



*Poised for Resources Growth*

# SHEFFIELD RESOURCES LTD

**Mid West Economic and Resources Summit  
Geraldton, Western Australia  
24 August 2011**

# COMPETENT PERSONS & FORWARD LOOKING STATEMENTS

## COMPETENT PERSONS' STATEMENT – EXPLORATION RESULTS

The information in this presentation that relates to exploration results has been compiled by Bruce McQuitty and David Archer. Each of Mr McQuitty and Mr Archer has consented to the inclusion of this information in this Section of this Web Site in the form and context in which it is included. Mr McQuitty and Mr Archer are geologists with over 20 years experience. Both Mr McQuitty and Mr Archer is a Member of the Australasian Institute of Geoscientists and has the appropriate relevant qualifications, experience, competence and independence to be considered as an “Expert” and “Competent Person” as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“JORC Code”)’.

## COMPETENT PERSONS' STATEMENT – YANDANOOKA RESOURCE ESTIMATE

The information in this presentation 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 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 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”, “intends”, “potential”, “prospective” and similar expressions.

# CORPORATE SNAPSHOT

**Cash Position** \$4.1m

## Capital Structure

Market Cap \$17.6m (undiluted, at 30cps)  
Shares 58.7m  
Options 27.2m (20c, 30/06/13)  
4.6m (30c, 30/11/13 & 13/12/15)  
1.1m (44c, 20/03/16 & 1/7/16)

Cash Backing ~ 6.9cps

## Major Shareholders

Directors 25.6%  
Cappig Finance 3.6%  
Top 40 55.8%

## Board & Management

Will Burbury	Chairman
Bruce McQuitty	Managing Director
David Archer	Technical Director
David Boyd	Exploration Manager





# NEAR-TERM STRATEGY

## Mid West - Mineral Sands, Talc

- Discover and develop a series of mineral sand deposits capable of producing 100,000-150,000tpa heavy mineral concentrate
- Discover and develop a deposit of premium talc capable of supporting a 100,000tpa mining operation

## Pilbara – Iron Ore

- Discover and consolidate 200 Mt of direct shipping iron ore in the Eastern Pilbara

# SHEFFIELD RESOURCES

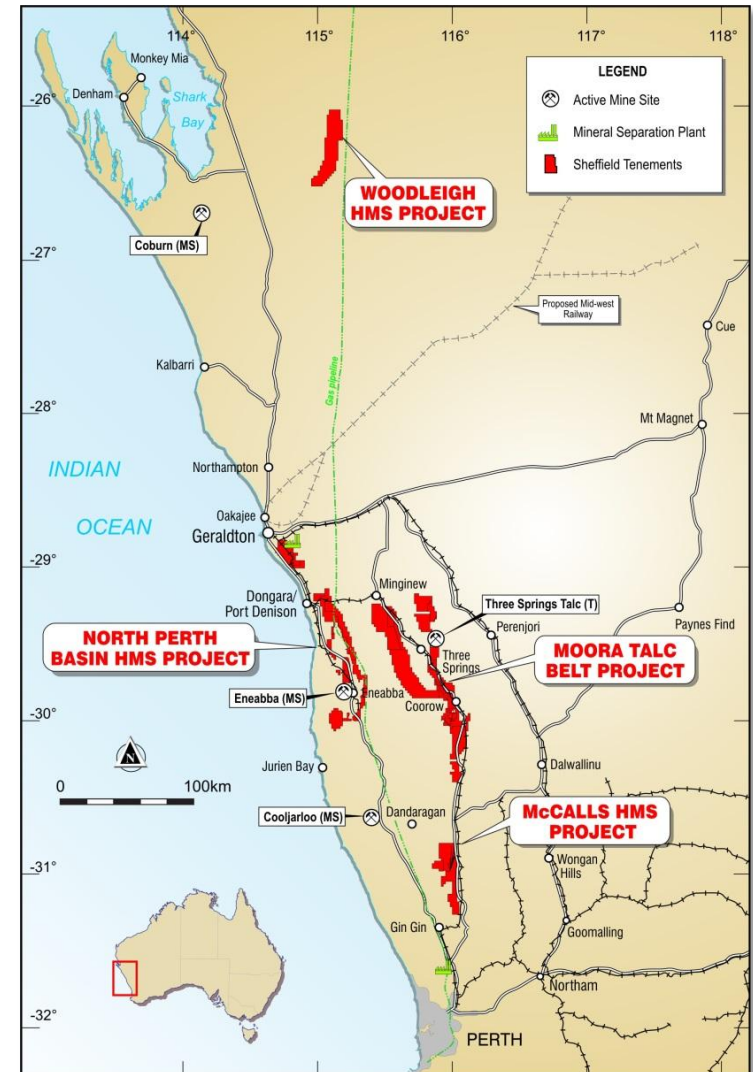
- Nimble, opportunistic active junior explorer
- Proven project generation skills
- ASX listed Dec 2010
- Australian owned
- Significant Mid West presence (~3,500km<sup>2</sup>)
- Committed to contributing to region's growth



