commercial production	16 months

<sup>1</sup> Includes a by product credit for net silver revenue of US\$0.2372/lb of silver (43g/t Ag (@ US\$15.40/oz).

### Upcoming Project Milestones in 2019

Upcoming value-adding milestone workstreams include:

- Phase II drilling campaign due to commence in April/May with 6,500m of drilling planned.
- Preparation of an updated Mineral Resource Estimate.
- Completion of an optimised Pre-Feasibility Study, targeting maiden ore reserve estimate.
- Pacifico commenced engagement with its JV partner Henan Yuguang as part of the PFS process, receiving a very positive response. The Company plans to continue engagement over coming months with a view to consider formal offtake arrangements.
- Advancing discussions with project financiers – the Company has initiated preliminary discussions with a number of parties regarding project financing including traditional banks and strategic financiers.
- Commence Definitive Feasibility Study.

### Summary of PFS

Pacifico owns 75% of the Sorby Hills lead-silver Project and Yuguang (Australia) Pty Ltd, a subsidiary of Henan Yuguang, owns the remaining 25%. HYG is the largest lead smelting company and silver producer in China and has been among the Top 500 Chinese enterprises and Top 500 China manufacturing enterprises for the past five consecutive years.

The Project was discovered in 1971 and has been the subject of historical (pre-1980) and modern exploration, and preliminary (PFS level) economic studies. There has been no previous mining activity at Sorby Hills, and the deposit does not outcrop. The Project is located within granted mining leases M80/197, M80/196, with three additional peripheral mining leases M80/285, M80/286 and M80/287.





**Figure 1. Location of the Sorby Hills Project Approximately 50km North-East of Kununurra, Western Australia.**

Pacifico undertook this PFS, following completion of the 2018 Phase 1 drilling campaign and several technical study reviews to confirm the technical and economic robustness of developing an integrated mining and processing operation to produce high value, high grade lead-silver concentrate at Sorby Hills.

Working with an update of the most recent Mineral Resource Estimate (see Pacifico ASX announcement of 7 March 2019) ('**March 2019 Resource**'), the PFS envisages a 1.0 million tonne per annum (Mtpa) throughput rate over an initial 8 year mine life. The proposed mine plan targets high grade lead-silver mineralisation, all within Indicated Resources. The PFS combines ore drawn from three open pits with a processing plant employing conventional milling and flotation with a Dense Media Separation (DMS) beneficiation plant between the coarse crush (dry end) and the grind and flotation circuit (wet end). The production rate was selected after analysing previous DMS test work which highlighted the ease of upgrading the grade of the ore via simple gravity separation. Ore sorter technology has advanced since the 2012 PFS, motivating Pacifico to provide a series of master composites to an ore sorter test facility. This will determine if above-standard DMS performance can be achieved through using a combination of optical, density (XRT) and EM sensors to discriminate the colour, density and conductance of lead-silver ore (galena) from waste rock.

The PFS indicates steady state annual production of concentrate containing approximately 31.125ktpa of lead and 1.17Mozpa of silver. Pre-production capital expenditure is estimated to be A\$95.4M (including A\$10.5M contingency) and lead C1 direct cash costs of production of US\$0.06/lb (inclusive of silver by product credits). Using a lead price of US\$0.92/lb and silver price of US\$15.40/oz, together with an exchange rate of A\$1= US\$0.70, results in an estimated NPV of A\$243M (at an 8% discount rate) and an IRR of 62%.

**Introduction**

Sorby Hills is well-located with the availability of crucial infrastructure and ready access to water, public roads and the town of Kununurra. Lead-silver concentrate will be transported by road to the port of Wyndham, approximately 150km from the Project area via sealed roads.

Sorby Hills’ mining leases were granted prior to the Mabo and Wik High Court decisions and therefore, native title has been extinguished over these mining leases.

**Mineral Resource Estimate and Geology**

The Sorby Hills lead-silver mineralisation is hosted within nine discrete deposits which have historically been referred to as Pods. The seven lead-dominant Pods were named as simple letters with A in the south and ending in I to the north, (A, B, C, DE, F, H, I). The J Pod contains lead mineralisation but has no resource estimate and is therefore not considered a deposit. Note there is no G Pod. Drilling campaigns at D and E Pods have now resolved these once separate Pods into a single Pod. The two zinc dominant Pods to the north are called Alpha and Beta. Importantly, Alpha and Beta also contain lead-dominant mineralisation above the zinc mineralisation. It is still unclear why there is such a marked partitioning between the lead-dominant mineralisation and the zinc-dominant mineralisation.

