

ARCHER



Archer Exploration Limited

“ Two outstanding deposits with more to come ”

**20:20 Investor Series
Sydney 9th March 2011**

Gerard Anderson Managing Director

Disclaimer

Competent persons statement

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than sixteen years experience in the field of activity being reported. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

Forward looking statements

The information in this presentation is published to inform you about Archer Exploration Limited and its activities. Some statements in this presentation regarding estimates or future events are forward looking statements.

Although Archer Exploration Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results and outcomes will be consistent with these forward-looking statements.

Company Assets

Exploration Tenements

- 100% of 18 tenements covering 9,042 km² over Leigh Creek, Eyre Peninsula, West Roxby, Burra and World's End areas.
- 100% of 3 ELA's covering 1,513 km².

“World Class” Magnesite Resource

JORC Measured, Indicated and Inferred Resources at Leigh Creek of 423Mt grading 42% MgO#. (Source MDL 2001 Report)

High Quality Graphite Deposit

Sugarloaf rapidly emerging as a premier deposit.

Farm-In

Archer earning 100% of the rights to all minerals other than uranium on EL3377 (Wild Horse Plains) and EL3653 (Elbow Hill) covering 895km² - highly prospective for manganese, iron ore and copper.

Joint Venture

JV with OMM Holdings over the Mn & Fe within EL3711.



Archer has a large portfolio of prospective tenements

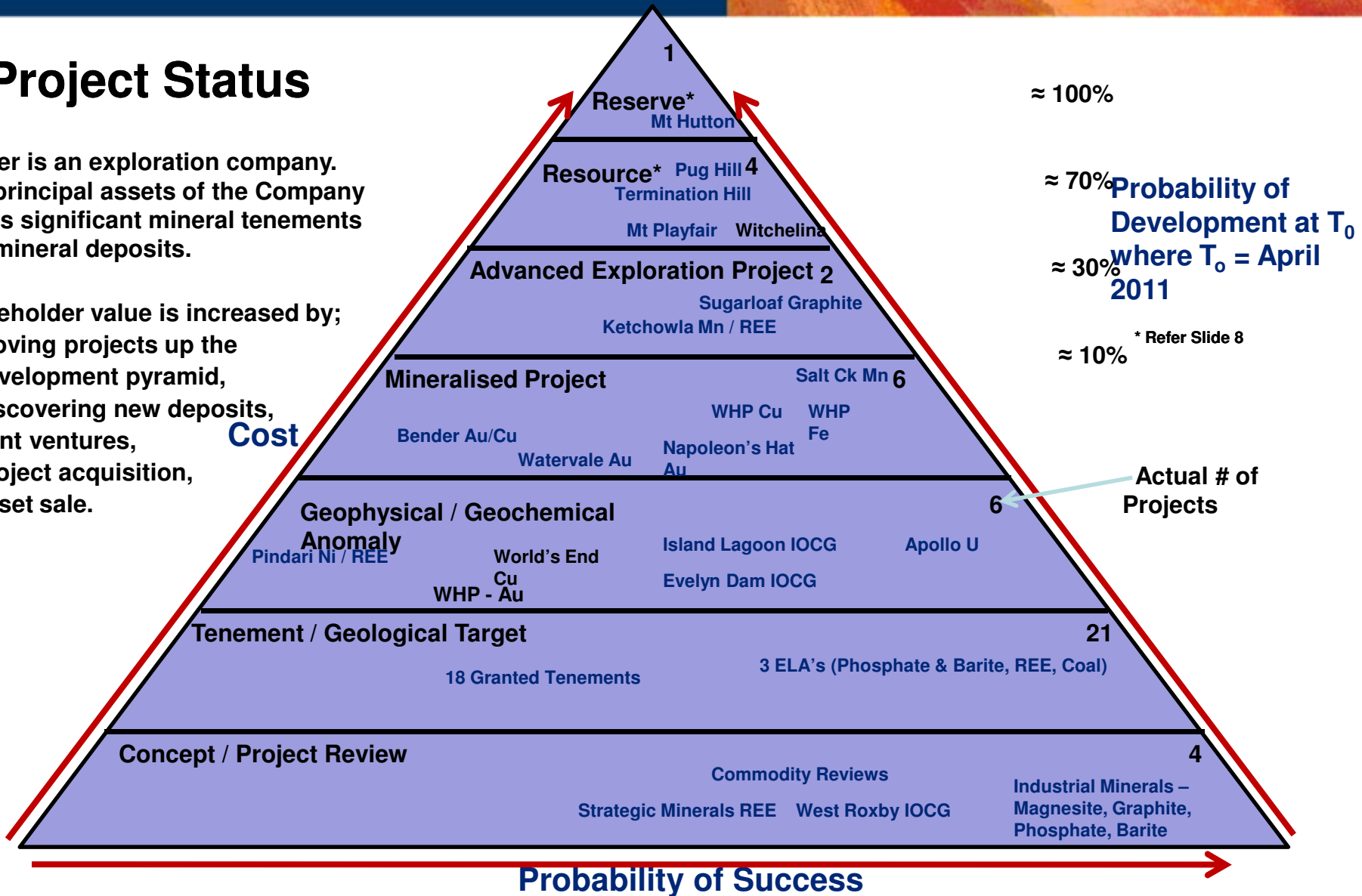
Project Status

Archer is an exploration company. The principal assets of the Company are its significant mineral tenements and mineral deposits.

Shareholder value is increased by;

- moving projects up the development pyramid,
- discovering new deposits,
- joint ventures,
- project acquisition,
- asset sale.

Cost



Archer has an several mineral projects at various 4

2011 Exploration First Order Priorities

Magnesite

Termination Hill and
Witchelina ELs

Area 962 km²

TARGET

Mine producing
>150,000tpa caustic
calcined magnesia

Graphite

Carappee Hill 100%
Sugarloaf deposit
Area 54 km²

Wildhorse Plains
Area 895 km²

Target
>20Mt Inferred Resource
containing >2.5Mt
graphite

Flake / amorphous
graphite

Manganese/Iron Ore

Eyre Peninsula
Jamieson Tank
Nth Cowell 100%
Wild Horse Plains

Area 1,042 km²

TARGET
Mn/Fe Deposits

Adelaidean
Ketchowla
100%
Neales Flat
100%
Kanyaka
100%
Stone Hut
100%

Area 2,466 km²

TARGET
Upgradeable Mn

Archer is focused on the critical few



What is Magnesite and Magnesia?

