Sheffield Resources Ltd
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30 October 2015

QUARTERLY REPORT FOR PERIOD ENDING 30 SEPTEMBER 2015

HIGHLIGHTS

Board restructure

- Highly credentialed mining executive Bruce McFadzean appointed as Managing Director to advance the Thunderbird minerals sands project through to production
- Will Burbury and Bruce McQuitty remain as Non-Executive Directors, David Archer remains as Executive Director

Thunderbird HMS project

- Pre-feasibility Study Update confirms low risk, high margin, long life mining project:
  - Pre-production capital reduced by 26% to A$271 million[1]
  - Capital payback period reduced to 3.4 years
  - Mine life extended to 40 years, with considerable exploration upside
  - Revenue A$11.8 billion over Life of Mine ("LOM")
  - EBITDA A$5.4 billion (LOM), A$135 million (annual LOM average)
  - Revenue to cash cost ratio 2.02:1 (LOM)
  - 100ktpa zircon, 382ktpa high grade sulphate ilmenite production (LOM average)
- Primary zircon product is premium grade and suited to the ceramics sector
- Upgraded ilmenite has superior qualities which will assist in displacing others in the market
- Access agreement with Shire of Derby-West Kimberley for Derby Wharf bulk handling facility strengthens robust mine-to-port logistics chain
- Mineral Resource update triples the amount of high grade (>7.5% HM) resource in the Measured category
- DFS to be finalised in 2016, with a substantial field component already complete, including collection of a 100t bulk sample and infill drilling (results pending)
- Night Train prospect emerging as a significant new mineral sands discovery

Fraser Range Nickel project

- High-priority Ni-Cu target at Stud prospect scheduled to be drilled during Q4 2015

As at 30/09/15:

Issued Shares	**134.4M**	ASX Code	**SFX**	Closing Price	**$0.48**
Market Cap	**$64.5M**	Cash Reserves	**$2.8M**[2]		

[1]Excludes contingency. [2]Excludes approximately $1.8 million from the 2015 Research and Development tax return which the Company is likely to receive during Q4 2015.

SUMMARY

Board Restructure

On 26 October 2015 Sheffield announced the appointment of highly credentialed mining executive Bruce McFadzean as Managing Director, effective 2 November 2015.

A qualified mining engineer with more than 35 years' experience in the global resources industry, Mr McFadzean has led the financing, development and operation of several new mines around the world. He possesses the right skills set to progress Sheffield's world class Thunderbird minerals sands project through to production.

Upon Mr McFadzean's commencement, the Board will be restructured, with Mr McQuitty and Mr Burbury transitioning to Non-Executive Directors. The make-up of the Board will be as follows:

Non-Executive Chairman	Will Burbury
Managing Director	Bruce McFadzean
Executive Director	David Archer
Non-Executive Director	Bruce McQuitty

The Board restructure ensures the Company is well positioned for its next phase of growth.

Operations

On 14 October the Company announced the results of an updated Pre-feasibility Study ("PFS") on its flagship Thunderbird Mineral Sands project which have significantly enhanced the Project's economics and technical feasibility.

The PFS Update is based on an updated Mineral Resource, announced on 31 July 2015, which includes a 3-fold increase in the amount of high grade (>7.5% HM) resource classified as Measured.

Metallurgical testwork confirmed that the primary ilmenite can be substantially upgraded using a simple low temperature roast ("LTR") process to produce a high grade (56.1% TiO_2), low impurity product suitable as sulphate and smelter feedstock.

A robust mine-to-market logistics chain has been strengthened with the signing of an Access Agreement with the Shire of Derby-West Kimberley over the bulk handling facility at the Derby Wharf (ASX release dated 19 October 2015).

The Thunderbird field campaign was completed during the quarter and comprised:

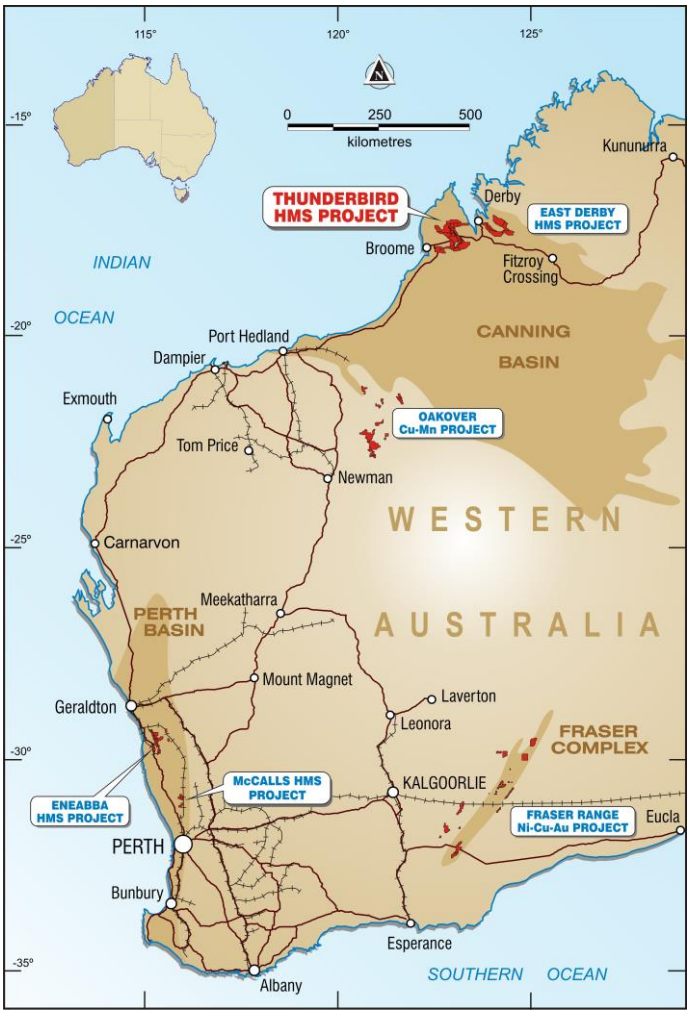

Figure 1: Location of Sheffield's Projects

- Infill drilling at Thunderbird designed to further increase the Measured component of the resource (110 aircore drill holes for 3,468m – results pending)
- Collection of a 100t bulk sample using a Bauer rig for DFS metallurgical testwork

A short regional exploration drilling program of 34 aircore drill holes for 1,804m was completed on the broader Dampier project. This resulted in discovery of extensions to mineralisation at Night Train prospect, while results from other prospects are pending.

Exploration expenditure for the quarter is $1,953,000.

THUNDERBIRD MINERAL SANDS

Sheffield's Thunderbird mineral sands project is located near Derby in Western Australia (Figures 1 & 2). Thunderbird has the potential to become a globally significant mineral sands mining and processing operation.

Zircon is the key value driver of the project making up 59% of forecast revenue, with the remainder generated from substantial amounts of high grade sulphate ilmenite and HiTi leucoxene. The high proportion of zircon in the product suite sets Thunderbird apart from many of the world's operating and undeveloped mineral sands projects which are dominated by lower value ilmenite.

