

26 April 2018

ASX Code:
SFX

Directors:

Mr Will Burbury
Non-Executive Chairman

Mr Bruce McFadzean
Managing Director

Mr Bruce McQuitty
Non-Executive Director

Mr David Archer
Technical Director

Registered Office:

Level 2, 41-47 Colin Street
West Perth WA 6005

Share Registry:

Link Market Services
Level 12, QV1 Building
250 St Georges Terrace
Perth WA 6000

Capital Structure:

Ordinary Shares: 228.6M
Unlisted Options: 13.8M
Unlisted Rights: 2.0M

Market Capitalisation:

A\$176 million

Cash Reserves:

A\$25.4 million
(as at 31 March 2018)

Investor Relations:

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SheffieldResources
LIMITED

QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 MARCH 2018

HIGHLIGHTS

Thunderbird Mineral Sands Project

- Further binding offtake agreements secured; 100% of Stage 1 forecast zircon revenue now under binding offtake agreement
- Offtake negotiations for ilmenite products well advanced
- Detailed engineering and design works in progress with GR Engineering
- US\$200M debt facility due diligence well advanced with Taurus Mining Finance
- National Native Title Tribunal hearing scheduled for 18 May 2018
- Government approved early site works well underway, underpinning pathway to construction
- Further commitment and success for 2018 Aboriginal training and development program
- Completion of Derby Port Lease Agreement imminent

Exploration

- Two new significant zircon-rich exploration projects secured during the quarter.
- Planning and permitting for regional exploration drilling at the Dampier project well advanced.

Corporate Activities

- Cash position of A\$25.4 million as at 31 March 2018
- Research & Development tax rebate of \$2.7m received in April 2018 (not included in 31 March 2018 cash position above).
- Completion of the Carawine Resources Limited demerger

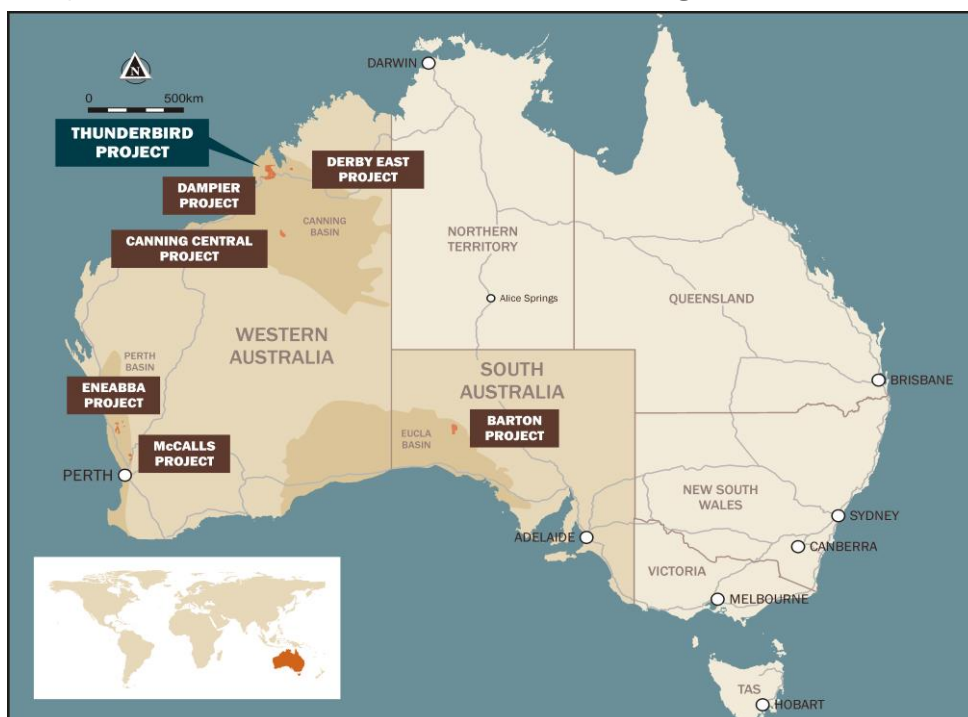


Figure 1: Location of Sheffield Mineral Sands Projects

OPERATIONAL AND EXPLORATION SUMMARY

During the quarter, Sheffield Resources Limited (“Sheffield” or “the Company”) continued progress toward development of its world class Thunderbird Mineral Sands Project (Thunderbird), located in the Canning Basin in northern Western Australia (Figures 1 and 2). Solid progress was made on offtake, financial due diligence and early engineering works, as described below.

Following the signing of multiple zircon offtake agreements in the previous quarter, the Company concluded a binding zircon offtake agreement with Qingyuan Jinsheng ZR & TI Resources Co. Ltd (Jinsheng), for the minimum annual supply of 9,000 tonnes of premium zircon. 100% of zircon concentrate and 100% of premium zircon for Stage 1 of Thunderbird has now been secured under binding agreements.

Thunderbird product demand remains strong. With over 60% of forecast Stage 1 revenue now under binding agreement, Sheffield is focussed on concluding negotiations for binding offtake agreements for its high quality low temperature roast (LTR) ilmenite and Hi-Ti88 (leucoxene) products. During the December 2017 quarter, Sheffield announced the execution of a US\$200M debt financing mandate with Taurus Mining Finance Fund. Due diligence processes are well advanced, in parallel with negotiation of a debt facility agreement and related financing documentation.

GR Engineering Services Limited (GRES), as preferred engineering, procurement and construction (EPC) contractor for Thunderbird, advanced a range of deliverables contained in the Early Works Agreement. The majority of front end engineering and design works for Thunderbird were concluded during the quarter. Additionally, Roundhill Engineering Pty Ltd completed LTR front end engineering and design works during the March quarter.

Project development expenditure for the March quarter totalled \$4.7m, with the majority of this sum comprising acquisition costs associated with the accommodation village and Thunderbird project front end engineering and design expenditure.

Site access and infrastructure arrangements for Thunderbird progressed during the quarter, in accordance with the State Government approved Minor or Preliminary Works (MoPW). Whilst significant rainfall events in the region constrained activities, there was no impact on overall development schedule. The early works program has also enabled Sheffield to advance Aboriginal training in readiness for construction activities at Thunderbird.

Following Environmental Protection Agency (EPA) recommendation for approval of Thunderbird Project during the December 2017 quarter, the environmental approvals process continued throughout the March quarter and is expected to conclude in Q2 2018. The approval process and conditions have underscored the low environmental impact of the Thunderbird project.

Following conclusion of Federal Court proceedings in late 2017, the matter has been referred to the National Native Title Tribunal (NNTT) to reconsider the previous good faith finding with a hearing scheduled for 18 May 2018 with a determination anticipated in late Q2 2018. Independent of the NNTT process, Sheffield has remained willing to seek a mutually acceptable Native Title Agreement with Traditional Owners.

