ASX and Media Release

13 September 2011

DRILLING SUCCESS AT IRWIN MINERAL SANDS PROJECT

KEY POINTS

- **Drilling results extend strike of HMS mineralisation at Irwin to over 5km**
- **Mineralisation is dunal style, with low slimes and low oversize**
- **New Exploration Licence application expands prospective zone to 15km**
- **Sheffield to undertake mineral assemblage work, with further drilling in first half of 2012**

Bulk minerals explorer Sheffield Resources ("Sheffield") (ASX:SFX) today announced results from a 31 hole drilling program at its Irwin heavy mineral sand (HMS) project located 80km southeast of the port of Geraldton in Western Australia's Mid West region (Figure 1).

These results follow the announcement on 16 August 2011 of Sheffield's maiden resource at its nearby Yandanooka project of 1.84 million tonnes of contained heavy mineral within a total resource of 71.75Mt @ 2.6% HM, comprising 61Mt @ 2.8% HM (Indicated) and 10.75Mt @ 1.1% HM (Inferred).

The drill results at Irwin, together with results of drilling by North Mining Ltd in 1994, confirm the presence of a large 1.5–2.5km wide zone of low grade (1-2% HM), dunal-style mineralisation, and increase the strike length of the zone to 5km (Figure 3).

Drilling results are shown in Table 2, with significant intersections including:

18.0m @ 1.25% HM from 6.0m (IRAC008),
13.5m @ 1.40% HM from 7.5m (IRAC019),
15.0m @ 1.66% HM from 4.5m (IRAC031),
12.0m @ 1.70% HM from 7.5m (IRAC029), and
9.0m @ 2.58% HM from 25.5m (IRAC027).

The mineralisation averages 10m in thickness but is locally up to 18m thick at 1% HM cut-off . It is variably overlain and enveloped by a halo of lower grade (0.5-1% HM) mineralisation.

An important feature of the dunal mineralisation is the low slimes content (weighted average 6.4%) and low oversize (3.0%), which favour low cost processing techniques.

Sheffield recently applied for an additional Exploration Licence (ELA70/4189) which extends the Irwin exploration target for an additional 10km to the north (Figure 2).

Managing Director, Bruce McQuitty said the drill results outlined a large open-ended dunal mineral sands system in an area that has received little previous exploration.

"The Irwin project represents a large virgin exploration target, strategically located close to infrastructure and adjacent to Tiwest's Dongara deposit. It is one of several projects that Sheffield is advancing in the world class North Perth Basin mineral sands province."

The Irwin project is situated 60km north of Eneabba in a highly prospective setting on the Swan Coastal Plain at the foot of the Gingin Scarp. It is immediately north of Tiwest's Dongara deposit (181.6 Mt at 5.0% HM). Discovered in 2000 by Magnetic Minerals NL, the Dongara deposit is made up of nine discrete strand line deposits over a 25km strike length. The mineral assemblage of the total deposit is unknown, however the assemblages reported for six individual strand line deposits range from 6-21% zircon, 5-12% rutile and 54-66% ilmenite (Magnetic Minerals Ltd ASX release 24 July 2002). The deposit was acquired by the Tiwest JV following the takeover of Magnetic Minerals by Ticor Ltd in March 2003.

