LEIGH CREEK ENERGY Limited

Investor Presentation

September 2015

Employees, Jordan and Tom Mehrtens identifying appraisal drill rig sites, June 2015 at PEL 650, Leigh Creek Energy Project, South Australia.

Disclaimer

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This presentation may also contain non-IFRS measures that are unaudited but are derived from and reconciled to the audited accounts. All references to dollars, cents or $ in this presentation are to Australian currency, unless otherwise stated.

The information in this report relating to exploration results 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 2012 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.

Objective & Strategy

Objective

"Enhance returns through application of in-situ gasification (ISG) process on deep coal resources."

Strategy

*"Develop Leigh Creek Energy Project (**LCEP**) & establish a portfolio of ISG assets and royalties."*

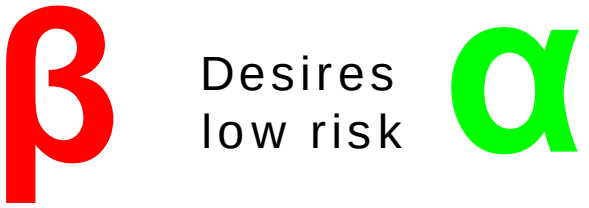
Investment Thesis

Early stage fast advancing project.

Currently <$100m market cap and outside ASX 300.

Aiming to generate “Alpha” when compared to weighted average of energy players because of LCK’s small size given;

- Energy resource prospectively = leverage.
- Supportive government.
- Gas demand and high gas price in Aust.
- Funding intended largely from gas monetisation.
- Low liquidity.



“Current market cap of $42m equates to 42 PJ at $1:00/GJ in ground.

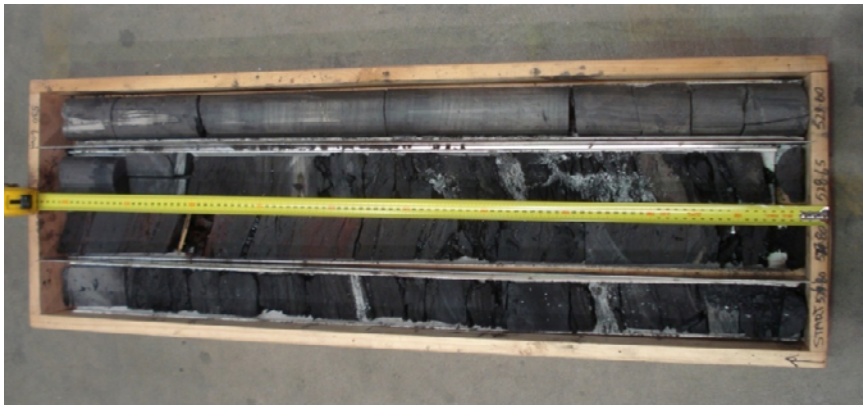
“Independent expert has target minimum of 56,000MMm3” *

*Previously published in the ‘Australian Mineral Consultants Review Report Leigh Creek Energy Project’ by Competent Person Tim Jones on 27 April 2015 available under Leigh Creek Energy (LCK) announcements on the asx website www.asx.com.au and at www.lcke.com.au/News/Technical-Reports. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcement. The form and context in which Tim Jones findings are presented have not been materially modified.

LCEP – Advanced Project

- Independent coal target 220-530mt = 56,000 – 135,000 million m^3 gas in place*.
- Appraisal drilling starts Nov 2015 - to obtain JORC 2012 coal & gas certification.
- Historic Independent ISG suitability confirmed – Golders.

LCEP Laydown area Jul 2015 (above), historic drilling (below).