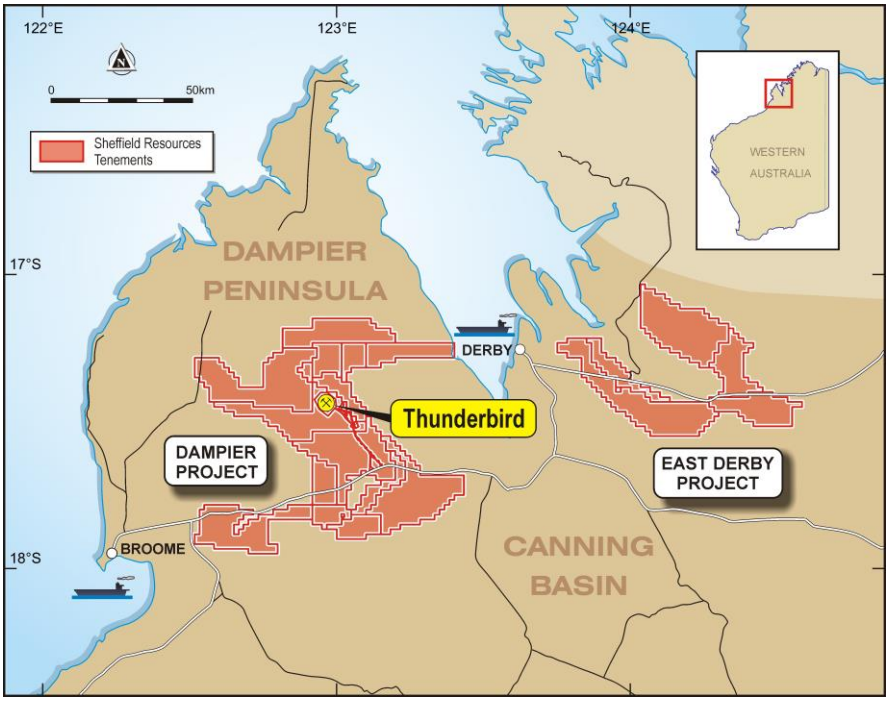

Figure 2: Location of Thunderbird HMS project

The PFS Update announced on 14 October 2015 follows the PFS previously announced on 14 May 2015 and contains significant improvements which have enhanced the Project's economics and technical feasibility, including the following key developments and initiatives:

- 12Mtpa initial throughput ramping to 18Mtpa designed to significantly lower pre-production CAPEX;
- An updated Mineral Resource, including a large increase in the Measured Resource component;
- Detailed mine scheduling in early production years to incorporate high grade, shallow mineralisation;
- An upgraded LTR ilmenite product; and
- Review of CAPEX and operating costs.

The PFS Update is based on the Thunderbird Mineral Resource announced on 31 July 2015. It comprises **3.240Bt @ 6.9% HM** (at 3% HM cut off), including a coherent high grade zone of **1.09Bt @ 11.9% HM** (at 7.5% cut off) (Measured, Indicated and Inferred). The high grade component contains 9.9Mt of zircon, 3.0Mt of high-titanium leucoxene, 2.8Mt of leucoxene and 36Mt of ilmenite (Table 1, Appendix 1).

The Measured category comprises **110Mt @ 14.9% HM** (at 7.5% HM cut-off), with very high in-situ zircon and ilmenite grades of 1.09% and 4.0% respectively. Significantly, the majority of the Measured Resource occurs in the shallow up-dip portion of the deposit targeted for production in the early years of the operation.

Table 1: Thunderbird Deposit High Grade Mineral Resource Summary (at 7.5% HM cut-off) 31 July 2015

	MINERAL RESOURCES [1]		VALUABLE HM GRADE (in situ) [2]			
Resource	Material Mt	HM %	Zircon %	HiTi Leuc %	Leucoxene %	Ilmenite %
Measured	110	14.9	1.09	0.31	0.28	4.0
Indicated	850	11.8	0.90	0.28	0.25	3.3
Inferred	130	10.7	0.82	0.25	0.23	3.0
TOTAL	**1,090**	**11.9**	**0.91**	**0.28**	**0.25**	**3.3**

Refer to Appendices 1 & 2 for full Resources Tabulation

1. Tonnes have been rounded to reflect the relative uncertainty of the estimate.
2. The in situ grade is determined by multiplying the percentage of HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage.

Pre-production capital costs have decreased by A$96.6M or 26% to A$271.3M[1]. The decrease is largely attributed to a reduction in initial mine throughput from 18Mtpa to 12Mtpa with a resultant decrease in capital expenditure associated with mining and processing.

The pre-production capital total includes A$27.7M for an ilmenite upgrade plant which will allow Sheffield to produce large quantities of consistently high quality, high grade sulphate ilmenite over the 40-year mine life.

The operation will be ramped up to a throughput of 18Mtpa in year eight, well past the initial capital payback period of 3.4 years. The ramp-up involves straightforward modular additions of plant and equipment which will be fully funded by operating cash flow. The shortened capital payback is due to lower pre-production capital and scheduling of high grade near-surface mineralisation in early production years (the initial six-year pit has an average grade of 15.7% HM).

In addition, further cost savings have been made to on-site and off-site infrastructure, including a Build Own Operate (BOO) arrangement for the accommodation camp and power station. Mining unit plants and mobile equipment will be lease-purchased over 5 years.

The mine life has increased substantially by 25% to 40 years, confirming the Project's capacity to supply globally significant quantities of high quality products to the market over a long period of time.

The processing flow sheet now includes an ilmenite upgrade step using a low temperature roast ("LTR") to upgrade the primary ilmenite by 22% to produce a high grade (56.1%) sulphate ilmenite. This will be one of the highest grade sulphate ilmenites in the global market. Smelter modelling test work also confirms the LTR ilmenite is suitable feed for producing high quality TiO_2 slag (89.8% TiO_2) and pig iron. Higher forecast pricing for the LTR ilmenite product is the principal driver of the 11% increase in unit revenue.

Table 2: PFS Update Financial Highlights and Variance from May 2015 PFS (All in AUD)

	PFS UPDATE OUTCOMES	CHANGE FROM PFS		
Pre-production Capital[1]	**$271.3M**	**$96.6M**	▼	**26%**
Mine Life	**40yrs**	**8yrs**	▲	**25%**
Revenue LOM	**$11.8B**	**$2.3B**	▲	**24%**
Annual Operating Cash Flow[2]	$149M	$15M	▲	11%
Annual EBITDA	$135M	$15M	▲	13%
Capital Payback	3.4yrs	0.2yrs	▼	6%
Unit Revenue LOM	$566	$58	▲	11%
Unit Cash Cost[2] LOM	$280	$1	▲	0.4%
Revenue to Cost[2] Ratio LOM	2.02	0.20	▲	11%

[1] Excludes contingency. [2]Excludes royalties

Financial modelling shows that Thunderbird will deliver average annual EBITDA of A$135 million over LOM. The Project is expected to produce an annual operating cash flow of A$149 million[2]. The revenue to cost ratio has improved to 2.02:1 over the LOM. A revenue to cost ratio of 2.19:1 during the first seven years reflects high in-situ grades (>1% zircon) and a low strip ratio (0.20:1) during this period.

Operating costs have remained the same over LOM, despite a reduction in throughput and the introduction of an ilmenite upgrade step.

Production is scheduled to commence in 2019. Over the 40 year LOM, production volumes average 382.1kt for LTR ilmenite, 14.3kt ilmenite, 100.1kt for zircon and 26.2kt for HiTi88. Production and revenue totals over the LOM are shown in Table 3.

