

# Carpentaria Exploration Limited We find it, we prove it, we make it possible



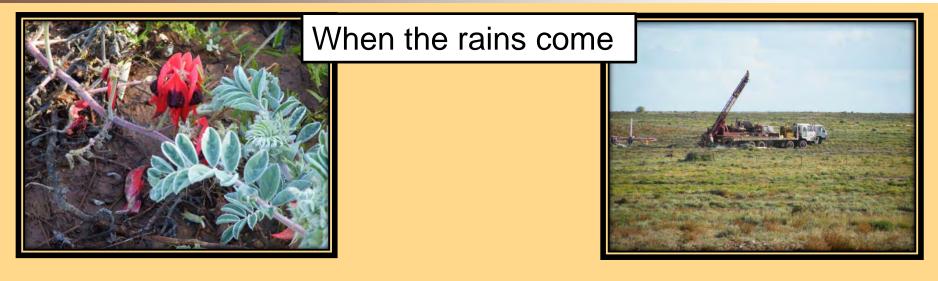
22<sup>nd</sup> November 2010

**AGM Presentation** 

**Nick Sheard** 

### CARPENTARIA EXPLORATION LIMITED







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# CARPENTARIA EXPLORATION LIMITED GOAL

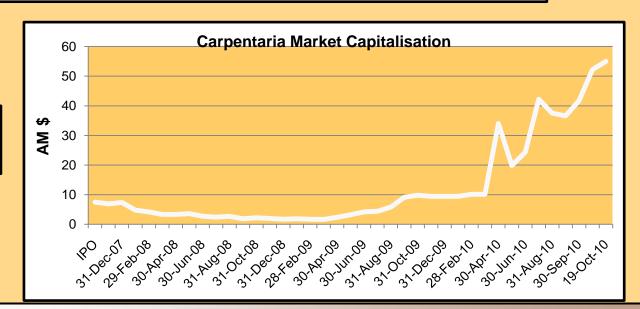


### Become a mid tier mining company in the near future

#### HOW?

Using strong geoscientific team, major company backgrounds, and experience, delivering a pipeline of projects diversified by commodity and geography and by aggressive exploration

Growth through discovery



### COMPANY SNAPSHOT



ASX: CAP FINANCIAL

18th Nov 2010

Cash A\$16.0 million

**QUOTED SECURITIES** 

94.3 m shares

**UNLISTED OPTIONS** 

**7.7M** 



#### LARGEST SHAREHOLDER

Aust' Conglin Int' Inv': 11.2%

Conglin Yue : 3.9% Giralia Resources NL : 9.1%

Directors : 1%

CAPITALISATION - 18th Nov 2010

**\$50 m** (fully diluted)

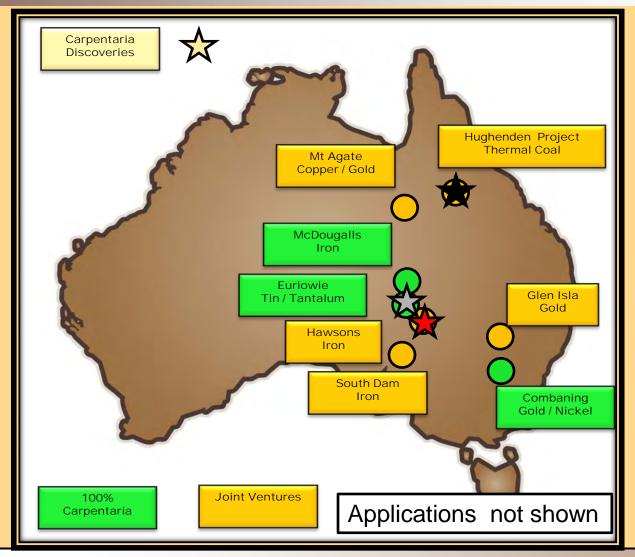
Share Price and Volume 12 months

CAP made a profit of \$1.66 m in 2009 / 2010 CAP made a loss of \$1.48 m in 2008 / 2009



