



# Eneabba Gas Limited

**COMPANY PRESENTATION – AUGUST 2012**

The Future of Energy





## Eneabba Gas Limited

- Eneabba is a West Australian based power generation, energy and resource company that listed on the ASX on 28 April 2006 (ASX: ENB)
- Eneabba's projects:-
  - **Sargon UCG / UCTL** – exploration tenement hosting a significant coal resource with potential for Underground-Coal-Gasification (“UCG”) and Underground-Coal-to-Liquids (“UCTL”) extraction; and
  - **Centauri-1 Power Station** – Eneabba has approval to construct its proposed 168 Megawatt Power Station in the Mid West of W.A on Company owned land
- Eneabba is actively pursuing new projects in the resources and energy sector, both in Australia and overseas, in order to increase shareholder value



## Capital Structure

Capital Structure	Free Trading	Unlisted	Total
Shares on issue (ASX: ENB)	160,418,038	-	160,418,038
Listed options (ASX: ENBOC) @ \$0.15 expiring 30/06/13	2,687,013	-	2,687,013
Unlisted options @ \$0.05 expiring 31/08/14	-	23,250,000	23,250,000

<b>Price (as at 31 July 2012)</b>	<b>\$0.03</b>
Market capitalisation	~\$4.8m
Cash & receivables	~\$2.5m
Enterprise value Comprising:- Dongara land, UCG / UCTL coal resource, power station permitting etc	~\$2.3m