Sheffield recently concluded the Carawine Resources Limited demerger process, following withdrawal of an ATO class ruling application and enabling finalisation of shareholder cost base and capital gains tax considerations to take place. Further details regarding the Carawine Resources Limited demerger process are described on Page 11.

During the quarter, the Company substantively advanced lease negotiations for the Derby port and bulk handling facility. The minimum 20 year lease agreement with the Shire of Derby-West Kimberley shall facilitate the export of the Company’s bulk products. Ship loading facilities currently in place at the Derby

port have previously been used for the export of base metal concentrates from Western Metal's Lennard Shelf operations and is well suited to the export of bulk mineral sands products. Sheffield expects to conclude the Derby Port Lease Agreement shortly.

The Company continued to grow its mineral sands land position and advance its exploration program in the March 2018 quarter. The Company has secured the Central Canning Project located in the Canning Basin of Western Australia and the Barton Project located in the Eucla Basin of South Australia. In addition, the Company has advanced exploration approvals anticipated in Q2 2018 with programs scheduled to commence during Q3 2018. Regional exploration drilling targets mineralisation along strike and proximal to the planned Thunderbird Project. Following the demerger of Carawine Resources, Sheffield is now structured as a pure mineral sands company holding significant ground positions in highly prospective mineral sands provinces in both Western Australia and South Australia.

THUNDERBIRD MINERAL SANDS PROJECT

Front End Engineering and Design

GR Engineering Services Limited (GRES), as preferred EPC tenderer for Thunderbird, entered into an Early Works Agreement during the December quarter to advance Front End Engineering and Design (FEED) activities in preparation for construction of Stage 1 of Thunderbird.

The majority of FEED activities are now complete, with Sheffield having confirmed the following arrangements with GRES:

- Mechanical arrangements and site layouts for Thunderbird;
- Definitive mechanical list of process plant items;
- Process Flow Diagrams (PFDs) and Process & Instrument Diagrams (P&IDs);
- Mass and Energy balances for Stage 1 Thunderbird;

With the confirmation and finalisation of the above activities, Sheffield expects to negotiate and conclude an EPC contract with GRES during Q2 2018. In addition to the FEED activities performed by GRES, Roundhill Engineering has concluded the front end engineering design work to support the LTR process with all PFDs and P&IDs received by the Company.



Figure 2: Location of Thunderbird Mineral Sands Project

Negotiations on a number of other contracting activities are well advanced, including the Thunderbird electricity and gas supply arrangements, mining services arrangements, village design and catering arrangements with shortlisted counterparties. Electricity and gas supply, together with mining services, represent more than 50% of Thunderbird's annual operating costs and pricing discussions indicate costs to be in line with the Bankable Feasibility Study (BFS) released in March 2017.

Early Works Program

Initial earthworks and site access to support Thunderbird continued during the quarter, in accordance with the State Government approved MoPW. Whilst rainfall events in the region curtailed some activities during the wet season, the work program is now accelerated with the arrival of the dry season and focussed on upgrading site access roads and preparatory works ahead of accommodation village and ancillary building installation.

A number of Kimberley based contractors and businesses have been engaged to carry out the work program, and further supported by Aboriginal trainees from Sheffield's Group Training Program.

As reported in the December quarter, the Company has acquired and stored a 328 room village and associated facilities in Broome. The Company is currently installing 92 rooms and associated facilities comprising of part permanent village and a fly camp to enable the construction of the project to commence. The Company anticipates utilising the skills of local labour and businesses with a very strong focus on Aboriginal participation in line with our commitment to the local communities.



Figure 3 & 4: Upgrade of site access roads

Sustainability

Following Environmental Protection Agency (EPA) recommendation for approval of Thunderbird Project during the December quarter, the environmental approvals process continued throughout the March quarter and is expected to conclude in Q2 2018. The approval process and outcomes have underscored the low environmental impact of the Thunderbird project.

Following conclusion of Federal Court proceedings in late 2017, the matter has been referred to the National Native Title Tribunal (NNTT) to reconsider the previous good faith finding with a hearing scheduled for 18 May 2018. Independent of the NNTT process, Sheffield has remained willing to seek a mutually acceptable Native Title Agreement with Traditional Owners.

Sheffield continued its stakeholder engagement process throughout the Kimberley community during the quarter, with the Thunderbird Project continuing to have strong and wide local community support.

Group Training Program

Following the successful completion of the Work Ready Program (WRP), Sheffield affirmed its ongoing commitment to Aboriginal employment and training, with the establishment of a Group Training Program, a further investment of \$750,000. The Group Training Program employed eight graduates from the WRP as trainees with Broome-based Nirrumbuk Group Training. The trainees have been rotated through a variety of activities including Early Works at the Thunderbird Project, refurbishment works on the second hand accommodation village, acquired in late 2017 and placements with other Kimberley based construction businesses. At the completion of the program, trainees will gain a Certificate 3 in Civil Construction and the opportunity to secure construction roles on the Thunderbird Project.



Figure 5 & 6: Trainees performing field and repair works

Marketing and Offtake

Following conclusion of multiple zircon offtake agreements in the December quarter, the Company concluded a binding zircon offtake agreement with Qingyuan Jinsheng ZR & TI Resources Co. Ltd (Jinsheng), for the minimum annual supply of 9,000 tonnes of premium zircon. 100% of zircon concentrate and 100% of premium zircon for Stage 1 of Thunderbird has now been secured under binding agreements, representing over 60% of Stage 1 forecast revenue. The Company seeks to have more than 80% of forecast revenue under binding offtake agreements, exceeding the debt condition precedent of 70% of gross revenue.

Sheffield is focussed on concluding negotiations toward binding offtake agreement for its premium LTR ilmenite product, with a number of meetings and engagements held with quality counterparties in Europe and Asia. Sheffield is receiving strong interest for its premium LTR ilmenite as feedstock for direct sulphate pigment production and for its LTR slag ilmenite blend for chloride slag manufacture. Sheffield has also commenced initial discussions for offtake of its Hi-Ti88 (leucosene) product.

Evidence of supply shortages have continued to impact pricing for zircon products during early 2018. Upward price pressure on zircon material is expected to continue, given current supply constraints from existing projects and limited available surplus stock.

Market conditions for TiO₂ products have remained steady during the quarter with this steady growth expected to continue throughout 2018. The market is anticipating strong future growth in the chloride pigment industry which bodes well for the Company's high-grade ilmenite products which are suited to both direct sulphate pigment production and importantly chloride slag manufacture.

