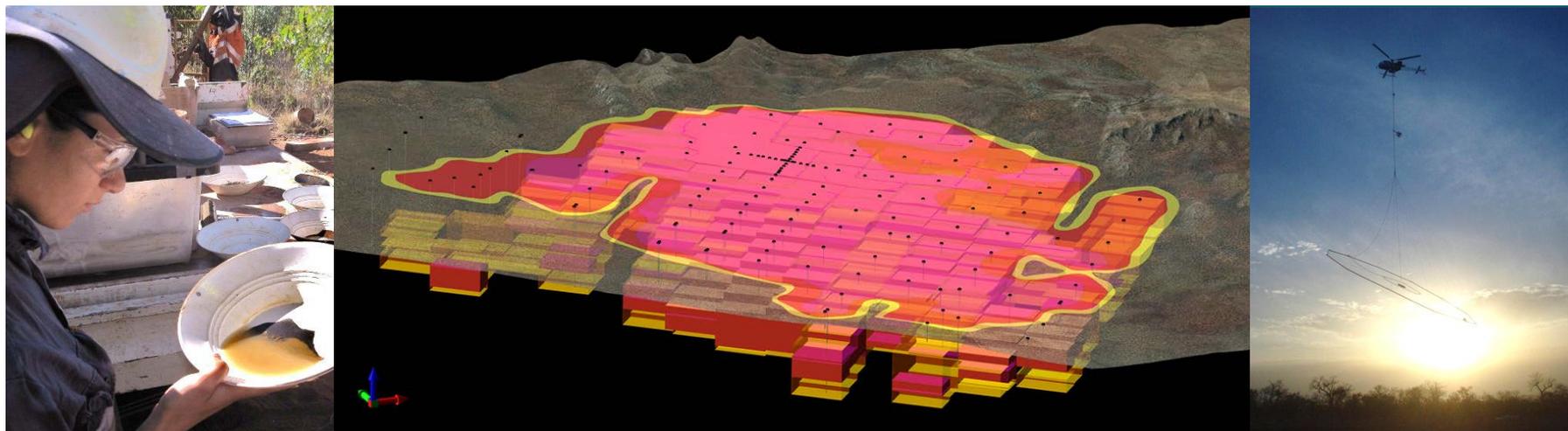


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Investor Update

11 February 2013

COMPETENT PERSONS' STATEMENT – EXPLORATION RESULTS

The information in this presentation that relates to exploration results is based on information compiled by David Archer and David Boyd. Both Mr Archer and Mr Boyd are full time employees of the Company and are Members of the Australasian Institute of Geoscientists. Mr Archer and Mr Boyd have 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 Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code")'. Each of Mr Archer and Mr Boyd consents to the inclusion in the presentation of the matters based on their information in the form and context in which it appears.

COMPETENT PERSONS' STATEMENT – RESOURCE ESTIMATES

The information in this presentation that relates to resource estimation is based on information compiled by Mr Trent Strickland. Mr Strickland is a full time employee of Quantitative Group (QG) and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Strickland has sufficient experience in the minerals industry to satisfy the requirements to act as the competent person for these resource estimates as defined in the 2004 Edition of the Australasian Code for Reporting of Mineral Resources and Ore Reserves. Mr Strickland consents to the inclusion in this presentation of the matters based on their information in the form and context in which it appears.

The information in this presentation that relates to reporting of resource and exploration results is based on information compiled under the guidance of Mark Teakle. Mr Teakle is a full time employee of 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 this presentation 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.

Company Snapshot

Capital Structure

Share price	\$0.515
Shares on issue	99.0m
Options (Ave. Ex Price ~25.3c)	27.7m
Market Cap (Undiluted)	\$51.0m
Cash at 31 December 2012	\$6.0m
Debt	Nil
Enterprise Value	\$45.0m

Shareholder Split

Top 20 Shareholders	39%
Directors	16%
Institutions	12%

Research

Hartleys, Breakaway, RFC Ambrian (see SFX web site)

Board & Management

Will Burbury	Executive Chairman
Bruce McQuitty	Managing Director
David Archer	Technical Director
David Boyd	Exploration Manager
Mark Teakle	Project Development Manager



Investment Summary

Dampier – Heavy Mineral Sands (HMS)

- Flagship project
- Thunderbird – globally significant discovery: 517Mt @ 10.1% HM High Grade Zone^{1,2} (open)
- Canning Basin – new minerals sands province

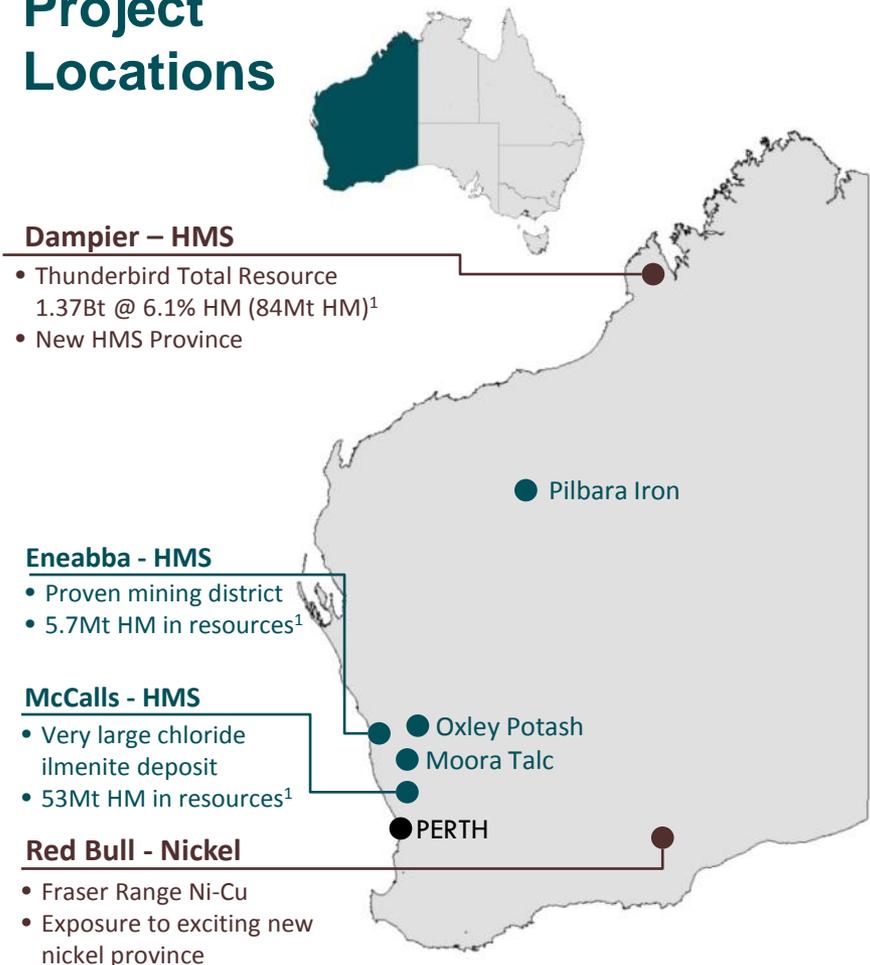
Red Bull – Nickel

- Located in an exciting new nickel province
- 20km from Sirius Resources' Nova discovery

Pipeline of Other Projects

- Eneabba HMS – building a strategic resource inventory in a proven mining district
- McCalls HMS – very large chloride ilmenite deposit
- Others: Pilbara iron, Moora talc, Oxley potash

