Sheffield Resources Ltd
ACN 125 811 083
L1, 57 Havelock Street West Perth WA

16 January 2015

QUARTERLY REPORT FOR PERIOD ENDING 31 DECEMBER 2014

HIGHLIGHTS

Thunderbird HMS project

- Substantial increase in mineral resource to **3.2Bt** @ **6.8% HM** (Measured, Indicated and Inferred) (at 3% HM cut-off), containing 95Mt of valuable heavy mineral, including 19.3Mt of zircon
- 46% increase in high grade component of resource to **1.08Bt** @ **11.8% HM** (at 7.5% HM cut-off) (Measured, Indicated and Inferred)
- High in-situ grades of **0.92% zircon, 0.28% high-titanium leucoxene, 0.25% leucoxene and 3.3% ilmenite** place Thunderbird in the top tier of mineral sands deposits globally
- Thunderbird Project economics expected to be strongly enhanced by new high grade resources added in shallow up-dip region of deposit
- Improved confidence levels: 82% of total mineral resource in Measured and Indicated categories
- Resource sets an exceptional foundation for Pre-feasibility Study
- Pre-feasibility Study is progressing well and is on schedule for completion in Q1 2015
- Miscellaneous licences lodged for access roads and camp site
- Results from regional exploration drilling and Thunderbird infill drilling due in Q1 2015

Fraser Range Nickel project

- Aircore drilling and Ground EM surveys planned for Q1 2015

As at 31/12/14:

Issued Shares	**134.4M**	ASX Code	**SFX**	Closing Price	**$0.74**
Market Cap	**$99.5M**	Cash Reserves	**$4.7M**		

SUMMARY

Following completion of the 2014 field work campaign at Thunderbird in late October, a large resource update was delivered on schedule in December.

Significantly, new high grade resources were added in the up-dip region of the deposit and the proportion of the resource in the Indicated category was substantially increased. This sets a strong foundation for the Pre-feasibility Study which is on schedule for completion in Q1 2015.

Work programs have been designed for the Fraser Range nickel, Eneabba and McCalls HMS and Oxley potash projects, and are scheduled to be undertaken in H1 2015.

Exploration expenditure for the quarter is $3,950,000. Projected exploration expenditure for Q1 2015 is $1,100,000.

