

31 October 2017

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 4, Central Park
152 St Georges Terrace
Perth WA 6000

Capital Structure:

Ordinary Shares: 225.1M
Unlisted Options: 13.6M

Market Capitalisation:
A\$169 million

Cash Reserves:

A\$5.7 million
(as at 30 September 2017)

Investor Relations:

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QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2017

HIGHLIGHTS

Thunderbird Mineral Sands Project

- Maiden binding offtake agreements secured, representing 36% of Stage 1 premium zircon production
- Negotiations progressing well on remaining Stage 1 zircon and ilmenite products
- US\$200M debt facility mandated in place with Taurus Mining Finance
- Preferred EPC Tenderer appointed, with major supply agreements for power supply well advanced
- Appeal to Native Title determination dismissed in favour of Sheffield
- EPA recommends approval of Thunderbird Mineral Sands Project
- Sheffield launches Aboriginal Training and Employment Program

Exploration

- Planned spin-out of Sheffield gold and base metals assets underway

Corporate Activities

- Cash position of A\$5.7 million as at 30 September 2017
- Placement and SPP in October 2017 raises \$32 million (before costs) to advance Thunderbird

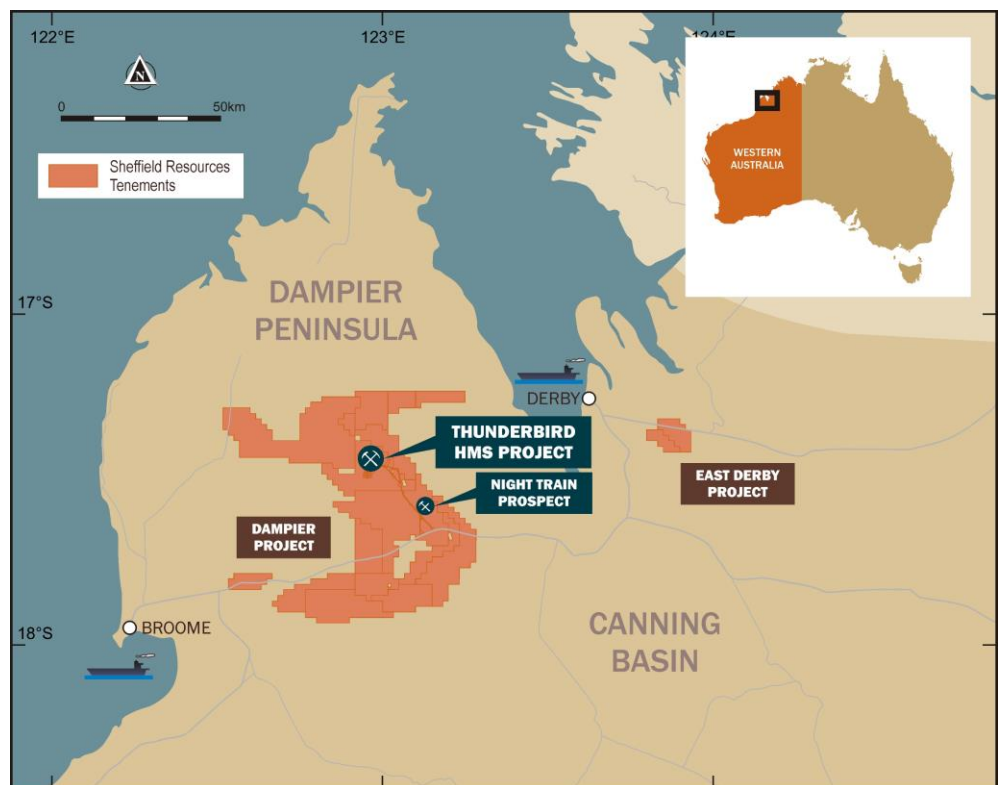


Figure 1: Location of Thunderbird Mineral Sands Project

OPERATIONAL SUMMARY

During the September quarter Sheffield Resources Limited (“Sheffield” or “the Company”) continued its operational focus on its world class Thunderbird Mineral Sands Project (Thunderbird), located in the Canning Basin in northern Western Australia (Figure 1).

Sheffield continued to pursue a number of offtake, financing, construction readiness and permitting matters, culminating in several significant announcements following the end of the quarter.

During the quarter, Sheffield secured two maiden binding offtake agreements, representing 36% of the planned premium zircon production for Stage 1 of the Thunderbird Project. The agreements were concluded with high quality industry counterparties and Sheffield continues to advance negotiation toward agreement on the remaining premium zircon, zircon concentrate and ilmenite products (see ASX announcements dated 12 September 2017 and 25 September 2017).

Following the end of the quarter, in conjunction with its financial advisor Azure Capital, Sheffield executed a US\$200M debt financing mandate with Taurus Mining Finance Fund (Taurus), following the conclusion of a process which saw a significant number of lenders submitting an expression of interest to participate in the development of the Thunderbird project. The debt financing mandate provides Sheffield with a significant and cost effective opportunity to advance the development of Thunderbird.

Also during the quarter, Sheffield undertook an extensive due diligence process toward the selection of an engineering, procurement and construction (EPC) contractor. Following conclusion of the September quarter, Sheffield announced the appointment of GR Engineering Services Limited (GRES) as preferred tenderer as it seeks to conclude contractual arrangements with GRES during the December quarter.

Permitting activities continued to advance throughout the quarter with the Environmental Protection Agency (EPA) recommending approval of the Thunderbird project.

A positive good faith decision by the National Native Title Tribunal (NNTT) found in favour of Sheffield during the June quarter was followed by the substantive Native Title determination by the NNTT enabling the grant of the mining lease. An appeal to this decision lodged by the Mount Jowlaenga Polygon #2 claimant group was dismissed by the Federal Court of Australia during the quarter. A further appeal to the Full Federal Court of Australia was lodged subsequent to the end of the September quarter.

Subsequent to the end of the quarter and following a strategic review by the Company, it is intended that Sheffield’s portfolio of gold and base metal assets, currently held by its 100% owned subsidiary Carawine Resources Limited (“Carawine”) be demerged from the Sheffield group. It is planned that Carawine will undertake an Initial Public Offer (“IPO”) in order to independently satisfy the admission requirements of the ASX targeted for the December quarter.

Exploration and evaluation expenditure totalled A\$1.2m for the quarter. Cash reserves of A\$5.7 million (unaudited) remained as at 30 September 2017. The Company concluded an equity placement of \$30 million during October 2017 (before costs) with a further \$2 million underwritten share purchase plan scheduled for conclusion on November 2017.

THUNDERBIRD MINERAL SANDS PROJECT

Marketing and Offtake

Activity continues to focus upon negotiating binding offtake agreements with suitable counterparties for both the zircon and ilmenite products from the Thunderbird deposit. During the quarter, Sheffield successfully secured two binding offtake agreements for future sales of premium zircon to a total of 18,000 tonnes (see ASX announcement dated 12 September 2017, 25 September 2017). Secured binding offtake agreements as at the end of the quarter represent 36% of the annual forecast production tonnes for stage 1 of the Thunderbird Project. Additionally, the Company is currently in discussion with several suitable counterparties to secure future sales of the remaining premium zircon and zircon concentrate products. In conjunction with securing additional binding offtake for zircon products, the Company is progressing negotiations with the potential consumers of the high grade ilmenite produced at the Thunderbird Project.

