



SheffieldResources
LIMITED

ASX and Media Release

14 November 2012

MORE SPECTACULAR DRILL RESULTS FROM DAMPIER HMS PROJECT

KEY POINTS

- Final batch of drill results from Thunderbird prospect include the best results to date and increase the overall grade, thickness and size of the mineralised zone
- Central high-grade zone (>5% HM) expanded: area 15km² (previously 12km²), average width 18m (previously 15m) and average HM grade 9.8% (previously 9.0%)
- In-situ zircon content increased to 0.65% (previously 0.6%) for the high-grade zone
- Resource estimation work has commenced

Mineral sands explorer Sheffield Resources ("Sheffield") (ASX:SFX) today announced more spectacular drill results from the final holes of its 2012 programme at the Dampier heavy mineral sand (HMS) Project near Derby in the Kimberley Region of Western Australia.

These final results from the remaining 93 holes (out of a 164 hole drill programme) have returned even higher grade mineralised intervals than previously reported, including:

- **52.5m @ 10.1% HM** from 3m (THAC117), including **45.0m @ 11.5% HM** from 3m
- **50.0m @ 8.8% HM** from 15m (THAC118), including **31.5m @ 12.6% HM** from 16.5m
- **45.0m @ 10.4% HM** from 1.5m (THAC113), including **37.5m @ 12.0% HM** from 1.5m
- **45.0m @ 10.5% HM** from 10.5m (THAC114), including **42.0m @ 11.0% HM** from 10.5m
- **46.5m @ 9.5% HM** from 7.5m (THAC121), including **36.0m @ 11.6% HM** from 9m
- **37.5m @ 8.6% HM** from 16.5m (THAC101), including **22.5m @ 12.3% HM** from 30m
- **31.5m @ 9.9% HM** from surface (THAC144), including **21.0m @ 13.6% HM** from 0m

(Refer to Tables 1 & 2 for full details).

These results combined with those reported previously (see ASX releases of 3 and 19 September, 2012) outline a coherent high-grade zone (at 5% HM cut-off) through the centre of the deposit up to 45m thick (average 18m thick), with grades averaging 9.8% HM. The high-grade zone has an area of 15km² and is open to the north and south. At a 2% HM cut-off the deposit is larger still and remains open in all directions.

The increased average HM grade of the high-grade zone results in an estimated in situ zircon content of 0.65%¹ (previously estimated at 0.6% - see ASX release 5 November 2012).

Managing Director, Bruce McQuitty said these spectacular final drill results demonstrate Thunderbird's potential for development into a major new mineral sands project.

"The key attributes of the Thunderbird deposit are its very large size, high heavy mineral grades and favourable geometry."

"These results further strengthen our view that Thunderbird is shaping up to be a globally significant mineral sands discovery and we look forward to delivering the maiden mineral resource estimate in December."

¹ This figure is derived by multiplying the average zircon content of 6.6% (see ASX release of 5 November, 2012) by the average grade within the high-grade zone of 9.8% HM.