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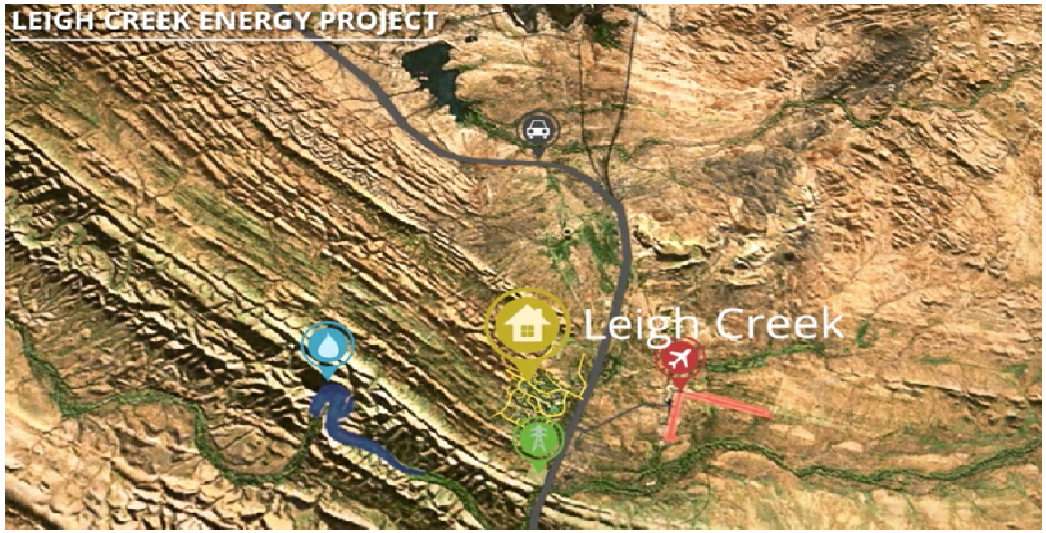
LCEP – Supportive Environment

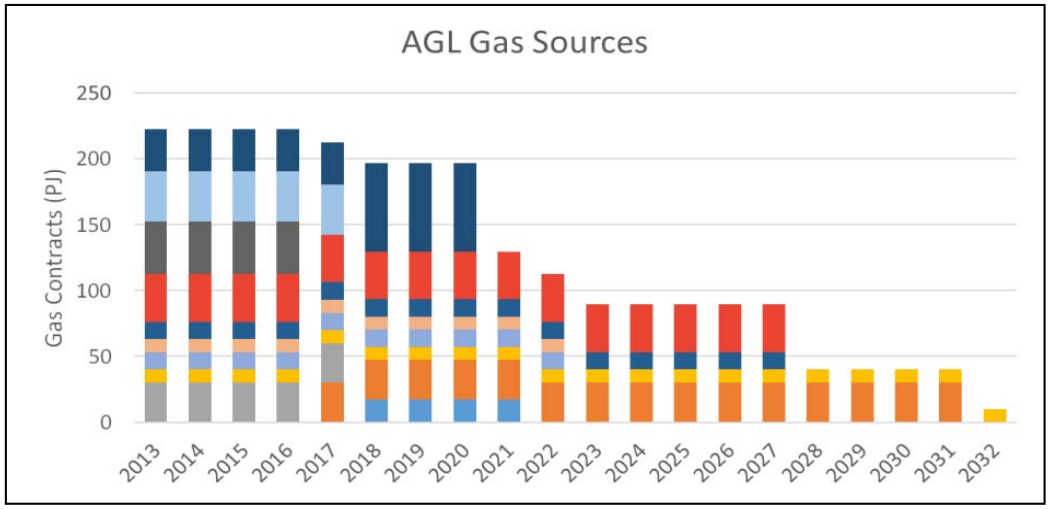
- South Aust. government
  - ✓ **ISG legislation in place.**
  - ✓ **No issues re. overlap of tenements at LCEP.**
  - ✓ **1-stop-shop for fast track.**
- Location benign
  - ✓ **Existing mine site.**
  - ✓ **Salt water at depth.**
  - ✓ **Outside Great Artesian Basin.**
  - ✓ **Remote from major centres.**

South Australia highly rated by Fraser Institute Global Petroleum Survey 2014 - #1 for "Geological Database" and top 10 for "Small Reserve Holder Comparisons".

LCEP – Lower Project Cost & Risk

- **Infrastructure in place**
  - **Major pipeline nearby**
  - **Sealed road**
  - **Airport**
  - **Power**
  - **Rail**
- **Gas shortage, high gas price (and likely rising).**
- **Gas marketing underway - Intend fund bulk of capex via early gas monetisation.**