As anticipated, market conditions for TiO₂ products have remained steady during the previous quarter with prices and demand remaining strong. This situation is expected to continue in the coming months.

Pricing for zircon products continued to strengthen throughout 2017 with the industry heading towards a supply shortage. Continued constraint of surplus stock is expected to place further upward price pressure on zircon material into 2018.



Figure 2: Derby wharf with bulk export ship loading facility

Project Financing

In conjunction with its financial advisor Azure Capital, Sheffield concluded a debt financing process, culminating in the appointment of Taurus as mandated lead arranger and underwriter of a US\$200M debt finance facility package to support the development of the Thunderbird Mineral Sands Project (see ASX announcement dated 18 October 2017).

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. Sheffield will appraise the market of developments in the near future.

Subsequent to the end of the quarter, the Company concluded a share placement to professional and sophisticated investors, raising a total of \$30 million (before costs) to advance the development of Thunderbird. Additionally, the Company announced a \$2 million underwritten share purchase plan which is scheduled for conclusion in November 2017 (see ASX announcement dated 25 October 2017).

Project Execution Planning

During the September quarter, Sheffield progressed the selection of an engineering, procurement and construction (EPC) contractor, culminating in the appointment of GR Engineering Services Limited (GRES) as preferred EPC tenderer. Following the execution of an Early Works Agreement and Key Term Sheet with GRES, discussions are now advancing toward EPC contract execution during the December quarter.

A number of contracting activities continue to progress well, including:

- Completion of a detailed electricity and gas supply tender process, resulting in a shortlist of quality counterparties invited to participate in bilateral contract negotiations;
- Mining services contractor selection;
- Assessment of accommodation village construction and facilities management opportunities;
- Various minor and preliminary works and owner works planning, including front end engineering design work associated with the low temperature roast (LTR), design of site access roads,
- Tailings and groundwater management studies

It is anticipated that major contracts will be concluded by Q1 2018.

Work Ready Program

During the quarter, Sheffield launched an Aboriginal employment program to support the Thunderbird Project. The Sheffield program was launched in partnership with local employment and training organisations Winun Ngari Aboriginal Corporation of Derby and Nirrumbuk Aboriginal Corporation of Broome. The commencement of work ready programs shall provide employment opportunities and skill growth pathways for up to 18 traditional owners that will focus on preparing participants for employment and training during the project construction phase.

Sustainability

Permitting activities continued to advance throughout the quarter with the Environmental Protection Agency (EPA) recommending approval of Thunderbird Project. The environmental approval process for Thunderbird remains on track and targeted for completion during 2017.

The positive good faith decision by the National Native Title Tribunal (NNTT) found in favour of Sheffield during the June quarter was followed by the substantive Native Title determination by the NNTT enabling the grant of the mining lease. An appeal to this decision lodged by the Mount Jowlaenga Polygon #2 claimant group was dismissed by the Federal Court of Australia during the quarter. A further appeal to the Full Federal Court of Australia was lodged subsequent to the end of the September quarter.

Sheffield continued its engagement with a range of stakeholders throughout the Kimberley community during the quarter. The Thunderbird Project continues to have strong and wide local community support.

EXPLORATION ACTIVITIES

DAMPIER REGIONAL MINERAL SANDS

Planning and permitting for regional exploration on the Dampier project continued during the quarter, with programs now expected to commence during H1 2018. During the quarter, a new exploration licence (E04/2494) was applied for covering ground previously held by Iluka Resources Ltd which

overlies the southern strike extension of the Thunderbird shoreline position. A review of past exploration data will be completed during Q4 2017.

DERBY EAST PROJECT

Sheffield is investigating the potential of the Derby East Project tenements, located 25km east of Derby, to yield commercial quantities of sand for construction purposes.

Aircore drilling by Sheffield in October 2016 tested an area within its tenement E04/2390 with potential to yield significant quantities of clean, angular silica sand suitable for construction, first identified by previous explorers Areva. The Company's drilling intersected the sand unit in nine holes, beneath 0-12m of cover, over an area of about 6km by 2.5km with an average thickness of about 34m (refer Sheffield December 2016 ASX Quarterly Report for further details of this drilling, Figure 3).

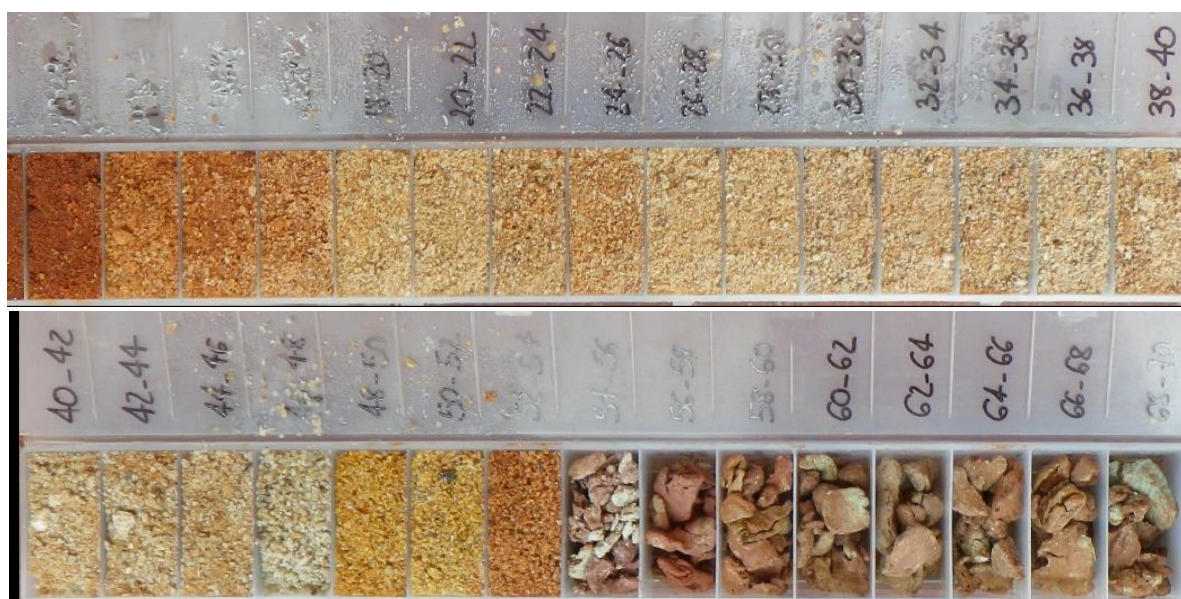


Figure 3: Coarse sub-angular sand intersected (12-54m) by aircore drilling at the East Derby project.

Review of results of a preliminary assessment of the sand unit for suitability as construction material was completed by Golder Associates Pty Ltd (Golder) during the quarter. Golder completed particle size distribution, Atterberg Limits and linear shrinkage, and compaction and soaked California Bearing Ratio tests on six composite samples, with five samples taken from within the target sand unit (Table 1).

Golder concluded that excepting two very minor grading exceedances, all five samples meet specification requirements for earthworks (Main Roads Western Australia Specification 302 - Earthworks) and Caisson Sand Key construction (Jurong Town Council Singapore Specification).

This preliminary test work is encouraging, 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.

Sheffield will continue to evaluate the opportunity presented by this deposit and will finalise a work programme for 2018 during the next quarter.