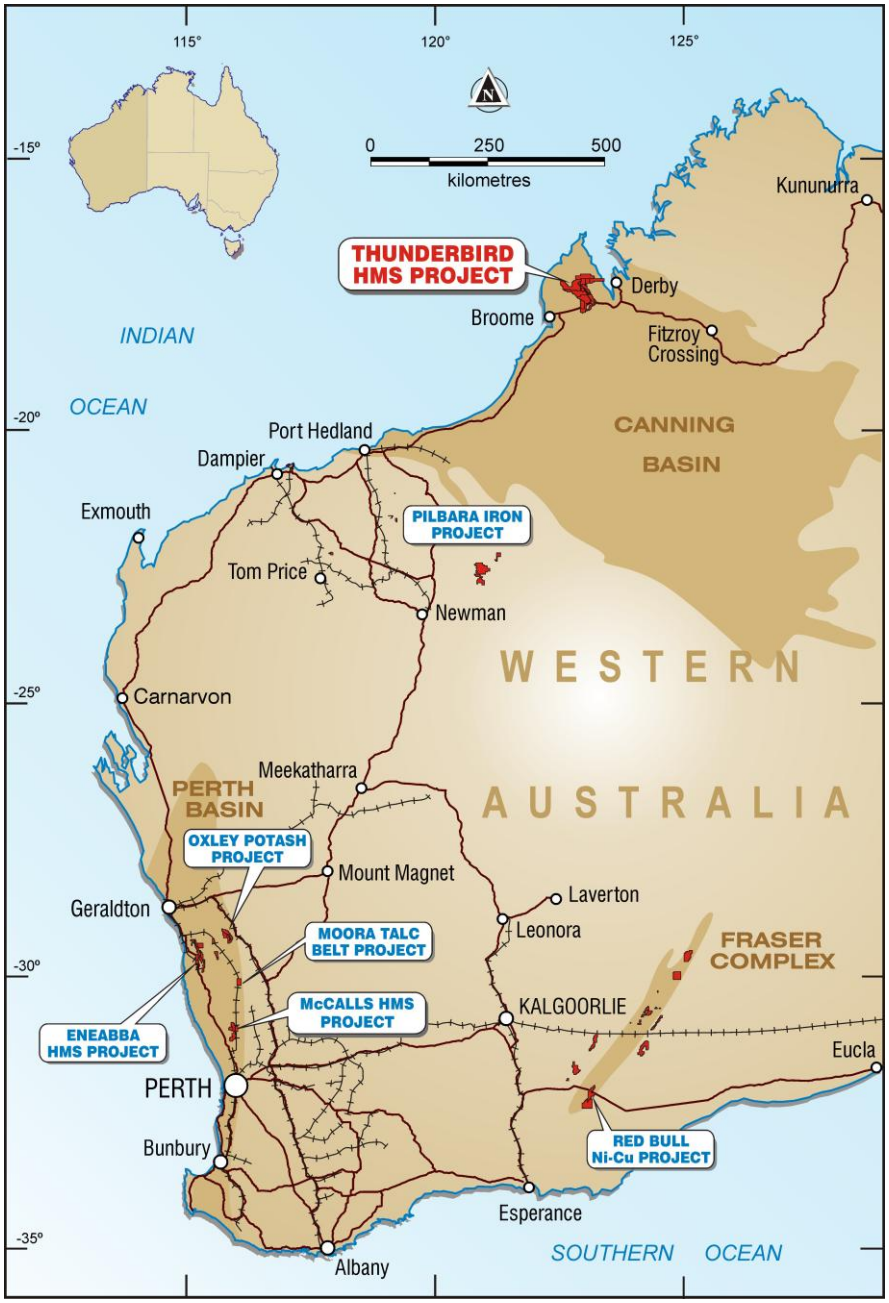

Figure 1: Location of Sheffield's Projects

THUNDERBIRD MINERAL SANDS

Sheffield's flagship Thunderbird mineral sands project is located near Derby in Western Australia (Figures 1 & 2).

The Thunderbird Scoping Study, released on 14 April 2014, showed the project has the potential to generate consistently strong cash margins from globally significant levels of production over an initial 32-year mine life.

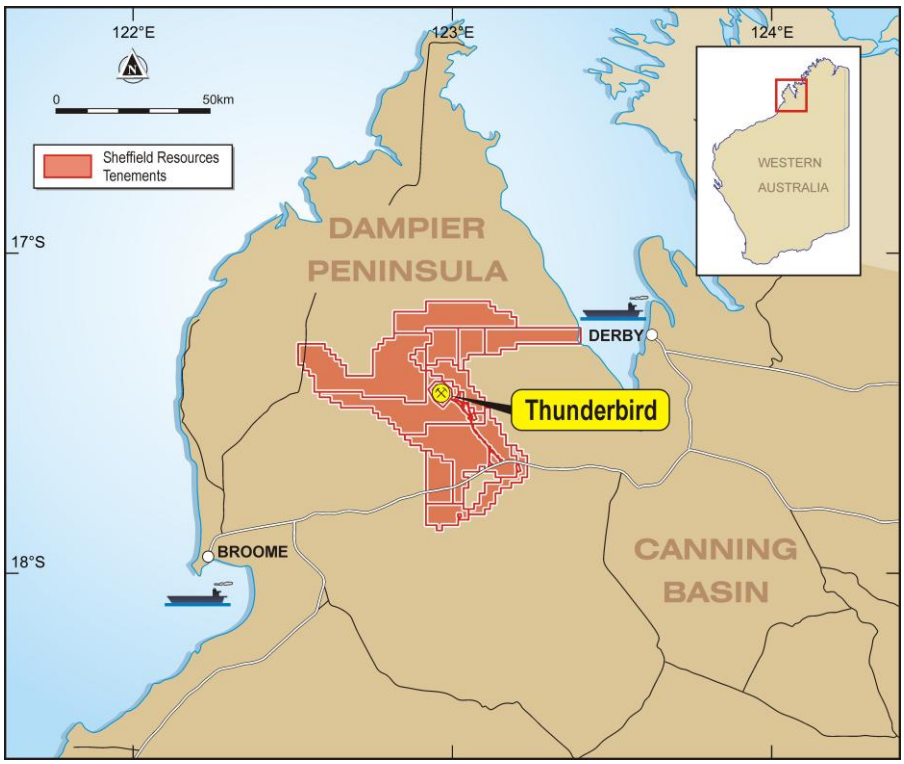

Figure 2: Location of Thunderbird HMS project

On 12 December 2014 the Company announced an updated mineral resource of **3.205Bt @ 6.8% HM** (Measured, Indicated and Inferred) for the Thunderbird deposit (Table 1, Appendix 1).