Shareholders	%
Top 5	35%
Top 20	58%
Management	7%

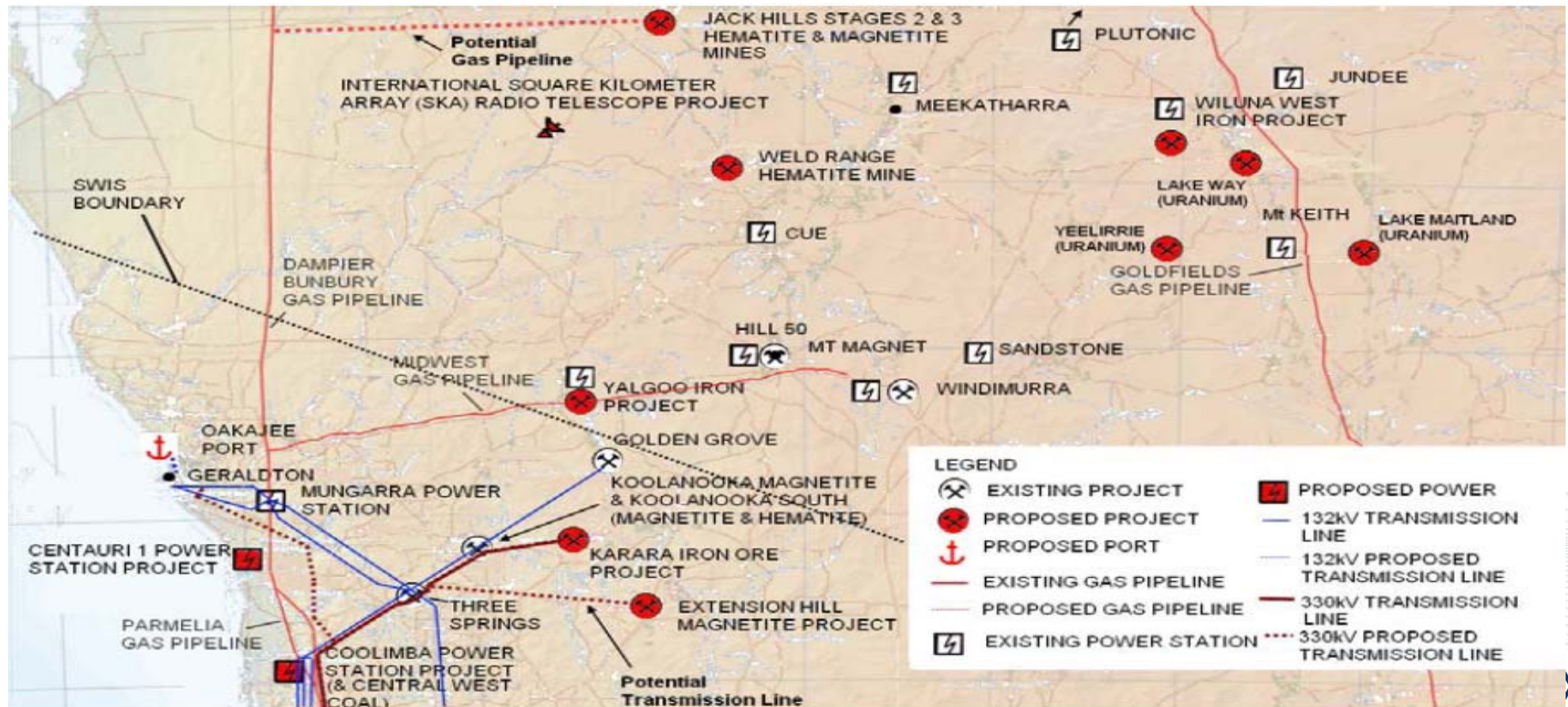


## **Centauri-1 Power Station**

- The proposed 168 MW Centauri-1 Power Station is to be constructed on Company owned land and will support the growing demand for power in the Mid West region
- Eneabba owns 4,666 acres of land in regional W.A which is surrounded by infrastructure; a main highway on one boundary, high speed fibre optic cable, power, rail and ports, plus a natural gas pipeline (APA Parmelia) running through the land
- Western Power to extend 330 kV transmission line to neighbouring Three Springs and construct new terminal substation as part of Mid West Energy Project targeted for completion in 2014 – provides opportunity for capacity credits into the SWIS energy market
- Site has adjacent highway access for Oakajee Deep Water Port support project
- Eneabba is one of the only energy companies in Mid West W.A to receive ALL approvals for development of a power station



## Map of Company-owned Power Station Site and Nearby Existing and Proposed Resource Projects



Source: Evans & Peck based on Department of State Development Map





## Sargon Coal Project (UCG / UCTL)

- Sargon Tenement coal resource is highly prospective for UCG to produce synthesis gas (“syngas”) which could supply feedstock to the Power Station. Initial energy yield is equivalent to power needs of over 100+ years of fuel supply
- Extensive 1,175 sq km portfolio of exploration acreage with JORC compliant resource. Tenement is in close proximity to the Power Station site
- Independent analysis by Xenith Consulting confirms a JORC indicated and inferred coal resource of 194 Mt, with in-situ energy yield of 3,037 PJ\*
- Resource is expected to grow significantly as it is based on result of limited 2009 exploration programme
- UCG process would produce feedstock at a significantly lower cost than traditional methods with savings passed on to end power users
- Potential to produce liquid fuel through Gas-to-Liquids (“GTL”) process using UCG syngas or via direct liquefaction using stand-alone UCTL process

\* Per Xenith Consulting Report 30 October 2009. Results released to ASX on 9 December 2009  
Refer to Competent Persons Statement at the end of this presentation



## Sargon Coal Project (continued)

- The JORC coal resource\* of 194 Mt has been classified as follows:-

Category	Tonnes (Mt)	MJ / Kg	PJ in-situ
Inferred	75	15.75	1,875
Indicated	119	15.66	1,162
<b>Total</b>	<b>194</b>		<b>3,037</b>

- Relative energy is equivalent to ~500\*\* million barrels of crude oil (BOE)
- The resource remains undefined to the south of the tenement and there is potential for a significant resource upgrade

\* Per Xenith Consulting Report 30 October 2009. Results released to ASX on 9 December 2009

