



SheffieldResources
LIMITED

ASX and Media Release

29 January 2013

SHEFFIELD GROWS PILBARA IRON PROJECT

- Five substantial new zones of hematite mineralisation outlined
- Three new tenements granted in the North Pilbara
- Sheffield wins tenement ballot in highly competitive region north of Newman
- Strategic tenement package adjacent to new operations and exploration discoveries

Sheffield Resources ("Sheffield") (ASX:SFJ) today announced new exploration success from its recently expanded Pilbara Iron project, located in Western Australia's Pilbara region (Figure 1).

Reconnaissance mapping and sampling recently undertaken by Sheffield's geologists has outlined five new zones of high grade iron mineralisation and increased the mineralised area at three previously identified prospects (Figures 2-12, Table 1).

The discoveries follow the recent granting of three exploration licences in the North Pilbara and a successful ballot outcome for exploration licence application E47/2594 in the highly prospective and competitive iron ore district to the north of Newman.

Significantly, four of the new mineralised zones are on Sheffield's Three Pools and Eagle Pool projects where the Company has previously outlined an Exploration Target¹ of **20-60Mt @ 56-60% Fe** (see ASX release 1 December 2011).

These projects are adjacent to Brockman Mining Ltd's (ASX:BCK) Pallas and Castor deposits which have combined Mineral Resources of 108Mt @ 58.3% Fe (BCK ASX release 16 October 2012). Mineralisation identified by Sheffield is contiguous with that of Brockman (Figures 3-5).

In the North Pilbara, Sheffield has identified substantial zones of iron enrichment at the Panorama and Dead Bullock projects which are located close to Atlas Iron Ltd's (ASX:AGO) Abydos and Mt Webber mine camps and within potential trucking distance to Port Hedland.

Managing Director, Bruce McQuitty said Sheffield continues to build a strategic iron ore project in the transport corridor between Newman and Port Hedland.

"The junior iron ore players in the Eastern Pilbara recognise the need to consolidate resources to achieve infrastructure solutions. Our team has a proven track record in iron ore exploration in the region, and with a growing portfolio of prospective tenements, Sheffield is well placed to participate in the consolidation process."

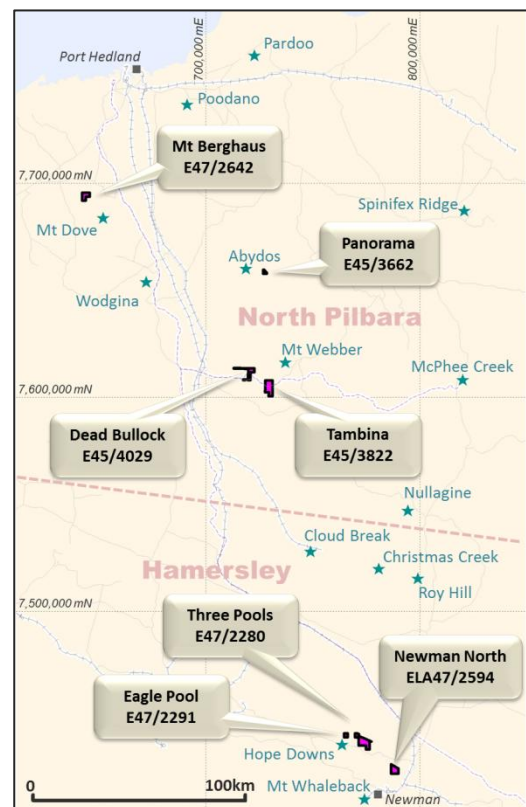


Figure 1: Sheffield's Pilbara iron projects

¹Sheffield has not yet reported Mineral Resources at the Three Pools project and any discussion in relation to targets and Mineral Resources 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.

"While we believe that our iron projects carry significant value, our current priorities are the Dampier mineral sands and Red Bull nickel projects."

Three Pools and Eagle Pool Projects

Sheffield's tenements are proximal to the Rio Tinto–Hancock JV's \$1.5 billion Hope Downs 4 project, currently in development; and to Brockman's Coondiner and Ophthalmia Range projects, Atlas Iron's Hickman project (Figure 2) and Fortescue Metals Group Ltd's (ASX:FMG) Horatio deposits (Figure 2).

Sheffield has previously reported broad iron intersections from RC drilling at the Top Forge and Crucible prospects at Three Pools including:

Top Forge Prospect

- 50m @ 57.5% Fe from 0m (TPRC012)
- 42m @ 57.6% Fe from 6m (TPRC011)
- 44m @ 56.0% Fe from 0m – includes 18m @ 59.6% Fe from 26m (TPRC017)

Crucible Prospect

- 52m @ 56.9% Fe from 16m (TPRC022)
- 46m @ 56.2% Fe from 2m – includes 30m @ 59.3% Fe from 16m (TPRC023)
- 44m @ 55.4% Fe from 4m – includes 20m @ 59.1% Fe from 28m (TPRC025)

(See ASX release 1 December 2011).

At Three Pools and Eagle Pool, iron mineralisation is primarily associated with the Boolgeeda Iron Formation. The Boolgeeda Iron Formation is known to host several significant iron deposits in the region including Brockman's Pallas, Castor, Sirius and Kalgan Creek deposits and Atlas Iron's Hickman deposits.

Sheffield's recent sampling has outlined four new zones of iron enrichment: Tramlines and Fiery Jack on E47/2291 and Thors Thunder and Chinook on E47/2280 (Figures 2-8).