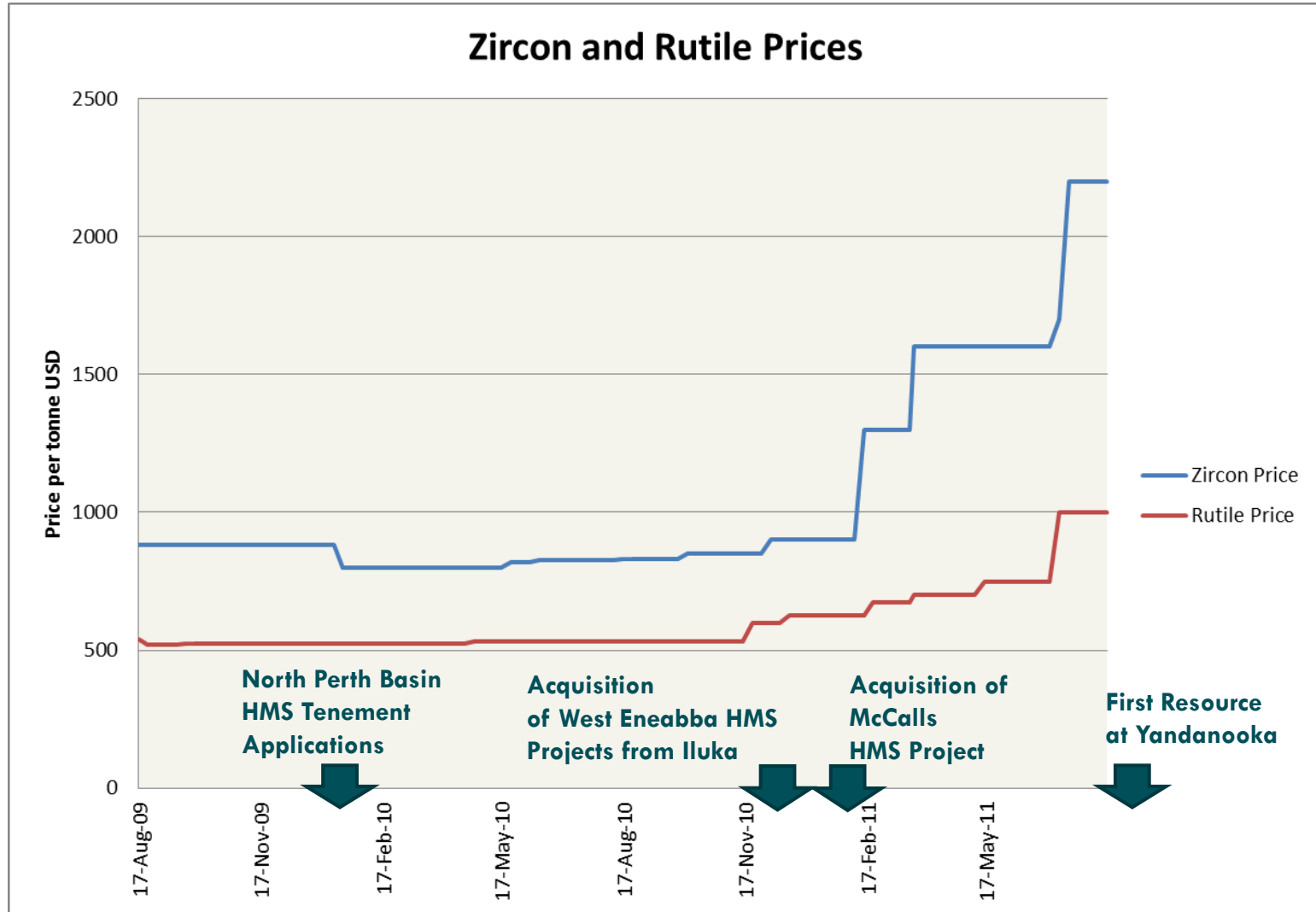
# MID WEST OPPORTUNITY

## What attracted us to the Mid West in early 2010?

- Overlooked commodities: Mineral Sands & Talc
- World Class deposits e.g. Eneabba – mineral sands  
Three Springs - talc
- Proximity to infrastructure
- “Open” ports
- Close to Asian markets



# SEIZING THE OPPORTUNITY



(Pricing data compiled by Sheffield from various open file sources)

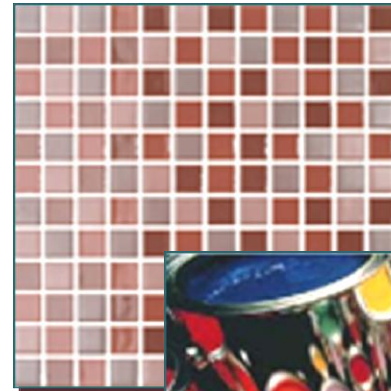
# MINERAL SANDS USES & MARKETS

## Zircon

- Main use in the manufacture of ceramics and refractory linings
- Global market 1.3Mtpa
- Acute shortage of supply

## Titanium Minerals

- Rutile: >95%  $\text{TiO}_2$
- Leucoxene: 85-95%  $\text{TiO}_2$
- Altered ilmenite: 55-85%  $\text{TiO}_2$
- Ilmenite <55%  $\text{TiO}_2$
- Main use in pigment production for paint, coatings, plastics, titanium metal
- Global market ~6Mtpa also experiencing shortage of supply