Table 1: Thunderbird Deposit Mineral Resource[1] Summary

		Mineral Resources		Valuable HM Grade (In-situ)[2]			
Resource Category	Cut-off HM%	Material Million Tonnes[3]	HM %	Zircon %	HiTi Leucoxene %	Leucoxene %	Ilmenite %
Measured	3.0	75	7.9	0.71	0.21	0.19	2.4
Indicated	3.0	2,550	7.0	0.60	0.19	0.22	2.0
Inferred	3.0	580	5.6	0.47	0.16	0.20	1.5
Total	**3.0**	**3,205**	**6.8**	**0.58**	**0.19**	**0.21**	**1.9**
Measured	7.5	35	12.7	1.1	0.32	0.27	3.7
Indicated	7.5	920	11.9	0.93	0.29	0.26	3.3
Inferred	7.5	125	10.8	0.83	0.25	0.24	3.0
Total	**7.5**	**1,080**	**11.8**	**0.92**	**0.28**	**0.25**	**3.3**

This compares with the previous March 2014 mineral resource of 2.62Bt @ 6.5% HM (Measured, Indicated & Inferred) at 3% HM cut-off (see Figure 3 and ASX release dated 19 March 2014).

[1] Refer to Appendix 1 for further information.
[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.
[3] Tonnes and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.

The updated resource includes a coherent high grade zone of **1.080Bt @ 11.8% HM at 7.5% HM** cut-off (Measured, Indicated and Inferred), containing 10.0Mt of zircon, 3.1Mt of high-titanium leucoxene, 2.8Mt of leucoxene and 36Mt of ilmenite.

The high in-situ valuable heavy mineral (VHM) grades for this zone of **0.92% zircon, 0.28% high-titanium leucoxene, 0.25% leucoxene and 3.3% ilmenite** place Thunderbird in the top tier of mineral sands deposits globally.

The resource includes a significant new high grade component in the near-surface, up-dip region of the deposit (Figure 4). This component, comprising **95Mt @ 12.0% HM** (Indicated) and **25Mt @ 12.2% HM** (Inferred) (at 7.5% HM cut-off), is expected to further enhance the already robust project economics by adding more years of high grade feed to the front end of the mining schedule.