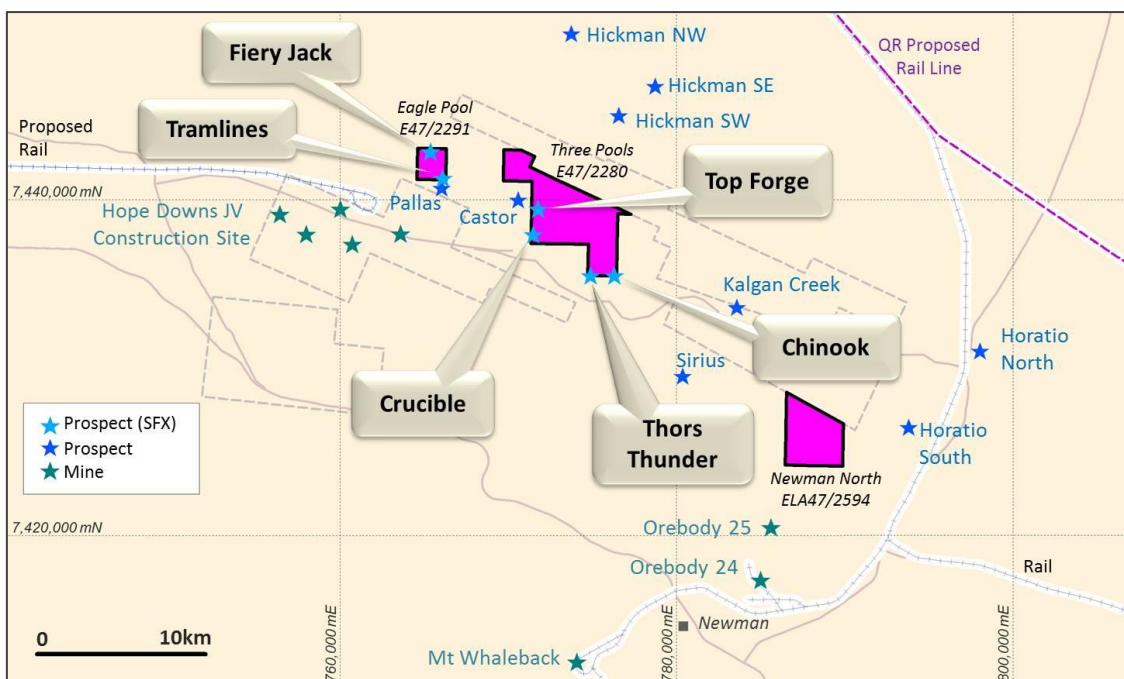


Figure 2: Hamersley region tenements, prospect locations, iron deposits and infrastructure