- **MAGNESITE** is a naturally occurring magnesium carbonate MgCO_3
- Leigh Creek magnesite was formed as a chemical precipitate in the NeoProterozoic in a shallow near ocean lagoon environment similar to the present Coorong
- Magnesia (MgO) is produced by heating magnesite. Magnesia occurs in three forms:
 - Caustic calcined magnesia (CCM) is formed by calcining magnesite to temperatures up to $1,000^\circ\text{C}$. It is reactive and that reactivity is important for a huge range of industries including construction, industrial , agriculture, water purification, waste water treatment and in the paper and rubber industries.
 - Deadburn magnesia (DBM) is produced by heating CCM to temperatures of $2,300^\circ\text{C}$ to produce inert magnesia used for the production of refractory bricks.
 - Electrofused magnesia is produced by melting CCM to $2,800 - 3,000^\circ\text{C}$ to produce crystalline magnesia used primarily in arduous steelmaking applications.

Magnesite/ magnesia products are widely used across a number of high growth industries and in high tech consumer goods.



Magnesia Market



business

Refractory Bricks - 63% of Magnesium



business

MgO based Chemicals - 23% of Magnesium

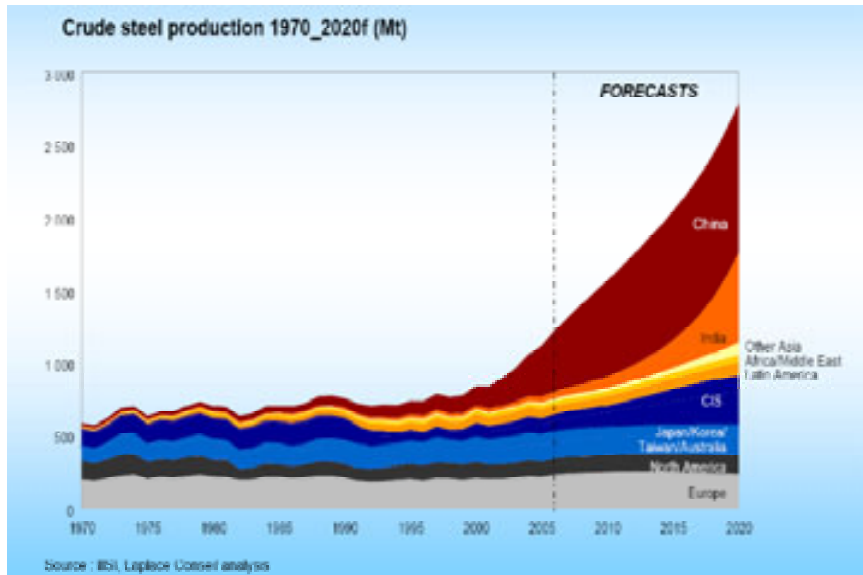


business

Mg Metal - 14% of Magnesium

Magnesia / magnesium market outlook strong

Magnesia Market Growth



MgO growth closely mirrors that of the steel industry



MgO Refractory Bricks

Automotive applications - In 5 years

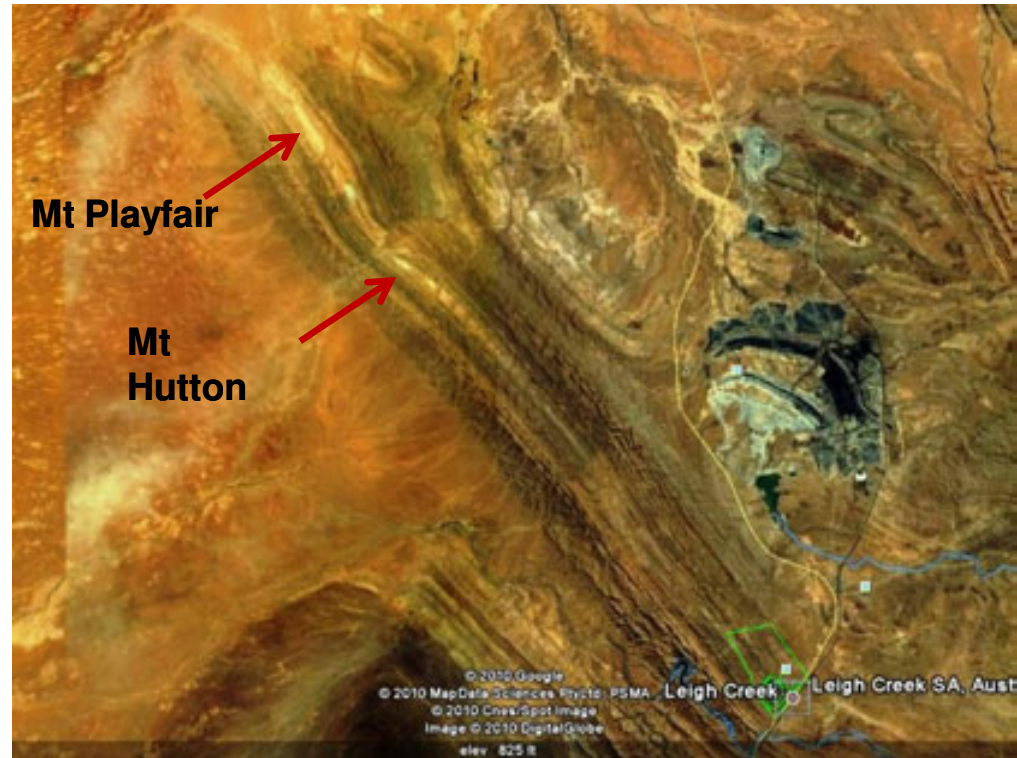
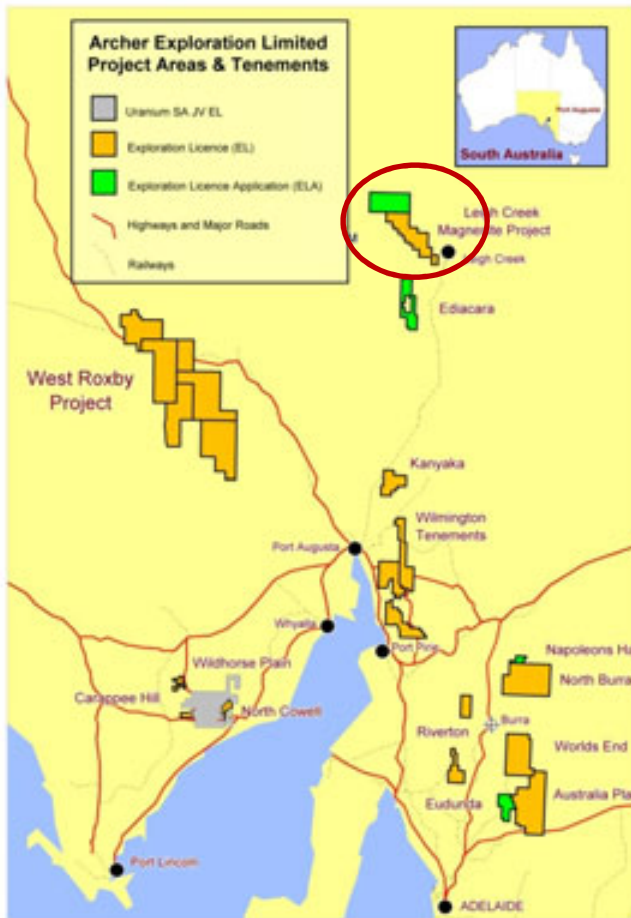
- Interior parts
 - Seat components
 - Instrument panels /
 - Knee bolster
 - Steering column components
 - Steering wheels
 - Brake & clutch pedal brackets
 - Airbag retainers
 - Pedal brackets
 - Radio heat sink/Frame
 - Radio/HVAC covers
 - Sunroof components
 - Mirror brackets/Frames
 - Headlight retainer
 - Inner door frame
- Chassis and body
 - A- and B-pillars
 - Grill reinforcements
 - Rad supports
 - Engine hoods
 - Roof panels
 - Rear deck lids
 - Full magnesium doors
 - Wheels
- Drive train parts
 - Manual transmission housing
 - 4 WD transfer case
 - Automatic transmission housing
- Engine parts
 - Cylinder head covers
 - Intake manifolds
 - Acup. Cr. brackets
 - Electrical connectors
 - Oil pans
 - Engine blocks
 - Bed plates
 - Engine supports
 - Engine cradles
 - FAE