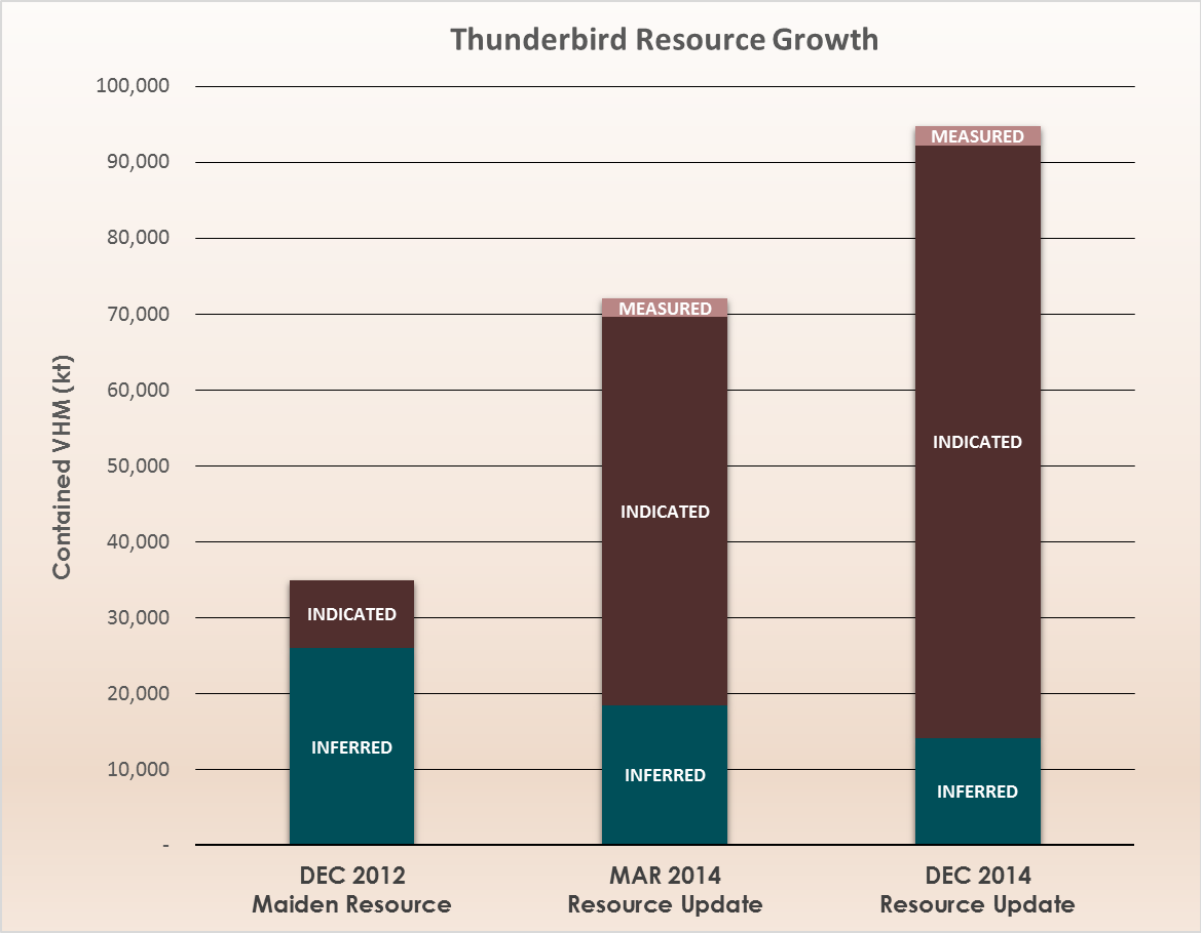

Figure 3: Thunderbird Resource Growth

Significantly, there has been a large increase in the Indicated Resource component (Figure 3). The Scoping Study excluded Inferred Resources, most of which have now been upgraded to the Indicated Resource category and will be incorporated into the Pre-feasibility Study.

The updated mineral resource is based on results from 509 aircore drill holes for 31,283m drilled by Sheffield between 2012 and 2014, including 68 new holes drilled during the 2014 program (refer to ASX releases dated 23 July; 17 September and 10 November 2014).

More results from the 2014 drilling program are anticipated during Q1 2015. These relate to 51 infill aircore drill holes and 20 sonic core drill holes in the up-dip portion of Thunderbird, and 61 regional exploration aircore drill holes.

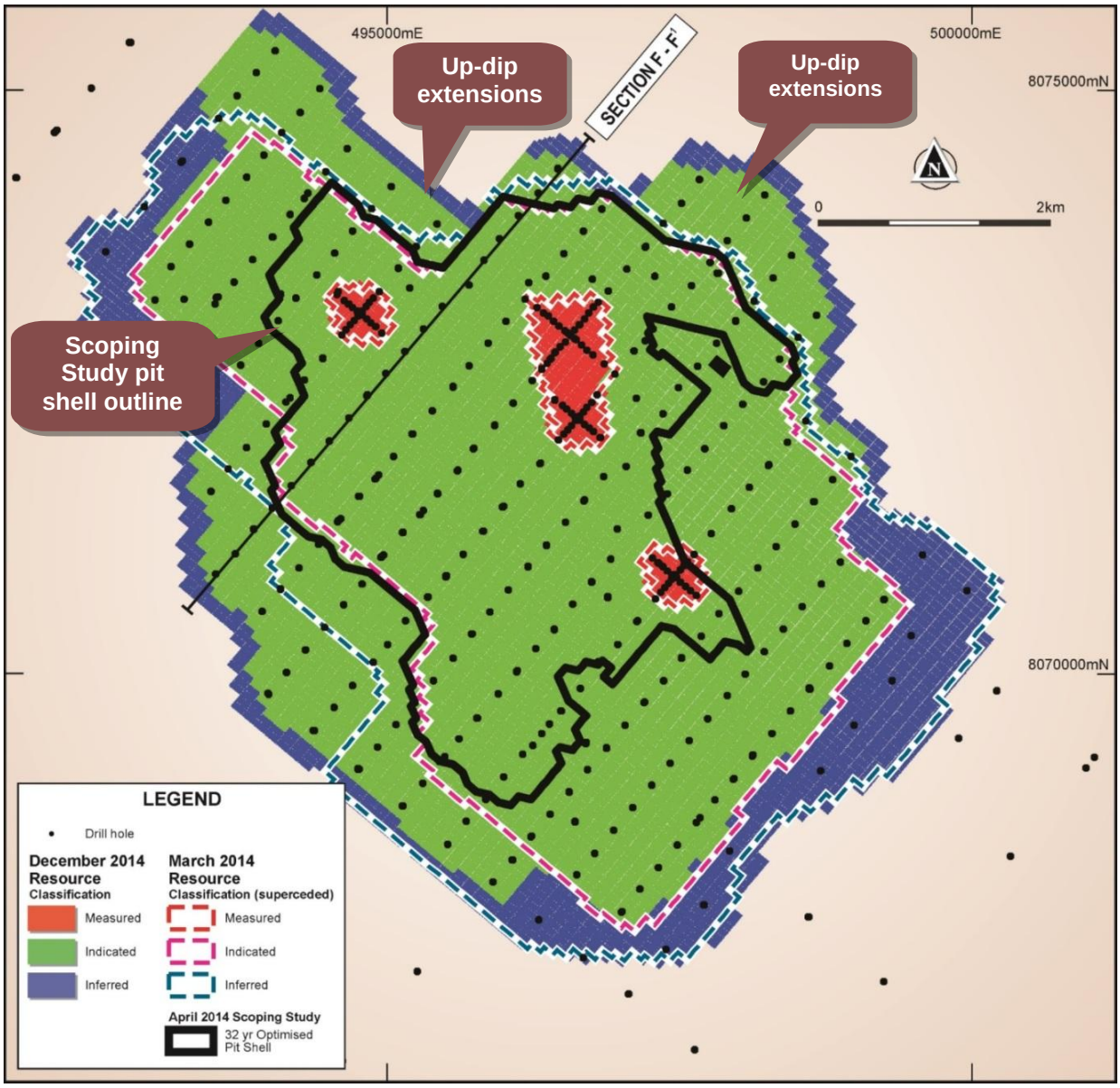

Figure 4: Thunderbird Resource block model resource category plan, and comparison with March 2014 resource category boundaries and April 2014 Scoping Study 32 year pit shell