Table 3: Production and Revenue Totals LOM

PRODUCT	LOM TONNES	LOM REVENUE (A$M)
Zircon	4,006,000	6,910
LTR Ilmenite	15,285,000	3,821
HiTi88	1,052,000	995
Primary Ilmenite	559,000	103
TOTAL PRODUCTS	**20,902,000**	**11,829**

The financial analysis uses TZMI's long term forecast prices specific to Thunderbird planned products. The key financial parameters for the project are shown in Table 4.

Table 4: Key Financial Outcomes and Assumptions

FINANCIALS		
Key Item	**A$M**	**LOM**
Revenue (LOM total)	A$M	11,829
Operating Cash Flow (LOM Average)	A$M pa	149
EBITDA (LOM Average)	A$M pa	135
EBIT (LOM Average)	A$M pa	122
Key Item	**A$/TONNE OF**	**LOM**
Unit Revenue	product	566
Unit Revenue	MUP feed	17.32
Cash operating costs (C1 costs)	product	280
Cash operating costs (C1 costs)	MUP feed	8.57
Royalties	product	28.30
Revenue:Cost ratio (excluding royalties)		2.02
Key Assumptions	**US$ (FOB bulk)**	**LOM**
A$:US$ Exchange rate		0.74
Zircon Price	US$/tonne	1,371
LTR Ilmenite Price	US$/tonne	185
Primary Ilmenite Price	US$/tonne	136
HiTi88 leucoxene Price	US$/tonne	700

[2]Excludes royalties

The total pre-production capital required to build the Thunderbird Project has been estimated at A$271.3M plus $25.3M contingency. The estimate covers the design and construction of the Project's mining and processing, supporting site infrastructure and off-site infrastructure such as an access road and port facilities at Derby.

The capital cost of expansion from 12Mtpa to 18Mtpa throughput in Year 8 is A$63.9M and will be met from operating cash flow. Sustaining capital costs average A$3.97M per annum over the 40 year mine life. Based on maintenance schedules, there is very little sustaining capital required in the first 10 years of operations.

Mining & Processing

The Mining Inventory that forms the basis of the PFS Update is from the northern central portion of the Thunderbird Mineral Resource and comprises 685Mt at 11.3% HM, with in-situ grades of 0.87% zircon, 0.27% HiTi leucoxene, 0.28% leucoxene and 3.13% ilmenite (from Measured and Indicated Resources only).

This equates to 40 years of scheduled production with initial production at a 12Mtpa mining rate for eight years, ramping up to 18Mtpa for the remainder of the mine life. The waste-to-ore ratio averages 0.66:1 over the 40 year life of mine. Mineralisation remains open beyond the 40 year pit shell outline, mainly in the down-dip direction, with optimisation studies indicating production can extend well beyond 40 years.

Mining is scheduled to begin in the north-eastern part of the deposit, where high grade mineralisation is at surface, then progress down-dip to the southwest before turning southeast to exploit the bulk of the near-surface high grade resource in the early years of operation. The mining inventory for the initial six year pit comprises 68Mt at 15.7% HM, with high in-situ grades of 1.12% zircon, 0.32% HiTi leucoxene, 0.31% leucoxene and 4.18% ilmenite (of which 86% is from Measured Resources and 14% from Indicated Resources) and covers the capital payback period of 3.4 years.

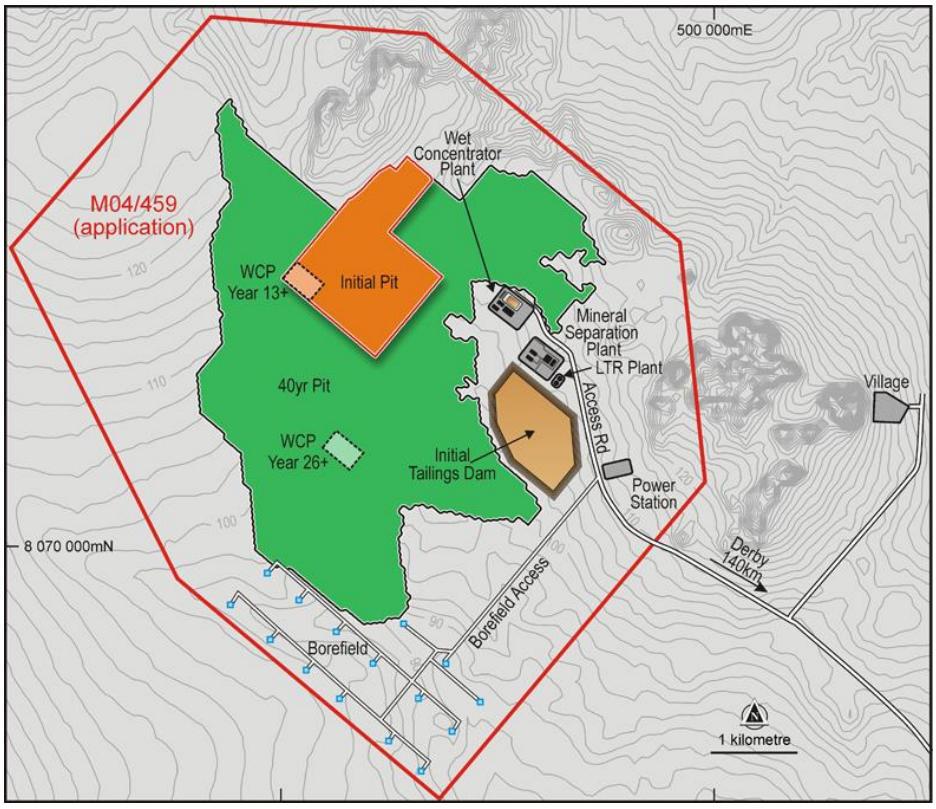

Figure 3: Thunderbird Site Layout Plan

The Thunderbird Project has a compact site layout, providing significant operating cost advantages and minimising the environmental footprint.

The permanent Mineral Separation Plant, the initial location of the movable Wet Concentrator Plant, and an initial Tailings Storage Facility will all be favourably located adjacent to the orebody within optimal pumping distances (Figure 3). Only two WCP moves are required - in production years 13 and 26.

The Thunderbird mineralisation will be processed through a conventional heavy mineral sands processing circuit to deliver a suite of zircon, ilmenite, and HiTi88 products. The process includes an ilmenite upgrade step using a low temperature roast to produce a high grade sulphate ilmenite.

The processing flowsheet has been developed by leading mineral sands specialists Robbins Metallurgical Pty Ltd on the basis of metallurgical process development testwork carried out during the PFS on a 12.5 tonne bulk sample using full-scale and scalable equipment. The product recoveries obtained from this work have been used in the PFS financial model.