Project Financing

During the December quarter, Sheffield announced the execution of a US\$200M debt financing mandate with Taurus Mining Finance Fund as mandated lead arranger and underwriter. Due diligence processes continued during the March quarter, in parallel with negotiation of a full form debt facility agreement and ancillary financing documentation. The due diligence process continues to support the key BFS process design and cost assumptions and has identified a number of opportunities to improve operability of the process plant.

In conjunction with mandated debt facility arrangements, Sheffield continues to advance discussions with a number of strategic partners with a view to participation in the development of the Thunderbird project. The Company is well advanced in contractual negotiations with key suppliers comprising more than 50% of Stage 1 operating costs. The Company anticipates concluding the majority of its key capital and operating contracts over the coming months.

The Company is consulting with the Northern Australia Infrastructure Fund (NAIF) to assess options and availability for a subordinated, long term infrastructure debt finance arrangement to support Thunderbird and adjacent local communities. NAIF is a federally funded program supporting infrastructure development projects for northern Australia. NAIF provides the Company with a cost effective opportunity to in-source Thunderbird energy supply infrastructure, in addition to providing improved public transportation and logistics infrastructure.

EXPLORATION ACTIVITIES

During the Quarter, Sheffield generated two new zircon rich projects located in the Canning Basin of Western Australia and the Eucla Basin of South Australia. Sheffield's current portfolio of heavy mineral sands exploration projects comprise the Dampier and Central Canning projects located in the Canning Basin of Western Australia, the Eneabba and McCalls projects located in the North Perth Basin of Western Australia and the Barton project located in the Eucla Basin of South Australia. Sheffield's exploration strategy is to target additional large, high value, zircon rich deposits suitable for downstream processing at the Thunderbird Dry Mineral Separation Plant (MSP). Sheffield will continue to actively pursue and evaluate new mineral sands opportunities in Australia and overseas, with a focus on zircon rich deposits.

Dampier Project

Planning and permitting for regional exploration on the Dampier project continued during the quarter, with approvals due Q2 2018 and programs expected to commence during Q3 2018. Regional drilling will target mineralisation along strike from and proximal to the planned Thunderbird Project. Thunderbird is the first significant heavy mineral sand deposit to be discovered in the Canning Basin, and limited exploration drilling to date by Sheffield has resulted in the discovery of four new mineral sands prospects named Night Train, Nomad, Argo and Seagull (Figure 7). The discovery rate highlights the potential for the Canning Basin to become a significant new mineral sands province. Night Train is located 20km southeast of Thunderbird and is within 2km of the proposed Thunderbird Access Road and considered the most significant of these additional prospects discovered to date.

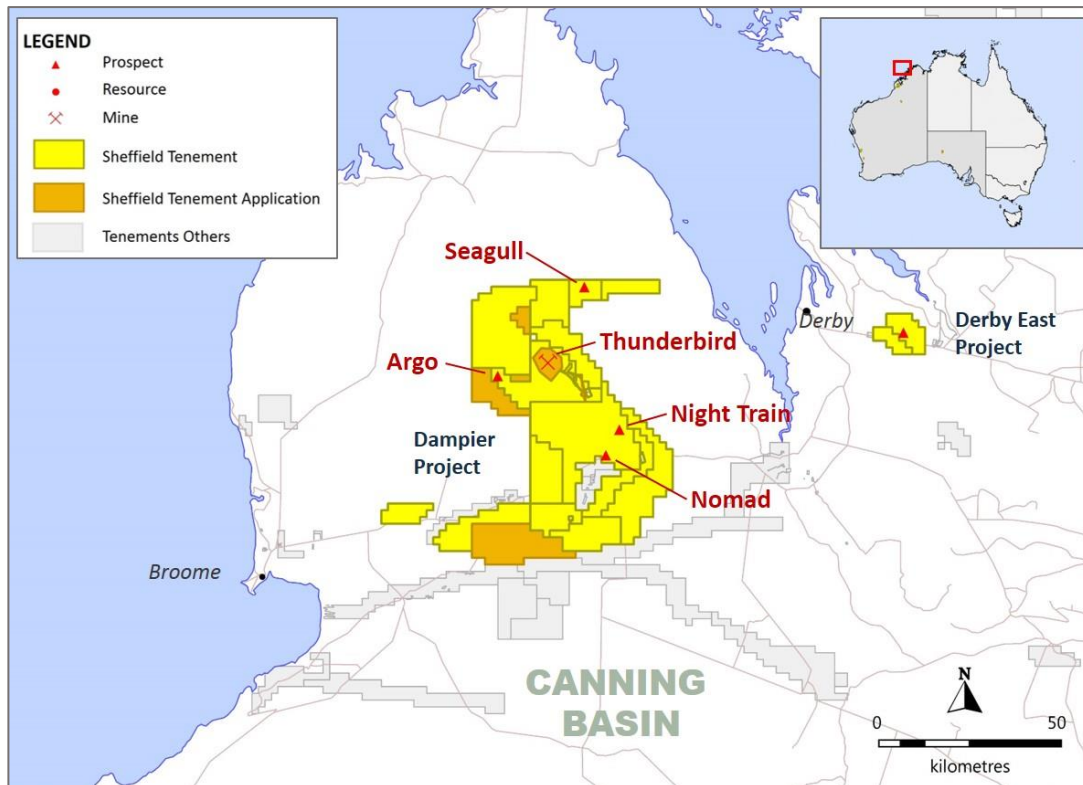


Figure 7: Dampier and Derby East Projects, Western Australia

Significant results from Night Train include:

- 9m @ 6.33% HM from 22.5m (DAAC052), including 7.5m @ 7.23% HM from 24m.
- 13.5m @ 5.25% HM from 46.5m (DAAC094), including 7.5m @ 8.23% HM from 48m.
- 24m @ 3.33% HM from 37.5m (DAAC093), including 12m @ 5.48% HM from 37.5m.
- Mineral assemblage: 15% zircon, 16% ilmenite, 53% leucoxene and 8% Hi-Ti leucoxene.
(refer to ASX announcements of 22 September 2015 and 25 February 2015 for further details)



Figure 8: Panned HM from Night Train Drill Hole DAAC093, Dampier Projects.

Initial scoping metallurgical test work completed on a drill sample composite from the mineralised zone at Night Train showed that high quality zircon which meets ceramic grade specifications can be produced (Table 1 and refer to ASX announcement of 14 April 2016 for further details).