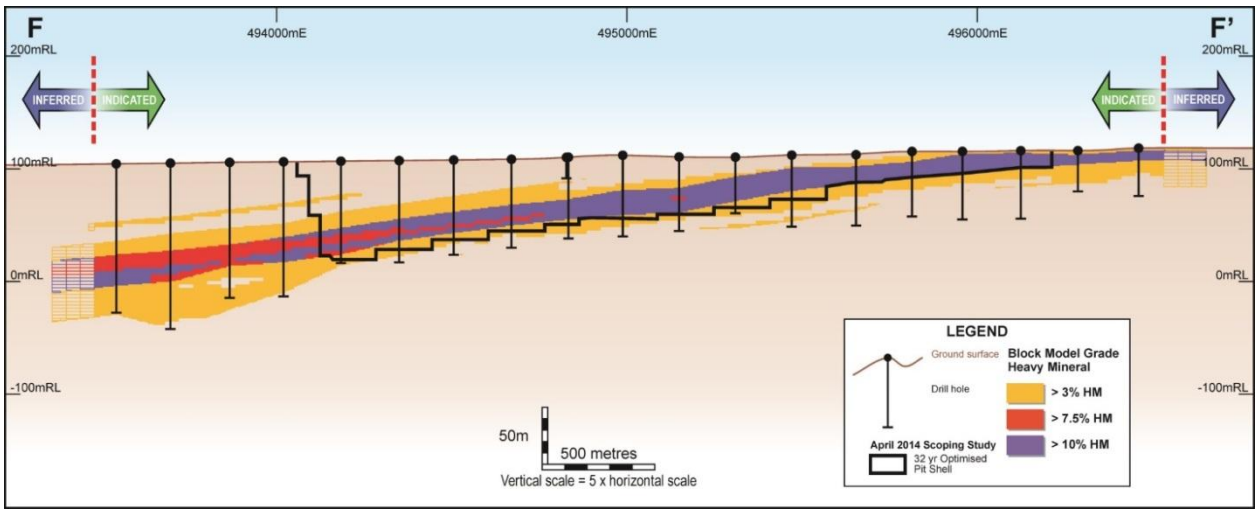

Figure 5: Cross-section F-F' through the Thunderbird resource block model showing the current Resource HM grade and April 2014 Scoping Study 32-Year pit shell outline

Thunderbird Pre-feasibility

The Pre-feasibility Study is on schedule to be finalised in Q1 2015.

Work on the following activities is largely complete and reporting is in progress:

- Bulk sample metallurgical testwork on full scale or scalable equipment;
- Geotechnical investigations based on core from 20 sonic drill holes;
- Mining studies;
- Infrastructure and power studies;
- Hydrogeological investigations.

Remaining work includes: tailings co-disposal testwork, process engineering design, product appraisal and marketing studies, optimization studies, mine scheduling and financial modelling.

Permitting

Sheffield continues to progress the permitting of the Thunderbird project, including mining lease application M04/459, which was lodged during the September 2014 quarter.

A polygonal native title claim, Mt Jowlaenga Polygon #2 – NNTT number WC2014/005, covering Application for Mining Lease 04/459 was formally entered on the National Native Title Tribunal register on 15 December 2014. The Company anticipates commencing negotiations with the claimants in the near future.

In December 2014, miscellaneous licences for access roads and a camp were lodged with DMP.

FRASER RANGE NICKEL

Four tenements were granted during the quarter (E28/2430, E28/2431, E28/2323 and E63/1696). Sheffield now has 12 granted tenements and 4 tenement applications in the Fraser Range and the adjacent Tropicana Belt with a combined area of 2,300km^2 (Figure 6).