### **EXPLORATION PORTFOLIO**







### LEVERAGED OPPORTUNITIES



(Partner	's spending	on Car	pentaria	projects)
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	Expenditure	Residual
		(CAP)
➢ Iron : Hawsons (Bonython Metal Group)	\$28.0m + \$53.0m cash	20%
➤ Gold : Glen Isla (Ramelius Res. Ltd.)	\$1.0m + BFS	25%
➢ Iron : South Dam (Bonython Metal Group)	\$1.95m	20%
➤ Coal: Hughenden (Guildford Pty Ltd)	<b>\$2.0m</b>	20%
Copper/Gold : Mt Agate (ActivEx Ltd)	<b>\$0.75m</b>	25%

Drilled over 16,000m of drilling to end of September

Anticipate additional 12,000m of drilling to end of year

#### Aim:

- **▶1** billion tonne inferred iron resource
- > Inferred Coal Resource



# **Keep Costs to a Minimum All Hands on Deck – A team at Work**



Co Sec in Breach of H and S – no helmet







Driver Training

# HAWSONS IRON PROJECT Becoming Real







# HAWSONS IRON PROJECT Location



- > Close to infrastructure
  - 60 km SW of Broken Hill
    - mining culture
    - work force
    - services
- > 30 km to rail line (Port Pirie)
- > 30 km to main roads
- > 30km to NSW power grid
- > No Native Title



# HAWSONS IRON PROJECT Overview



#### HAWSONS IRON PROJECT

➤ Large magnetite discovery – July 2009
 Exploration Target¹
 3.5 – 5.8 Billion Tonnes

18 – 20% DTR; **Fe 69 – 71%:** assuming 42 – 46 strike km; **to 250m vertical** 

- Quality and potential size supported by current drilling
- > Potential
  - Low cost mining, processing
  - ➤ High grade, clean concentrate (70% Fe)
  - Long life mine
  - > Increased tonnages with depth ~ 400m ?







# HAWSONS IRON PROJECT BMG earning in



### **Bonython Metal Group Ltd (BMG) JV**

- ➤ Stage 1 :
  - Cash to CAP \$5.0m Done
  - Exploration funding \$8.0m

BMG vests 40%

- ➤ Stage 2 :
  - Cash to CAP \$25.0m *Mar 2011*
  - BMG vests 51%
- ➤ Stage 3 :
  - Feasibility Study costs ~ \$20.0m
  - On completion cash to CAP \$23.0m
  - BMG vests 80%
- CAP has free carried to production of 20mtpa

### Value:

- > No script issued
- Project deal only
- Cash to CAP
  Total \$53.0m
- ➤ Free Carriedhuge value
- CAP to market 4 million tonnes con'
- > CAP undertakes the work



### IS MAGNETITE ECONOMIC?



- Chinese steel industry using magnetite ore for many years.
- Most of china's domestic iron ore production is from magnetite deposits
- Generally, magnetite Fe insitu grades are lower than most hematites
- After beneficiation high grade concentrate with fewer impurities
- > Higher quality of magnetite attracts a premium over most hematites
- Additional crushing and beneficiation costs offset by the higher premium from the sale of the quality product
- Typically used as pellet feed. CRU is forecasting a strong demand for pellet feed
- High quality magnetite can be used as DR feed which attract an even higher premium

CRU | STRATEGIES

### **MAGNETITE** – Limited Technical Risk



### Magnetite has been mined and processed in:

- China most internal production
- ➤ US / Canada mostly magnetite (taconite)
- ➤ Russia / Ukraine more magnetite than hematite
- ➤ Australia / Brazil some magnetite

