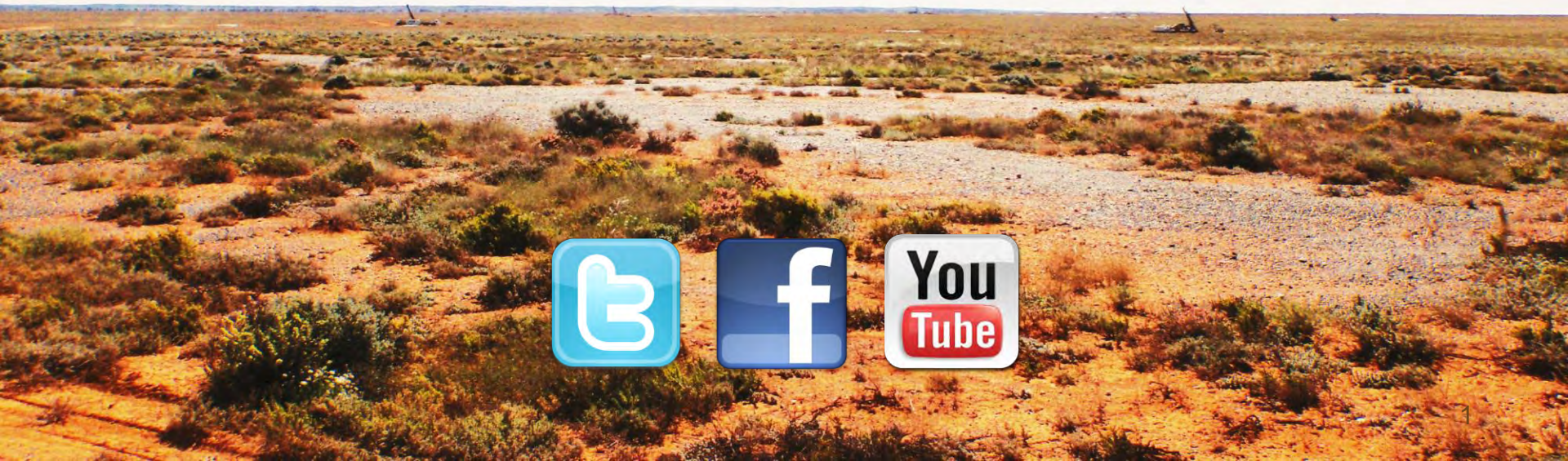
Carpentaria Exploration Ltd Update

AGM Oct 18th

We find it. We prove it. ***We make it possible.***



Carpentaria

We Find It

We Prove It

We Make It Possible

Aim :

Discover, Develop and Mine mineral resources to grow shareholder value and fund further discoveries in Eastern Australia

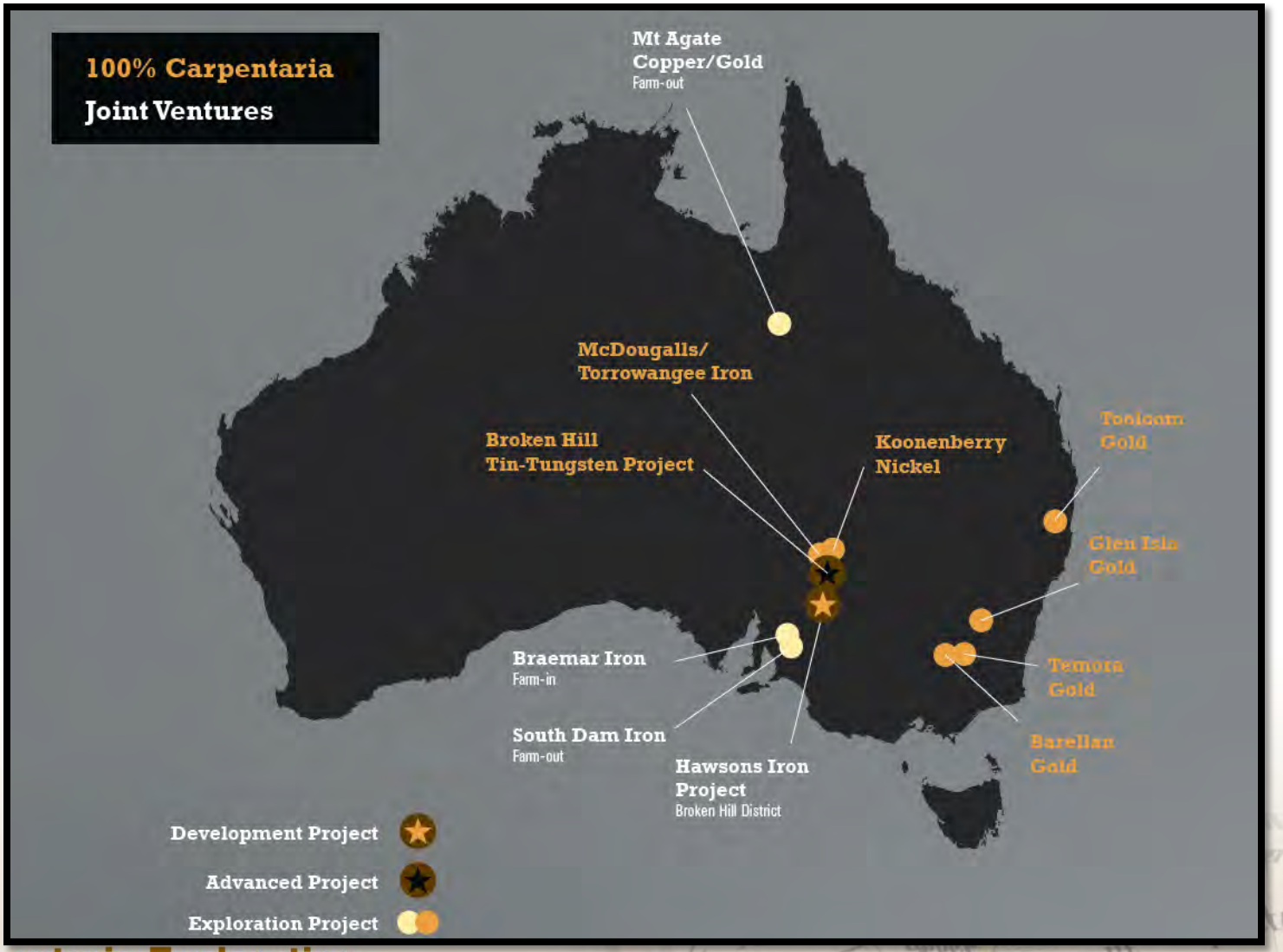
Abilities :

Strong geoscientific and engineering team

Track Record :

- Established Resource at Hawsons
  - ✓ Positive PFS released
- Tin / Tungsten near Broken Hill
  - ✓ Tungsten Resource
- Gold – Lachlan Fold Belt
- Continue turn over EL's

Carpentaria Current Projects



Company Snapshot October 16th

ASX : CAP

FINANCIAL 16th Oct 2012

Cash A$5.8 million

Share Price and Volume 12 months

QUOTED SECURITIES

105,991,301 shares

LARGEST SHAREHOLDERS

Silvergate : 17.79%

Aust' Conglin Int' Inv' : 10.6%

Conglin Yue : 3.7%

Directors & Management (inc' unlisted Options : 13.31%)

INVESTMENTS

2.2 m Guildford Coal Ltd fully paid shares ~ value $1m 16th Oct

KEY ASSET

Hawsons Iron Project JV – Carpentaria 60%

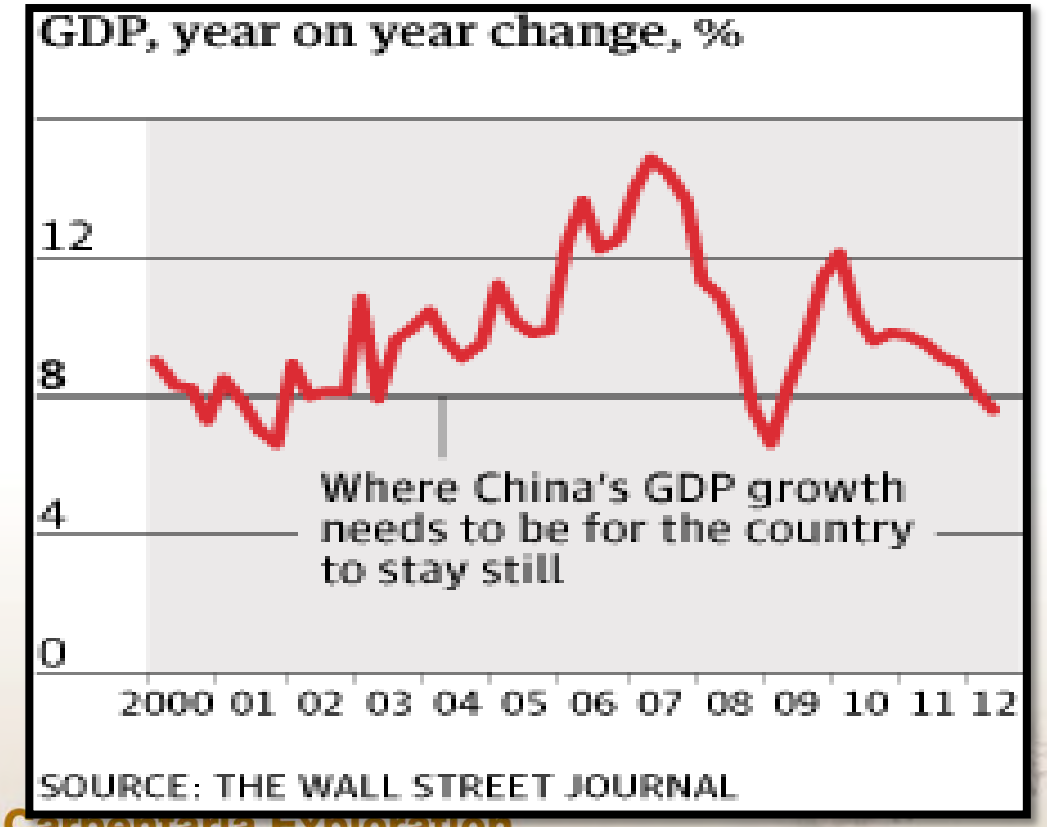
HAWSONS IRON PROJECT
Largest Magnetite Project in NSW

Is Iron Still Worth It ?

In the News :

- **China slow down :**

The Chinese economy was expected to grow 7.8 per cent in 2012 and 8.2 per cent in 2013, the IMF said.
Oct 9th AAP



This is a very good slow down !
Will still require Iron

Is Iron Still Worth It ?