Table 1: Zircon Products – Summary Assay Results

Product	ZrO ₂ +HfO ₂	SiO ₂	TiO ₂	Fe ₂ O ₃	Al ₂ O ₃	U+Th
Primary Zircon	65.9%	32.9%	0.15%	0.05%	0.37%	481ppm
Secondary Zircon	65.5%	33.3%	0.36%	0.05%	0.20%	542ppm

Derby East Project

Sheffield is investigating the potential of the Derby East Project tenements, located 25km east of Derby (Figure 7), to yield commercial quantities of sand for construction purposes. Work to date has been encouraging (see Sheffield’s September 2017 Quarterly Report for details), with further drilling required to better define the potential quantities of these sands, along with additional test work designed to assess suitability for specific end-use requirements. Planning and permitting continued during the quarter, with approvals due Q2 2018 and programs expected to commence during Q3 2018.

Canning Central Project

The Canning Central Project comprises one Exploration Licence Application E45/5214 (applied for on the 11 April 2018, subsequent to end of quarter). The project is located central to the Canning Basin, 350km south of Thunderbird in the Kidson Sub-basin (Figure 9). Sheffield is targeting shallow zircon rich, Thunderbird style mineralisation in a shallow marine geological setting. A review of historic exploration and regional geology will be completed during H2 2018.

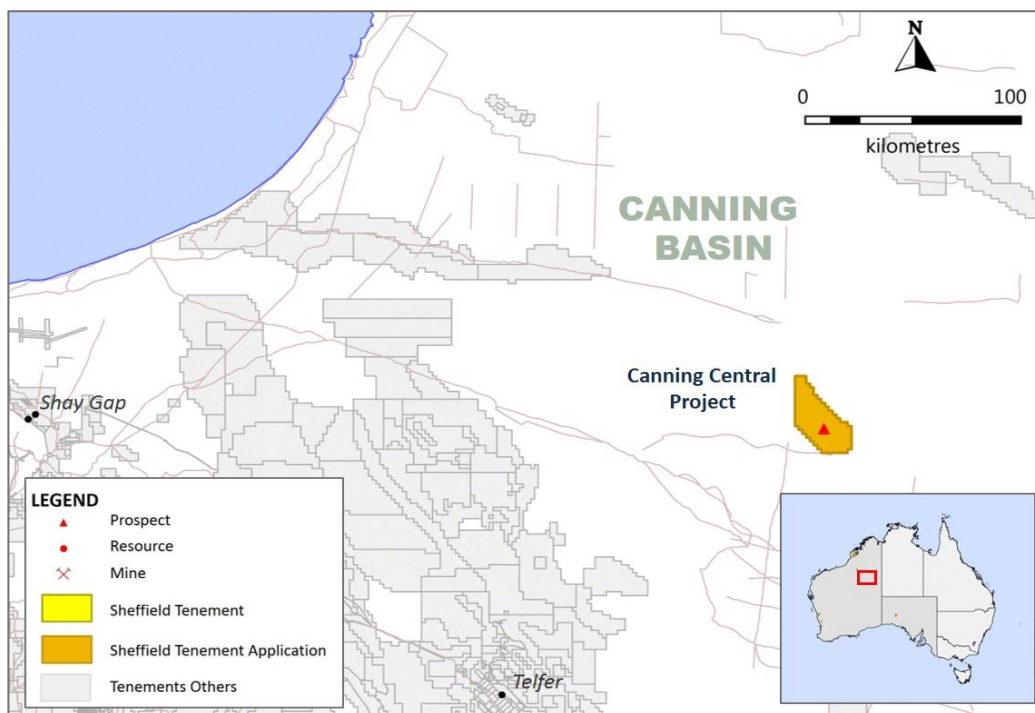


Figure 9: Canning Central Project, Western Australia

Barton Project

Exploration Licence Application (ELA) 2018/00046 was applied for on 8 March 2018 covering an area of 983.8 km² in the north-eastern Eucla Basin of central South Australia (Figure 10). The tenement application covers parts of the Eocene to Miocene sequence in the north-eastern Eucla Basin. Within this sequence the sand units of the Ooldea and Hampton Formations have the potential to host significant concentrations of heavy minerals within shallow marine or shore face sand units. The Exploration Licence

Application is located just 130 kilometres north of Iluka Resources Limited's (ASX:ILU) Jacinth-Ambrosia deposit.

Rio Tinto Exploration Pty Ltd (RTX) explored the area between 2004 and 2009, and a preliminary review of open file reports has shown the identification by RTX of heavy mineral sand mineralisation below the Paling and Barton Ranges, including the identification a significant zone of heavy mineral concentration (Sherrin prospect) from drill holes in the Paling Range. The mineralisation is described as approximately 8km long north-south, 6km wide east-west, and 4.5m to 12m metres thick¹. A thorough review of historic exploration data and regional geology will be completed during H2 2018.