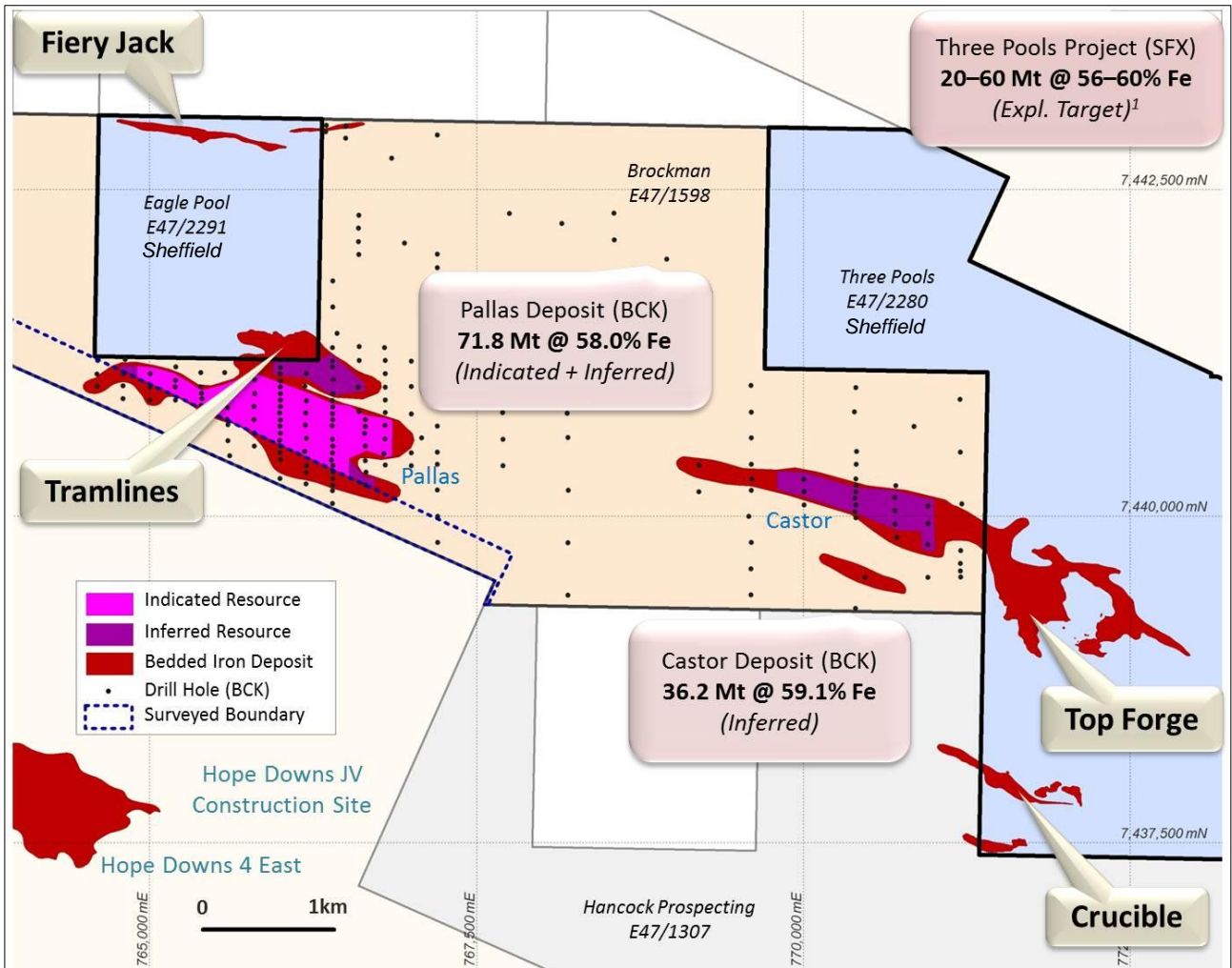


Figure 3: Location of Sheffield's iron prospects near Brockman's Pallas and Castor deposits

Tramlines prospect

The iron mineralisation identified at Tramlines is hosted by the lower banded iron unit of the Boolgeeda Iron Formation. Channel iron deposits (CID) also occur overlying the bedded mineralisation. The iron mineralisation at Tramlines is an extension of Brockman's Pallas deposit (Figures 3-5) located immediately south of the tenement boundary.

The iron enrichment at Tramlines has a strike length of between 400m and 500m and a width of between 50m and 120m. The bedded mineralisation is characterised by high iron grades (average 62.9% Fe from 4 samples), low to moderate phosphorous levels and low to moderate aluminium levels (Figure 5).

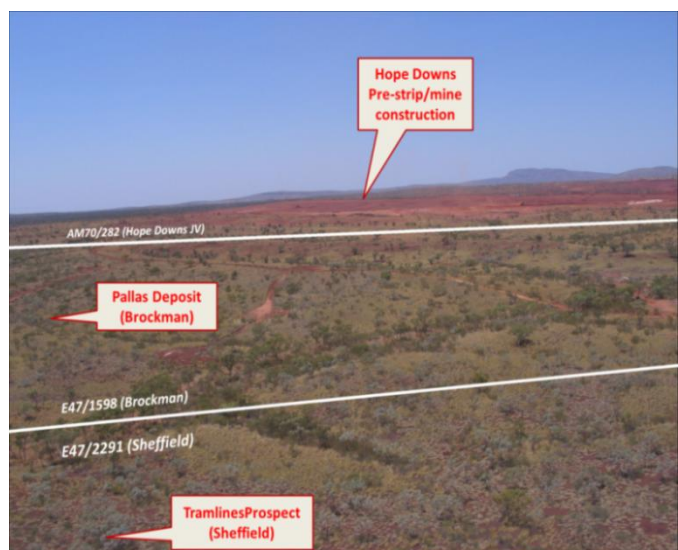


Figure 4: View looking south towards the Tramlines prospect, the Pallas deposit and the Hope Downs JV construction site

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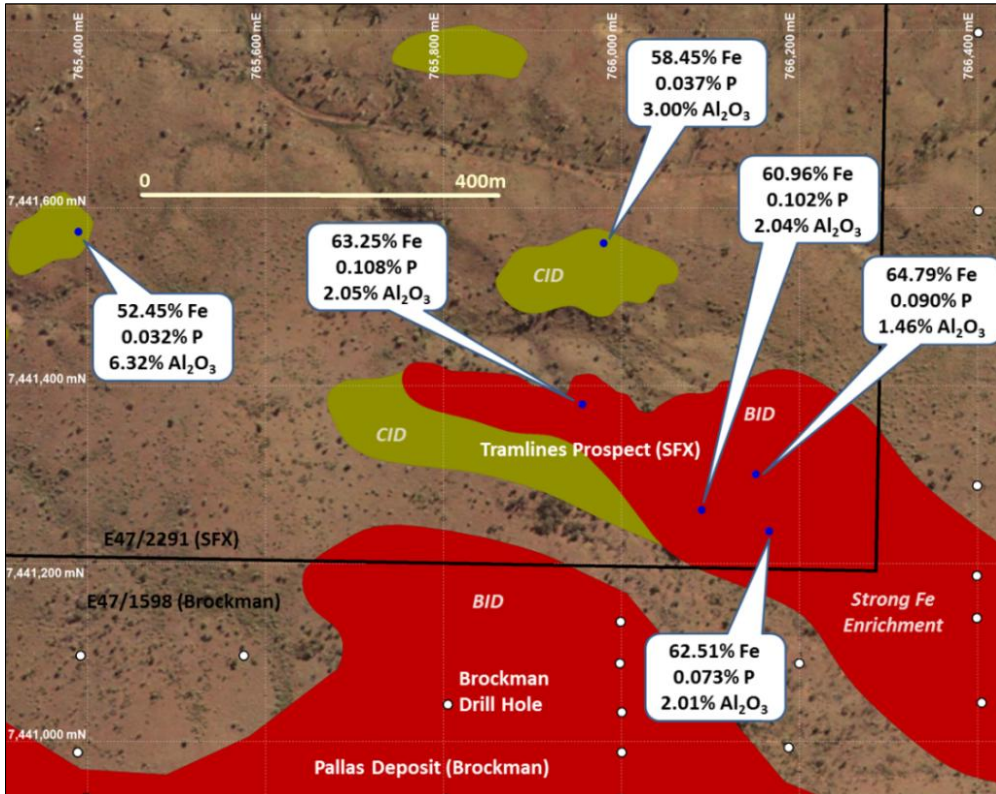