In the News :

- **Iron price reduction**
  - **Hematite producers reducing project expenditure**

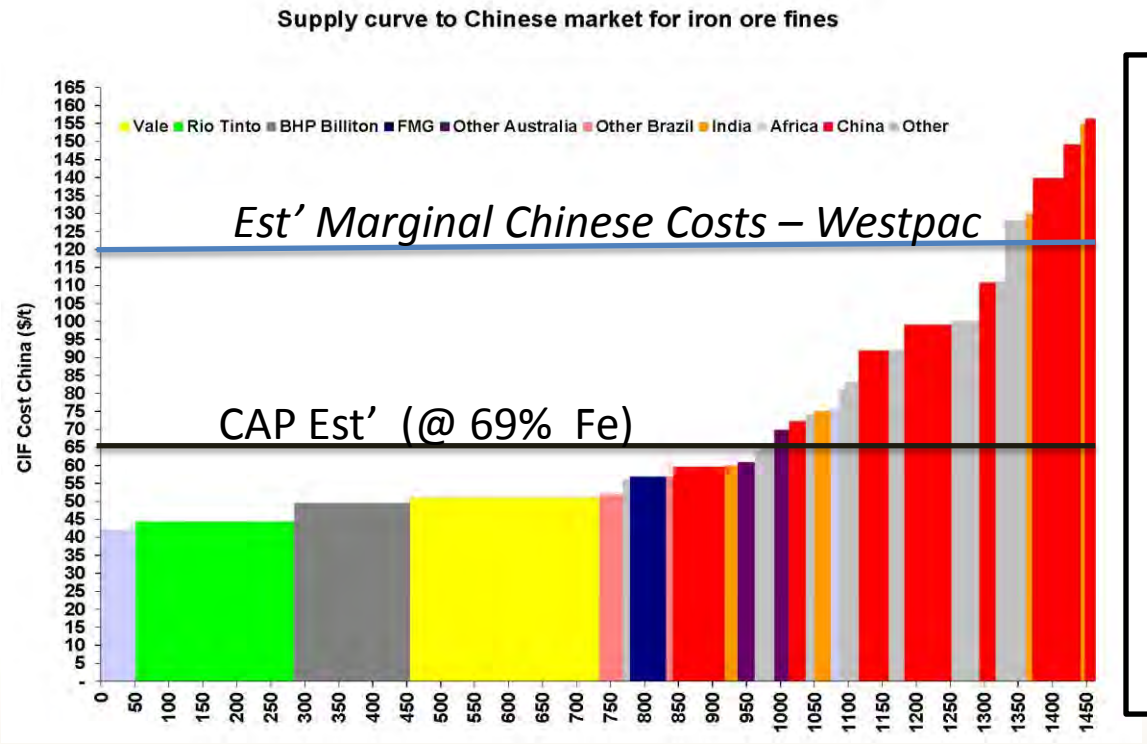
Legend
BHP
RIO
FMG – Fortescue Metals
AGO – Atlas Iron
MGX – Mt Gibson
GRR - Grange Resources
BCI - BC Iron
CAP – Carpentaria Exp'

Revenue Calculation (@ spot)		RIO	BHP	FMG	AGO	MGX	GRR	BCI	CAP
Iron ore fines price - 62% Fe	US$/dmt cfr	93	93	93	93	93	93	93	93
deduct freight	US$/t	(7)	(7)	(7)	(10)	(22)	(22)	(7)	(15)
Iron ore fines price - 62% Fe	US$/dmt FOB	86	86	86	83	71	71	86	78
Fe%		62%	62%	58%	58%	61%	66%	57%	68%
Adjust to Fe content	US$/dmt FOB	0	0	(6)	(6)	(1)	4	(7)	9
Quality adjustment	%	0%	0%	5%	5%	0%	0%	5%	0
Quality adjustment	US$/dmt FOB	0	0	(4)	(4)	0	0	(4)	0
Rec'd price	US$/dmt FOB	86	86	76	73	69	74	75	87
Moisture	%	6.0%	6.0%	9.0%	7.5%	3.0%	5.0%	8.0%	9%
Adjust for moisture	US$/mt FOB	(5)	(5)	(7)	(5)	(2)	(4)	(6)	(8)
Pellet premium (for GRR)	US$/wmt FOB						25		
Rec'd price	US$/wmt FOB	80	80	69	67	67	96	69	79
Rec'd price	**A$/wmt FOB**	77	77	66	65	65	92	66	77
Costs									
COGS guidance	A$/wmt FOB	26	33	45	66	59	95	50	41
royalties	%	7%	7%	11%	7%	7%	5%	7%	10%
plus royalties	A$/wmt FOB	5	5	7	4	4	5	4	4
Cash Costs	**A$/wmt FOB**	31	38	52	70	63	100	54	45
plus D&A	A$/wmt FOB	7	6	5	13	4	18	2	10
Total Costs	**A$/wmt FOB**	38	44	57	83	67	118	56	55
EBITDA Margin	**A$/t**	47	40	14	(5)	2	(8)	12	22
EBIT Margin	**A$/t**	40	34	9	(18)	(2)	(26)	10	32

Source: Company filings and UBSe.

Note : Carpentaria's costs are estimated at $50FOB (dry) in its PFS. However wet, they are reduced by 9%.

Is Iron Still Worth It ?



Macquarie Research Aug 2012

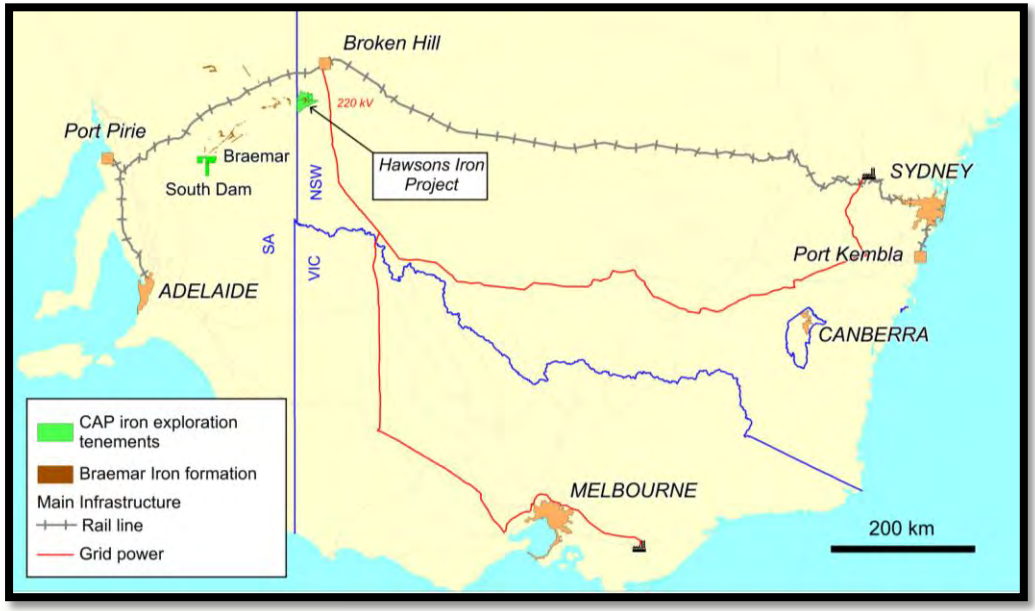
Implications – all in U$:

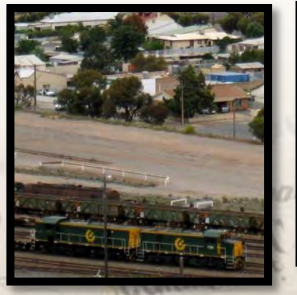
- **Probable Future Base cost for 62% $120/t**
- **CAP will realise a premium (69% Fe)**
- **Hawsons very profitable at $120/t (62% Fe)**

HAWSONS IRON PROJECT
Largest Magnetite Project in NSW

- *Resource* – very large with potential for 50 year plus mine life
- *Mining* – very low unit costs because low strip ratio, very wide mining widths, low abrasion index and single pit
- *Processing* - comparatively very low cost because of very soft mineralised rock
- *Infrastructure* – water, power, transport and port all available for start up
- *Approvals* – low hurdles compared with other projects

Native Title has been extinguished





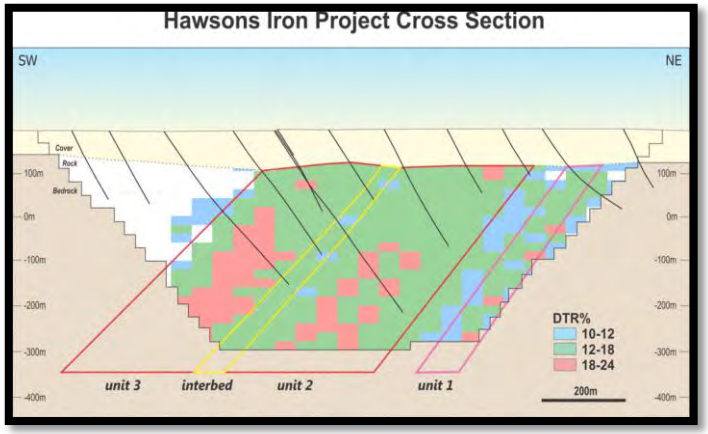
HAWSONS IRON PROJECT
Maiden Resource / Exploration Target[1]

JORC Inferred Resource (12% DTR cut off)

1.4 billion tonnes at 15.5% mass rec.

220 million tonnes of concentrate

69.9% Fe; 2.50% SiO_2; 0.22% Al_2O_3; 0.002 P_2O_5



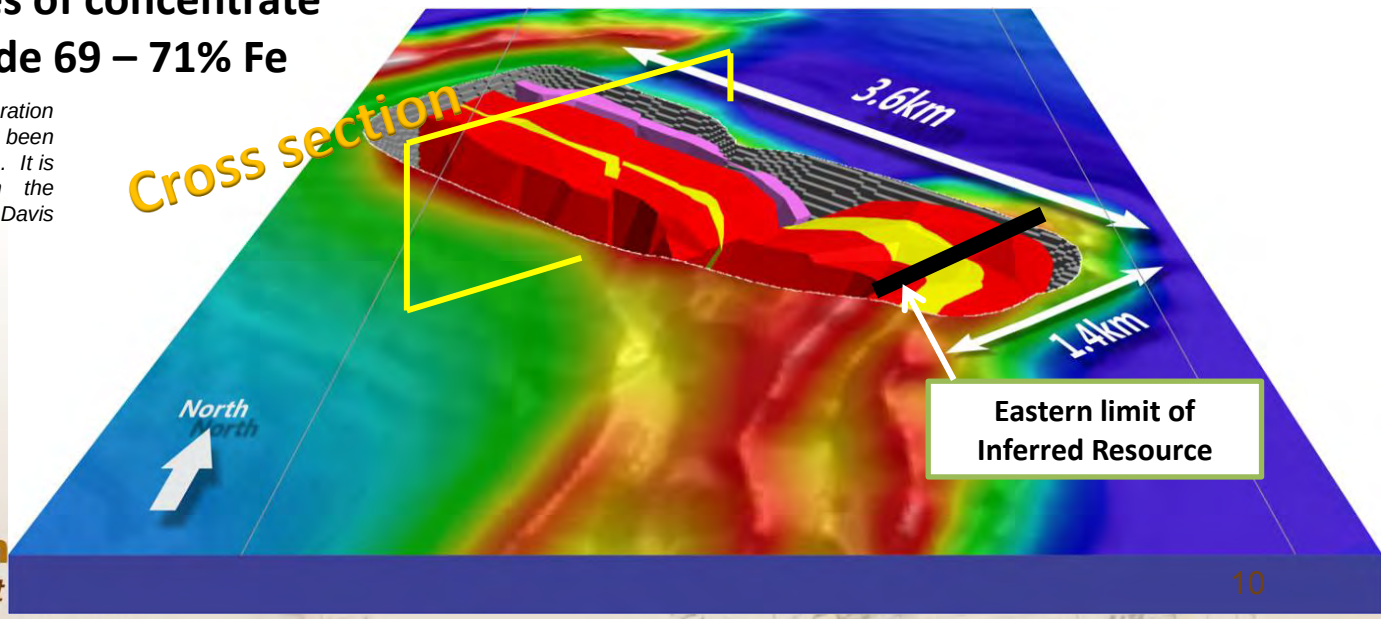
Exploration Target[1]

6 to 11 billion tonnes

900-1,900 million tonnes of concentrate

DTR 14-17%, Con' Grade 69 – 71% Fe

[1] *The potential quantity and grade of the exploration targets is conceptual in nature and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource. (DTR is Davis Tube Recovery)*



Hawsons
At 15.5% DTR - Why Does it Work ?