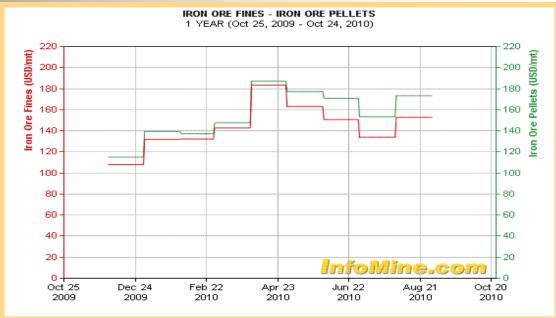
" Off the Shelf " Technologies

Limits risks



# MARKET REVIEW MAGNETITE (October 20th 2010)





- > Iron Fines (equivalent to magnetite concentrate) \$150 /t
- > Blast Furnace Pellets (BF) est + 50% ~ \$175 /t
- > Direct Reduction Pellets (DR) + 10% (no data) ~ \$190 /t



### DRILLING TO DATE



#### Phase 1:

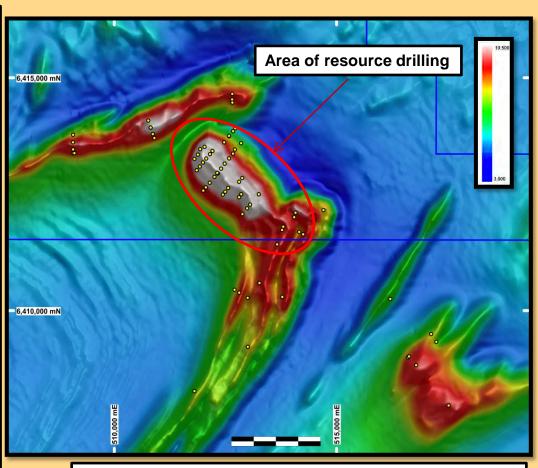
- > Establish thickness of units
- Depth of cover
- Grade of magnetite unit
- > ~10,000 m drilled to Sep 01 (50 holes)

### Phase 2 drilling:

- ➤ Resource drilling est :
  - 4,000m done (Oct 01)9 holes (deep)
  - 6,000m drilling to finish

#### Aim:

- ➤ drilling finalize Nov'
- > Inferred Resource :
  - 1 B tonnes by Dec' 2010



Hole Location on Airborne Magnetics Reduced to the Pole

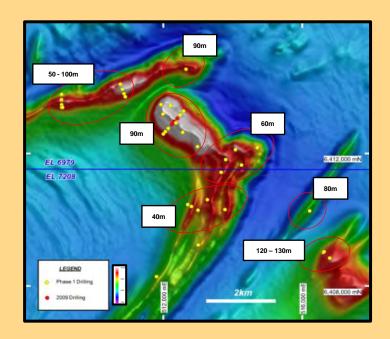


## RESOURCE DEFINITION Aim – 1 Billion Tonnes

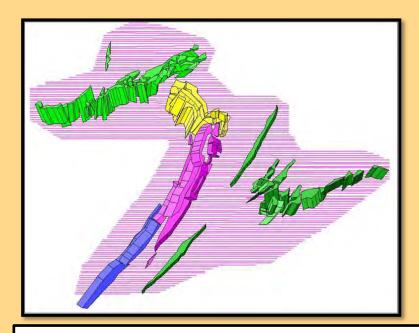


### 3D Magnetic Modelling to Assist Resource Definition

Collaboration with CSIRO . (Ref. Clive Foss, et al, ASEG August 2010 "Generating a Resource Estimate by Magnetic Field Inversion - a Study of the Hawsons Magnetite Prospect, NSW")



Reduced to the Pole Magnetics Showing Depth of Oxidation



3D Block Magnetic Susceptibility Model using demagnetizing techniques



### **MAGNETITE**



# Magnetite is one of the three common iron ore minerals that is commercially exploited

	<u>Hematite</u> <u>Magnetite</u>		<u>Goethite</u>		
	Fe <sub>2</sub> O <sub>3</sub>	Fe <sub>3</sub> O <sub>4</sub>	FeO(OH)		
Iron Content					
Maximum theoretical	69.95%	72.73%	62.86%		
Typical Theoretical	61 – 65%	65 – 68%	55 - 60%		
Note - the magnetite specifications are after beneficiation					