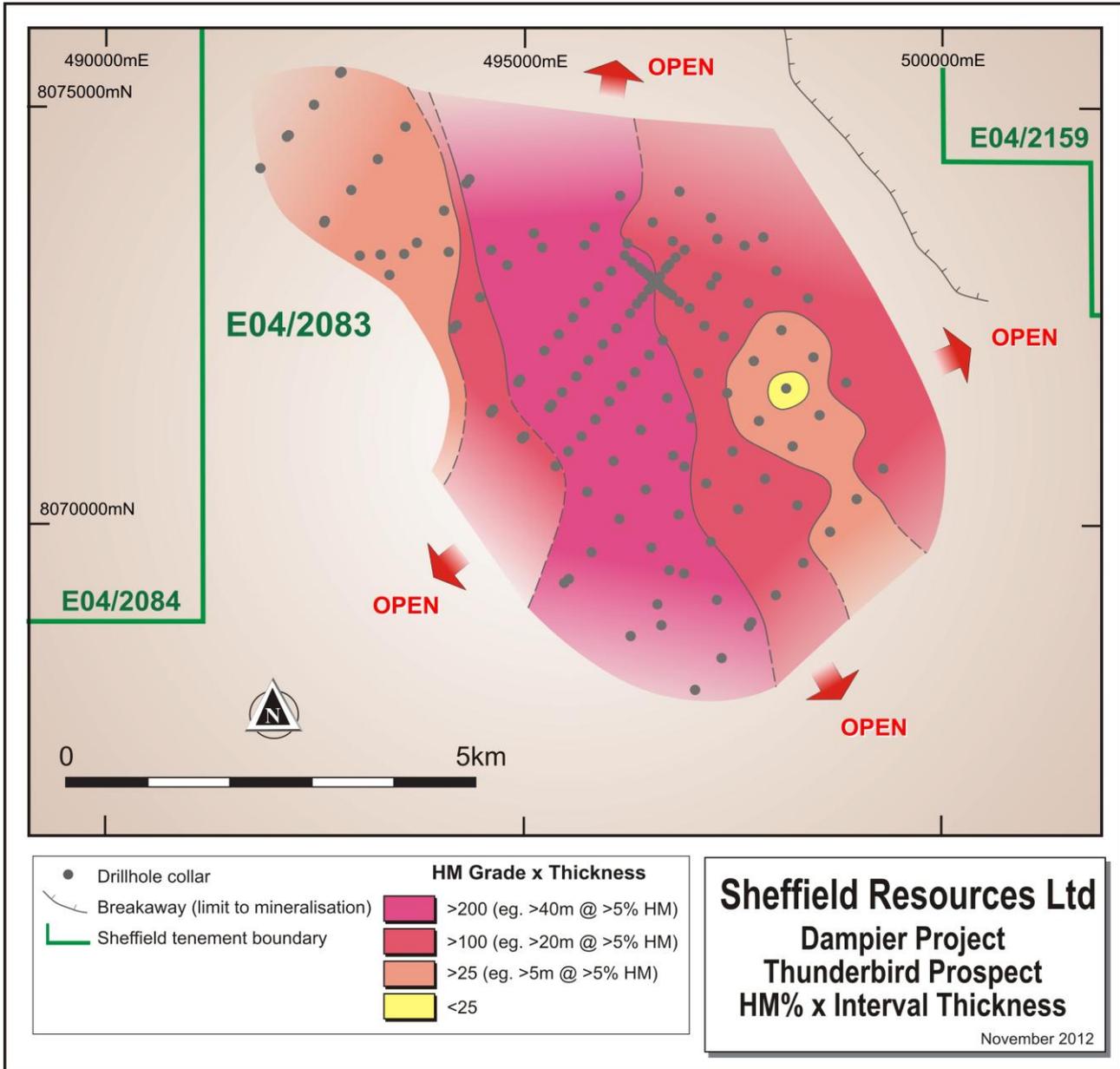


Figure 1: Thunderbird prospect drill collar plan showing distribution of mineralisation.

Further Work

A further 54 QEMSCAN mineral assemblage determinations will be performed on heavy mineral samples composited from a selection of the last batch of 93 drill holes. These results will be incorporated into resource estimation work which has commenced and is due for completion in December. Metallurgical testwork is also underway on a 6 tonne bulk sample, with results expected in March 2013.

About the Thunderbird Prospect

The Dampier project contains two significant heavy mineral sands prospects: a large, shallow eastern zone, named Thunderbird; and a smaller, deeper western zone, named Argo.

Sheffield's 2012 drilling programme targeted the Thunderbird prospect over an 8km strike length. The drilling pattern is nominally 250m to 500m x 500m at the centre of the target area

to 500m x 1,000m at the strike extremities (Figure 1). Within this is a “cross” of drillholes at 60m spacing drilled to assist geostatistical modelling of the deposit and to provide material for metallurgical testwork.