The Value at Hawsons :

1. **Low waste to Ore ratio (0.3:1)**
   - **Mining costs low - not mining too much waste**

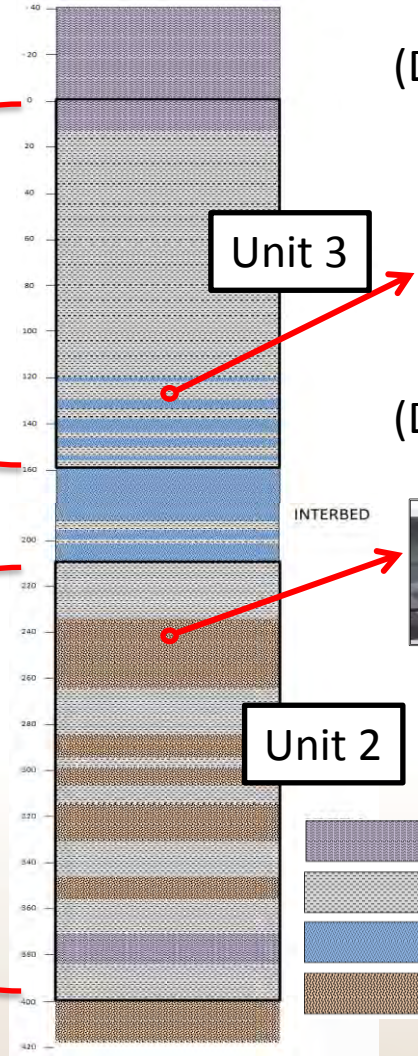
2. **Large mining widths and single pit to year 20**
   - **Mining costs low – thick consistent Fe units**
   - **Large and easy to move material – in pit crushing and conveyancing**
   - **Minimising truck usage – lower OPEX**

3. **Soft Ore**
   - **Lower mining costs (compared to BIF's)**
   - **Lower grinding (processing costs)**
   - **Reduce CAPEX**

4. **High grade concentrate will low contaminants**

5. **Infrastructure**
   - **Power, water, rail, mining community**
   - **Port availability**

HAWSONS IRON PROJECT
Value - Geologically Consistent

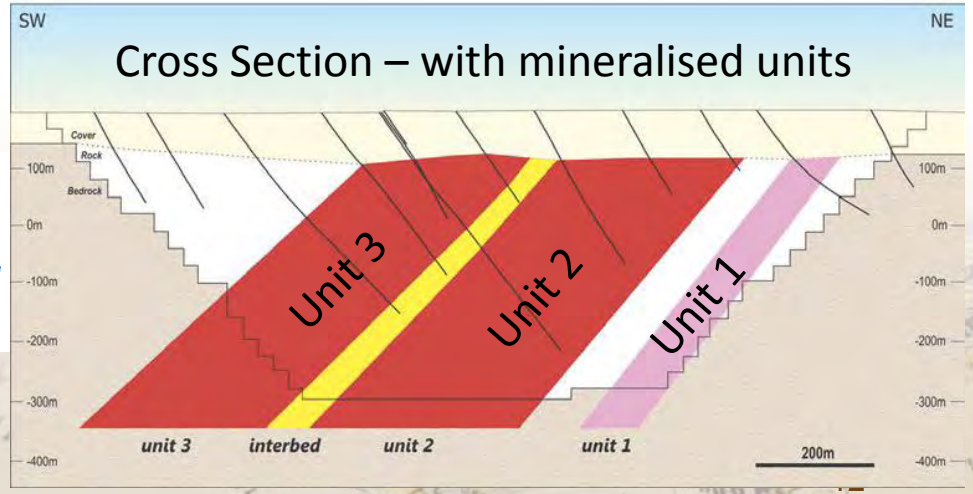


(DD10BRP023)

(DD10BRP039)

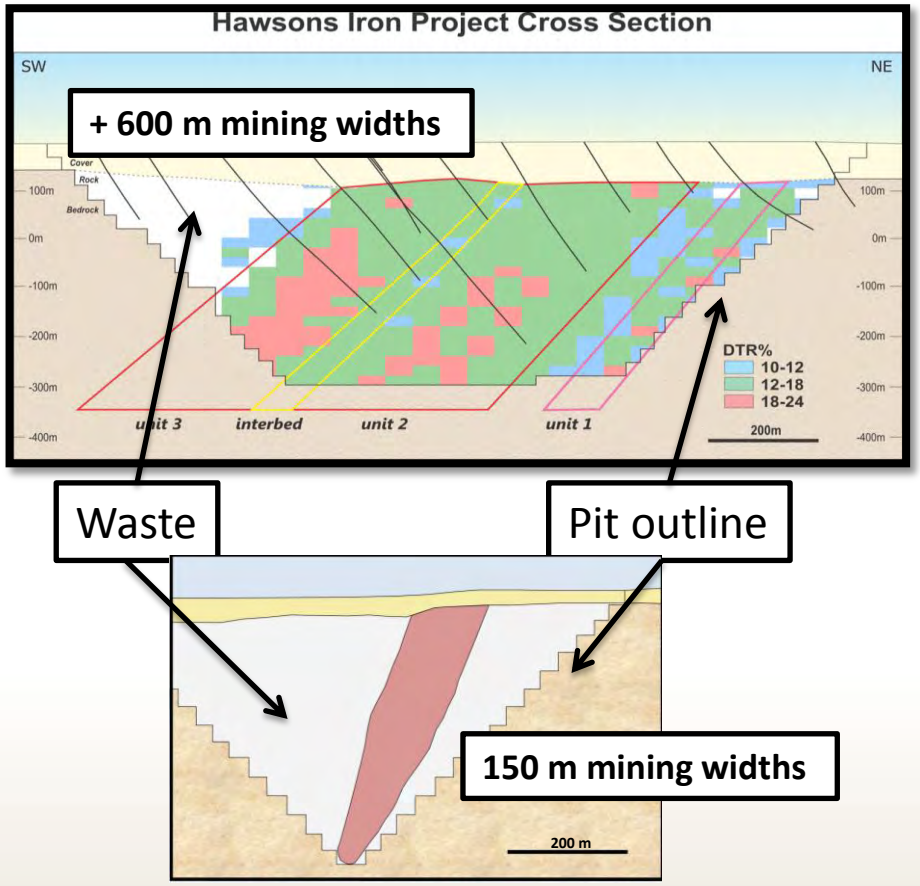
True Thickness 400-500m

Composition
- **Magnetite**
- **Quartz**
- **Carbonate**
- **Chlorite/biotite**
- **Hematite**



Carpentaria Exploration
We find it. We prove it. *We make it possible.*

HAWSONS IRON PROJECT
Why Does it Work ? low Waste : Ore



Example at same scale

Waste to ore 0.3 : 1, 15.5% DTR

Mine 130t material to produce 100t of ore

100t ore gives 15.5t of concentrate

8.4 t material moved produces 1 tonne concentrate

Example of a WA style BIF deposit

Waste to ore 2.3: 1, 36% DTR

Mine 330t material to produce 100t of ore

100t ore gives 36t of concentrate

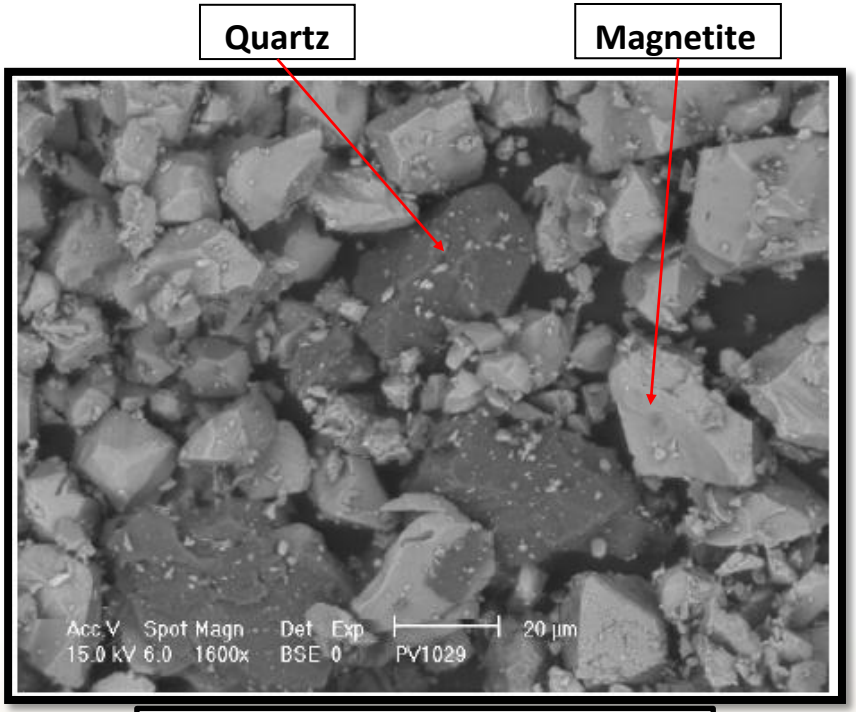
9.2 t material moved produces 1 tonne concentrate

HAWSONS IRON PROJECT
Why Does it Work ? – Soft Ore

Unique Metallurgical Characteristics :

- **Low bond work index of 6 - 8 kWh/t**
  (BIF's ~ 15 – 30 kWh/t)
- **Low abrasion index ~ 0.09**
  (BIF's ~0.3 – 0.7)
- **Rock Strength (UCS) 50 – 90 Mpa**
  (BIF's ~ 355 Mpa)

All this shows very soft ore



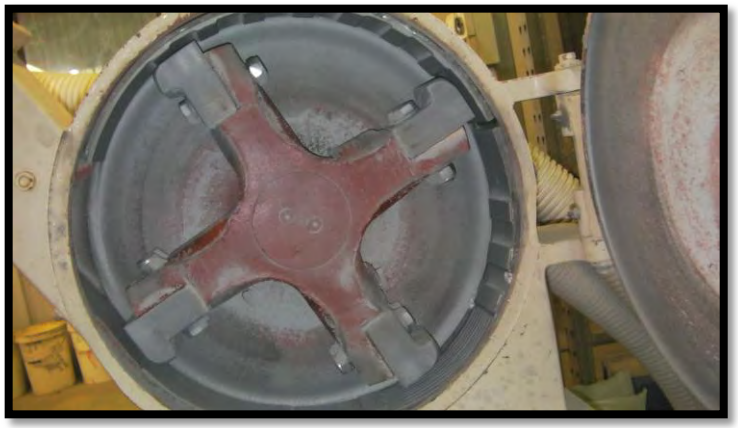
Rock breaks into grain size

HAWSONS IRON PROJECT
Why Does it Work ? – Easy to Crush

- Suitable for Impact Crushing
  - High reduction ratios – rapid throughput
  - Generates fines early

    Saves on secondary crushing

- Simple Process Flow
  - Crushing
  - Screening
  - Magnetic Separation
  - Milling
  - Possibly fine Grinding
  - Fine Concentrate
- Slurry Pipe to Rail / Port



HAWSONS IRON PROJECT
Pilot Plant - Proof of Concept

Work at HRL Testing Pty Ltd

6t core through Impact Crusher

- **Decimates the ore**
- **Fines generated >40% minus 106 micron**

- **Rougher Magnetic separation**
  - **Greater than 50% solids rejected – to tails**
  - **Rougher concentration**

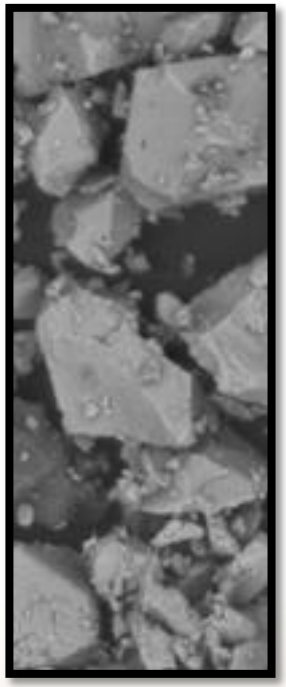
    ~40% Iron
- **Ball Milling requirements**
  - **Less than 50% of ore needs to be milled**
  - **Milling testwork planned for next week**