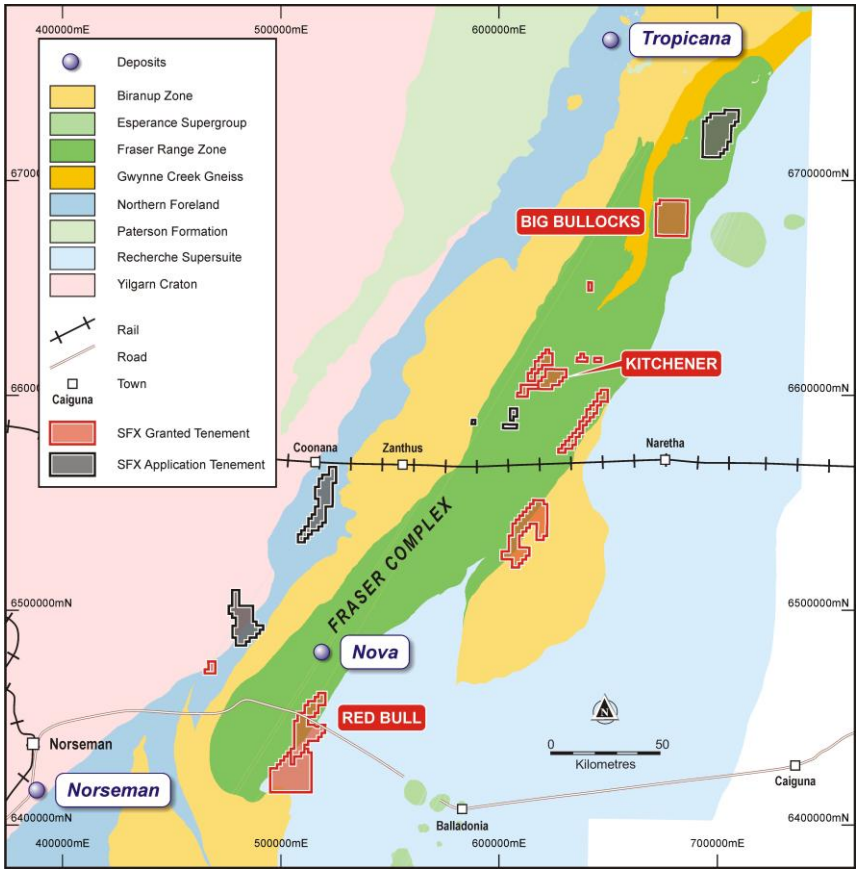

Figure 6: Location of Sheffield's tenements in the Fraser Range region

Red Bull Nickel

The main exploration target at Red Bull is an 8km long Ni-Cu-Co anomalous trend in a layered mafic-ultramafic sequence in the northern project area. Three substantial nickel targets have been outlined from aircore drilling, including intervals of up to 5m @ 0.73% Ni with anomalous Cu, Co and PGEs (refer to ASX release of 11 February 2014). Collectively, these are referred to as the "Northern Targets".

Moving loop EM surveys have been designed for the Northern Targets region and are scheduled for completion during Q1 2015.

Big Bullocks Nickel

The Big Bullocks project (E39/1733) is located in the northeast sector of the Fraser Range (Figure 6) and straddles the major regional gravity ridge associated with the Fraser Complex. During the quarter, a bedrock geological interpretation was completed using available datasets, including recently acquired 100m-spaced aeromagnetic survey data. Magnetic lows, representing possible ultramafic intrusions, were identified and will be prioritised for initial aircore drilling during Q1 2015.

MCCALLS HEAVY MINERAL SANDS

The McCalls project, located 110km north of Perth, has an Inferred Resource of 4.4Bt @ 1.2% HM containing 53Mt of HM (Appendix 1). Of this, 43 million tonnes is chloride grade ilmenite (66% TiO_2) ranking McCalls as one of the largest undeveloped chloride ilmenite deposits in the world. The deposit also contains approximately 3.5 million tonnes of zircon and 1 million tonnes of rutile.

A mineral resource update for McCalls is scheduled for completion during Q1 2015.

The Mindarra Springs HMS prospect, located 20km to the south of McCalls, has an Exploration Target[1] of 1.7-2.2Bt at 1.4%-1.6% HM (refer to September 2014 Quarterly Report for full details). A short aircore drilling program to confirm the grade and mineral assemblage is scheduled for H1 2015.

ENEABBA HEAVY MINERAL SANDS

The Eneabba project comprises five mineral sands deposits: West Mine North, Ellengail, Yandanooka, Durack and Drummond Crossing with combined resources of 6.76Mt of HM (Appendix 1). Sheffield's strategy is to evaluate these deposits with a view to developing a sequential mining operation, whilst actively exploring the region for further deposits.

An aircore drilling program has been designed for initial testing of several dunal-style HMS targets along the Gingin scarp to the east and north of Eneabba. This drilling is scheduled for H1 2015.

OXLEY POTASH

The Oxley potash project is located near Morawa in Western Australia's Mid-west region. Oxley has an unconventional, hard rock style of potash mineralisation, hosted by a series of ultrapotassic microsyenite lavas, which typically contain over 90% sanidine (potash) feldspar. Sheffield controls the entire 32km strike extent of the prospective units within the northern Moora Basin.