Refer to Competent Persons Statement at the end of this presentation

\*\* Based on  $6.12 \times 10^9$  joules per BOE





## UCG Tenement and Centauri-1 Power Station Site

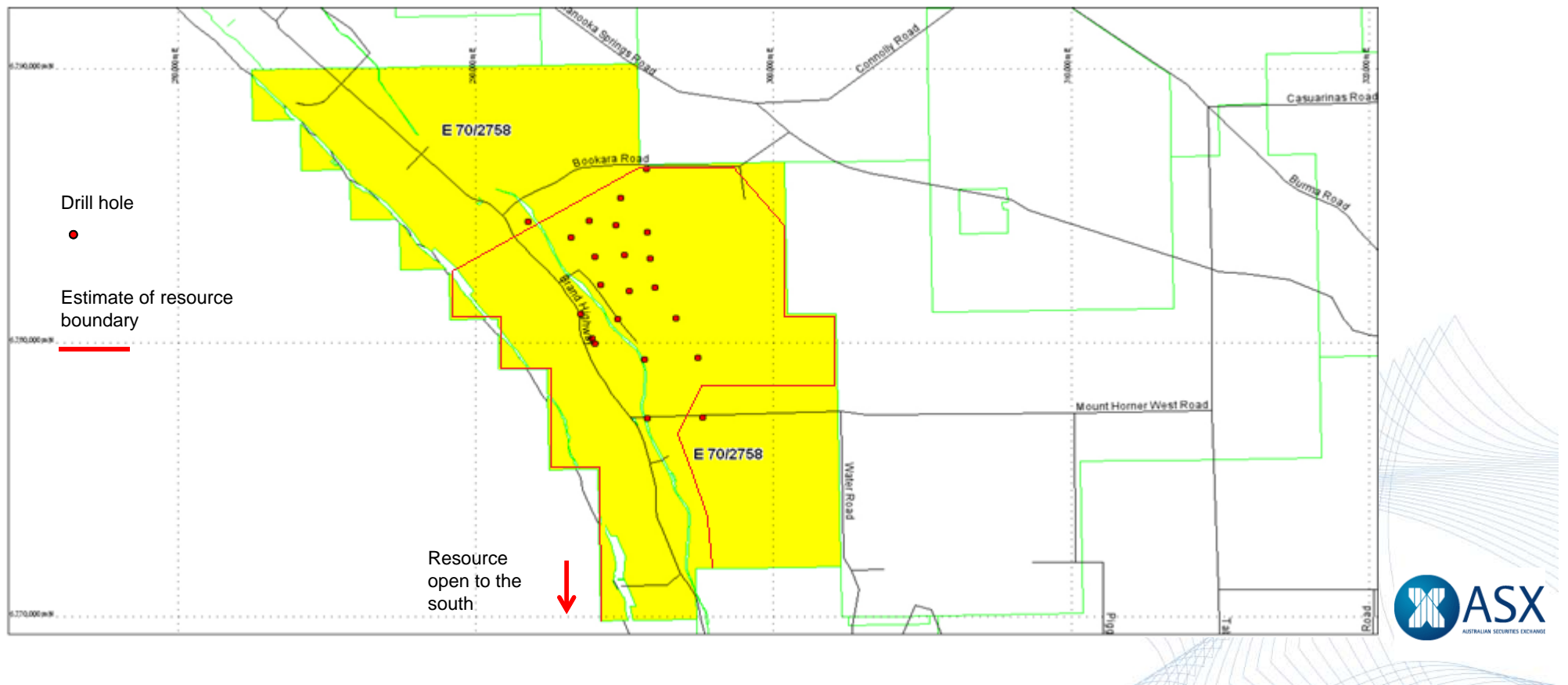






## Sargon Coal Project

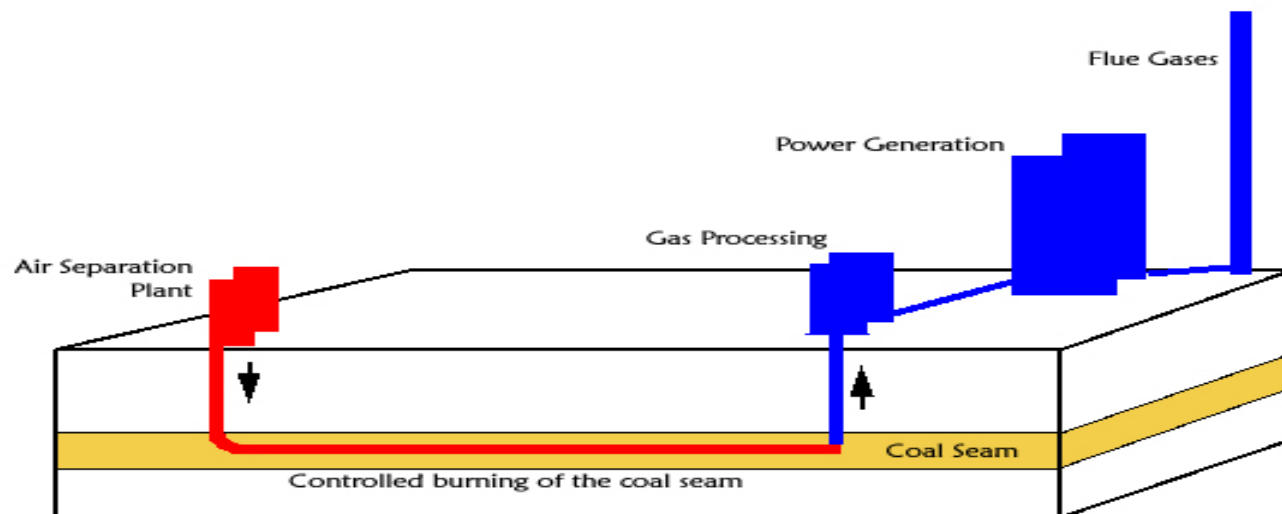
### Location of drill holes on the Sargon Coal Project