# MINERAL SANDS PROJECT STATUS



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LIMITED

## Resources

Yandanooka

## Resource Estimation Underway

Ellengail

West Mine North

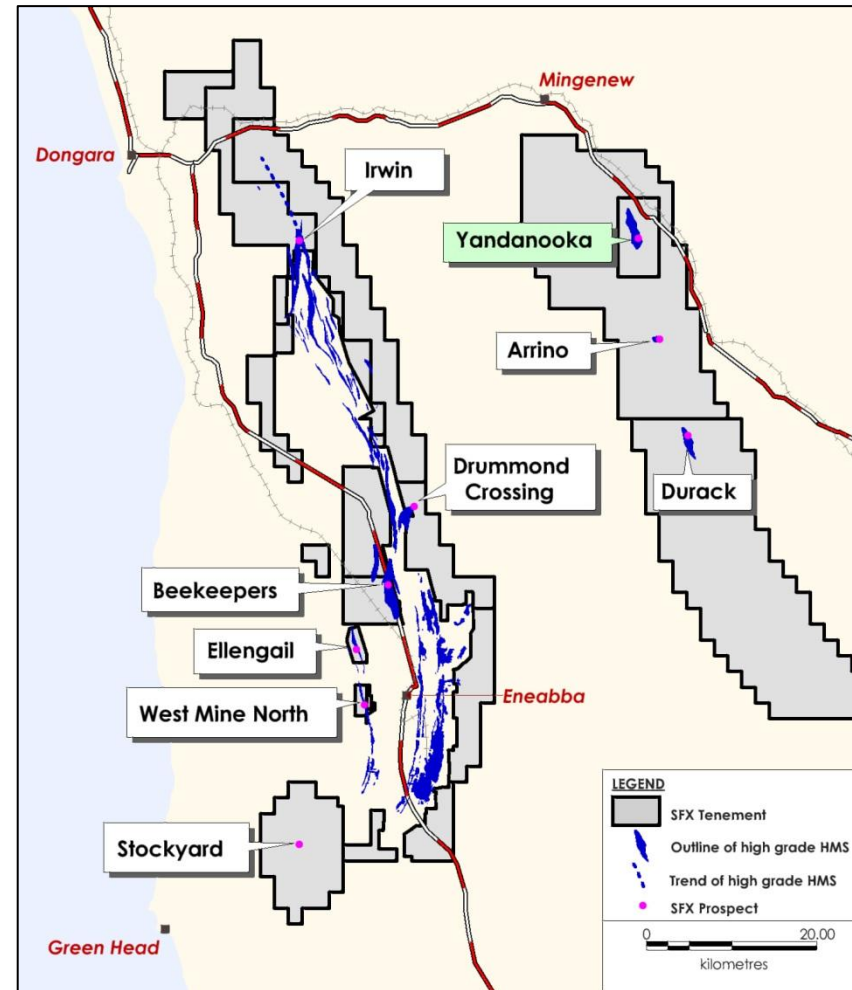
McCalls

## Next Drilling

Durack

Irwin

Stockyard

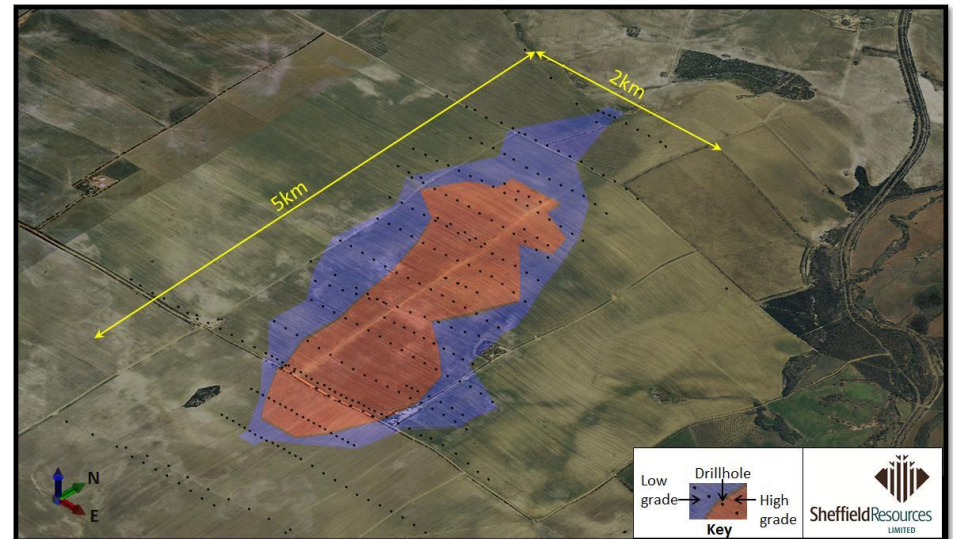
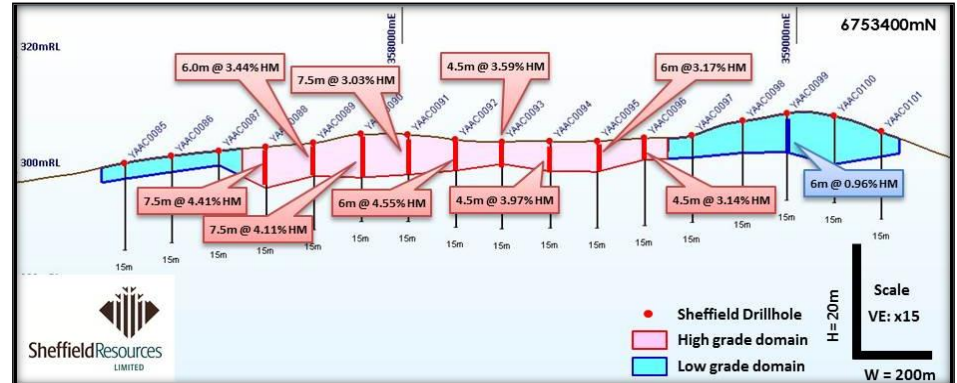


# YANDANOOKA



SheffieldResources  
LIMITED

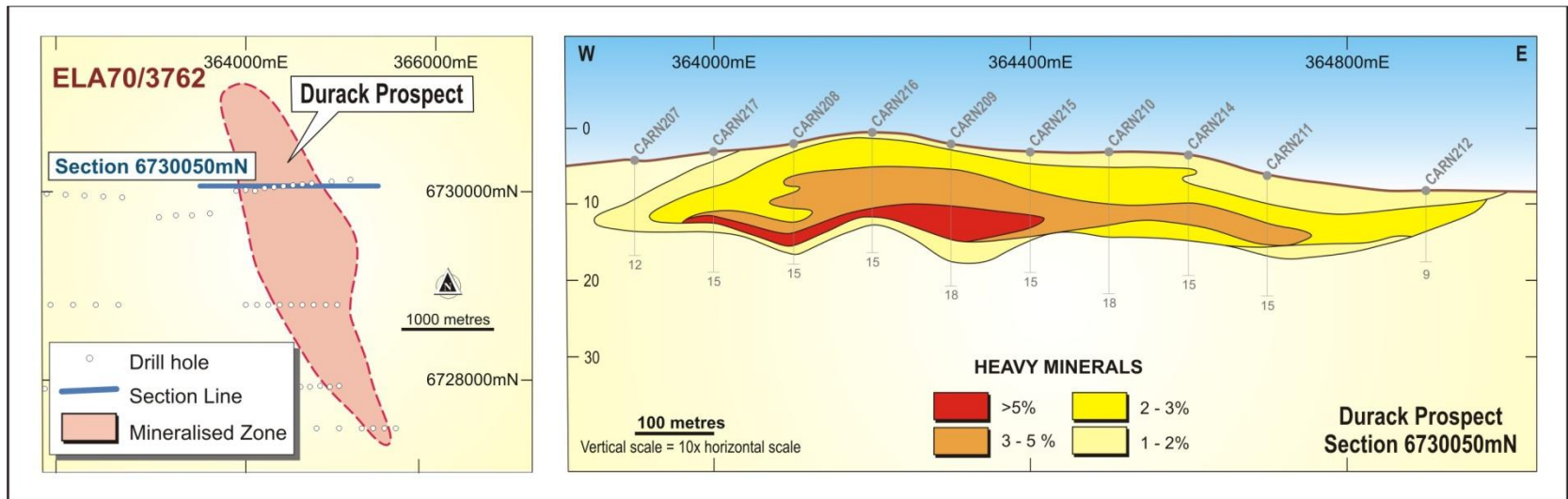
- Total resource of **71.75 million tonnes @ 2.6% HM<sup>1</sup>** for 1.84Mt contained HM comprising:
  - 61Mt @ 2.8% HM (Indicated)
  - 10.75Mt @ 1.1% HM (Inferred)
- Includes High Grade core of **37.5Mt @ 3.8% HM** (Indicated)
- High value mineral assemblage: 11.5% zircon, 6.9% rutile, 10.2% leucoxene, 61.9% ilmenite
- At surface, above water table
- 140km by road or rail to Geraldton Port