- Industrial applications - concrete
- Building products – Mg board
- Fertilizers and soil conditioners – strong local market
- Water purification
- Waste water treatment
- Acid mine water and acid tailings neutralisation
- Consumer electronics - Mobile phones, laptops, cameras, iPods, PDAs
- High tech alloys – AM-lite
- Magnesium batteries which hold twice the energy of lithium-ion cells likely to be used to power electric cars
- Liquid magnesium battery offers promising solar energy

MgO Market grows at ~330ktpa



Archer's Leigh Creek Magnesite Deposits



- High quality (>42% MgO)
- Consistent chemical composition over 80 kms strike
- \$millions spent on BFS for Mg metal production

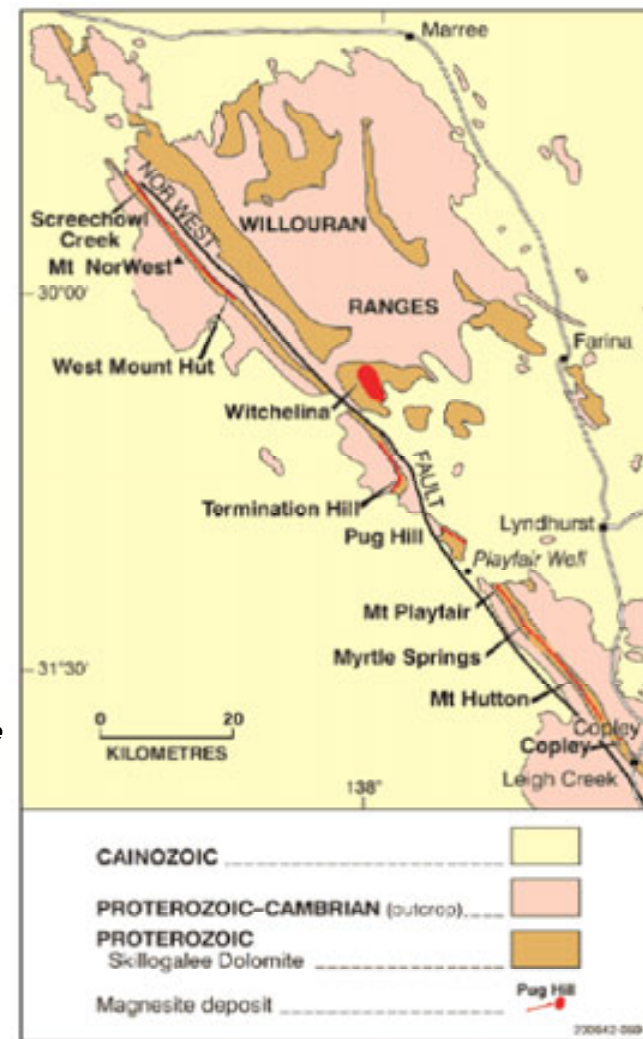
“World Class” is often self-bestowed but rarely deserved. Leigh Creek is an exception.

MDL's 1999 JORC Resource Estimate

Area	Measured* (Mt)	Indicated* (Mt)	Inferred* (Mt)	MgO ¹
Mt Hutton	18.3	42	53	42.9%
Mt Playfair		21	23	42.5%
Pug Hill		10	10	42.7%
Termination Hill	4	5	20	42.8%
Witchelina	23.7	94	99	40.0%
Total	46	172	205	

**Source: Reproduced from MDL Report "Economic Evaluation of the Pug Hill Magnesite Deposit, North Flinders Ranges, South Australia. 2001. Note full BFS completed and JORC resources for 5 deposits and JORC reserve for Mt Hutton calculated. An independent Resource estimate was completed by Mr. Colin Arthur (BSc, MSc, FGS, MAusIMM, CGeol, CEng) Manager, Micromine Resource Centre, August 1999. The estimates were based on 69 fully cored DDHs and other attendant studies required to support resource estimation.*