Figure 5: Tramlines iron enrichment and rock chip results over aerial photograph

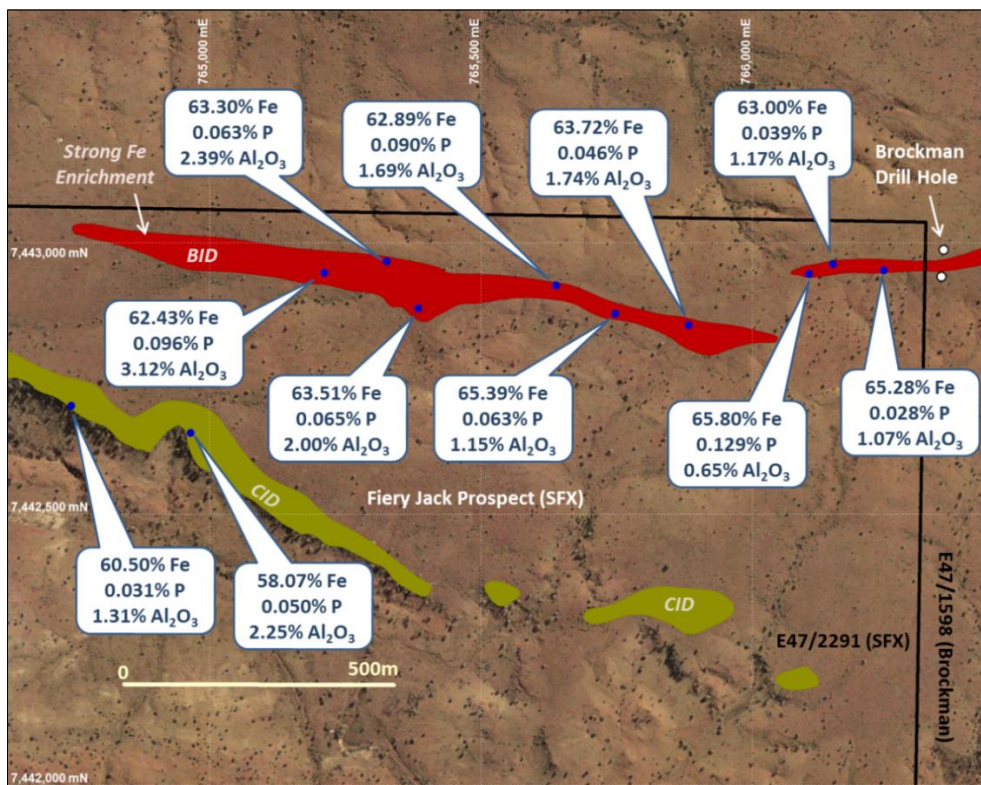


Figure 6: Fiery Jack iron enrichment and rock chip results over aerial photograph

Fiery Jack prospect

Fiery Jack is located just 5km to the north of Tramlines and is hosted by banded iron formation of the Boolgeeda Iron Formation. Channel Iron deposits have also been mapped in a zone approximately 300m to the south of Fiery Jack.

The mineralisation at Fiery Jack occurs over a strike length of between 1,000 and 1,200m and varies in width between 25 and 35m. At surface the mineralisation is characterised by very high iron grades (average 63.9% Fe from 9 samples) and low levels of phosphorous and aluminium (Figure 6).

Thors Thunder prospect

Iron enrichment at Thors Thunder is hosted by the basal banded iron formation of the Boolgeeda Iron Formation. The mineralisation occurs along strike from, and in the same stratigraphic and structural position as Brockman's recent Kalgan Creek discovery (52.1Mt @ 59.11% Fe; BCK ASX release 4 December 2012).

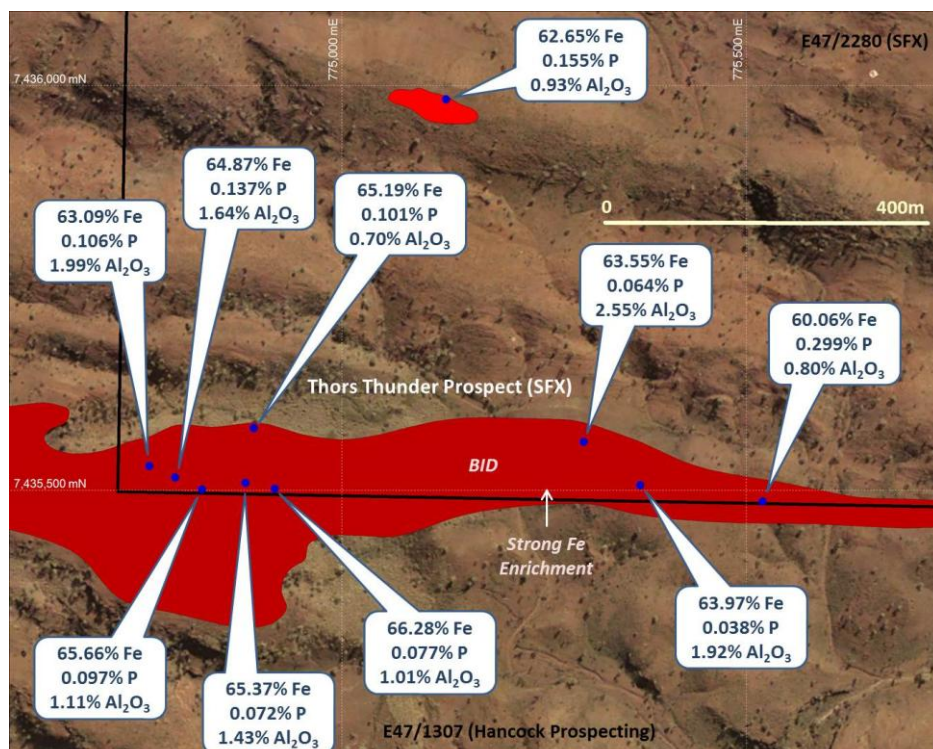


Figure 7: Thors Thunder iron enrichment and rock chip results over aerial photograph

The mineralisation at Thors Thunder extends over a strike length of between 600m and 720m and varies in thickness between 30m and 60m. The mineralisation is constrained to the south by the tenement boundary. At surface, the mineralisation is characterised by high iron grades (average 64.2% Fe from 9 samples) and moderate levels of phosphorous and low to moderate levels of aluminium (Figure 7).