## What is UCG?

- UCG is potentially a replacement for underground mining as it allows deep coal assets to be economically mined through drill-hole access only
- Converts underground coal to surface syngas, which is a lower cost alternative to traditional mining methods
- Energy recovery from the coal seam exceeds 50% which is higher than either mining or coal seam gas production. The energy recovered via UCG should be comparable to mining plus coal seam methane (“CSM”) extraction combined where mining and CSM are possible



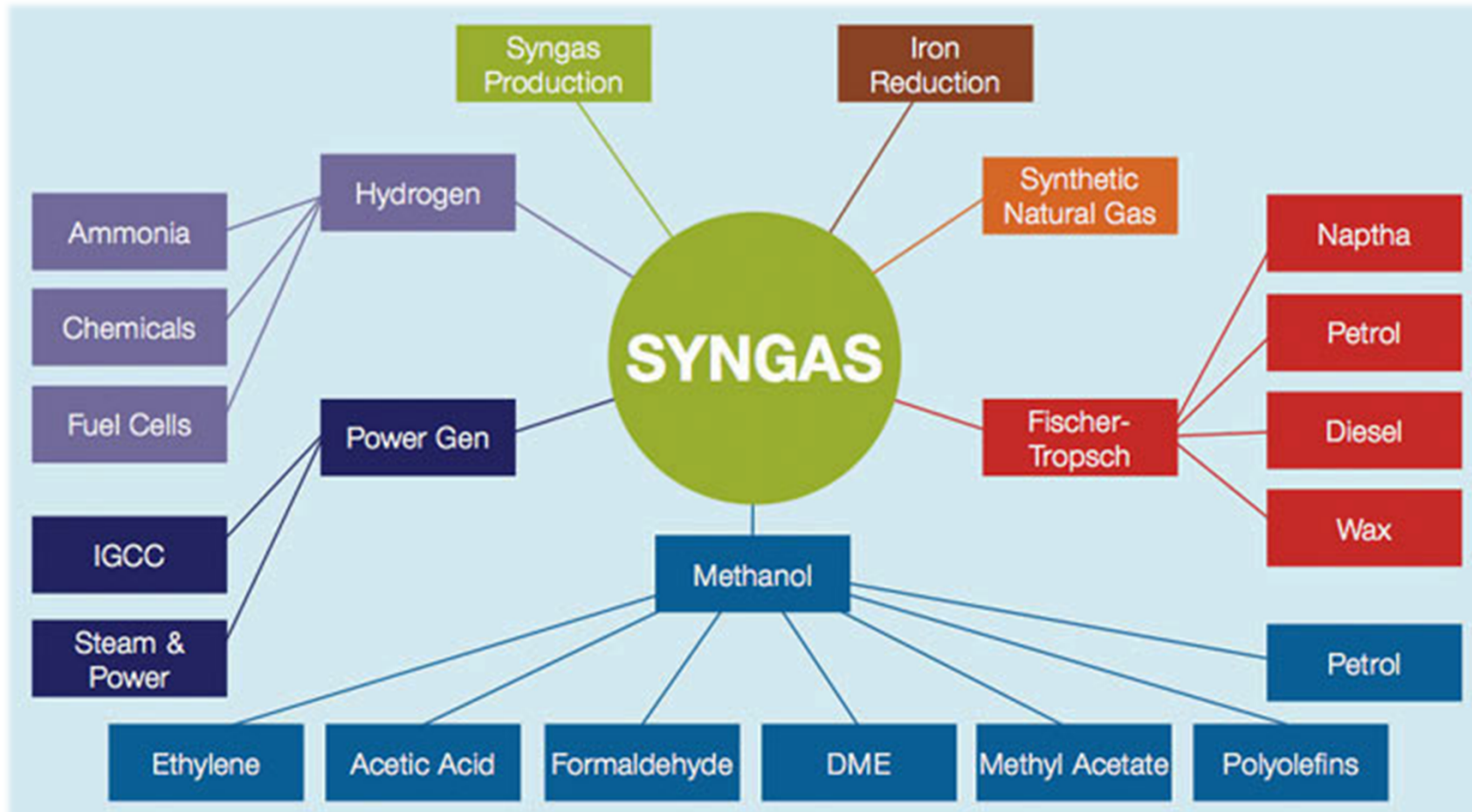


## UCG Advantages

- **Cleaner Energy:** UCG is the gasification of burning coal underground, with resultant positive reductions in the carbon footprint
- **Efficient and Reliable Energy Resource:** Gasification is the process where ignition is activated and air or oxygen, under pressure, consumes the resource. An energy rich gas mixture is produced - mainly Hydrogen & Nitrogen
- **Significantly Reduced Footprint:** Energy in the coal is extracted without the environmental impacts associated with traditional coal mining. Farming of land remains uninterrupted, ash content remains underground, minimal waste water production and water resources are preserved
- **Well suited to effective Geo-Sequestration:** UCG process conveniently combines with CO2 capture (geo-sequestration). Potential for local injection on Company-owned land via existing gas well
- **Enhanced Gas Recovery (“EGR”)** method may enable additional gas to be extracted from nearby Perth basin gas wells using CO2 by-product from UCG process
- **Syngas could potentially be converted into synthetic fuel via GTL process** which has been successfully demonstrated in Queensland