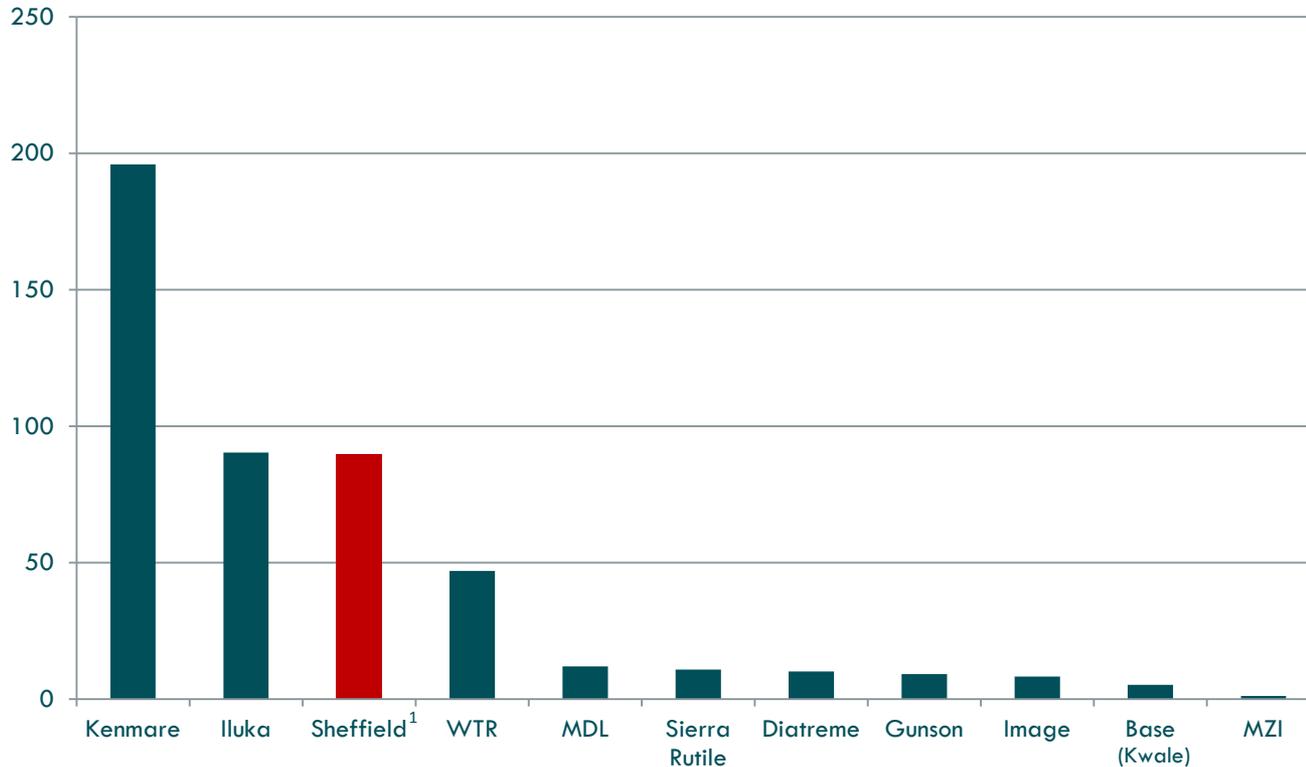
Project Locations



¹See Appendices 1 & 2 for resource tabulation ²See ASX release dated 18 December 2012

Globally Significant Mineral Sands Resource Inventory

Total Valuable Heavy Mineral (VHM) in Resources (Mt)



Thunderbird discovery has boosted Sheffield 's resource inventory to 90Mt VHM¹

¹See Appendices 1 & 2 for resource tabulation

Resources data compiled by Sheffield from open file sources

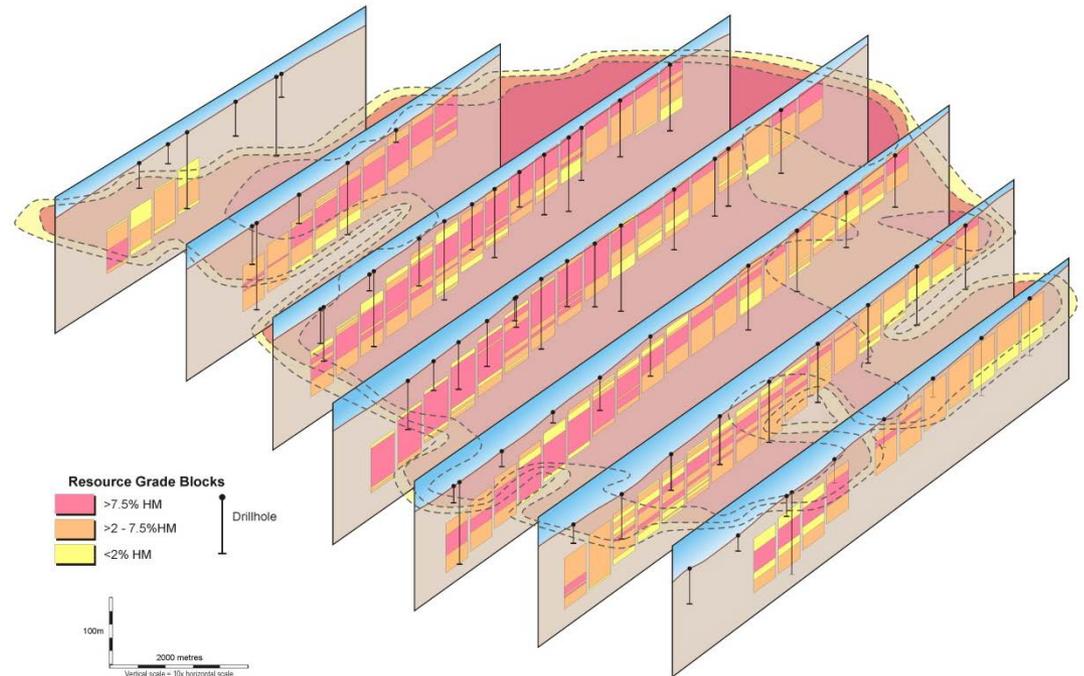
Thunderbird HMS Discovery

Maiden Mineral Resource December 2012

- **1.37Bt @ 6.1% HM** (Indicated & Inferred)¹
- Heavy Mineral assemblage: 6.9% zircon, 1.6% rutile, 4.3% leucoxene, 29% ilmenite

High Grade Zone

- Coherent High Grade Zone (at 7.5% HM cut-off) of **517Mt @ 10.1% HM**, (Indicated & Inferred)²
- Containing: 3.6Mt zircon, 0.8Mt rutile, 2.2Mt leucoxene and 15.2Mt ilmenite
- High in-situ VHM grades: 0.7% zircon, 0.16% rutile, 0.44% leucoxene and 2.9% ilmenite
- Focus for initial development studies