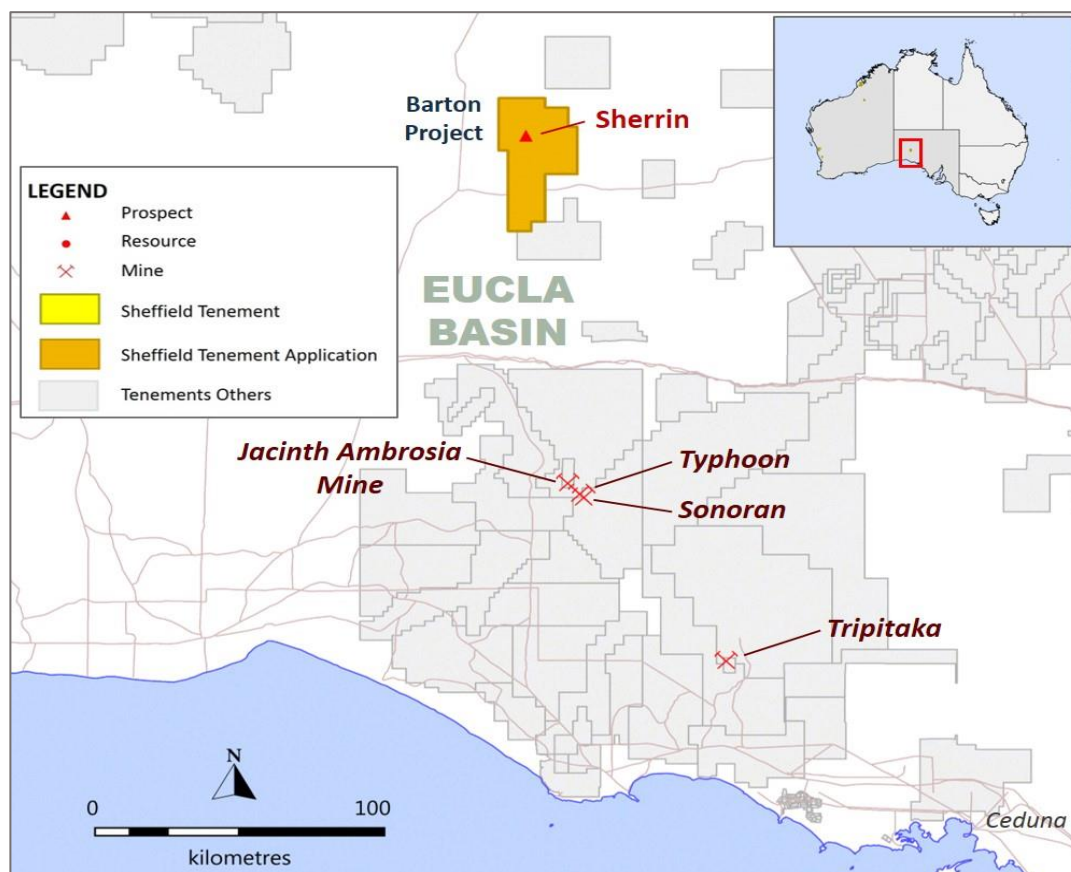


Figure 10: Barton Project, South Australia

Eneabba Project

During last quarter, maiden Mineral Resource estimates incorporating results from recent exploration drilling were completed at the Robbs Cross and Thomsons HMS deposits, within Sheffield's 100% owned Eneabba Project, located about 110km north of Perth in Western Australia's Midwest region (Figure 11).

At Robbs Cross, immediately north of Sheffield's Drummond Crossing deposit, total Mineral Resources comprising 17.8 million tonnes @ 1.9% heavy mineral (HM) above a 1.4% HM cut-off (Indicated and Inferred) have been estimated. At Thomsons, total Mineral Resources comprising 26 million tonnes @ 2.0% heavy mineral (HM) above a 1.4% HM cut-off (Inferred) have been estimated. Both deposits occur at or near-surface and have high proportions of valuable heavy minerals (VHM) in the assemblage, with

¹ Muggerridge, G. D., 2009, Fourth Annual Report for the Period Ending 14 March 2009, EL 3319 Barton Range Central EL 3320 Barton Range North and EL 3321 Paling Range North-Eastern Eucla Basin South Australia, Rio Tinto Exploration Pty Limited.

high components of zircon and rutile (see Sheffield's Quarterly Activities Report for the Period ended 31 December 2017 for details).

The addition of Robbs Cross and Thomsons brings total Mineral Resources for Sheffield's Eneabba HMS Project to over 7.6 million tonnes of contained HM (Measured, Indicated and Inferred) in seven deposits, including 897kt of zircon, 540kt of rutile, 323kt of leucoxene and 4,703kt of ilmenite (see Appendix 1 for a complete listing of Sheffield's Resources and Reserves).

During the Quarter review work commenced on Mineral Resources for Yandanooka, Durack, Drummond Crossing, West Mine North and Ellengail to enable reporting under the JORC Code (2012). It is anticipated that this work will be completed during Q3 2018.

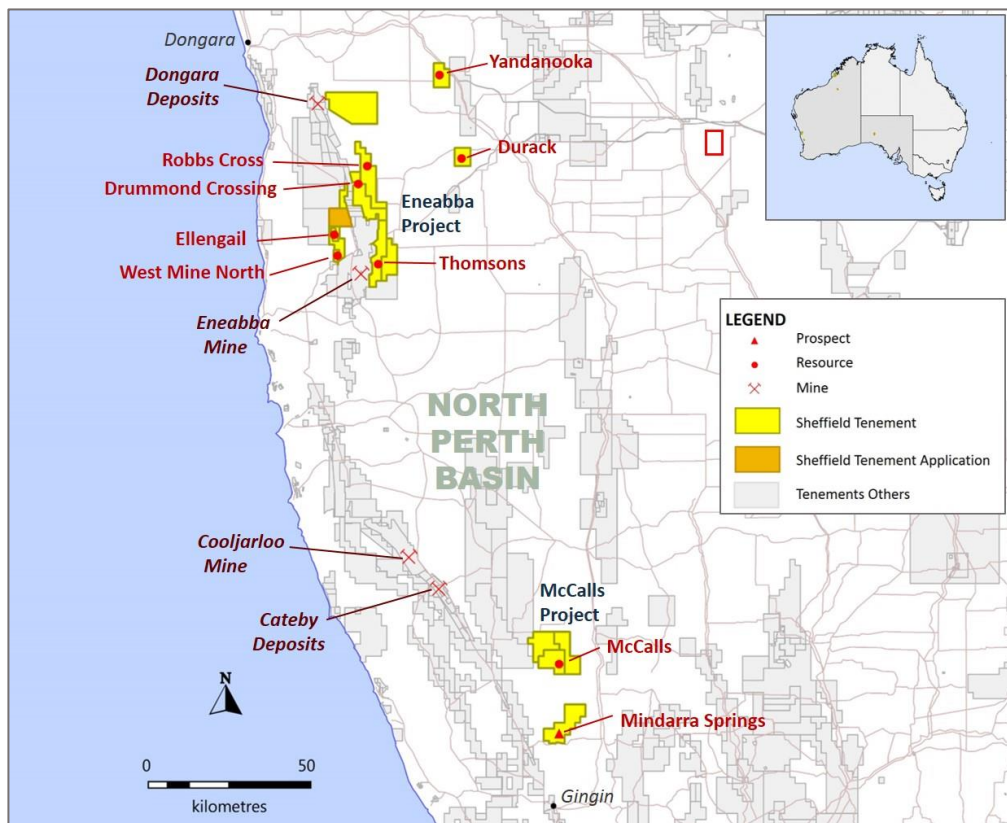


Figure 11: Eneabba and McCalls Projects, Western Australia

McCalls Project

During the quarter work commenced on an update of the McCalls Mineral Resource to include additional historic drilling data from the recently granted Exploration Licence E70/4922, which adjoins the current Mineral Resource area. Completion of this work is expected during Q3 2018.

CORPORATE ACTIVITIES

As at 31 March 2018, Sheffield held cash reserves of approximately \$25.4 million (unaudited). This amount excludes a Research & Development tax rebate of \$2.7m, received following the end of the quarter.

During the quarter, Sheffield continued preparation for the development of Thunderbird with the employment of experienced Human Resources professional, Vanessa Hughes as the General Manager – People and Community and the implementation of ERP software and systems to complement business growth objectives.

Carawine Resources Limited Demerger & Taxation Implications

Sheffield recently completed the demerger of Carawine Resources Limited and previously announced it was seeking a class ruling from the Australian Taxation Office (ATO) to confirm the taxation implications of the demerger. Sheffield has subsequently withdrawn its class ruling application and the ATO has not provided a determination. As a consequence of withdrawing the class ruling application, a capital gains tax liability may apply to small number of Sheffield shareholders who took part in the demerger.