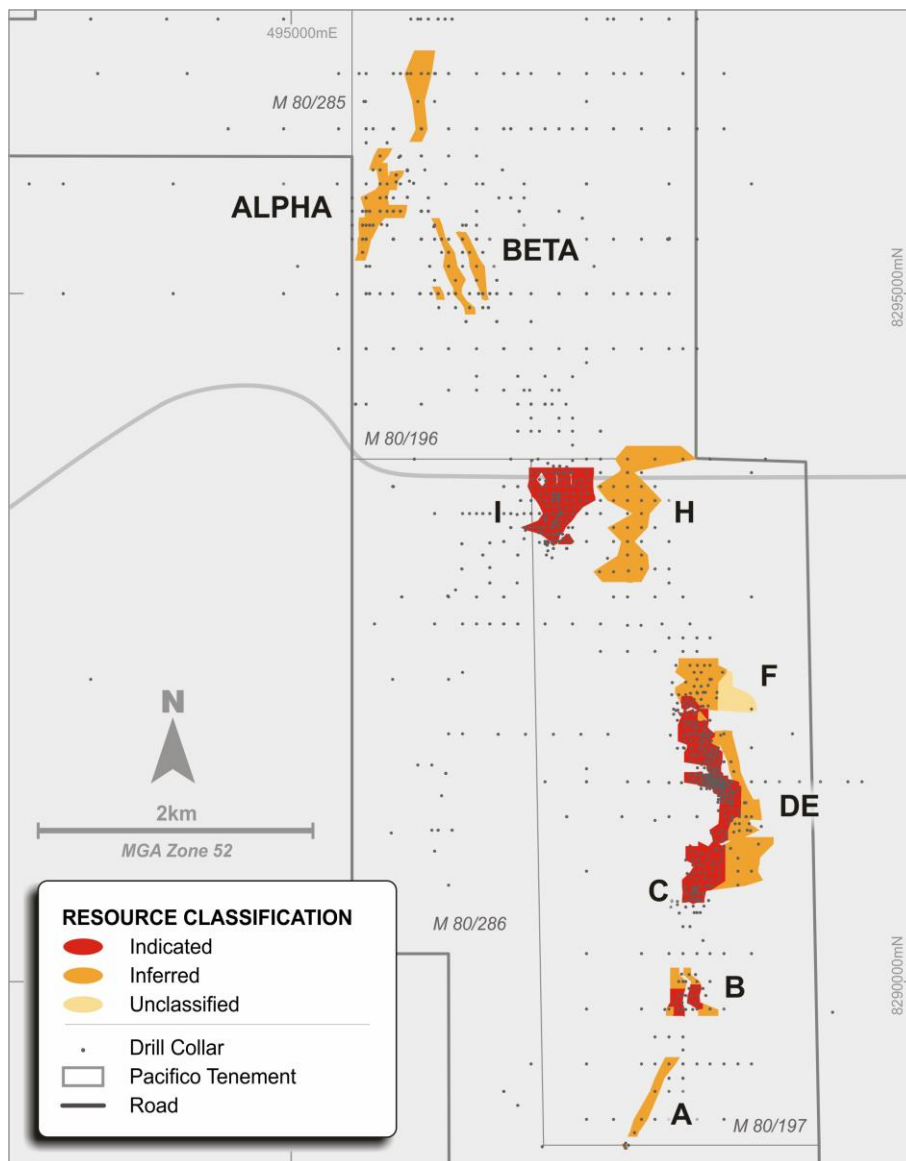


Figure 2. Mineral Resource Block Model Colour Coded by Classification.

These deposits form a north-south arcuate trend approximately 7km long hosted in carbonate sediments on the northern margin of the Burt Range Formation next to the north-eastern flank of the Pincombe Range visible as a prominent topographic feature rising from the Weaber Plain to the east of the Weaber Plains Road. The rocks around Sorby Hills are pervasively dolomitised as distinct from other drilled areas of the Burt Range Formation which is undolomitised. Dolomitisation has been noted as both pre- and syn-mineralisation.

Table 4 confirms the current Mineral Resource Estimate which was completed by Pacifco using data from a total of 1,199 drill holes in the database, of these, 546 holes were drilled prior to 2007 and of these 353 holes were retained. An additional 300 holes were drilled between 2007 and 2018. Consequently, the Mineral Resource has been estimated from a total of 653 drill holes. The March 2019 Resource was estimated under the JORC Code 2012 and released to the ASX on 7 March 2019. A summary of the Estimate is presented in Table 4.

<b>Table 4: JORC Mineral Resource Estimate (MRE) at a 1% Lead Cut-Off Grade</b>			
<b>Resource Classification</b>	<b>Tonnes (Mt)</b>	<b>Lead Grade (%)</b>	<b>Silver Grade (g/t)</b>
Indicated	10.85	3.9	46
Inferred	19.13	3.6	42
Total	29.98	3.7	43

The Company is not aware of any new information or data that materially affects the information included in the 7 March 2019 release and, in the case of the March 2019 Resource, that all material assumptions and technical parameters underpinning the March 2019 Resource continue to apply and have not materially changed.