ENEABBA MINERAL SANDS

During the quarter, results were received from the aircore drilling programme completed during Q2 2017 at the Robbs Cross and Thomsons prospects within the Eneabba Project, located approximately 140km south of Geraldton in WA (Figure 4). The prospects form part of Sheffield's 100% owned Eneabba Mineral Sands project in the Mid-West region of Western Australia.

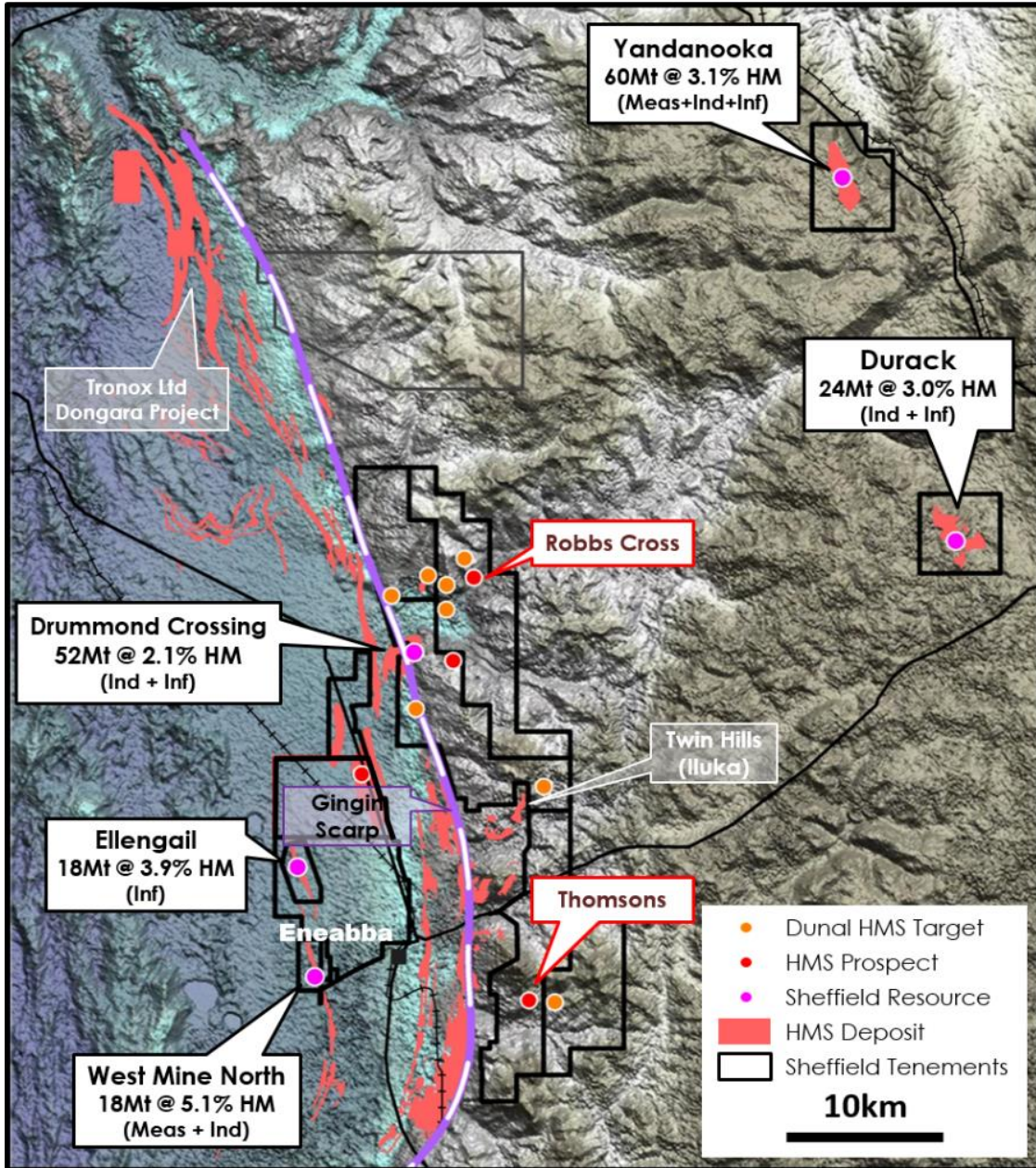


Figure 4: Eneabba Project Mineral Resources & Dunal HMS Targets

The drilling focussed on extension of dunal-style HMS mineralisation discovered by Sheffield in 2015 (see ASX announcement dated 23 July, 2015). At Robbs Cross, 32 holes were drilled for a total of 696m and at Thomsons, 33 holes were drilled for a total of 1,083m. The drilling outlined coherent dunal style mineralisation and confirmed very high value mineral assemblages at both prospects.

Significant results include:

Robbs Cross

- **22m @ 2.17% HM** from 4.5m (RCAC019), including **9m @ 3.1% HM** from 13.5m
- **10.5m @ 1.57% HM** from 4.5m (RCAC032), including **4.5m @ 2.07% HM** from 10.5m
- **13.5m @ 1.33% HM** from 10.5m (RCAC051)
- Mineral assemblage (2017) **12.5% rutile, 14.9% zircon, 5.4% leucoxene, 47.5% ilmenite**

Thomsons

- **15m @ 3.53% HM** from surface (TMAC058)
- **9m @ 2.19% HM** from surface (TMAC056), including **7.5m @ 2.37% HM**
- **7.5m @ 3.16% HM** from surface (TMAC057), including **6m @ 3.69% HM** from surface, and 6m @ 0.96 % HM from 13.5m and 3m @ 1.0% HM from 21m
- Mineral assemblage (2017) **14.6% rutile, 20.7% zircon, 6.3% leucoxene, 39.5% ilmenite**

(Refer to Appendix 2 for full details).

Further Work

Future work will include the estimation of a JORC 2012 Resource for the Robbs Cross deposit. Interpretation of the Thomsons prospect will be completed to assess whether further drilling is required.

CARAWINE RESOURCES LTD

Subsequent to the end of the quarter, following a strategic review, the Company announced its intention to demerge its portfolio of gold and base metal assets ("Carawine Assets"), currently held by its 100% owned subsidiary Carawine Resources Limited ("Carawine"). It is also indicated that Carawine will undertake an Initial Public Offer ("IPO") in order to independently satisfy the admission requirements of the ASX (see ASX release 20 October 2017).

The Carawine Assets comprise the following high quality exploration projects (Figure 1):

- Jamieson Project, high grade Au-Cu-Ag-Zn targets, Victoria (Carawine earning 100%),
- Oakover Project, Cu-Co targets, Western Australia,
- Paterson Project, Cu-Co and Au-Cu targets, Western Australia; and,
- Fraser Range Project, Ni-Cu-Co and Au targets, Western Australia, (Carawine 49%, Independence Group NL 51%, earning 70% by spending \$5 million).

Subject to Sheffield obtaining shareholder approval and Carawine receiving approval to be admitted to the ASX, Sheffield will demerge Carawine and spin-out its interests in the Carawine Assets by way of distributing the 20 million shares it holds in Carawine in specie to eligible Sheffield shareholders on a pro rata basis ("Spin-out").

The Carawine IPO will raise between \$5 million and \$7 million through the offer of between 25 million and 35 million shares, at an issue price of 20c per share. In addition, one free attaching loyalty option will be issued for every three Carawine shares, vesting six months from Carawine's ASX listing date.