HAWSONS IRON PROJECT
Why Does it Work ? – Magnetic Separator

HAWSONS IRON PROJECT
Low Cost Front End Crushing

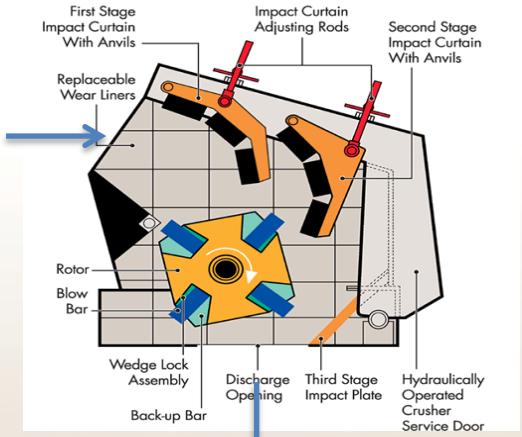
PRIMARY CRUSHING - IMPACT CRUSHERS

HPGR



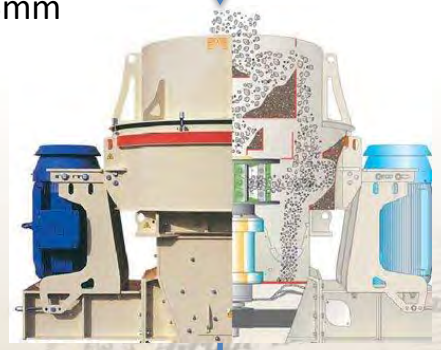
~40µm

Feed
<800mm



Discharge
<65mm

Feed
~ 65mm



Discharge
~70% <1mm

HAWSONS IRON PROJECT
Value of Soft Ore – power per tonne concentrate

Hawsons

Grinding costs

Bond Work index : 6 kWh/t

At 15.5% DTR :

39 kWh to produce 1 tonne con'

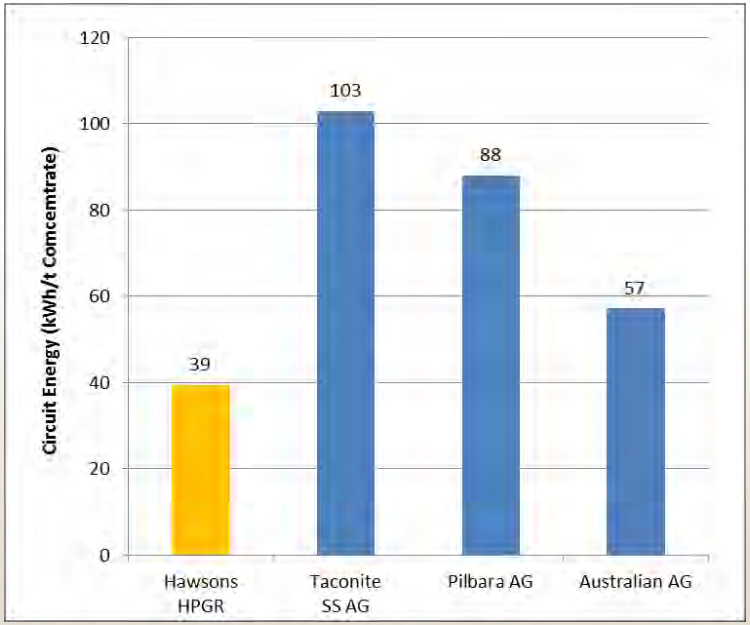
Example of a WA BIF

Grinding costs

Bond Work index :~ 20 kWh/t

At 36% DTR :

57 kWh to produce 1 tonne con'



Note :

- **Power calculations based on public information**
- **Hawsons costs assuming HPGR / Ball Mill circuit**
- **Anticipate lower power with impact crushers**

HAWSONS IRON PROJECT
Optimization Studies - Processing

Preliminary Costings for a 5Mtpa Crushing Module

Equipment	5Mtpa (equivalent)		Installed Power kW	Estimated Costs M AUD	Option Study 5Mtpa (Anticipated)		Installed Power kW	Estimated Costs M AUD
Primary Crushers	Gyratory	1	1,200	4.5	Impact Crusher	2	2,400	2.0
Secondary Crushers	Cone	2	1,900	7.0	Barmac	5	3,000	2.5
Tertiary Crushers	HPGR	4	16,000	31.2	-	-	-	
Total			19,100	42.7			*5,400*	*4.5*

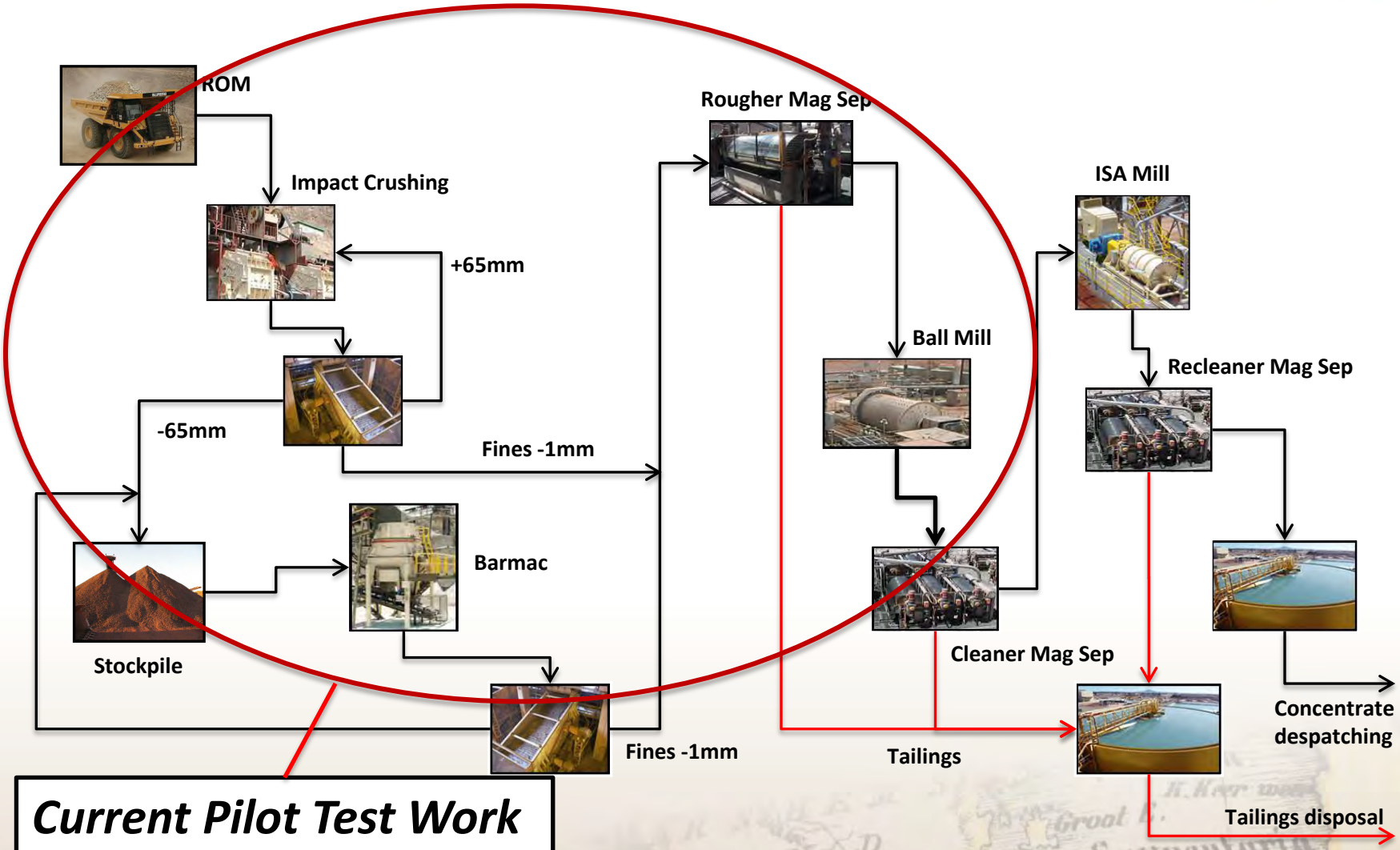
Total Installed Power consumption estimated to be reduced from 173 MW to ~ 143 MW

Estimated Power Reduction of 15 – 20% *

* *Reduction not put into PFS, power for entire on site operation at 20Mtpa con. production*

HAWSONS IRON PROJECT

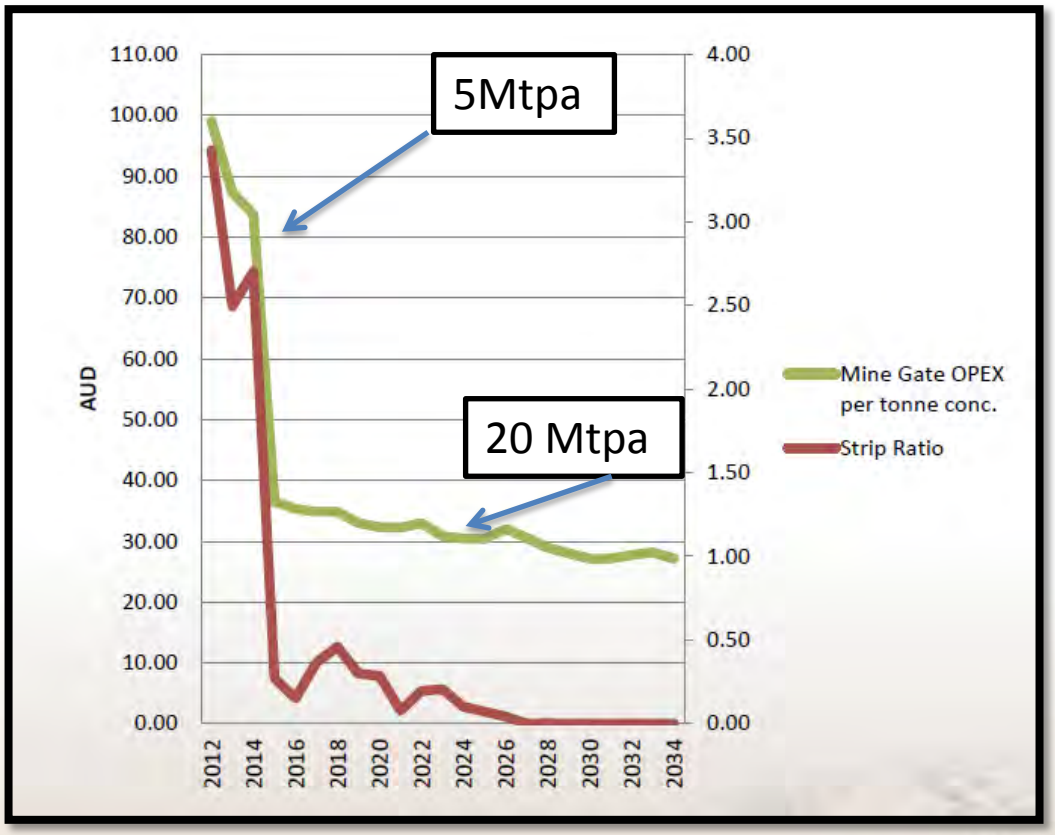
Optimization Studies – Simplified Flow Diagram