<sup>1</sup> Refer to Appendix 1 for Resource Tabulation and Competent Person Statements and to ASX release dated 16 August 2011

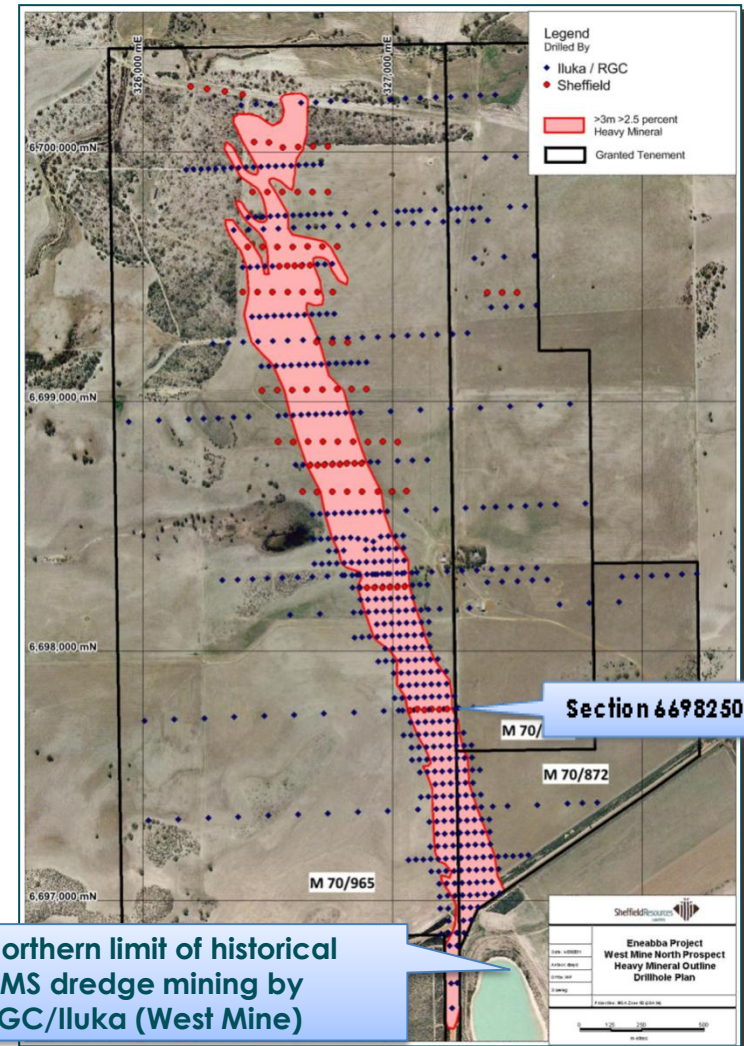
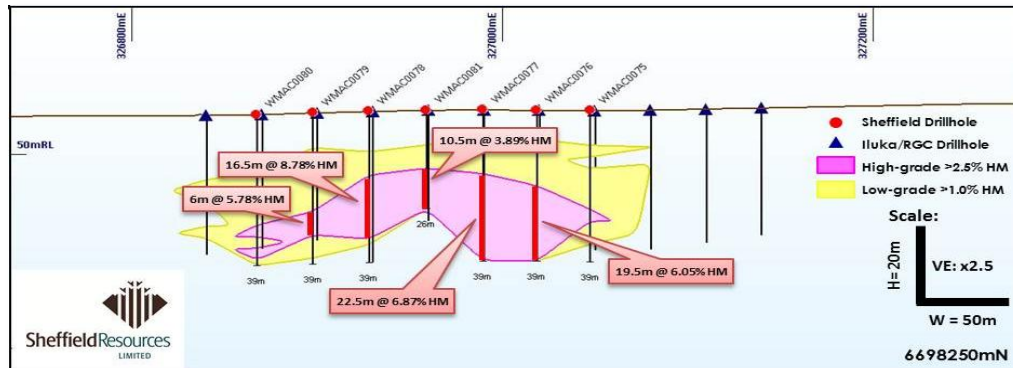
# DURACK

- 25km south of Yandanooka
- Limited prior drilling by Iluka
- Similar dimensions to Yandanooka deposit
- Mineralised at or near surface
- Drilling planned Q1 2012



# WEST MINE NORTH

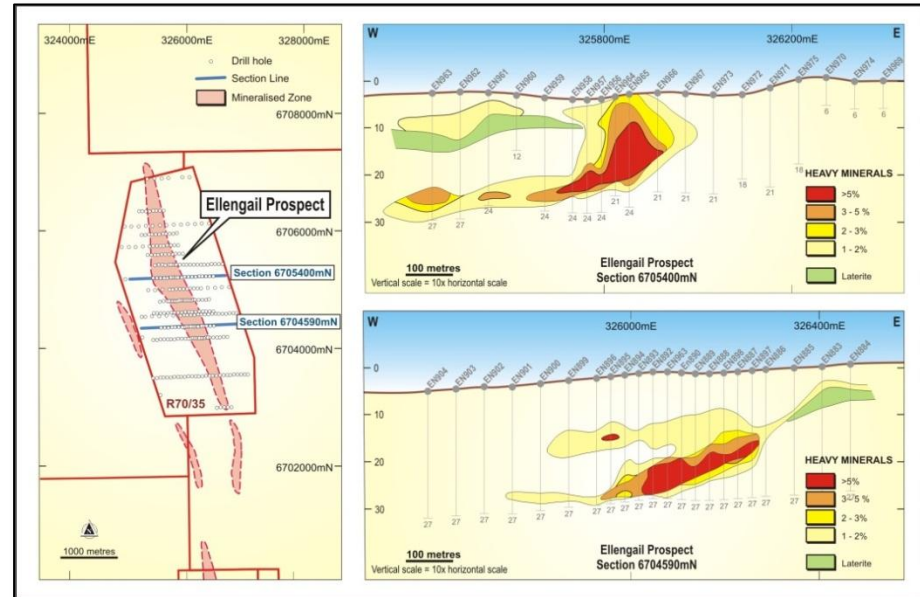
- Purchased from Iluka Dec 2010
- 3.5km extension of Eneabba West deposit, dredge mined by Iluka/RGC in 1990s
- Drilling by Sheffield in May 2011 confirmed high grades<sup>1</sup>
- Resource estimate due Oct 2011