The IPO will be conditional on Sheffield shareholders approving the Spin-out. Patersons Securities Limited have been appointed as sole lead manager to the IPO. The proposed demerger is consistent with Sheffield's strategic focus on developing the world class Thunderbird Mineral Sands Project.

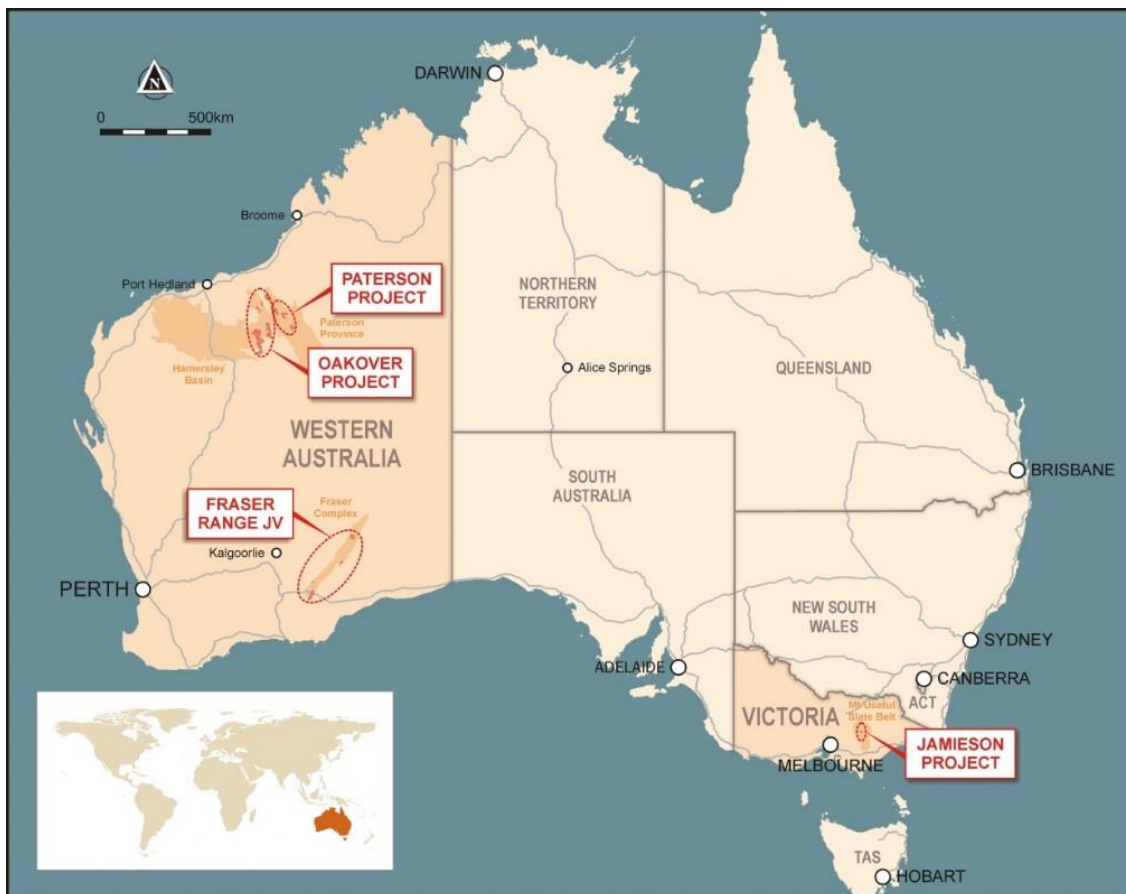


Figure 5: Location of Carawine's projects

CASH POSITION AND CORPORATE ACTIVITIES

As at 30 September 2017, Sheffield had cash reserves of approximately \$5.6 million (unaudited). Subsequent to the end of the quarter, the Company completed a share placement to professional and sophisticated investors, raising a total of \$30 million to advance the development of Thunderbird. Additionally, the Company announced a \$2 million underwritten share purchase plan which is scheduled for conclusion in November 2017 (see ASX announcement dated 25 October 2017).

Sheffield's corporate activities continue to focus on securing a pathway through to project development. Subsequent to the end of the quarter, Sheffield concluded a debt financing process, culminating in the appointment of Taurus as mandated lead arranger and underwriter of a US\$200M debt finance facility package to support the development of the Thunderbird Mineral Sands Project (see ASX announcement dated 18 October 2017). 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.

Mr Bruce McFadzean
 Managing Director
 31 October 2017

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 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2083 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2084 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2159 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2171 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2192 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2193 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2194 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2348 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2349 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2350 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2390 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2399 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2400 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/84 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/85 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/86 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/92 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/93 ⁵	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 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Mineral Sands	M04/459 ⁵	Thunderbird Operations Pty Ltd	100%	Canning Basin	Pending
Nickel/Copper/Cobalt	E28/2563	Carawine Resources Ltd ²	49%	Fraser Range	Granted
Nickel/Copper/Cobalt	E69/3033 ⁴	Carawine Resources Ltd ²	49%	Fraser Range	Granted
Nickel/Copper/Cobalt	E69/3052 ⁴	Carawine Resources Ltd ²	49%	Fraser Range	Granted
Nickel/Copper/Cobalt	E39/1733 ⁴	Carawine Resources Ltd ²	49%	Fraser Range	Granted
Nickel/Copper/Cobalt	E28/2374-I ⁴	Carawine Resources Ltd ²	49%	Fraser Range	Granted
Nickel/Copper/Cobalt	E69/3521	Carawine Resources Ltd	100%	Fraser Range	Pending
Copper/Zinc	E45/4871 ⁴	Carawine Resources Ltd	100%	Patterson	Pending
Copper/Zinc	E45/4881 ⁴	Carawine Resources Ltd	100%	Patterson	Pending
Copper/Gold	E45/4845 ⁴	Carawine Resources Ltd	100%	Patterson	Pending
Copper/Gold	E45/4847 ⁴	Carawine Resources Ltd	100%	Patterson	Pending
Copper/Zinc	E45/4955	Carawine Resources Ltd	100%	Patterson	Pending

Project	Tenement	Holder	Interest	Location ³	Status
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	E70/4292	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4313	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4584	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	E70/3859	Sheffield Resources Ltd	100%	Perth Basin	Pending
Mineral Sands	E70/4922	Sheffield Resources Ltd	100%	Perth Basin	Pending
Copper/Cobalt	E46/1042	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1116	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1119	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1041 ⁴	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1044 ⁴	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1069-I ⁴	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Cobalt	E46/1099 ⁴	Carawine Resources Ltd	100%	Pilbara	Granted
Copper/Manganese	E45/4958	Carawine Resources Ltd	100%	Pilbara	Pending
Copper/Manganese	E45/4959	Carawine Resources Ltd	100%	Pilbara	Pending
Copper/Cobalt	E46/1194	Carawine Resources Ltd	100%	Pilbara	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.

²Sheffield Group holds a 49% interest, with JV partner Independence Group NL (IGO) holding a 51% interest and earning in.

³All tenements are located in the state of Western Australia.

⁴Carawine Resources Ltd is a 100% owned subsidiary of Sheffield Resources Ltd.

⁵Thunderbird 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 Appendix 5B notice for the September 2017 quarter.