Chinook prospect

The Chinook prospect is located directly along strike and to the east of Thors Thunder. The mineralisation extends across the tenement boundary to both the south and east. The iron enrichment has a strike length of between 300m and 400m and varies in width between 30m and 60m. At surface, the mineralisation is characterised by moderate to high iron grades (average 59.4% Fe from 4 samples), variable levels of phosphorous and low to moderate levels of aluminium (Figure 8).

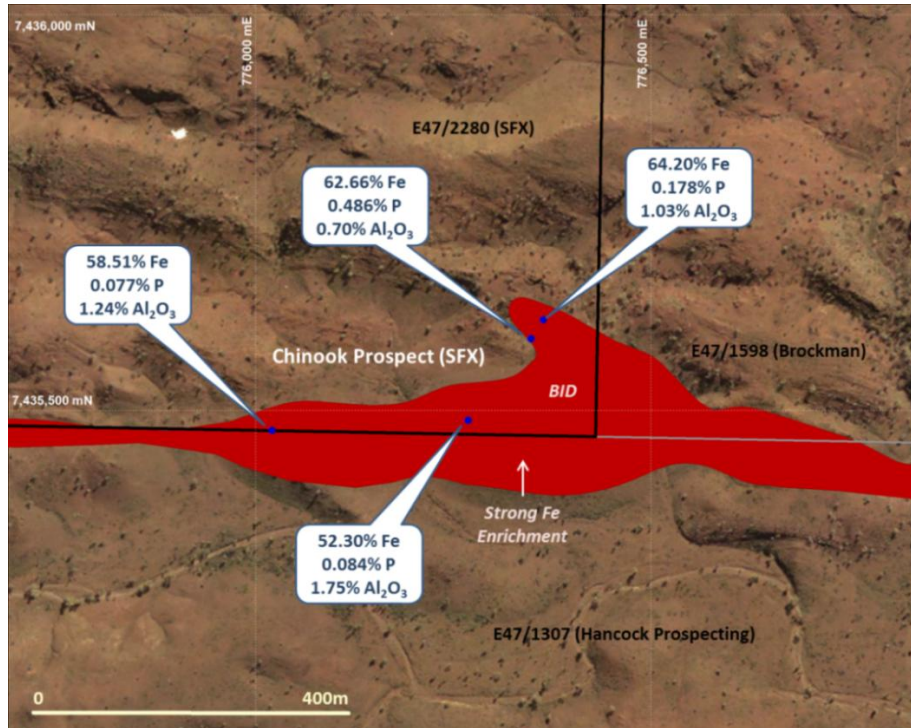


Figure 8: Chinook iron enrichment and rock chip results over aerial photograph

North Pilbara Region

Sheffield has four granted exploration licences situated in the North Pilbara region. The tenements are all located near existing iron ore mine sites or major development projects (e.g. Mt Dove, Abydos and Mt Webber, Figure 9). The recent sampling programme has outlined a significant new zone of iron enrichment at Dead Bullock and has extended previously mapped iron enrichment zone at Panorama.

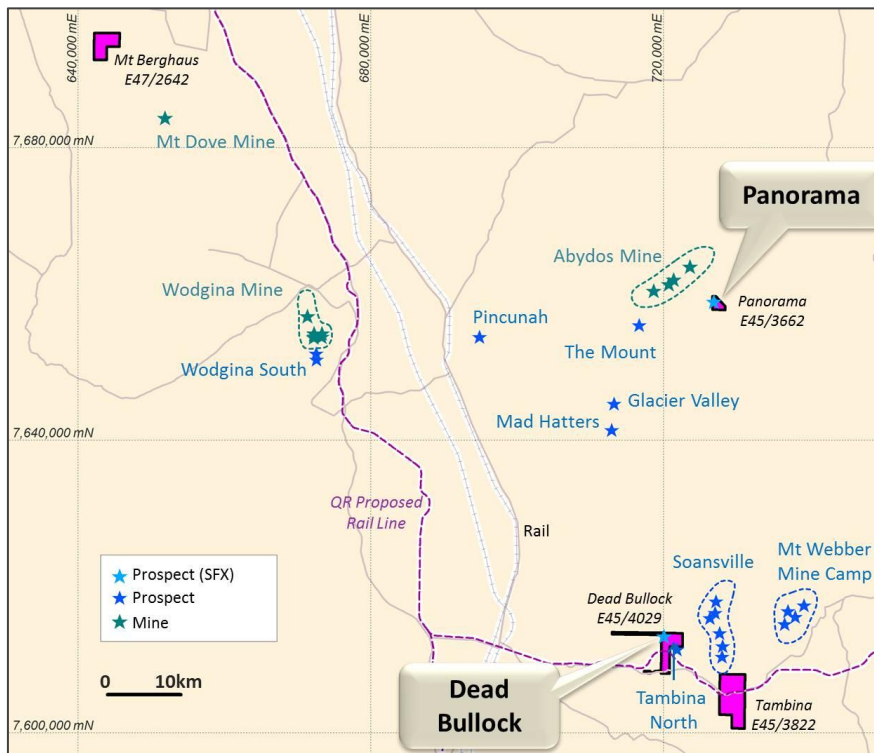


Figure 9: North Pilbara iron projects, infrastructure and iron deposits

Dead Bullock prospect

The iron mineralisation at Dead Bullock is located immediately north of the Pincunah Shear Zone in the Emerald Mine Greenstone Complex. The mineralisation is hosted by banded iron formations of the Paddy Market Formation. This Formation hosts substantial iron deposits at Atlas Iron's Mt Webber project, located just 17km to the east. The iron mineralisation extends up to 700m along strike and is between 30m and 40m wide. The mineralisation is characterised by high iron grades (average 62.15% Fe from 4 samples) and very low phosphorous and aluminium contaminant levels (Figure 10).

