

ABN 29 125 811 083

# **Interim Financial Report**

For the half year ended 31 December 2020



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# DIRECTORS' REPORT

Your Directors submit the financial report of the Group for the half year ended 31 December 2020. In order to comply with the provisions of the Corporations Act 2001, the Directors report as follows.

The Directors of the Company during or since the end of the interim period (unless otherwise stated) are:

John Richards	Non-Executive Chairman
Bruce McFadzean	Managing Director
Bruce Griffin	Commercial Director
David Archer	Non-Executive Director
Will Burbury	Non-Executive Director
lan Macliver	Non-Executive Director

# **REVIEW OF OPERATIONS**

During the half year, the Company has continued to advance development options on its world-class Thunderbird Mineral Sands Project.

In August 2020, the Company announced that it had entered into a Non-Binding Term Sheet with Yangang (Hong Kong) Co., Ltd's wholly owned subsidiary YGH Australia Investment Pty Ltd ("Yansteel") to form a Joint Venture to develop the Thunderbird Mineral Sands Project. Yansteel will invest A\$130.1m in equity to earn a 50% interest in the Project. The formation of the Yansteel and Sheffield Joint Venture was subject to agreement and execution of formal documentation and other customary conditions precedent for a transaction of this nature.

Binding documentation was executed subsequent to the end of the December 2020 half year. Satisfaction of the remaining conditions precedent to finalise the formation of the joint venture are ongoing with a Final Investment Decision ("FID") targeted during 2021.

A trial mining pit was excavated during the half year to enable full scale ore mining via a dozer push method through the full thickness of the high grade "T2" ore zone. The trial mining pit confirmed that ore mining via a dozer push method is viable and practical over a range of ground and weather conditions and confirmed assumptions associated with mining of waste materials.

A 25 tonne bulk sample collected from dozer pushed ore material shall enable final design criteria to be determined for the ore feed preparation plant and additional metallurgical test work.

The Company undertook field mapping and geotechnical test work from the trial mining pit to inform final pit wall slope design angles. Ongoing monitoring of the pit wall slopes is scheduled over the wet season. A gravel test program was undertaken on the Thunderbird Mining Lease (M04/459) to identify construction materials for road construction and project development infrastructure requirements.

#### THUNDERBIRD MINERAL SANDS PROJECT

A work program to enable completion of a Bankable Feasibility Study ("BFS") on a revised project scope and flowsheet commenced during the half year. The preferred flowsheet is designed to produce a zircon rich non-magnetic concentrate and LTR ilmenite. Upon formation of the joint venture, an agreed project development strategy will be determined with the work programs enabling the prompt completion of a BFS and the project financing process.

#### Engineering

During the half year, work continued on the development of the preferred flowsheet. This flowsheet reintroduces the Low Temperature Roast ("LTR") and simplifies the ilmenite producing circuit as well as removing the zircon-related Mineral Separation Plant ("MSP") components. Existing raw ore and partly processed samples were used to complete test work based on the flowsheet. Existing Heavy Mineral Concentrate ("HMC") samples were used to complete zircon rich non-magnetic concentrate flowsheet design parameters and produce samples for existing and new offtake partners. Magnetic products were processed through the simplified ilmenite process circuit and then processed to produce LTR



ilmenite. The results of the test work were in line with assumptions made for the agreed flowsheet and in line with expectations from previous BFS standard test work.

#### Trial Mining Program

The Company planned and safely executed a trial mining program at the Thunderbird Mineral Sands Project utilising local contractor Kimberley Quarries Pty Ltd. The trial mining open pit was located to intersect all materials expected to be encountered during mining, including waste cover material, low grade ore material from the "T1" domain and high grade ore material from the "T2" domain from the hanging wall to the footwall of the orebody. The trial mining open pit planned to excavate c.220kt of material containing 120kt of ore and 100kt of waste, and to be 25m deep and approximately 100m long and 80m wide at the surface and with 40° walls angles.





The trial mining pit was excavated to a depth of 30 metres to observe full scale ore mining utilising the dozer push method through the full thickness of the high grade "T2" ore zone. Waste material was removed by excavator and truck operations with some zones of harder and competent waste materials requiring ripping by dozer to enable excavation. Mining operations were able to continue throughout inclement periods with good heavy vehicle trafficability in waste and ore materials, confirming mining and haulage productivity assumptions in waste and ore materials. Geotechnical and pit slope information to inform final pit design parameters was collected, with the final pit walls exhibiting good stability.

A 25 tonne bulk sample was collected from dozer pushed ore material to enable final design criteria to be determined for the ore feed preparation plant and additional metallurgical test work. The bulk ore sample was collected from regular flitches through the orebody and were individual fed into a screening plant to determine oversize variability within the high-grade "T2" ore zone. Results are to be analysed in conjunction with planned process outcomes.





Figure 2: Dozer push sample collection



Figure 3: Screening to analyse variance in fraction size flitch

Access to site and accommodation was established to support the trial mining and other activities including a fire management program and general village maintenance was undertaken. Preparation and asset protection activities for the Kimberley wet season were carried out, with the accommodation village and site locked down at the conclusion of the trial mining program.

# Aboriginal Engagement

Prior to the commencement of trial mining, Traditional Owners' heritage monitors and Company rangers conducted pre and post land clearing artefact checks and Greater Bilby surveys of the area. No artefacts or evidence of Greater Bilby presence or activity was found in the trial mining area.

Heritage monitors and Company rangers continued final artefact checks and Greater Bilby surveys over land where project infrastructure will be constructed. Evidence of Greater Bilby activity was found in some of the surveyed areas. The Greater Bilby Disturbance Protocols outlined in Thunderbird's Terrestrial Fauna Environmental Management Plan, approved by the Federal Government, are followed prior to land clearing.

#### Sustainability

The Company submitted the State and Federal annual compliance reporting related to environmental project approvals. The operation remains in compliance with approved project conditions.



#### Marketing and Offtake

During the half year, fresh samples of a zircon rich concentrate were dispatched to existing offtake groups for independent review and assessment. Following assessment, feedback from the offtake groups was positive.

As part of diversifying product offtake, discussions have commenced with several potential additional offtake groups. Samples are being prepared for these groups to independently review and assess.

The COVID-19 pandemic continues to impact the global economy. Despite this, the mineral sands and associated industries have performed relatively well. China, as a major consumer of mineral sands feedstocks, continued to bounce back strongly in Q3 of 2020 and demand has been robust. Mineral sands feedstock demand in the Americas rebounded during the half year, however demand in India and Europe has not been as sound.

The titanium feedstock market has continued to tighten, especially in China where pricing for feedstocks, in particular sulfate ilmenite, has increased.

Zircon demand has not held up as well as titanium feedstock and supply has adjusted to balance weaker demand. China is the best performing market for zircon consuming industries, and although not yet at full capacity, it is operating at higher levels than in the first half of 2020. Zircon pricing remains in the range of US\$1,350 – US\$1,500 per tonne.

Mid to long range forecasts for both zircon and ilmenite markets remain unchanged. It is anticipated that there will be significant supply constraints in the market over the coming years.

#### Exploration

Eneabba & McCalls Mineral Sands Project

During the reporting period, the Group carried out technical reports upon both the Eneabba and McCalls Mineral Sand Projects.

#### Derby East Construction Sand Project

The Derby East Project contains a large sand target with the Group is investigating for the potential to yield commercial quantities of sand suitable for end-use construction purposes. The Project is located 24k east of the Port of Derby. A technical report was completed during the period.

#### CORPORATE ACTIVITIES

At the end of the half year, the Group held \$12.9m in cash and incurred a loss of \$1.5m (2019: \$5.9m loss).

The Company welcomed Yansteel as a significant shareholder following the issue of 34,259,421 fully paid ordinary shares in Sheffield to Yansteel via a share placement for a total consideration of \$A12.9m.

#### ROUNDING

The Group is of a kind referred to in Corporations Instrument 2016/191, issued by the Australian Securities and Investments Commission, relating to 'rounding-off'. Amounts in this report have been rounded off in accordance with that Corporations Instrument to the nearest thousand dollars, or in certain cases the nearest dollar.

# AUDITOR'S INDEPENDENCE DECLARATION

Section 307C of the Corporations Act 2001 requires our auditors, HLB Mann Judd, to provide the Directors of the Company with an Independence Declaration in relation to the review of the half year financial report. This Independence Declaration is set out on page 18 and forms part of this Directors' report for the half year ended 31 December 2020.

This report is signed in accordance with a resolution of the Board of Directors made pursuant to s.306(3) of the Corporations Act 2001.

Mr Bruce McFadzean Managing Director

15 FEBRUARY 2021



# ORE RESERVE AND MINERAL RESOURCE STATEMENT

#### DAMPIER PROJECT ORE RESERVE

#### SHEFFIELD ORE RESERVE FOR DAMPIER PROJECT AT 31 DECEMBER 2020 (in-situ assemblage) Summary of Ore Reserve1,2,3,4 Valuable HM Assemblage (in-situ)5 Total In-situ Ore HiTi Leuco Ilme-Deposit Oversize Slimes Material Total HM7 HM Zircon Reserve Leuc -xene nite Grade (Million (Million Category (%) (%) (%) (%) (%) (%) (%) Tonnes) Tonnes) Thunderbird 13.7 1.02 0.28 14.0 16.1 Proved 219 30.0 0.30 3.68 Probable 529 53.4 10.1 0.79 0.26 0.27 2.87 10.5 14.5 748 11.2 0.27 0.27 3.11 15.0 Total 83.8 0.86 11.6

#### SHEFFIELD ORE RESERVE FOR DAMPIER PROJECT AT 31 DECEMBER 2020 (HM assemblage)

Summary of (	Dre Reserve <sup>1</sup>	.,2,3,4			Valu	uable HM				
Deposit	Ore Reserve	Material	In-situ Total HM <sup>7</sup>	Total HM Grade	Zircon	HiTi Leuc	Leuco -xene	llme- nite	Oversize	Slimes
	Category	(Million Tonnes)	(Million Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Thunderbird	Proved	219	30.0	13.7	7.4	2.2	2.0	26.9	14.0	16.1
	Probable	529	53.4	10.1	7.8	2.6	2.7	28.4	10.5	14.5
	Total	748	83.8	11.2	7.7	2.4	2.4	27.8	11.6	15.0

<sup>1</sup>The Ore Reserves are presented with in-situ HM grade, and mineral assemblage. Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal. This Ore Reserve reported for the Dampier Project was prepared and first disclosed under the JORC Code (2012) in the announcement 31 July 2019 Titled "Thunderbird 10% Ore Reserve Increase". The Ore Reserve is reported to a design overburden surface with appropriate consideration for modifying factors, costs, mineral assemblage, process recoveries and product pricing

2.Ore Reserve is a sub-set of Mineral Resource

<sup>3</sup>Total HM is within the 38µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -38µm fraction and oversize is the +1mm fraction. <sup>4</sup>Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal.