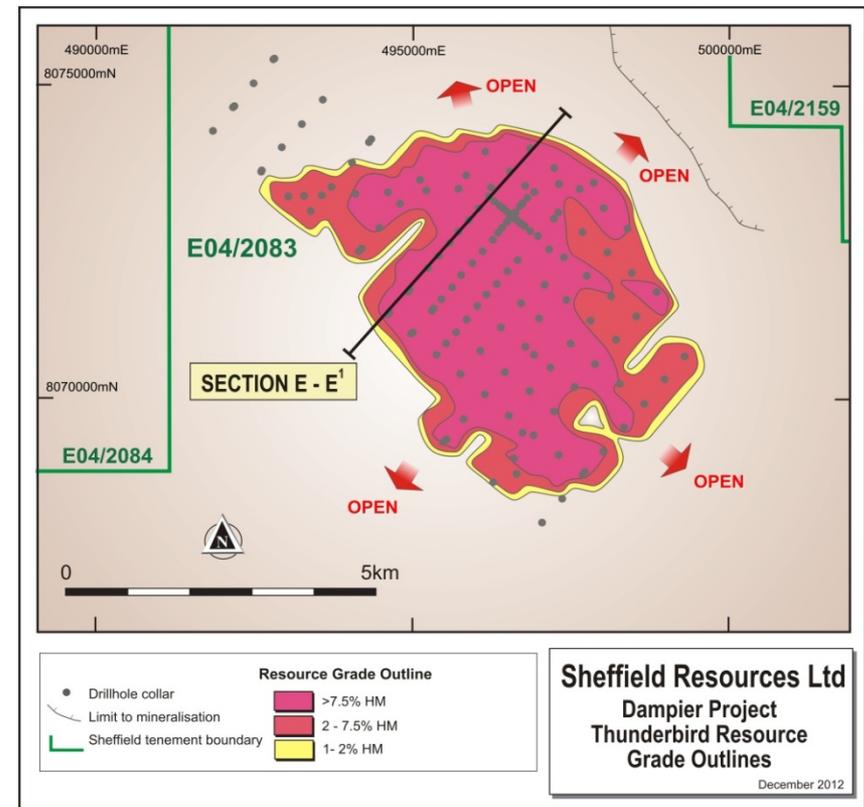
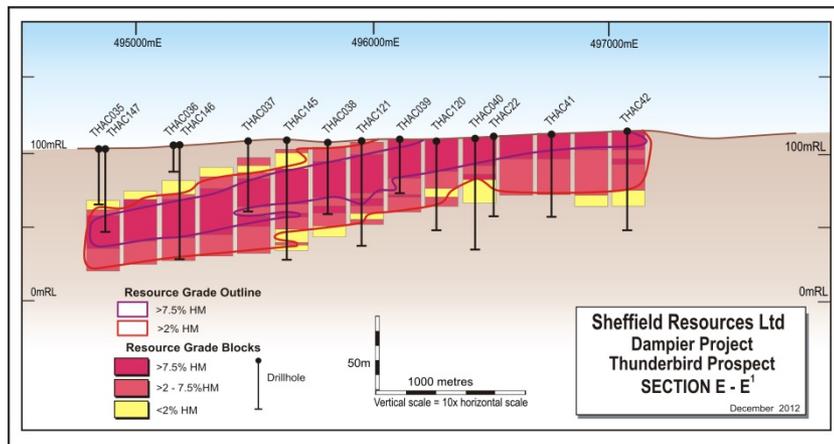


¹See Appendices 1 & 2 for resource tabulation. ²See ASX release dated 18 December 2012

Thunderbird HMS Discovery

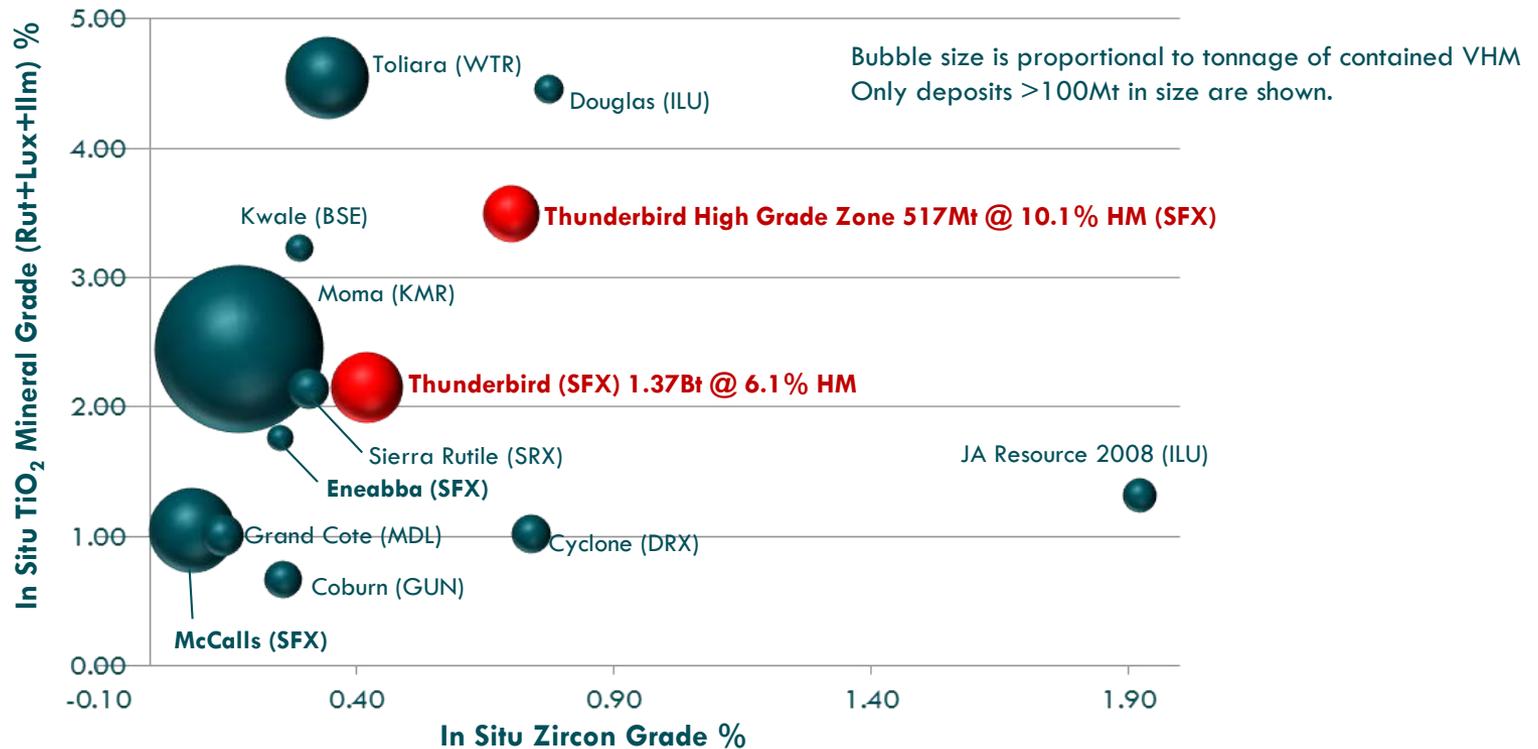
Thunderbird has scale, high grade & favourable geometry:

- Strike potential of 15 km (only 8km drilled), width 4km
- Thickness up to 52m, average 38m
- Mineralisation shows excellent continuity
- Mineralisation outcrops, dipping shallowly to southwest
- 40% of the deposit has less than 3 metres of overburden
- Mostly above water table



Thunderbird – a Globally Significant Deposit

- Amongst the highest in situ Zircon and TiO_2 mineral grades
- One of the largest deposits in terms of contained valuable heavy mineral
- Yet to be closed off by drilling

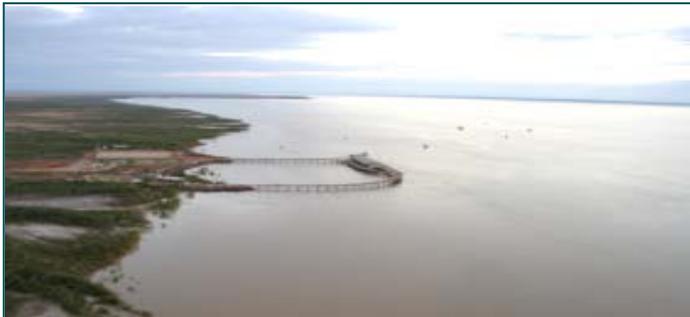


Data compiled by SFX from open file sources.