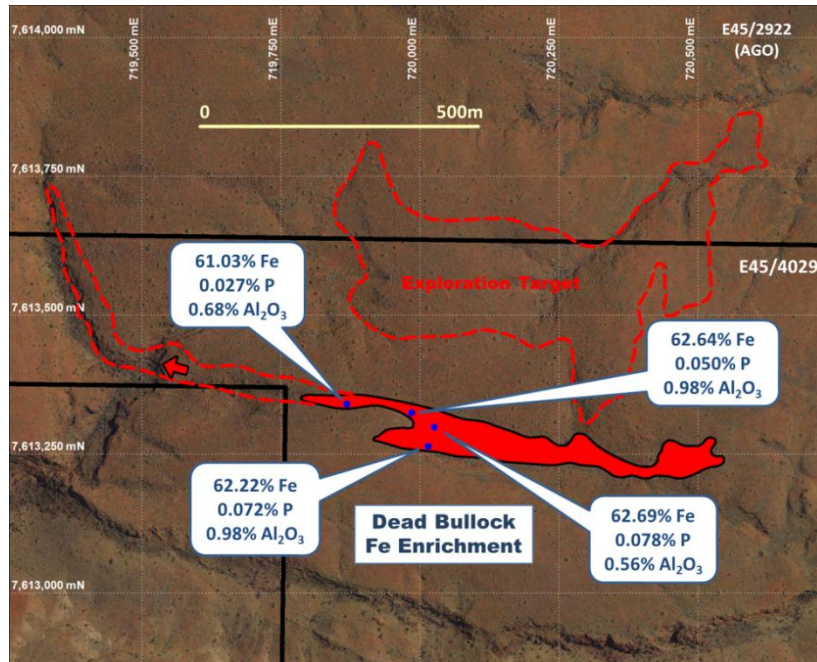


Figure 10: Dead Bullock iron enrichment and rock chip results over aerial photograph

Panorama prospect

Panorama is situated just 7km to the east-southeast of Atlas Iron's Abydos Mine Camp and is located within the Soansville Greenstone Belt. The iron mineralisation is hosted by a banded iron formation within the Sulphur Springs Group. The iron enrichment occurs in a structurally complex zone with at least one strongly folded horizon present.

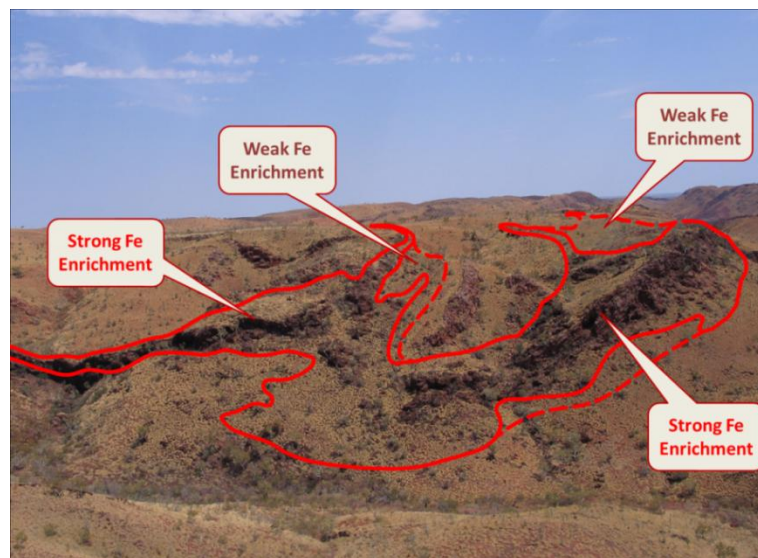


Figure 11: Panorama iron enrichment – view looking to the northeast

The mineralisation extends for a strike length of between 400m and 500m and varies between 30m and 50m width. The horizon is structurally thickened in places and dips to the north-northwest. The mineralisation is goethite dominant with iron grades of between 57% Fe and 61% Fe with high phosphorous levels and low aluminium levels (Figure 12).