HAWSONS IRON PROJECT
3d Mine Model animation

HAWSONS IRON PROJECT
Operating Cost Summary

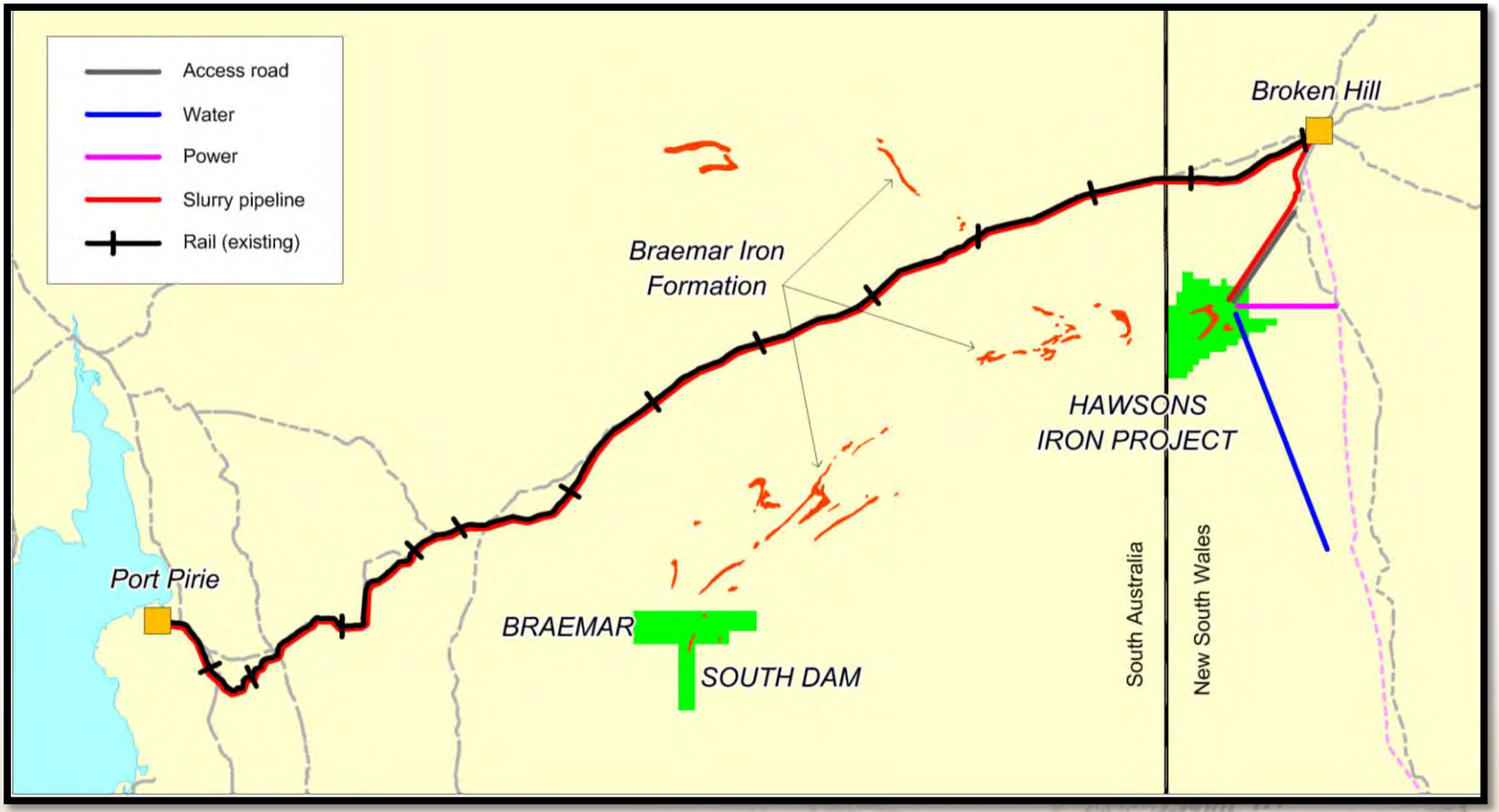
Operating Costs and Strip Ratio



Over Life of Mine :

- **Operating costs : Fall from $36 to $27**
- **Waste to ore Strip Ratio : Reduce at start of mine from ~ 0.4 :1 to 0 in 10 years**

HAWSONS IRON PROJECT
Transport Options From Site to Port

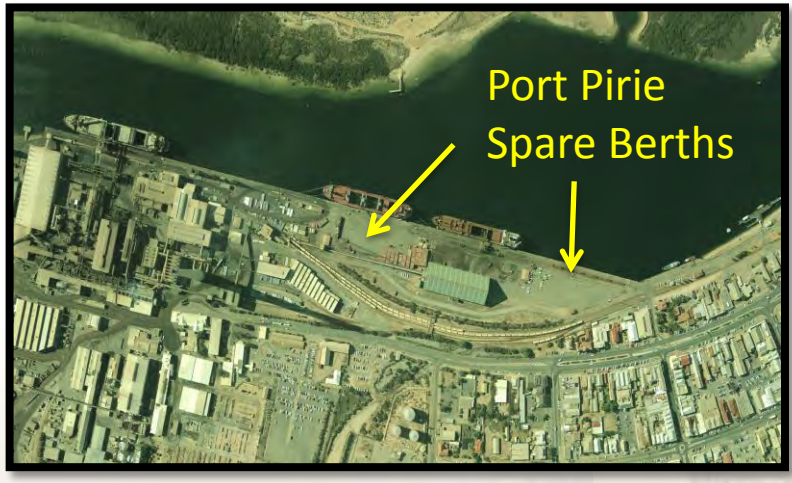


HAWSONS IRON PROJECT
Pipe Line animation

HAWSONS IRON PROJECT
Transport Options – Great Optionality

Recent Developments – March 21, 2012

- **MOU signed with Flinders Ports to determine long term handl storage and loading solution at Port Pirie, South Australia**
- **Common User Facility for potential to export 20 – 30Mtpa of iron concentrates**



Start Up Preference

- **Year 1 – 5Mt**
  - **slurry to Broken Hill , train to Port Pirie**
- **Ramp up to yr 4 - 20Mt**
  - **slurry to Broken Hill ,**
  - **slurry / train to Port Pirie**
- **13Mtpa available using existing rail to Port Pirie**
- **Port capacity available at Port Pirie pending upgrade**

HAWSONS IRON PROJECT
Cost Summary

Costs per tonne concentrate	AUD
Mining Costs	$15
Processing Costs	$11*
Other (incl' Royalties)	$8
Transport to and onto Ship	$13[a]- 19[b]
Total FOB Port Pirie	**$47-53**

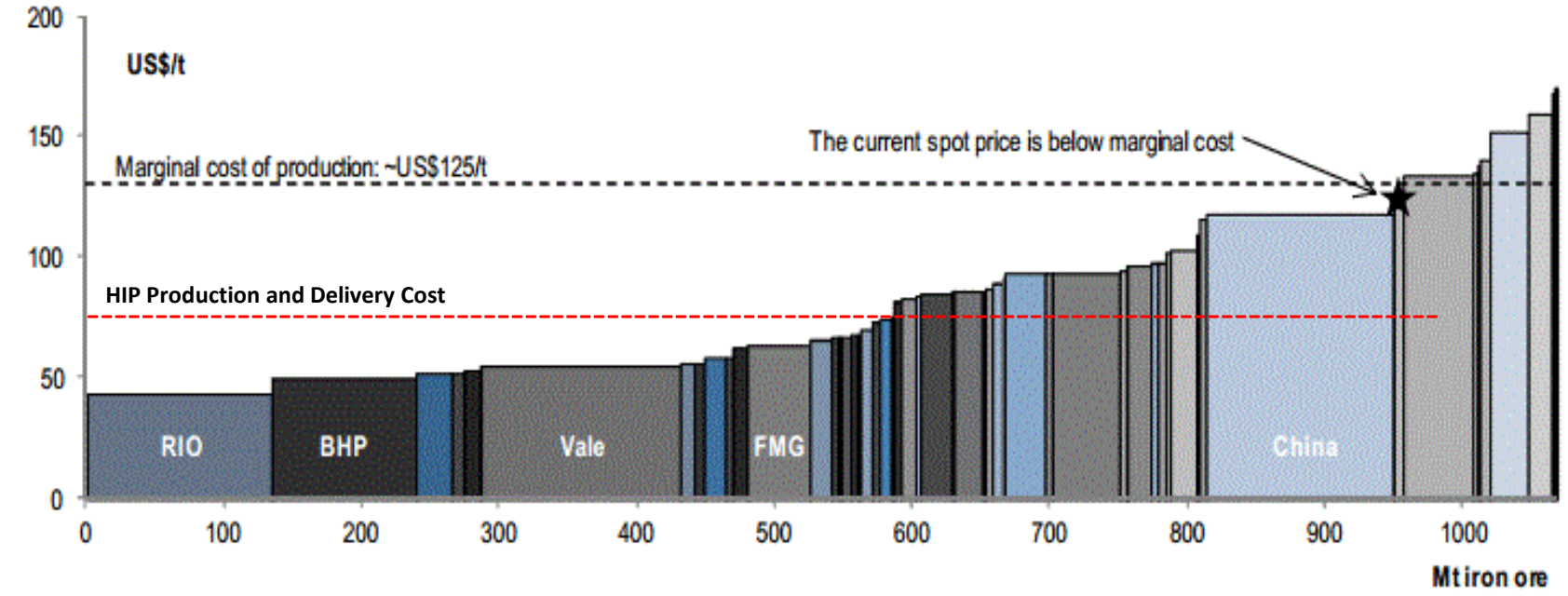
- **FOB costs highly competitive (av. Closer to $60)**
- **Including transhipping**

[a] Long term pipeline estimate
[b] Rail to Port Pirie estimate
** Not including processing optimization*

FOB – Free on board

HAWSONS IRON PROJECT
Where We Sit

Figure 2: 2011 iron ore cost curve for delivery to China [US$/t 62% Fe CFR China]



Source: J.P. Morgan estimates

HAWSONS IRON PROJECT
Approvals

- Submitted Preliminary Environmental Assessment (PEA) and Development Application to NSW Govt.
- Planning Focus Meeting
  - Meet with government departments involved with EIS
  - Meeting held today
- Will receive guidelines for Environmental Impact Statement (EIS)
- Entered discussions with TransGrid