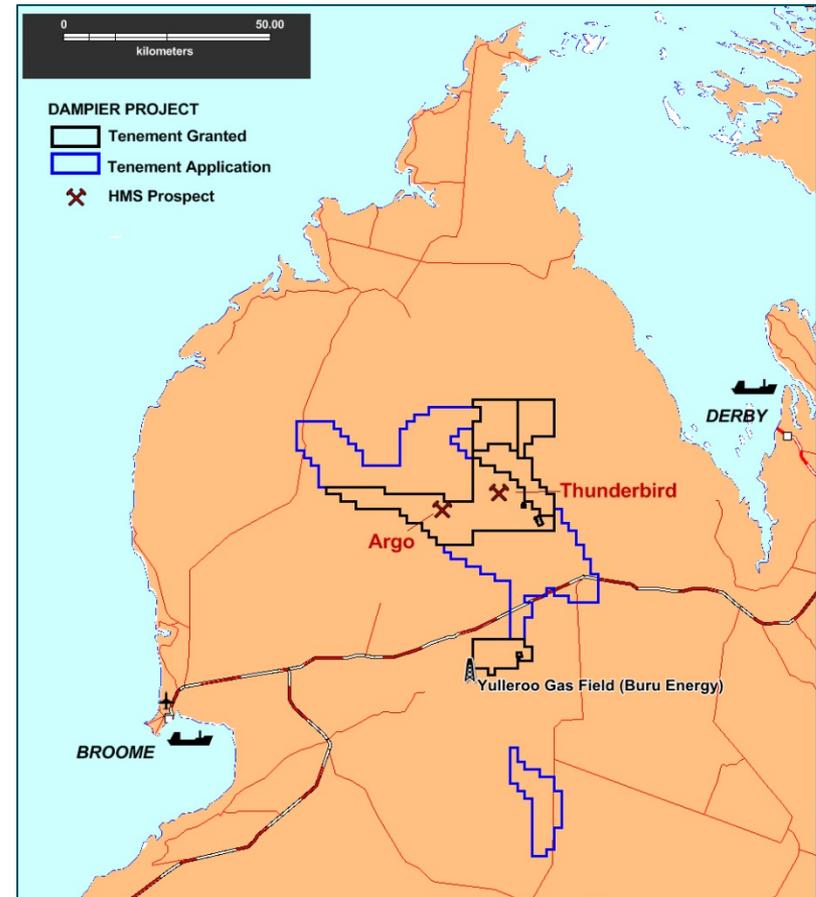
Dampier HMS - Infrastructure

Infrastructure Advantages:

- Located on Crown Land (pastoral lease)
- 30km north of sealed Broome-Derby Highway
- ~140km by road to either Derby or Broome ports
- Abundant fresh groundwater suitable for processing
- Close to recently discovered Yulleroo Gas Field
- Close to Asian markets



Derby Port



Dampier Project Location & Infrastructure

Thunderbird – Next Steps

Bulk Sample Metallurgical Testwork Underway

- 6 tonne bulk sample collected from Sheffield's composited drill samples - shipped to RJ Robbins laboratory, Brisbane
- Initial testwork to determine recovery, product quality and preliminary process design
- Results due late Q1 2013

Scoping Studies Q2-Q3 2013

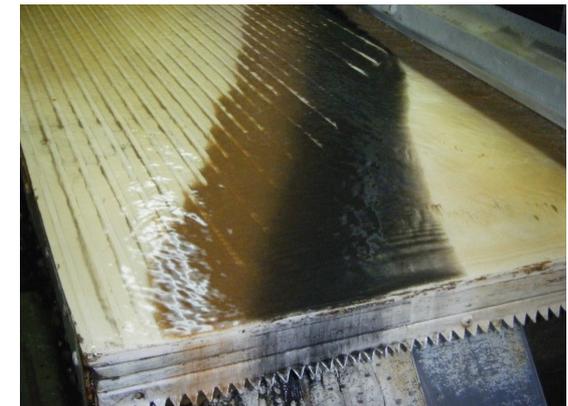
- Initial financial/development modelling

Further Evaluation Q2-Q3 2013

- Infill drilling to upgrade resource classification
- Additional bulk sample for met testwork & marketing studies
- Extensional drilling to expand resource
- Regional exploration, e.g. Argo prospect

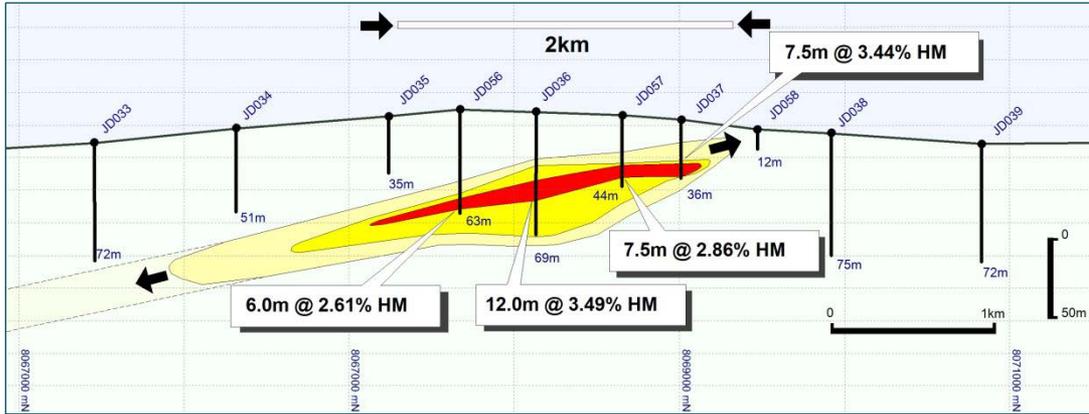


Thunderbird Bulk Sample



Wet Table Separation of HM from
Thunderbird Bulk Sample

Dampier HMS – Exploration Upside



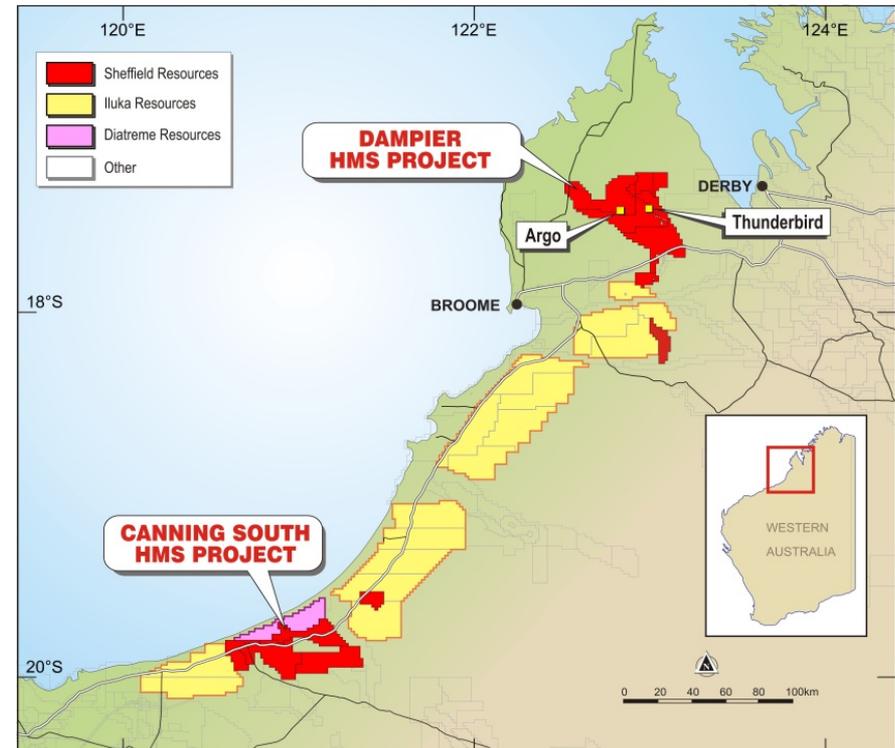
Cleaner stage gravity separation of HM on bulk sample from the Argo prospect. Source: Rio Tinto Exploration Pty Ltd open file report.