<sup>5</sup>The in-situ assemblage grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale.

6 Mineral Assemblage is reported as a percentage of HM Grade, it is derived by dividing the in-situ grade by the HM grade.

<sup>7</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables

The Ore Reserve estimate was prepared by Entech Pty Ltd, an experienced and prominent mining engineering consultancy with appropriate mineral sands experience in accordance with the JORC Code (2012 Edition). The Ore Reserve was estimated using all available geological and relevant drill hole and assay data, including mineralogical sampling and test work on mineral recoveries and final product qualities. The Company is not aware of any new information or data that materially affects the information included in the Ore Reserve estimate and confirms that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed. The Ore Reserve estimate is based on the current, July 2016 Thunderbird Mineral Resource estimate, announced to the ASX on 5 July 2016. Measured and Indicated Mineral Resources were converted too Proved and Probable Ore Reserves respectively, subject to mine design, modifying factors and economic evaluation.



#### SHEFFIELD HM MINERAL RESOURCE

#### DAMPIER PROJECT MINERAL RESOURCES

#### SHEFFIELD MINERAL RESOURCE FOR DAMPIER PROJECT AT 31 DECEMBER 2020 (in-situ assemblage)

Summary of M	ineral Resource	<del>g</del> 1,2,3							-		
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>6</sup>	Total HM Grade	In Zircon	<u>-situ Ass</u> HiTi Leuc	emblage <sup>4, :</sup> Leuco- xene	。 Ilme- nite	Over size	Slimes
	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Measured	3.0	510	45	8.9	0.71	0.20	0.19	2.4	12	18
Thunderbird	Indicated	3.0	2,120	140	6.6	0.55	0.18	0.20	1.8	9	16
(low-grade)	Inferred	3.0	600	38	6.3	0.53	0.17	0.20	1.7	8	15
	Total	3.0	3,230	223	6.9	0.57	0.18	0.20	1.9	9	16
Night Train (low-grade)	Inferred	1.2	130	4.2	3.3	0.45	0.18	1.5	0.71	2.2	8.7
(low-grade)	Total	1.2	130	4.2	3.3	0.45	0.18	1.5	0.71	2.2	8.7
	Measured	3.0	510	45	8.9	0.71	0.20	0.19	2.4	12	18
All Dampier Project	Indicated	3.0	2,120	140	6.6	0.55	0.18	0.20	1.8	9	16
(low grade cut-off)	Inferred	Various	730	42	5.8	0.51	0.17	0.43	1.6	7.2	13
	Total	Various	3,360	227	6.8	0.57	0.18	0.25	1.9	8.7	15
	Measured	7.5	220	32	14.5	1.07	0.31	0.27	3.9	15	16
Thunderbird	Indicated	7.5	640	76	11.8	0.90	0.28	0.25	3.3	11	14
(high-grade)	Inferred	7.5	180	20	10.8	0.87	0.27	0.26	3.0	9	13
	Total	7.5	1,050	127	12.2	0.93	0.28	0.26	3.3	11	15
Night Train	Inferred	2.0	50	3.0	5.9	0.82	0.33	2.9	1.06	2.2	10.2
(high-grade)	Total	2.0	50	3.0	5.9	0.82	0.33	2.9	1.06	2.2	10.2
	Measured	7.5	220	32	14.5	1.07	0.31	0.27	3.9	15	16
All Dampier Project	Indicated	7.5	640	76	11.8	0.90	0.28	0.25	3.3	11	14
(high grade cut-off)	Inferred	Various	230	23	9.7	0.85	0.28	0.83	2.6	7.2	12
Sucon	Total	Various	1,090	130	11.9	0.92	0.29	0.38	3.2	11	14

<sup>1</sup> Night Train: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 31 January 2019 for further details including Table 1. The Mineral Resource reported above 1.2% heavy mineral (HM) cut-off is inclusive of (not additional to) the Mineral Resource reported above 2.0% HM cut-off. Thunderbird: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 5 July 2016 for further details including Table 1. The Dampier Project Mineral Resources are reported inclusive of (not additional to) Ore Reserves. The Mineral Resource reported above 3.0% HM cut-off is inclusive of (not additional to) the Mineral Resource reported above 7.5% HM cut-off.

<sup>2</sup>Total HM is within the 38µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -38µm fraction and oversize is the +1mm fraction. <sup>3</sup>Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal.

<sup>4</sup> Night Train: Estimates of Mineral Assemblage are presented as percentages of the Heavy Mineral (HM) component of the deposit, as determined by magnetic separation, QEMSCAN™ dor mineral determination as follows: Ilmenite: 40-70% TiO<sub>2</sub> >90% Liberation; leucoxene: 70-90% TiO<sub>2</sub> >90% Liberation; High titanium leucoxene (HiTi leucoxene) and rutile 90% TiO<sub>2</sub> >90% Liberation, and zircon: 66.7% ZrO<sub>2</sub>+HfO<sub>2</sub> >90% Liberation. The non-magnetic fraction was submitted for XRF analysis and minerals determined as follows: zircon: ZrO<sub>2</sub>+HfO<sub>2</sub>/0.667 and HiTi leucoxene: TiO<sub>2</sub>/0.94. HM assemblage determination was by the QEMSCAN™ process for 11 of 12 composite samples which uses observed mass and chemistry to classify particles according to their average chemistry, and then report mineral abundance by dominant % mass in particle. For the TiO<sub>2</sub> minerals the following breakpoints were used to distinguish between Ilmenite 40% to 70% TiO<sub>2</sub>. Jeucoxene: 70% to 90% TiO<sub>2</sub>. HTI leucoxene and rutile 90%, Screening of the heavy mineral was not required. Thunderbird: estimates of Mineral Assemblage are presented as percentages of the HM component of the deposit, as determined by magnetic separation, QEMSCAN™ and XRF. Magnetic fractions were analysed by QEMSCAN™ for mineral determination as follows: Ilmenite: 40-70% TiO<sub>2</sub> >90% Liberation; leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation; HiTi leucoxene: 54% TiO<sub>2</sub> >90% Liberation; and zircon: 66.7% ZrO<sub>2</sub>+HfO<sub>2</sub> >90% Liberation; HiTi leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation; HiTi leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation; HiTi leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation as follows: Ilmenite: 40-70% TiO<sub>2</sub> >90% Liberation; HiTi leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation

<sup>5</sup>In-situ assemblage grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale.

<sup>6</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables.



SHEFFIELD MINERAL RESOURCES FOR DAMPIER PROJECT AT 31 DECEMBER 2020 (HM assemblage)

Summary of M	ineral Resource	e <sup>1,2,3</sup>					HM Asse	nhlage4			
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>6</sup>	Total HM Grade	Zircon	HiTi Leuc <sup>5</sup>	Leuco- xene	llme- nite	Over size	Slimes
	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Measured	3.0	510	45	8.9	8.0	2.3	2.2	27	12	18
Thunderbird	Indicated	3.0	2,120	140	6.6	8.4	2.7	3.1	28	9	16
(low-grade)	Inferred	3.0	600	38	6.3	8.4	2.6	3.2	28	8	15
	Total	3.0	3,230	223	6.9	8.3	2.6	2.9	28	9	16
Night Train (low-grade)	Inferred	1.2	130	4.2	3.3	14	5.4	46	22	2.2	8.7
(low-grade)	Total	1.2	130	4.2	3.3	14	5.4	46	22	2.2	8.7
	Measured	3.0	510	45	8.9	8.0	2.3	2.2	27	12	18
All Dampier Project	Indicated	3.0	2,120	140	6.6	8.4	2.7	3.1	28	9	16
(low grade cut-off)	Inferred	Various	730	42	5.8	8.9	2.9	7.5	27	7.2	13
cutony	Total	Various	3,360	227	6.8	8.4	2.7	3.7	28	8.7	15
	Measured	7.5	220	32	14.5	7.4	2.1	1.9	27	15	16
Thunderbird (high-grade)	Indicated	7.5	640	76	11.8	7.6	2.4	2.1	28	11	14
(	Inferred	7.5	180	20	10.8	8.0	2.5	2.4	28	9	13
	Total	7.5	1,050	127	12.2	7.6	2.3	2.1	27	11	15
Night Train (high-grade)	Inferred	2.0	50	3.0	5.9	14	5.6	49	18	2.2	10.2
(ingli giude)	Total	2.0	50	3.0	5.9	14	5.6	49	18	2.2	10.2
	Measured	7.5	220	32	14.5	7.4	2.1	1.9	27	15	16
All Dampier Project	Indicated	7.5	640	76	11.8	7.6	2.4	2.1	28	11	14
(high grade cut-off)	Inferred	Various	230	23	9.7	8.8	2.9	8.6	27	7.2	12
cut-on)	Total	Various	1,090	130	11.9	7.8	2.4	3.2	27	11	14

<sup>1</sup> Night Train: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 31 January 2019 for further details including Table 1. The Night Train Mineral Resource reported above 1.2% heavy mineral (HM) cut-off is inclusive of (not additional to) the Mineral Resource reported above 2.0% HM cut-off. Thunderbird: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 5 July 2016 for further details including Table 1. The Dampier Project Mineral Resources are reported inclusive of (not additional to) to (not additional to) Ore Reserves. Thunderbird: The Mineral Resource reported above 3.0% HM cut-off is inclusive of (not additional to) the Mineral Resource reported above 3.0% HM cut-off.