The March 2019 Resource is based on geological data from 11 historic drilling campaigns as described in Table 5 below. Geological and resource modelling used Datamine software. Wireframing was carried on 50m spaced east-west oriented cross sections and then cross-checked in plan. A 3D geological model is being developed which encompassed the major litho-stratigraphic units, slump breccia zones and faults. Solid wireframes were created for the mineralised Pod at a 2.5% Pb cut-off and a 1.0% Pb cut off.

<b>Table 5: Historic Drill Campaigns</b>			
<b>Campaign No.</b>	<b>Drill Hole Series</b>	<b>Drilling Methods</b>	<b>Year</b>
1	DDH1-DDH65	Diamond coring with unspecified precollar (mud rotary)	1972-1973
2	RI -R29	Rotary Percussion (some open hole RC)	Unknown
3	FDH1 -FDH89	Conventional RC using VPRH rig	1974
4	WBS1001 -WBS1160	Mud rotary and RAB precollars with diamond tail	1975
	WBS2001-WBS2159	Conventional RC using VPRH rig (possibly some open hole)	1975
	WBS3001 -WBS3041	Rotary (probably open hole)	1975
5	WBS4001 -WBS4205	Rotary (Mostly open hole some conventional RC)	1976-1979
6	WBS5001 -WBS5099	Mud rotary precollars diamond tails	1978-1979
7	WBS6002 -WBS6044	Some RAB some mud rotary precollars with diamond tails	1980
	WBS7003 -WBS7035	RAB and conventional RC	1980
8	CSHDD001-CSHDD029	Diamond coring with open precollar (mud rotary)	2007
9	ISHDD001-ISHDD006	Diamond coring with open precollar (RC)	2010
	ISHRC001-ISHRC047	Conventional RC using T685WS Schramm rig	2010



	DSHRC001-DSHRC018	Conventional RC using T685WS Schramm rig	2010
	CSHRC001-CSHRC024	Conventional RC using T685WS Schramm rig	2010
	IPRC001-IPRC004	Conventional RC using T685WS Schramm rig	2010
	DSHDD001-DSHDD002	Diamond coring with open precollar (RC)	2010
	CSHDD0030-CSHDD031	Diamond coring with open precollar (RC) (see 2007 drilling above)	2010
10	KSHRC001-KSHRC108	Conventional RC	2011
11	AB, ACD, AF, AI series	RC and HQ diamond tails	2018

Lead is the primary economic element and was modelled using ordinary kriging. Local dip variations to the stratabound mineralisation were honoured using the dynamic anisotropy functionality within Datamine. Blocks were modelled with dimensions of 10m (X) x 10m (Y) x 5m (Z). Blocks were estimated using a search ellipse of 40m (major) x 40m (semi-minor) x 20m (minor). With a minimum of 5 and a maximum of 25 samples from a minimum of four drillholes per cell interpolation. Search radii were increased, and the minimum number of samples were reduced in subsequent sample searches if cells were not interpolated in the first two passes. Cell discretisation of 4m (X) x 4m (Y) x 1m (Z) was employed.

These methods are believed to be appropriate for the data set and evaluation as a series of open pit mines extracting ore from stratabound style mineralisation. Bulk densities were assigned to each domain based on a formula derived from density test work.

Resource classification for Sorby Hills is based upon a review of critical modifying factors including data density, data quality, geological confidence, geostatistics, variography, and quality of the estimate. On this basis, the Resource has been classified as Indicated in areas where there is high geological confidence, and there is appropriate drill spacing, from generally 50m x 50m but in places 25m x 25m, where there is continuity of geology and grade. Inferred Resources are reported where drill spacing is generally 50m x 50m, and there is not the level of confirmatory infill evidence of geology and grade.

The March 2019 Resource estimate has been prepared assuming mining and processing can be economically undertaken using open pit mining methods and conventional flotation processing. A 1.0% lead cut-off grade was selected having regard to the practical mining and processing and economic modelling associated with the PFS. The assumptions used in the PFS are presented elsewhere in this announcement, and further information concerning the March 2019 Resource is detailed in the Company's ASX release of 7 March 2019.

### **Mining Study**

Open Pit mining will use standard excavators and haul trucks. Ground conditions within the top 20m to 30m are expected to allow free-digging or the use of rippers without the need for drill and blast.

Using available geotechnical data extracted from a Mount Isa Mines Limited report prepared for the Aquitaine Australia Minerals – Mimets Exploration Joint Venture titled 'Sorby Hills Project – Preliminary Feasibility Study. Rock Mechanics dated November 1979, a simple picture of the geotechnical parameters and fracture pattern findings is clearly described.

The primary source of information for the report were detailed structural logs of 11 HQT (61 mm diameter) diamond cores through a part of Deposit I, supported by examination of some earlier diamond drill cores, logs from in and around Deposit I, inspection and face mapping of an exploratory adit at the edge of Deposit I, the outcrops of the Sorby Hills, a report on the structural geology of the area and various Aquitaine drawings.