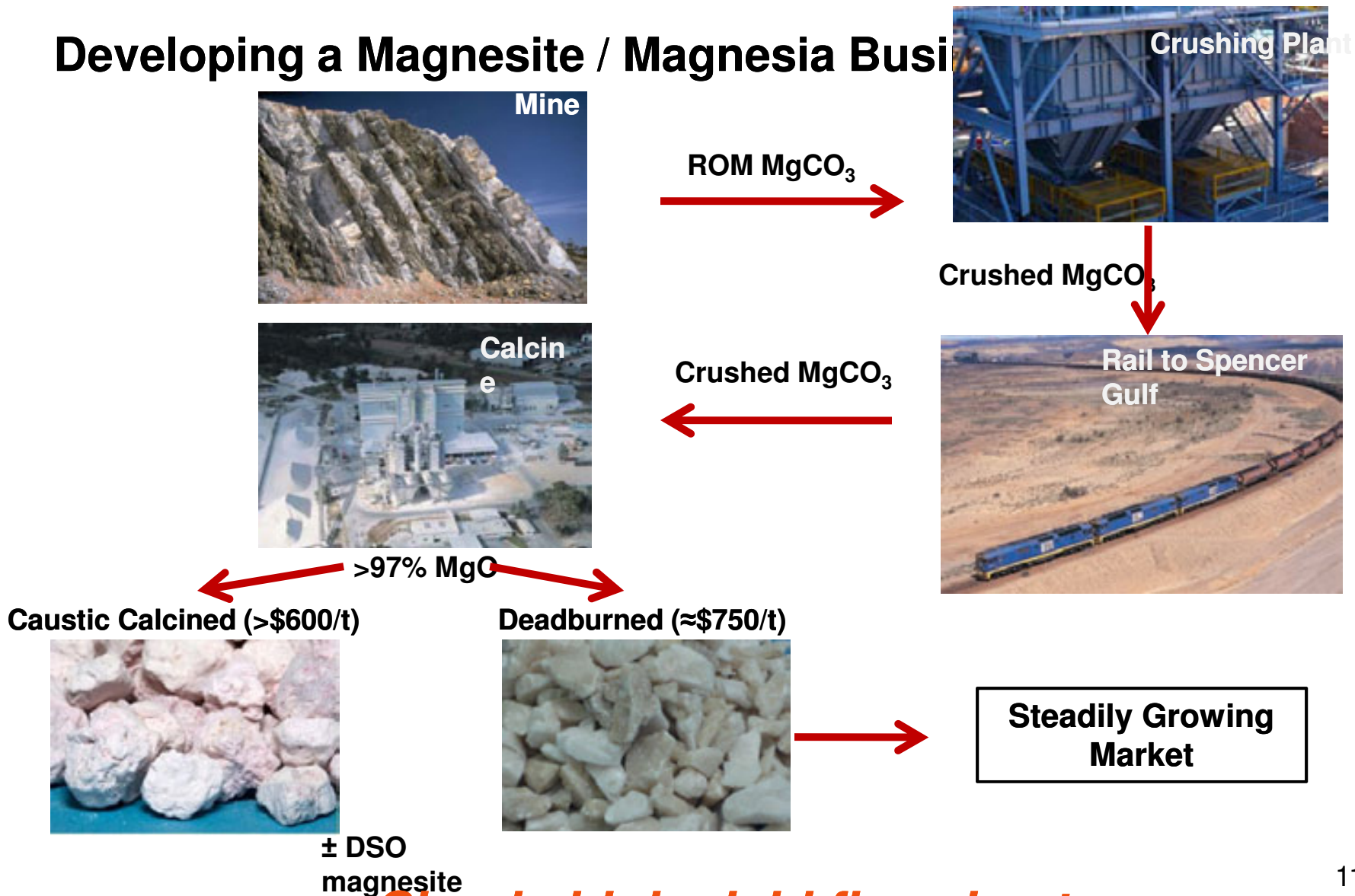
¹ Pure magnesite is 47.8% MgO



Magnesite deposits north-west of Leigh Creek

Leigh Creek is World Class in terms of both

Developing a Magnesite / Magnesia Business



Simple high yield flowsheet

Competitor Comparison

Leigh Creek Vs Kunwarara Magnesite (QMag)

Beneficiation Plant Feed

2001 : 3.4Mt ore mined producing 437,000t magnesite (Yield 15.5%)

Beneficiation: Crush/screen/scrubbing/heavy media/ore sorting

Back calculated head grades \approx 11% MgO

V
S

Leigh Creek Projected Feed

High purity cryptocrystalline magnesite

\approx 42%MgO ; 4.5% SiO₂ ; 2.4% CaO



Trucked 70 kms
45% MgO; 0.8% SiO₂; 2% CaO

The purity, yield and the absence of the need to have expensive multi-step beneficiation processing



Leigh Creek Magnesite

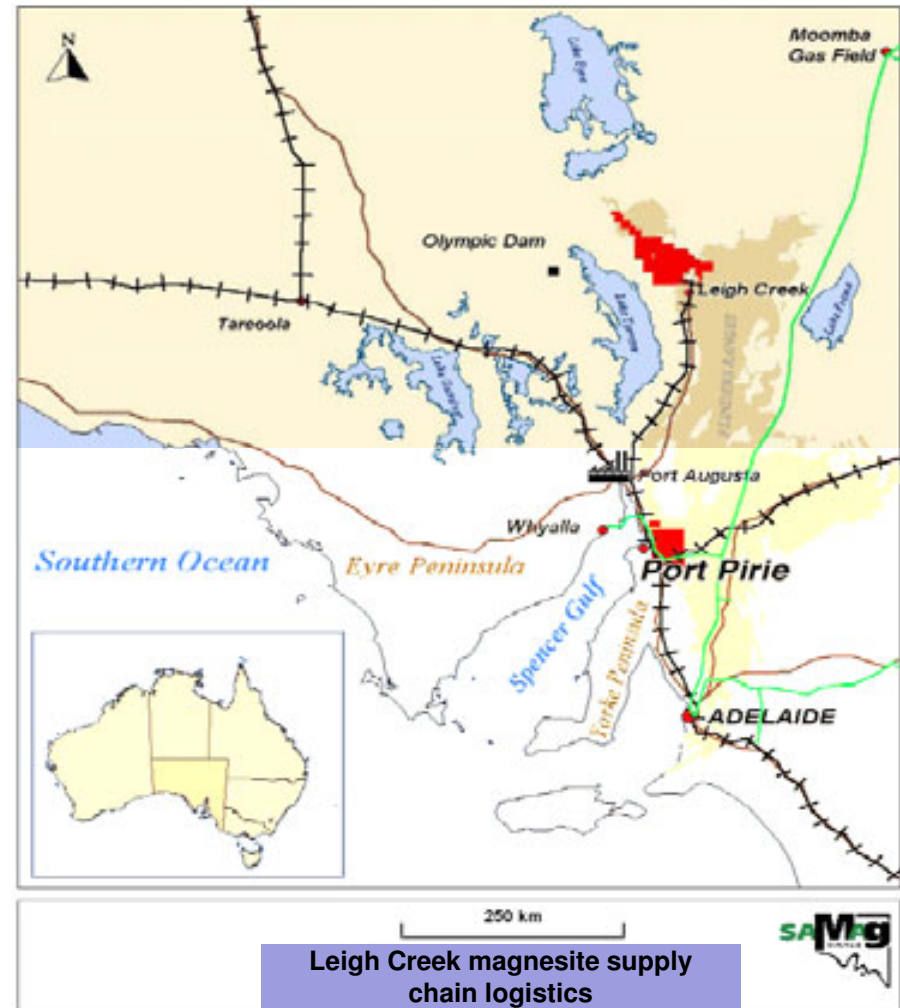
Good Supply Chain Logistics

- Deposits lie 20kms north of privately owned Leigh Creek
 - Port Augusta standard gauge rail line
- Leigh Creek town site 25kms to the south east
- Moomba – Adelaide gas line
- Port Pirie capable of handling 25kt shipments with Port Adelaide a second shipping option

Low Capital Entry*

- Order of magnitude Capex price for calciner and rotary cooler (150,000tpa feed) with installation \$25 million.
- Estimated gas consumption $\approx 3.1\text{GJ/tonne feed}$ and electricity usage approximately 30kW/ tonne feed.