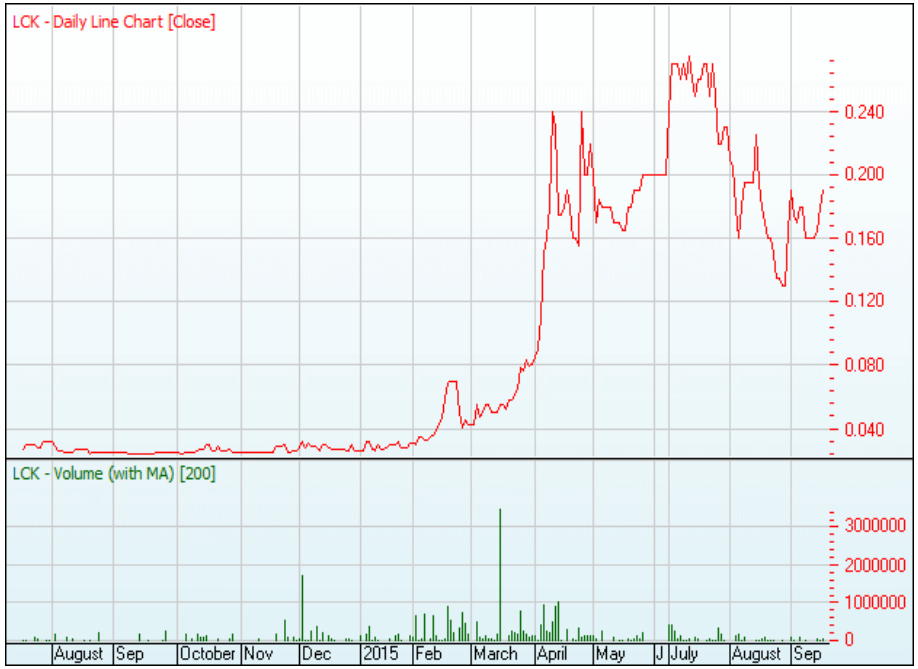
LCEP – Low Costs & High IRR

- **Low operating costs:**
  - **Make for $2-3/GJ and sell for $8/GJ (LT est.)**
  - **Includes amortisation of capital.**
- **Capex optimisation underway.**
- **IRR high and may improve dramatically:**
  - **If (and as) gas monetisation offsets capex.**
  - **If other parties (Build Own Operate) pipeline and part of gas plant.**
  - **With gearing.**

Current Capital Structure

Relisted 3 July 2015 after acquiring Leigh Creek Energy Project (LCEP).

Capital Structure			
	Securities #	**Mkt Cap $m**	**Notes**
Ordinary shares	230,519,472	43.8	
Options	750,000		$1:727, expiry 1 Nov 2015
Total	**231,269,472**	**43.8**	**Fully diluted**



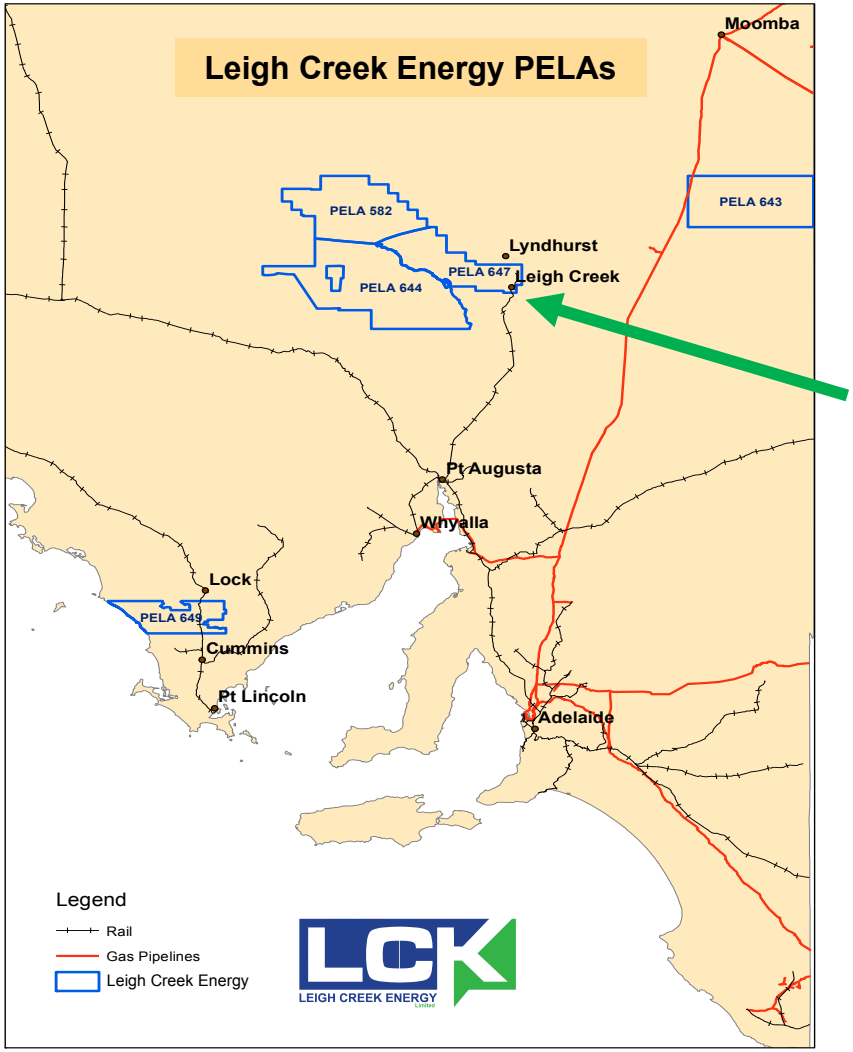
Daily price, volume for past 12 months. Source: ASX Ltd