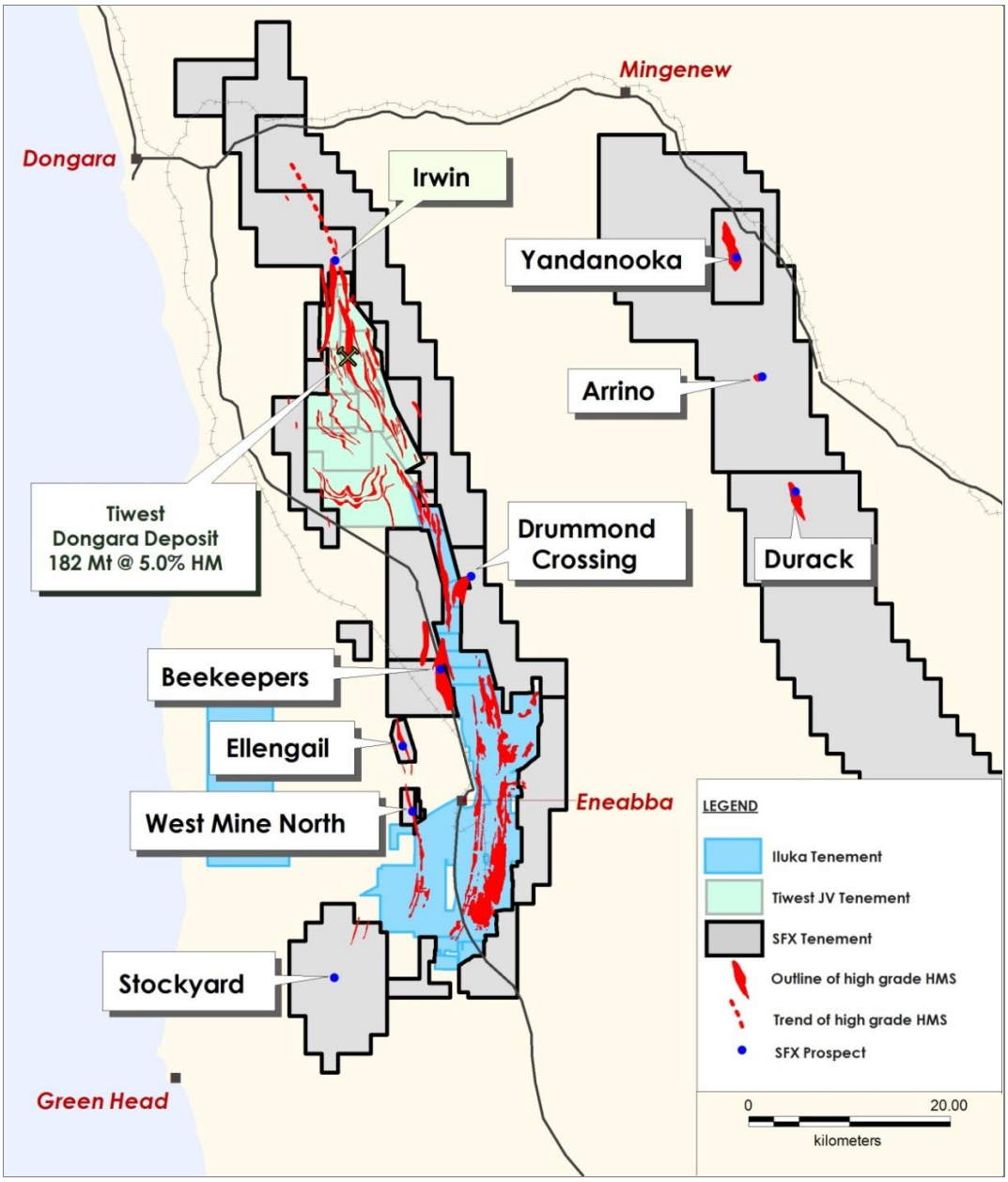

Figure 1: Location of Irwin and Sheffield's other HMS Projects in the Eneabba Region

The dunal-style mineralisation at Irwin differs from the narrow strandline mineralisation at the Dongara deposit. Assemblage work is yet to be undertaken on the Irwin mineralisation. Sheffield will select representative composite samples from its recent drilling for mineral assemblage testwork in October. Further exploration drilling is planned for the first half of 2012.

Sheffield's ongoing resource estimation and scoping study schedule is provided in Table 1 below, and includes resource estimation work currently underway on the West Mine North and Ellengail deposits, located to the west of Eneabba.