* Jord International estimate February 2011



Low Capex entry and excellent supply



Why the interest? – you do the Math

Magnesite = MgCO_3

Magnesia = MgO



Archer's "Exploration Potential" at Leigh Creek = 423 million tonnes

1 tonne MgO = \approx A\$620 (2010 \$)

100% ownership affords Archer flexibility in project development.

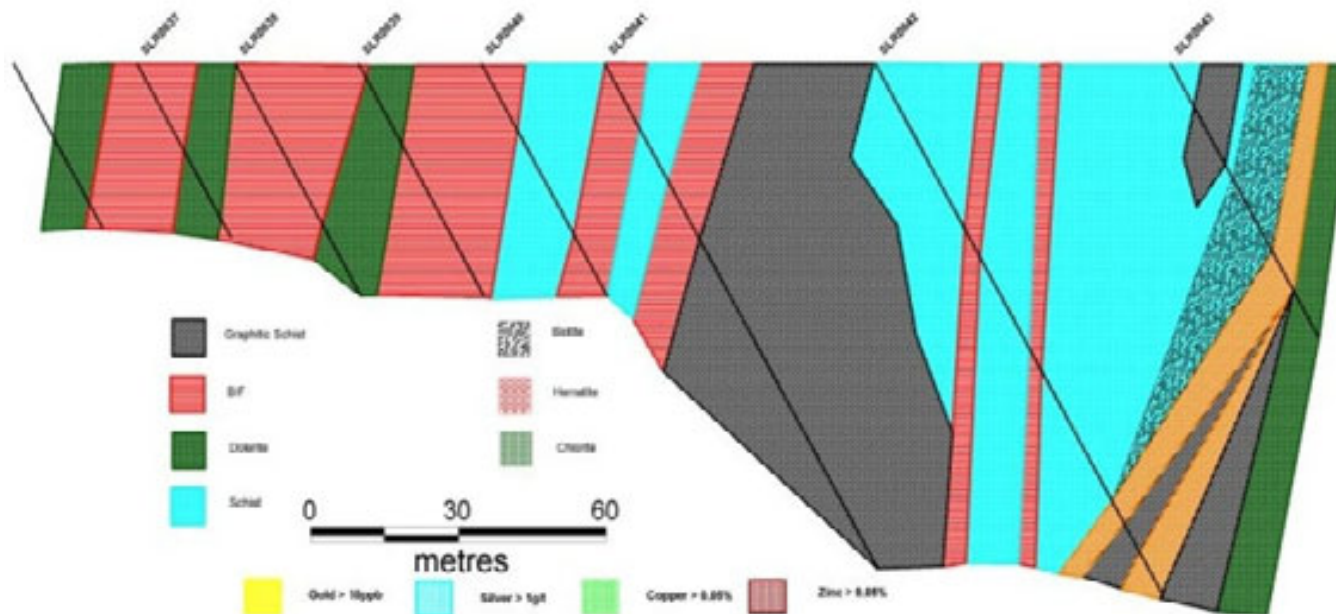
There is the capacity to raise funds by inviting partners to acquire interests in the



Sugarloaf Graphite

The Sugarloaf graphite deposit occurs as a highly graphitic schist. Two shafts dug to 63 and 80 feet in 1915 returned values of 25.3% and 15% total carbon respectively. There is no record of tonnes mined from the shafts.

In 2004 Helix and Goldstream both drilled a line of shallow holes at the southern end of Sugarloaf, although no carbon assays are reported, considerable graphite (up to 70m intercepts) was reported in drill logs .



Goldstream drill section

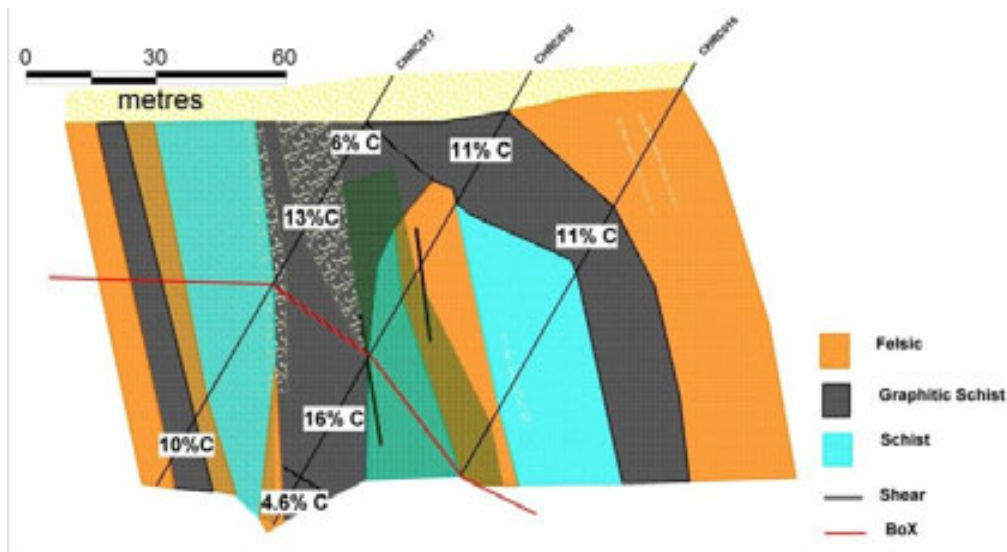
Graphite was not so important then!