CRU | STRATEGIES

### **TYPICAL RESULTS**



Hole ID	From	Thickness	DTR %	DTRG	DTRG
	(m)	(m)	38um	Fe%	SiO2%
RC10BRP022	102	114	17.1	70.1	2.16
INCL.	131	69	17.6	70.1	1.99
RC10BRP025	137	69	15.2	69.4	2.81
INCL.	173	33	17.8	68.9	3.23
RC10BRP017	157	75	17.4	68.7	3.81
INCL.	177	36	18.3	68.3	4.17
RC10BRP019	72	94	16.4	70.7	1.46
INCL	92	59	19.2	70.8	1.37
RC10BRP012	48	98	17.2	68.9	2.72
INCL.	97	49	20	69.4	2.28
INCL.	97	14	22.9	69.4	2.12
DD10HA003	138.7	160.95	15.7	66.6	6.23
INCL.	138.7	33.65	18.7	66.9	5.99
INCL.	138.7	20.3	21.6	66.5	6.48
AND	228.1	71.9	17.8	65.9	7.01
RC10BRP013	110	56	17.6	70.2	2.11
INCL.	138	28	19.1	70.5	1.64
INCL.	155	11	24.2	70.9	1.19
RC10BRP021	122	128	16.6	70.1	2.27
INCL.	128	81	17.2	70.1	2.37
INCL.	128	64	17.8	70.1	2.38
INCL.	163	29	19.2	70.5	2.04

#### **EXCELLENT RESULTS:**

- > Consistent DTR's
- > Very high grade concentrate
- > Low deleterious elements
- Drilling supports magnetic modelling – Fe continuous at depth to 1000m
- ▶ Pre feasibility study underway



## **Scoping study results**



### Ore is very soft

**≻Bond work index – 6.3 kwh/t** 



low power requirements

Usual range for magnetites 16 - 29 kwh/t

Truck and shovel mining



low cost operation est \$1.90 / t

High pressure grind work index is 2.2 kwh/t

use of HPGR technology

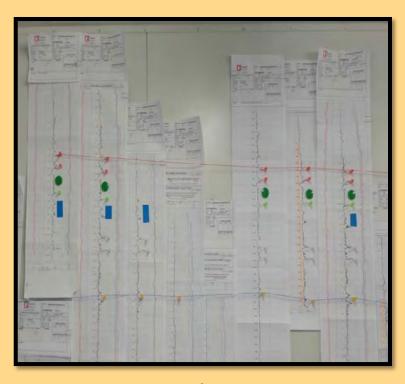


lower cost



### **Drilling / Down hole results**





3.5 km

### **Down Hole Magnetic Susceptibility**

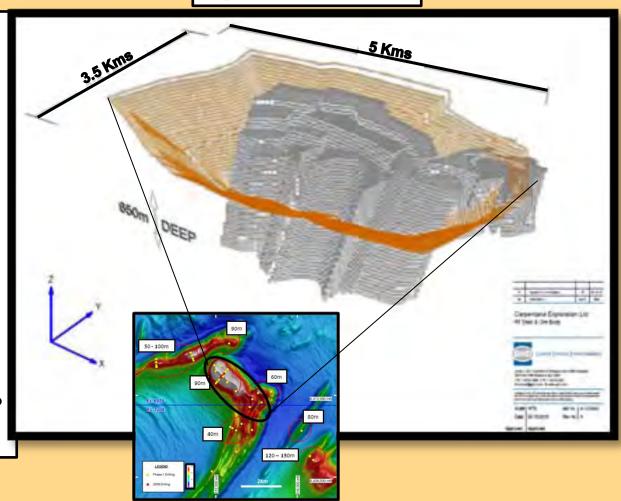
- map marker units across holes
  - shows continuity of mineralization
- > excellent correlation with DTR results
  - reduce assay time
  - allow rapid resource calculation
  - reduce costs