Argo Prospect

- 12km west of Thunderbird
- High priority drilling target with established mineralisation (based on a single historical scout drill traverse)
- 17% zircon from historical metallurgical testwork
- Provides significant exploration upside
- Aboriginal Heritage Survey completed
- Scheduled for drilling Q2-Q3 2013

Canning Basin - New HMS Province

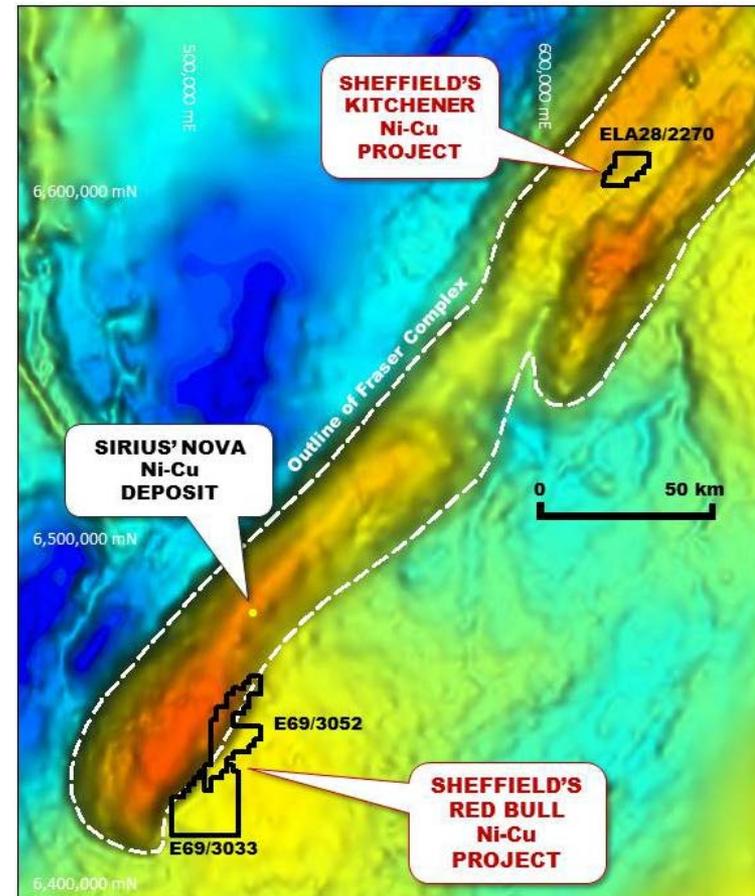
- Canning Basin is a new HMS Province
- Previously under-explored region
- Sheffield an early mover with over 4,000 km² of tenure
- Two large projects: Dampier and Canning South
- Canning South recently pegged – tenements are still under application



Location of Sheffield's projects in the Canning Basin HMS Province

Red Bull Nickel

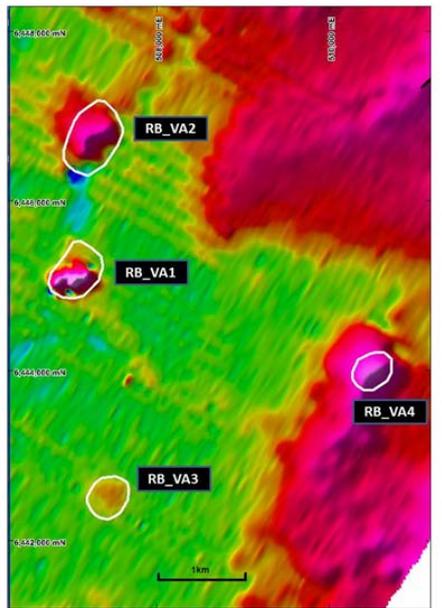
- Red Bull Project comprises two granted exploration licences with a combined area of 525km²
- Recent Kitchener Project application expands Sheffield's footprint
- Red Bull is within 20km of Sirius Resources NL's (ASX:SIR) Nova discovery, within similar prospective rocks of the Fraser Complex
- The Nova discovery defines a new Nickel-Copper Province
- In November 2012, Sheffield undertook a VTEM survey to accelerate the exploration of this exciting project
- Field work commenced following grant of E69/3052 on 11 December 2012



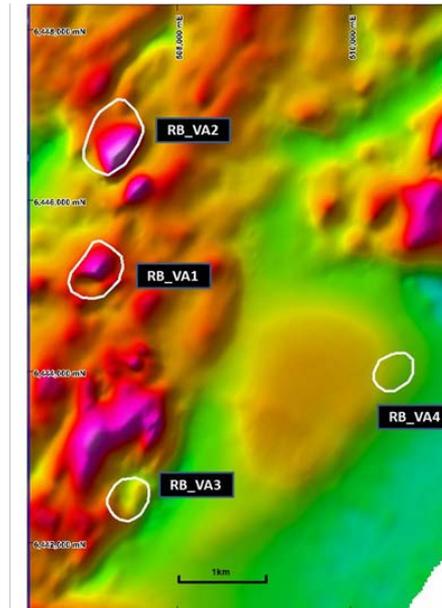
Gravity image outlining the Fraser Complex

Red Bull Nickel VTEM Survey

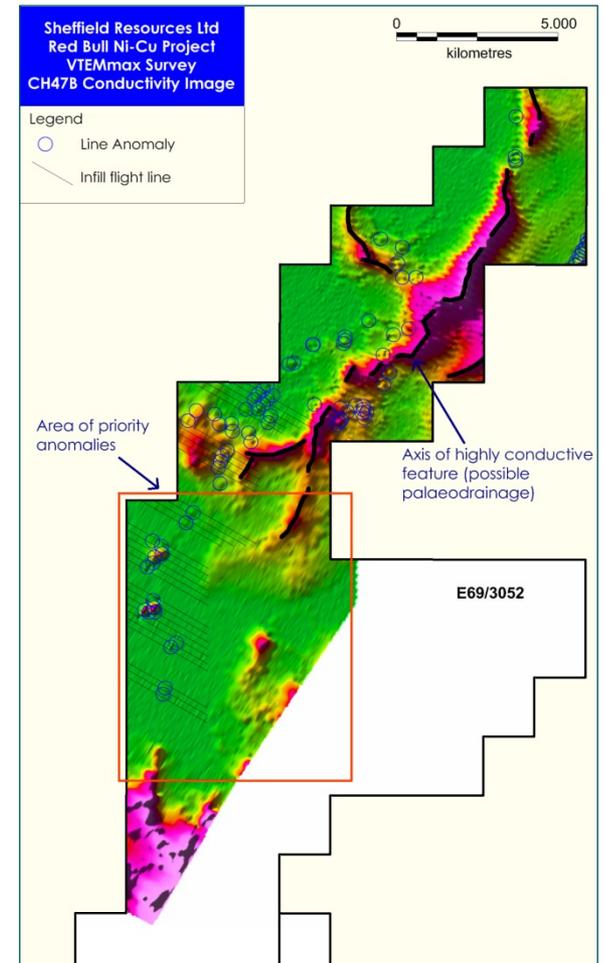
- VTEM survey flown in November 2012
- Target area 144sq km, mostly under shallow transported cover
- 4 high order EM anomalies identified in southern survey area, of which 3 have coincident magnetic anomalies
- Over 10 second order EM anomalies identified
- Immediate focus for ground-based work (e.g. soils, Fixed Loop EM)



