

#### 12 September 2019

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## More Strong Drilling Results from the Sorby Hills Lead-Silver-Zinc Deposit

Pacifico Minerals Limited (ASX: PMY) ('Pacifico' or the 'Company') is pleased to provide an update on drilling results from the Phase II drilling program at its 75% owned Sorby Hills Lead-Silver-Zinc Mine Development Project ('Sorby Hills' or the 'Project').

#### **HIGHLIGHTS**

- Analyses results received from all 75 holes of the Phase II drilling campaign with further impressive intersections.
- Significant new drill intercepts from B Deposit and CDEF deposits include:
  - 8.0m at 13.7% Pb equivalent (12.4% Pb, 51g/t Ag) and 0.3% Zn from 80m CDEF Deposit in drill hole ACD058;
  - 22.0m at 10.2% Pb equivalent (8.8% Pb, 52g/t Ag) and 0.3% Zn from 68m (including 16m at 13.5%Pb equivalent (11.7% Pb, 68g/t Ag) and 0.37% Zn from 63m) CDEF Deposit in drill hole ACD082;
  - 6.0m at 11.4% Pb equivalent (10.5% Pb, 35g/t Ag) and 0.1% Zn from 81m CDEF Deposit in drill hole AF058;
  - 7m at 7.4% Pb equivalent (5.7%Pb, 67g/t Ag) and 0.2% Zn from 80m CDEF Deposit in drill hole ACD087; and
  - **15.0m at 5.6% Pb equivalent** (5.1% Pb, 18g/t Ag) and 0.2% Zn from 15m B Deposit in drill hole AB052.
- Results of Phase II drilling program expected to materially increase Indicated Resources within the next Mineral Resource Estimate ('MRE').
- MRE underway and is expected to be completed in October 2019 and will underpin the upcoming Optimised Pre-Feasibility Study ('PFS').
- Results continue to suggest that further resources will be obtained with 50m spaced drilling targeting shallow extensions.
- As a result of the continuing drilling success and additional funding recently secured by Pacifico a Phase III (3000m RC) drilling program will commence in around 3 weeks.

#### **BACKGROUND**

Pacifico intends to develop a large **near-surface** flat-lying lead-silver-zinc deposit located 50km northeast of Kununurra in Western Australia. After completing the acquisition of a 75% interest in the Sorby Hills Project in late 2018, Pacifico carried out a Phase I drill program that significantly increased the size and confidence in the global MRE (29.97Mt of 4.8% Pb equivalent (3.7% Pb, 43g/t Ag) and 0.6% Zn¹) and underpinned a PFS completed in 1H 2019. The PFS estimated a **CAPEX of A\$95.4M** to develop the mine, with a **16-month payback** and a pre-tax **NPV**<sup>8</sup> **of A\$243M**<sup>2</sup>. Importantly the **PFS only considered resources in the indicated category** (10.85Mt of Indicated Resources with a grade of 5.1% Pb equivalent (3.9% Pb, 46g/t Ag) and 0.4% Zn).

See Appendix 3 for equivalent Pb% calculation assumptions.

<sup>1</sup> See ASX announcement 7 March 2019. <sup>2</sup>The company confirms all material assumptions underpinning the production target or the forecast financial information referenced in ASX announcement 26 March 2019, continue to apply and have not materially changed.





#### PHASE II DRILLING PROGRAM

The Phase II infill and extension drilling program ('Phase II' or the 'Program') was conducted from May to July 2019. An updated MRE, improved metallurgical testwork results, and new mining studies will aim to enhance the economics and improve confidence in the upcoming Optimised PFS.

Phase II focused on shallow mineralisation above 100m depth, that may be mineable by open pit, at B and CDEF deposits (Figure 3). The program provided geotechnical (pit wall stability) information for pit designs and will deliver representative samples for further metallurgical work.

Phase II consisted of 20 reverse circulation ('**RC**') holes, 10 holes drilled with RC pre-collars and diamond tails, and 45 HQ cored diamond holes for a total of 5,959m. Most holes were inclined at 60° and drilled at 270° azimuth (towards the west) and were orientated for structural measurements.

#### **MINERALISATION**

Final laboratory analyses from Phase II confirm the nature and continuity of the mineralisation in areas where there had been no previous drilling. The mineralisation is typical stratabound carbonate-hosted lead-silver-(zinc) mineralisation with associated excellent metallurgical characteristics of both oxidised and sulphide mineralisation confirmed by recent testwork (ASX announcement 17 July 2019).

Modelling of the mineralisation and structure shows that it is offset by syn and post mineralisation faults with minor displacement into several fault-bound compartments. Individual mineralised areas are elongated north-south and vary from 100m to 1km in length north-south, and from 40m to 200m east-west. A large proportion of the mineralisation lies within 50m depth from surface. A simplified overall representation of mineralised blocks denoted by letters B and CDEF is shown in Figure 1.

The limited number of step-out drill holes completed as part of this campaign have shown that the high-grade mineralisation forms variable size lenses of mineralisation within a laterally extensive blanket of mineralisation that is yet to be drill tested beyond its currently known perimeter.