COMPLIANCE STATEMENTS

EXPLORATION RESULTS

The information in this report that relates to Exploration Results is based on information compiled by Mr David Boyd, a Competent Person who is a Member of Australian Institute of Geoscientists (AIG). Mr Boyd 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 Boyd consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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 and Technical Studies. The information was extracted from the Company's previous ASX announcements as follows:

- Jamieson Gold Project Farm-In: "SHEFFIELD FARMS IN TO HIGH GRADE JAMIESON GOLD EXPLORATION PROJECT" 28 June, 2017
- Thunderbird Ore Reserve: "THUNDERBIRD ORE RESERVE UPDATE" 16 March, 2017
- December 2016 Quarterly Report: "QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2016" 24 January, 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
- Robbs Cross and Thomsons Discovery: "NEXT GENERATION OF MINERAL SANDS DISCOVERIES AT ENEABBA" 23 July, 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 and Sampling Results from Dunal-Style HM Targets, Eneabba Project: "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, Bankable Feasibility Study and Technical Study results, 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
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	6	7.7	7.7	59	15	5
	Indicated	225	5.0	2.2	12	5.8	4.2	64	15	13
	Inferred	68	1.3	1.9	10	7.7	2.7	64	15	6
	Total	302	6.8	2.2	11	6.3	4.1	64	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 and McCalls are reported below a 35% Slimes upper cutoff.

5) Mineral Resources for the Dampier and McCalls Projects were prepared and first disclosed under the JORC Code (2012).

6) Mineral Resources reported for the Eneabba Project 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 the McCalls Projects were prepared and first disclosed under the JORC Code (2012). Mineral Resources reported for the Eneabba Project 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
	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

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: Eneabba Project Exploration Results

JORC (2012) Table 1 Report for the Eneabba project exploration results

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> NQ diameter aircore drilling used to collect 2-3kg samples at 1.5m intervals down-hole. Mineral Sands Industry-standard drilling technique.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Aircore system NQ diameter holes. Blade drill bit used for drilling. Aircore system used as an industry standard for HMS deposits.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Sample quality (including wet vs. dry and qualitative recovery) is logged at the drill site. Orientation process undertaken at the beginning of program to set up sampling system to collect 2-3kg sub-sample from 1.5m intervals. Excess sample was collected in 3m interval in bulk calico bags for future metallurgical test work. Intervals disposed off down hole, if field observations indicated nominal HMS. Sample weight recorded at laboratory Drill system is optimised for HMS. Duplicate samples are collected at the drill site (see below) to enable analysis of data precision
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Every drill sample is washed and panned, then geologically logged on-site in 1.5m intervals, recording primary, secondary and oversize lithology, qualitative hardness, grainsize, rounding, sorting, and washability, visual estimates of HM%, SL% and OS%, and depth to water table. The entire length of the drill hole is logged; minimum (nominal) interval length is 1.5m. Logging is suitable such that interpretations of

Criteria	JORC Code explanation	Commentary
<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<p>grade and deposit geology can be used, for example, to establish context of exploration results and support Mineral Resource estimation.</p> <p>Drill Site</p> <ul style="list-style-type: none"> • 2-3kg sample collected at 1.5m intervals in numbered bags at the drill site via rotary splitter at cyclone discharge point. • Duplicate samples (field duplicates) collected at drill site 1 in every 40 samples. • Blank standard material samples inserted 1 each in every 40 samples. • Sample submitted to external laboratory for heavy liquid separation (HLS) determination of weight per cent heavy mineral (HM), Slimes (SL) and Oversize (OS). <p>Laboratory</p> <ul style="list-style-type: none"> • 2-3kg drill sample sub-split via rotary splitter to approx. 200g for analysis. • HM, SL and OS calculated as percentage of total sample weight. • Laboratory repeats are conducted 1 in every 20 samples, and laboratory reference standard inserted 1 in every 40 samples. <p>All</p> <ul style="list-style-type: none"> • Spacing of duplicate, standard, blank and lab repeat samples are designed to identify sample misplacement or misallocation during sample collection and laboratory analysis. • Sample representivity and data precision has been determined as acceptable through analysis of results from field duplicate samples and laboratory repeats. • Visual estimates of HM, Slimes and OS logged at the drill site are compared against laboratory results to identify any major errors. • Analysis of duplicates show the data has acceptable precision, indicating sampling techniques are appropriate for the deposit style. • Techniques are considered appropriate for use in public reporting of exploration results and Mineral Resource estimation. <p>HM Assemblage Determination</p> <ul style="list-style-type: none"> • Heavy Mineral Concentrate (HMC) from individual samples is combined according to HM grade and weight into (nominal) 20g – 50g composite samples for HM assemblage determination. • Weighed HMC is split via a micro-riffle to ensure HM%, SL% and OS% of the final composite sample can be correctly calculated. • Resultant data is considered to be of suitable quality for the reporting of Exploration Results.

Criteria	JORC Code explanation	Commentary
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<p>HM%, SL% OS% Determination</p> <ul style="list-style-type: none"> Assay and laboratory procedures are industry standard for HMS, although laboratories' methods and heavy liquid composition vary slightly. TBE (2.96g/ml) is used for these results. Method produces a total grade as weight per cent of the initial sample. Method does not determine the relative amounts of valuable (saleable or marketable) and non-valuable heavy mineral species. QAQC sample frequency is described above. Blank material used is commercially available builder's sand. Reference standards and blanks are examined for performance over time and within laboratory batches. Batches or sub-batches are re-analysed if unacceptable QAQC data are returned. Analysis of reference standards, blanks and laboratory repeats show the data to be of acceptable accuracy and precision for use in public reporting of exploration results and Mineral Resource estimation. <p>HM Assemblage Determination</p> <ul style="list-style-type: none"> HM assemblage determination was by QEMSCAN™. This method is considered an industry standard, typically optimised according to the HM characteristics of individual deposits. The QEMSCAN™ process uses observed mass and chemistry to classify particles according to their average chemistry, and then report mineral abundance by % mass. For TiO₂ minerals specific breakpoints are used to distinguish between rutile (>95% TiO₂), leucoxene (85-95% TiO₂) and ilmenite (<55-85% TiO₂). These breakpoints are chosen to reflect mineral assemblage data defined by previous workers in the region, and provide a consistent base for comparison between prospects and Mineral Resources. Reference material was not used, the method design and comparison to visual observation is considered sufficient to establish acceptable accuracy of the data for the reporting of Exploration Results.
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> Significant intervals are reviewed by senior Sheffield personnel prior to release. No assays contained significant intersections of valuable heavy mineral. Data is logged electronically using "validation at point of entry" systems prior to storage in the Company's drill hole database, which is managed by Company personnel and an external consultancy. Documentation related to data custody and validation are maintained on the Company's server. No assay data have been adjusted.
<p>Location of</p>	<ul style="list-style-type: none"> <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys),</i> 	<ul style="list-style-type: none"> Hole locations were surveyed by handheld GPS system with expected accuracy of +/- 5m

Criteria	JORC Code explanation	Commentary
<i>data points</i>	<p>trenches, mine workings and other locations used in Mineral Resource estimation.</p> <ul style="list-style-type: none"> • Specification of the grid system used. • Quality and adequacy of topographic control. 	<p>horizontal.</p> <ul style="list-style-type: none"> • RL determined by projection to a SRTM DEM model. • Holes RCAC026, RCAC027, RCAC028 and RCAC029 given nominal RL of 150m as SRTM DEM model terminates south of their location and vertical accuracy of the hand held GPS is poor. • Easting and Northing coordinate system is MGA Zone 51 (GDA94)
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • See body of announcement for drill hole detail of spacing. • This is a second pass drill program and holes have been designed to define mineralisation announced by Sheffield in July 2015. • Samples have not been composited. No significant intercepts have been listed in the table within the body of the report.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> • Mineralisation is generally flat-lying, vertical drill holes are therefore appropriate to represent true thickness and perpendicular intersection of mineralisation.
<i>Sample security</i>	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • Sample security is not considered a significant risk given the location of the Project. • Nevertheless, the use of recognised transport providers, and sample dispatch procedures directly from the field to the laboratory are considered sufficient to ensure appropriate sample security.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • No formal external audits or review have been conducted. • Audits are not considered necessary at this stage of the Project's development. Industry-standard methods are being employed.