Sugarloaf Graphite

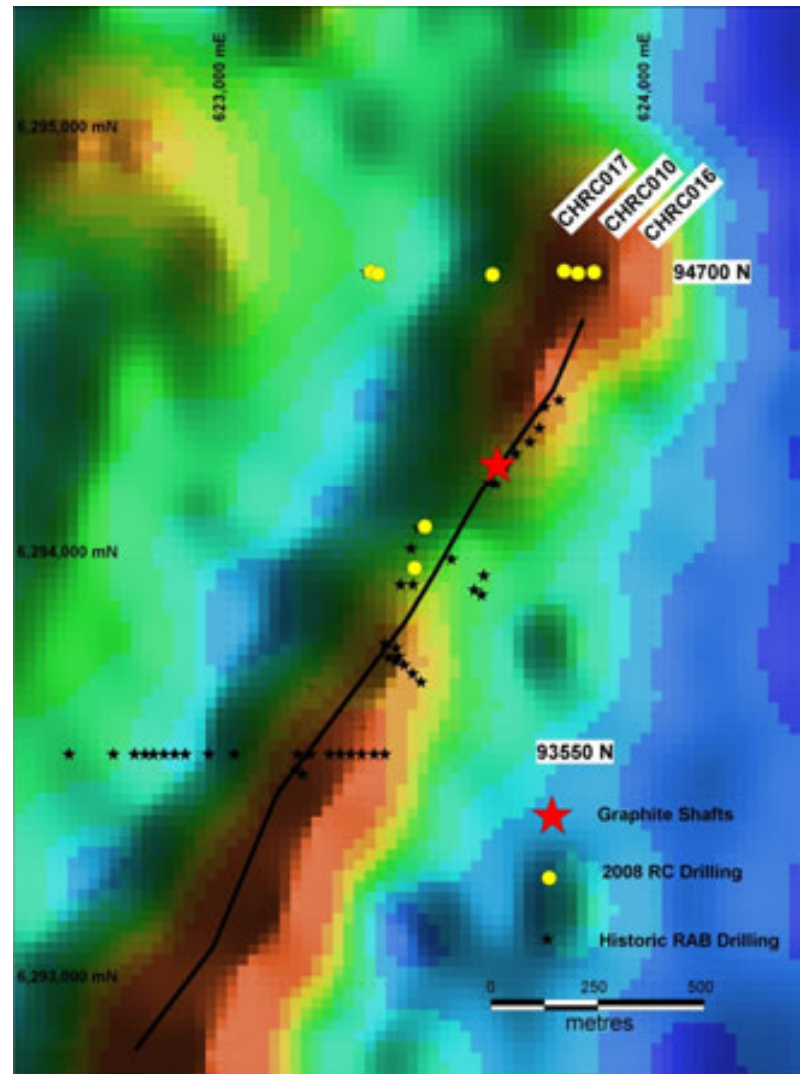
Archer drilling has recorded wide graphite intervals with total carbon values to 22.9%.

The area has a pronounced EM signature extending over 2.5 km.



Archer drill section across northern Sugarloaf

CHRC010		10-26m	16m @ 11.3% total C
		77-113m	36m @ 14.0% total C
	Inc	77-85m	8m @ 22.9% total C
CHRC016		36-64m	28m @ 11.1% total C
CHRC017		12-52m	40m @ 10.8% total C
	Inc	28-48m	20m @ 13.1% total C
		92-100m	8m @ 10.7% total C



Sugarloaf EM response (sliced at a depth of 120m)

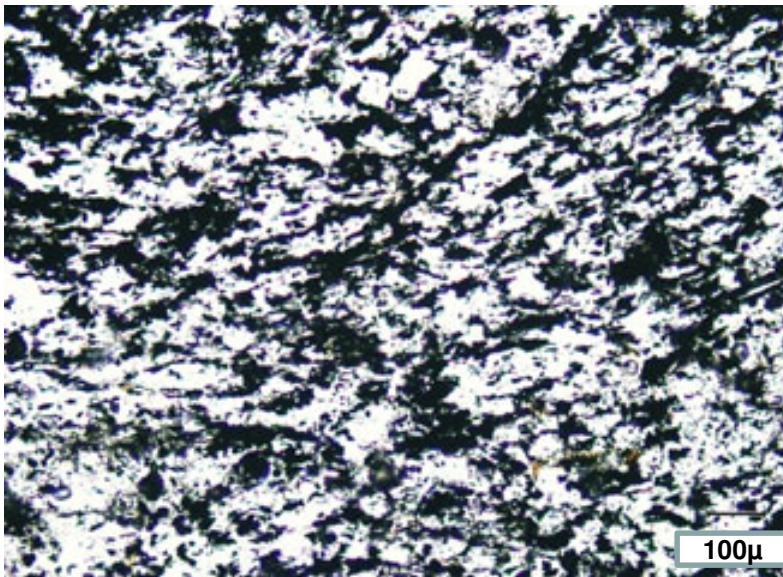
High grade graphite recorded over wide drill



Sugarloaf Graphite

- Graphitic schist adjacent to a granite intrusion.
- Graphite flake size varies to 0.2mm and averages 0.1mm.
- Sugarloaf likely to be able to produce Fine; Medium and Large flake products.
- NB : Petrological sample taken at surface - expect grain size to increase with depth.
- **Exploration potential to 100m depth of 9 - >20Mt*.**
- Intrusive granite may coarsen flake size proximal to intrusion.

**The potential quantities and grades presented are conceptual in nature, there has been insufficient exploration to define an overall Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource*



Photomicrograph: Transmitted light (TL). Thin section (TS). Ordinary light (OL). Moderate magnification (x100). Shows typical mode of occurrence and flake size of schistose black-opaque graphite within (muscovite) quartz-rich metasiltstone.

When it comes to graphite – size matters

Sugarloaf Graphite

Graphite :

- Key ingredient in steel, castings, lubricants, vehicle brakes, golf clubs, tennis rackets and pencils!
- Stable in corrosive environments, conducts electricity and resists heat.
- Growing importance for storage batteries and nuclear-electricity generation stations.
- High-purity large-flake graphite is essential for lithium-ion batteries crucial to electronics industry.
- Demand for graphite has been rising for other applications - emerging fuel cell technologies.
- Graphene is a carbon allotrope extracted from graphite. Its superconductive electrical features and super strength are expected to spawn a revolution in new technologies based on a panoply of chemically and naturally-induced by-products.

- A 2010 European Commission study regarding on critical materials to the European economy included graphite

Natural graphite prices (crystalline, CIF European port, FCL, \$/t) October 2010.	
Grade	28/10/10
Fine: 90%C, -100 mesh, FCL	850-1,100
Fine: 94-97%C, -100 mesh, FCL	1,100-1,400
Medium flake: 85-87%C, +100 mesh – 80 mesh, FCL	950-1,200
Medium flake: 94-97% C, +100 mesh – 80 mesh, FCL	1,300-1,700
Large flake: 94-97% C, +80 mesh, FCL	1,400-2,000

Sugarloaf has enormous potential and is a ready priority drill target. Further drilling scheduled for March – April 2011

Source <http://www.ree-investor.com>



Sugarloaf Graphite

Work Program

- Drilling will re-commence in March – April 2011 to confirm overall strike extent of high grade graphite. This drilling will more tightly constrain the upper Exploration Target currently standing at 20Mt.
- A sample has been collected for further metallurgical evaluation at a specialist US laboratory to compliment the recent petrological analysis. Specifically the testing will:
 - Determine the % of graphite (as opposed to carbon) in the sample.
 - Separate the graphite using flotation.
 - Screen and size the flotation product and test the graphite for carbon, ash, true density, sulfur, complete ash analysis and spring back.

The results of this comprehensive analysis will determine the range of graphite products that can be produced and permit detailed comparison of Sugarloaf to other graphite deposits around the world.

Archer believes that only limited drilling would then be required to estimate an Inferred Resource.