<sup>1</sup>Refer to ASX release dated 11 August 2011 for full details

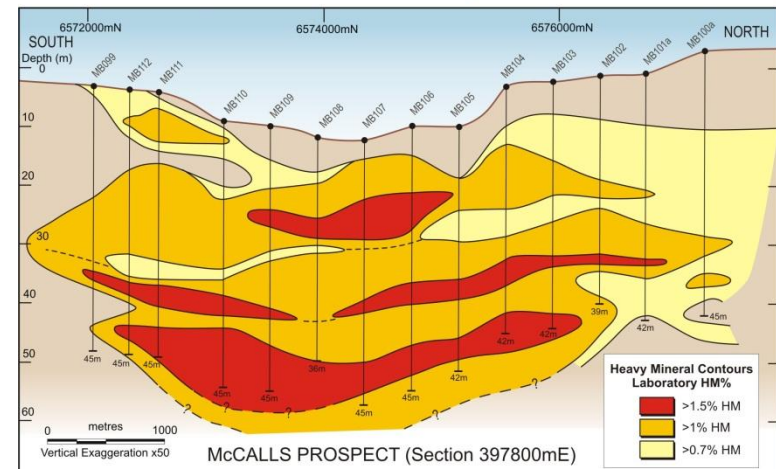
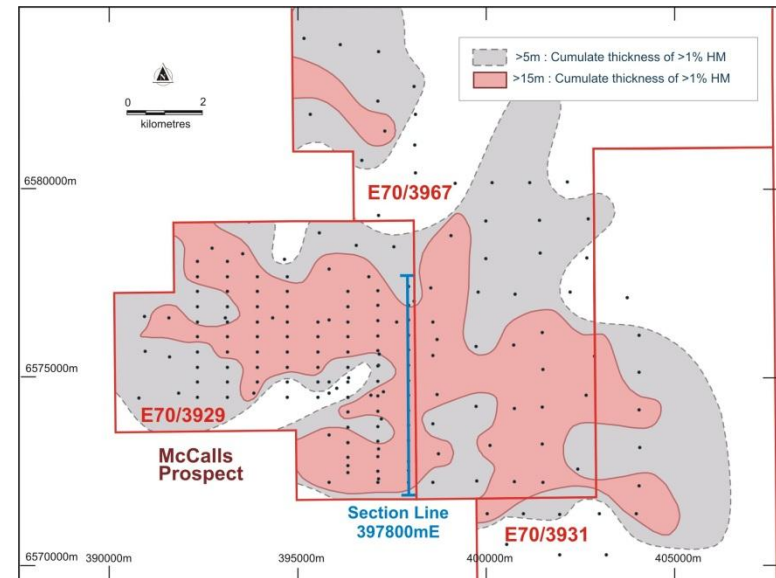
# ELLENGAIL

- Purchased from Iluka Dec 2010
- 3km north of West Mine North
- Lower grade than WMN but broader and closer to surface
- High grade strand with lower grade dunal cap in north
- Resource estimate due Sep 2011



# MCCALLS

- Located 110km north of Perth
- Drilled by BHP in early 1990s
- Exploration Target<sup>1</sup> of **1.5-2.5 billion tonnes @ 1.1-1.3% HM**
- High TiO<sub>2</sub> ilmenite-dominated assemblage
- Confirmatory drilling by Sheffield in May 2011 – results awaited
- Resource estimate due Q4 2011



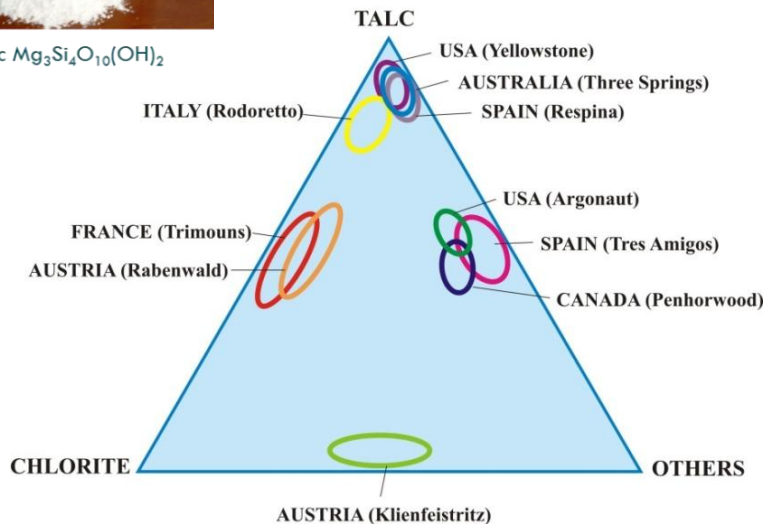
<sup>1</sup>Sheffield Resources has not yet reported Mineral Resources at McCalls and any discussion in relation to targets and Mineral Resources is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. For further details refer to ASX release of 17 January 2011.