Employee options scheme permits 10% outstanding on rolling 5 year basis.

- Operational team being gathered – there is intention to incentivise with options.

Location of LCEP

Central South Australia, 550km N of Adelaide.

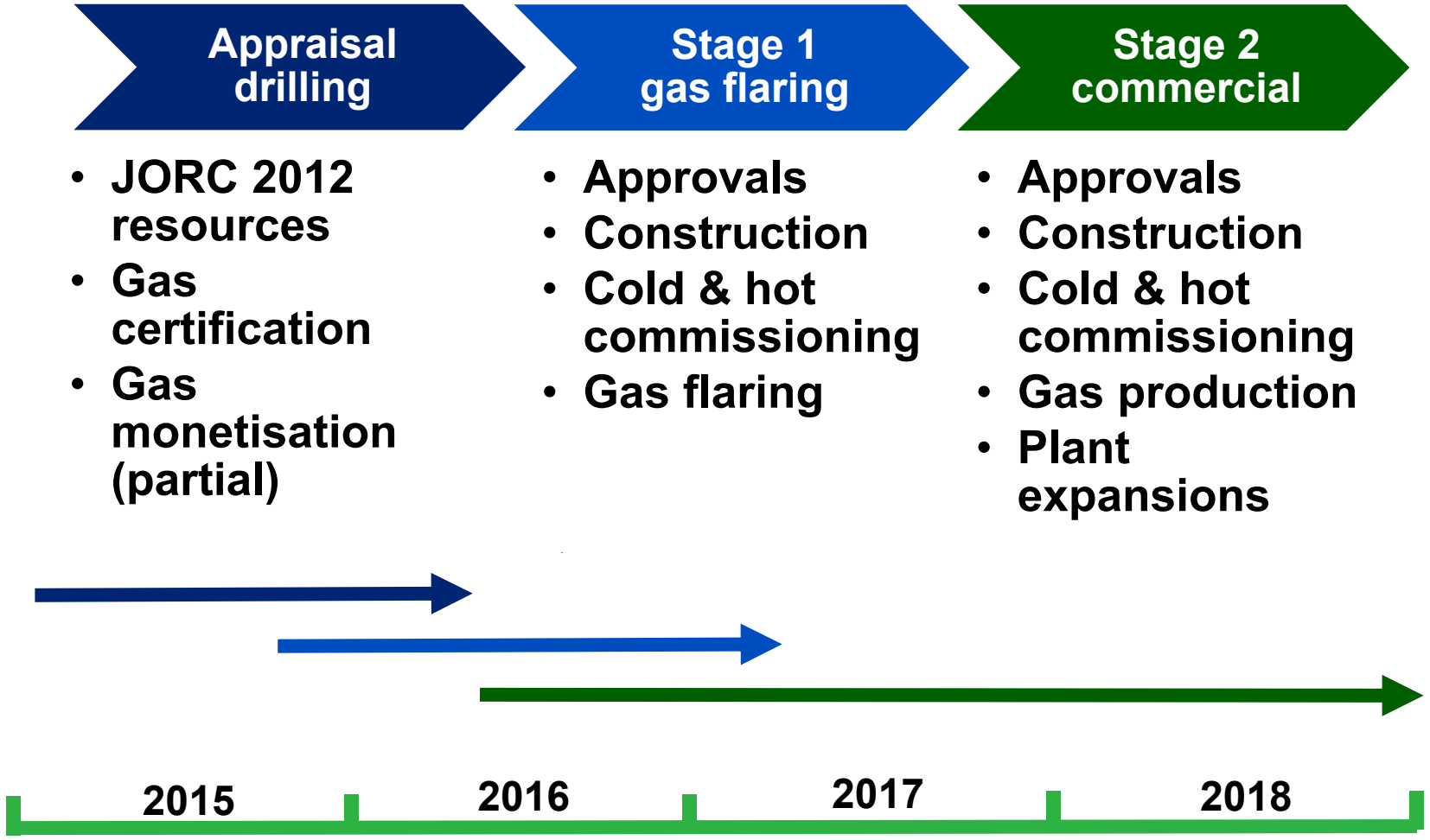


LCEP Stages

Early stage of development:

1. **Appraisal drilling**
   - JORC 2012 coal & gas certification of resources.
   - Gas in ground monetisation (partial).
2. **Stage 1 - gas flaring:**
   - Approvals - aim end March qrt 2016.
   - Construction.
   - Commissioning.
   - Operation - aim Sept qrt 2016.
3. **Stage 2 - gas commercial (and ramp up):**
   - Approvals.
   - Construction (including pipeline & electricity generation).
   - Commissioning & operation - aim 2018/19.
4. **Stage 3 - fertiliser manufacture.**

LCEP Stages



Stage 3 - Fertiliser

1. **South Aust imports 100% of nitrogen based fertiliser & explosives.**
   - Farmers suffer;
     - Price volatility, high prices & security of supply.
     - Port & storage charges
2. **LCEP Cost advantage:**
   - Uses waste gasses from LCEP
     - Hydrogen H_2
     - Nitrogen N_2
     - Steam (waste heat)