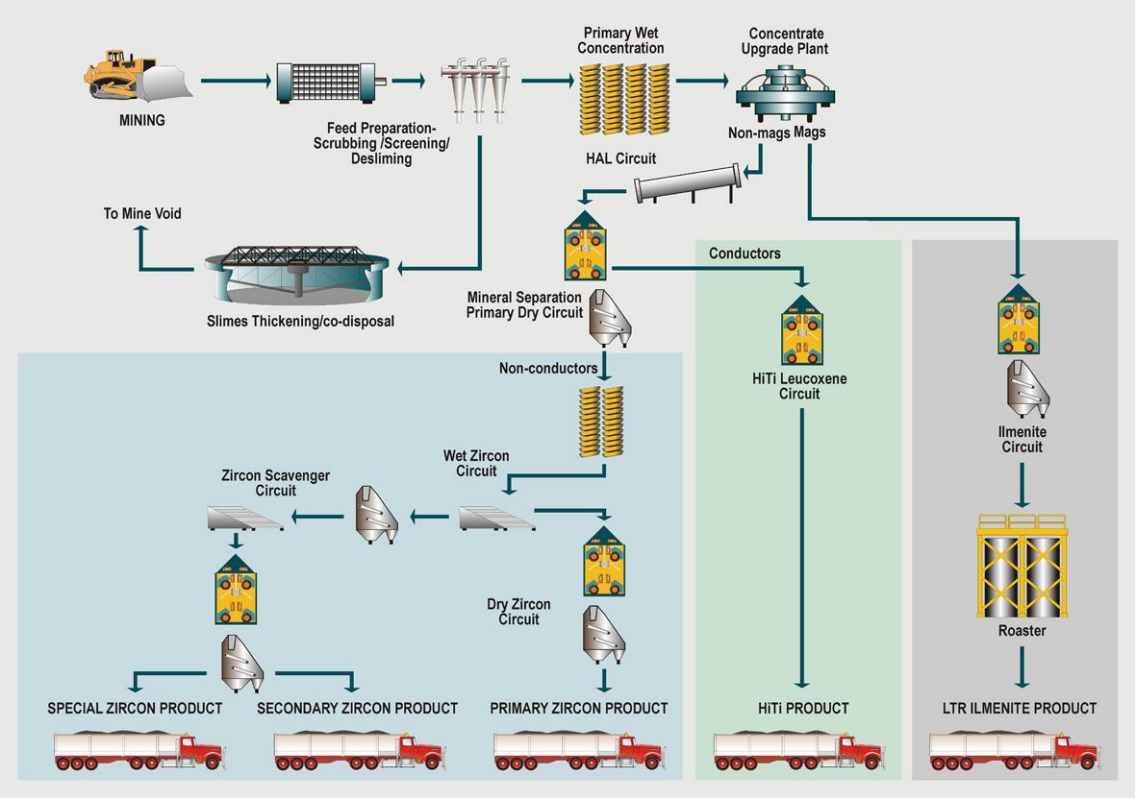

Figure 4: Thunderbird Schematic Process Flow Sheet

Overall recovery of ilmenite to product (45-47% TiO_2) is 74%. The overall recovery of LTR ilmenite (56.1% TiO_2) is 68%.

Overall zircon recovery, excluding semi-processed and re-circulated streams, is calculated at 67%. The Primary (66.6% ZrO_2) Zircon is approximately 80% of the recovered zircon. A Secondary (65.1% ZrO_2) and a Special (62.8% ZrO_2) Zircon were also produced.

The HiTi88 (87.7% TiO_2) product recovery, excluding semi-processed or re-circulation streams is 40%.

Product quality and marketability

Leading global mineral sands consulting group TZMI has confirmed that Sheffield's primary zircon and LTR ilmenite are high quality products that are likely to receive strong market support. Collectively these products represent 81% of the total projected revenue. Significant interest has been registered in these products by leading marketing specialists and industry groups.

Zircon (59% of revenue)

TZMI concluded that the primary zircon product meets the requirements for premium classification for use in the ceramic sector. The ceramics sector is the largest sector of the zircon market, with China being the largest importing country. TZMI do not see any issue with placing this material in

the market due to the progressively growing supply gap beyond 2018, when production from several major global operations is expected to decline. The secondary and special zircon can be sold as high grade concentrates to the zircon chemicals sector or to zircon concentrate processors, most of which are located in China

Upgraded Ilmenite (32% of revenue)

The LTR ilmenite product is produced by a simple, 15 minute ultra-low temperature (450^{o}C) reduction roast, and subsequent magnetic separation stage, which upgrades TiO_2 in the primary ilmenite by 22% to 56.1% TiO_2 and increased the FeO to Fe_2O_3 ratio.

The results of sulphuric acid solubility testwork show that the TiO_2 solubility for the LTR ilmenite product is very high at 96.2% using an acid-to-ore ratio of 1.67 (see ASX release 9 September 2015).

The TiO_2 solubility of the Thunderbird LTR ilmenite has been benchmarked against several known commercial ilmenites that are suitable for existing sulphate plants (Figure 5). The Thunderbird LTR ilmenite is in the highest bracket of solubility, and has a higher TiO_2 grade than all the ilmenites tested in the benchmarking exercise.

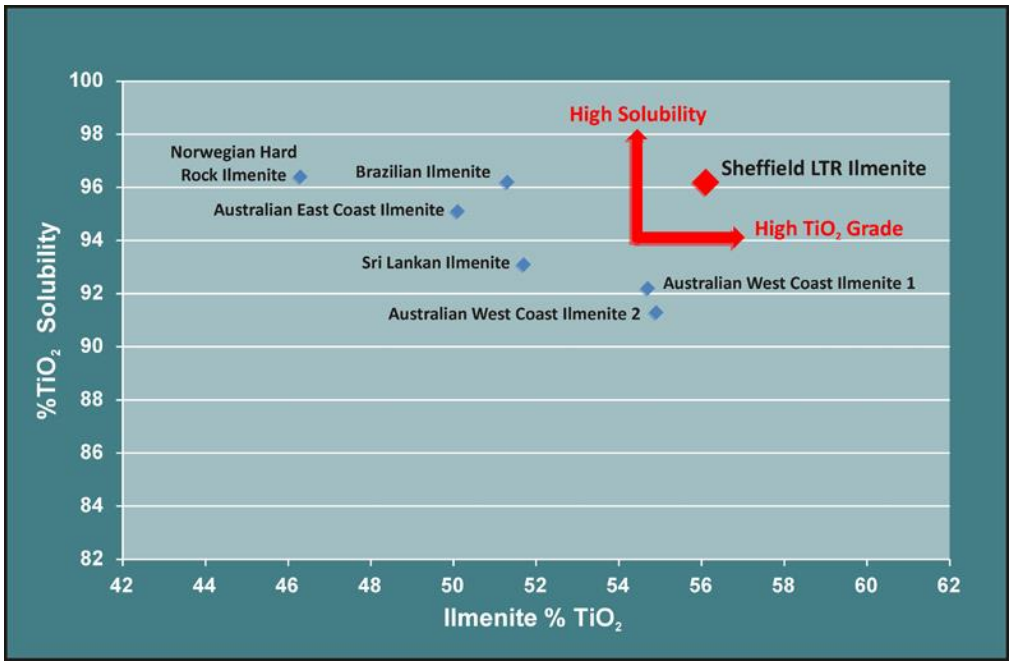

Figure 5: %TiO_2 Solubility vs Grade, Sheffield LTR Ilmenite benchmarked against known sulphate Ilmenites (blue)

Testwork completed by Outotec on pre-reduced and primary ilmenite product derived from the PFS testwork, and modelling completed on LTR ilmenite, indicate that high grade TiO_2 slag and pig iron can be produced. The high grade slag product (89.8% TiO_2) compares well with competing slag products from Western and Asian smelters. The testwork showed that the LTR ilmenite is capable of producing both a high quality sulphate and chloride grade slag suitable for pigment plants, further broadening potential markets.