<sup>2</sup> Total HM is within the 38µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -38µm fraction and oversize is the +1mm fraction. <sup>3</sup>Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal.

<sup>4</sup>Night Train: Estimates of Mineral Assemblage are presented as percentages of the HM component of the deposit, as determined by magnetic separation, QEMSCAN™ and XRF for one of 12 composite samples. Magnetic fractions were analysed by QEMSCAN™ for mineral determination as follows: Ilmenite: 40-70% TiO<sub>2</sub> >90% Liberation; leucoxene: 70-90% TiO<sub>2</sub> >90% Liberation; High titanium leucoxene (HiTi leucoxene) and rutile 90% TiO<sub>2</sub> >90% Liberation, and zircon: 66.7% ZrO<sub>2</sub>+HfO<sub>2</sub> >90% Liberation. The non-magnetic fraction was submitted for XRF analysis and minerals determined as follows: zircon: ZrO<sub>2</sub>+HfO<sub>2</sub>/O.667 and HiTi leucoxene: TiO<sub>2</sub>/0.94. HM assemblage determination- was by the QEMSCAN™ process for 11 of 12 composite samples which uses observed mass and chemistry to classify particles according to their average chemistry, and then report mineral abundance by dominant % mass in particle. For the TiO<sub>2</sub> minerals the following breakpoints were used to distinguish between llmenite 40% to 70% TiO<sub>2</sub>. Leucoxene 70% to 90% TiO<sub>2</sub>. HITi leucoxene and rutile >90%, Screening of the heavy mineral was not required. Thunderbird: estimates of Mineral Assemblage are presented as percentages of the HM component of the deposit, as determined by magnetic separation, QEMSCAN™ and XRF. Magnetic fractions were analysed by QEMSCAN™ for mineral determination as follows: ilmenite: 40-70% TiO<sub>2</sub> >90% Liberation; leucoxene: 70-94% TiO<sub>2</sub> >90% Liberation; HiTi leucoxene: 20% ZicPa+HfO<sub>2</sub> >00% Liberation; and zircon: 66.7% ZrO<sub>2</sub>+HfO<sub>2</sub> >90% Liberation. The non-magnetic fraction was submitted for XRF analysis and minerals determined as follows: zircon: ZrO<sub>2</sub>+HfO<sub>2</sub>/O.667 and HiTi leucoxene: TiO<sub>2</sub>/O.94.

<sup>5</sup> HiTi leucoxene and rutile (%) combined for Night Train at a >90% TiO<sub>2</sub> (as one assemblage sample utilised=> 90% rutile and HiTi leucoxene), HiTi leucoxene for Thunderbird > 94% TiO<sub>2</sub>

<sup>6</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables.



#### SHEFFIELD MINERAL RESOURCE FOR DAMPIER PROJECT AT 31 DECEMBER 2020 (in-situ tonnes)

Summary of M	ineral Resourc	e <sup>1,2,3</sup>				In-situ	Tonnes⁴		
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>6</sup>	Zircon	HiTi Leuc⁵	Leucoxene	Ilmenite	Total VHM
	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)
	Measured	3.0	510	45	3,600	1,000	1,000	12,000	17,700
Thunderbird	Indicated	3.0	2,120	140	11,800	3,800	4,300	39,100	59,000
(low-grade)	Inferred	3.0	600	38	3,200	1,000	1,200	10,500	15,900
	Total	3.0	3,230	223	18,600	5,900	6,500	61,700	92,600
Night Train (low-grade)	Inferred	1.2	130	4.2	560	220	1,900	900	3,590
(low-grade)	Total	1.2	130	4.2	560	220	1,900	900	3,590
All Dampier	Measured Indicated	3.0 3.0	510 2,120	45 140	3,600 11.800	1,000 3,800	1000 4,300	12,000 39,100	17,700 59.000
Project (low grade cut-off)	Inferred	Various	730	42	3,760	1,220	3,100	11,400	19,490
cut-on)	Total	Various	3,360	227	19,160	6,020	8,400	62,600	96,190
	Management	7 5	000	20	0.000	700	600	0.400	40.000
Thunderbird	Measured Indicated	7.5 7.5	220 640	32 76	2,300 5.800	1.800	1.600	8,400 21.000	12,000
(high-grade)	Indicated	7.5 7.5	640 180	20	5,800 1,600	1,800 500	1,600 500	5,600	30,200 8,200
	Total	7.5	1,050	127	9,700	3,000	2,700	35,000	50,400
Night Train	Inferred	2.0	50	3.0	420	170	1,500	540	2,600
(high-grade)	Total	2.0	50	3.0	420	170	1,500	540	2,600
	Measured	7.5	220	32	2,300	700	600	8,400	12,000
All Dampier Project	Indicated	7.5 Various	640	76	5,800	1,800	1,600	21,000	30,200
(high grade	Inferred	various	230	23	2,020	670	2,000	6,140	10,800
cut-off)	Total	Various	1,090	130	10,120	3,170	4,200	35,540	53,000

<sup>1</sup>Night Train: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 31 January 2019 for further details including Table 1. The Night Train Mineral Resource reported above 1.2% heavy mineral (HM) cut-off is inclusive of (not additional to) the Mineral Resource reported above 2.0% HM cut-off. Thunderbird: The Mineral Resource estimate was prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 5 July 2016 for further details including Table 1. The Dampier Project Mineral Resources are reported inclusive of (not additional to) Ore Reserves. Thunderbird: The Mineral Resource reported above 3.0% HM cut-off is inclusive of (not additional to) the Mineral Resource reported above 3.0% HM cut-off.

<sup>2</sup> Total HM is within the 38µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -38µm fraction and oversize is the +1mm fraction. <sup>3</sup>Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal.

<sup>4</sup> The contained in-situ tonnes for the valuable heavy minerals were derived from information from the Mineral Resource tables. The in-situ assemblage grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale.

<sup>5</sup> HiTi leucoxene and rutile (%) combined for Night Train at a >90% TiO<sub>2</sub> (as one assemblage sample utilised=> 90% Rutile and HiTi leucoxene), HiTi leucoxene for Thunderbird > 94% TiO<sub>2</sub>

<sup>6</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables



#### ENEABBA PROJECT MINERAL RESOURCES

#### SHEFFIELD MINERAL RESOURCES FOR THE ENEABBA PROJECT AT 31 DECEMBER 2020 (in-situ assemblage)

Summary of M	villeral Resou					I					
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>12</sup>	Total HM Grade	Zircon	Rutile	Leuco- xene	llme- nite	Over size	Slimes
	Category	(Total HM%)	(Million Tonnes)	(Thousand Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Measured	1.4	2.6	112	4.3	0.44	0.09	0.10	3.08	11.3	15
Yandanooka	Indicated	1.4	57.7	1,726	3.0	0.37	0.11	0.11	2.08	11.4	15
4,6,8	Inferred	1.4	0.4	7	1.5	0.16	0.05	0.07	1.01	21.9	20
	Total	1.4	60.8	1,845	3.0	0.37	0.11	0.11	2.11	11.5	15
	Indicated	1.4	20.7	600	2.9	0.40	0.09	0.11	2.07	14.7	14
Durack <sup>4,6,7,</sup> 8	Inferred	1.4	5.6	148	2.6	0.37	0.07	0.19	1.68	18.3	16
	Total	1.4	26.3	748	2.8	0.39	0.08	0.13	1.99	15.5	14
Drummond	Indicated	1.4	35.5	838	2.4	0.33	0.24	0.08	1.26	7.7	14
Crossing <sup>3,4,</sup>	Inferred	1.4	3.3	77	2.3	0.26	0.21	0.06	1.31	7.2	12
6,8	Total	1.4	38.8	915	2.4	0.33	0.24	0.08	1.26	7.7	14
	Indicated	1.4	14.0	261	1.9	0.27	0.24	0.09	0.88	6.2	6
Robbs Cross <sup>5,6,8</sup>	Inferred	1.4	3.8	77	2.0	0.29	0.22	0.08	1.02	8.1	6
0.000	Total	1.4	17.8	338	1.9	0.28	0.23	0.09	0.91	6.6	6
Thomson <sup>5,8</sup>	Inferred	1.4	26	516	2.0	0.38	0.28	0.11	0.85	6.9	18
,	Total	1.4	26	516	2.0	0.38	0.28	0.11	0.85	6.9	18
West	Indicated	2.0	10.2	748	7.3	0.43	0.48	0.13	3.51	2.3	11
Mine	Inferred	2.0	1.8	48	2.7	0.25	0.23	0.06	1.31	3.0	17
North <sup>3,4,6,9</sup>	Total	2.0	12.0	796	6.6	0.40	0.44	0.12	3.18	2.4	12
	Indicated	2.0	6.5	346	5.3	0.53	0.43	0.55	3.49	3.2	15
Ellengail <sup>3,4,</sup> 9,10	Inferred	2.0	5.3	218	4.1	0.41	0.34	0.35	2.55	2.5	15
	Total	2.0	11.8	565	4.8	0.47	0.39	0.46	3.07	2.9	15
	Measured	1.4	2.6	112	4.3	0.44	0.09	0.10	3.08	11	15
Tatal	Indicated	Various	144.6	4,519	3.1	0.37	0.19	0.12	1.92	9	14
Total	Inferred	Various	46.0	1,091	2.4	0.36	0.24	0.14	1.21	8	16
	Total	Various	193.3	5,723	3.0	0.36	0.20	0.13	1.77	9	14

<sup>1</sup>The Mineral Resource estimates were prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer 03 October 2018 ASX announcement for Yandanooka, Durack, Drummond Crossing, West Mine North and Ellengail. Refer to December 2017 Quarterly Activities Report for Robbs Cross and Thomson deposits for further details

2All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sums of columns may not equal.