Late Channel B-field VTEM

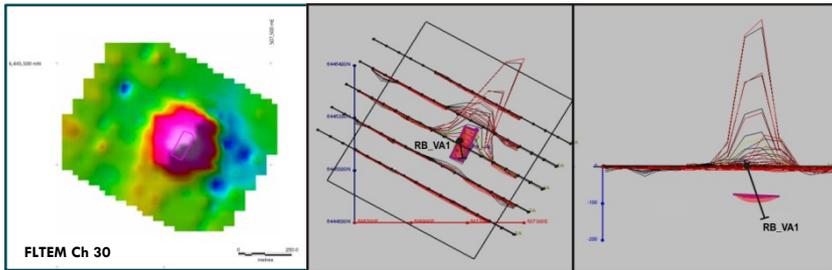


TMI magnetics

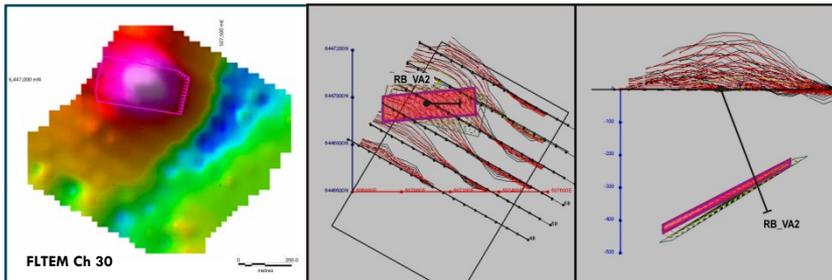


Red Bull Nickel - Fixed Loop EM Results

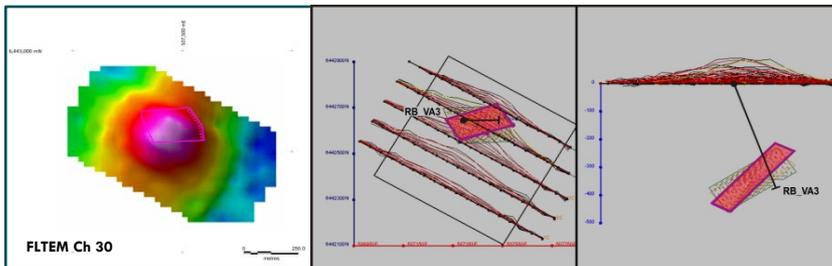
Anomaly RB_VA1



Anomaly RB_VA2



Anomaly RB_VA3



Fixed Loop EM (FLTEM) Survey

- Targeted 3 High Order EM Anomalies (RB_VA1-3) in southern survey area
- Defined strong bedrock conductors (~5,000-10,000S) consistent with targeted massive sulphide bodies (e.g. Nova conductor 5144S*)
- Modelled plate conductor dimensions range from 50x150m to 100x400m; depths from 100m to 350m
- Drill holes have been designed to test targets
- FLTEM programme expanded to test an additional 5 lower order VTEM anomalies (RB_VA4-8)

Next steps

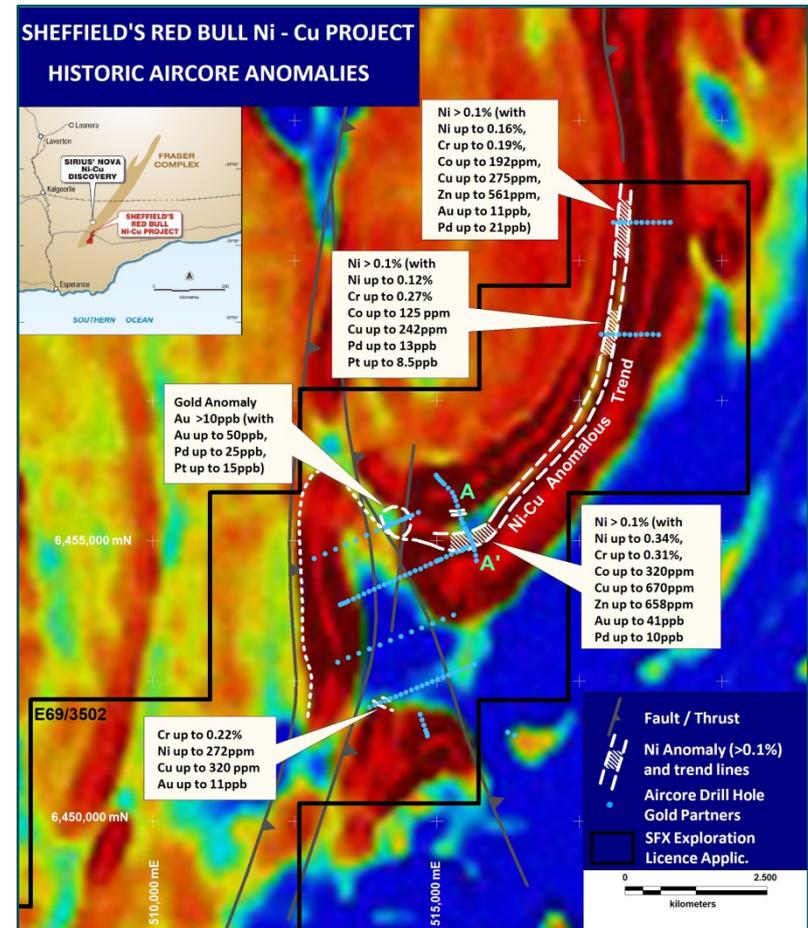
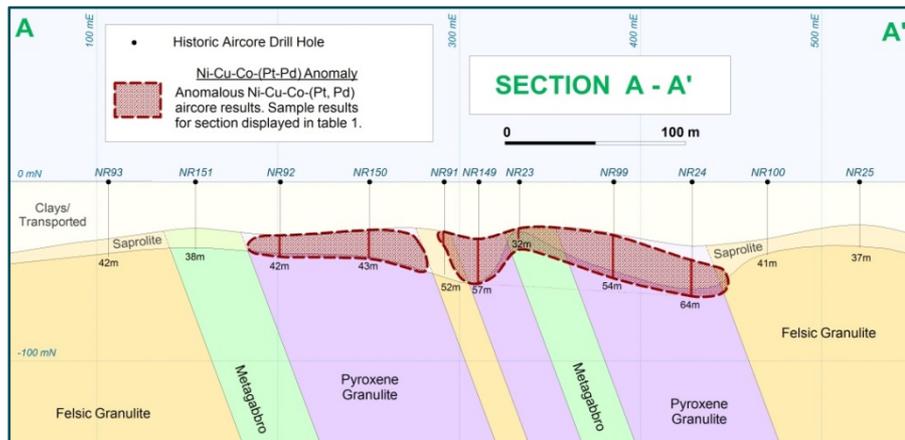
- Complete processing & interpretation of FLTEM
- Soil sampling Q1 2013
- Aircore drilling Q2 2013
- RC/Diamond drilling of targets Q2-Q3 2013

*Sirius Resources NL ASX release 18 April 2012

Red Bull Nickel - Other Targets

Targets from historic data review

- 8km long anomalous Ni-Cu trend identified from historical aircore drilling results
- Maximum values 0.34% Ni, 670ppm Cu, 320ppm Co
- Favourable mafic and ultramafic host rocks and large structures
- Disseminated sulphides noted by previous explorers
- Follow up with soils & aircore drilling (due to conductive overburden)