TZMI concluded that the LTR ilmenite would be a suitable feedstock for sulphate pigment manufacture and recommend further testing in commercial plants. TZMI also indicated that, due to low impurities, this product could be used as a preferential blend feed where other feedstocks have higher impurity levels.

TZMI's smelter simulation modelling using LTR ilmenite specifications showed that the elevated TiO_2 content of the ilmenite (56.1%) would be beneficial to the smelting operation (reducing specific energy consumption) and would allow targeting of a higher TiO_2 slag product. The TiO_2 content of the simulated slag product exceeded TiO_2 levels of typical chloride grade slags available from western ilmenite smelters.

Due to the high TiO_2 content and low Cr_2O_3 levels, TZMI indicates that a 5-10% premium to the recommended long term price of US$181/t for this product may be achievable, subject to customer testing.

TZMI indicate that there may be a market for the titanomagnetite product which is a co-product of the LTR magnetic separation stage. The target market for this product is blast furnace protection in the steelmaking industry. This product has not been factored into the PFS, but will be investigated further during the DFS.

Primary Ilmenite (1% of revenue)

The primary ilmenite product (45.8% TiO_2) is a suitable feedstock for the sulphate-route TiO_2 pigment process. Despite elevated iron oxide levels, the low levels of alkalis and chromium make this ilmenite an attractive feedstock for blending with ilmenite from other sources with higher levels of these contaminants. TZMI recommend a long term price of US$135/t for this product.

Hi Ti88 (8% of revenue)

TZMI indicate that the likely end use market for the HiTi88 product (87.7% TiO_2 content) would be welding electrode application, particularly for flux core wires. Another alternative market would be the titanium sponge markets which are based on molten salt chlorination technology.

Logistics

Infrastructure studies undertaken during the PFS have determined a robust and straightforward mine-to-port supply chain for the Thunderbird mineral products.

Final products will be transported in bulk form by a fleet of 4 quad road trains from the mine to the Derby Port for storage and export. A storage warehouse facility and administration office will be constructed adjacent to the Derby wharf. Bulk ilmenite, zircon and HiTi88 products will be off-loaded in the storage shed where they will be stacked separately in preparation for transhipment via barge. The products will be reclaimed from the stockpiles by front end loaders and transferred by conveyor to the ship loader.

Derby Port has previously been used for the export of up to 500,000tpa of base metal concentrates from Western Metal's Lennard Shelf operations and is well suited to the export of mineral sands products.

Derby Port Access Agreement

Subsequent to the end of the quarter, Sheffield entered into an Access Agreement with the Shire of Derby-West Kimberley over the bulk handling facility at the Derby Wharf. The binding agreement confirms Sheffield as the preferred proponent for the bulk handling facility, allowing exclusive access during the definitive feasibility study to complete all work required to submit a development application and to complete terms of a sublease agreement by the 30th of June 2017. The agreement is a significant step towards establishing a cost effective mine-to-port logistics chain for Thunderbird products.

Figure 6: Derby Wharf

Development Schedule

Sheffield plans to complete a Definitive Feasibility Study in 2016, followed by mine construction commencing in 2017, followed by commissioning in 2018 and first production in 2019, as per the schedule below.

Table 5: Production Timeline

ACTIVITY	2015				2016				2017				2018				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
PFS update																		
Permitting																		
Definitive Feasibility Study																		
Environmental Approvals																		
Infrastructure																		
Engineering Construction																		
Commissioning																		
First Products																		

Next Steps

Sheffield will now commence the DFS, which will advance in parallel with the environmental approvals process and offtake negotiations during calendar 2016. During the DFS, Sheffield will explore several opportunities to further improve the Project's strong financial returns, for example:

- CAPEX and OPEX savings in the lower cost, post mining boom pricing environment (Sheffield notes that quotes for various items were in decline up until completion of the PFS update, with more savings likely to come prior to completion of the DFS);
- Assess more efficient mining configurations to reduce mining costs;
- Optimisation of process design, focused on increasing processing efficiency and product recoveries;
- Further product optimisation work targeting customer requirements and extra revenues, such as:
  - Producing a marketable titanomagnetite product from the LTR process magnetic fraction;
  - Customer testing of LTR ilmenite, targeting a 5-10% pricing premium indicated by TZMI.

A substantial proportion of the DFS-related field work has already been completed, including infill drilling and collection of a 100t bulk sample. The next steps include:

- DFS Study Manager appointment
- DFS to be tendered
- 20t Bulk sample metallurgical test work and flow sheet optimisation to commence Q4 2015
- Engineering review and de-bottlenecking studies scheduled for Q1 2016
- Port lease agreement
- Native title agreement and permitting

DAMPIER REGIONAL MINERAL SANDS

During the quarter, an exploration drilling program of 34 aircore drill holes for 1,804m was completed on exploration licences E04/2171, E04/2193, E04/2194 and E04/2084 which are part of Sheffield's broader Dampier project.

Four holes were drilled at Night Train prospect (E04/2171), three of which returned substantial mineralised intersections:

- **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
- **9m** @ **2.48% HM** from 31.5m (DAAC092), including **3m** @ **3.44% HM** from 31.5m

(refer to ASX release dated 22 September 2015 for full details)

These intersections are immediately down-dip from the discovery intersections announced on 25 February 2015, and extend the Night Train mineralisation by a further 1km to over 1.6km width across strike (Figure 7).

Mineral assemblage for the recent drilling is yet to be determined, however visual examination of the heavy mineral, and proximity to previously announced results, suggest these latest samples will have a similar high value mineral assemblage to that obtained from the earlier drilling, i.e. 15% zircon, 53% leucoxene, 8% HiTi leucoxene and 16% ilmenite (total 92% VHM)[1] (see ASX announcement dated 25 February, 2015 for details).

Although it is still sparsely drilled, Night Train is shaping up as a significant new discovery. It is well located, just 5km from the Broome-Derby Highway and 2km from the proposed haul road for the Thunderbird Project.

Results are still pending for drilling undertaken at other prospects.