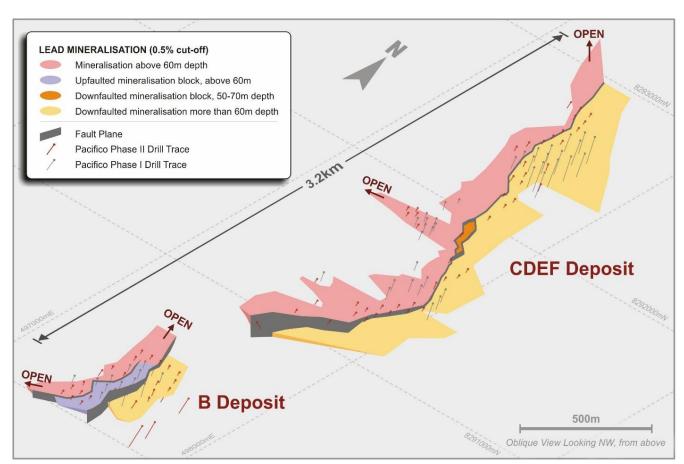


Figure 1: Oblique view of B and CDEF deposits showing a simplified view of the mineralisation and principle fault blocks and Pacifico's Phase I and Phase II drill traces

#### **DRILL RESULTS**

#### **B DEPOSIT**

The B Deposit is interpreted to be divided into four fault-bound segments by northerly trending faults. The fault displacement is collectively up to 40m to the east. The westernmost compartment of the deposit is particularly shallow and commences from 9m below surface, and mostly lies above 50m depth (Figure 5). The B Deposit is open to the south and north and is probable to link up with A Deposit to the south (Figure 6) and possibly also with the CDEF Deposit to the north (Figure 1).

Most B Deposit drill holes have been previously reported by the Company (ASX announcement 14 August 2019). Of the analyses results received since then, the best results include:

- 15.0m at 5.6% Pb equivalent (5.1% Pb, 18g/t Ag) and 0.2% Zn from 15m drill hole AB052; and
- 8.0m at 4.5% Pb equivalent (4.1% Pb, 16g/t Ag) and 0.1% Zn from 52m-drill hole AB034.



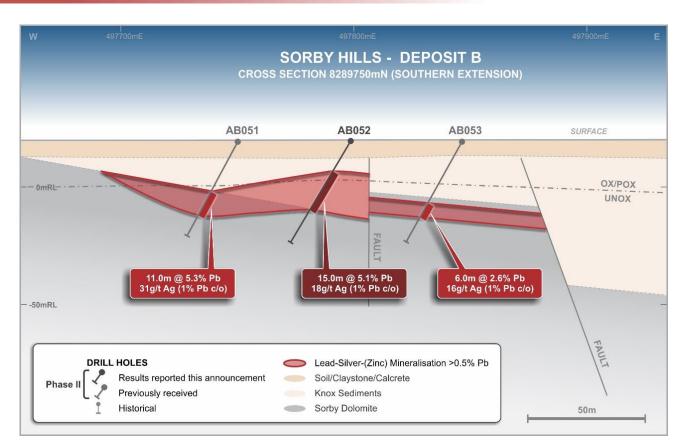


Figure 5: Interpreted geology section 8289750N, B Deposit. Note that all mineralisation on this section lies above 50m depth from surface.

#### **CDEF DEPOSIT**

The additional infill and step-out drill holes in this area have contributed to the robustness of the mineralisation model and, in places, have led to extensions and additional mineralisation. Importantly, the CDEF deposit remains open to the north towards the H Deposit (Figure 6).

A major, steeply east dipping, NNW-trending fault is interpreted to transect the deposit and is considered a control to mineralisation. The fault may have fractured and veined the more brittle Sorby Dolomite, depositing sulphides by replacement (and veining) in the overlying slump breccia zone. The fault displaces the mineralised horizon up to 50m downwards, east of the fault zone (Figure 3).

It is anticipated that the additional data will support an upwards revision of the Indicated Resources at the northern end of the CDEF deposit as a result of the infill and extensional drilling.

Recent results from the CDEF Deposit include:

- 8.0m at 13.7% Pb equivalent (12.4% Pb, 51g/t Ag) and 0.3% Zn from 80m –drill hole ACD058;
- 22.0m at 10.2% Pb equivalent (8.8% Pb, 52g/t Ag) and 0.3% Zn from 68m (including 16m at 13.5%Pb equivalent (11.7% Pb, 68g/t Ag) and 0.37% Zn from 63m) –in drill hole ACD082;
- 6.0m at 11.4% Pb equivalent (10.5% Pb, 35g/t Ag) and 0.1% Zn from 81m drill hole AF058; and
- 7m at 7.4% Pb equivalent (5.7% Pb, 67g/t Ag) and 0.2% Zn from 80m –drill hole ACD087.



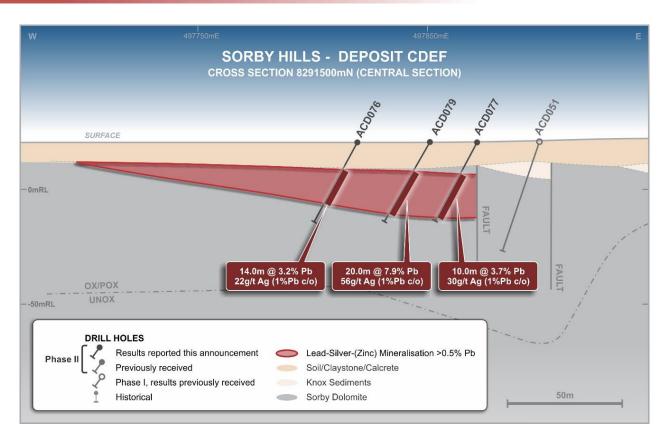


Figure 2: Interpreted geology section 8291500N, CDEF Deposit.