Capital Gains Tax Implications

A capital gains tax (CGT) event occurred at the date of the demerger, when Sheffield shareholders were issued shares in Carawine Resources Limited. The cost base and reduced cost base of a share in Sheffield will be reduced by \$0.01752 per share, being the capital reduction amount. Sheffield shareholders may make a capital gain on the demerger to the extent that the capital component of the distribution exceeds the particular shareholder's cost base. A capital gain may arise where a shareholder holds a share in Sheffield with a cost base of less than \$0.01752.

It should be noted that shareholders that have acquired a share in Sheffield for greater than \$0.01752 per share should not make a capital gain as a result of the above CGT event. However, all shareholders should note that the cost base and reduced cost base of a share in Sheffield will be reduced by \$0.01752 per share for CGT purposes. This will be relevant for determining future capital gains or losses made in relation to shares held in Sheffield.

Further to the above, the capital reduction resulted in Sheffield shareholders being issued shares in Carawine Resources Limited valued at \$0.20 per share. The cost base and reduced cost base of a share in Carawine Resources Limited will be equal to the total distribution amount of \$0.20 per share. Furthermore, shares in Carawine Resources Limited will be taken to have been acquired by the shareholder at 7 December 2017 for the purposes of determining eligibility for the CGT discount (not at the original date of acquisition of a share in Sheffield Resources Limited). This will be relevant for determining future capital gains or losses made in relation to shares held in Carawine Resources Limited.

A fact sheet, including generic examples, is available at:

<http://www.sheffieldresources.com.au/irm/content/investor-fact-sheet.aspx> or by contacting the Company on +61 8 6555 8777.

Please note:

The information above provides general information on the Australian income tax implications of the Carawine Resources Limited demerger from Sheffield Resources Limited. This information is based on Australian income tax laws as at April 2018 and is limited to Australian income tax implications of the demerger for shareholders who hold or held their shares on capital account for tax purposes, and not on revenue account. The above information is not intended, and nor should it be relied on, as specific income tax advice. It is strongly recommended you seek independent professional advice in relation to your specific personal circumstances. Neither Sheffield, nor any of its officers or advisers, accepts liability or responsibility with respect to such consequences or the reliance of any shareholder on any part of the above information.



Mr Bruce McFadzean
Managing Director
26 April 2018

Schedule 1: Interests in Mining Tenements at the end of the quarter as required under ASX Listing Rule 5.3.3

Project	Tenement	Holder	Interest	Location ³	Status
Mineral Sands	E04/2455	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2456	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2081 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2083 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2084 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2159 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2171 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2192 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2193 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2194 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2348 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2349 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2350 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2390 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2399 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2400 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/84 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/85 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/86 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/92 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/93 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2478	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	L04/82	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	L04/83	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2494 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Mineral Sands	M04/459 ²	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Mineral Sands	E70/3762	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3813	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3814	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3929	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3967	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4190	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4584	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4292	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4719	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4747	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	L70/150	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	M70/872 ¹	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	M70/965 ¹	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	M70/1153 ¹	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	R70/35 ¹	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4922	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3859	Sheffield Resources Ltd	100%	Perth Basin	Pending
Mineral Sands	E04/2509	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2510	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Mineral Sands	ELA 2018-00046	Moora Talc Pty Ltd	100%	Eucla Basin (SA)	Pending

Notes:

¹Iluka Resources Ltd (ASX: ILU) retains a gross sales royalty of 1.5% in respect to tenements R70/35, M70/872, M70/965 & M70/1153.

²Thunderbird Operations Pty Ltd is a 100% owned subsidiary of Sheffield Resources Ltd.

Details of tenements and/or beneficial interests acquired/disposed of during the quarter are provided in Section 10 of the Company's accompanying Appendix 5B notice.

COMPLIANCE STATEMENTS

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:

- December 2017 Quarterly Report (Robbs Cross and Thomsons Mineral Resources): "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2017" 30 January, 2018
- September 2017 Quarterly Report: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2017" 31 October, 2017
- Thunderbird Ore Reserve: "THUNDERBIRD ORE RESERVE UPDATE" 16 March, 2017
- Thunderbird Bankable Feasibility Study: "THUNDERBIRD BFS DELIVERS OUTSTANDING RESULTS" 24 March, 2017
- McCalls Mineral Resource: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 JUNE 2016" 25 July 2016.
- Thunderbird Mineral Resource: "SHEFFIELD DOUBLES MEASURED MINERAL RESOURCE AT THUNDERBIRD" 5 July, 2016
- Night Train metallurgical scoping results: "PREMIUM ZIRCON AT NIGHT TRAIN", 14 April, 2016
- Night Train Discovery: "NEW MINERAL SANDS DISCOVERY AT NIGHT TRAIN" 22 September, 2015
- Robbs Cross and Thomsons Discovery: "NEXT GENERATION OF MINERAL SANDS DISCOVERIES AT ENEABBA" 23 July, 2015
- Night Train Drilling: "THREE NEW MINERAL SANDS DISCOVERIES IN CANNING BASIN" 25 February, 2015

This report also includes information that relates to Exploration Results and Mineral Resources which were prepared and first disclosed under the JORC Code 2004. The information has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. The information was extracted from the Company's previous ASX announcements as follows:

- Drummond Crossing Mineral Resource: "1Mt HEAVY MINERAL RESOURCE ADDED TO ENEABBA PROJECT", 30 October 2013.
- Yandanooka Mineral Resource: "YANDANOOKA RESOURCE UPGRADE AND METALLURGICAL RESULTS", 30 January 2013.
- Durack Mineral Resource: "ENEABBA PROJECT RESOURCE INVENTORY EXCEEDS 5MT HEAVY MINERAL", 28 August 2012.
- West Mine North Mineral Resource: "WEST MINE NORTH MINERAL RESOURCE ESTIMATE EXCEEDS EXPECTATIONS", 7 November 2011.
- Ellengail Mineral Resource: "1MT CONTAINED HM INFERRED RESOURCE AT ELLENGAIL", 25 October 2011.

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 Person's findings are presented have not been materially modified from the relevant original market announcements.

CAUTIONARY STATEMENTS AND RISK FACTORS

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.

APPENDIX 1: Ore Reserves and Mineral Resources

Sheffield announced an updated Ore Reserve totalling 680.5 million tonnes @ 11.3% HM for the Thunderbird heavy mineral sands deposit, in the Kimberley Region of Western Australia, on 16 March 2017, and has since completed a Bankable Feasibility Study for development of the deposit (the Thunderbird Mineral Sands Project). The Proved and Probable Ore Reserve estimate is based on that portion of the current July, 2016 Thunderbird deposit Measured and Indicated Mineral Resources within scheduled mine designs that may be economically extracted, considering all “Modifying Factors” in accordance with the JORC Code (2012).