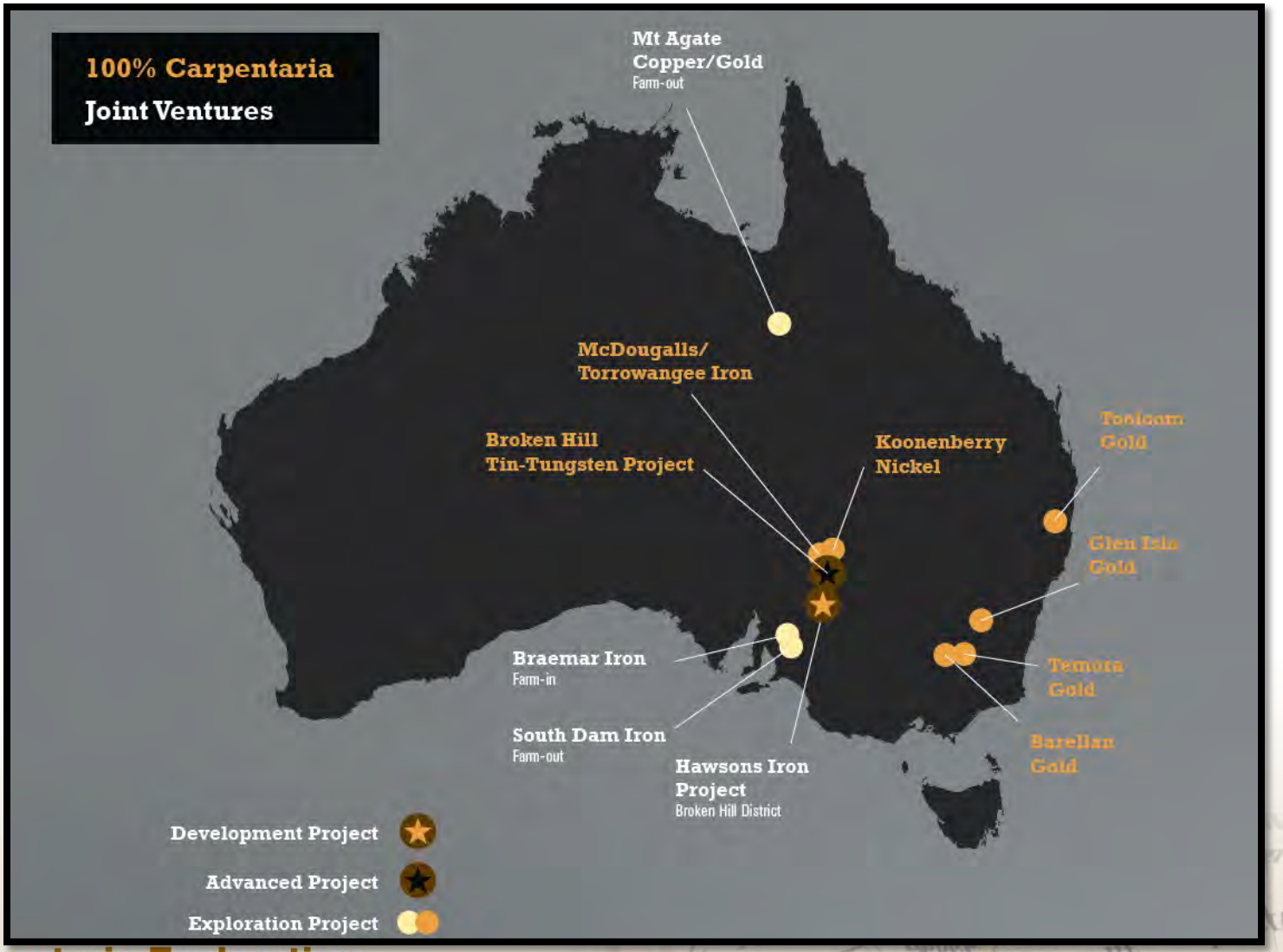
Power Lines Near Site

Weather Station on Site

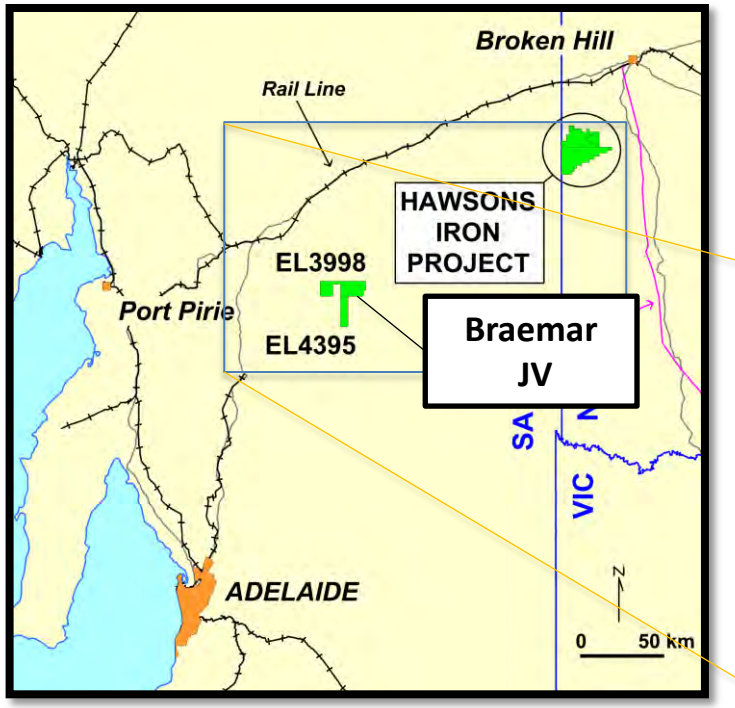
HAWSONS IRON PROJECT
Work Program - Summary

- *Port Pirie Expansion*
  - Flinders Port to complete
- *Metallurgical Testwork*
  - Pilot scale ongoing
- *Transport Studies*
  - Maximise option utility (Slurry/rail)
- *Drilling*
  - Improve resource category
  - Geotechnical testing
  - Metallurgical sampling
- *Statutory Approvals*
  - PEA submitted – Meeting on Oct 18th with Govt

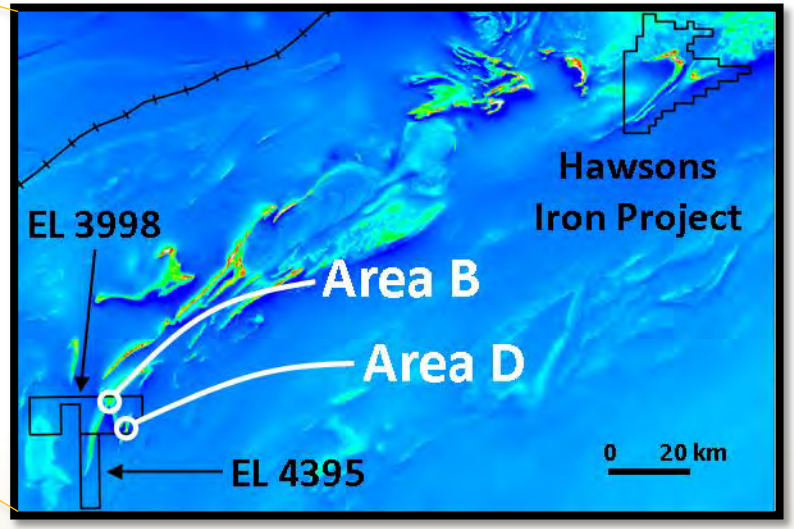
Carpentaria Current Projects



Carpentaria Iron Projects Braemar JV



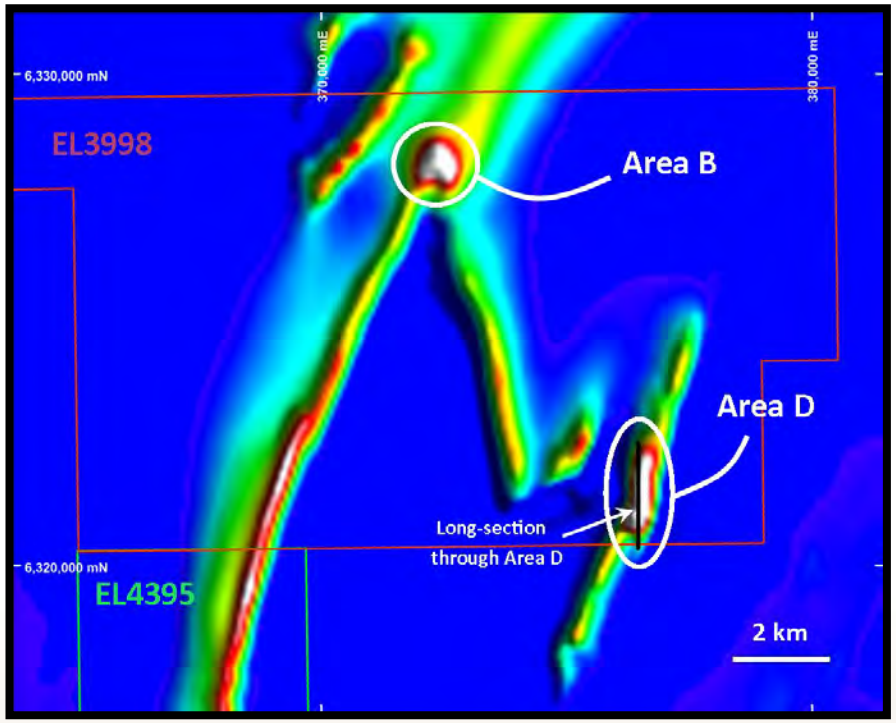
Airborne magnetic image
Green to Red depicts Braemar Iron Formation



Close to Adelaide / Port Pirie
Good transport infrastructure
(Rail and Road)
No Native Title

Tail end of Braemar Iron Formation
EL 3998 ~ 20kms of Braemar
EL 4395 ~ 10kms of Braemar

Carpentaria Projects



Target :

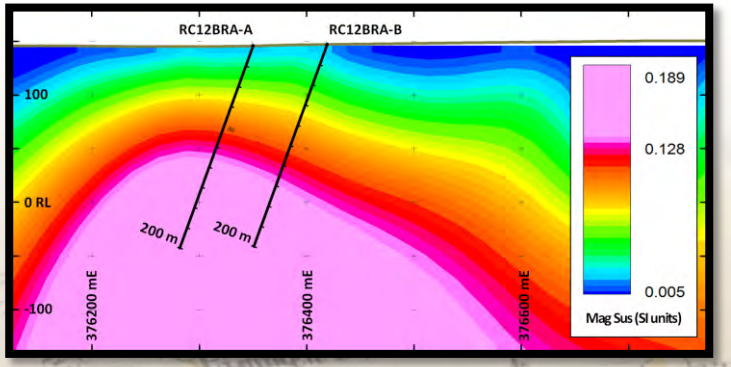
1. **High amplitude magnetic anomalies that may represent magnetite**

Two zones for test :

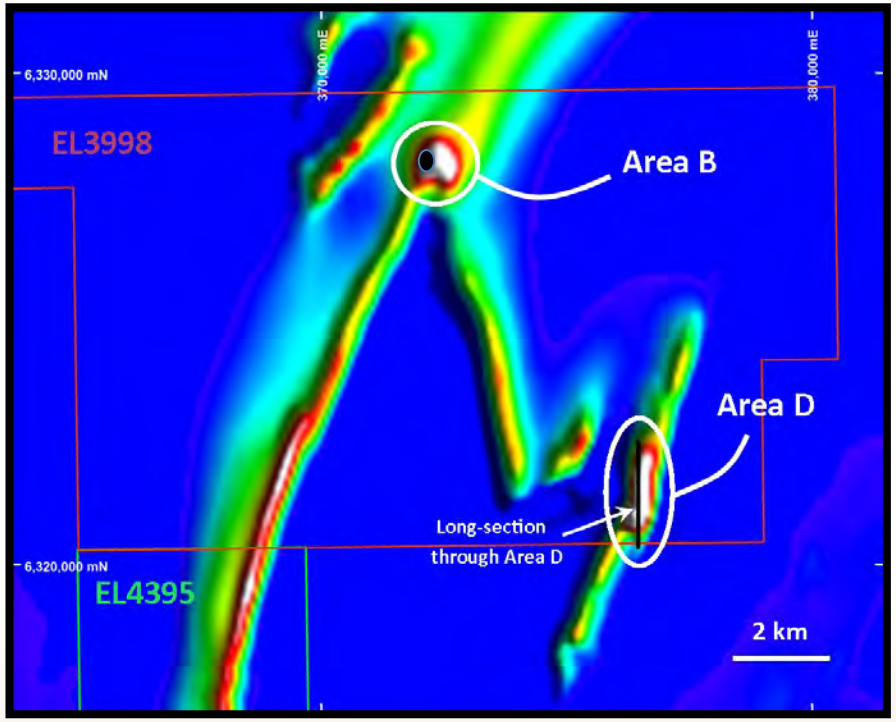
1. **Depth of oxidation**
2. **Quality of magnetite**

Drilling started yesterday

Example of magnetic model



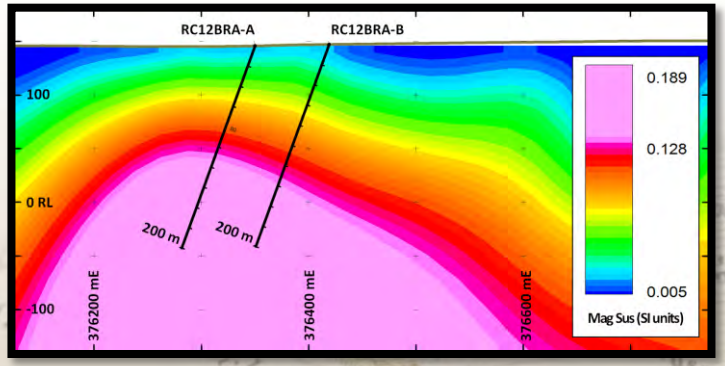
Carpentaria Current Drilling



Initial Drill Results :
RC12 BM001

- **0 - 18 m unconsolidated cover**
- **18 – 62 m oxidised magnetite siltstone**
- **62 – (eoh) 160 m interbedded magnetite siltstone 30,000 SI units**