### **CONCEPTUAL OPEN PIT MINE PLAN**



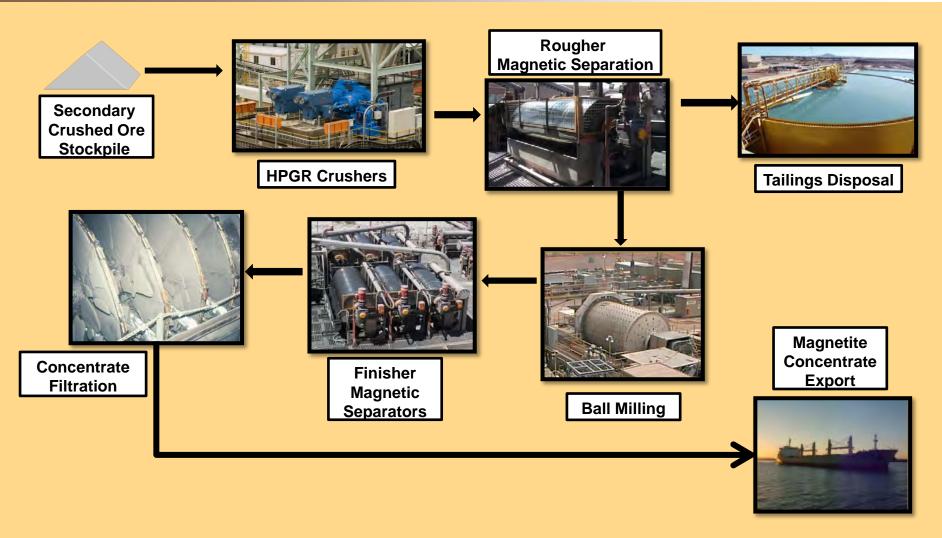
### Open Cut - Pit 1

- ➤ Depth of pit ?> 400m (depends on economics)
- >Thick ironstone units
- **➤ Dipping 45 degrees**
- ➤ Aim Pit 1 :1 Billion tonnes inferred
- >Pit life est' 10 − 15 years
- ➤ Additional Pits ~ 50 years?