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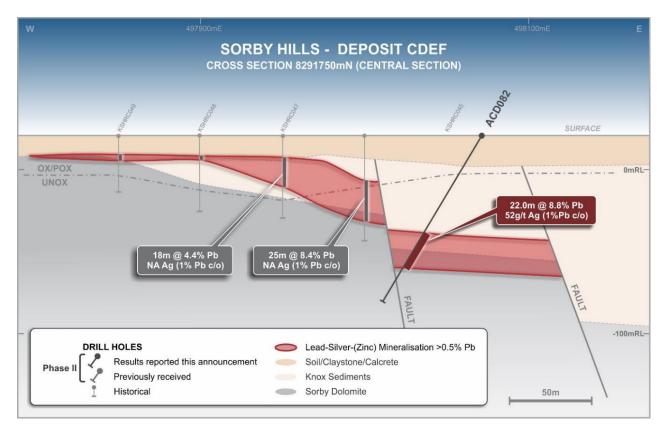


Figure 3: Interpreted geology section 8291750N, CDEF Deposit, central section.



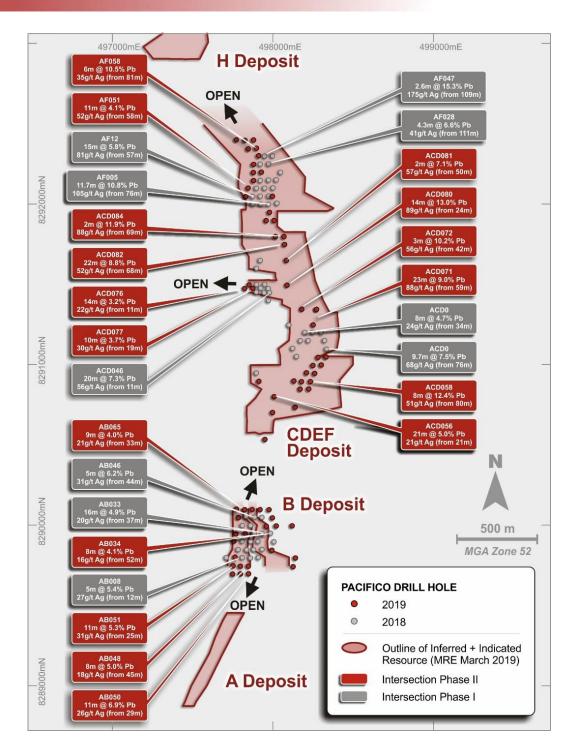


Figure 4: Plan of A, B and CDEF Deposits. Highlights of intersections to date from Pacifico Phase I and II drilling campaigns. Full list of intersections for Phase I in Appendix 1 ASX Announcement 6 May 2019; and for Phase II in Appendix 1 of this announcement. MRE Inferred + Indicated Resource outlines as per ASX Announcement 7 March 2019. Plan shows Pacifico drill holes only.

#### PHASE III DRILLING PROGRAM

As a result of the continuing drilling success and additional funding recently secured by Pacifico a Phase III (3000m RC) drilling program will commence in around 3 weeks. The program will aim to continue adding to shallow Indicated Resources, and to increase the Inferred Resource inventory. Further details on the Phase III drilling program will be provided in due course.



#### **MRE POTENTIAL UPSIDE**

In parallel with advancing its mining and metallurgical studies Pacifico plans to continue with additional drilling in 2019 and 2020 to expand the Indicated Resource of the B and CDEF deposits, and convert Inferred Resources at the A, H, I, Alpha and Beta deposits to Indicated Resources (Figure 6). Other drilling targets include extensions to the zinc dominant mineralisation at the Alpha Zinc Deposit and targets outside the defined deposits for both lead and zinc (also silver).

It is expected that the deposit size at Sorby Hills will continue to grow significantly as extensions and other targets outside of the main defined deposits, based on both historical and Pacifico drill programs, are drilled and added to the resource base.

A revised MRE is expected to be completed in October, ahead of an updated and optimised PFS.

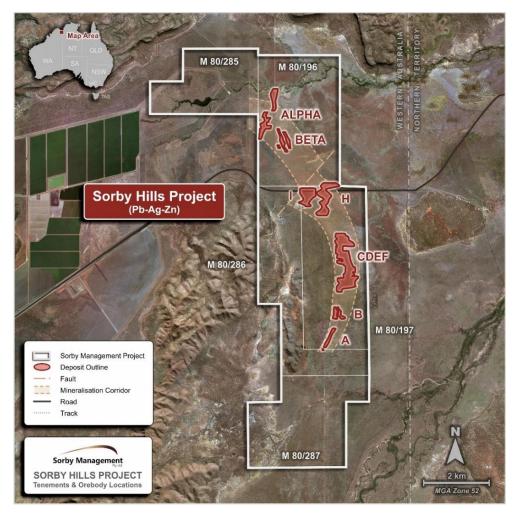


Figure 6. Sorby Hills mineralised corridor showing Lead-Silver Deposits with a global MRE totalling 30Mt @ 4.8%Pb equivalent (3.7% Pb, 43 g/t Ag) and 0.6% Zn as per ASX announcement 7 March 2019.

#### FOR FURTHER INFORMATION, OR TO BE ADDED TO OUR ELECTRONIC MAILING LIST, PLEASE CONTACT:

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#### **ABOUT PACIFICO MINERALS LIMITED**

Pacifico Minerals Limited ('Pacifico') (ASX: PMY) is a Western Australian based development and exploration company. The company is currently focused on advancing the Sorby Hills Lead-Silver-Zinc Joint Venture project in WA. Pacifico owns a 75% interest in the Joint Venture with the remaining 25% (contributing) interest held by Henan Yuguang Gold & Lead Co. Ltd.

#### ABOUT HENAN YUGUANG GOLD AND LEAD CO LTD

Henan Yuguang Gold and Lead Co., Ltd was established in 1957 by the government of Jiyuan City which is in Henan Province in North China. In July 2002, HYG (exchange code: 600531) was listed on the Shanghai Stock Exchange (SSX). Current ownership is approximately 29.61% by Jiyuan City. 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 last five consecutive years. The main products produced by HYG are electrolytic lead, gold, silver and copper which are all registered at LME and LBMA respectively. In 2017, HYG produced 415,100 tonnes of electrolytic lead, 110,000 tonnes of copper, 958 tonnes of silver, 7,383 kg of gold and achieved sales of about US\$2,684 million. HYG's plants are largely modern, focussed on development of industrial technology and are environmentally friendly. Its recently refurbished lead smelting plant has achieved full automation. More information can be found on the HYG website; http://www.yggf.com.cn/en/.