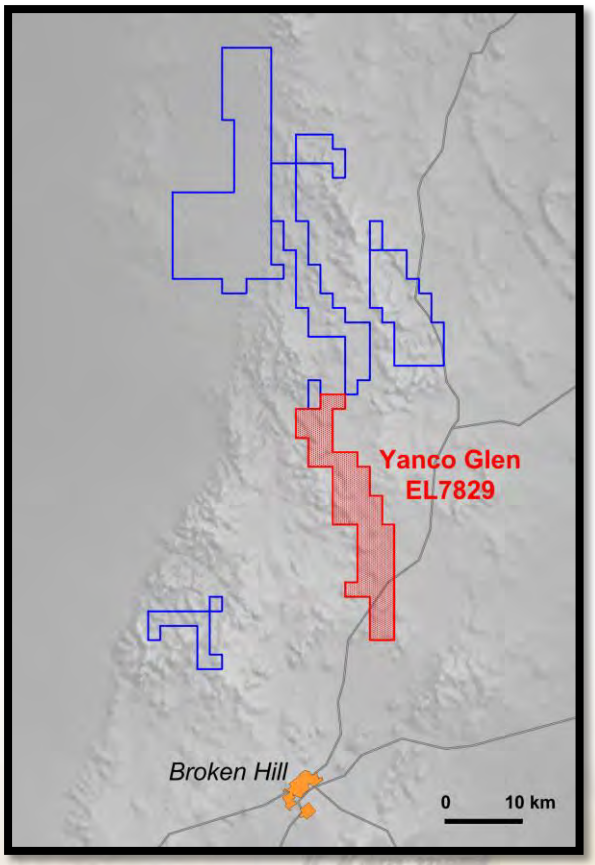
(interpreted to be same as Unit 2 at Hawsons)



Carpentaria Tin Tungsten Projects

Carpentaria's strategic objective :

- close to Broken Hill
- establish a cluster of tin and/or tungsten deposits
- coarse grained surface mineralisation
- easily mined by low cost methods
- processed with a single, centrally located plant
- Produce a tin concentrate and tungsten concentrate using same processing plant



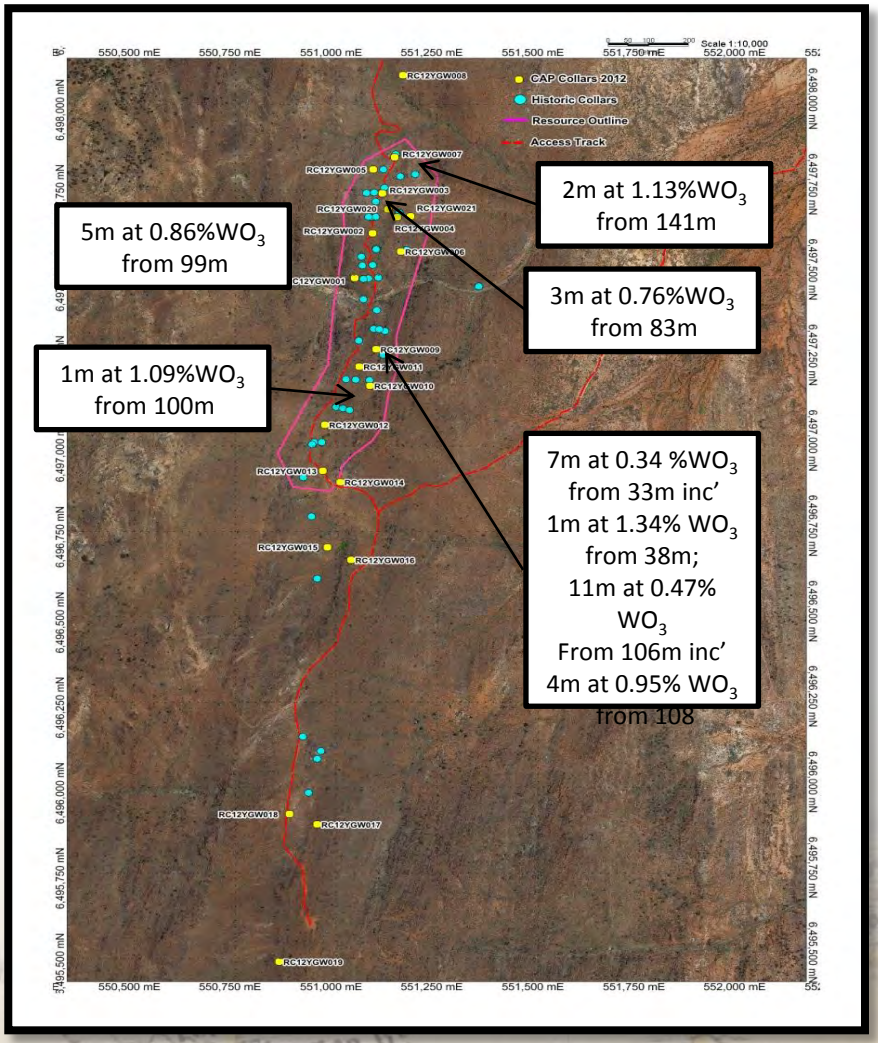
Carpentaria
Tungsten Project – Yanco Glen

New Inferred Resource

3.4Mt @ 0.11% WO_3
(at 0.05% WO_3 cut-off) containing 3,953t WO_3

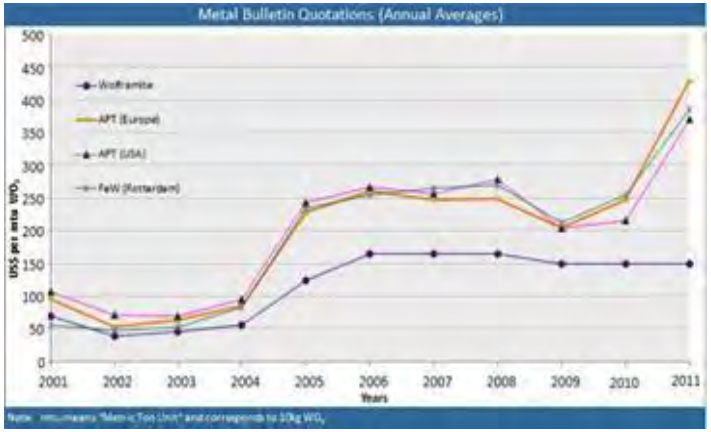
Doubled in-situ tonnes of contained metal
(**3,950t** of **WO_3**)
Previously published and now superseded 2006 inferred resource of 0.83Mt @ 0.21% WO_3 or 1,743t of WO_3

- **Resource open and depth and along strike**
- **Will be amenable to open cut mining**
- **Metallurgical test will commence to establish**
  - **Concentrate quality**
  - **Processing techniques inc' ore sorting possibility / beneficiation**

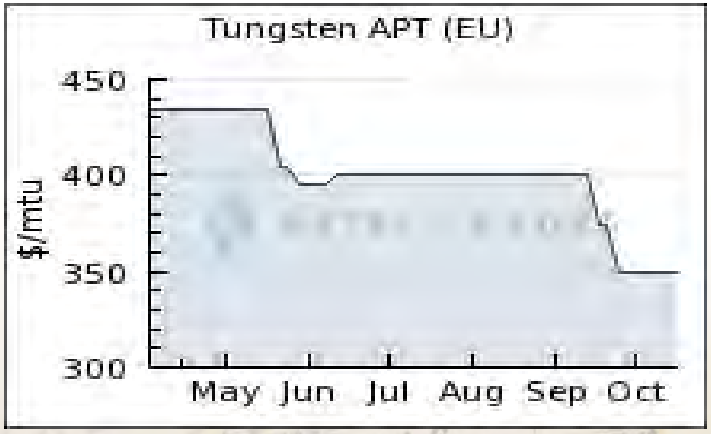


Tungsten Production

- Historically China controls supply
  - China dominated in ‘80 & ’90’s
  - Chinese mines historically high graded
  - ATP plants installed were artificially supported by government
  - Created artificial supply cheap W
- Results today
  - West stopped W exploration
  - Chinese mines now operate at higher costs
  - China now a net importer of W
  - China imposes a 5% tariff on all W exports
  - Identified globally as a Strategic Material



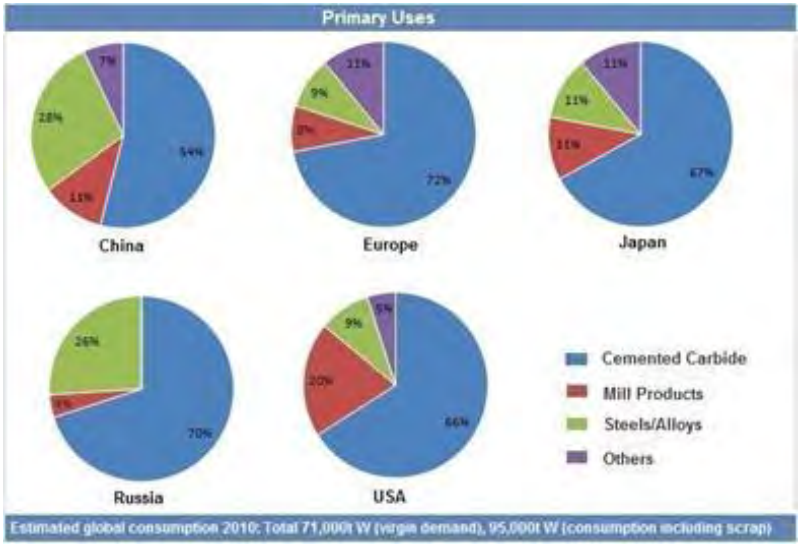
Tungsten Annual Averages U$
(Metal Bulletin Quotations)

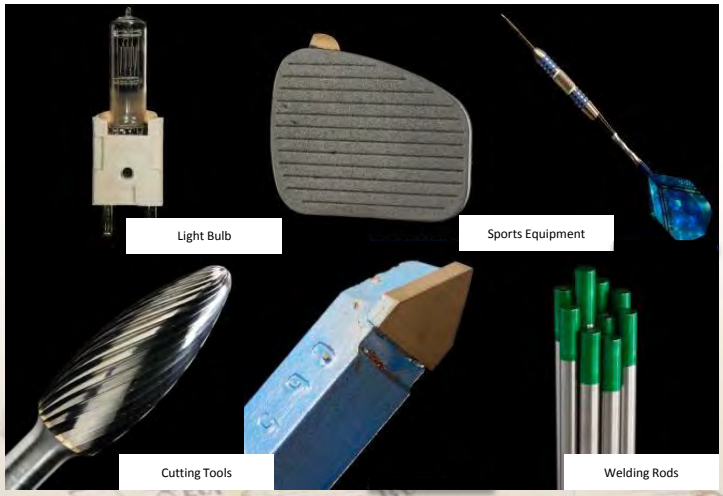


Tungsten APT Prices U$
(Metal-Pages)
Note 1 mtu equals 10 kgs

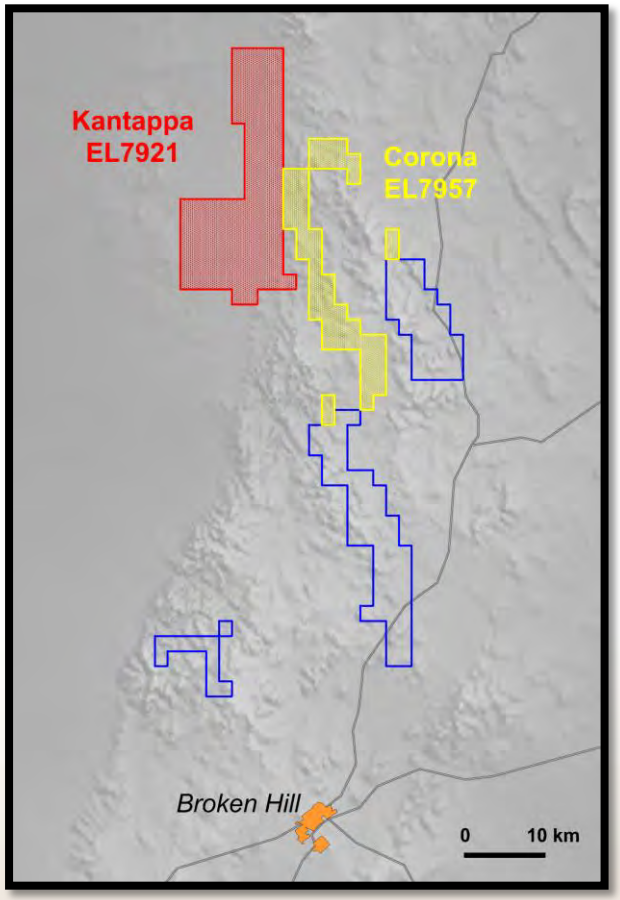
Tungsten – What you may not know

- Tungsten Properties
  - Highest melting point of ALL metals
  - Hard metal therefore robust
  - SG 19.3 – very dense
  - Thermal Expansion 40% of steel
- Uses for Tungsten include: -
  - Hard wearing tool protection (Tungsten Carbide / Tool Steel)
    - Mining drill bits
    - Machine tools / cutters
  - Heat sinks / Transition spacers
  - Furnace and Light bulb elements
  - Radiation & X-Ray shielding
  - Ceramic Glazes