## Uses of Syngas



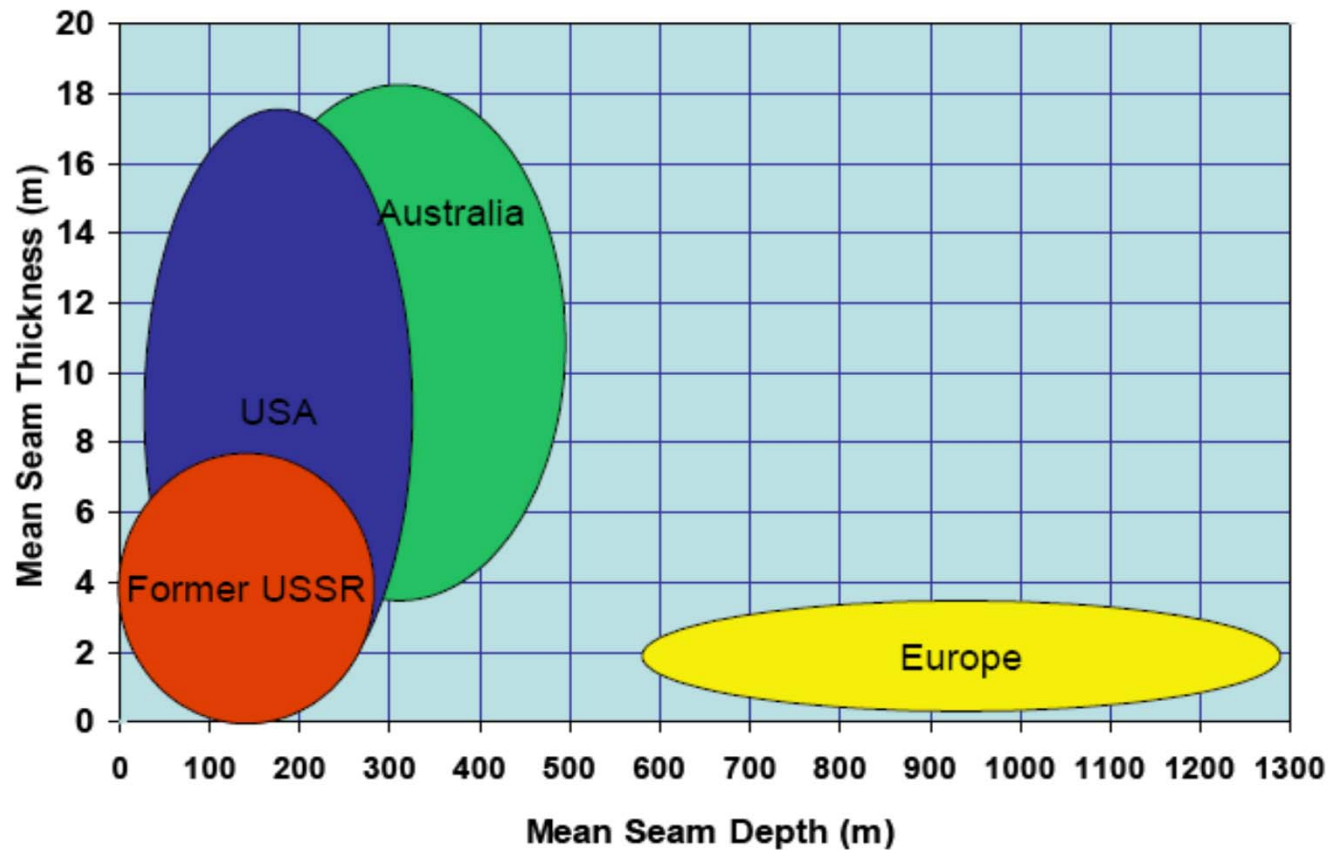


## Potential for UCG on Sargon Tenement

- Coal seam characteristics necessary for a successful UCG process are present within Eneabba's Sargon tenement, namely:-
  - Depth of coal seam; 129m to +400m, is within ideal range for UCG
  - Seam thickness is greater than 2 metres
  - Ash content of 20% is below the maximum threshold for UCG
  - Continuity of coal seam with minimal disruption / faulting
  - The deposit is downstream of the nearby Allanooka Borefield which is also protected from contamination by a deep graben structure
  - Detailed hydrogeology and packer testing has been performed on all of the aquifers impacting on the tenement – results in following page
  - The coal resource and characteristics have been reviewed by Dr Michael Blinderman from Ergo Exergy Technologies Inc. and has been assessed as suitable for UCG based on information provided