These latest drill results, combined with those released previously this year, relate to an area of over 24km². At a 2% HM cut-off, the main mineralised zone varies in thickness from 4.5m to 52.5m, with an average of 28m. There is a higher-grade core (>5% HM) to the mineralised zone which varies in thickness from 4.5m to 45m, with an average thickness of 18m, over an area of 15km². The mineralisation shows excellent continuity and remains open in all directions (Figure 1). It is hosted in fine loose sand, with minor 30-50cm bands of cemented sand and ironstone which have occasionally prevented drill holes from reaching target depth.

Overburden thickness average is 10m, increasing with the dip of the mineralised unit towards the southwest. Significantly, about half of the mineralisation outlined to date (2.5km across strike) has less than 3m of overburden.

Further information on the Thunderbird prospect is contained in the Company's ASX releases of 7 September 2011, 8 November 2011, 12 July 2012, 3 September 2012, 19 September 2012 and 5 November 2012).

Results Tabulation

Results of heavy liquid separation (HLS) are tabulated below. HLS using TBE, screen sizes: slimes -45µm, oversize +1mm. Surveyed hole coordinates are shown, coordinate system is MGA Zone 51 (GDA94), all holes drilled vertically.

Table 1: Thunderbird aircore drill results. Intervals calculated using >2% HM, including intervals >5% HM, 4.5m minimum width, maximum 4.5m internal waste.

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Oversize wt%
THAC023	495701	8073332	0.0	36.0	36.0	8.77	20.1	14.8
<i>including:</i>			7.5	33.0	25.5	11.2	18.5	12.4
THAC023	495701	8073332	42.0	49.5	7.5	3.06	26.4	8.5
THAC072	497456	8070838	7.5	25.5	18.0	5.73	13.8	11.2
<i>including:</i>			10.5	16.5	6.0	10.5	14.8	12.1
THAC072	497456	8070838	33.0	43.5	10.5	2.96	13.3	18.8
THAC073*	497136	8070457	10.5	37.0	26.5	7.97	12.9	12.5
THAC074	496484	8069687	18.0	24.0	6.0	3.48	18.0	0.6
THAC074*	496484	8069687	33.0	38.5	5.5	7.80	7.3	44.3
<i>including:</i>			33.0	37.5	4.5	8.53	8.4	40.2
THAC075	498805	8071669	1.5	33.0	31.5	4.72	15.5	15.4
<i>including:</i>			3.0	13.5	10.5	7.94	11.2	34.0
THAC076	498484	8071286	4.5	15.0	10.5	3.58	20.5	11.7
THAC077	498167	8070911	6.0	28.5	22.5	3.41	16.3	18.0
<i>including:</i>			16.5	21.0	4.5	5.52	18.9	28.2
THAC077	498167	8070911	34.5	39.0	4.5	4.96	20.4	15.9
THAC078	497836	8070517	7.5	42.0	34.5	4.97	16.5	11.0
<i>including:</i>			9.0	27.0	18.0	7.52	14.5	10.1