Section 2 Reporting of Exploration Results

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

Criteria	Statement	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> • Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> • Exploration results are entirely within 100% Sheffield Resources held Exploration Licences: <ul style="list-style-type: none"> ○ E70/4292 granted on the 05/10/2012 and is due to expire on the 04/10/2017. Sheffield has lodged a extension of term to operate on the tenement for a further 5 year. This tenement contains the Robbs Cross HMS prospect ○ E70/4190 granted on the 27/06/2012 and due to expire on the 26/06/2022. E70/4747 granted on the 27/07/2011 and due to expire on the 26/06/2022. These tenements contain the Thomson HMS prospect • These are within Sheffield's Eneabba Project and are centred along the Brand Highway in

Criteria	Statement	Commentary
		<p>the Midwest region of Western Australia.</p> <ul style="list-style-type: none"> • There are no known or experienced impediments to obtaining a licence to operate in the area. • Sheffield has been operating successfully in the region for more than 6.5 years.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> • Sheffield carried out the initial exploration at the Robbs Cross and Thomson prospects via soil sampling and aerial photograph assessment
<i>Geology</i>	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • The Eneabba Project forms part of the Swan Coastal Plain bounded to the east by the Gingin Scarp within the Northern Perth Basin. The Gingin Scarp is a remnant feature of the marine incursion which resulted in the reworking of older rocks and ended in the deposition of heavy mineral sand enriched beach placers within Cainozoic sediments. Heavy mineral sand mining is prolific within the Swan Coastal Plain sediments. • The prospects drilled are in newly interpreted heavy mineral trap sites located to the north of Eneabba and to east of the Gingin Scarp and adjacent to westerly to south-westerly trending paleo-drainage. • Sheffield is exploring for Cainozoic heavy mineral sands associated with fluvialite sediments and re-worked aeolian dunal occurrences that have stripped lighter material and enabled heavy mineral accumulations
<i>Drill hole Information</i>	<ul style="list-style-type: none"> • <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i> 	<ul style="list-style-type: none"> • Information relating to the number of drill holes, assayed samples, location accuracy, orientation etc. is included in this table, and in the body of the announcement. • Diagrams in the body of the announcement show the location of and distribution of drill holes
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> • <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i> • <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> • Criteria for calculating significant intervals are included in the body of the announcement. Minimum widths, maximum internal waste intervals and cut-off grades have been selected to most-appropriately represent the mineralisation, taking into account the early-stage, reconnaissance nature of the drill program. No “high” or “top-cuts” are applied. Higher-grade components of significant intervals are detailed in Table 1 preceded by the term “including”.
<i>Relationship between mineralisation</i>	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with</i> 	<ul style="list-style-type: none"> • Heavy mineral intersects were viewed under a microscope to assess the valuable heavy mineral component. Intersects that contain

Criteria	Statement	Commentary
<i>widths and intercept lengths</i>	<p><i>respect to the drill hole angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i> 	<p>'trash' heavy mineral (i.e. high iron contaminates or aggregated material) are voided from the table of intersects.</p> <ul style="list-style-type: none"> Mineralisation and stratigraphy is assumed to be sub-horizontal, flat lying and therefore vertical drill holes are approximate to true thickness Downhole widths are quoted only.
<i>Diagrams</i>	<ul style="list-style-type: none"> <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> See body of announcement.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> All current drill hole results are reported in this announcement. Where results do not meet the criteria of significant interval these are reported in Table 1 as "no significant interval". All information considered material to the reader's understanding of the exploration results have been reported.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<ul style="list-style-type: none"> Sheffield has previously reported information for the Eneabba Project Area the most recent being ASX release entitled 'Next Generation of Mineral Sands Discoveries at Eneabba' released in July 2015 (available from the company's website: www.sheffieldresources.com.au). Where relevant this information has been included in the body of this announcement.
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Refer to the Further Work section in the body of announcement.