Table 1Drilling and Resource Estimation Schedule

Project	Drilling status	Assay timetable	Resource Estimation	Scoping Study
Yandanooka	130 holes completed	Results received (see ASX release 16 May 2011)	Completed (ASX release 16 August 2011)	Commence October 2011
Ellengail	Compilation of historic drilling completed	Not applicable	Commenced, results due late September 2011	Commence October 2011
West Mine North	90 holes completed	Results received (see ASX release 9 August 2011)	Commence August, results due mid-October 2011	Commence October 2011
McCalls	30 holes completed	Results due September, 2011	Commence August, results due October 2011	Commence October 2011
Irwin	31 holes completed	Results this release	N/A	N/A
Drummond Crossing	30 holes completed	Results due October 2011	N/A	N/A

Note – these dates are indicative only and remain subject to possible delays arising from laboratory assay and other factors

ENDS

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COMPETENT PERSONS' STATEMENTS

The information in this announcement that relates to exploration results is based on information compiled by Bruce McQuitty. Mr McQuitty is a full time employee of the Company. Mr McQuitty 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 McQuitty consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

YANDANOOKA RESOURCE ESTIMATE

The information in this announcement that relates to resource estimation is based on information compiled under the guidance of John Vann. Mr Vann is a Principal of Quantitative Group and acts as a consultant to the Company. Mr Vann is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow 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 Vann consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this announcement that relates to reporting of resource and exploration results is based on information compiled under the guidance of Mark Teakle. Mr Teakle is a consultant to the Company. Mr Teakle is a Member of the Australasian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy 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 Teakle 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", "prospective", and similar expressions.