# TALC

- Simple “Dig and Deliver” Commodity
- Sheffield targeting Premium Grade Talc to gain market penetration



Talc  $Mg_3Si_4O_{10}(OH)_2$



(source: Luzenac web site)

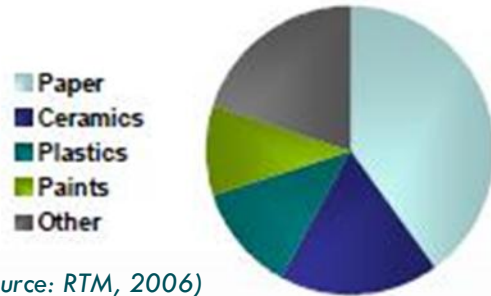


Three Springs Talc Mine 1996 (source GSWA)



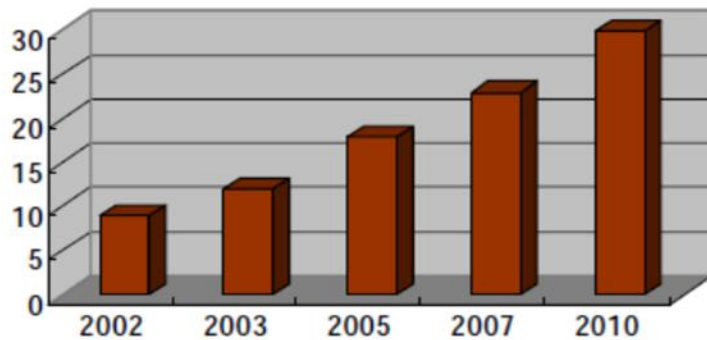
Luzenac lump talc stockpiles, awaiting shipment Geraldton Port

# TALC USES & MARKET

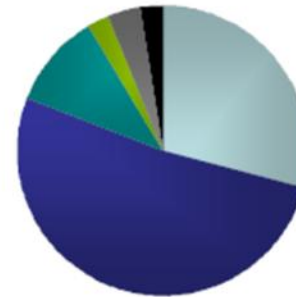


(source: RTM, 2006)

**“Talc production was up 18 per cent compared with the first half of 2009 driven by strong polymers demand from the auto sector..” – Rio Tinto Half Yearly Results to 30 June 2010**



Amount of plastics products consumed by China's automobile industry in 2002-2010 (x100,000 tons)  
(Source: China Talc Association)



Global talc production

(source: RTM, 2006)

**Global Market: ~6Mtpa**

“(Chinese) output of high quality talc powder and lump is considered insufficient to meet the needs of either Chinese domestic market or export” – Mike O’Driscoll, *Industrial Minerals*, 2008

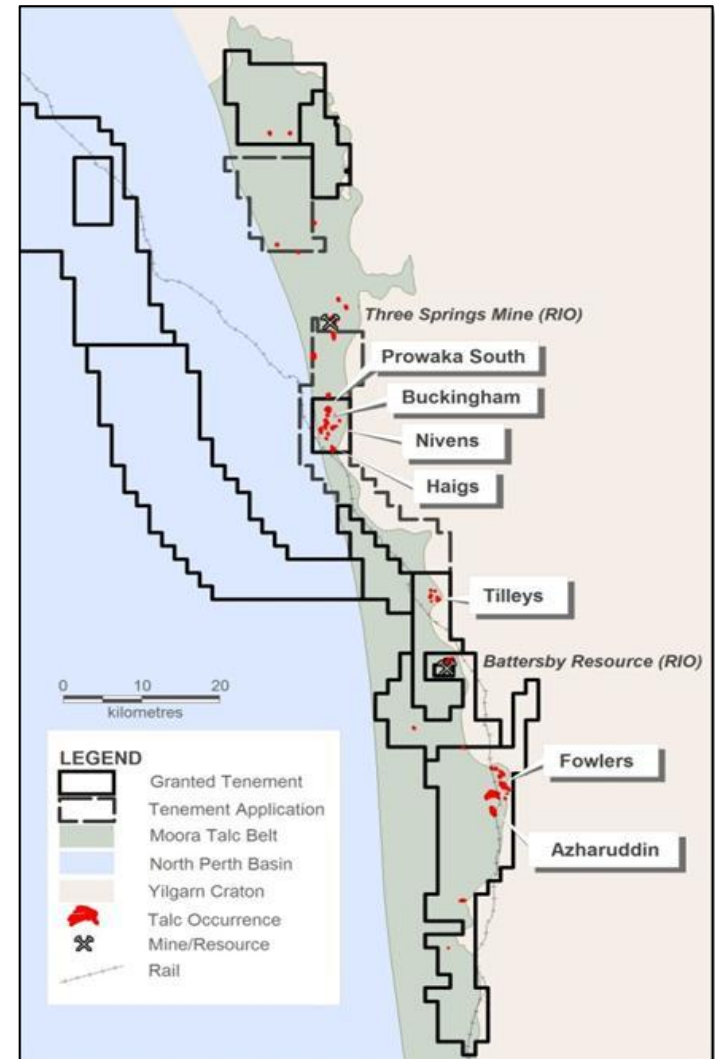


**Price: US\$260-460/t depending on grade**



# MOORA TALC BELT

- 175km long Talc Belt
- Locked up by majors for last 50 years
- Hosts world class Three Springs Talc Mine – producing premium talc since 1948
- Simple “dig and deliver” operation
- Three Springs Mine is a key element of Luzenac’s global talc business, recently acquired by Imerys from Rio Tinto
- Sheffield controls exploration potential – dominant tenement position of 1,150km<sup>2</sup>