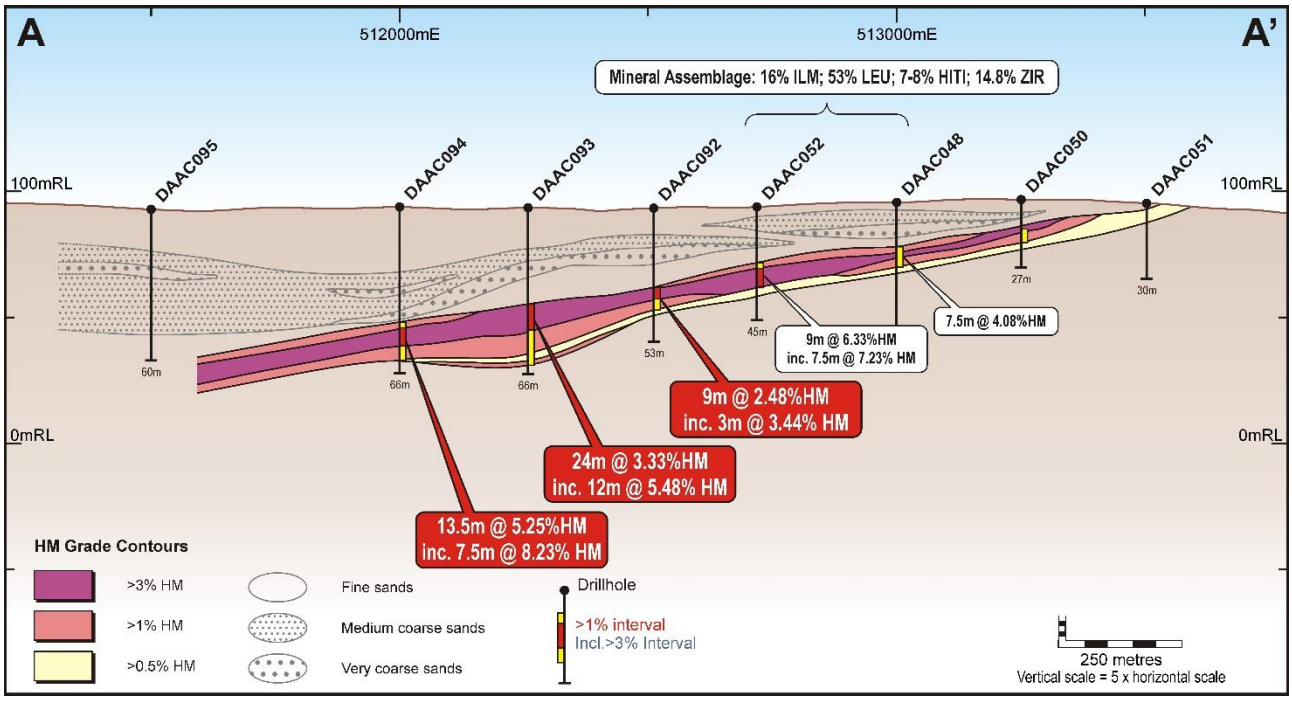

Figure 7: Night Train prospect cross-section

[1] The following TiO_2 content ranges were used in the classification of the titanium minerals: HiTi leucoxene (includes rutile) >90%TiO_2; leucoxene 70-90% TiO_2; ilmenite <70% TiO_2.

FRASER RANGE NICKEL

Sheffield's tenement holding in the Fraser Range region comprises 15 granted exploration licences and 4 exploration licence applications with a total area of over 1,900km^2 (Figure 8).

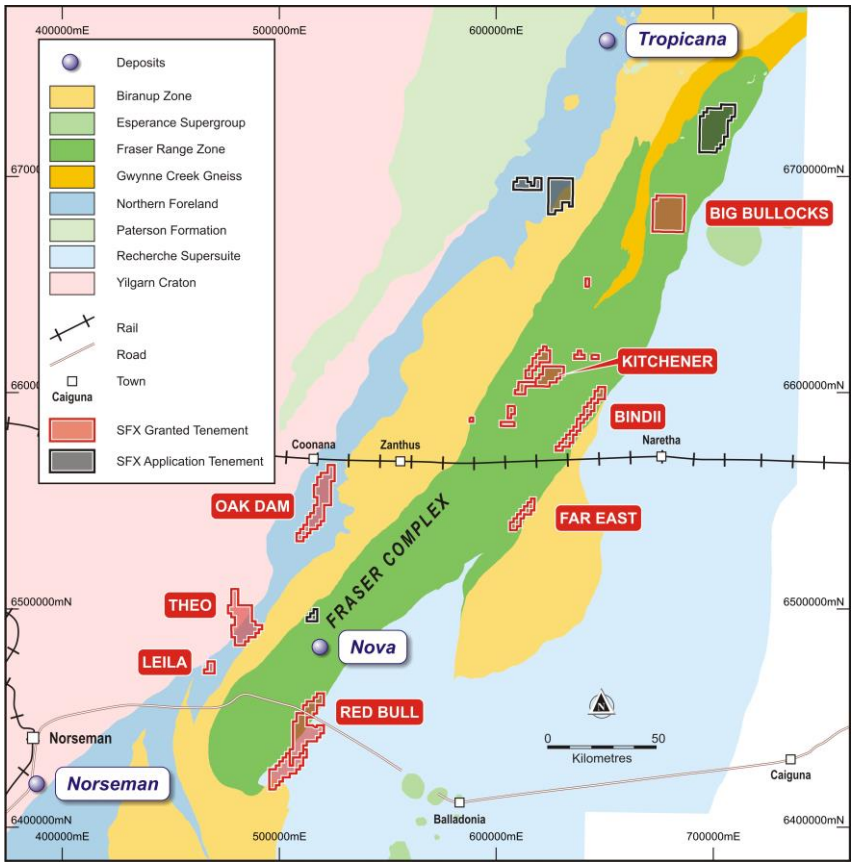

Figure 8: Location of Sheffield's tenements in the Fraser Range region

Sheffield plans to drill a nickel target at the Stud prospect on the Red Bull project during Q4 2015. This is a compelling target due to the combination of bedrock conductor, strong nickel anomalism in shallow aircore drill holes, e.g. 5m @ 0.73% Ni from 33m (REAC240), and observed trace amounts of nickel sulphide in end-of-hole drill samples (see ASX releases dated 12 September 2013, 27 November 2013, 7 July 2014 and 23 June 2015).

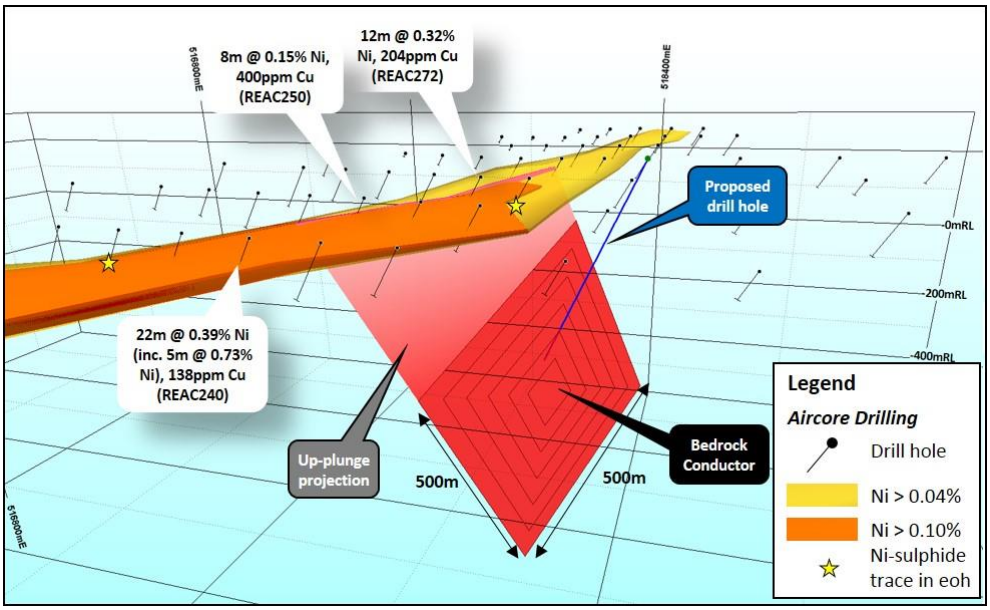

Figure 9: Stud prospect showing modelled bedrock conductor beneath extensive nickel geochemical anomalism in shallow aircore drill holes

DERBY EAST MINERAL SANDS

The Derby East project comprises 5 tenements with a total area of 1,843km^2, covering prospective mineral sands ground to the east of Derby (Figure 2). Three of the tenements, E04/2391, E03/2393 and E04/2394, were granted during the quarter, while two tenements remain under application. A review of historical exploration data is planned for Q4 2015.