#### COMPETENT PERSON STATEMENT AND JORC INFORMATION

The information contained in this announcement that relates to geology and exploration results is based, and fairly reflects, information compiled by Mr David Pascoe, who is a Member of the Australian Institute of Geoscientists. Mr Pascoe is a consultant to Pacifico Minerals Limited. Mr Pascoe has sufficient experience which is 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, Mineral Resources and Ore Reserves'. Mr Pascoe consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The interpretations and conclusions reached in this announcement 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.

#### FORWARD LOOKING STATEMENTS

Certain statements in this document are or maybe "forward-looking statements" and represent Pacifico's intentions, projections, expectations or beliefs concerning among other things, future exploration activities. The projections, estimates and beliefs contained in such forward-looking statements necessarily involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Pacifico, and which may cause Pacifico's actual performance in future periods to differ materially from any express or implied estimates or projections. Nothing in this document is a promise or representation as to the future. Statements or assumptions in this document as to future matters may prove to be incorrect and differences may be material. Pacifico does not make any representation or warranty as to the accuracy of such statements or assumptions.



#### **APPENDIX 1**

# TABLE OF SIGNIFICANT RECEIVED RESULTS, 1% Pb OR 1% Zn CUT OFF, MINIMUM 2m INTERSECTION, MAXIMUM 3m INTERNAL WASTE <1% Pb

Deposit	Hole ID	From (m)	To (m)	Interval (m)	Pb%	Zn%	Ag g/t
В	AB007	12	17	5	1.81	0.04	9
В	AB034	52	60	8	4.12	0.13	16
В	AB040	53	66	13	2.42	0.15	10
В	AB048	45	53	8	4.98	0.68	18
В	AB049	40	42	2	2.68	0.19	14
В	AB050	29	40	11	6.91	0.12	26
	Incl	29	36	7	9.00	0.08	31
В	AB051	25	36	11	5.31	0.37	31
	Incl	25	31	6	8.72	0.27	46
В	AB052	15	30	15	5.10	0.15	18
В	AB053	31	37	6	2.62	0.05	16
В	AB055	107	110	3	2.9	0.64	12
	and	115	117	2	5.04	0.55	12
В	AB056	55	60	5	4.16	0.17	10
В	AB057	10	12	2	5.49	0.07	10
В	AB058	21	23	2	1.04	0.24	6
В	AB059	28	30.5	2.5	7.01	0.13	26
В	AB060	71	80	9	3.25	0.22	12
В	AB063	60	62	2	1.26	2.49	133
В	AB064	16	21	5	3.38	0.15	19
В	AB065	33	42	9	3.97	0.47	21
CDEF	ACD034	55	57	2	1.16	0.03	33
CDEF	ACD055	18	32	14	2.47	0.15	17
	and	39	44	5	4.49	0.28	19
CDEF	ACD056	23	44	21	5.04	0.52	21
CDEF	ACD057	64	67	3	4.45	0.49	19
CDEF	ACD058	80	88	8	12.35	0.31	51
CDEF	ACD061	57	65	8	1.37	0.24	8
CDEF	ACD063	95	103	8	2.55	0.43	11
CDEF	ACD067	69	76	7	0.10	2.00	43
	incl	69	71	2	0.17	4.71	130
CDEF	ACD068	64	66	2	1.91	0.45	17
CDEF	ACD070	63	65	2	1.22	2.80	11
CDEF	ACD071	59	82	23	9.03	1.17	88
	incl	59	75	16	11.91	1.54	116
CDEF	ACD072	42	45	3	10.2	0.84	56
CDEF	ACD073	79	89	10	3.78	0.85	27

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Deposit	Hole ID	From (m)	To (m)	Interval (m)	Pb%	Zn%	Ag g/t
CDEF	ACD076	11	25	14	3.21	0.11	22
	incl	13	17	4	5.71	0.13	48
CDEF	ACD077	19	29	10	3.69	0.11	30
CDEF	ACD079	16	36	20	7.91	0.18	56
CDEF	ACD080	24	38	14	13.00	0.99	89
	incl	28	36	8	20.70	1.12	139
CDEF	ACD081	50	52	2	7.10	0.21	57
	and	74	80	6	1.76	0.67	15
CDEF	ACD082	68	90	22	8.82	0.34	52
	incl	63	84	16	11.75	0.37	68
CDEF	ACD083	49	52	3	2.52	0.48	29
	and	59	62	3	3.14	0.2	21
CDEF	ACD084	69	71	2	11.90	0.9	88
CDEF	ACD085	35	40	5	3.25	2.93	58
CDEF	ACD086	71	74	3	2.37	0.27	22
CDEF	ACD087	80	87	7	5.68	0.16	67
CDEF	ACD089	57	60	3	1.75	0.1	9
CDEF	AF004	58	67	9	3.60	0.08	24
CDEF	AF051	58	69	11	4.09	0.06	52
CDEF	AF052	51	55	4	5.1	0.09	17
CDEF	AF054	76	83	7	2.21	0.64	28
CDEF	AF055	78	84	6	2.24	0.18	78
CDEF	AF056	85	91	6	3.72	0.1	41
CDEF	AF057	75	82	7	1.27	0.09	12
CDEF	AF058	81	87	6	10.46	0.07	35
CDEF	AF060	68	70	2	2.57	0.06	10
CDEF	AF061	88	97	9	3.92	0.09	17

Holes with recently obtained analyses and calculated intersections (subsequent to announcement to ASX of 14 August 2019) are highlighted in orange.