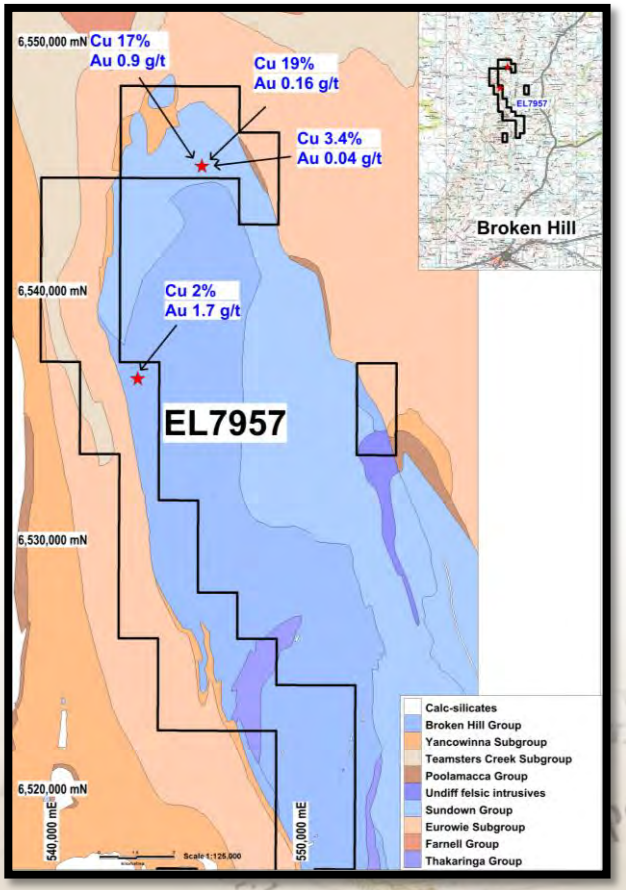




Carpentaria Tin Tungsten Projects

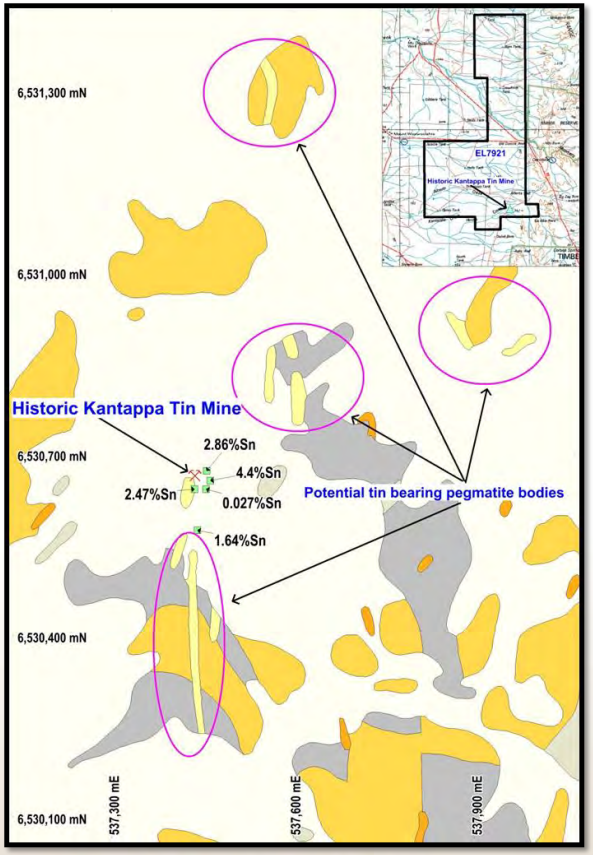


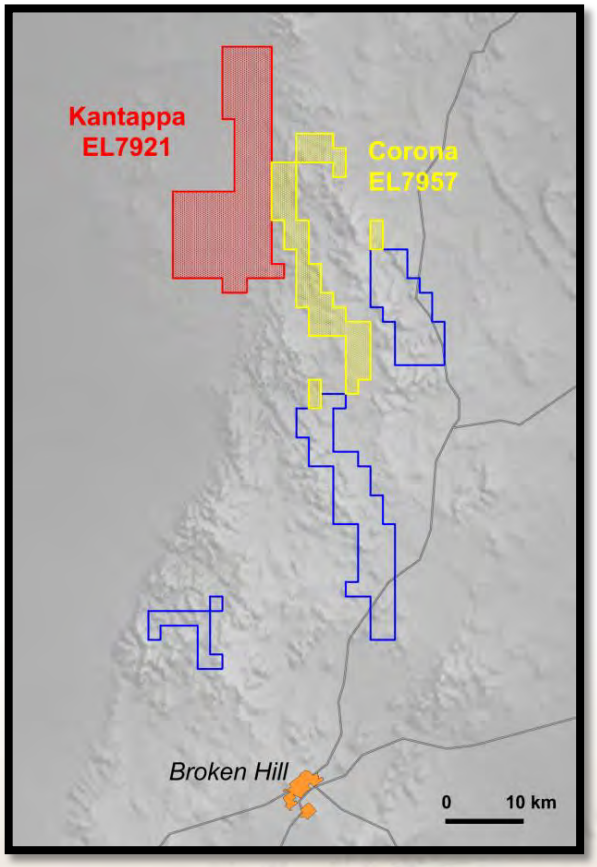
Corona :
Initial Field Results
Indicate up to 19% copper



Carpentaria Tin Tungsten Projects

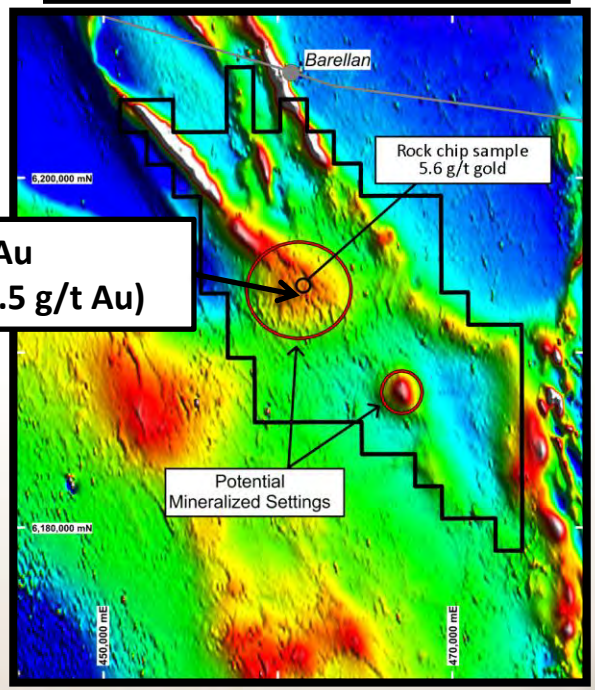
Kantappa :
Initial Field Results
Indicate up to 2.86% tin





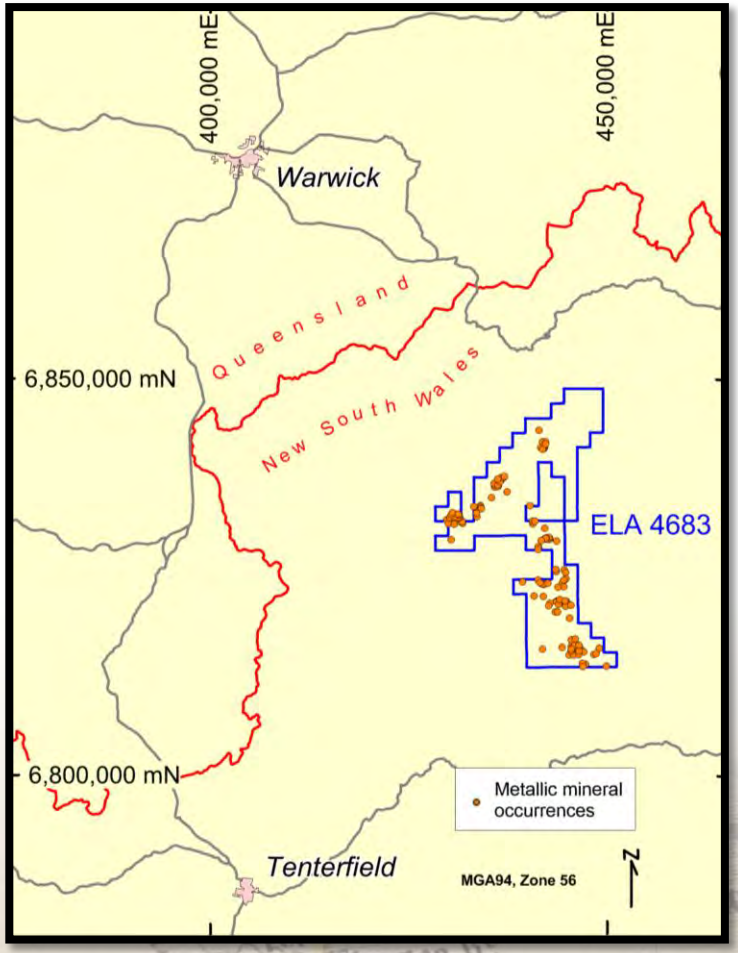
Carpentaria Gold Projects

Barellan EL



60m at 1.5g/t Au
(incl. 10m at 4.5 g/t Au)

Tooloom EL



Carpentaria Summary

Carpentaria is in a strong position

- **Cash in the bank**
- **Major Iron Projects**
  - **One post Pre feasibility**
  - **One in drilling phase with good initial results**
- **New inferred tungsten resource at Yanco Glen doubling in situ tonnage from earlier resource**
- **Good tin results in other tenements requiring follow up**
- **Three large undrilled gold projects in the highly prospective Lachlan Fold Belt of NSW**
- **An excellent team to carry out this work**
- **A strong supportive Board**

The information in this presentation that relates to Exploration Results and Resources is based on information compiled by S.N.Sheard, who is a Fellow of the Australian Institute of Geoscientists and has had sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. S.N.Sheard is an employee of Carpentaria and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Carpentaria Exploration

We find it. We prove it. ***We make it possible.***

Phone: +61 7 3220 2022

To find out more, visit us at
www.capex.net.au

YouTube Broadcast Yourself™

@CARPEXPLORE