**Characteristics of coal seams where UCG projects are being conducted worldwide**



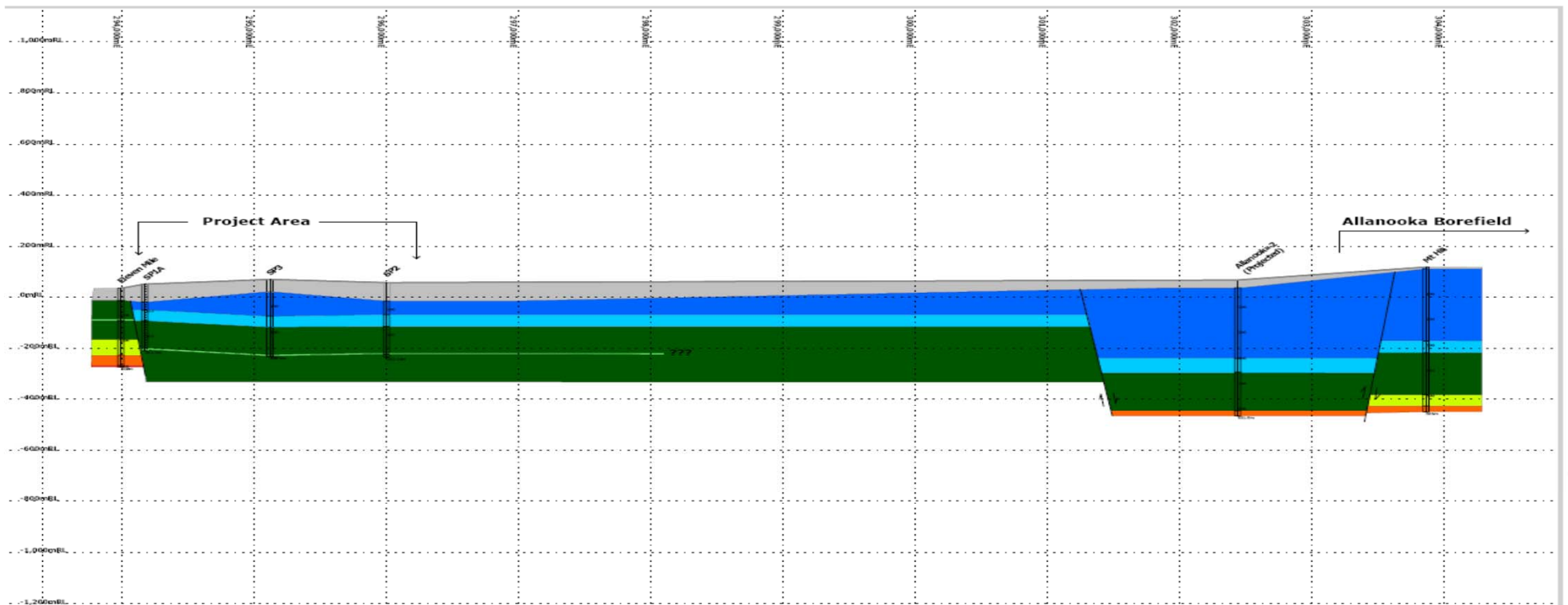


## Hydrogeology of Sargon Tenement

- The hydrogeology of the Sargon tenement has been reviewed by RPS Aquaterra through airlift recovery testing, falling head testing and packer testing with the following findings:-
- The coal seams range in depth from 70 m to 300 m below the regional water table which provides ideal hydrostatic confining conditions for a UCG operation
- A previous assessment at the proposed UCG project area concluded that the hydraulic conductivity of the coal seams and associated mudstones was suitably low to restrict groundwater flows into the UCG cavity area
- The proposed UCG project area is compartmentalised between two faults that will restrict the propagation of any drawdown or contaminant related impacts to within the local area inside the faults
- The proposed UCG project area is located down gradient from other major groundwater users and in an area of brackish to saline water quality which will minimise any potential impact to other groundwater users and reduce any degradation of water quality