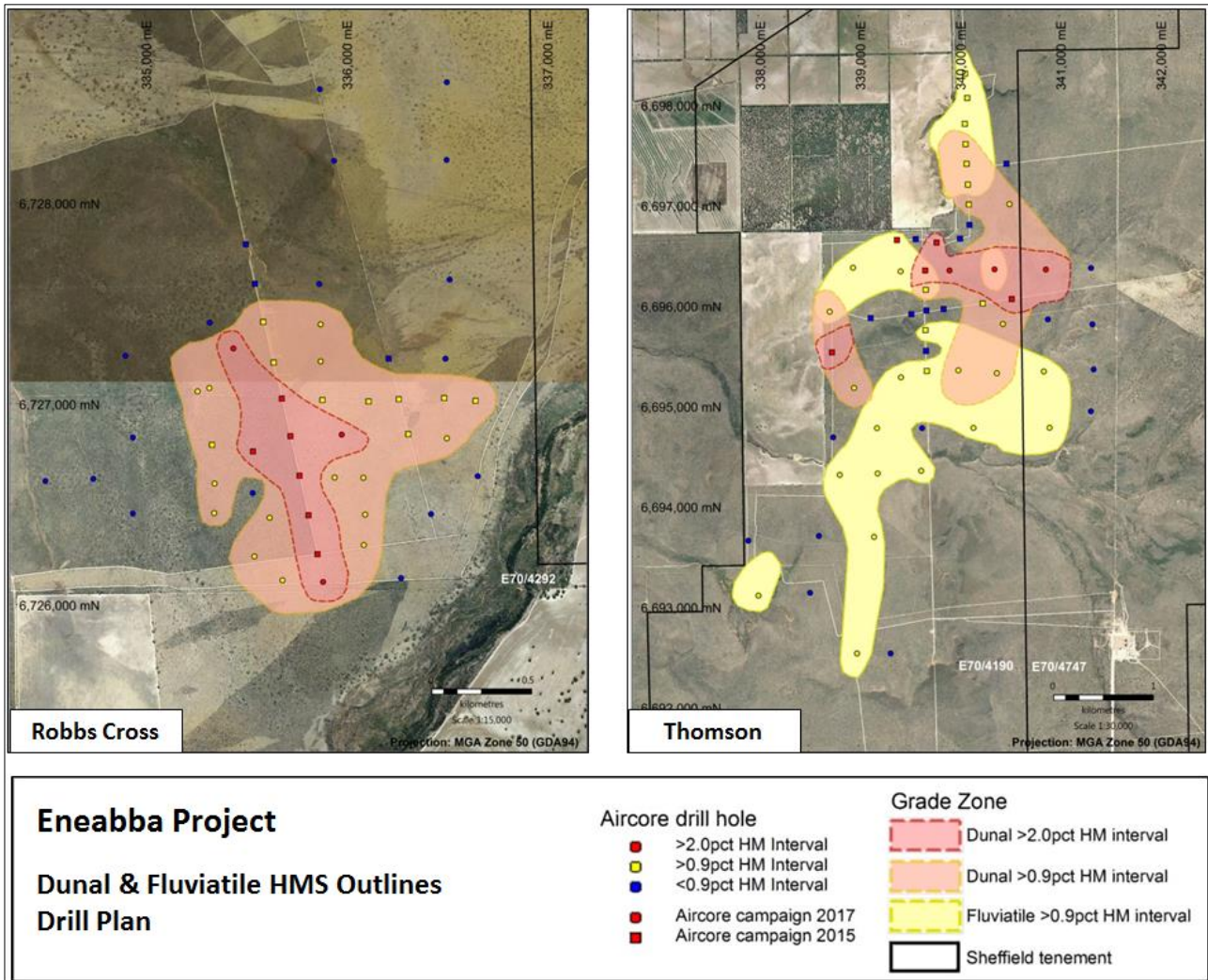


Figure 2.1: Eneabba Project drill plan of dunal and fluviatile mineralisation

Table 2.1

Robbs Cross* (2017) Air Core drill hole collar and significant intersect information

Hole ID	Domain	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Osize wt%	Drill Hole Collar Information			
								Easting (m)	Northing (m)	RL (m)	Depth (m)
RCAC019	Aeolian	4.5	27.0	22.5	2.17	4.9	3.1	335,889	6,726,112	147	30
<i>including</i>		13.5	22.5	9.0	3.10	3.2	5.0				
RCAC020	Aeolian	No significant intersect						336,278	6,726,131	130	15
RCAC021	Aeolian	No significant intersect						336,660	6,726,639	121	15
RCAC022	Aeolian	No significant intersect						336,427	6,726,450	132	12
RCAC023	Aeolian	6.0	15.0	9.0	1.35	8.5	5.1	336,506	6,726,827	134	18
RCAC024	Aeolian	No significant intersect						336,499	6,727,224	136	15
RCAC025	Aeolian	No significant intersect						336,520	6,727,618	128	18
RCAC026	Aeolian	No significant intersect						336,505	6,728,214	150	24
RCAC027	Aeolian	No significant intersect						336,506	6,728,601	150	24
RCAC028	Aeolian	No significant intersect						335,873	6,728,566	150	24
RCAC029	Aeolian	No significant intersect						335,944	6,728,210	150	24
RCAC030	Aeolian	No significant intersect						335,870	6,727,596	144	18
RCAC031	Aeolian	6.0	12.0	6.0	1.42	9.5	8.4	335,877	6,727,211	155	24
RCAC032	Aeolian	4.5	15.0	10.5	1.57	8.9	3.8	335,982	6,726,846	157	24
<i>including</i>		10.5	15	4.5	2.07	9.8	6.0				
RCAC033	Aeolian	1.5	6	4.5	1.33	8.9	10.0	336,090	6,726,631	151	30
RCAC034	Aeolian	0	7.5	7.5	1.44	10.0	8.7	336,099	6,726,448	148	18
RCAC035	Aeolian	1.5	9	7.5	1.58	8.0	6.1	336,093	6,726,296	146	27
RCAC036	Aeolian	1.5	10.5	9	1.45	10.4	9.4	335,547	6,726,239	153	21
RCAC037	Aeolian	0	4.5	4.5	1.25	13.2	7.4	335,347	6,726,455	161	18
RCAC038	Aeolian	No significant intersect						335,539	6,726,555	160	21
RCAC039	Aeolian	0	19.5	19.5	1.36	10.1	7.2	335,323	6,727,078	173	27
RCAC040	Aeolian	No significant intersect						335,325	6,727,404	169	18
RCAC041	Aeolian	No significant intersect						334,905	6,727,239	181	18
RCAC042	Aeolian	No significant intersect						334,942	6,726,831	161	12
RCAC043	Aeolian	No significant intersect						334,745	6,726,626	161	15
RCAC044	Aeolian	No significant intersect						334,506	6,726,615	172	15
RCAC045	Aeolian	No significant intersect						334,941	6,726,452	151	12
RCAC046	Aeolian	15	18	3	1.30	4.4	1.8	335,623	6,726,432	156	27
RCAC047	Aeolian	4.5	10.5	6	1.14	9.3	8.0	335,349	6,726,602	168	21
RCAC048	Aeolian	0	6	6	0.99	14.1	22.0	335,264	6,727,061	175	18
RCAC049	Aeolian	0	9.0	9.0	1.46	12.3	12.2	335,442	6,727,275	166	24
<i>including</i>		6	9	3.0	2.14	11.5	11.4				
RCAC050	Aeolian	9	16.5	7.5	1.17	5.3	6.1	335,877	6,727,395	151	21
RCAC051	Aeolian	10.5	13.5	3	1.33	4.5	3.2	335,947	6,726,632	152	30
RCAC052	Aeolian	10.5	13.5	3.0	1.08	4.6	2.5	335,687	6,726,120	150	24
<i>and</i>		16.5	19.5	3.0	1.36	3.8	4.3				

**All intervals are calculated using 0.9% HM lower cut with less than 3m @ 35% slimes, 3m minimum width, maximum 1.5m internal waste; "including" intervals >2% HM, 3m minimum width, maximum 1.5m internal waste. HM, Slimes and Oversize ("Osize") determined by Heavy Liquid Separation (HLS) using TBE (sg. 2.96g/cc); screen sizes: slimes 45µm and oversize ("Osize") +1mm. Drill hole collar locations were determined by handheld GPS with expected accuracy of +/- 5m horizontal. RL determined by projection to a regional DTM model created from Landgate spot height data. Holes RCAC026-29 nominal RL value of 150m. Easting and Northing coordinate system is MGA Zone 50 (GDA94), RL is AHD. All holes were drilled vertically.*

Table 1.2 Thomson* (2017) Air Core drill hole collar and significant intersect information