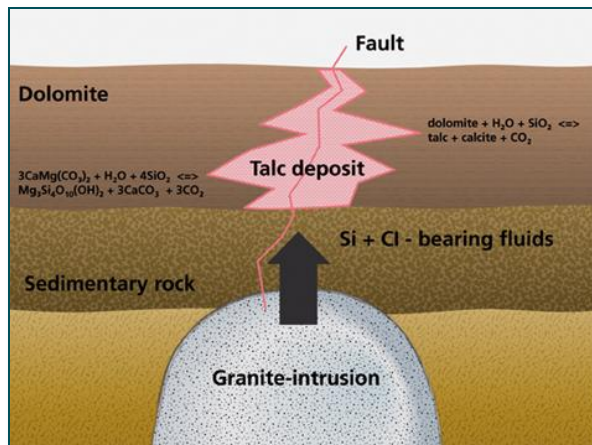


# TALC EXPLORATION OPPORTUNITY

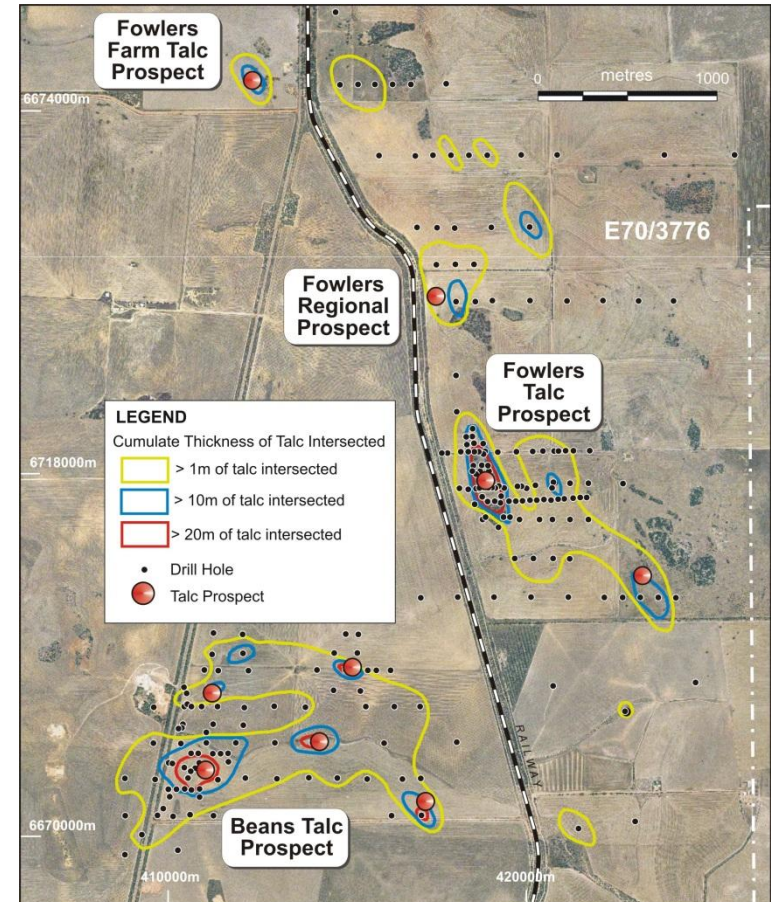


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- Prior exploration by WMC, Rio & others - significant sunk cost
- Extensive database
- Over 20 “walk up” drill targets
- Predictive geological model



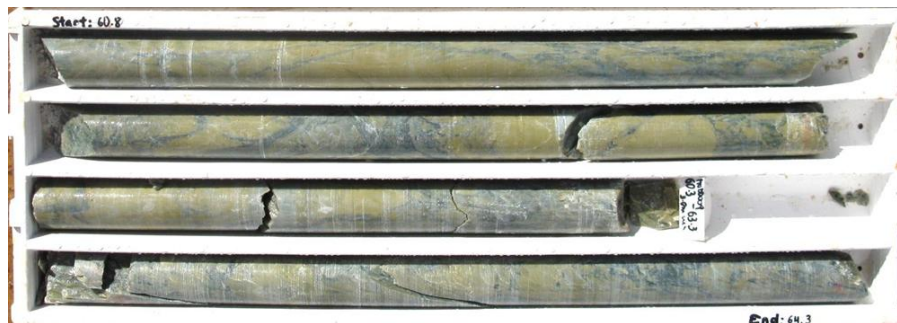
Source: Mondo Minerals web site



Compilation of prior exploration drilling in the Fowlers region

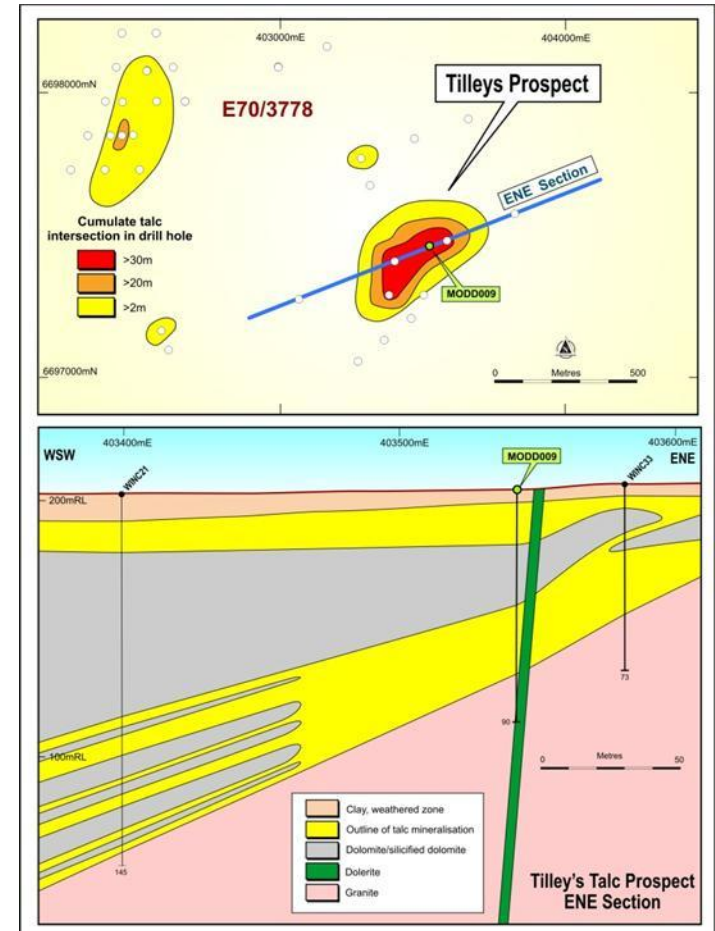
# SHEFFIELD'S TALC DRILLING

- 1,238m core drilling program completed in May-June
- Significant talc in 4 of 6 prospects tested<sup>1</sup>
- Up to 84m of talc intersected from surface at Fowlers
- 26.5m of talc from 45m depth at Tilleys
- Assay results due in September



Tilleys Prospect green talc (MODD009 – 60.8 to 64.3m, HQ core).