     - Carbon dioxide CO_2 (to make Urea)
3. **Heads of Agreement signed with AETI (7 Aug 2015):**
   - Principal has built many fertiliser plants
   - LCEP early design incorporating export of gasses required for fertiliser.

Fertiliser – Nitrogen based

- **Largest component of fertiliser market – Ammonium Nitrate ("AN")**
- **Expect to be low cost as consumes by-product gas streams from ISG.**
- **AN manufactured via a series of chemical steps:**
  - **Ammonia NH_3**
  - **Nitric oxide NO**
  - **Nitrogen dioxide NO_2**
  - **Nitric acid HNO_3**
  - **Ammonium nitrate NH_4NO_3**
  - **Urea $CO(NH_2)_2$**

Fertiliser / Explosives market

- South Australia has a large agriculture and mining industry, using:
  - 300-500,000 tpa of AN
  - ~100,000 tpa of explosives.
- Prices are currently $500-650/t.
- If fed by low cost waste gasses AN production costs of < $200/t expected.
- Farming covers a large area of the State.

Leigh Creek Coal Field

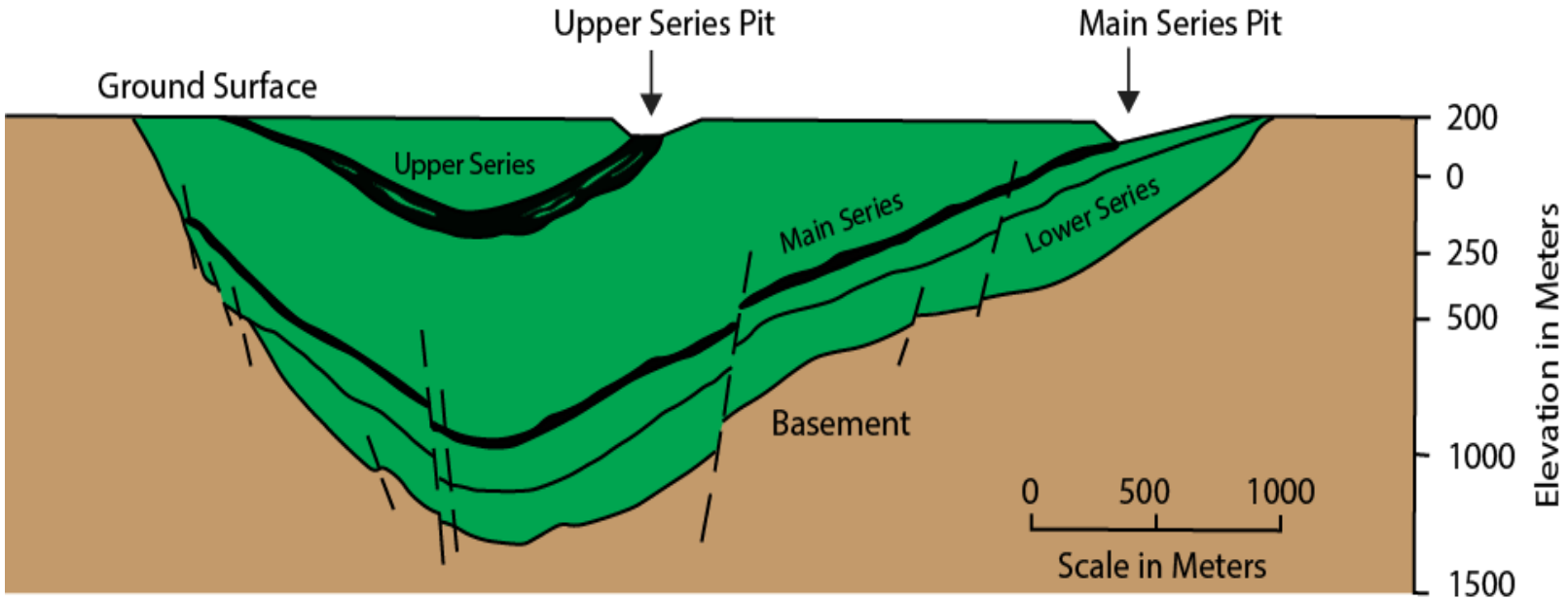
Produced coal at up to 2.5mtpa for captive power stations 250km south at Port Augusta. Mine and Power Station to close – as recently announced by owner Alinta Energy.