The HQT diamond drill cores were arranged in the two arms of a cross. Two sets of fractures were found in the 'cross' cores. They were vertical and normal to each other and bedding, forming an orthogonal relationship. Such a relationship is typical of fractures in flat lying, undeformed, sedimentary basins. A set striking 340° – 160° had a frequency of 6/metre normal to its plane and the other striking 070° – 250° had a frequency of 3/m. The similarity of the orientations in the 'cross' and the outcrops of the Sorby Hills, along with an apparently similar pattern in the other cores from Deposit I, suggests that this fracture pattern persists through all of this section of the basin, embracing all the identified deposits of mineralisation.

With no measurements, rock stresses can only be estimated. The greatest principal stress is likely to be vertical and equal to the weight of the overlying rock. With a rock density of around 2.8 t/m<sup>3</sup> and the density of soil, sand, gravel and completely weathered rock around half this, vertical stresses are likely to vary from about 1 MPa at a depth of about 40m to 2.5 – 3.0 MPa at 100m. The corresponding horizontal stress is estimated to be a quarter to a third of these values. The shallow depth of mineralisation and consequent low stresses means that stress is likely to have a negligible effect on rock stability.

To substantiate the earlier geotechnical work, Pacifico plans to drill several PQ diameter diamond drill holes at the start of the Phase II drilling program to commence in April 2019 and site these drill holes in the pit wall areas of the planned Deposit DE open pit. These holes will then be subject to systematic structural and geotechnical logging. This data collection will assist in the planning of suitable bench/berm geometry and inter ramp angles using kinetic analysis and empirical slope design. Kinematic analysis looks at the potential for rock slope failures (plane, wedge, toppling failures) due to discontinuities such as joints, faults and bedding planes. Empirical slope design uses a range of rock mass rating methods. Some geotechnical testing may also be needed to provide more information and confirm pit limits.

**Process Engineering and Metallurgical testwork**

Perth based engineering consultants Lycopodium conducted a PFS review of all processing options which resulted in a conceptual plant design for a 1Mtpa flotation plant and associated infrastructure constructed on site at the Sorby Hills Project. The proposed plant design is relatively conventional and straightforward, reflecting the favourable metallurgical characteristics of the Sorby Hills Deposit. Lycopodium reviewed previous metallurgical test work undertaken by MIM (1979) and AMML (2008). This work confirms Sorby Hills' ore as soft (WI = 9.7kWh/t (MIM) and WI = 9.3 and 9.8kWh/t (AMML)) with coarse galena and an optimised grind size of 75um (at least 80% passing at 75um). Low reagent usage and high recoveries result in the design of a simple flow sheet. Future metallurgical testing will seek to increase the assay suite and determine if there are any deleterious elements in the resulting concentrate that attract penalties. At this early stage with a carbonate/sediment host rock with low pyrite, previous concentrate specifications highlight a low iron and low silica (no quartz), high lead and silver concentrate.



The process flowsheet selected in the PFS has been designed to produce a single high-value, high grade lead-silver concentrate. It comprises a single stage primary crush, followed by a beneficiation plant for DMS using either conventional DMS techniques or the use of ore sorter technology utilising optical, density (XRT) and EM sensors. Prior DMS test work with bench scale heavy liquid separation has shown that the Sorby Hills ore readily separates into two primary 'sink' and 'float' fractions with minor fines. Also, prior metallurgical test work has shown that optimal grade and recovery will be attained by utilising a lead-only flotation circuit and a specific lead collector 'reagent'. The circuit will comprise roughing and scavenging followed by a two-stage cleaning to produce a final high-value, high grade concentrate averaging approximately 65% lead and 1270g/t silver at a 91% recovery for lead and 87% recovery for silver. The lead and silver concentrate grades and recoveries were determined from test work conducted on 11 drill cores (WBS 6024 – 6034) from I Pod by MIM at their Mt Isa metallurgical test facilities in October 1979. This work is reported within a pre-JORC Preliminary Feasibility Study by MIM published in January 1980. As this stage, it appears that the majority of the silver is contained within the galena lattice and no additional process steps are required to optimise the recovery of silver.