ENEABBA & McCALLS HEAVY MINERAL SANDS

No work was undertaken during the quarter.

PILBARA IRON

The three project tenements; E45/3662, E45/4029 and E45/3822, were sold to Atlas Iron Ltd (ASX:AGO) for a total consideration of $150,000 in AGO shares (5,549,390 shares).

CASH POSITION

As at 30 September 2015, Sheffield had cash reserves of approximately $2.8 million.

During Q4 2015, the Company is likely to receive approximately $1.8 million from its 2015 Research and Development tax return.

Bruce McQuitty
Managing Director
30 October 2015

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	E04/2081	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2083	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2084	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2159	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2171	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2192	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2193	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2194	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2348	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2349	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2350	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2386	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2390	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2391	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2392	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2393	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2394	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2399	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2400	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	E04/2401	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	M04/459	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	L04/84	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/85	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/86	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/92	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/93	Sheffield Resources Ltd	100%	Canning Basin	Granted
Mineral Sands	E70/3762	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3812	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	E70/3846	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3929	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3931	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3967	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/3970	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	E70/4314	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4434	Sheffield Resources Ltd	100%	Perth Basin	Granted
Mineral Sands	E70/4584	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	L70/150	Sheffield Resources Ltd	100%	Perth Basin	Pending
Mineral Sands	E70/4719	Sheffield Resources Ltd	100%	Perth Basin	Pending
Mineral Sands	E70/4747	Sheffield Resources Ltd	100%	Perth Basin	Pending
Mineral Sands	E70/4748	Sheffield Resources Ltd	100%	Perth Basin	Pending
Nickel	E69/3033	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E69/3052	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2270	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E39/1733	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2374-I	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2448	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2449	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2450	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2323	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2430	Sheffield Resources Ltd	100%	Fraser Range	Granted

Project	Tenement	Holder	Interest	Location	Status
Nickel	E28/2431	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E28/2428	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E69/3181	Sheffield Resources Ltd	100%	Fraser Range	Pending
Nickel	E28/2563	Sheffield Resources Ltd	100%	Fraser Range	Pending
Gold	E63/1696	Sheffield Resources Ltd	100%	Tropicana Belt	Granted
Nickel/Gold	E28/2481	Sheffield Resources Ltd	100%	Tropicana Belt	Granted
Gold	E28/2453	Sheffield Resources Ltd	100%	Tropicana Belt	Granted
Nickel	E39/1865	Sheffield Resources Ltd	100%	Tropicana Belt	Pending
Nickel/Gold	E39/1891	Sheffield Resources Ltd	100%	Tropicana Belt	Pending
Iron	E47/3031-I	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E46/1041	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E46/1042	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E46/1044	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E45/4558	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E45/4573	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E45/4574	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E46/1069	Sheffield Resources Ltd	100%	Pilbara	Pending
Manganese	E46/1070	Sheffield Resources Ltd	100%	Pilbara	Pending
Copper	E45/4600	Sheffield resources Ltd	100%	Pilbara	Pending

Notes:
[1]Iluka Resources Ltd (ASX:ILU) retains a gross sales royalty of 1.5% in respect to tenements R70/35, M70/872, M70/965 & M70/1153.
[2] Ironbridge Resources Pty Ltd is a 100% owned subsidiary of Sheffield Resources Ltd.
[3]All tenements are located in the state of Western Australia.

Details of tenements and/or beneficial interests acquired/disposed of during the September 2015 Quarter are provided in Section 6 of the Company's Appendix 5B notice for the September 2015 Quarter.

COMPLIANCE STATEMENTS

PREVIOUSLY REPORTED INFORMATION

This report includes information that relates to Exploration Results, Exploration Targets, Mineral Resources and a Pre-feasibility Study which were prepared and first disclosed under the JORC Code 2012. The information was extracted from the Company's previous ASX announcements as follows:

- Thunderbird Pre-feasibility Study Update: "*PRE-FEASIBILITY STUDY UPDATE CONFIRMS THUNDERBIRD AS THE WORLD'S BEST UNDEVELOPED MINERAL SANDS PROJECT*" 14 October 2015
- Thunderbird High Grade Resource Update: "*THUNDERBIRD HIGH GRADE RESOURCE UPDATE*" 31 July 2015
- Night Train discovery: "*NEW MINERAL SANDS DISCOVERY AT NIGHT TRAIN*" 22 September, 2015
- Bulk Sample Collection: "*CONVENTIONAL DOZER TRAP MINING ASSESSED AS PREFERRED MINING METHOD AT THUNDERBIRD*" 17 September, 2015
- Thunderbird Pre-feasibility Study: "*PRE-FEASIBILITY STUDY CONFIRMS THUNDERBIRD AS NEXT MAJOR MINERAL SANDS PROJECT IN GLOBAL DEVELOPMENT PIPELINE*", 14 May 2015
- Red Bull Results: "*LARGE Ni-Cu-Co ANOMALIES IDENTIFIED IN THE FRASER RANGE*", 11 February, 2014
- Red Bull EM and Big Bullocks aircore drilling: "*COMPELLING NEW DRILL TARGET IDENTIFIED FROM GROUND EM SURVEY AT RED BULL NICKEL PROJECT*", 23 June 2015
- New Fraser Range Nickel & Gold targets: "*TWELVE NEW NICKEL AND GOLD TARGETS OUTLINED IN FRASER RANGE*", 3 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:

- Ellengail Mineral Resource: "*1MT CONTAINED HM INFERRED RESOURCE AT ELLENGAIL*", 25 October 2011.
- West Mine North Mineral Resource: "*WEST MINE NORTH MINERAL RESOURCE ESTIMATE EXCEEDS EXPECTATIONS*", 7 November 2011.
- McCalls Mineral Resource: "*4.4 BILLION TONNE MAIDEN RESOURCE AT MCCALLS HMS PROJECT*", 20 February 2012.
- Durack Mineral Resource: "*ENEABBA PROJECT RESOURCE INVENTORY EXCEEDS 5MT HEAVY MINERAL*", 28 August 2012.
- Yandanooka Mineral Resource: "*YANDANOOKA RESOURCE UPGRADE AND METALLURGICAL RESULTS*", 30 January 2013.
- 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.

These announcements are available to view on Sheffield Resources Ltd's web site 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 original market announcements and, in the case of estimates of Mineral Resources and Pre-feasibility 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 original market announcement.

FORWARD LOOKING AND CAUTIONARY STATEMENTS

Some statements in this report regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company's exploration programme, outlook, target sizes and mineralised material estimates. They include statements preceded by words such as "anticipated", "expected", "target", "scheduled", "intends", "potential", "prospective" and similar expressions.