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Oversize wt%
THAC079	497516	8070141	12.0	60.0	48.0	4.48	16.6	13.4
<i>including:</i>			15.0	27.0	12.0	7.81	16.4	16.8
THAC080*	497194	8069757	27.0	49.5	22.5	7.04	16.1	12.0
<i>including:</i>			28.5	45.0	16.5	8.62	13.1	13.3
THAC082	496876	8069371	16.5	21.0	4.5	2.09	19.5	1.9
THAC082*	496876	8069371	30.0	37.5	7.5	8.07	10.7	29.3
<i>including:</i>			31.5	37.5	6.0	9.41	11.3	28.4
THAC083*	496553	8068990	27.0	46.5	19.5	3.75	9.2	4.0
<i>including:</i>			42.0	46.5	4.5	8.63	8.5	6.3
THAC085*	497261	8069049	30.0	34.5	4.5	6.05	16.0	35.1
THAC087	499241	8070642	4.5	36.0	31.5	4.16	17.2	14.3
<i>including:</i>			6.0	16.5	10.5	6.32	15.2	26.2
THAC088	498925	8070267	6.0	34.5	28.5	2.91	18.9	7.5
THAC090*	498608	8069882	7.5	18.0	10.5	3.93	15.1	19.3
THAC091	498220	8070195	10.5	48.0	37.5	5.25	16.0	13.0
<i>including:</i>			10.5	16.5	6.0	7.39	15.5	14.0
<i>including:</i>			22.5	28.5	6.0	9.28	17.3	16.8
THAC092*	498286	8069495	13.5	28.6	15.1	7.80	13.6	15.1
<i>including:</i>			18.0	28.6	10.6	9.43	14.9	18.3
THAC098	496124	8073930	0.0	30.0	30.0	8.98	16.3	15.0
<i>including:</i>			0.0	21.0	21.0	11.7	14.1	18.3
THAC099	495828	8073547	3.0	33.0	30.0	8.95	16.6	14.2
<i>including:</i>			7.5	28.5	21.0	11.3	15.8	13.0
THAC101	494778	8073089	16.5	54.0	37.5	8.55	17.6	12.9
<i>including:</i>			30.0	52.5	22.5	12.3	16.9	15.2
THAC108*	492599	8073618	52.5	81.0	28.5	2.82	15.6	3.9
THAC113	496465	8072006	1.5	46.5	45.0	10.4	18.3	10.6
<i>including:</i>			1.5	39.0	37.5	12.0	18.2	12.3
THAC114	496140	8071630	10.5	55.5	45.0	10.5	15.6	11.3
<i>including:</i>			10.5	52.5	42.0	11.0	15.5	10.5
THAC115*	495823	8071227	19.5	43.0	23.5	13.3	12.2	12.9
THAC117	496079	8072323	3.0	55.5	52.5	10.1	15.6	6.8
<i>including:</i>			3.0	48.0	45.0	11.5	15.2	6.2
THAC118*	495740	8071937	15.0	65.0	50.0	8.77	13.8	10.9
<i>including:</i>			16.5	48.0	31.5	12.6	14.2	7.8
THAC120	496019	8073022	0.0	37.5	37.5	8.05	19.0	10.1
<i>including:</i>			0.0	27.0	27.0	10.3	18.6	11.9
THAC121	495702	8072644	7.5	54.0	46.5	9.47	18.1	6.6
<i>including:</i>			9.0	45.0	36.0	11.6	18.2	8.1
THAC145	495389	8072254	18.0	61.5	43.5	6.20	22.1	5.6
<i>including:</i>			24.0	58.5	34.5	7.29	22.3	5.5

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Oversize wt%
THAC146	494930	8071707	34.5	75.0	40.5	6.25	24.2	7.7
<i>including:</i>			42.0	61.5	19.5	9.83	24.7	11.5
THAC147*	494602	8071333	42.7	55.5	12.8	8.54	15.7	18.9
<i>including:</i>			45.0	55.5	10.5	9.37	16.4	18.4
THAC148*	495308	8071401	24.0	76.5	52.5	6.24	20.8	10.0
<i>including:</i>			33.0	55.5	22.5	11.4	19.6	16.3
THAC150	494172	8072367	39.0	79.5	40.5	5.19	25.0	11.7
<i>including:</i>			43.5	66.0	22.5	6.39	24.7	13.7
THAC151	494294	8074076	10.5	16.5	6.0	2.78	16.5	1.7
THAC151	494294	8074076	25.5	66.0	40.5	4.70	25.8	7.7
<i>including:</i>			33.0	60.0	27.0	5.44	27.8	6.9
THAC153	492809	8075411	52.5	73.5	21.0	2.83	33.7	5.4
THAC154*	492180	8074658	45.0	55.0	10.0	2.49	22.5	4.5
THAC155	495494	8069297	36.0	79.5	43.5	6.09	15.5	13.0
<i>including:</i>			42.0	75.0	33.0	7.20	14.5	12.4
THAC156	497671	8068772	27.0	73.5	46.5	5.13	17.3	7.9
<i>including:</i>			31.5	46.5	15.0	11.3	15.6	18.0