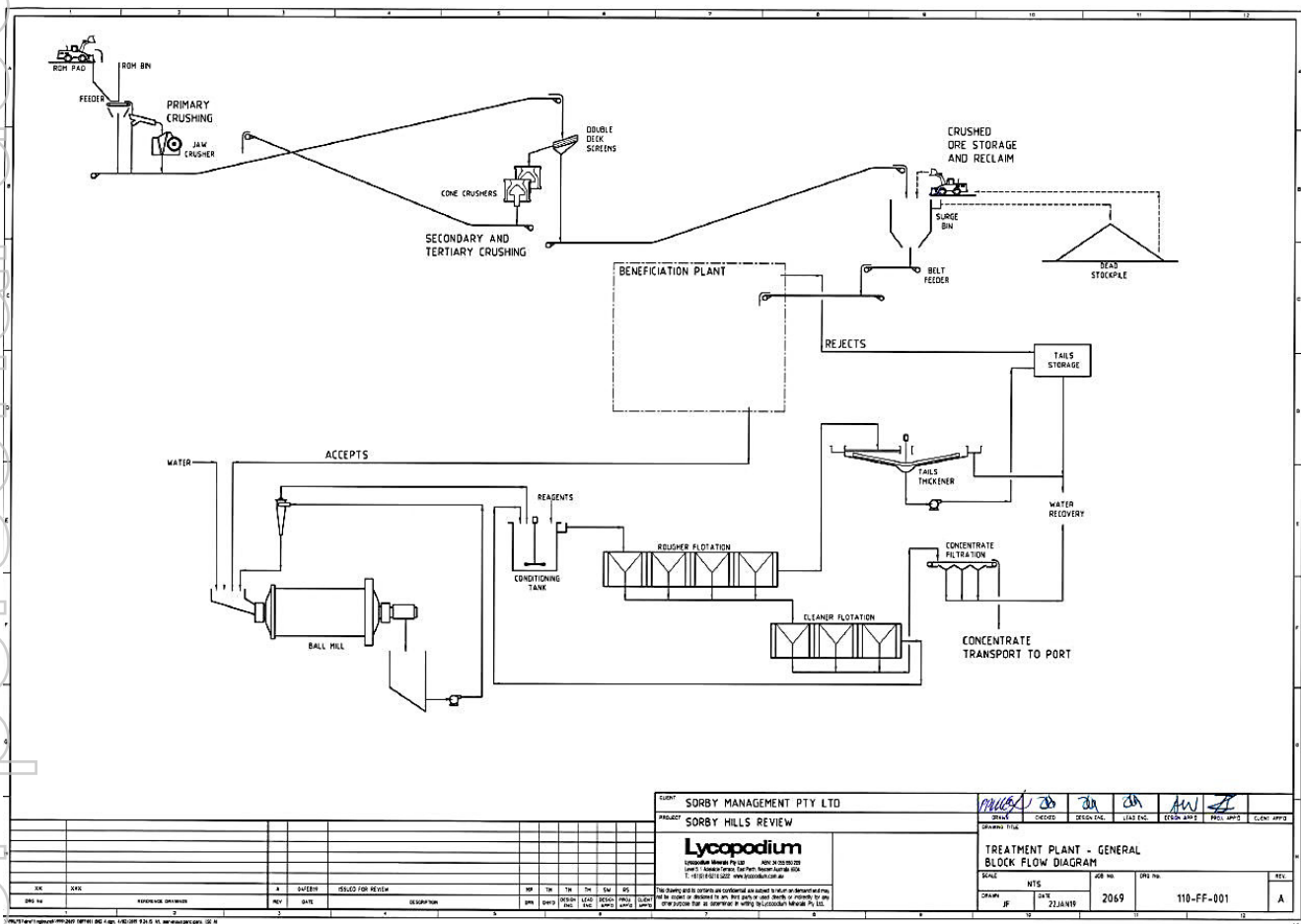


Figure 3. Sorby Hills Process Flow Sheet

### Infrastructure and Services

The Weaber Plains Road is sealed from Kununurra northward to within 2km of the Project area. Landcorp has planned to seal the remainder of the Weaber Plains Road to the WA/NT border. This will then provide a continuous sealed road from 'mine to port'. Grid power utilising Argyle Dam hydroelectricity is also available to within 30km of the Project area. Currently, grid power terminates 20km north of Kununurra on the Weaber Plains Road. The PFS cost 'on site' diesel powered generators, however future studies will determine the economic viability of extending the grid an additional 30km north to the Project area to run the site using grid power.

Surface infrastructure including process plant, administration and maintenance buildings, TSF, waste dumps and evaporation ponds has been designed within an area of 4km<sup>2</sup> to the west of the pits and on the lower slope of the Pincombe Range. Approval for ground clearing of 5.73km<sup>2</sup> for the site chosen has been provided under the EP Act Ministerial Statement No. 964. Manning levels during steady state production will require 50 staff on site with additional contract personnel to operate the mining fleet. Staff and contractors will be housed in Kununurra and commute daily to site. Five administration staff will be located in Kununurra to support the operation.

### **Transport and Logistics**

The lead-silver concentrate will be filtered and then containerised. The sealed containers will be transported by road to the Port of Wyndham. The PFS assumes concentrate will leave Sorby Hills via truck and travel approximately 150km via sealed roads to Wyndham. The Port of Wyndham has the required permits and infrastructure to handle lead sulphide concentrates such as Sorby Hills' and is currently an active handler of similar material for Panoramic Resources Limited.

### **Marketing and Lead Market**

Sorby Hills product is being marketed as a high value, high grade primary lead concentrate with substantial silver credits. Pacifico's research to date suggests that at a 65% contained lead grade, Pacifico's lead concentrate will be amongst the highest grade lead concentrate available commercially in the global market.