In this report the term "mining inventory" is used to report that part of the Mineral Resource that has been considered in the Pre-feasibility Study. The mining inventory does not meet the requirements of an Ore Reserve as defined under the 2012 edition of the JORC Code and should not be considered an Ore Reserve. There is no certainty that all or any part of the mining inventory will be converted into Ore Reserves.

APPENDIX 1: MINERAL RESOURCES

Table 1: Sheffield's contained Valuable HM (VHM) Resource inventory at 31 July 2015

Deposit	Resource Category	Zircon (kt)*	Rutile (kt)*	HiTi Leuc. (kt)*	Leuc. (kt)*	Ilmenite (kt)*	**Total VHM (kt)***
Thunderbird	Measured	1,700	-	500	500	5,800	**8,400**
Thunderbird	Indicated	14,000	-	4,500	5,300	46,700	**70,500**
Thunderbird	Inferred	2,800	-	900	1,200	9,300	**14,200**
Yandanooka	Measured	13	2	-	3	87	**105**
Yandanooka	Indicated	250	77	-	78	1,450	**1,850**
Yandanooka	Inferred	4	1	-	2	23	**29**
Durack	Indicated	142	29	-	47	715	**933**
Durack	Inferred	26	4	-	12	123	**166**
Drummond Crossing	Indicated	143	102	-	37	540	**822**
Drummond Crossing	Inferred	6	5	-	1	28	**41**
Ellengail	Inferred	92	90	-	20	658	**860**
West Mine North	Measured	16	35	-	35	198	**283**
West Mine North	Indicated	59	81	-	45	502	**687**
McCalls	Inferred	3,490	1,060	-	2,560	42,800	**49,900**
Total	Measured	1700	-	500	500	6100	**8,800**
Total	Indicated	14,600	300	4,500	5,500	49,900	**74,800**
Total	Inferred	6,400	1,200	900	3,800	52,900	**65,200**
Total	**All**	**22,800**	**1,500**	**5,900**	**9,700**	**108,900**	**148,800**

All tonnages have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal. The contained VHM tonnages in the above table are derived from Mineral Resource Estimates for the Yandanooka, Ellengail , West Mine North, McCalls, Durack deposits (estimated using a 0.9% HM cut-off), the Drummond Crossing deposit (estimated using a 1.1% HM cut-off) and the Thunderbird deposit (estimated using a 3% HM cut-off) as detailed in Table 2.

* Valuable Heavy Minerals are classified as zircon, rutile, HiTi leucoxene, leucoxene and ilmenite.

Table 2: Sheffield's HMS Mineral Resource[2] Inventory at 31 July 2015

Project	Deposit	Resource Category	Cut-off (% HM)[3]	Material (Mt)*	Bulk Density	HM %	Slimes %[3]	Osize %	Insitu HM (Mt)*	Zircon[2] %	Rutile[2] %	HiTi [2] Leuc. %	Leuc.[2] %	Ilm.[2] %
Dampier	Thunderbird	Measured	3.0	230	2.1	9.4	19	10	21	7.9	-	2.2	2.1	27
	Thunderbird	Indicated	3.0	2410	2.0	6.9	16	8	167	8.4	-	2.7	3.1	28
	Thunderbird	Inferred	3.0	600	2.0	5.6	16	9	33	8.4	-	2.8	3.5	28
	Total Dampier	**All**	**3.0**	**3,240**	**2.0**	**6.9**	**16**	**9**	**222**	**8.3**	**-**	**2.7**	**3.1**	**28**
Eneabba	Yandanooka	Measured	0.9	3	2.0	4.1	15	14	0.1	10	1.9	-	2.2	72
	Yandanooka	Indicated	0.9	90	2.0	2.3	16	15	2.1	12	3.7	-	3.7	69
	Yandanooka	Inferred	0.9	3	2.0	1.2	18	21	0.03	11	3.9	-	4.6	68
	Yandanooka	All	0.9	96	2.0	2.3	16	15	2.2	12	3.6	-	3.7	69
	Durack	Indicated	0.9	50	2.0	2.0	15	21	1.0	14	2.8	-	4.6	70
	Durack	Inferred	0.9	15	1.9	1.2	14	17	0.2	14	2.4	-	6.7	67
	Durack	All	0.9	65	2.0	1.8	15	20	1.2	14	2.8	-	4.9	70
	Drummond Crossing	Indicated	1.1	49	2.0	2.1	16	9	1.0	14	10	-	3.6	53
	Drummond Crossing	Inferred	1.1	3	2.0	1.5	16	8	0.05	13	9.9	-	2.8	55
	Drummond Crossing	All	1.1	52	2.0	2.1	16	9	1.1	14	10	-	3.6	53
	Ellengail	Inferred	0.9	46	2.0	2.2	16	2	1.0	9	8.7	-	1.9	64
	Ellengail	All	0.9	46	2.0	2.2	16	2	1.0	9	8.7	-	1.9	64
	West Mine North	Measured	0.9	6	2.0	5.6	15	1	0.4	4	9.6	-	9.5	54
	West Mine North	Indicated	0.9	36	1.9	2.3	13	3	0.8	7	9.6	-	5.4	60
	West Mine North	All	0.9	43	1.9	2.8	13	3	1.2	6	9.6	-	6.6	58
	Total Eneabba	Measured	Var.	9	2.0	5.2	15	5	0.5	6	7.7	-	7.7	59
	Total Eneabba	Indicated	Var.	225	2.0	2.2	15	13	5.0	12	5.8	-	4.2	64
	Total Eneabba	Inferred	Var.	68	2.0	1.9	15	6	1.3	10	7.7	-	2.7	64
	Total Eneabba	**All**	**Var.**	**302**	**2.0**	**2.2**	**15**	**11**	**6.8**	**11**	**6.3**	**-**	**4.1**	**64**
McCalls	McCalls	Inferred	0.9	4,431	2.3	1.2	27	1.4	53	7	2.0	-	4.8	81
	Total McCalls	**All**	**0.9**	**4,431**	**2.3**	**1.2**	**27**	**1.4**	**53**	**7**	**2.0**	**-**	**4.8**	**81**

** All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate and maintain consistency throughout the table, thus sum of columns may not equal.*
[1] See the compliance statements in this report for important information relating to the reporting of these Mineral Resources. [2] The Mineral Assemblage is represented as the percentage of the Heavy Mineral (HM) component of the deposit, determined by QEMSCAN for Eneabba & McCalls, with TiO_2 minerals defined according to the following ranges: Rutile >95% TiO_2; Leucoxene 85-95% TiO_2; Ilmenite <55-85% TiO_2; for Dampier the mineral assemblage was determined by screening and magnetic separation. Magnetic fractions were analysed by QEMSCAN for mineral determination as follows: Ilmenite: 40-70% TiO_2 >90% Liberation; Leucoxene: 70-94% TiO_2 >90% Liberation; High Titanium Leucoxene (HiTi Leucoxene): >94% TiO_2 >90% Liberation; and Zircon: 66.7% ZrO_2+HfO_2 >90% Liberation. Non-magnetic fractions were submitted for XRF analysis and minerals determined as follows: Zircon: ZrO_2+HfO_2/0.667 and High Titanium Leucoxene (HiTi Leucoxene): TiO_2/0.94. [3] West Mine North, Drummond Crossing, Durack and McCalls deposits are reported below 35% slimes cut-off.