* hole ended in mineralisation

Table 2: Thunderbird aircore drill results from holes drilled in the “cross”. Intervals calculated as for Table 1.

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Oversize wt%
THAC122	496802	8073184	0.0	33.0	33.0	4.79	15.2	13.3
<i>including:</i>			1.5	10.5	9.0	9.05	14.8	19.5
<i>including:</i>			18.0	22.5	4.5	5.03	25.2	23.5
THAC123	496723	8073094	0.0	28.5	28.5	7.81	15.8	10.9
<i>including:</i>			0.0	22.5	22.5	9.11	16.2	12.6
THAC124	496686	8073045	0.0	40.5	40.5	4.72	17.6	10.5
<i>including:</i>			1.5	19.5	18.0	7.23	15.5	14.6
THAC125*	496647	8072995	0.0	5.0	5.0	5.47	16.4	33.1
THAC126	496599	8072945	0.0	28.5	28.5	7.36	17.8	10.0
<i>including:</i>			0.0	12.0	12.0	14.4	15.0	18.9
THAC127	496522	8072846	0.0	31.5	31.5	7.08	20.5	11.2
<i>including:</i>			0.0	13.5	13.5	12.2	17.8	18.9
THAC128	496481	8072803	0.0	31.5	31.5	9.34	16.5	10.6
THAC129*	496437	8072758	0.0	27.5	27.5	10.3	12.9	13.9
<i>including:</i>			1.5	25.5	24.0	11.4	11.4	13.3
THAC130	496400	8072709	3.0	33.0	30.0	7.08	17.2	16.0
<i>including:</i>			3.0	30.0	27.0	7.51	17.3	15.5
THAC132	496642	8072995	0.0	30.0	30.0	8.44	13.9	14.8
<i>including:</i>			0.0	21.0	21.0	10.7	11.4	17.5