<sup>3</sup>Total heavy mineral (HM) %: Samples from 1989 and 1996 (Drummond Crossing, Ellengail and West Mine North) were analysed using a -75 µm slimes / +2 mm oversize screen. Separation of HM% was by heavy liquid TBE (density 2.84 g/ml) from the -710µm+75µm fraction.

<sup>4</sup>Total HM %: RGC samples from 1998 and Iluka samples (Drummond Crossing, Durack, Ellengail, West Mine North and Yandanooka) were analysed using a -53 µm slimes / +2 mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.90 g/ml) from the -710µm+53µm fraction.

<sup>5</sup>Total HM %: Samples from Robbs Cross and Thomson analysed by Diamantina Laboratories in Perth using a 45 µm slimes / +1 mm oversize screen (method DIA\_HLS\_45µm\_1mm). Separation of total HM% was by heavy liquid TBE (density 2.96g/ml) from the -45 µm+1mm fraction.

<sup>6</sup>Total HM %: Samples from Drummond Crossing, Durack, West Mine North and Yandanooka were analysed by Western Geolabs in Perth using a -53 µm slimes / +1 mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.96 g/ml) from the +53µm-1mm fraction.

7Reported below an upper cut-off grade of 35% slimes.

<sup>8</sup>Estimates of mineral assemblage are presented as percentages of the total HM component of the deposit, as determined by QEMSCAN™ analysis. For the TiO<sub>2</sub> minerals specific breakpoints are used to distinguish between rutile (>95% TiO<sub>2</sub>), leucoxene (85-95% TiO<sub>2</sub>) and ilmenite (<55-85% TiO<sub>2</sub>).

PAt West Mine North and Ellengail mineral assemblage data determined by Iluka using Method 4 (HM concentrate is separated into magnetics and non-magnetics) was used with the Sheffield QEMSCAN™ data

<sup>10</sup>At Ellengail mineral assemblage data determined by Iluka using Method 3 (magnetic separation and XRF) was used with the Sheffield QEMSCAN™ data and Iluka Method 4

<sup>11</sup>The in-situ assemblage grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale.

<sup>12</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables



#### SHEFFIELD MINERAL RESOURCE FOR ENEABBA PROJECT AT 31 DECEMBER 2020 (HM assemblage)

Summary of I	Mineral Resou	rce <sup>1,2</sup>					HM Assem	hlag <u>o</u> 8.9.10			
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>11</sup>	Total HM Grade	Zircon	Rutile	Leuco- xene	llme- nite	Over size	Slimes
	Category	(Total HM%)	(Million Tonnes)	(Thousand Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Measured	1.4	2.6	112	4.3	10	2.1	2.3	72	11.3	15
Yandanooka	Indicated	1.4	57.7	1,726	3.0	12	3.6	3.7	69	11.4	15
4,6,8	Inferred	1.4	0.4	7	1.5	11	3.0	4.4	68	21.9	20
	Total	1.4	60.8	1,845	3.0	12	3.5	3.6	70	11.5	15
	Indicated	1.4	20.7	600	2.9	14	2.9	3.7	71	14.7	14
Durack <sup>4,6,7,</sup> 8	Inferred	1.4	5.6	148	2.6	14	2.6	7.4	64	18.3	16
	Total	1.4	26.3	748	2.8	14	2.9	4.4	70	15.5	14
Drummond	Indicated	1.4	35.5	838	2.4	14	10.3	3.4	53	7.7	14
Crossing <sup>3,4,</sup>	Inferred	1.4	3.3	77	2.3	11	9.0	2.7	56	7.2	12
6,8	Total	1.4	38.8	915	2.4	14	10.2	3.4	54	7.7	14
	Indicated	1.4	14.0	261	1.9	15	12.7	5.0	47	6.2	6
Robbs Cross <sup>5,6,8</sup>	Inferred	1.4	3.8	77	2.0	14	10.9	4.1	50	8.1	6
	Total	1.4	17.8	338	1.9	15	12.3	4.8	48	6.6	6
<b>T</b> I	Inferred	1.4	26	516	2.0	19	13.8	5.4	42	6.9	18
Thomson <sup>5,8</sup>	Total	1.4	26	516	2.0	19	13.8	5.4	42	6.9	18
West	Indicated	2.0	10.2	748	7.3	6	6.5	1.8	48	2.3	11
Mine	Inferred	2.0	1.8	48	2.7	9	8.6	2.1	50	3.0	17
North <sup>3,4,6,9</sup>	Total	2.0	12.0	796	6.6	6	6.6	1.8	48	2.4	12
	Indicated	2.0	6.5	346	5.3	10	8.0	10.4	66	3.2	15
Ellengail <sup>3,4,</sup> 9,10	Inferred	2.0	5.3	218	4.1	10	8.2	8.4	62	2.5	15
	Total	2.0	11.8	565	4.8	10	8.1	9.6	64	2.9	15
	Measured	1.4	2.6	112	4.3	10	2.1	2.3	72	11	15
<b>T</b> 1	Indicated	Various	144.6	4,519	3.1	12	6.1	3.9	62	9	14
Total	Inferred	Various	46.0	1,091	2.4	15	10.3	5.8	51	8	16
	Total	Various	193.3	5,723	3.0	12	6.8	4.2	60	9	14

<sup>1</sup> The Mineral Resource estimates were prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer 03 October 2018 ASX announcement for Yandanooka, Durack, Drummond Crossing, West Mine North and Ellengail. Refer to December 2017 Quarterly Activities Report for Robbs Cross and Thomson deposits for further details

<sup>2</sup>All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sums of columns may not equal.

<sup>3</sup>Total heavy mineral (HM) %: Samples from 1989 and 1996 (Drummond Crossing, Ellengail and West Mine North) were analysed using a -75µm slimes / +2 mm oversize screen. Separation of HM% was by heavy liquid TBE (density 2.84 g/ml) from the -710µm+75µm fraction.

<sup>4</sup>Total HM %: RGC samples from 1998 and Iluka samples (Drummond Crossing, Durack, Ellengail, West Mine North and Yandanooka) were analysed using a -53 μm slimes / +2 mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.90 g/ml) from the -710μm+53μm fraction.

<sup>5</sup>Total HM %: Samples from Robbs Cross and Thomson analysed by Diamantina Laboratories in Perth using a -45µm slimes / +1mm oversize screen (method DIA\_HLS\_45µm\_1mm). Separation of total HM% was by heavy liquid TBE (density 2.96g/ml) from the -45 µm+1mm fraction.

<sup>6</sup>Total HM %: Samples from Drummond Crossing, Durack, West Mine North and Yandanooka were analysed by Western Geolabs in Perth using a -53 μm slimes / +1 mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.96g/ml) from the +53μm-1mm fraction.

<sup>7</sup>Reported below an upper cut-off grade of 35% slimes.

<sup>8</sup>Estimates of mineral assemblage are presented as percentages of the total HM component of the deposit, as determined by QEMSCAN™ analysis. For the TiO₂ minerals specific breakpoints are used to distinguish between rutile (>95% TiO₂), leucoxene (85-95% TiO₂) and ilmenite (<55-85% TiO₂).

PAt West Mine North and Ellengail mineral assemblage data determined by Iluka using Method 4 (HM concentrate is separated into magnetics and non-magnetics) was used with the Sheffield QEMSCAN™ data

<sup>10</sup>At Ellengail mineral assemblage data determined by Iluka using Method 3 (magnetic separation and XRF analysis) was used with the Sheffield QEMSCAN<sup>TM</sup> data and Iluka Method 4 data

11 The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables



# SHEFFIELD MINERAL RESOURCE FOR ENEABBA PROJECT AT 31 DECEMBER 2020 (in-situ tonnes)

Summary of Mi	neral Resource	8 <sup>1,2,3</sup>				In-situ	Tonnes		
Deposit	Mineral Resource Category	Cut off (Total HM%)	Material (Million Tonnes)	In-situ Total HM <sup>11</sup> (Thousand	Zircon (Thousand Tonnes)	Rutile (Thousand Tonnes)	Leucoxene (Thousand	llmenite (Thousand	Total VHM (Thousand Tonnes)
	Maggurad	1.4	2.6	<b>Tonnes)</b> 112	12	2	Tonnes) 3	Tonnes) 81	98
	Measured								
Yandanooka <sup>,</sup> 4,6,8	Indicated	1.4 1.4	57.7	1,726 7	212 1	63 0.2	63 0.3	1,197 4	1,535
	Inferred		0.4						6
	Total	1.4	60.8	1,845	224	65	66	1,283	1,639
	Indicated	1.4	20.7	600	82	18	22	429	551
Durack4,6,7,8	Inferred	1.4	5.6	148	21	4	11	95	130
	Total	1.4	26.3	748	104	21	33	523	681
	Indicated	1.4	35.5	838	118	86	29	447	680
Drummond Crossing <sup>3,4, 6,8</sup>	Inferred	1.4	3.3	77	9	7	2	43	61
0	Total	1.4	38.8	915	127	93	31	490	741
	Indicated	1.4	14.0	261	38	33	13	123	208
Robbs Cross <sup>5,6,8</sup>	Inferred	1.4	3.8	77	11	8	3	39	61
01000	Total	1.4	17.8	338	50	41	16	162	269
Thomson <sup>5,8</sup>	Inferred	1.4	26	516	97	71	28	219	415
I nomson <sup>3,8</sup>	Total	1.4	26	516	97	71	28	219	415
West	Indicated	2.0	10.2	748	44	49	13	359	465
Mine	Inferred	2.0	1.8	48	5	4	1	24	34
North <sup>3,4,6,9</sup>	Total	2.0	12.0	796	48	53	14	383	498
	Indicated	2.0	6.5	346	34	28	36	227	325
Ellengail <sup>3,4,9,1</sup>	Inferred	2.0	5.3	218	22	18	18	136	193
	Total	2.0	11.8	565	56	46	54	363	519
	Measured	1.4	2.6	112	12	2	3	81	98
Total	Indicated	Various	144.6	4,519	529	276	176	2,782	3,764
Total	Inferred	Various	46.0	1,091	165	113	64	559	900
	Total	Various	193.3	5,723	705	392	242	3,423	4,762

<sup>1</sup> The Mineral Resource estimates were prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer 03 October 2018 ASX announcement for Yandanooka, Durack, Drummond Crossing, West Mine North and Ellengail. Refer to December 2017 Quarterly Activities Report for Robbs Cross and Thomson deposits for further details

<sup>2</sup>All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sums of columns may not equal.