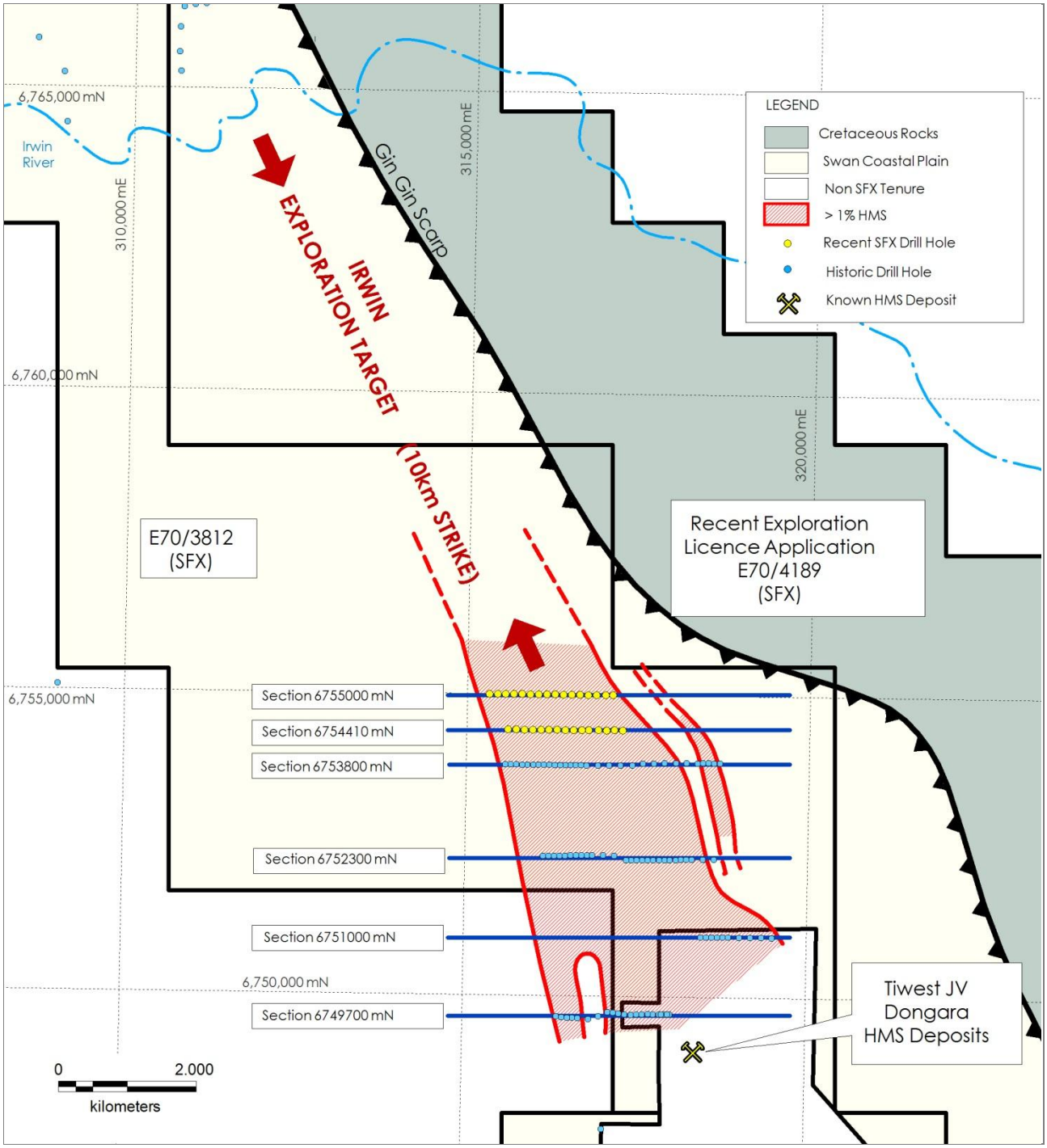

Figure 2: Irwin Project – Plan of Drill Hole collars and Exploration Target.