Hole ID	Domain	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Osize wt%	Drill Hole Collar Information			
								Easting (m)	Northing (m)	RL (m)	Depth (m)
TMAC026	Aeolian	0.0	7.5	7.5	1.42	17.4	9.7	340,504	6,697,011	200	24
TMAC027	Fluviatile	7.5	19.5	12.0	1.10	20.8	2.2	339,419	6,696,340	217	30
TMAC028 and and	Fluviatile	15.0	19.5	4.5	1.21	18.6	0.1	338,944	6,696,377	195	42
		22.5	28.5	6.0	0.97	25.1	2.3				
		31.5	37.5	6.0	1.25	25.7	1.3				
TMAC029	Aeolian	7.5	12.0	4.5	1.00	19.0	8.0	338,711	6,695,939	187	36
and	Fluviatile	21.0	25.5	4.5	1.35	20.3	5.9				
TMAC030	Aeolian	7.5	10.5	3.0	0.94	11.3	9.3	338,954	6,695,179	161	36
TMAC031 and	Fluviatile	18.0	21.0	3.0	1.09	25.8	3.3	339,422	6,695,285	166	36
		27.0	31.5	4.5	1.36	21.7	5.1				
TMAC032	No significant intersect							339,634	6,694,779	150	21
TMAC033	Fluviatile	31.5	40.5	9.0	1.18	21.9	1.0	339,183	6,694,779	148	45
TMAC034	No significant intersect							338,746	6,694,687	141	45
TMAC035 and	Fluviatile	13.5	16.5	3.0	1.76	27.9	0.1	339,189	6,694,327	144	42
		22.5	34.5	12.0	1.22	28.1	1.2				
TMAC036	Fluviatile	40.5	45.0	4.5	1.24	26.0	1.7	339,624	6,694,354	148	54
TMAC037	Fluviatile	31.5	39.0	7.5	1.07	18.0	1.9	338,812	6,694,314	142	45
TMAC038	Fluviatile	12.0	15.0	3.0	1.14	14.9	0.7	339,154	6,693,696	173	48
TMAC039	No significant intersect							338,604	6,693,705	164	24
TMAC040	No significant intersect							337,899	6,693,658	166	24
TMAC041	Fluviatile	7.5	10.5	3.0	1.01	24.2	1.7	338,001	6,693,110	191	33
TMAC042	No significant intersect							338,516	6,693,139	181	24
TMAC043	Fluviatile	18.0	22.5	4.5	1.01	15.4	0.4	338,983	6,692,534	209	30
TMAC044	No significant intersect							339,319	6,692,534	216	21
TMAC045 and	Fluviatile	15.0	21.0	6.0	1.31	26.9	0.2	340,146	6,694,782	156	42
		24.0	28.5	4.5	1.21	19.4	0.3				
TMAC046	Fluviatile	9.0	18.0	9.0	1.18	18.6	3.8	340,905	6,694,783	173	24
TMAC047	No significant intersect							341,317	6,694,947	177	24
TMAC048	No significant intersect							341,345	6,695,364	190	27
TMAC049	Fluviatile	31.5	36.0	4.5	1.47	21.5	0.8	340,848	6,695,343	169	36
TMAC050 and	Aeolian	0.0	6.0	6.0	0.94	20.3	20.6	340,379	6,695,326	169	36
	Fluviatile	21.0	28.5	7.5	1.10	23.4	1.1				
TMAC051 and	Aeolian	0.0	6.0	6.0	1.22	17.6	11.8	339,994	6,695,355	165	33
	Fluviatile	15.0	28.5	13.5	1.02	24.1	1.6				
TMAC052	Aeolian	0.0	3.0	3.0	1.29	3.9	21.6	340,440	6,695,817	183	30

Hole ID	Domain	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Osize wt%	Drill Hole Collar Information			
								Easting (m)	Northing (m)	RL (m)	Depth (m)
and	Fluviatile	6.0	9.0	3.0	1.52	34.3	4.7				
TMAC053	No significant intersect							340,888	6,695,862	175	24
TMAC054	No significant intersect							341,332	6,695,813	190	30
TMAC055	No significant intersect							341,318	6,696,374	183	30
TMAC056	Aeolian including	0.0	9.0	9.0	2.2	24.6	11.8	340,868	6,696,360	188	27
		0	7.5	7.5	2.4	23.6	11.6				
TMAC057	Aeolian including	0.0	7.5	7.5	3.2	15.8	4.5	340,356	6,696,361	203	30
		0	6.0	6.0	3.7	11.9	3.6				
and	Fluviatile	13.5	16.5	3.0	1.18	29.7	0.1				
and	Fluviatile	21.0	24.0	3.0	1.00	26.7	3.8				
TMAC058	Aeolian including	0.0	15.0	15.0	3.5	10.3	3.4	339,907	6,696,349	220	30
		0.0	15.0	15.0	3.5	10.3	3.4				

**All intervals are calculated using 0.9% HM lower cut with less than 3m @ 35% slimes, 3m minimum width, maximum 1.5m internal waste; "including" intervals >2% HM, 3m minimum width, maximum 1.5m internal waste. HM, Slimes and Oversize ("Osize") determined by Heavy Liquid Separation (HLS) using TBE (sg. 2.96g/cc); screen sizes: slimes 45µm and oversize ("Osize") +1mm. Drill hole collar locations were determined by handheld GPS with expected accuracy of +/- 5m horizontal. RL determined by projection to a regional DTM model created from Landgate spot height data. Easting and Northing coordinate system is MGA Zone 50 (GDA94), RL is AHD. All holes were drilled vertically.*

Table 2.2 Robbs Cross and Thomson QEMSCAN™ assemblage results

Prospect	Domain	Composite	Hole ID	Depth From (m)	Depth To (m)	Composite			Mineral Assemblage			
						HM wt%	SL wt%	OS wt%	Rutile %	Zircon %	Leucoxene %	Ilmenite %
Robbs Cross	Dunal	SARCCP003	RCAC038	0	19.5	1.52	10.5	9.4	14.7	17.7	6.9	45.4
			RCAC048	3	6							
			RCAC049	4.5	9							
		SARCCP004	RCAC036	1.5	10.5	1.39	9.4	8.1	16.0	16.9	6.5	38.9
			RCAC037	0	4.5							
			RCAC046	15	18							
			RCAC047	4.5	10.5							
		SARCCP005	RCAC019	4.5	27	2.47	4.3	4.1	9.2	16.1	4.3	52.8
			RCAC052	16.5	19.5							
		SARCCP006	RCAC033	1.5	6	1.52	7.1	6.9	13.3	12.1	4.5	46.5
			RCAC034	0	7.5							
			RCAC035	1.5	9							
			RCAC051	10.5	24							
		SARCCP007	RCAC031	6	12	1.54	8.2	6.5	12.1	11.4	5.4	49.9
			RCAC032	4.5	15							
			RCAC050	9	16.5							
Thomson	Dunal	SATMCP003	TMAC026	0	7.5	3.01	14.0	5.6	14.8	18.4	6.5	37.0
			TMAC057	0	7.5							
		SATMCP004	TMAC050	3	6	1.95	22.9	11.3	15.9	21.8	5.4	40.3
			TMAC051	0	4.5							
			TMAC052	6	9							
	TMAC056		0	9								
	SATMCP005	TMAC058	0	13.5	3.82	9.9	2.5	13.9	21.9	6.7	40.9	
	Fluviatile	SATMCP006	TMAC027	7.5	19.5	1.12	21.9	2.5	7.5	7.8	3.1	64.5
			TMAC028	15	28.5							
			TMAC029	21	25.5							
		SATMCP007	TMAC031	27	31.5	1.11	25.2	2.4	6.5	8.0	3.1	62.0
			TMAC050	21	28.5							
			TMAC051	15	28.5							
			TMAC057	13.5	24							
		SATMCP008	TMAC036	40.5	45	1.25	23.0	2.0	5.2	7.0	2.2	59.3
			TMAC045	15	28.5							
			TMAC046	9	21							
		SATMCP009	TMAC033	31.5	40.5	1.18	24.0	1.0	7.4	10.8	2.9	58.1
			TMAC035	21	31.5							
TMAC037			31.5	39								

Zone A: Dunal aeolian sand heavy mineral assemblage; Zone B: Fluvialite sands heavy mineral assemblage

Appendix 3: 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