Sheffield also has a number of Mineral Resource estimates for heavy mineral sands deposits within its Eneabba and McCalls Projects located in the Mid-West Region of Western Australia.

Ore Reserves										
Dampier Project Ore Reserves ^{1,4}										
Deposit	Ore Reserve Category	Ore Tonnes (millions)	In-situ HM Tonnes (millions)	HM Grade (%)	Valuable HM Grade (In-situ) ²				Slimes (%)	Osize (%)
					Zircon %	HiTi Leuc %	Leuc %	Ilmenite %		
Thunderbird	Proved	235.8	31.4	13.3	1.00	0.29	0.26	3.55	16.5	13.7
	Probable	444.8	45.4	10.2	0.80	0.26	0.26	2.85	15.2	11.0
	Total	680.5	76.8	11.3	0.87	0.27	0.26	3.10	15.7	12.0
Deposit	Ore Reserve Category	Ore Tonnes (millions)	In-situ HM Tonnes (millions)	HM Grade (%)	Mineral Assemblage ³				Slimes (%)	Osize (%)
					Zircon (%)	HiTi Leuc (%)	Leuc (%)	Ilmenite (%)		
Thunderbird	Proved	235.8	31.4	13.3	7.5	2.2	1.9	26.7	16.5	13.7
	Probable	444.8	45.4	10.2	7.8	2.5	2.6	28.0	15.2	11.0
	Total	680.5	76.8	11.3	7.7	2.4	2.3	27.4	15.7	12.0

1) Ore Reserves are presented both in terms of in-situ VHM grade, and HM 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. Ore Reserve is reported to a design overburden surface with appropriate consideration of modifying factors, costs, mineral assemblage, process recoveries and product pricing.

2) The in-situ grade is determined by multiplying the HM Grade by the percentage of each valuable heavy mineral within the heavy mineral assemblage.

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

4) Ore Reserves reported for the Dampier Project were prepared and first disclosed under the JORC Code (2012)

Mineral Resources

Dampier Project Mineral Resources 1,2,5

Deposit (cut-off)	Mineral Resource Category	Material Tonnes (millions)	In-situ HM Tonnes (millions)	HM Grade (%)	Mineral Assemblage ³				Slimes (%)	Osize (%)
					Zircon (%)	HiTi Leuc (%)	Leuc (%)	Ilmenite (%)		
Thunderbird (> 3% HM)	Measured	510	45	8.9	8.0	2.3	2.2	27	18	12
	Indicated	2,120	140	6.6	8.4	2.7	3.1	28	16	9
	Inferred	600	38	6.3	8.4	2.6	3.2	28	15	8
	Total	3,230	223	6.9	8.3	2.6	2.9	28	16	9
Thunderbird (>7.5% HM)	Measured	220	32	14.5	7.4	2.1	1.9	27	16	15
	Indicated	640	76	11.8	7.6	2.4	2.1	28	14	11
	Inferred	180	20	10.8	8.0	2.5	2.4	28	13	9
	Total	1,050	127	12.2	7.6	2.3	2.1	27	15	11

Eneabba Project Mineral Resources 2,4,6

Deposit (cut-off)	Mineral Resource Category	Material Tonnes (millions)	In-situ HM Tonnes (millions)	HM Grade (%)	Mineral Assemblage ³				Slimes (%)	Osize (%)
					Zircon (%)	Rutile (%)	Leuc (%)	Ilmenite (%)		
Yandanooka (> 0.9% HM)	Measured	3	0.1	4.1	10	1.9	2.2	72	15	14
	Indicated	90	2.1	2.3	12	3.7	3.7	69	16	15
	Inferred	3	0.03	1.2	11	3.9	4.6	68	18	21
	Total	96	2.2	2.3	12	3.6	3.7	69	16	15
Durack (>0.9% HM)	Indicated	50	1.0	2.0	14	2.8	4.6	70	15	21
	Inferred	15	0.2	1.2	14	2.4	6.7	67	14	17
	Total	65	1.2	1.8	14	2.8	4.9	70	15	20
Drummond Crossing (>1.1% HM)	Indicated	49	1.0	2.1	14	10	3.6	53	16	9
	Inferred	3	0.05	1.5	13	9.9	2.8	55	16	8
	Total	52	1.1	2.1	14	10	3.6	53	16	9
Ellengail (>0.9% HM)	Inferred	46	1.0	2.2	9	8.7	1.9	64	16	2
	Total	46	1.0	2.2	9	8.7	1.9	64	16	2
Robbs Cross (>1.4% HM)	Indicated	14	0.3	1.9	15	13	5	47	6.0	6.2
	Inferred	4	0.1	2.0	14	11	4.1	50	6.3	8.1
	Total	18	0.3	1.9	15	12	4.8	48	6.0	6.6
Thomsons (>1.4% HM)	Inferred	26	0.5	2.0	19	14	5.4	42	18	6.9
	Total	26	0.5	2.0	19	14	5.4	42	18	6.9
West Mine North (>0.9% HM)	Measured	6	0.4	5.6	4	9.6	9.5	54	15	1
	Indicated	36	0.8	2.3	7	9.6	5.4	60	13	3
	Total	43	1.2	2.8	6	9.6	6.6	58	13	3
All Eneabba (various)	Measured	9	0.5	5.2	5.9	7.7	7.7	59	15	5
	Indicated	239	5.2	2.2	12	6.1	4.2	64	15	13
	Inferred	97	1.9	1.9	12	9.5	3.5	57	16	7
	Total	346	7.6	2.2	12	7.1	4.2	62	15	11

McCalls Project Mineral Resources 2,4,6

Deposit (cut-off)	Mineral Resource Category	Material Tonnes (millions)	In-situ HM Tonnes (millions)	HM Grade (%)	Mineral Assemblage ³				Slimes (%)	Osize (%)
					Zircon (%)	Rutile (%)	Leuc (%)	Ilmenite (%)		
McCalls (>1.1% HM)	Indicated	2,214	31.7	1.4	5.1	3.2	2.7	76.8	21.7	1.3
	Inferred	1,436	18.7	1.3	5.0	3.2	3.1	80.3	25.5	1.1
	Total	3,650	50.4	1.4	5.1	3.2	2.9	78.5	23.2	1.2

1) The Dampier Project Mineral Resources are reported inclusive of (not additional to) Ore Reserves. The Mineral Resource reported above 3% HM cut-off is inclusive of (not additional to) the Mineral Resource reported above 7.5% HM cut-off.