As part of the PFS process, Pacifico engaged MineralstoMarket as a consultant for indicative concentrate terms. The Company believes the Sorby Hills concentrate is in high demand and has incorporated the findings regarding likely concentrate terms into the PFS.

Lead is a base metal with liquid daily trading on the London Metal Exchange just like copper, nickel or zinc. Approximately 65% of global lead consumption is used for automotive batteries, both in new cars and as secondary replacement of batteries in the existing automotive fleet. Other uses including stationary batteries (14%), industrial traction batteries (7%) and non-battery use (13%). Lead<sup>1</sup> demand is forecast to grow at 1.9% per year in the 2018 to 2040 forecast period. Core drivers of growth are increasing demand in automotive uses (it should be noted that lithium-ion powered electric vehicles all still use lead-acid auxiliary batteries in the same way as internal combustion engine vehicles do); and stationary battery applications for stable, low-cost energy storage. The lead market is currently in a supply deficit, with very little new mine development over the last decade. At the end of 2017, lead concentrate stockpiles were at or near record lows of 18 days of global smelter requirements<sup>2</sup>.

<sup>1</sup> Source: Wood Mackenzie

<sup>2</sup> Source: LME <https://www.lme.com/Metals/Non-ferrous/Lead#tabIndex=0>

### **Pre-Production Capital Expenditure**

The capital expenditure required up to the start of commercial concentrate production totals approximately A\$95.4M.

A\$80.5M has been allocated to pre-production costs associated with construction of the processing plant including a 15% contingency of A\$10.5M. The remaining A\$14.9M relates to pre-production mining costs.

Table 6: Sorby Hills Pre-Production Capital Expenditure		Approx.
		A\$M
Treatment Plant		40
Infrastructure		6
Tailings Storage Facility		2
Contractor and Construction Costs		4
Subtotal		52
Management Costs (incl. vendor reps)		8
Owners Project Costs		10
Subtotal		70
Contingency		10.5
<b>Project Total</b>		<b>80.5</b>

### Operating Costs and Sustaining Capital

Operating costs are inclusive of mining, processing, infrastructure, waste storage, administration, shipment, treatment and refining charges ('TCRCs') and royalties. General and administration costs have been allowed for in the operating cost estimate including, insurances, freight, consultants, tenement fees, communications, offices and process plant related expenses. These costs have been derived from an assessment of the mining fleet, processing plant, civil engineering and onsite buildings required to support the operation. Entech Mining Consultants ("Entech") has assessed the material handling requirements of the mining operation and costed the mining fleet based on 2 Komatsu PC1250 excavators, 4 Caterpillar 777G haul trucks and 2 Caterpillar D9 dozers plus a number of ancillary equipment including water trucks for dust suppression and service vehicles to support in pit drill and blast, pit de-watering and lighting operations. General and administration costs, freight and Port handling costs are readily determined from existing activity by other mining operations delivering mineral concentrate to the Port of Wyndham. The costs have been considered and reflect general mining operations and Sorby Hills' specific circumstances. LOM operating cost estimates are broken down in Table 7 below.

Table 7: Sorby Hills Average LOM Operating Cost Estimates		
	A\$ /lb	US\$ /lb
Mining	0.26	0.18
Processing	0.09	0.06
TCRCs and outbound logistics	0.19	0.13
By-product deduction for net silver revenue	0.34	0.24
Lead C1 direct cash cost of production (excluding Ag credit)	0.43	0.30
Royalties	0.09	0.06

**Total LOM sustaining capital expenditure is approximately A\$13.8M.**

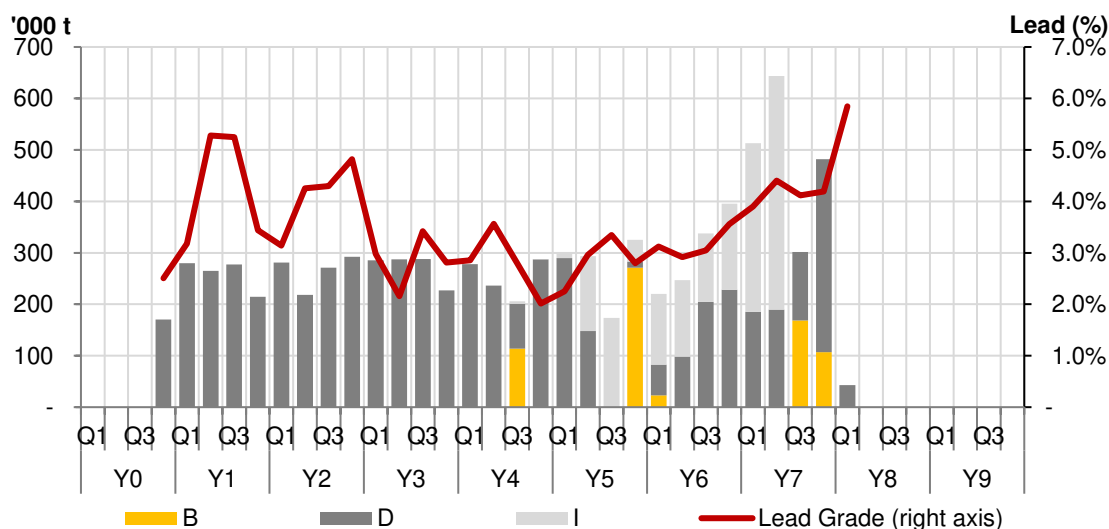
### Production metrics, Ramp-Up Assumptions and Production Profile