# **Conceptual Processing Flow Sheet**





# PROJECT TAKING SHAPE









### PROGRAM June to Dec' 2010



**Euriowie Tin Project** 

- 1st stage drilling completed

proof of concept

- mapping / sampling 11 other veins

Mt Agate Copper / Gold - initial drilling (550m) completed

• 35m @ 0.85% copper, 0.04g/t gold and 207g/t cobalt\*

• inc' 6m @ 3.2% copper, 0.21g/t Au and 206g/t cobalt

Panama Hat Gold Project - 6 holes drilled

Glen Isla Gold Project

- drilling delayed because of rain

Hughenden Coal Project

- drilling re-commenced

Hawsons Iron Project

- 1<sup>st</sup> Phase drilling completed

- 2<sup>nd</sup> Phase drilling nearing completion

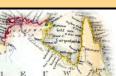
- maiden resource expected mid Dec 2010

### **PROGRAM News Flow**



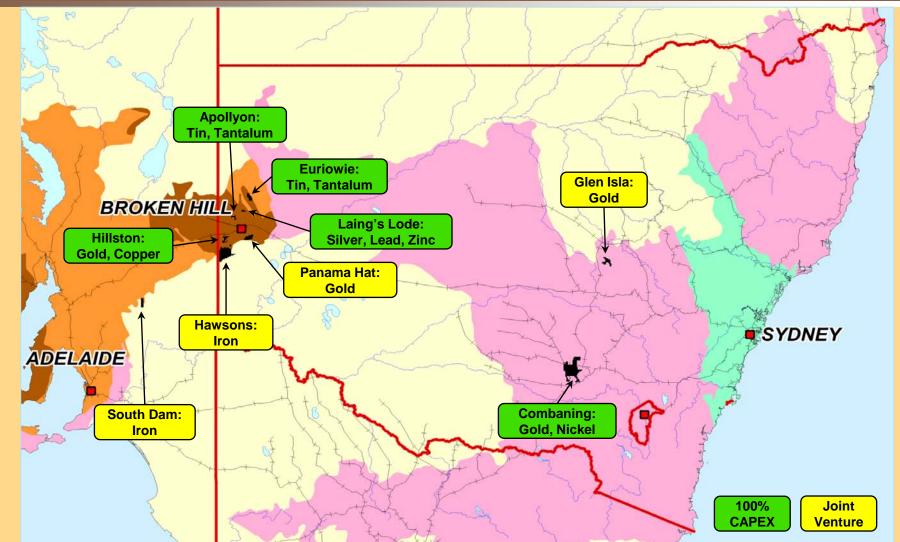
### Expect to drill + 20,000 metres to end of year

- > Acquisition of Yanco Glen tin / tungsten announcement today
- > Drilling results from Glen Isla
- ➤ Inferred Resource Hawsons ~~ 1 billion tonnes
- ➤ Inferred Resource Hughenden ?
- ➤ Acquisition of additional properties nickel / tin / tungsten



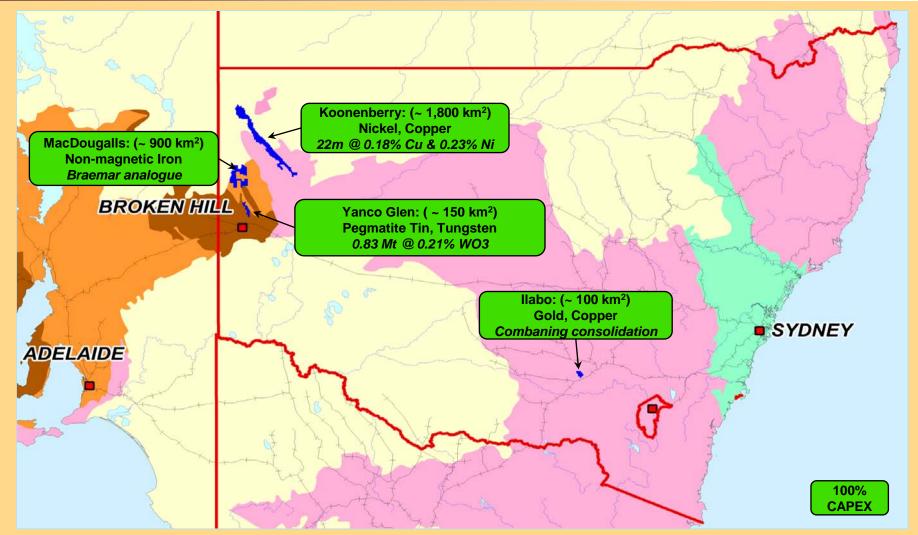
# CARPENTARIA EXPLORATION LIMITED NSW EXPLORATION TENEMENT LOCATION





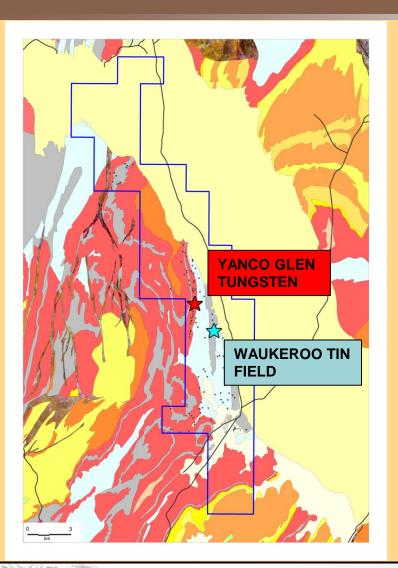
# CARPENTARIA EXPLORATION LIMITED NEW PROJECTS LOCATION





# NEW PROJECTS YANCO GLEN





#### YANCO GLEN TENEMENT ACQUISTION

- **>100%** Purchase from Wolf Minerals for 250K CAP Shares 146 km² area.
- >30 km North of Broken Hill, 30 km from Euriowie
- > Sealed Road & Grid Power
- >Contains 125 known mineral occurrences
- > Prospective for Tin, Tungsten, Iron & Base Metals