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Holes where no analyses >1%Pb were received are not included. These drill holes do not fall within modelled mineralisation and are considered unlikely to be included in future resource or reserve estimates.



### **APPENDIX 2**

### **COORDINATES OF DRILL HOLES**

		Drill				
Hole ID	Deposit	Туре	N (Z52)	E (Z52)	Z (Z52)	TD
AB007	В	RC	8289800.0	497761.7	19.6	34
AB027	В	DD	8289898.8	498010.9	19.7	81.7
AB034	В	DD	8289950.5	497985.6	19.8	78.3
AB040	В	DD	8289996.0	497960.9	19.8	81.7
AB046	В	RC + DD	8290050.6	497886.2	19.8	81
AB047	В	RC + DD	8290049.3	497932.1	19.8	91
AB048	В	RC	8289700.8	497748.4	19.7	70
AB049	В	RC	8289699.7	497799.6	19.7	60
AB050	В	RC	8289701.9	497848.5	19.7	64
AB051	В	RC	8289750.6	497750.1	19.8	46
AB052	В	DD	8289749.4	497798.4	19.8	50.2
AB053	В	RC	8289750.3	497846.5	19.7	50
AB054	В	DD	8289747.6	498123.5	19.7	162.5
AB055	В	RC + DD	8289799.1	498139.4	19.7	126.2
AB056	В	DD	8289846.4	497992.7	19.6	90.6
AB057	В	DD	8289901.5	497756.9	19.7	51.6
AB058	В	RC	8289949.2	497768.0	19.7	34
AB059	В	DD	8289950.4	497830.5	19.7	48.2
AB060	В	DD	8290000.6	498020.7	19.7	111.2
AB061	В	DD	8289999.4	498120.5	19.8	114.2
AB062	В	DD	8290051.4	497786.5	19.8	40.6
AB063	В	DD	8290050.3	497999.5	19.7	110.2
AB064	В	RC	8290101.3	497772.8	19.7	40
AB065	В	RC	8290099.8	497824.3	19.8	58
AB066	В	RC	8290101.3	497871.3	19.8	76
AB067	В	DD	8290101.2	497919.7	19.7	99.8
AB068	В	RC + DD	8290098.2	497974.0	19.8	120.9
ACD034	С	RC	8291201.0	498248.2	20.0	70
ACD055	С	DD	8290701.0	497998.6	19.9	50.5
ACD056	С	DD	8290799.1	498010.8	19.9	66.5
ACD057	С	DD	8290849.4	498169.9	19.9	87.2
ACD058	С	DD	8290849.7	498227.2	19.9	107.8
ACD059	С	RC	8290899.3	497910.3	19.9	38
ACD061	С	RC	8290899.4	498128.7	19.8	82
ACD062	С	DD	8290898.9	498180.2	19.8	125.8
ACD063	С	DD	8290897.3	498230.4	19.8	108.4
ACD064	С	DD	8290951.7	498208.5	19.8	96
ACD065	С	RC + DD	8290946.9	498258.5	20.0	120.3
ACD066	С	RC + DD	8290999.9	498249.8	19.9	135.2
ACD067	С	RC + DD	8291000.9	498299.3	20.0	145.1

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Hole ID	Deposit	Drill Type	N (Z52)	E (Z52)	Z (Z52)	TD
ACD068	С	RC + DD	8291050.3	498281.8	20.0	145
ACD069	С	RC + DD	8291050.7	498331.5	19.9	132
ACD070	DE	DD	8291250.4	498249.2	20.0	69.5
ACD071	DE	RC	8291297.1	498273.4	19.9	85
ACD072	DE	DD	8291347.7	498177.5	19.9	56.6
ACD073	DE	RC	8291349.3	498269.5	19.9	119.7
ACD074	DE	RC	8291424.5	497929.1	20.0	40
ACD075	DE	RC	8291450.1	497848.8	19.9	40
ACD076	DE	RC	8291477.0	497822.5	20.0	40
ACD077	DE	RC	8291475.7	497873.4	20.0	40
ACD079	DE	RC	8291499.2	497851.6	20.1	40
ACD080	DE	DD	8291499.6	498088.2	19.9	46.6
ACD081	DE	DD	8291650.8	498085.2	20.0	95.2
ACD082	DE	DD	8291749.1	498071.0	20.1	116.8
ACD083	DE	DD	8291797.2	498017.6	20.0	73.5
ACD084	DE	DD	8291801.3	498069.8	20.1	120.2
ACD085	DE	RC	8291902.2	497959.8	20.1	75
ACD086	DE	DD	8291900.6	498007.7	20.1	120.2
ACD087	DE	DD	8291949.5	497980.0	20.1	114.2
ACD088	С	RC	8290538.2	497951.1	19.8	44
ACD089	С	RC	8290739.2	498139.2	19.9	70
AF004	F	DD	8291999.4	497925.7	20.2	78
AF050	F	DD	8292049.3	497831.3	20.2	72.5
AF051	F	RC	8292100.7	497846.5	20.3	75
AF052	F	DD	8292146.8	497878.8	20.2	81.5
AF053	F	RC	8292198.5	497878.3	20.3	60
AF054	F	RC + DD	8292198.3	497927.4	20.3	120.2
AF055	F	DD	8292248.1	497880.7	20.3	102.2
AF056	F	DD	8292299.8	497912.0	20.3	105.5
AF057	F	DD	8292347.1	497848.0	20.3	88.4
AF058	F	RC + DD	8292349.7	497896.8	20.3	110.3
AF059	F	RC + DD	8292398.9	497771.7	20.3	40
AF060	F	DD	8292397.3	497825.1	20.3	79
AF061	F	RC + DD	8292400.1	497878.4	20.3	117
AF062	F	DD	8292050.6	497997.9	20.2	30.5
AF062B	F	DD	8292050.6	497997.9	20.2	110.5



#### **APPENDIX 3**

#### **CALCULATION OF Pb EQUIVALENT GRADES**

The contained metal equivalence formula is made on the following assumptions based on historical metallurgical work included in a Pre-Feasibility Study (ASX: PMY Announcement 26 March 2019) and modified by more recent metallurgical testwork results (ASX: PMY Announcement 17 July 2019), and on the published London Metal Exchange closing metal prices of 9 August 2019.