Sheffield's maiden drilling programme at Oxley returned thick, high grade potash intervals averaging 8.4% K_2O over 36m width with higher grade intervals averaging 9.9% K_2O over 15m width. (Refer to ASX release of 19 July 2013 for full details).

During the quarter, regional geological reconnaissance sampling and mapping was undertaken to outline the full extent of the Oxley microsyenite lavas. Metallurgical testwork and marketing studies have been scheduled for H1 2015.

[1]Sheffield Resources has not yet reported any Mineral Resources for Mindarra Springs and any discussion in relation to the potential quantity of the targets is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

OTHER

No work was undertaken on the Pilbara Iron and Moora Talc projects during the quarter.

CASH POSITION

As at 31 December 2014, the Company had cash reserves of approximately $4.7 million.

During Q1 2015, the Company may receive approximately $1.5 million from its 2014 Research and Development tax return.

During the quarter $60,000 was raised from the exercise of options.

Bruce McQuitty
Managing Director
16 January 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	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	Pending
Mineral Sands	L04/85	Sheffield Resources Ltd	100%	Canning Basin	Pending
Mineral Sands	L04/86	Sheffield Resources Ltd	100%	Canning Basin	Pending
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	E70/3901	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
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
Nickel	E28/2431	Sheffield Resources Ltd	100%	Fraser Range	Granted
Nickel	E69/3181	Sheffield Resources Ltd	100%	Fraser Range	Pending
Nickel	E28/2428	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	Pending
Gold	E28/2453	Sheffield Resources Ltd	100%	Tropicana Belt	Pending
Nickel	E80/4866	Sheffield Resources Ltd	100%	East Kimberley	Pending
Nickel	E80/4867	Sheffield Resources Ltd	100%	East Kimberley	Pending
Nickel	E80/4868	Sheffield Resources Ltd	100%	East Kimberley	Pending
Nickel	E80/4884	Sheffield Resources Ltd	100%	East Kimberley	Pending
Iron	E45/3662-I	Ironbridge Resources Pty Ltd[2]	100%	Pilbara	Granted
Iron	E45/3822-I	Sheffield Resources Ltd	100%	Pilbara	Granted
Iron	E45/4029	Sheffield Resources Ltd	100%	Pilbara	Granted

Project	Tenement	Holder	Interest	Location	Status
Iron	E47/3031-I	Sheffield Resources Ltd	100%	Pilbara	Pending
Iron	E47/3083	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
Talc	E70/3776	Moora Talc Pty Ltd[2]	100%	Moora	Granted
Talc	E70/4004	Moora Talc Pty Ltd[2]	100%	Moora	Granted
Potash	E70/3777	Moora Talc Pty Ltd[2]	100%	Morawa	Granted
Potash	E70/4318	Sheffield Resources Ltd	100%	Morawa	Granted
Potash	E70/4319	Sheffield Resources Ltd	100%	Morawa	Granted
Potash	E70/4320	Sheffield Resources Ltd	100%	Morawa	Granted
Potash	E70/4378	Sheffield Resources Ltd	100%	Morawa	Granted

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]Moora Talc Pty Ltd and Ironbridge Resources Pty Ltd are 100% owned subsidiaries 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 December 2014 Quarter are provided in Section 6 of the Company's Appendix 5B notice for the December 2014 Quarter.

COMPLIANCE STATEMENTS

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 styles of mineralisation and types 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 a Scoping 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 Resource Update: "*THUNDERBIRD HIGH GRADE RESOURCE SURPASSES ONE BILLION TONNES*", 12 December 2012
- Thunderbird Resource Update: "*SHEFFIELD DOUBLES TOTAL MINERAL RESOURCES AT WORLD CLASS THUNDERBIRD HMS DEPOSIT*", 19 March 2014
- Thunderbird Scoping Study: "*SCOPING STUDY HIGHLIGHTS THUNDERBIRD'S EXCEPTIONAL FINANCIAL RETURNS*", 14 April, 2014
- Red Bull Results: "*LARGE Ni-Cu-Co ANOMALIES IDENTIFIED IN THE FRASER RANGE*", 11 February, 2014
- Red Bull Drilling Results: "*RED BULL DRILLING UPDATE*", 9 September 2014
- Thunderbird Drilling Results: "*THUNDERBIRD MINERAL SANDS PROJECT UPDATE*", 17 September 2014

This report also includes information that relates to Exploration Targets, 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.
- Oxley Potash Drilling Results: "*MAJOR NEW POTASH DISCOVERY IN WA'S MID-WEST*", 19 July 2013.
- Oxley Potash Drilling Results: "*QUARTERLY REPORT FOR PERIOD ENDING SEPTEMBER 2013*", 31 October 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 Scoping 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.