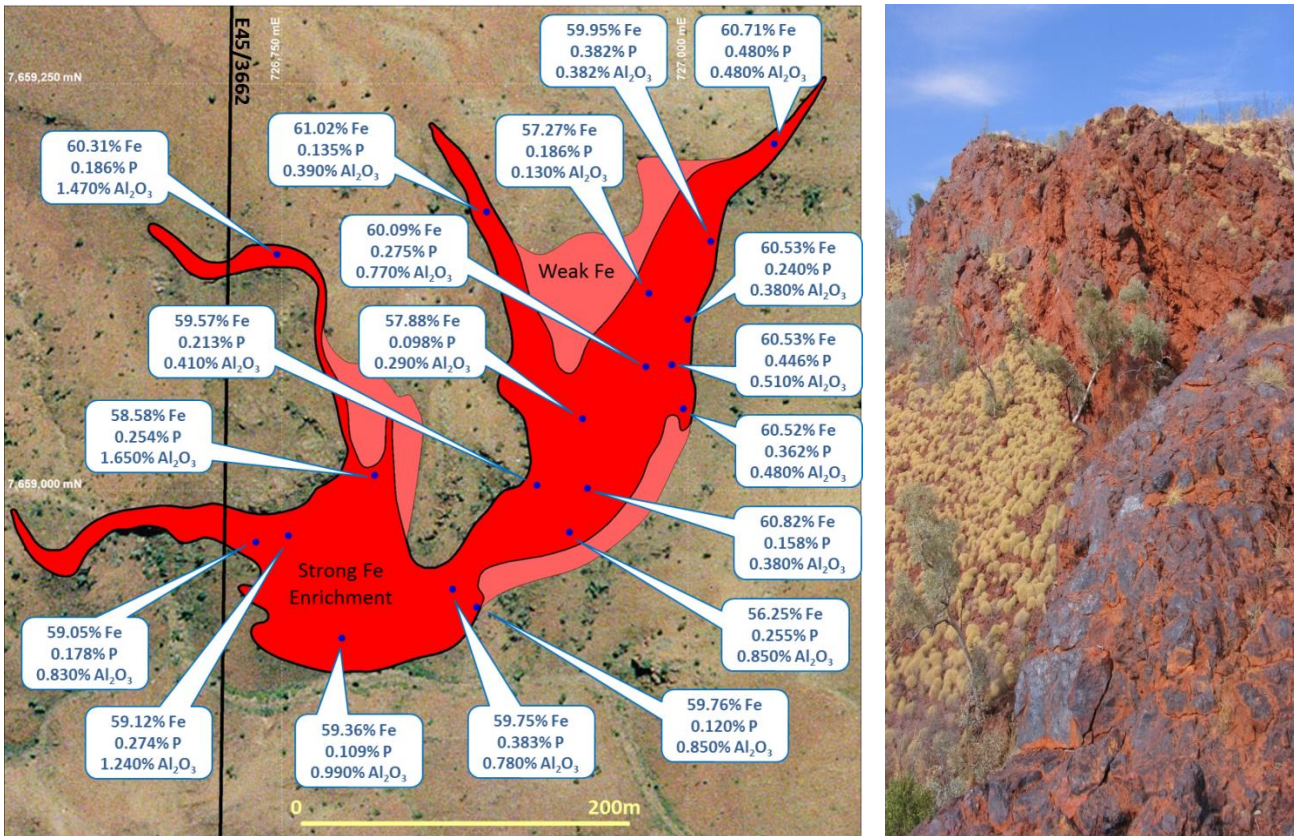


Figure 12: Panorama iron enrichment (left), southeastern cliff exposure of strong bedded iron enrichment (right)

Further Work

Further target generation work has been planned for Q2 2013. Sheffield continues to seek new iron ore opportunities in the district and will evaluate potential consolidation options in the region.

ENDS

For further information please contact:

Bruce McQuitty
 Managing Director
 Tel: 0409 929 121
bmquitty@sheffieldresources.com.au

Media: Annette Ellis
 Cannings Purple
 Tel: 08 6314 6300
aellis@canningspurple.com.au

Website: www.sheffieldresources.com.au

COMPETENT PERSONS' STATEMENT

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.

FORWARD LOOKING 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", "strategy" and similar expressions.

Table 1: Pilbara Reconnaissance Rock Chip Sample Results

Sample	Tenement	Prospect	Easting	Northing	Fe%	SiO ₂ %	Al ₂ O ₃ %	P%	LOI%	Description
IB001	E45/3662	Panorama	727053	7659213	60.71	1.17	0.48	0.358	10.40	BID, strong iron enrichment
IB002	E45/3662	Panorama	727014	7659153	59.95	2.27	0.77	0.382	10.09	BID, strong iron enrichment
IB003	E45/3662	Panorama	727000	7659105	60.53	1.24	0.38	0.240	10.78	BID, strong iron enrichment
IB004	E45/3662	Panorama	726990	7659077	60.25	1.02	0.51	0.446	10.89	BID, strong iron enrichment
IB005	E45/3662	Panorama	726997	7659050	60.52	1.01	0.48	0.362	10.53	BID, strong iron enrichment
IB006	E45/3662	Panorama	726927	7658974	56.25	7.49	0.85	0.255	9.89	BID, strong iron enrichment
IB007	E45/3662	Panorama	726870	7658928	59.76	7.46	1.00	0.120	5.02	BID, strong iron enrichment
IB008	E45/3662	Panorama	726787	7658909	59.36	2.51	0.99	0.109	10.41	BID, strong iron enrichment
IB009	E45/3662	Panorama	726734	7658968	59.05	2.66	0.83	0.178	10.83	BID, strong iron enrichment
IB010	E45/3662	Panorama	726807	7659009	58.58	2.53	1.65	0.254	11.36	BID, strong iron enrichment
IB011	E45/3662	Panorama	726907	7659003	59.57	3.29	0.41	0.213	10.52	BID, strong iron enrichment
IB012	E45/3662	Panorama	726935	7659044	57.88	7.05	0.29	0.098	9.91	BID, strong iron enrichment
IB013	E47/2642	Mt Berghaus	644436	7693901	28.35	43.64	8.32	0.014	3.71	Siltstone
IB016	E45/4029	Dead Bullock	720015	7613264	62.22	2.91	0.98	0.072	6.89	BID, strong iron enrichment
IB017	E45/4029	Dead Bullock	720026	7613298	62.69	2.41	0.56	0.078	7.11	BID, strong iron enrichment
IB018	E45/4029	Dead Bullock	719985	7613324	62.64	5.03	0.98	0.050	4.12	BID, strong iron enrichment
IB019	E45/4029	Dead Bullock	719869	7613340	61.03	3.05	0.68	0.027	9.01	BID, strong iron enrichment
IB020	E45/4029	Regional	721079	7611773	41.02	35.91	0.62	0.024	4.03	BID, weak iron enrichment
IB024	E45/3822	Regional	729752	7604917	39.21	26.22	8.21	0.035	6.05	BID, weak iron enrichment
IB026	E47/2280	Chinook	776269	7435488	52.30	17.36	1.75	0.084	5.10	BID, Moderate iron enrich.
IB027	E47/2280	Chinook	776364	7435615	64.20	1.39	1.03	0.178	5.45	BID, strong iron enrichment
IB028	E47/2280	Chinook	776349	7435591	62.66	1.97	0.70	0.486	6.61	BID, strong iron enrichment
IB029	E47/2280	Chinook	776021	7435475	58.51	9.76	1.24	0.077	4.65	BID, strong iron enrichment
IB030	E47/2280	Thors Thunder	775369	7435506	63.97	2.17	1.92	0.038	3.52	BID, strong iron enrichment
IB031	E47/2280	Thors Thunder	775520	7435486	60.06	5.53	0.80	0.299	7.13	BID, strong iron enrichment
IB032	E47/2280	Thors Thunder	775299	7435560	63.55	1.93	2.55	0.064	4.19	BID, strong iron enrichment