<sup>3</sup>Total heavy mineral (HM) %: Samples from 1989 and 1996 (Drummond Crossing, Ellengail and West Mine North) were analysed using a -75µm slimes / +2mm oversize screen. Separation of HM% was by heavy liquid TBE (density 2.84 g/ml) from the -710µm+75µm fraction.

<sup>4</sup>Total HM %: RGC samples from 1998 and Iluka samples (Drummond Crossing, Durack, Ellengail, West Mine North and Yandanooka) were analysed using a -53 µm slimes / +2 mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.90 g/ml) from the -710µm+53µm fraction.

<sup>5</sup>Total HM %: Samples from Robbs Cross and Thomson analysed by Diamantina Laboratories in Perth using a -45 μm slimes / +1 mm oversize screen (method DIA\_HLS\_45μm\_1mm). Separation of total HM% was by heavy liquid TBE (density 2.96g/ml) from the -45 μm+1mm fraction.

<sup>c</sup>Total HM %: Samples from Drummond Crossing, Durack, West Mine North and Yandanooka were analysed by Western Geolabs in Perth using a -53µm slimes / +1mm oversize screen. Separation of total HM% was by heavy liquid TBE (density 2.96 g/ml) from the +53µm-1mm fraction.

<sup>7</sup>Reported below an upper cut-off grade of 35% slimes.

<sup>8</sup>Estimates of mineral assemblage are presented as percentages of the total HM) component of the deposit, as determined by QEMSCAN™ analysis. For the TiO<sub>2</sub> minerals specific breakpoints are used to distinguish between rutile (>95% TiO<sub>2</sub>), leucoxene (85-95% TiO<sub>2</sub>) and ilmenite (<55-85% TiO<sub>2</sub>).

<sup>9</sup>At West Mine North and Ellengail mineral assemblage data determined by Iluka using Method 4 (HM concentrate is separated into magnetics and non-magnetics) was used with the Sheffield QEMSCAN™ data

<sup>10</sup>At Ellengail mineral assemblage data determined by Iluka using Method 3 (magnetic separation and XRF analysis) was used with the Sheffield QEMSCAN<sup>TM</sup> data and Iluka Method 4 data

11 The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables



# McCALLS PROJECT MINERAL RESOURCES

#### SHEFFIELD MINERAL RESOURCES FOR McCALLS PROJECT AT 31 DECEMBER 2020 (in-situ assemblage)

N	dinoral						In-situ Asse	emblage <sup>5, 6</sup>			
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>6</sup>	Total HM Grade	Zircon	Rutile	Leuco- xene	llme- nite	Over size	Slimes
c	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
h	Indicated	1.1	1,630	23.3	1.4	0.07	0.05	0.04	1.10	1.1	21
McCalls I	Inferred	1.1	1,980	24.4	1.2	0.06	0.05	0.04	1.00	1.1	26
Т	Total	1.1	3,600	47.7	1.3	0.07	0.05	0.04	1.05	1.1	24
Mindarra	Inferred	1.1	2,200	36.3	1.6	0.07	0.01	0.05	1.32	5.1	20
Springs <sup>7</sup> T	Total	1.1	2,200	36.3	1.6	0.07	0.01	0.05	1.32	5.1	20
lı	Indicated	1.1	1,630	23.3	1.4	0.07	0.05	0.04	1.10	1.1	21
Total II	Inferred	1.1	4,180	60.7	1.5	0.07	0.03	0.05	1.17	3.2	23
т	Total	1.1	5,800	84.0	1.4	0.07	0.03	0.04	1.15	2.6	22

# SHEFFIELD MINERAL RESOURCES FOR McCALLS PROJECT AT 30 SEPTEMBER 2020 (HM assemblage)

Summary of	of Mineral Res	ources1,2,3,4,	7								
							HM Assen	nblage <sup>5, 6</sup>			
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM <sup>6</sup>	Total HM Grade	Zircon	Rutile	Leuco- xene	llme- nite	Over size	Slimes
	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Indicated	1.1	1,630	23.3	1.4	5.2	3.3	2.8	77	1.1	21
McCalls	Inferred	1.1	1,980	24.4	1.2	5.0	3.8	3.2	81	1.1	26
	Total	1.1	3,600	47.7	1.3	5.1	3.6	3.0	79	1.1	24
Mindarra	Inferred	1.1	2,200	36.3	1.6	4.2	0.9	3.1	80	5.1	20
Springs <sup>7</sup>	Total	1.1	2,200	36.3	1.6	4.2	0.9	3.1	80	5.1	20
	Indicated	1.1	1,630	23.3	1.4	5.2	3.3	2.8	77	1.1	21
Total	Inferred	1.1	4,180	60.7	1.5	4.5	2.1	3.2	81	3.2	23
	Total	1.1	5,800	84.0	1.4	4.7	2.4	3.1	79	2.6	22

<sup>1</sup>The Mineral Resource estimates for McCalls and Mindarra Springs were prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 03 October 2018

<sup>2</sup>All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sums of columns may not equal

<sup>3</sup>Total heavy mineral (HM) is within the 45µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -45µm fraction and oversize is the +1mm fraction

<sup>4</sup>Reported below an upper cut-off grade of 35% slimes

<sup>5</sup>Estimates of mineral assemblage (Sheffield) are presented as percentages of the total HM) component of the deposit, as determined by QEMSCAN<sup>™</sup> analysis. For the TiO<sub>2</sub> minerals specific breakpoints are used to distinguish between rutile (>95% TiO<sub>2</sub>), leucoxene (85-95% TiO<sub>2</sub>) and ilmenite (<55-85% TiO<sub>2</sub>). Estimates of mineral assemblage (BHP) HM assemblage determination was by magnetic separation and observation (grain-counting)

<sup>6</sup> The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables

<sup>7</sup>Excludes Mineral Resources within the Mogumber Nature Reserve



SHEFFIELD MINERAL RESOURCES FOR McCALLS PROJECT AT 31 DECEMBER 2020 (in-situ tonnes)

Summary of	of Mineral Res	ources <sup>1,2,3,4</sup>				In-situ	I Tonnes		
Deposit	Mineral Resource	Cut off	Material	In-situ Total HM7	Zircon	Rutile	Leucoxene	Ilmenite	Total VHM
	Category	(Total HM%)	(Million Tonnes)	(Million Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)	(Thousand Tonnes)
	Indicated	1.1	1,630	23.3	1,210	770	650	17,940	20,570
McCalls	Inferred	1.1	1,980	24.4	1,210	930	790	19,790	22,720
	Total	1.1	3,600	47.7	2,430	1,700	1,430	37,730	43,290
Mindarra	Inferred	1.1	2,200	36.3	1,520	320	1,130	29,080	32,050
Springs <sup>8</sup>	Total	1.1	2,200	36.3	1,520	320	1,130	29,080	32,050
	Indicated	1.1	1,630	23.3	1,210	770	650	17,940	20,570
Total	Inferred	1.1	4,180	60.7	2,740	1,250	1,920	48,860	54,770
	Total	1.1	5,800	84.0	3,950	2,020	2,570	66,810	75,340

<sup>1</sup>The Mineral Resource estimates for McCalls and Mindarra Springs were prepared by Optiro Pty Ltd and first disclosed under the JORC Code (2012) refer to ASX announcement 03 October 2018

2All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sums of columns may not equal

<sup>3</sup>Total heavy mineral (HM) is within the 45µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -45µm fraction and oversize is the +1mm fraction

<sup>4</sup>Reported below an upper cut-off grade of 35% slimes

<sup>5</sup>Estimates of mineral assemblage (Sheffield) are presented as percentages of the total HM component of the deposit, as determined by QEMSCAN™ analysis. For the TiO₂ minerals specific breakpoints are used to distinguish between rutile (>95% TiO₂), leucoxene (85-95% TiO₂) and ilmenite (<55-85% TiO₂). Estimates of mineral assemblage (BHP) HM assemblage determination was by magnetic separation and observation (grain-counting)

<sup>e</sup>The in-situ assemblage grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale

<sup>7</sup>The contained in-situ tonnes derived from HM and material tonnes from information in the Mineral Resource tables

<sup>8</sup>Excludes mineralisation within the Mogumber Nature Reserve

# **GOVERNANCE AND INTERNAL CONTROLS**

Mineral Resource and Ore Reserve are compiled by qualified Sheffield personnel and/or independent consultants following industry standard methodology and techniques. The underlying data, methodology, techniques and assumptions on which estimates are prepared are subject to internal peer review by senior Company personnel, as is JORC compliance. Where deemed necessary or appropriate, estimates are reviewed by independent consultants. Competent Persons named by the Company are members of the Australasian Institute of Mining and Metallurgy and/or the Australian Institute of Geoscientists and qualify as Competent Persons as defined in the JORC Code 2012.

#### COMPETENT PERSONS AND COMPLIANCE STATEMENTS

The information in this report that relates to Exploration Results is based on information compiled by Mr Seb Gray, a Competent Person who is a Member of Australian Institute of Geoscientists (AIG). Mr Seb Gray is a full-time employee of Sheffield Resources Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Seb Gray consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Company's Ore Reserves and Mineral Resources Statement is based on information first reported in previous ASX announcements by the Company. These announcements are listed below and are available to view on Sheffield's website www.sheffieldresources.com.au. Mineral Resources and Ore Reserves reported for the Dampier Project and Mineral Resources reported for the Eneabba and McCalls Projects, are prepared and disclosed under the JORC Code 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant original market announcement continue to apply and have not materially changed.