#### YANCO GLEN TUNGSTEN PROSPECT

- ➤ Surface Inferred Resource of 830 Kt @ 0.21% WO3¹. (tungsten oxide)
- ► Historical CRAE drilling e.g. 4m @ 2.47% WO3².
- >Startabound Scheelite in Broken Hill Group metasediments.

#### **WAUKEROO TIN FIELD**

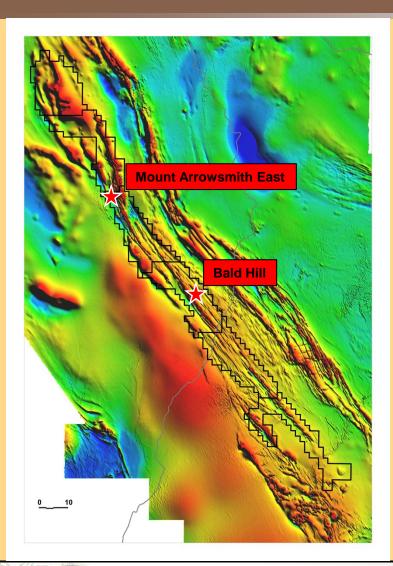
- ➤ Untested pegmatite coarse grained cassiterite tin oxide mineralisation same as Euriowie
- ➤ CAP now controls most of known significant pegmatite tin occurrences in Broken Hill District

Carpentaria Exploration Ltd 2010

<sup>1.</sup> Ravensgate Industry Consultants, Gra 2. NSW Geological Survey, GS 1984-157

# NEW PROJECTS KOONENBERRY PROJECT





#### **KOONENBERRY APPLICATIONS**

- ➤ Six 100% ELA's ~ 1,800 km2, 200 km north of Broken Hill
- ➤ Recent Exploration Expenditure of ~\$4M by Vale.
- ➤ Airborne magnetics, GEM & 25,000m of RAB Geochem
- ➤ Highlight Mt Arrowsmith East & Bald Hill Prospects
- Number of other targets generated that were not tested

#### MOUNT ARROWSMITH EAST

- ➤ Outcropping tabular (+ 250x20m) Ultramafic discovery tested by only two shallow drill holes
- ➤ Holes hit 20m thick vertical body, open down dip & strike
- >22m @ 0.18% Cu & 0.23% Ni, in. 2m @ 0.41% Ni & 0.41% Cu
- ➤ Petrography indicates presence of Ni & Cu sulfide.
- ➤Intersections < 15m below surface</p>
- > Walk up down dip & along strike drill target

#### BALD HILL WEATHERED BEDROCK - RAB ANOMALY

- **▶** Geochem. anomaly: 12m & 0.34% Ni, max 0.84% Ni
- >Coincident magnetic anomaly
- ➤ Not followed up by bedrock drilling untested!



# CARPENTARIA EXPLORATION LIMITED In Brief



### **GROWTH THROUGH SUCCESS**

- Large magnetite iron discovery at Hawsons in NSW
- Tin discovery over long strike length at Euriowie
- Positive coal intercept Hughenden
- ➤ Significant work program for 2010 mainly drilling
- Budgeted exploration 2010 / 2011 year \$9.1M
- Aggressive exploration programs by joint venture parties
- Continuously generating new projects
- >Experienced geoscientific team providing good results
- Committed to exploration and soon to mining





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.

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