**East – West Section** - shows the deep graben structure situated between the Project area and the nearby Allanooka Borefield which highlights the favourable location of the Project area for UCG



400 0 400 800  
 Meters  
 Scale: 1:30,000 A3  
 Non-Earth  
 AUTHOR: GS      REPORT NO: 006  
 DRAWN: MS      REVISION: 8  
 DATE: 19/05/2010      JOB NO: 1132C

**LEGEND**

<b>Stratigraphy</b>	Cattamarra Coal Measures
Recent	Coal Seam C & D
Pleistocene	Kockatea Shale
Yarragadee Formation	Basal Triassic
Cadda Formation	

Note: Section locations provided on Figure 3.5

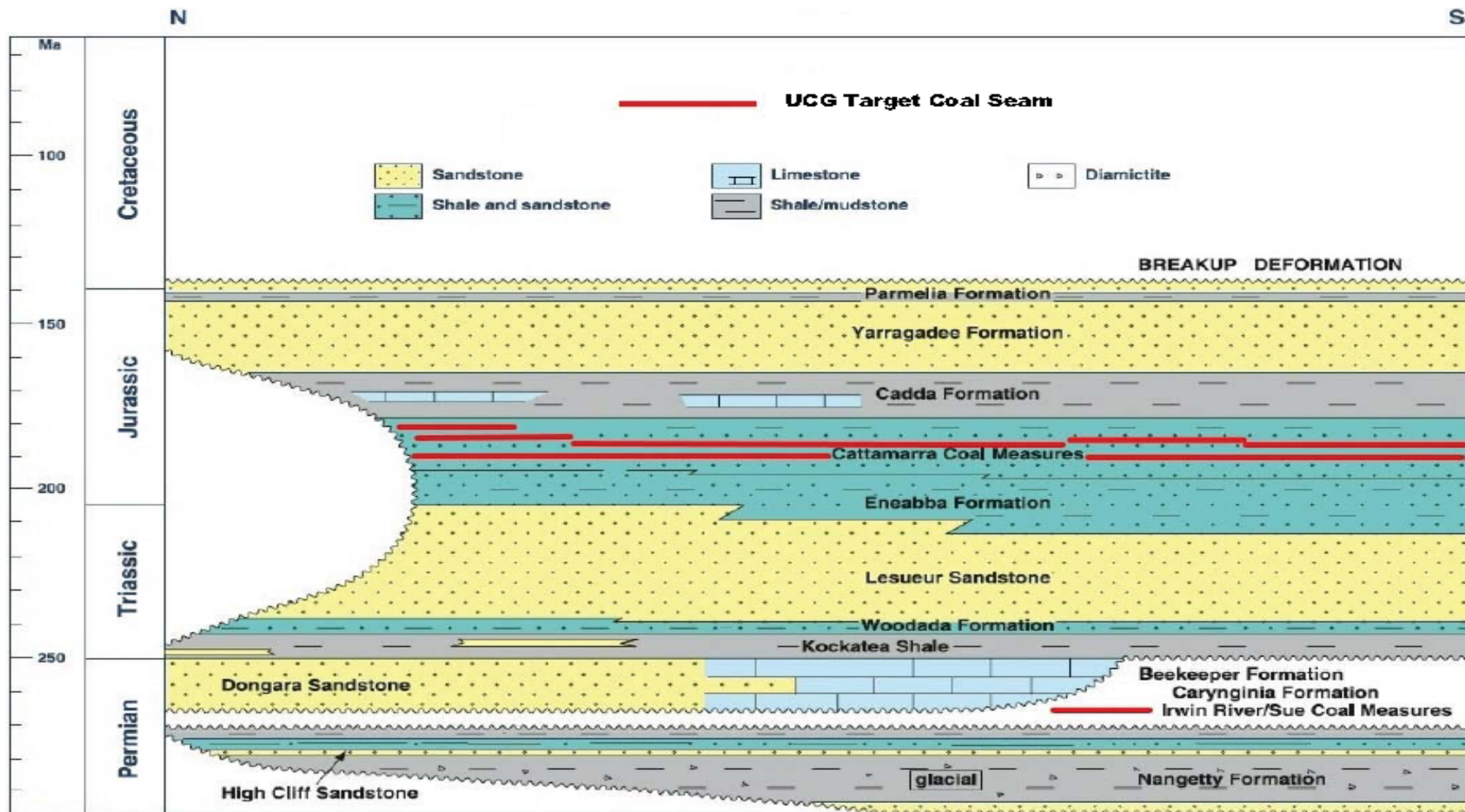
**FIGURE 2.8**  
**EXPANDED EAST - WEST SECTION**