The information in this report that relates to the estimation of the Ore Reserve is based on information compiled by Mr Per Scrimshaw, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Scrimshaw is employed by Entech Pty Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Scrimshaw consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



The information in this report that relates to the estimation of the Mineral Resources is based on information compiled by Mrs Christine Standing, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG) and the Australasian Institute of Mining and Metallurgy (AusIMM). Mrs Standing is a full-time employee of Optiro Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Mrs Standing consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to the Thunderbird Mineral Resource is based on information compiled under the guidance of Mr Mark Teakle, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG) and the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Teakle is a full-time employee of Sheffield Resources Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Teakle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Competent Persons for reporting of Mineral Resources and Ore Reserves in the relevant original market announcements are listed below. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the relevant original market announcement.

Item	Report title	Report Date	Competent Person(s)
Thunderbird Ore Reserve	Thunderbird 10% Ore Reserve Increase	31 July 2019	P. Scrimshaw
Thunderbird Mineral Resource	Sheffield Doubles Measured Mineral Resource at Thunderbird	05 July 2016	M. Teakle, C. Standing
Night Train Mineral Resource	High Grade Maiden Mineral Resource at Night Train	31 January 2019	C. Standing
Robbs Cross Mineral Resource	Quarterly Activities Report for The Period Ended 31 December 2017	30 January 2018	C. Standing
Thomson Mineral Resource	Quarterly Activities Report for The Period Ended 31 December 2017	30 January 2018	C. Standing
Yandanooka Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
Durack Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
Drummond Crossing Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
West Mine North Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
Ellengail Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
McCalls Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing
Mindarra Springs Mineral Resource	Mineral Resource and Ore Reserve Statement	03 October 2018	C. Standing

Ore Reserves and Mineral Resources prepared and first disclosed under the JORC Code (2012):

Item	Name	Company	Professional Affiliation
Exploration Results	Mr Seb Gray	Sheffield Resources	MAIG
Exploration Results	Mr David Archer	Sheffield Resources	MAIG
Mineral Resource Reporting	Mr Mark Teakle	Sheffield Resources	MAIG, MAusIMM
Mineral Resource Estimation	Mrs Christine Standing	Optiro	MAIG, MAusIMM
Ore Reserve	Mr Per Scrimshaw	Entech	MAusIMM



# SUPPORTING INFORMATION REQUIRED UNDER ASX LISTING RULES, CHAPTER 5

The supporting information below is required, under Chapter 5 of the ASX Listing Rules, to be included in market announcements reporting estimates of Mineral Resources and Ore Reserves.

Refer to the Sheffield ASX Release 'MINERAL RESOURCE AND ORE RESERVE STATEMENT' released on the 24 September 2019. This can be found on the company's website <u>www.sheffieldreseources.com.au</u>.

# PREVIOUSLY REPORTED INFORMATION

This report includes information that relates to Exploration Results, Mineral Resources and Ore Reserves prepared and first disclosed under the JORC Code 2012 and a Bankable Feasibility Study. The information was extracted from the Company's previous ASX announcements as follows:

- Quarterly Activities Report: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2020" 21 January 2021
- Quarterly Activities Report: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2020" 13 October 2020
- Mineral Resource and Ore Reserve Statement: "MINERAL RESOURCE AND ORE RESERVE STATEMENT" 24 September 2019
- Quarterly Activities Report June 30, 2019 "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 JUNE 2019" 31 July 2019
- Thunderbird Ore Reserve Update: "THUNDERBIRD ORE RESERVE UPDATE" 31 July 2019
- Thunderbird BFS Update: "BFS UPDATE MATERIALLY REDUCES CAPITAL", 31 July 2019
- Night Train Inferred Resource and Mineral Assemblage results "HIGH GRADE MAIDEN MINERAL RESOURCE AT NIGHT TRAIN" 31 January 2019
- Yandanooka, Durack, Drummond Crossing, West Mine North, Ellengail, McCalls and Mindarra Springs Resource Estimates and including Mineral Resource and Ore Statement "MINERAL RESOURCE AND RESERVE STATEMENT" 03 October, 2018
- Thomson and Robbs Cross Mineral Resources: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2017" 30 January, 2018
- Thunderbird Mineral Resource: "SHEFFIELD DOUBLES MEASURED MINERAL RESOURCE AT THUNDERBIRD" 5 July, 2016

These announcements are available to view on Sheffield's website www.sheffieldresources.com.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources, Ore Reserves and the Bankable Feasibility Study, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the relevant original market announcements.

# FORWARD LOOKING AND CAUTIONARY STATEMENTS

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

Some statements in this report regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.



# AUDITOR'S INDEPENDENCE DECLARATION

As lead auditor for the review of the consolidated financial report of Sheffield Resources Limited for the half-year ended 31 December 2020, I declare that to the best of my knowledge and belief, there have been no contraventions of:

- a) the auditor independence requirements of the *Corporations Act 2001* in relation to the review; and
- b) any applicable code of professional conduct in relation to the review.

Perth, Western Australia 15 February 2021

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# hlb.com.au

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HLB Mann Judd (WA Partnership) is a member of HLB International, the global advisory and accounting network.



		Consolidated	
	Notes	31 December 2020 \$'000	31 December 2019 \$'000
Continuing operations			
Other Income		188	56
Employee benefits expense		(1,216)	(2,867)
Corporate expenses	2	(402)	(3,077)
Results from operating activities		(1,430)	(5,888)
Net financing income		(27)	(37)
Net loss before income tax		(1,457)	(5,925)
Income tax benefit		-	-
Loss for the period		(1,457)	(5,925)
Other comprehensive income			
Other comprehensive income for the year, net of tax		-	-
Total comprehensive loss for the half year		(1,457)	(5,925)
Basic loss per share (cents per share)		(0.43)	(2.08)
Diluted loss per share (cents per share)		(0.43)	(2.08)



Assets           Current Assets           Cash and cash equivalents         12,932         7,083           Trade and other receivables         684         500           Total Current Assets         13,616         7,583           Non-Current Assets         3         3,364         3,364           Other non-current assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         20         19           Provisions         117         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         226         63           Total Current Liabilities         1,708         1,555           Total non-current liabilities         1,708		Notes	31 December 2020 \$'000	30 June 2020 \$'000
Cash and cash equivalents         12,932         7,083           Trade and other receivables         684         500           Total Current Assets         13,616         7,583           Non-Current Assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Llabilities         20         19           Provisions         117         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         226         63           Total non-current liabilities         1,708         1,555           Total Current Liabilities         1,708         1,555           Total con-current liabilities         1,708         1,555           Total non-current liabilities         3,035 </td <td>Assets</td> <td></td> <td></td> <td></td>	Assets			
Trade and other receivables         684         500           Total Current Assets         13,616         7,583           Non-Current Assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         20         19           Provisions         11,7         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         1,708         1,555           Total non-current liabilities         1,708         1,555           Total Liabilities         3,035         4,355           Notal non-current liabilities         1,708         1,555           Total Current Liabilities         3,035         4,355           Net Assets         98,044         86,82	Current Assets			
Total Current Assets         13,616         7,583           Non-Current Assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         20         19           Provisions         11,7         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         1,708         1,555           Total non-current liabilities         1,708         1,555           Total Liabilities         1,708         1,555           Notal Liabilities         3,035         4,355           Non-Current Liabilities         1,708         1,555           Total non-current liabilities         1,708         1,555           Notal Liabilities         3,035         4,355 </td <td>Cash and cash equivalents</td> <td></td> <td>12,932</td> <td>7,083</td>	Cash and cash equivalents		12,932	7,083
Non-Current Assets         3         3,364         3,364           Other non-current assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         20         19           Provisions         117         205           Total Assets         1,327         2,800           Non-Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Interest bearing liabilities         1,482         1,492           Provisions         226         63           Total non-current liabilities         3,035         4,355           Notal Incerset bearing liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         11,265         11,	Trade and other receivables		684	500
Other non-current assets         3         3,364         3,364           Plant and equipment         4         3,477         3,719           Right of use asset         4         1,358         1,393           Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         20         19           Provisions         1,327         2,800           Non-Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         226         63           Total non-current liabilities         1,708         1,555           Total non-current liabilities         1,708         1,555           Notal non-current liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         1         1,265         11,123           Accumulated losses         (46,319)         (44,862)	Total Current Assets		13,616	7,583
Plant and equipment       4       3,477       3,719         Right of use asset       4       1,358       1,393         Deferred exploration and evaluation expenditure       5       10,642       10,137         Mine development       4       68,622       64,979         Total Non-Current Assets       87,463       83,592         Total Assets       101,079       91,175         Liabilities       101,079       91,175         Current Liabilities       20       19         Provisions       117       205         Total Assets       1,327       2,800         Non-Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       11,265       11,123         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Non-Current Assets			
Right of use asset       4       1,358       1,393         Deferred exploration and evaluation expenditure       5       10,642       10,137         Mine development       4       68,622       64,979         Total Non-Current Assets       87,463       83,592         Total Assets       101,079       91,175         Liabilities       101,079       91,175         Current Liabilities       20       19         Provisions       1117       205         Total Assets       1,327       2,800         Non-Current Liabilities       1,327       2,800         Non-Current Liabilities       1,327       2,800         Non-Current Liabilities       1,708       1,555         Total non-current liabilities       1,708       1,555         Total Iabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       1,265       11,123         Reserves       11,265       11,123       14,4862	Other non-current assets	3	3,364	3,364
Deferred exploration and evaluation expenditure         5         10,642         10,137           Mine development         4         68,622         64,979           Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         101,079         91,175           Current Liabilities         20         19           Provisions         117         205           Total non-current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         1,708         1,555           Total non-current liabilities         1,708         1,555           Total Liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         1         1,265         11,123           Accumulated losses         (46,319)         (44,862)	Plant and equipment	4	3,477	3,719
Mine development       4       68,622       64,979         Total Non-Current Assets       87,463       83,592         Total Assets       101,079       91,175         Liabilities       101,079       91,175         Current Liabilities       20       19         Provisions       117       205         Total Assets       1,327       2,800         Non-Current Liabilities       1,482       1,492         Provisions       1,708       1,555         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       1,265       11,123         Accumulated losses       (46,319)       (44,862)	Right of use asset	4	1,358	1,393
Total Non-Current Assets         87,463         83,592           Total Assets         101,079         91,175           Liabilities         Current Liabilities         7           Trade and other payables         6         1,190         2,576           Interest bearing liabilities         20         19           Provisions         117         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         226         63           Total non-current liabilities         1,708         1,555           Total Liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         Issued capital         7         133,098         120,559           Reserves         11,265         11,123         Accumulated losses         (46,319)         (44,862)	Deferred exploration and evaluation expenditure	5	10,642	10,137
Total Assets         101,079         91,175           Liabilities         Current Liabilities            Trade and other payables         6         1,190         2,576           Interest bearing liabilities         20         19           Provisions         117         205           Total Current Liabilities         1,327         2,800           Non-Current Liabilities         1,482         1,492           Provisions         226         63           Total non-current liabilities         1,708         1,555           Total Liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         11,265         11,123           Accumulated losses         (46,319)         (44,862)	Mine development	4	68,622	64,979
Liabilities         Current Liabilities         Trade and other payables       6       1,190       2,576         Interest bearing liabilities       20       19         Provisions       117       205         Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       1,265       11,123         Issued capital       7       133,098       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Total Non-Current Assets		87,463	83,592
Current Liabilities       6       1,190       2,576         Interest bearing liabilities       20       19         Provisions       117       205         Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       1,265       11,123         Issued capital       7       133,098       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Total Assets		101,079	91,175
Trade and other payables       6       1,190       2,576         Interest bearing liabilities       20       19         Provisions       1117       205         Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       Issued capital       7       133,098       120,559         Reserves       11,265       11,123       1,123         Accumulated losses       (46,319)       (44,862)	Liabilities			
Interest bearing liabilities       20       19         Provisions       117       205         Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       1,265       11,123         Issued capital       7       133,098       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Current Liabilities			
Provisions       117       205         Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Trade and other payables	6	1,190	2,576
Total Current Liabilities       1,327       2,800         Non-Current Liabilities       1,482       1,492         Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       1       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Interest bearing liabilities		20	19
Non-Current LiabilitiesInterest bearing liabilities1,4821,492Provisions22663Total non-current liabilities1,7081,555Total Liabilities3,0354,355Net Assets98,04486,820Equity11,26511,233Reserves11,26511,123Accumulated losses(46,319)(44,862)	Provisions		117	205
Interest bearing liabilities       1,482       1,492         Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Total Current Liabilities		1,327	2,800
Provisions       226       63         Total non-current liabilities       1,708       1,555         Total Liabilities       3,035       4,355         Net Assets       98,044       86,820         Equity       120,559         Issued capital       7       133,098       120,559         Reserves       11,265       11,123         Accumulated losses       (46,319)       (44,862)	Non-Current Liabilities			
Total non-current liabilities         1,708         1,555           Total Liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         1 <th1< th="">         1         <th1< <="" td=""><td>Interest bearing liabilities</td><td></td><td>1,482</td><td>1,492</td></th1<></th1<>	Interest bearing liabilities		1,482	1,492
Total Liabilities         3,035         4,355           Net Assets         98,044         86,820           Equity         133,098         120,559           Reserves         11,265         11,123           Accumulated losses         (44,862)         (44,862)	Provisions		226	63
Net Assets         98,044         86,820           Equity	Total non-current liabilities		1,708	1,555
Equity         7         133,098         120,559           Issued capital         7         11,265         11,123           Accumulated losses         (46,319)         (44,862)	Total Liabilities		3,035	4,355
Issued capital         7         133,098         120,559           Reserves         11,265         11,123           Accumulated losses         (46,319)         (44,862)	Net Assets		98,044	86,820
Reserves         11,265         11,123           Accumulated losses         (46,319)         (44,862)	Equity			
Accumulated losses (46,319) (44,862)	Issued capital	7	133,098	120,559
	Reserves		11,265	11,123
Total Equity         98,044         86,820	Accumulated losses		(46,319)	(44,862)
	Total Equity		98,044	86,820