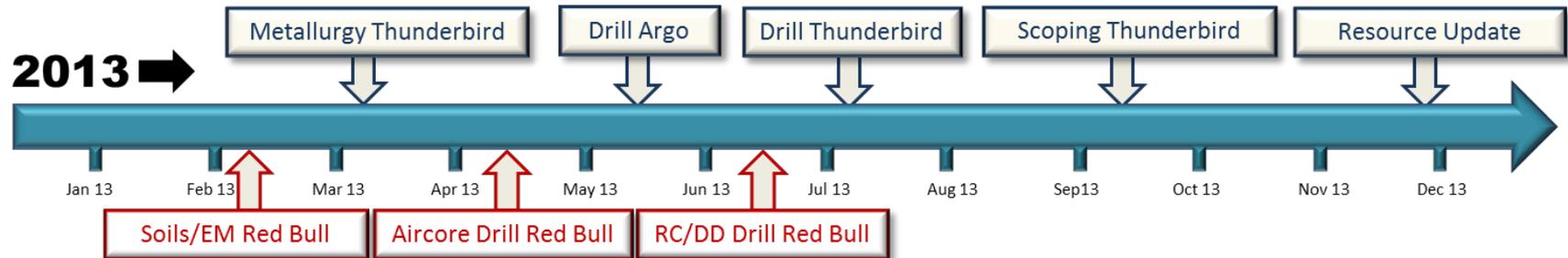
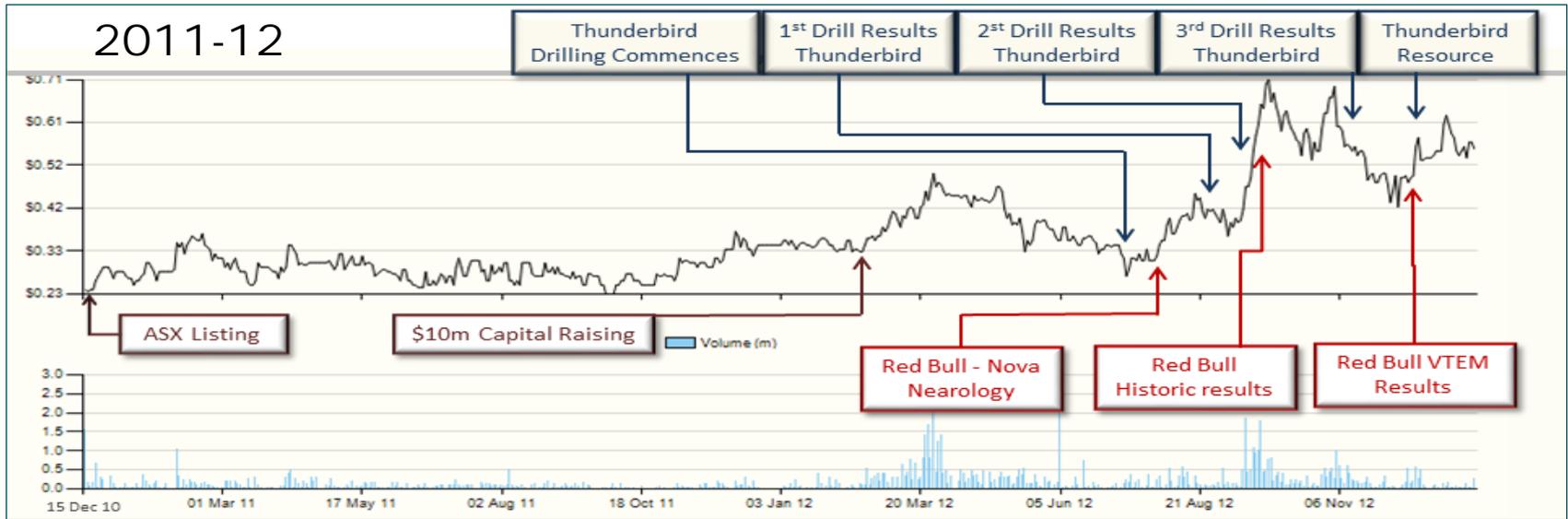


Historic aircore anomalies on TMI magnetic image

Delivering Shareholder Value Growth into the Future



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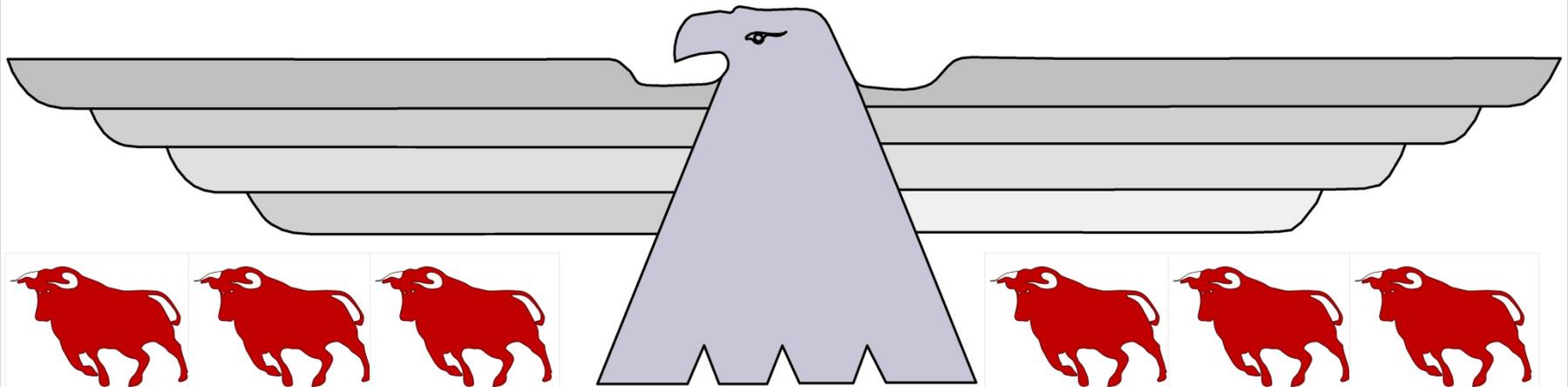
Summary

- A globally significant mineral sands resource base built from organic exploration success
- Dampier HMS Project - Thunderbird shaping up as a world class mineral sands deposit
- Canning Basin - a new HMS province with more discoveries to be made
- Evaluating high order EM anomalies at Red Bull Project in Fraser Range nickel province
- Successful track record of exploration underpinned by:
 - a fertile project pipeline
 - a sound cash position, and
 - an experienced management team
- Dampier & Red Bull the focus of 2013 work programme





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Appendix 1

Resource Inventory

Sheffield's contained Valuable HM (VHM)* Resource Inventory at 30 Jan 2013

Deposit	Resource Category	Zircon ('000t)	Rutile ('000t)	Leuc. ('000t)	Ilmenite ('000t)	Total VHM ('000t)
Thunderbird	Indicated	1,483	344	924	6,256	9,007
Thunderbird	Inferred	4,270	990	2,661	18,007	25,927
Yandanooka	Measured	13	2	3	87	105
Yandanooka	Indicated	240	81	83	1,439	1,843
Yandanooka	Inferred	4	1.3	2	23	29
Durack	Indicated	144	29	52	703	928
Durack	Inferred	26	4.6	13	121	164
Ellengail	Inferred	92	90	20	658	860
West Mine North	Measured	18	33	42	200	293
West Mine North	Indicated	71	87	46	506	709
McCalls	Inferred	3,491	1,063	2,576	42,911	50,041
Total	Measured	31	35	45	287	398
Total	Indicated	1,938	540	1,104	8,904	12,487
Total	Inferred	7,882	2,149	5,271	61,718	77,021
Total	All	9,851	2,725	6,421	70,910	89,906

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) and the Thunderbird deposit (estimated using a 2% HM cut-off). These Mineral Resources have previously been fully reported in ASX releases by Sheffield on 25 October 2011, 7 November 2011, 20 February 2012, 28 August 2012, 18 December 2012 and 30 January 2013. Appendix 2 summarises the estimated tonnes and grades for these deposits.