- Lead price US\$ 2,086/t;
- Silver price US\$ 0.546/g (US\$16.975/oz);
- Lead recoverable to concentrate 91%; and
- Silver recoverable to concentrate 90%.

It is Pacifico's opinion that all elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold. The formula used to calculate lead equivalent grade is:

Lead equivalent grade Pb% = ((Grade % Pb x recoverable % Pb x price US\$ per tonne Pb metal / 10,000) + (grade g/t Ag x recoverable % Ag x price US\$/g)) / (Grade % Pb x recoverable % Pb x price US\$ per tonne Pb metal / 10,000)

Metal equivalents are highly dependent on the metal prices used to derive the formula. Pacifico notes that the metal equivalence method used above is a simplified approach. Only preliminary metallurgical recoveries are available. The metal prices are based on average LME prices of 9 August 2019 and do not reflect the metal prices that a smelter would pay for concentrate nor are any smelter penalties or charges included in the calculation.

Owing to limited metallurgical data zinc grades are not included at this stage in the lead equivalent grade calculation.



## JORC Code, 2012 Edition – Table 1

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling technique s	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>During the drilling program (from March to July 2019), RC sampling during the Pacifico 2019 campaign was conducted at 1m intervals for the entire length of the hole.</li> <li>All the samples from RC pre-collars and RC holes were scanned with a portable XRF (Olympus InnovX Delta) for an indication of qualitative lead concentration. Intervals were selected for assaying from XRF readings above 0.3% Pb. An additional metre sample was taken above and below this interval.</li> <li>Mineralised HQ diamond core was sampled at different intervals to reflect lithological boundaries, but within length limits of between 0.5m and 2.0m.</li> <li>The sampling methodology is considered representative and appropriate for the carbonate hosted style of mineralisation at Sorby Hills.</li> </ul>
Drilling technique s	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Drilling methods used in the 2019 drill program were mud rotary, RC and HQ diamond drilling. RC drilling was also used to precollar holes with planned end of hole depth greater than 80m, which were then completed with diamond tails. Mud rotary was used for some diamond hole pre-collars. This material was not sampled.  Reference has been made in the announcement to 10 previous drilling campaigns at Sorby Hills prior to the drilling campaign reported in this announcement.  A summary of historic drilling campaigns is provided below:  Table 1: Summary of Drilling at Sorby Hills  Drill Hole Series Drilling Methods Year  1 DDH1- Diamond coring with unspecified pre-DDH65 collar (mud rotary) 1972-1973  2 R1-R29 Rotary Percussion (some open hole RC) Unknown  3 FDH1 - FDH89 Conventional RC using VPRH rig 1974  4 WBS1001- Mud rotary and RAB pre-collars with
		W8S1157 diamond tail 1975



W852000   W853000   W853	Criteria	JORC Code Explanation			Commentary	
WSS2109				WBS2000-	Conventional RC using VPRH rig	
Wissoon   Wiss				WBS2159		1975
WBS2003   Rotary (Mosthy open hole)   1975				WBS3000 -	, , ,	
S. WISSA000					Rotary (probably open hole)	1975
W85205   Conventional RC   1976-1979			5		, , , , ,	
6 W855000 - W855005   Wild rotary pre-collars diamond tails   1978-1979   1980   W855005   W855000 - Some RAB some mud rotary pre-collars with diamond tails   1980   W855005   W855005   W855000 - Some RAB some mud rotary pre-collars with diamond tails   1980   W857000 - W857000   W857000   W857000   W857000   W857000   W857000   W857000   W857000   RAB and conventional RC   1980   2007   SINDDO01   Diamond coring with open pre-collar (SHDDO01   SINDDO01   Diamond coring with open pre-collar (SHDDO01   SINDDO01   SINDDO01   SINDDO01   SINDDO01   SINDDO01   SINDDO01   SINDDO01   RC   SINDDO01   SINDDO01   RC   SINDDO01   SINDDO01   SINDDO01   RC   SINDDO01   SINDDO01   SINDDO01   RC   SINDDO01   SINDDO01   RC					, , , ,	1976-1979
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WBS7035 RAB and conventional RC 1980  B CSHD0001 - Dilamond coring with open pre-collar (mud rotary) 2007  9 ISHD0006 (RC) Diamond coring with open pre-collar (shD002) Schramm rig 2010  Conventional RC using T685WS Schramm rig 2010  CSHRC001 - Conventional RC using T685WS (shramm rig 2010  CSHRC0024 Schramm rig 2010  CONVENTIONAL RC using T685WS (shramm rig 2010  DSHD000 In (RC) Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond coring with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with open pre-collar (RC) (shramm rig 2010  DSHD000 Diamond rig with rig 2010  DSHD000 Diamond rig with rig 2010  DSHD000 Diamond rig 2			-		with diamond tails	1980
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sample recovery and grade and whether collected dry. There was an occasional wet sample when there						
was excessive water flow pressure. In one or two holes where		sample recovery and grade and whether				