	Accumulated			
	Issued Capital	Losses	Reserves	Total Equity
	\$'000	\$'000	\$'000	\$'000
Balance at 1 July 2019	99,469	(36,492)	9,663	72,640
Loss for the period	-	(5,925)	-	(5,925)
Total comprehensive loss for the period	-	(5,925)	-	(5,925)
Shares issued during the period	18,000	-	-	18,000
Share issue costs	(1,372)	-	-	(1,372)
Share-based payments	1,462	-	1,456	2,918
Balance at 31 December 2019	117,559	(42,417)	11,119	86,261

	Accumulated			
	Issued Capital	Losses	Reserves	Total Equity
	\$	\$	\$	\$
Balance at 1 July 2020	120,559	(44,862)	11,123	86,820
Loss for the period		(1,457)	-	(1,457)
Total comprehensive loss for the period	-	(1,457)	-	(1,457)
Shares issued during the period and options exercised	12,882	-	-	12,882
Share issue costs	(343)	-	-	(343)
Share-based payments	-	-	142	142
Balance at 31 December 2020	133,098	(46,319)	11,265	98,044



	Consolidated	
	31 December 2020 \$'000	31 December 2019 \$'000
	Inflows/(Outf	
Cash flows from operating activities		
Receipts from customers	-	2
Payments to suppliers and employees	(2,073)	(2,088)
Interest received	31	32
Net cash (outflows) from operating activities	(2,042)	(2,054)
Cash flows from investing activities		
Payments for exploration and evaluation expenditure	(477)	(937)
Payments for development expenditure	(3,781)	(3,266)
Payments for debt service costs	(414)	(1,958)
Payments for plant and equipment	(8)	-
Payments for guarantees	-	(67)
Return of guarantees	41	-
Proceeds from disposal of assets	-	5
Net cash (outflows) from investing activities	(4,639)	(6,223)
Cash flows from financing activities		
Proceeds from issue of shares and exercise of options	12,882	18,000
Payments for share issue costs	(343)	(1,412)
Repayment of finance lease	(9)	(79)
Net cash inflows from financing activities	12,530	16,509
Net increase in cash held	5,849	8,232
Cash and cash equivalents at the beginning of the period	7,083	2,698
Cash and cash equivalents at the end of the period	12,932	10,930



# NOTE 1: STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

#### Statement of compliance

The half year consolidated financial statements are general purpose financial statements prepared in accordance with the requirements of the Corporations Act 2001, applicable accounting standards including AASB 134 'Interim Financial Reporting', Accounting Interpretations and other authoritative pronouncements of the Australian Accounting Standards Board ('AASB'). Compliance with AASB 134 ensures compliance with IAS 34 'Interim Financial Reporting'.

This condensed half year financial report does not include full disclosures of the type normally included in an annual financial report. Therefore, it cannot be expected to provide as full an understanding of the financial performance, financial position and cash flows of the Group as in the full financial report.

It is recommended that this financial report be read in conjunction with the annual financial report for the year ended 30 June 2020 and any public announcements made by Sheffield Resources Limited during the half year in accordance with continuous disclosure requirements arising under the Corporations Act 2001 and the ASX Listing Rules.

#### **Basis of preparation**

The half year report has been prepared on a historical cost basis. Cost is based on the fair value of the consideration given in exchange for assets. The company is domiciled in Australia and all amounts are presented in Australian dollars, unless otherwise noted.

For the purpose of preparing the interim report, the half year has been treated as a discrete reporting period.

The accounting policies adopted are consistent with those of the previous financial year and corresponding interim reporting period.

#### Significant accounting judgments and key estimates

The preparation of half year financial report requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expense. Actual results may differ from these estimates.

Except as described below, in preparing this half year financial report, the significant judgments made by management in applying the Group's accounting policies and the key sources of estimation uncertainty were the same as those that applied to the consolidated financial report for the year ended 30 June 2020.

#### Accounting policies and method of computation

The accounting policies and methods of computation adopted are consistent with those of the previous financial year and corresponding interim reporting period. These accounting policies are consistent with Australian Accounting Standards and with International Financial Reporting Standards.

# Adoption of new and revised standards

In the period ended 31 December 2020, the Directors have reviewed all of the new and revised Standards and Interpretations issued by the AASB that are relevant to the Group and effective for the current reporting period. As a result of this review, the Directors have determined that there is no material impact of the new and revised Standards and Interpretations on the Group and, therefore, no material change is necessary to Group accounting policies.

The Directors have also reviewed all of the new and revised Standards and Interpretations in issue not yet adopted for the period ended 31 December 2020. As a result of this review the Directors have determined that there is no material impact of the Standards and Interpretations in issue not yet adopted to the Group and, therefore, no change is necessary to Group accounting policies.



# NOTE 2: CORPORATE EXPENSES

	Consolidated		
	31 December	31 December	
	2020	2019	
	\$'000	\$'000	
Accounting fees	-	22	
Legal fees	19	35	
Conferences and seminars	1	18	
Operating lease variable outgoings	51	56	
Consultancy fees	(54)	2,123	
Depreciation – non-mine assets	250	259	
Depreciation – right of use assets	35	163	
Other	100	401	
	402	3,077	

# NOTE 3: OTHER NON-CURRENT ASSETS

	Consolidate	Consolidated		
	31 December 2020	30 June 2020		
	\$'000	\$'000		
Transaction costs <sup>1</sup>	3,364	3,364		
	3,364	3,364		

<sup>1</sup> The amount relates to transaction costs that are directly attributable to the establishment of the funding facilities negotiated for the Thunderbird Project. These amounts will be reclassified to borrowings upon drawdown of the facilities.