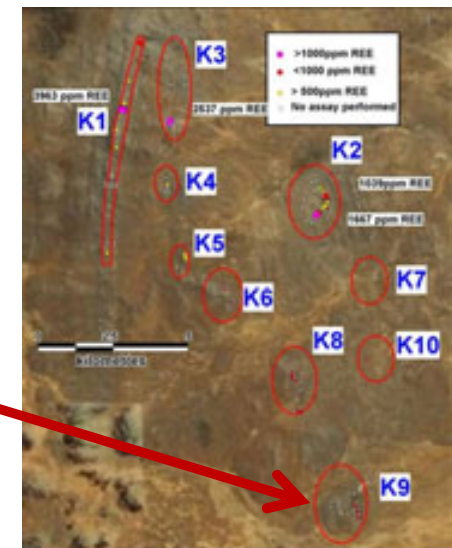
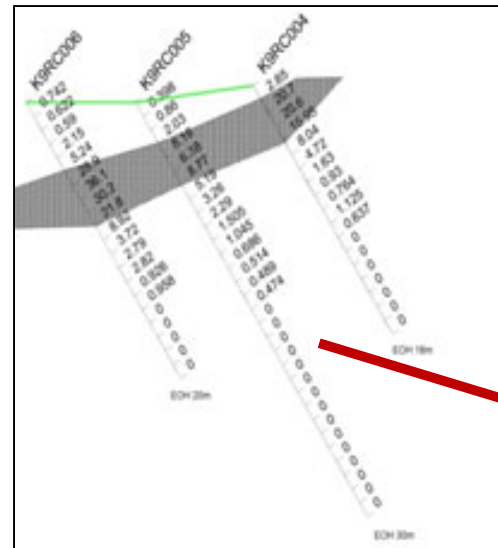
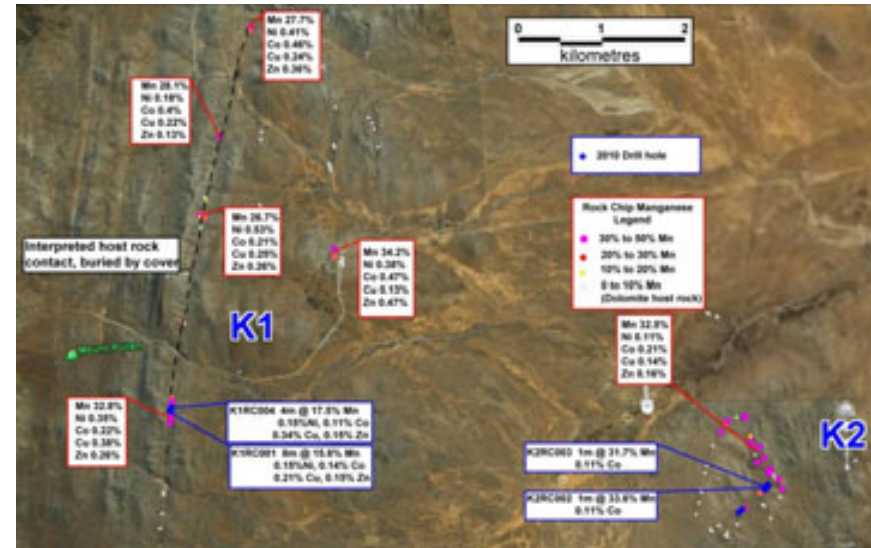
Whilst at an early stage of evaluation, Sugarloaf has many of the hallmarks of a substantial high grade graphite deposit



Manganese

Ketchowla

- 5 main manganese deposits over 28 km.
- Medium grade ($\approx 20\% \text{ Mn} \pm \text{Ni, Co, Cu \& Zn}$).
- Peak assays of 0.47% REE (from rock chip samples) and 0.36% REE in drill cuttings at K1, K2, K3 and K9 manganese deposits.
- Elevated REE and lithium results coincident with anomalous Ni, Co, Cu and Zn at K1.
- Elevated REEs at K9 not related to manganese and occur within a clay horizon (weathered intrusive?).
- Manganese deposits open at depth and along strike.
- 90% – 95% recovery of Mn, Ni, Co, Cu &



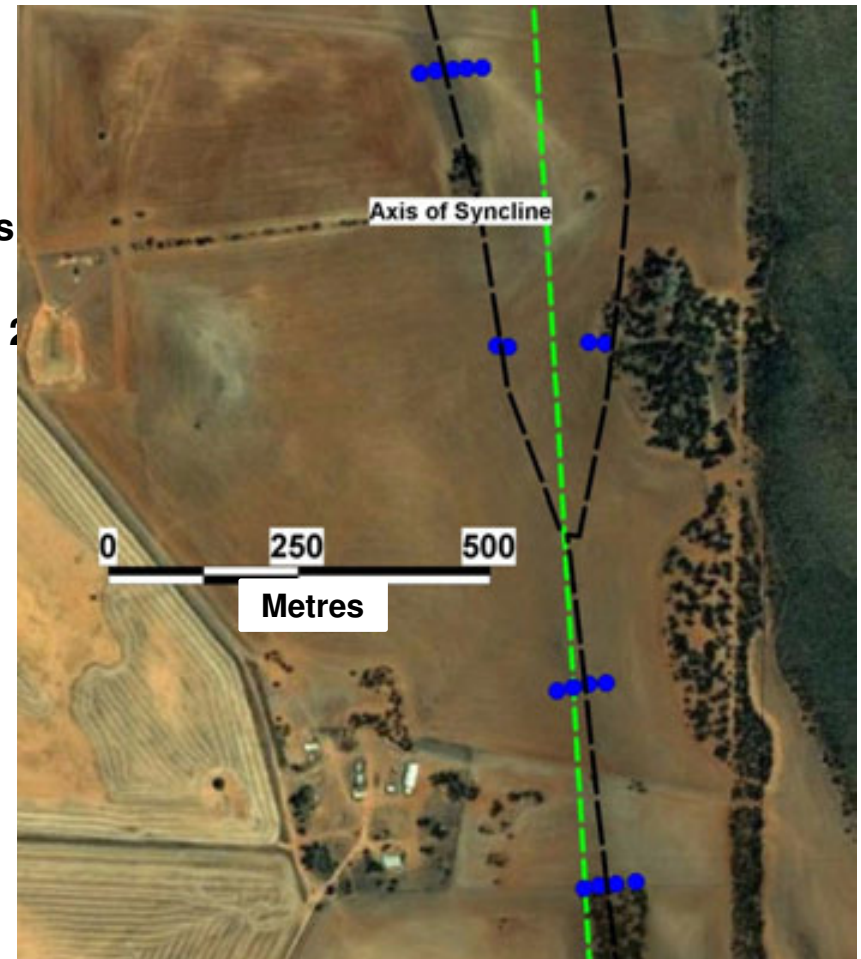
Ground gravity and drilling planned for



Manganese

Salt Creek

- Manganese outcrops over a 3 km strike.
- Surface widths to 30 metres with manganese grades 27% Mn with elevated REEs.
- Four RC drill traverses to be drilled in March – April 2012