Location: F:\Data\1132C\MapInfo\Drilling\Figure 2.8.wor





## General Stratigraphy of the Northern Perth Basin





## Green Credentials

- Carbon neutral power station site - Greenhouse Office credits (assessed in 2007) equate to offset for 30.5 MW p.a related to protected area of 1,212 Ha (~3,000 acres) of Company land
- The Company is currently assessing its entitlement to carbon offset credits under the Carbon Credits (Carbon Farming Initiative) Act 2011





## Emerging W.A. Market Opportunities

- Unlike other developing UCG projects across the globe, the Company's resource is in close proximity to infrastructure including rail, major highways, port facilities and within delivery proximity of mining resource projects (Mid West region)
- Western Australia can capitalise on UCG as a major gas/fuel alternative for power generation, industry and transport
- UCG opportunities are recognised by the Department of Mines and Petroleum ("DMP"). DMP has released a background consultation paper for stakeholder comment. Its recommended view is that the *W.A Mining Act 1978* should be amended to enable UCG operations in W.A



## Current Work Program

- Eneabba intends to develop the first UCG project in W.A
- Company continues to monitor and assess global UCG projects for local applications
- Undertaking crucial **next step** to assessing and developing a UCG pilot plant –
  - In Q3 2012 to drill the first of its Baseline water wells recommended and approved by the Department of Water
- Baseline monitoring hole data will provide further understanding of the baseline groundwater environment so potential changes as a result of the UCG pilot can be documented and assessed
- This will allow for the verification of environmental aspects of a trial pilot burn as well as provide input to modeling of impact on groundwater from the trial and project production



## Seeking Partner / Investor to Develop the Power Station & UCG / UCTL Projects

- With the close proximity of its coal prospects to the Company's proposed Centauri 1 power station, the Company believes it is one of the most significant stand-alone energy projects in Western Australia's Mid West region
- Company is poised to begin construction of its Power Station once it has secured a power off-take agreement and necessary development / debt capital
- The Directors are actively searching for a joint venture partner to participate in the development of the Power Station and UCG / UCTL Project
- The Directors are aware of strategic partnerships being formed between Australian energy / UCG companies and Chinese institutions and have recently travelled to China to investigate opportunities to market the projects to Chinese investors who can provide funding and UCG industry experience which could fast track the development of the UCG tenement and proposed Power Station into a world class energy project



## Board of Directors

### **John Arndell – Non Executive Chairman**

Mr Arndell is a Chartered Accountant with over 30 years experience in both the professional and commercial arenas. Mr Arndell has been a partner in a number of chartered accounting practices operating both nationally and internationally and specialised in the trading and reconstruction of companies across a diverse range of industries.

### **Greg Allen– Non Executive Director**

Mr Allen currently serves as Chief Operating Officer at Carnegie Wave Energy Limited, an ASX listed clean technology developer. Mr Allen has over fifteen years of experience across a range of technology, power generation and engineering related industries. He has held senior management and executive responsibility for operational, business development and administrative functions at energy and engineering organisations.

### **Thomas Goh– Non Executive Director**

Mr Goh co-founded Eneabba Gas Limited in 2004 and was responsible for securing approvals to construct the Centauri-1 power station. Mr Goh holds a B.Sc. Degree in Mathematics (University of Singapore) and has acquired years of extensive experience in the petroleum exploration industry through working with seismic contractor companies (in Singapore), a major international oil company and an Australian group of companies.

### **Morgan Barron– Non Executive Director**

Morgan Barron is a qualified Chartered Accountant who has worked in various corporate roles both in Australia and Europe. Mr Barron is currently a director of ASX listed Strickland Resources Ltd. Mr Barron provides a strong commercial, financial and management background.



## Contacts

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## Disclaimer

This presentation contains forward looking statements that are subject to risk factors associated with the energy and mining industry. It is believed that the expectations reflected in these statements are reasonable but may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially to those stated, including but not limited to: product price fluctuations, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions, project delay or advancement, approvals and cost estimates.

Investors should undertake their own analysis and obtain independent advice before investing in EGL shares (ASX : ENB).

## Competent Persons Statement

*The information in this presentation relating to coal resources is based on information compiled by Mr Troy Turner who is a member of the Australasian Institute of Mining and Metallurgy, and is a full time employee of Xenith Consulting Pty Ltd.*

*Mr Turner is a qualified geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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."*

*Mr Turner consents to the inclusion in the report of the matters based on the information, in the form and context in which it appears.*





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