# NOTE 4: PLANT AND EQUIPMENT, RIGHT OF USE ASSET AND MINE DEVELOPMENT

Consolidated	Plant and Equipment	Right of Use Assets	Mine Development	Total
As at 31 December 2020	\$'000	\$'000	\$'000	\$'000
At cost	4,899	1,393	68,622	74,914
Accumulated depreciation	(1,422)	(35)	-	(1,457)
Closing carrying amount	3,477	1,358	68,622	73,457
Reconciliation of carrying amounts:				
Balance at 1 July 2020	3,719	1,393	64,979	70,091
Additions	8	-	3,473	3,481
Transfers between asset classes	-	-	-	-
Capitalisation of research and development grant	-	-	-	-
Additions to mine rehabilitation asset	-	-	170	170
Depreciation expense	(250)	(35)	-	(285)
Balance at 31 December 2020	3,477	1,358	68,622	73,457

	Plant & Equipment	Right of Use Assets	Mine Development	Total
As at 30 June 2020	\$'000	\$'000	\$'000	\$'000
At cost	4,891	1,544	64,979	71,414
Accumulated depreciation	(1,172)	(151)	_	(1,323)
Closing carrying amount	3,719	1,393	64,979	70,091
Reconciliation of carrying amounts:				
Balance at 1 July 2019	4,232	2,058	53,952	60,242
Additions	-	-	9,971	9,971
Transfers between asset classes <sup>1</sup>		-	3,331	3,331
Derecognition of right of use asset	-	(456)	-	(456)
Capitalisation of research & development grant	-	-	(670)	(670)
Disposal of assets	(38)	-	(1,605)	(1,643)
Depreciation expense	(475)	(209)	_	(684)
Balance at 30 June 2020	3,719	1,393	64,979	70,091

<sup>1</sup>During the half year the Group transferred \$3.3m from Other Non-Current Assets in relation to commitment fees paid on the undrawn US\$175m Taurus Mining Fund facility. These fees are classified as borrowing costs and have been capitalised to Mine Development.



# NOTE 5: DEFERRED EXPLORATION AND EVALUATION EXPENDITURE

	Consolidated		
	Half-year to 31 December 2020	Year to 30 June 2020	
	\$'000	\$'000	
Exploration and evaluation phase – at cost			
Balance at beginning of period	10,137	9,641	
Expenditure incurred	512	1,383	
Impairment of exploration expenditure	(7)	(887)	
Balance as at 31 December 2020	10,642	10,137	

The recoupment of costs carried forward in relation to areas of interest in the exploration and evaluation phases is dependent upon the successful development and commercial exploitation or sale of the respective areas.

# NOTE 6: TRADE AND OTHER PAYABLES

	Consolidated	Consolidated		
	31 December 2020	30 June 2020		
	\$'000	\$'000		
Trade payables	665	1,584		
Other payables	525	992		
	1,190	2,576		

Trade payables are non-interest bearing and are normally settled on 30-day terms.

Trade and other payables represent liabilities for goods and services provided to the Group prior to the period end and which are unpaid. These amounts are unsecured and have 30-60-day payment terms. They are recognised initially at fair value and subsequently at amortised cost.

# NOTE 7: ISSUED CAPITAL

	Consolidate	Consolidated		
	31 December 2020	30 June 2020		
Ordinary shares	\$'000	\$'000		
Issued and fully paid	133,098	120,559		



# NOTE 7: ISSUED CAPITAL (continued)

	Consolidated				
	No.		\$'000		
	Half-year to 31 December Year to 30 June		Half-year to 31 December	Year to 30 June	
	2020	2020	2020	2020	
Movements in ordinary shares on issue					
At start of period	311,795,340	260,555,374	120,559	99,469	
Issue of fully paid ordinary shares	34,259,421	46,153,846	12,882	18,000	
Issued pursuant to a Facility Agreement	-	2,250,000	-	1,463	
Issued pursuant to an Agreement	-	2,836,120	-	3,000	
Share issue costs	-	-	(343)	(1,373)	
At end of period	346,054,761	311,795,340	133,098	120,559	

# NOTE 8: DIVIDENDS

No dividends were paid or declared during the half year ended 31 December 2020.

# NOTE 9: SEGMENT REPORTING

		Unallocated Corporate		
31 December 2020	Sheffield Project	Thunderbird Project	/ Other	Consolidated
	\$'000	\$'000	\$'000	\$'000
Other income	-	-	181	181
Employee benefits expense	-	-	(1,074)	(1,074)
Corporate expense	-	-	(117)	(117)
Depreciation – non mine site assets	-	(214)	(36)	(250)
Depreciation - right of use assets	-	(35)	-	(35)
Impairment of deferred exploration and evaluation	-	7	-	7
Share based payments	-	-	(142)	(142)
Net financing income	-	(58)	31	(27)
Segment assets	6,942	81,372	12,765	101,079
Segment liabilities	-	2,815	220	3,035



# NOTE 9: SEGMENT REPORTING (continued)

04 D 4 0040	Unallocated Corporate				
31 December 2019	Sheffield Project	Thunderbird Project	/ Other	Consolidated	
	\$'000	\$'000	\$'000	\$'000	
Other income	-	-	53	53	
Employee benefits expense	-	-	(2,867)	(2,867)	
Corporate expense	-	-	(3,072)	(3,072)	
Gain on disposal of asset	-	-	5	5	
Impairment of deferred exploration and evaluation	-	(2)	-	(2)	
Net financing income	-	-	(37)	(37)	
Segment assets	6,795	75,913	10,439	93,147	
Segment liabilities	-	(4,622)	(2,264)	(6,886)	

Description of Projects

- I. Sheffield Project: This Project consists of mineral sand exploration tenements located in Western Australia. Exploration activities continue to be conducted in these areas.
- II. Thunderbird Project: This Project consists of mineral sand tenements located in the Canning Basin that form part of the Thunderbird mineral sand mining operation, currently under construction.
- III. Unallocated Items: Part of the following items and associated assets and liabilities are not allocated to operating segments as they are not considered part of the core operations of any segment:
  - corporate expenses; and
  - share-based payment expense.

#### NOTE 10: FINANCIAL INSTRUMENTS

The directors consider that the carrying value of the financial assets and liabilities as recognised in the financial statements at their approximate fair values.

#### NOTE 11: SHARE-BASED PAYMENT PLANS

#### **Options**

No options were exercised or issued during the half year. 2,198,039 options lapsed on expiry during the period.

#### Performance Rights

The following performance rights were issued during the half year to directors, as approved at the Annual General Meeting of Shareholders:

Number	Grant date	Expiry date	Exercise price	Share price at grant date	
3,000,000	10/06/2020	31/12/2021	Nil	\$0.145	

During the half year, 2,559,565 performance rights lapsed due to not meeting the vesting conditions and 11,265 performance rights were cancelled on termination of employment.

No performance rights were exercised during the half year.



# NOTE 12: CONTINGENT LIABILITIES

The Group has transaction fees of up to \$3m payable upon successful completion of the 50/50 joint venture arrangement and receipt of A\$130m from Yansteel.

# NOTE 13: MATERIAL CAPITAL COMMITMENTS

The Group has the following capital commitments relating to the Thunderbird Co-existence Agreement as at 31 December 2020:

- \$0.4m annual support payment; and
- \$1.5m payable on a positive final investment decision for the Thunderbird Mineral Sands Project.

# NOTE 14: EVENTS SUBSEQUENT TO REPORTING DATE

Subsequent to the end of the half year, the Company announced to the ASX on 6 January 2021 that it had executed definitive binding documents for the proposed \$130m investment by Yansteel to acquire 50% of the Thunderbird Mineral Sands Project. Satisfaction of the remaining conditions precedent to formalise formation of the Joint Venture are ongoing with a Final Investment Decision ("FID") targeted during 2021.



In the opinion of the Directors of Sheffield Resources Limited ('the Group'):

- 1. The attached financial statements and notes thereto are in accordance with the Corporations Act 2001 including:
  - a. complying with Accounting Standards, the Corporations Regulations 2001 and other mandatory professional reporting requirements; and
  - b. giving a true and fair view of the Group's financial position as at 31 December 2020 and of its performance for the half year then ended; and
- 2. There are reasonable grounds to believe that the Group will be able to pay its debts as and when they become due and payable.

This declaration is signed in accordance with a resolution of the Board of Directors made pursuant to s.303(5) of the Corporations Act 2001.

Mr Bruce McFadzean Managing Director

15 FEBRUARY 2021



# INDEPENDENT AUDITOR'S REVIEW REPORT

To the members of Sheffield Resources Limited

# **Report on the Condensed Half-Year Financial Report**

# Conclusion

We have reviewed the accompanying half-year financial report of Sheffield Resources Limited ("the company") which comprises the condensed consolidated statement of financial position as at 31 December 2020, the condensed consolidated statement of comprehensive income, the condensed consolidated statement of changes in equity and the condensed consolidated statement of cash flows for the half-year ended on that date, notes comprising a summary of significant accounting policies and other explanatory information, and the directors' declaration, for the Group comprising the company and the entities it controlled at the half-year end or from time to time during the half-year.

Based on our review, which is not an audit, we have not become aware of any matter that makes us believe that the half-year financial report of Sheffield Resources Limited does not comply with the *Corporations Act 2001* including:

- (a) giving a true and fair view of the Group's financial position as at 31 December 2020 and of its performance for the half-year ended on that date; and
- (b) complying with Accounting Standard AASB 134 Interim Financial Reporting and the Corporations Regulations 2001.

# Basis for conclusion

We conducted our review in accordance with ASRE 2410 Review of a Financial Report Performed by the Independent Auditor of the Entity. Our responsibilities are further described in the Auditor's responsibilities for the review of the financial report section of our report. We are independent of the company in accordance with the auditor independence requirements of the Corporations Act 2001 and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (including Independence Standards) (the Code) that are relevant to our audit of the annual financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

# Responsibility of the directors for the financial report

The directors of the company are responsible for the preparation of the half-year financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the directors determine is necessary to enable the preparation of the half-year financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

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Auditor's responsibility for the review of the financial report

Our responsibility is to express a conclusion on the half-year financial report based on our review. ASRE 2410 requires us to conclude whether we have become aware of any matter that makes us believe that the half-year financial report is not in accordance with the *Corporations Act 2001* including giving a true and fair view of the Group's financial position as at 31 December 2020 and its performance for the half-year ended on that date, and complying with Accounting Standard AASB 134 Interim Financial Reporting and the Corporations Regulations 2001.

A review of a half-year financial report consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

# Independence

In conducting our review, we have complied with the independence requirements of the *Corporations Act 2001*.

His Manpool

HLB Mann Judd Chartered Accountants

Perth, Western Australia 15 February 2021

N G Neill Partner

# hlb.com.au

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