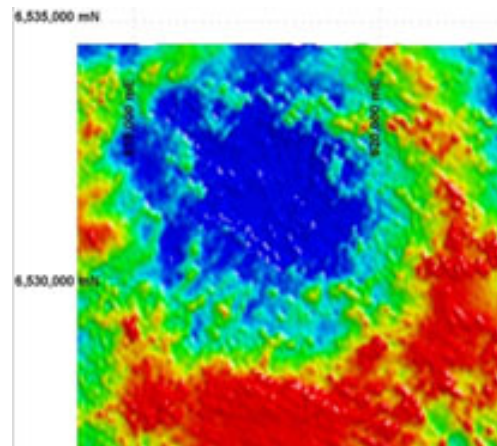
Salt Creek manganese has significant tonnage potential. Initial drill testing March



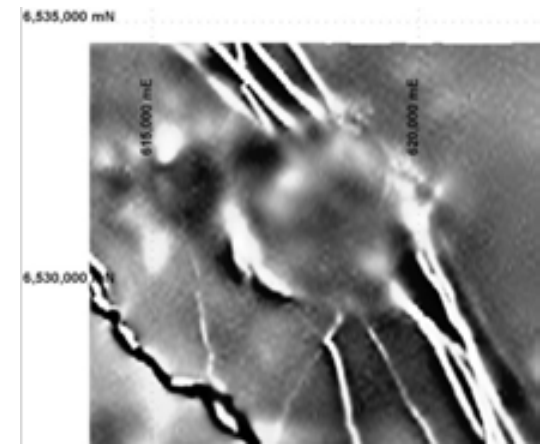
Uranium

Apollo Prospect

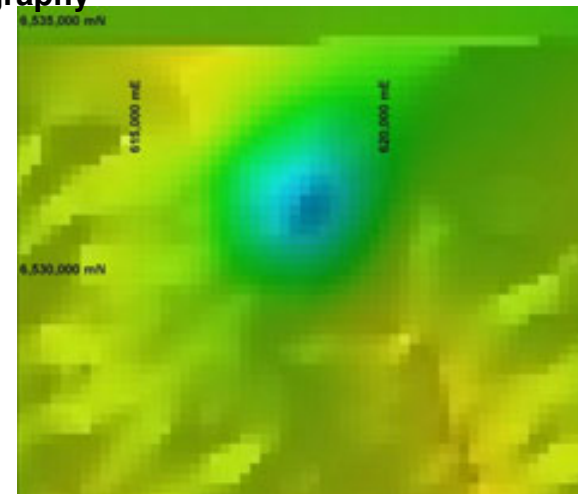
- Apollo is a 3km diameter circular 7 - 8 milligal gravity low, which is coincident with a 20-30m deep topographic depression and significant disruption to regional magnetic trends.
- The surface depression may be the result of intense alteration associated with the source of the magnetic/gravity anomaly.
- Figures show the coincident topographic depression, the highly disrupted magnetic image and the bulls-eye gravity signature.
- NB No drilling has been undertaken due to issues relating to land access.



Apollo Topography



Apollo magnetics



Apollo Gravity Anomaly

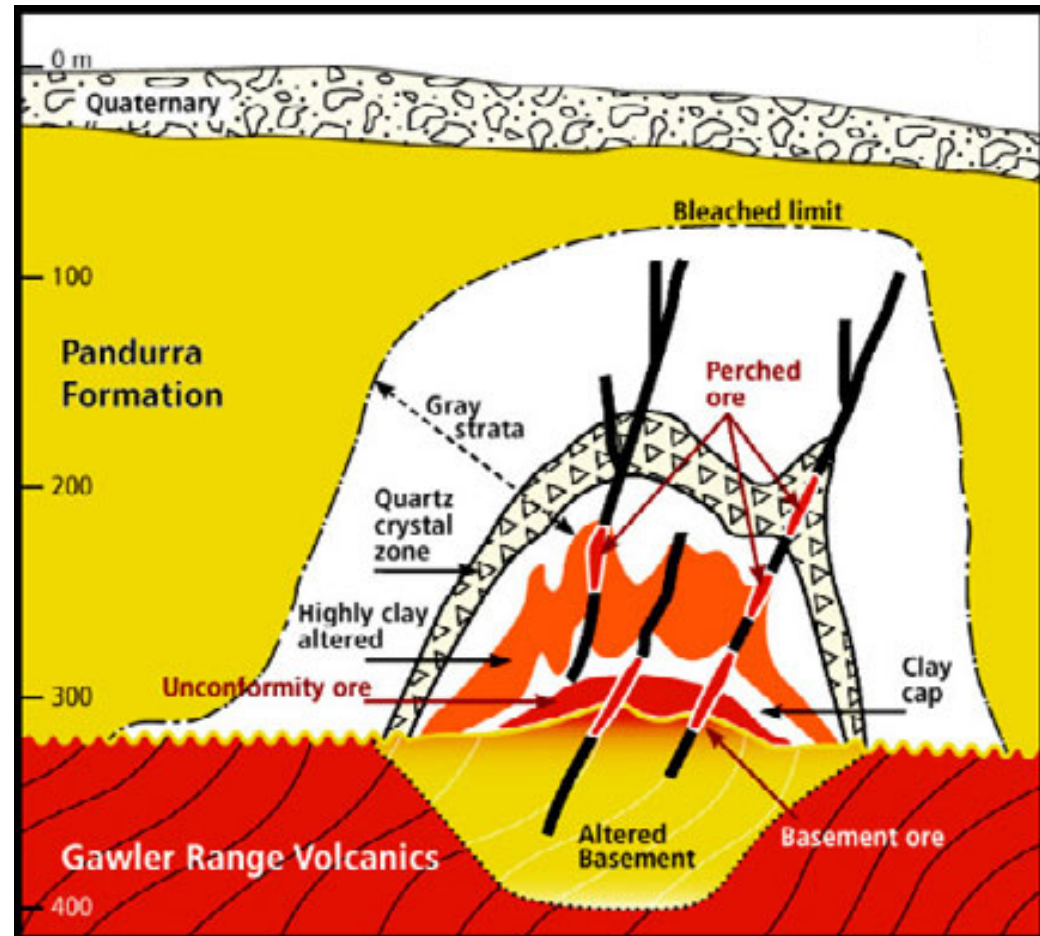
The exploration vectors are compelling



Uranium

Apollo Prospect

- The Apollo target has striking similarities to the Rabbit Lake Athabasca-style unconformity uranium deposit located in Northern Saskatchewan Canada. Rabbit Lake was discovered in 1965, first production was in 1975 and in 2008 Cameco produced 3.6Mlbs of uranium.
- Working area clearance has been lodged.



Model for unconformity Athabasca-style uranium deposits

Site clearance sought as precursor to drilling