Table 8: Production Metrics		
	Annual	LOM
Mill throughput	1.0Mt	8.64Mt
Diluted mined ore grade:		
- Lead		3.50%
- Silver		43g/t

Life of Mine (LOM) recoveries		8 years
- Lead		91%
- Silver		87%
Production (metal in concentrate)		
- Lead	31.125kt	249kt
- Silver	1.17Moz	9.35Moz
High-value lead-silver concentrate grade:		
- Lead		65%
- Silver		1270g/t
Metal payabilities		
- Lead (95% -3% - \$150/t = 86%)		86%
- Silver (95% - 50g/t = 86%)		86%

Table 9: Ramp-Up and LOM Metrics	
Construction period	12 months
Ramp-up period	3 months
First full-year of steady state commercial production	2022
LOM	8 years

The LOM production profile is outlined below



**Financial Assumptions, Financial Outcomes and Project Economics**

Table 10: Financial Assumptions, Financial Outcomes and Project Economics	
Lead metal price	US\$0.92/lb
Silver metal price	US\$15.40/oz
Exchange rate US\$ per A\$1	0.70
TCRC (one factor in reducing % payability from 95% to 86%)	US\$150/t concentrate
- Lead	5%
- Silver	2.50%
Inflation	Modelled in 'real' 2019 terms



Following a detailed analysis of world lead and silver markets, spot prices from the LME were used. The company maintains a conservative view of future metal prices. Assumed lead and Silver prices at spot 21<sup>st</sup> March 2019.

<b>Table 11: LOM Revenue, Costs and Cashflows Estimates</b>	
	<b>A\$M</b>
Total gross revenue	798
Smelter charges and outbound logistics	90
Royalties	43.6
Capital expenditure (pre-production and sustaining)	112
Project cash flow (pre-tax)	401

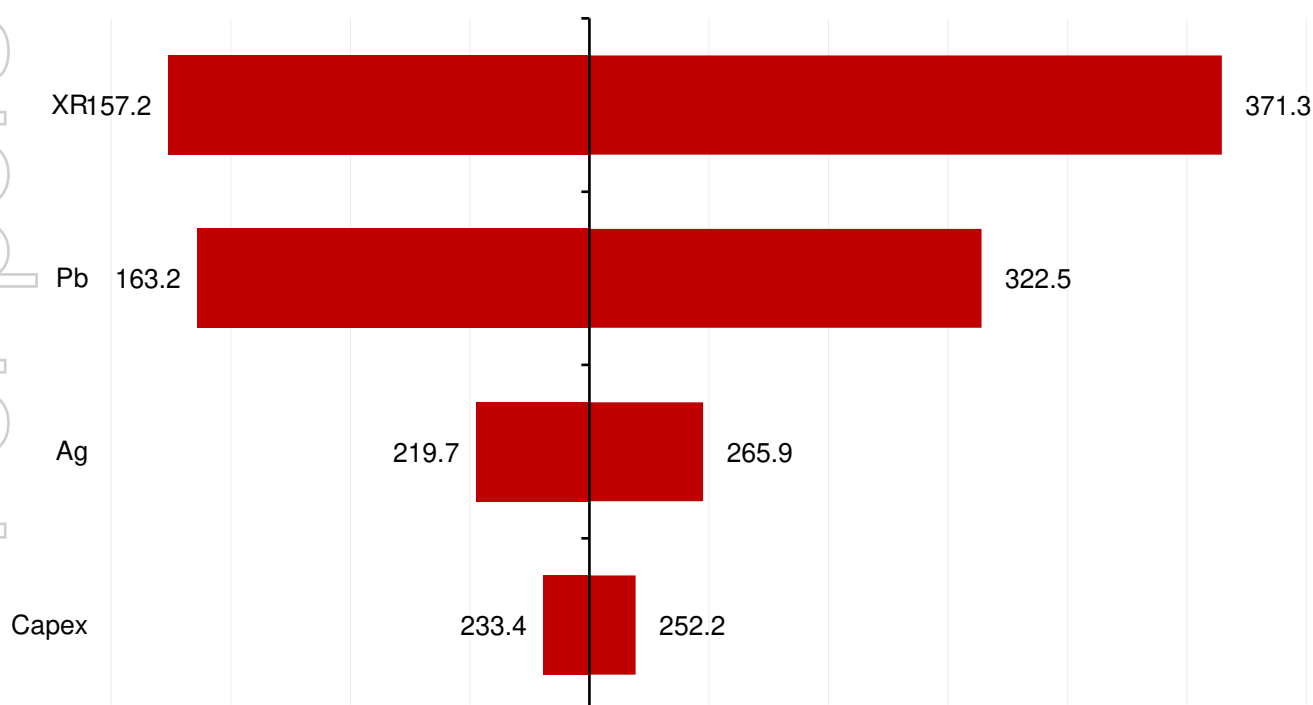
Note: Closure costs have not been estimated for this PFS and are not included in the cash flow projections