2) All tonnages and grades have been rounded to reflect the relative accuracy and confidence level of each estimate and to maintain consistency throughout the table, therefore the sum of columns may not equal.

3) Estimates of Mineral Assemblage are represented as the percentage of HM grade. For Dampier the mineral assemblage was determined by screening and magnetic separation. Magnetic fractions were analysed by QEMSCAN for mineral determination as follows: >90% liberation and; Ilmenite 40-70% TiO₂; Leucoxene 70-94% TiO₂; High Titanium Leucoxene (HiTi Leucoxene) >94% TiO₂ and Zircon 66.7% ZrO₂+HfO₂. The non-magnetic fraction was analysed by XRF and minerals determined as follows: Zircon ZrO₂+HfO₂/0.667 and HiTi Leucoxene TiO₂/0.94. For Eneabba & McCalls determination was by QEMSCAN, with TiO₂ minerals defined according to the following ranges: Rutile >95% TiO₂; Leucoxene 85-95% TiO₂; Ilmenite <55-85% TiO₂

4) West Mine North, Durack, Drummond Crossing, Robbs Cross, Thomsons and McCalls are reported below a 35% Slimes upper cutoff.

5) Mineral Resources for Dampier, McCalls, Robbs Cross and Thomsons were prepared and first disclosed under the JORC Code (2012).

6) Mineral Resources reported for Yandanooka, Durack, Drummond Crossing, Ellengail and West Mine North were prepared and first disclosed under the JORC Code 2004. These have not been updated since to comply with the JORC Code 2012 on the basis that the information on which the Resource estimates are based has not materially changed since it was last reported.

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 McCalls, Robbs Cross and Thomsons were prepared and first disclosed under the JORC Code (2012). Mineral Resources reported for Yandanooka, Durack, Drummond Crossing, Ellengail and West Mine North were prepared and first disclosed under the JORC Code (2004), these have not been updated since to comply with the JORC Code (2012) on the basis that the information on which the Mineral Resource estimates are based has not materially changed since it was last reported.

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 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 Person's findings are presented have not been materially modified from the relevant original market announcement.

Item	Name	Company	Professional Affiliation
Mineral Resources Reporting	Mr Mark Teakle	Sheffield Resources	MAIG, MAusIMM
	Mr David Boyd	Sheffield Resources	MAIG
Mineral Resources Estimation	Mrs Christine Standing	Optiro	MAusIMM, MAIG
	Mr Tim Journeaux	QG	MAusIMM
	Mr Trent Strickland	QG	MAusIMM
Ore Reserves	Mr Per Scrimshaw	Entech	MAusIMM

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

Item	Report Title	Report Date	Competent Person(s)
Thunderbird Ore Reserve	Thunderbird Ore Reserve Update	16 March 2017	P. Scrimshaw
Thunderbird Mineral Resources	Sheffield Doubles Measured Mineral Resource At Thunderbird	5 July 2016	M. Teakle C. Standing
McCalls Mineral Resources	Quarterly Activities Report For The Period Ended 30 June 2016	20 July 2016	D. Boyd T. Journeaux
Robbs Cross Mineral Resource	Quarterly Activities Report For The Period Ended 31 December 2017	25 January 2017	C. Standing
Thomsons Mineral Resource	Quarterly Activities Report For The Period Ended 31 December 2017	25 January 2017	C. Standing

Mineral Resources prepared and first disclosed under the JORC Code (2004):

Item	Report Title	Report Date	Competent Person(s)
Ellengail Mineral Resource	1Mt Contained HM Inferred Resource at Ellengail	25 October 2011	M. Teakle T. Strickland
West Mine North Mineral Resource	West Mine North Mineral Resource Estimate Exceeds Expectations	7 November 2011	M. Teakle T. Strickland
Durack Mineral Resource	Eneabba Project Resource Inventory Exceeds 5Mt Heavy Mineral	28 August 2012	M. Teakle T. Strickland
Yandanooka Mineral Resource	Yandanooka Resource Upgrade and Metallurgical Results	30 January 2013	M. Teakle T. Strickland
Drummond Crossing Mineral Resource	1Mt Heavy Mineral Resource Added to Eneabba Project	30 October 2013	M. Teakle T. Strickland

APPENDIX 2: BFS Final Product Specifications
(refer to ASX announcement dated 12 October 2016 for further details)

Premium zircon

ZrO ₂ +HfO ₂	TiO ₂	Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	D ₅₀
66.3%	0.14%	0.08%	32.5%	0.1%	59µm

- High grade 66.3% ZrO₂+HfO₂
- Low in key impurities iron and titanium
- Very low in aluminium impurities
- Good opacity, similar to other competing products

LTR Ilmenite

TiO ₂	FeO	Fe ₂ O ₃	FeO:Fe ₂ O ₃	Cr ₂ O ₃	CaO	MgO	D ₅₀
56.1%	22.0%	18.5%	1.2	0.03%	0.01%	0.21%	67µm

- High titanium grade (56.1% TiO₂)
- Low in key contaminant Cr₂O₃
- Very low in alkalis CaO and MgO
- Consistent homogenous product
- LTR Ilmenite feedstock can produce high grade TiO₂ slag (88% TiO₂) and HPPI co-product
- Soluble in sulphuric acid, TiO₂ solubility > 95%
- Highly reactive (FeO:Fe₂O₃ of 1.2)

HiTi88

TiO ₂	Fe ₂ O ₃	Cr ₂ O ₃	CaO	MgO	SiO ₂	Al ₂ O ₃	D ₅₀
87.8%	2.9%	0.07%	0.04%	0.00%	3.4%	0.5%	71µm

- High titanium grade (87.8% TiO₂)
- Suitable for flux cored wire welding market or titanium sponge markets.
- Blended feedstock for processing via the chloride process.
- Low in key contaminants Cr₂O₃
- Very low in alkalis CaO and MgO

Zircon Concentrate

ZrO ₂ +HfO ₂	TiO ₂	Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	CeO ₂	D ₅₀
43.7%	20.1%	0.9%	23.3%	1.7%	0.2%	62µm

- Initially focussing on a ZrO₂ rich (~44%) concentrate for process upgrading by the customer.
- Target zirconium chemicals industry

Titanomagnetite

Fe	TiO ₂	P	SiO ₂	Al ₂ O ₃	Cr ₂ O ₃	MnO	D ₅₀
56.2%	11.3%	0.05%	7.8%	0.9%	0.05%	0.20%	67µm

- Co-product produced as from magnetic separation post the LTR process
- Targeting steel feeds industry, protection against erosion of the blast furnace hear