SCOPING STUDY

The Scoping Study referred to in this report is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

FORWARD LOOKING AND EXPLORATION TARGET 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.

The terms "Target" and "Exploration Target", where used in this report, should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code 2012, and therefore the terms have not been used in this context. Exploration Targets are conceptual in nature and it is uncertain if further exploration or feasibility study will result in the determination of a Mineral Resource or Reserve.

APPENDIX 1: MINERAL RESOURCES

Table 1: Sheffield's contained Valuable HM (VHM) Resource inventory at 12 December 2014

Deposit	Resource Category	Zircon (kt)*	Rutile (kt)*	HiTi Leuc. (kt)*	Leuc. (kt)*	Ilmenite (kt)*	**Total VHM (kt)***
Thunderbird	Measured	500	-	200	200	1,800	**2,600**
Thunderbird	Indicated	15,900	-	5,200	6,500	50,400	**78,100**
Thunderbird	Inferred	2,800	-	1,000	1,300	9,000	**14,100**
Yandanooka	Measured	13	2		3	87	**105**
Yandanooka	Indicated	240	81		83	1,440	**1,840**
Yandanooka	Inferred	4	1		2	23	**29**
Durack	Indicated	144	29		52	703	**928**
Durack	Inferred	26	5		13	121	**164**
Drummond Crossing	Indicated	143	101		37	542	**823**
Drummond Crossing	Inferred	7	5		1	28	**41**
Ellengail	Inferred	92	90		19	658	**859**
West Mine North	Measured	18	33		42	200	**293**
West Mine North	Indicated	71	87		46	506	**709**
McCalls	Inferred	3,490	1,060		2,580	42,910	**50,040**
Total	Measured	530	35	200	245	2,090	**3,100**
Total	Indicated	16,500	300	5,200	6,720	53,590	**82,310**
Total	Inferred	6,420	1,160	1,000	3,915	52,740	**65,235**
Total	**All**	**23,450**	**1,500**	**6,400**	**10,880**	**108,420**	**150,650**

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 12 December 2014

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	75	2.1	7.9	19	11	6	9.3	-	2.7	2.7	30
	Thunderbird	Indicated	3.0	2,550	2.1	7.0	16	9	180	8.9	-	2.9	3.6	28
	Thunderbird	Inferred	3.0	580	2.0	5.6	16	9	32	8.8	-	3.0	4.1	28
	Total Dampier	**All**	**3.0**	**3,205**	**2.1**	**6.8**	**16**	**9**	**218**	**8.9**	**-**	**2.9**	**3.7**	**28**
Eneabba	Yandanooka	Measured	0.9	3	2.0	4.1	15	14	0.1	11	1.9	-	2.2	72
	Yandanooka	Indicated	0.9	90	2.0	2.3	16	15	2.1	11	3.9	-	3.9	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	11	3.8		3.9	69
	Durack	Indicated	0.9	50	2.0	2.0	15	21	1.0	14	2.8		5.1	69
	Durack	Inferred	0.9	15	1.9	1.2	14	17	0.2	14	2.5		7.2	66
	Durack	All	0.9	65	2.0	1.8	15	20	1.2	14	2.8		5.6	68
	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	10		2.8	55
	Drummond Crossing	All	1.1	52	2.0	2.1	16	9	1.1	14	10		3.5	53
	Ellengail	Inferred	0.9	46.	2.0	2.2	16	2	1.0	8.9	8.7		1.9	64
	Ellengail	All	0.9	46	2.0	2.2	16	2	1.0	8.9	8.7		1.9	64
	West Mine North	Measured	0.9	6	2.0	5.6	15	1	0.4	4.9	9.1		12	55
	West Mine North	Indicated	0.9	36	1.9	2.3	13	3	0.8	8.4	10		5.4	60
	West Mine North	All	0.9	43	1.9	2.8	13	3	1.2	7.9	10		6.4	59
	Total Eneabba	Measured	var.	9	2.0	5.2	15	5	0.5	6.7	6.8		8.7	60
	Total Eneabba	Indicated	var.	225	2.0	2.2	15	13	5.0	12	6.0		4.4	64
	Total Eneabba	Inferred	var.	68	2.0	1.9	15	6	1.3	10	7.2		3.2	64
	Total Eneabba	**All**	**var.**	**302**	**2.0**	**2.2**	**15**	**11**	**6.8**	**12**	**6.3**		**4.2**	**64**
McCalls	McCalls	Inferred	0.9	4,431	2.3	1.2	27	1.4	53	6.6	2.0		4.9	81
	Total McCalls	**All**	**0.9**	**4,431**	**2.3**	**1.2**	**27**	**1.4**	**53**	**6.6**	**2.0**		**4.9**	**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.