Criteria	JORC Code Explanation	Commentary
	sample bias may have occurred due to preferential loss/gain of fine/coarse material.	more than 2m of wet sample was collected the RC hole was terminated and left to be recontinued with a diamond tail.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>RC chips were logged at the rig at Sorby Hills</li> <li>Diamond drill core was logged at a secure facility in Kununurra, where it is also stored.</li> <li>All core was logged in detail. Core was processed with orientation lines and metre marks and RQD. Recoveries and RQD's were recorded</li> <li>Structural measurements of stratigraphy and fault orientations were made where the ori-marks and orientation lines were of sufficient confidence.</li> </ul>
Sub- sampling technique s and sample preparatio	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Core was cut in half at the core shed in Kununurra using a diamond saw. Half core samples were collected and placed in pre-numbered calico bags. Samples were placed into heave duty plastic bags and sealed for transport to the laboratory.</li> <li>2 x 2kg samples were collected from each RC metre using a rigmounted cone-splitter. The booster compressor was used on the rig to maintain consistently dry samples. One sample was used to be sent to the laboratory for analysis if selected, and the other stored in the Kununurra facility.</li> <li>Samples from RC holes into mineralisation were scanned with a portable XRF for an indication of qualitative lead concentration. 1m intervals were selected to be sampled of above 0.3% Pb as indicated by the pXRF. An additional metre sample was taken above and below this interval.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Samples sent to Intertek-Genalysis in Darwin for preparation and analysis. Duplicates, blanks and standards inserted a regular intervals.</li> <li>Drill core and rock chip samples were assayed to accepted industry standards at the Intertek-Genalysis nationally certified laboratory in Darwin. Multi-acid digestion of pulverised sample was followed by ICP-OES or equivalent assay technique</li> <li>Certified Ore Grade Base Metal Reference Material provided by Geostats Pty Ltd. The standards selected covered a range of lead and silver concentrations and there is good agreement between the Pb and Ag assays, and the mean values provided with the reference standards. For the standards the assayed values were within half of one standard deviation and more commonly below the mean suggesting that grade overestimation is not a significant problem in the dataset.</li> <li>Duplicates and Blanks were also included in all sample despatches.</li> </ul>
Verificatio n of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Geological logs were handwritten on A3 and A4 paper log sheets and digitally entered into data entry templates in M8 Excel and entered into an Access database.</li> <li>Assay certificates were received from the analytical laboratories and imported into the drill database.</li> <li>No adjustments were made to the assay data.</li> </ul>



Criteria		JORC Code Explanation		Commentary
Location of data points	•	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used.  Quality and adequacy of topographic control.	•	Accurately surveyed using a DGPS by a registered surveyor and recorded in GDA94 Zone 52.
Data spacing and distributio n	•	Data spacing for reporting of Exploration Results.  Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.  Whether sample compositing has been applied.	•	Nominal 50m spaced collars 76 angled holes drilled in the Pacifico 2019 drilling program w be imported into the Sorby Hills database and standar geostatistics will be performed to determine the grade an continuity and assess the appropriate resource category t classify based on drill hole spacing and grade continuity. Most holes drilled at 60deg to the west (270deg), to bette sample both shallow and steeply dipping mineralised structure considered significant to the mineralisation.
Orientation of data in relation to geological structure		Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	It is not considered that there is a significant sampling bias du to structure.  All holes drilled at 60deg to the west (270deg), to better sampl both shallow and steeply dipping mineralised structure considered significant to the mineralisation.
Sample security	•	The measures taken to ensure sample security.	•	Samples are stored and processed at a secure facility in Kununurra. All samples taken by Pacifico personnel to the truck depot in Kununurra and placed on a pallet and sealed for transport direct to the Intertek-Genalysis laboratory in Darwin.
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	•	Two independent geologists have previously reviewed the sampling protocols in the field, the import of assay results from the laboratory online access system and the data management within excel spreadsheets and the Access database.



## **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation Commentary					
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	interes project Octobe Ltd and Henan (HYG) o Sorby I mining M80/2 of whice between	t in the So t in Wester or 2018. Yo d wholly or Yuguang ( owning the Hills Project leases (M 85-287) (s ch are curr	rby Hills rn Austra Iguang (A wned sub Sold & Le e remaini tt compri 80/196-1 ee Table ently hel lills Pty Lt	sustralia) Posidiary of and Co. Ltd and 25%. The ses five 2 below), and jointly different (75%) ar	ety he
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		Tene ment	Area	Gra	Evnim	
		ment	(km²)	<b>nted</b> 22/0	Expiry	1
		M80		1/19	21/01	
		/196	9.99	88	/2030	
		7130	3.33	22/0	72030	ł
		M80		1/19	21/01	
		/197	9.95	88	/2030	
		7137	3.33	29/0	72030	ł
		M80		3/19	28/03	
		/285	5.57	89	/2031	
		7203	3.37	29/0	72031	ł
		M80		3/19	28/03	
		/286	7.89	89	/2031	
		7200	7.03	29/0	72031	ŀ
		M80		3/19	28/03	
		/287	8.15	89	/2031	
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		• The p	roject ar	ea lies	adjacent Conservati	
		Park.				
			_		ng until 20 31. M80/2	