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

Appendix 2

HMS Mineral Resource¹ Inventory 30 Jan 2013

Project	Deposit	Resource Category	Cut-off (% HM)	Material (Mt)*	Bulk Density	HM %	Slimes %	Osize %	In-situ HM (Mt)*	Zircon %	Rutile %	Leuc. %	Ilmenite %
DAMPIER	Thunderbird	Indicated	2.0	299	2.1	7.2	19	14	21.5	6.9	1.6	4.3	29
	Thunderbird	Inferred	2.0	1,075	2.1	5.8	17	16	61.9	6.9	1.6	4.3	29
	Total Dampier	All	2.0	1,374	2.1	6.1	17	15	83.4	6.9	1.6	4.3	29
ENEABBA	Yandanooka	Measured	0.9	2.9	2.0	4.1	15	14	0.12	10.6	1.9	2.2	72
	Yandanooka	Indicated	0.9	90.1	2.0	2.3	16	15	2.09	11.5	3.9	3.9	69
	Yandanooka	Inferred	0.9	2.8	2.0	1.2	18	21	0.03	11.2	3.9	4.6	68
	Yandanooka	Total	0.9	95.9	2.0	2.3	16	15	2.24	11.4	3.8	3.9	69
	Durack	Indicated	0.9	50.3	2.0	2.0	15	21	1.02	14	2.8	5.1	69
	Durack	Inferred	0.9	15	1.9	1.2	14	17	0.18	14	2.5	7.2	66
	Durack	Total	0.9	65.3	2.0	1.8	15	20	1.20	14	2.8	5.6	68
	Ellengail	Inferred	0.9	46.45	2.0	2.2	15.6	2.1	1.04	8.9	8.7	1.9	63.5
	Ellengail	Total	0.9	46.45	2.0	2.2	15.6	2.1	1.04	8.9	8.7	1.9	63.5
	West Mine North	Measured	0.9	6.47	2.0	5.6	14.8	1.2	0.36	4.9	9.1	11.6	54.9
	West Mine North	Indicated	0.9	36.11	1.9	2.3	13.1	2.8	0.84	8.4	10.3	5.4	60.0
	West Mine North	Total	0.9	42.58	1.9	2.8	13.4	2.5	1.21	7.9	10.1	6.4	59.2
	Total	Measured	0.9	9.4	2.0	5.2	15	5	0.48	6.7	6.8	8.7	60
	Total	Indicated	0.9	176.6	2.0	2.2	15	14	3.96	11.6	4.9	4.6	67
	Total	Inferred	0.9	64.2	2.0	1.9	15	6	1.25	10.2	7.1	3.3	64
	Total Eneabba	All	0.9	250	2.0	2.3	15	12	5.69	11.1	5.5	4.4	66
	MCCALLS	McCalls	Inferred	0.9	4,431	2.3	1.2	26.5	1.4	53	6.6	2.0	4.9
Total McCalls		All	0.9	4,431	2.3	1.2	26.5	1.4	53	6.6	2.0	4.9	80.8

*Tonnes have been rounded to reflect the relative uncertainty of the estimate. ¹ This estimate is classified and reported in a manner compliant with the JORC code and guidelines (JORC, 2004). ² The Mineral Assemblage is represented as the percentage of the Heavy Mineral (HM) component of the deposit, as determined by QEMSCAN. TiO₂ minerals defined according to the following ranges: Dampier: Rutile >95% TiO₂; Leucoxene 70-95% TiO₂; Ilmenite 40-70% TiO₂, Eneabba & McCalls: Rutile >95% TiO₂; Leucoxene 85-95% TiO₂; Ilmenite <55-85% TiO₂. West Mine North and McCalls deposits are reported below 35% slimes cut-off.

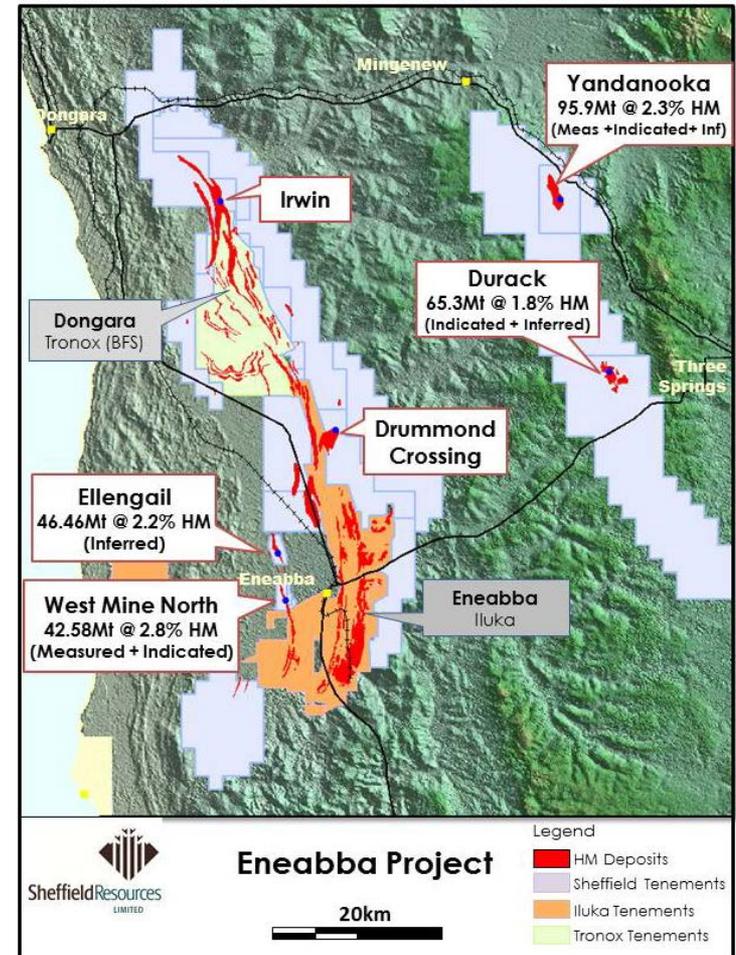
Appendix 3: Eneabba HMS

- Established mining district dominated initially by Iluka Resources Ltd and Tronox Ltd
- ~140km south of Geraldton port
- Sheffield's Mineral Resources total **250Mt @ 2.3% HM**, containing **5.7Mt HM¹** (4 deposits)
- Good all-round mineral assemblage: 11.1% zircon, 5.5% rutile, 4.4% leucoxene and 66% ilmenite
- Strategy: to build a substantial resource base to underpin a 20-30 year mine life

Next steps:

- Drummond Crossing Resource estimate due Q1 2013
- Further targets to be drilled H1 2013
- Updated scoping assessment mid 2013

¹See Appendices 1 & 2 for resource tabulation



Appendix 4: McCalls HMS

- Large high TiO₂ ilmenite deposit, located 110km north of Perth
- Globally significant asset receiving considerable industry attention
- Mineral Resource of 4.4Bt @ 1.2% HM, containing 53Mt HM¹
- Lower grade but has scale:
 - contains over 40Mt of chloride grade ilmenite (65.4% TiO₂ determined by met testwork)
 - one of the largest chloride grade ilmenite deposits in the world
 - also contains 3.5Mt of zircon & 1Mt of rutile

Next steps:

- 71 broadly-spaced drill holes completed – to obtain more representative mineral assemblage data
- Assay results due Q1 2013
- QEMSCAN results due Q1 2013
- Updated resource estimate Q2 2013

¹See Appendices 1 & 2 for resource tabulation