- The Petroleum Act permits ISG, allowing PEL 650 access to deep coal at the LCEP.

*Source: Google Maps

Coal Seams

The Main Series coal seam is up to 18m in thickness.*



- Focus on Main seam and Lower Series seam.
- No prior holes in base of coal basin.

*Statement and image previously published in the 'Australian Mineral Consultants Review Report Leigh Creek Energy Project' by Competent Person Tim Jones on 27 April 2015 available under Leigh Creek Energy (LCK) announcements on the asx website www.asx.com.au and at www.lcke.com.au/News/Technical-Reports. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcement. The form and context in which Tim Jones findings are presented have not been materially modified.

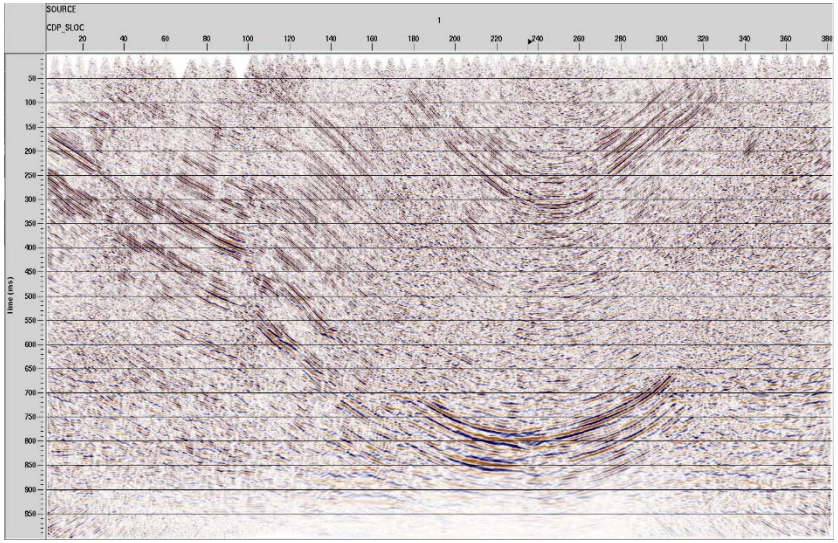
Appraisal Drilling

Historic:

- Independent expert report, 220-530mt coal exploration target equating to 56,000 – 135,000 million m^3 gas in place*.
- Prior seismic re-processed.

Drilling from Nov 2015:

- 8 well program (max 950m), obtain coal, hydrological and geotechnical data.
- Develop 3D modelling.
- Possibly expand into 2nd round to include; additional holes & seismic.