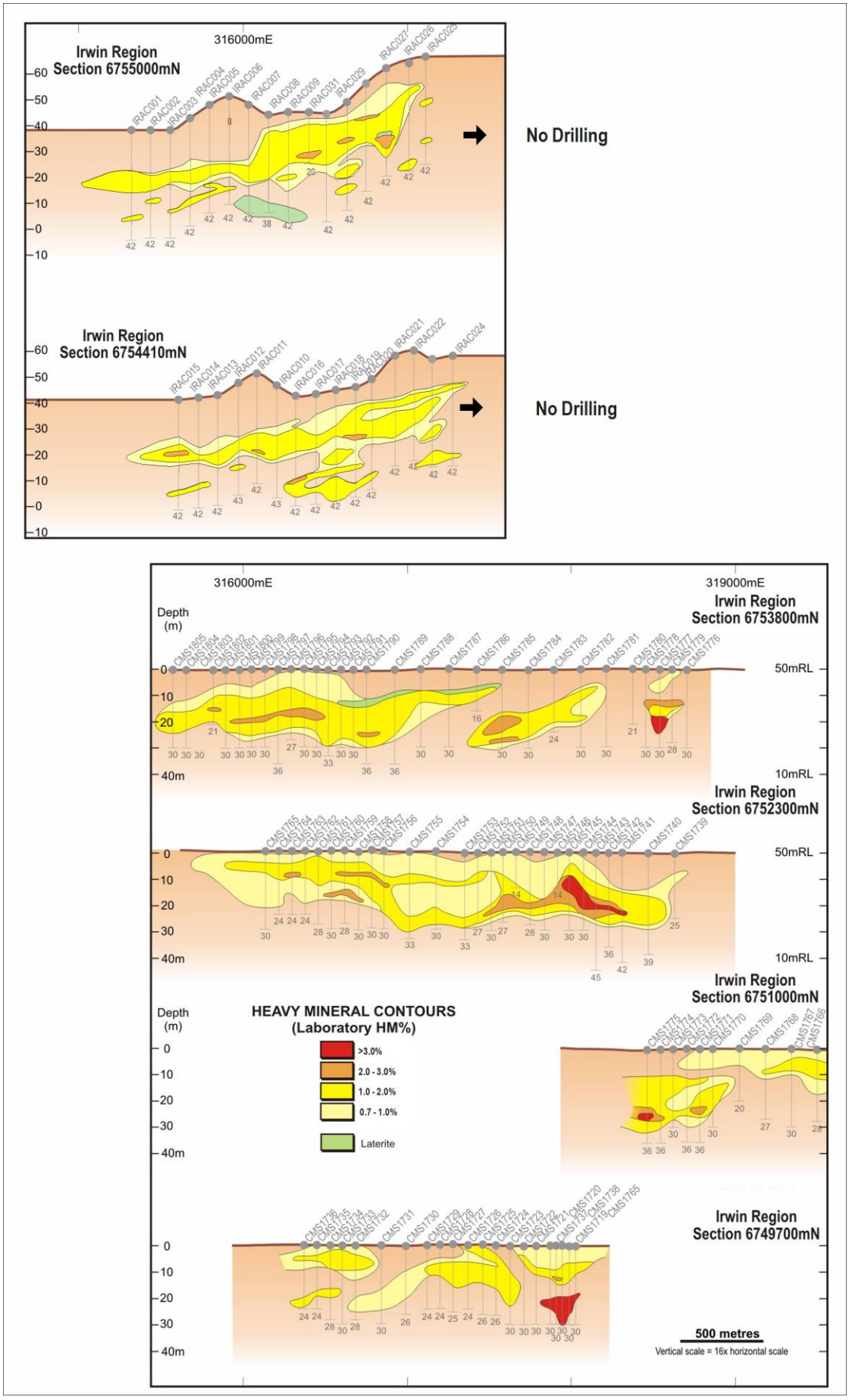

Figure 3: Irwin Project – Stacked Sections (elevation information is unavailable for the four southern sections drilled by North Mining Ltd in 1994)

Results Tabulation

Results of heavy liquid separation (HLS) are tabulated below. HLS using TBE, screen sizes: slimes -53µm, oversize +1mm. Coordinates used throughout are MGA Zone 50 (GDA94), all holes drilled vertically.

Table 2: Irwin aircore drill results. Intervals calculated using 1% HM cut, 3m minimum width, maximum 1.5m internal waste.

Hole ID	Easting	Northing	Depth From (m)	Depth To (m)	Interval Width (m)	HM Wt%	Slimes Wt%	Osize Wt%
IRAC001	315319	6754997	15.0	24.0	9.0	1.53	6.41	0.80
IRAC002	315439	6754999	18.0	24.0	6.0	1.25	4.19	1.07
IRAC003	315559	6754999	16.5	21.0	4.5	1.55	2.76	1.22
IRAC004	315678	6754999	19.5	25.5	6.0	1.27	7.05	1.35
IRAC004	315678	6754999	30.0	33.0	3.0	1.24	3.02	0.60
IRAC005	315797	6755000	22.5	27.0	4.5	1.17	3.47	1.37
IRAC005	315797	6755000	30.0	34.5	4.5	1.01	2.34	0.53
IRAC006	315918	6755000	25.5	28.5	3.0	1.27	4.52	0.77
IRAC007	316037	6754999	24.0	30.0	6.0	1.14	4.45	0.86
IRAC008	316157	6755000	6.0	24.0	18.0	1.25	6.60	1.75
IRAC009	316278	6754999	7.5	19.5	12.0	1.18	7.25	2.18
IRAC010	316197	6754411	19.5	28.5	9.0	1.39	6.62	0.63
IRAC011	316080	6754413	22.5	31.5	9.0	1.71	3.10	2.36
IRAC012	315957	6754410	22.5	25.5	3.0	1.19	2.01	0.11
IRAC013	315837	6754411	22.5	27.0	4.5	1.56	1.84	1.68
IRAC014	315718	6754410	No Significant Interval					
IRAC015	315597	6754411	16.5	24.0	7.5	1.77	5.16	0.56
IRAC016	316317	6754412	12.0	21.0	9.0	1.51	4.40	1.62
IRAC016	316317	6754412	31.5	39.0	7.5	1.64	2.93	8.37
IRAC017	316438	6754412	16.5	21.0	4.5	1.32	9.39	0.99
IRAC018	316557	6754412	15.0	18.0	3.0	1.05	7.89	2.55
IRAC018	316557	6754412	22.5	42.0	19.5	1.33	2.91	1.20
IRAC019	316678	6754412	7.5	21.0	13.5	1.40	5.40	5.96
IRAC020	316779	6754413	9.0	12.0	3.0	1.02	18.59	2.18
IRAC020	316779	6754413	16.5	22.5	6.0	1.52	12.35	3.72
IRAC021	316918	6754414	18.0	31.5	13.5	1.04	2.84	3.84
IRAC022	317038	6754414	16.5	19.5	3.0	1.26	11.48	18.51
IRAC022	317038	6754414	22.5	28.5	6.0	1.56	3.50	5.59
IRAC023	317154	6754423	12.0	16.5	4.5	1.19	6.51	17.40
IRAC023	317154	6754423	25.5	30.0	4.5	1.53	2.13	1.23
IRAC023	317154	6754423	34.5	42.0	7.5	1.82	17.87	1.49
IRAC024	317274	6754415	No Significant Interval					
IRAC025	317120	6754999	No Significant Interval					
IRAC026	317018	6754998	10.5	13.5	3.0	1.15	5.51	3.85
IRAC026	317018	6754998	39.0	42.0	3.0	1.08	4.94	0.17
IRAC027	316878	6754999	16.5	22.5	6.0	1.29	13.87	5.23
IRAC027	316878	6754999	25.5	34.5	9.0	2.58	5.14	2.11
IRAC028	316760	6754999	12.0	22.5	10.5	1.32	14.91	7.70
IRAC029	316637	6754999	7.5	19.5	12.0	1.70	5.34	5.90
IRAC029	316637	6754999	24.0	28.5	4.5	1.34	1.30	0.19
IRAC029	316637	6754999	31.5	34.5	3.0	1.22	3.46	0.30
IRAC030	316518	6754999	4.5	19.5	15.0	1.40	4.84	2.17
IRAC030	316518	6754999	30.0	33.0	3.0	1.40	42.18	0.44
IRAC031	316398	6754999	4.5	19.5	15.0	1.66	6.74	2.73