<sup>1</sup>See ASX release 27 June 2011 for further details

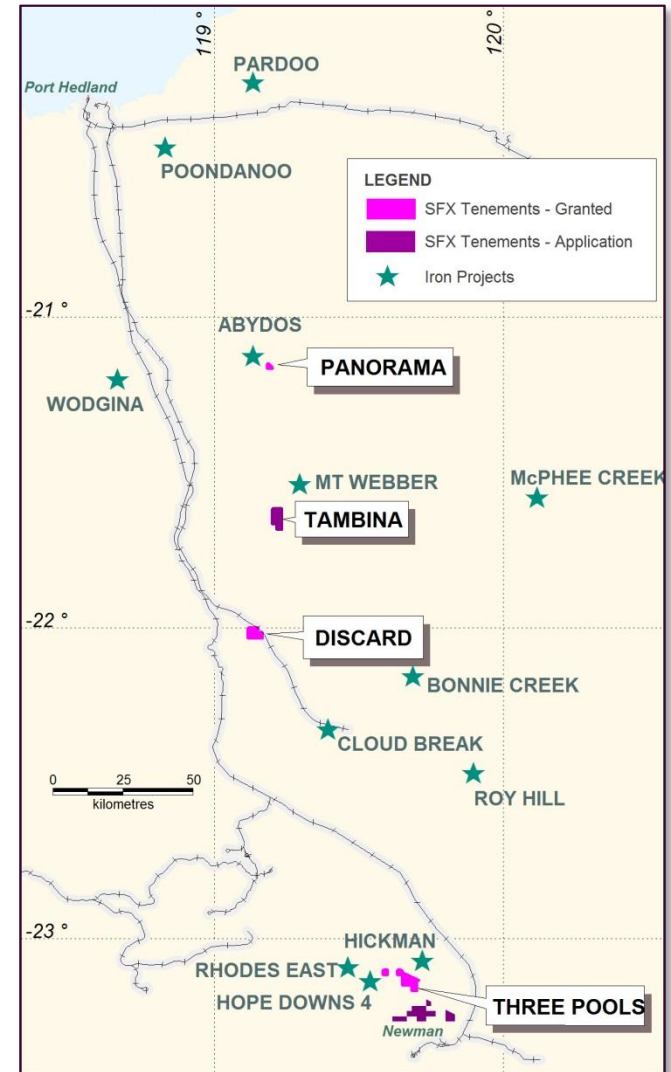


# PILBARA IRON PROJECT

- Pilbara - World Class Iron Province
- Core expertise of Sheffield's management team
- Significant hematite mineralisation mapped and sampled at Three Pools and Panorama during 1H 2011<sup>1</sup>
- Exploration Target<sup>2</sup> of **20-60Mt @ 58-64% Fe** outlined at Three Pools
- Drilling scheduled for Q4 2011

<sup>1</sup>Refer to ASX release of 27 July for further details.

<sup>2</sup>Sheffield 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.



# EXPLORATION & EVALUATION TIMETABLE

Project	Drilling status	Assay timetable	Resource Estimation	Scoping Study	Prefeasibility
<b>Yandanooka HMS</b>	Drilled 1H 2011	Results received	Completed	Q4 2011	1H 2012?
<b>Ellengail HMS</b>	Compilation of historic drilling completed	N/A	In Progress	Q4 2011	1H 2012?
<b>West Mine North HMS</b>	Drilled 1H 2011	Results received	Oct 2011	Q4 2011	1H 2012?
<b>McCalls HMS</b>	Drilled 1H 2011	Late August, 2011	Oct 2011	Q4 2011	1H 2012?
<b>Irwin HMS</b>	Drilled 1H 2011 Further drilling planned for 1H 2012	Sept 2011	Q3 2012	-	-
<b>Drummond Crossing HMS</b>	Drilled 1H 2011	Sept 2011	-	-	-
<b>Durack HMS</b>	Drilling planned 1H 2012		Q3 2012	-	-
<b>Stockyard HMS</b>	Drilling planned 1H 2012		-	-	-
<b>Moora Talc</b>	9 holes completed Further drilling planned for 1H 2012	Sept 2011	Q3 2012?	-	-
<b>Pilbara Iron</b>	Drilling Q4 2011 & Q1 2012	Dec 2011	Q3 2012?	-	-

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

# CONCLUSION

- Experienced Board and Management with proven track record in project generation
- Three growth sectors: HMS, Talc, Iron Ore
- Clear strategy
- Rapid progress since listing in December 2010
- **Strong Mid West focus and commitment to contributing to the region's growth.**



# SHEFFIELD RESOURCES LTD ASX:SFX

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For further information please visit the company's web site: [www.sheffieldresources.com.au](http://www.sheffieldresources.com.au)



# APPENDIX 1

## YANDANOOKA RESOURCE TABULATION

Domain	Mineral Resource Category	Material Million Tonnes*	Bulk Density	HM %	Slimes %	Osize %	In-situ HM Million Tonnes*
<b>HG Core</b>	Indicated	37.50	2.0	3.8	15.8	11.0	1.41
<b>LG Halo</b>	Indicated	23.50	1.9	1.3	12.9	6.8	0.31
	Inferred	10.75	1.9	1.1	12.9	9.0	0.12
	Total	34.25	1.9	1.3	12.9	7.5	0.43
<b>ALL DOMAINS</b>	Indicated	61.00	2.0	2.8	14.7	9.4	1.72
	Inferred	10.75	1.9	1.1	12.9	9.0	0.12
	Total	71.75	2.0	2.6	14.4	9.3	1.84
Domain	Mineral Resource Category	In-situ HM Million Tonnes*	Mineral Assemblage (% of HM Tonnes) <sup>1</sup>				Total VHM
			Zircon	Rutile >95% TiO <sub>2</sub>	Leucoxene 85-95% TiO <sub>2</sub>	Ilmenite <55-85% TiO <sub>2</sub>	
<b>HG Core</b>	Indicated	1.41	12.7	6.7	8.1	63.9	91.4
<b>LG Halo</b>	Indicated	0.31	10.1	7.0	12.5	59.8	89.4
	Inferred	0.12	10.1	7.0	12.5	59.8	89.4
	Total	0.43	10.1	7.0	12.5	59.8	89.4
<b>ALL DOMAINS</b>	Indicated	1.72	11.7	6.8	9.8	62.3	90.6
	Inferred	0.12	10.1	7.0	12.5	59.8	89.4
	Total	1.84	11.5	6.9	10.2	61.9	90.4

Yandanooka Project – Mineral Resources as at 16 August, 2011, at 0.9% HM Cut-off

\*Tonnes have been rounded to reflect the relative uncertainty of the estimate