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM wt%	Slimes wt%	Oversize wt%
THAC133	496435	8072755	0.0	34.5	34.5	8.72	20.1	13.9
<i>including:</i>			0.0	24.0	24.0	11.3	17.9	16.4
THAC134	496321	8072616	3.0	34.5	31.5	8.18	17.4	14.6
<i>including:</i>			4.5	25.5	21.0	10.8	16.0	14.9
THAC135	496853	8072657	0.0	30.0	30.0	7.34	17.4	14.0
<i>including:</i>			4.5	27.0	22.5	8.65	18.0	10.4
THAC135	496853	8072657	37.5	42.0	4.5	2.54	26.8	5.1
THAC136	496756	8072735	1.5	21.0	19.5	7.03	16.7	23.7
THAC137	496709	8072776	4.5	21.0	16.5	7.37	16.0	16.6
THAC137	496709	8072776	27.0	31.5	4.5	2.30	15.3	10.1
THAC138	496660	8072820	1.5	31.5	30.0	6.46	17.6	18.2
<i>including:</i>			6.0	28.5	22.5	7.21	17.7	17.7
THAC139	496615	8072865	0.0	37.5	37.5	8.66	17.6	14.2
<i>including:</i>			0.0	28.5	28.5	10.7	17.3	17.7
THAC140	496518	8072943	0.0	30.0	30.0	9.39	19.0	10.9
<i>including:</i>			0.0	15.0	15.0	16.4	17.9	14.4
THAC141	496469	8072985	0.0	33.0	33.0	11.0	17.9	16.6
<i>including:</i>			0.0	25.5	25.5	13.7	16.7	20.1
THAC142	496425	8073024	0.0	31.5	31.5	7.25	16.9	10.5
<i>including:</i>			0.0	13.5	13.5	13.7	15.9	19.4
THAC143	496376	8073067	0.0	27.0	27.0	10.4	17.5	11.3
<i>including:</i>			0.0	15.0	15.0	16.3	15.6	18.3
THAC144	496282	8073141	0.0	31.5	31.5	9.85	17.6	16.4
<i>including:</i>			0.0	21.0	21.0	13.6	15.3	20.2
THAC157*	496761	8073143	0.0	30.0	30.0	6.66	28.6	4.4
<i>including:</i>			0.0	18.0	18.0	9.30	26.2	5.7
THAC158*	496393	8072699	1.5	33.0	31.5	6.29	29.0	4.4
<i>including:</i>			1.5	16.5	15.0	11.1	28.3	5.8
THAC159	496366	8072662	1.5	34.5	33.0	8.30	29.2	4.6
<i>including:</i>			3.0	27.0	24.0	10.2	27.2	4.6
THAC160	496605	8072872	0.0	30.0	30.0	6.50	24.6	9.0
<i>including:</i>			0.0	13.5	13.5	11.2	22.9	13.3
THAC161	496600	8072878	0.0	30.0	30.0	6.17	26.5	7.2
<i>including:</i>			0.0	12.0	12.0	10.7	25.4	11.2
THAC162	496548	8072919	0.0	31.5	31.5	6.21	26.7	8.6
<i>including:</i>			0.0	12.0	12.0	12.4	26.2	14.5
THAC163	496543	8072924	0.0	22.5	22.5	8.21	22.4	11.9
<i>including:</i>			1.5	22.5	21.0	8.51	22.8	9.6
THAC164	496337	8073094	0.0	28.5	28.5	8.71	22.2	9.7
<i>including:</i>			1.5	28.5	27.0	8.98	22.4	7.8

* hole ended in mineralisation

ENDS

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COMPETENT PERSONS' STATEMENT

The information in this announcement that relates to exploration results is based on information compiled by David Boyd. Mr Boyd is a full time employee of the Company. Mr Boyd is a Member of the Australasian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity to which they are undertaking to qualify as Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code")'. Mr Boyd consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

FORWARD LOOKING AND EXPLORATION TARGET STATEMENTS

Some statements in this announcement 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 "expected", "planned", "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 (2004), 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.

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (**Sheffield**) is a rapidly emerging heavy mineral sands (HMS) company.

ASX Code – SFX

Market Cap @ 55cps - \$53.9m

Issued shares – 98.1m

Cash - \$7.3m (at 30/9/2012)

The Company has over 6,000km² of highly prospective tenure, all situated within the state of Western Australia.

HEAVY MINERAL SANDS

The Dampier project, located near Derby in WA's Kimberley region, contains the large, high grade zircon-rich Thunderbird HMS deposit.

The Eneabba project comprises multiple HMS deposits and is located near Eneabba approximately 140km south of the port of Geraldton in WA's Mid-West region.

Sheffield is also evaluating the large McCalls chloride ilmenite project, located 110km to the north of Perth.

NICKEL-COPPER

Sheffield's 525km² Red Bull project is located in the highly prospective Fraser Complex within 20km of Sirius Resources NL's (ASX:SIR) Nova Ni-Cu discovery.

IRON

Sheffield has identified iron mineralisation on three of its tenements in the Pilbara iron ore province. Thick hematite mineralisation was intersected in first pass RC drilling at the Three Pools project, 20km north of Newman.

TALC

Sheffield's large Moora Talc Belt project contains numerous talc occurrences and is located near Imery's long-life Three Springs talc mine in WA's Mid-West region. The Company is targeting high purity talc, similar to that produced from the simple quarrying operation at Three Springs.