Criteria	JORC Code Explanation	Commentary
		& M80/197 have a current cultural clearance access agreement in place; for the remaining mining tenements normal cultural clearance plans would be required. No mining agreement has been negotiated.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The Sorby Hills area has been systematically explored by numerous companies since 1971. Prominent amongst these were ELF Aquitaine (1973-1981) with various JV partners (SEREM, St Joe Bonaparte &amp; BHP), BHP (1981-1988), in JV with Triako; and CBH/Kimberley Metals/KBL Mining.</li> <li>Previous work included, geologic mapping, soil geochemistry, airborne and ground geophysics and extensive drilling campaigns.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Sorby Hills mineralisation is regarded as having many features typical of Mississippi Valley Type (MVT) deposits. Recent geological assessment has refined this to a sediment replacement system, with mineralisation focussed on the contact between the upper Knox Sediments and the lower Sorby Dolomite</li> <li>The Sorby Hills mineralisation consists of 9 discrete carbonate hosted Ag Pb Zn deposits A, B, CDEF, H, I and J, Beta East, Beta West and Alpha. The deposits form a linear north-south belt extending over 7 km, sub parallel to the eastern margin of the Precambrian Pincombe Inlier and within the Carboniferous Burt Range Formation of the Bonaparte Basin.</li> <li>The mineralisation is largely stratabound and hosted mainly on the contact between Knox Sediments and Sorby Dolomite and in dolomitic breccia which is typically developed at the contact of a crystalline dolomite unit and overlying dolomitic siltstone which generally dips shallowly to the east.</li> <li>The mineralised deposits average 7-10m in thickness, are up to 2km long and 100 to 500m wide. There is some structural control to the mineralisation, with higher grade zones associated with faulting. The deposits also appear to be parallel to a main fault trend which displaces the zone of mineralisation downwards to the east. Mineralisation is often thicker and/or of higher grade in areas of strong fracturing and slump</li> </ul>

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Criteria	JORC Code Explanation	Commentary
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth	<ul> <li>The Sorby Hills primary mineralisation is typically lead and silver-rich with moderate to high pyrite (FeS2) content and generally low amounts of sphalerite (ZnS). Galena (PbS) occurs as massive to semi massive crystalline lenses often found in the more argillaceous units, and as coarse to fine disseminations or as open-space fill in fractures, breccias and vughs. Sphalerite typically predates galena and occurs as colloform open-space fill. It is typically more abundant at the lateral fringes of and below the lead mineralisation. Silver values tend to increase as the lead content increases and is generally assumed to be closely associated with the galena. A discrete pyrite zone is seen to occur below the base-metal mineralisation.</li> <li>The upper portions of the deposits are often oxidised and composed of a variable mix of cerussite (PbCO3) and galena. Cerussite has also been observed deeper in the deposits where faults, fractures and or cavities have acted as conduits for meteoric waters. The extent to which secondary lead minerals exist through the deposit has not been systematically documented; however, it is possible that other lead-oxide minerals may be present.</li> <li>See Appendix 2. A report has been prepared by the registered surveyor as to the accuracy of the DGPS surveying undertaken at the drill collars.</li> <li>The total number of drill holes at the Sorby Hills project area for A, B, CDEF, H, I, J, Alpha and Beta deposits since its discovery in 1971 comprises 1272 surface drill holes for a total of 121,315m of drilling.</li> <li>Drill hole intercepts of results received to date above 1% Pb are contained in Appendix 1.A complete listing of all particles above 1% Pb are contained in Appendix 1.A complete listing of all particles above 1% Pb are contained in Appendix 1.A complete listing of all particles above 1% Pb are contained in Appendix 1.A complete listing of all particles above 1% Pb are contained and particles above 1% Pb are contained and particles above 1% P</li></ul>
	<ul> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Pacifico 2019 campaign drill hole details is contained in Appendix 2.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No aggregated exploration data is reported here.     The metal price and metal recovery factors used to calculate a lead grade equivalent are listed in Appendix 3

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Criteria	JORC Code Explanation	Commentary		
Relationship between mineralisation widths and intercept lengths  Diagrams	<ul> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for</li> </ul>	The stratabound mineralisation at Sorby Hills generally dips gently to the east.      All plan view, cross-sectional and long sectional diagrams accurately reflect coordinates.		
Balanced reporting	any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.  • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of	All drill hole locations are reported in Appendix 2.		
	both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.			
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Since the discovery of Sorby Hills base metal deposit in 1971 considerable geological information concerning the mineralisation and its host has been compiled. Similarly, numerous geochemical soil surveys and geophysical surveys have been conducted across the tenement package. This information is well documented in company annual reports and can be readily accessed via the WA DMIRS website.  Extensive metallurgical test work on drill core samples from the Sorby Hills deposit was carried out in the laboratories of the Technical Services Department of Mount Isa Mines Limited, Mount Isa in the late 1970s and early 1980s.		

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Criteria	JORC Code Explanation	Commentary
		<ul> <li>Subsequently, CBH Resources commissioned AMML to carry out a test work program to confirm the results of the Mount Isa Mines work and investigate the replacement of sodium cyanide (NaCN), used as a depressant for iron pyrite and zinc sulphide, by alternative reagents. The results of this work appeared in Report 0034-1 dated 8 August 2008. Further test work was carried out by AMML for Sorby Management, following the change in ownership of the Sorby Hills project. The results appeared in Report 0194-1 dated 24 Oct 2011.</li> <li>A first stage of metallurgical testwork commissioned by Pacifico Minerals was reported 17 July 2019 (ASX Announcement). It confirmed the higher recoveries that can be obtained from this style of carbonate replacement mineralisation. Flotation recoveries of up to 96%Pb and 95%Ag were obtained and the testwork indicated that a final concentrate grade of 65%Pb can be produced. Outstanding results were also obtained to upgrade the ores prior to flotation by heavy liquid separation and by ore sorting.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Further drill campaigns are planned to improve geological confidence, to upgrade the resource to higher confidence categories (i.e. from inferred to Indicated Resource, and from Indicated Resource to Measured Resource), to aid in future Reserve estimates, and to delineate additional areas of potentially economic mineralisation. The drilling results reported in this announcement form Phase II.

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