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (**Sheffield**) is a new exploration company with a bulk minerals focus. The Company's Projects are geared towards the steel industry feed cycle (iron ore and tungsten) and the emerging fillers-ceramics-pigments cycle (talc, zircon, titanium dioxide).

ASX Code – SFX	Market Cap @ 27cps - $15.8m
Issued shares – 58.7m	Cash - $4.1 (at 30/6/2011)

The Company has over 6,000km^2 of highly prospective tenure, all situated in Western Australia.

HEAVY MINERAL SANDS

Sheffield controls over 5,000km^2 of mineral sands tenure in the established North Perth Basin mineral sands province and the emerging Carnarvon, Eucla and Canning Basin provinces.

The Dampier project, located near Derby in WA's Kimberley region is the most recent addition to Sheffield's heavy mineral sands project portfolio, Dampier is a large scale zircon play formerly explored by Rio Tinto.

Sheffield's North Perth Basin tenement package of over 2,500km^2 contains seven advanced exploration projects: West Mine North, Ellengail, Yandanooka, Durack, Beekeepers, and Irwin which are located near Eneabba and the large McCalls deposit - a former BHP project located near Gingin. These projects are well located close to existing mineral sands operations and to a network of highways and railway lines connecting to Geraldton and Fremantle/Kwinana ports. Sheffield's strategy is, subject to exploration success, to build multiple HMS projects capable of supporting a flexible mobile mining plant.

TALC

Sheffield has 1,152km^2 of tenure over the 175km-long Moora Talc Belt which represents a dominant ground position over a region that has, for the last 50 years, been exclusively controlled by major mining companies.

The Moora Talc Belt includes the large Three Springs mine which is owned by Rio Tinto Limited subsidiary Luzenac Australia Pty Ltd. Three Springs is renowned for producing high purity talc and is a relatively simple "dig-and-deliver" operation.

The existing infrastructure is excellent. A railway and a sealed highway transect the project and connect to Geraldton port approximately 170km to the northwest.

Sheffield's large tenement holding contains numerous talc occurrences and has the potential to become a strategic talc asset. Sheffield therefore represents a unique opportunity for investors to gain exposure to one of the few high-grade talc explorers in the world.

IRON

Sheffield's Pilbara iron ore projects consist of five granted tenements and 7 tenement applications, five of which are subject to ballot with multiple competing parties. Sheffield's strategy is to target hematite mineralisation adjacent to infrastructure in the world class Pilbara iron province and to build up consolidated tenement holdings over time. High grade iron mineralisation has been identified on three of the Company's tenements.