<b>Table 12: Cashflow, NPV, Pre-Tax IRR</b>	
Average steady state cash flow	A\$60M
Pre-tax NPV (8% discount rate)	A\$243M
Pre-tax IRR	62%

The discount rate of 8% that was applied in the Updated PFS takes account of the location of the Project and the discount rates used by peer companies to assess Lead- Silver projects in Australia.

### **Sensitivity Analysis**

Sensitivity analyses using +25 / -20% range pivoting on base case assumptions and then varying exchange rate (AUD vs USD), Pb price, Ag price and CAPEX costs to show the effect on NPV sensitivity in the sensitivity bar chart below. A series of other sensitivity analyses have been undertaken to assess, cashflow sensitivity, IRR sensitivity, payback sensitivity.



Sensitivity analysis was also conducted on the pre-tax NPV for a range of discount rates as shown below.

Table 13: Discount Rate vs. Pre-Tax NPV	
Discount Rate	Pre-Tax NPV (A\$)
6%	274M
8%	243M
10%	215M
12%	192M

### **Funding**

The financial, economic and marketing metrics generated under the PFS in addition to the resource base demonstrate that Sorby Hills has the capacity to deliver a high-value project. While the Project is economically viable with robust financial metrics under a scenario in which only indicated resources are mined, given the significant quantity of inferred resources and the confidence that the majority of this material can be converted to a higher confidence resource classification, there is potential for significantly improved outcomes resulting from extensions to mine life.

The main products produced by Pacifico's Joint Venture partner, Henan Yuguang are electrolytic lead, gold, silver and copper which are all registered at LME and LBMA respectively. Pacifico has commenced discussions on possible funding and off take agreements to potentially accelerate production at Sorby Hills.

The Company has formed the view that there are reasonable grounds to assume that a combination of offtake finance, debt and equity will likely be successfully raised and be sufficient to cover the estimated capital and working capital costs as and when required. Going forward, the Company will continue to assess all possible commercial mechanisms to determine the optimum financing solution during the DFS period.

The Company will continue to explore options in relation to securing financing from one or more customer(s) for the Project, as discussions progress in relation to securing binding offtake commitments. Given the favourable Project economics demonstrated by the PFS, and the strong demand for offtake that is currently being indicated by potential customers, the Company believes that the Project has the capacity to attract a reasonable level of debt funding. In addition, the Company may also consider developing the Project in conjunction with one or more strategic partners at the project level.

### **Next Steps**

The Company has defined a detailed program for an optimized PFS which will include programs for a Definitive Feasibility Study leading toward a development decision on the Sorby Hills Project towards late 2020. These programs include:

- Drilling – a series of diamond and RC drilling programs are planned to commence in April/May 2019 that are designed to provide additional data and samples that will further increase confidence in the deposit and the mining studies. The drilling programs will allow an upgrade of resources and provide material for programs described below. Geotechnical drilling of construction sites and proposed pit wall locations is scheduled for later in the year.
- Variability testwork – programs have commenced that will demonstrate the robustness of the process to treat the various defined geo-metallurgical ore types present at Sorby Hills.
- Resource and reserve estimates – results from upcoming drill programs will allow definition of improved Lead and Silver resources and a maiden reserve ore estimate for optimisation of the mining schedule.

- Production of marketing samples – Lead – Silver concentrate samples have been requested in response to enquiries from potential partners to further promote the exceptional concentrate production potential of the Sorby Hills Project.

### **The Study Team**

The Updated PFS was undertaken by independent experts with substantial experience in the base metals sector and resources projects in Australia. Pacifico would like to acknowledge the Study team, which included:

Lycopodium	Study Manager, Engineering Design and Metallurgy review
CSA Global	Mineral Resource Estimate and Geology Review
Entech Mining Consultants	Mining study and financial modelling
Pennington Scott	Hydrogeology Review
Animal Plant Mineral	Reviewed current EPA approval and confirmed pathway to apply for necessary permits and approvals to commence mining

Michael Hannington was engaged by the Company as the Sorby Hills Project Manager.

***For further information or to be added to our electronic mailing list please contact:***

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### **Compliance Statement (JORC 2012)**

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 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 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.