Sample	Tenement	Prospect	Easting	Northing	Fe%	SiO ₂ %	Al ₂ O ₃ %	P%	LOI%	Description
IB033	E47/2280	Thors Thunder	774891	7435577	65.19	0.97	0.70	0.101	4.57	BID, strong iron enrichment
IB034	E47/2280	Thors Thunder	774917	7435502	66.28	0.92	1.01	0.077	3.10	BID, strong iron enrichment
IB035	E47/2280	Thors Thunder	774881	7435509	65.37	1.65	1.43	0.072	3.24	BID, strong iron enrichment
IB036	E47/2280	Thors Thunder	774794	7435516	64.87	1.50	1.64	0.137	3.73	BID, strong iron enrichment
IB037	E47/2280	Thors Thunder	774827	7435501	65.66	1.76	1.11	0.097	3.13	BID, strong iron enrichment
IB038	E47/2280	Top Forge	772830	7439025	44.69	32.49	1.48	0.047	1.92	BID, weak iron enrichment
IB039	E47/2280	Top Forge	771413	7439916	60.01	3.19	2.16	0.071	8.26	BID, strong iron enrichment
IB040	E47/2280	Top Forge	771559	7439785	63.62	1.33	1.02	0.102	6.87	BID, strong iron enrichment
IB041	E47/2280	Top Forge	771550	7439738	64.03	2.01	1.70	0.094	4.37	BID, strong iron enrichment
IB042	E47/2291	Tramlines	766090	7441261	60.96	1.68	2.04	0.102	8.55	BID, strong iron enrichment
IB043	E47/2291	Tramlines	766166	7441237	62.51	2.25	2.01	0.073	6.10	BID, strong iron enrichment
IB044	E47/2291	Tramlines	766151	7441301	64.79	1.27	1.46	0.090	4.28	BID, strong iron enrichment
IB045	E47/2291	Tramlines	765956	7441380	63.25	1.16	2.05	0.108	5.38	BID, strong iron enrichment
IB046	E47/2291	CID	764802	7441513	49.36	10.07	6.14	0.033	11.71	Detrital, weak iron enrichment
IB047	E47/2291	Fiery Jack	765326	7442967	63.30	3.45	2.39	0.063	3.21	BID, strong iron enrichment
IB048	E47/2291	Fiery Jack	765384	7442881	63.51	3.41	2.00	0.065	3.22	BID, strong iron enrichment
IB049	E47/2291	Fiery Jack	765638	7442923	62.89	4.88	1.69	0.090	2.99	BID, strong iron enrichment
IB050	E47/2291	Fiery Jack	766148	7442962	63.00	4.27	1.17	0.039	3.68	BID, strong iron enrichment
IB051	E47/2291	Fiery Jack	766104	7442944	65.80	1.31	0.65	0.129	3.58	BID, strong iron enrichment
IB052	E47/2291	Fiery Jack	765882	7442850	63.72	4.63	1.74	0.046	2.05	BID, strong iron enrichment
IB053	E47/2291	Fiery Jack	765747	7442871	65.39	2.19	1.15	0.063	2.67	BID, strong iron enrichment
IB054	E47/2291	Fiery Jack	766242	7442951	65.28	2.29	1.07	0.028	3.02	BID, strong iron enrichment
IB055	E47/2280	Crucible	771355	7438079	58.34	5.87	5.91	0.037	4.21	BID, strong iron enrichment
IB056	E47/2280	The Edge	771369	7437489	65.83	1.17	0.53	0.070	3.37	BID, strong iron enrichment

Coordinates are GDA94 Zone 50. BID = Bedded Iron Deposit. All samples were analysed by X-Ray Fluorescence Spectrometry (XRF). Loss on Ignition (LOI) values were determined using Thermo-Gravimetric Analyses between 110 and 1000°C.

ABOUT SHEFFIELD RESOURCES

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

ASX Code – SFX

Market Cap @ 52.5cps - \$52.0m

Issued shares – 99.0m

Cash - \$6.0m (approx.)

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 four 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.