LCEP Reprocessed seismic line LC78B (1978)

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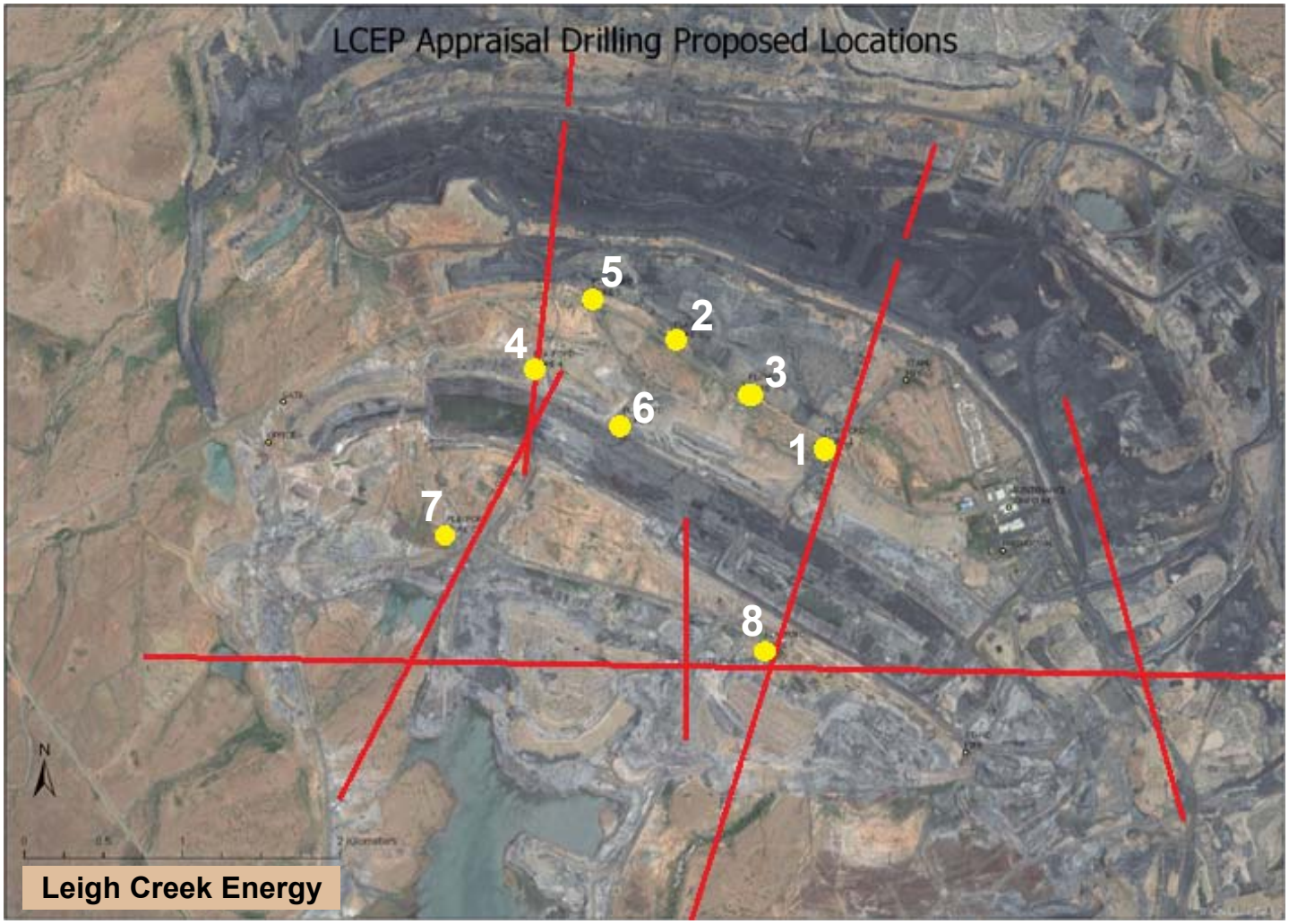
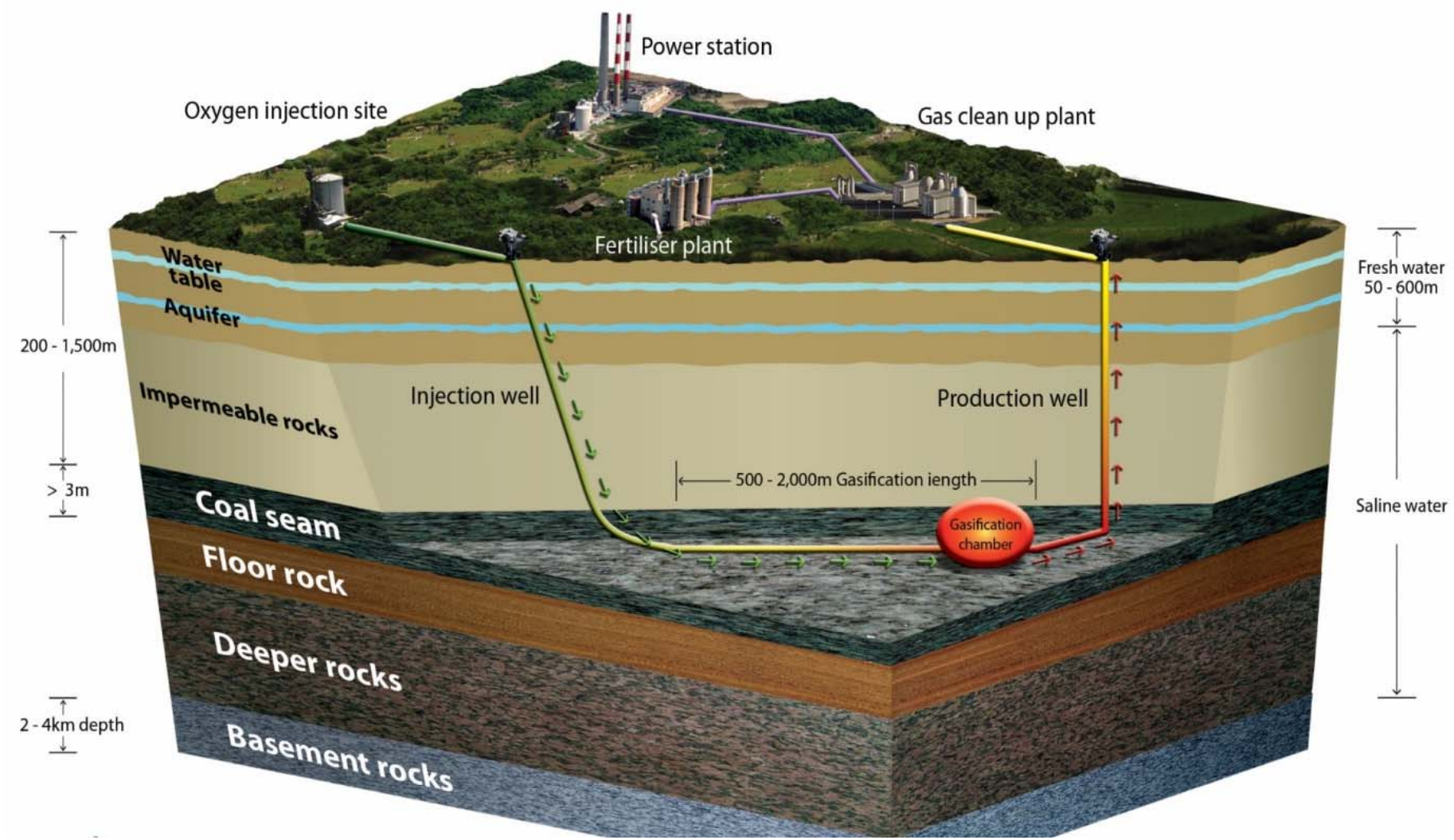
Appraisal Drilling

Old 2D seismic lines have been re-processed (red).

Appraisal drill holes planned (yellow).



ISG – InSitu Gasification



ISG Panel

A single ISG Panel consists of:

- A vertical production well (drill hole).
- A vertical then curved to horizontal injection well.
- Well heads on surface (injection and production) with valves.

Coal extracted is simplistically a rectangular prism (so #'s below overstate extraction) at depths of 200 – 1,000m.
Each panel will last 2-5 years depending on length and rate of extraction.

Simplistic ISG Panel							
Length m	Width m	Thickness m	Volume million m^3	Specific Gravity	Tonnes Million t	Energy GJ/t	Energy PJ
1,000	50	18	0.9	1.4	1.26	14	17.64
1,500	50	18	1.35	1.4	1.89	14	26.46
2,000	50	18	1.8	1.4	2.52	14	35.28

ISG is Real

- Commercial Operation:
  - Angren, Uzbekistan – 60 years of operation.
  - Eskom, Majuba South Africa – co-firing power station with syngas.
- Australian experience:
  - LNC – demonstration facility, 11 years.
  - Carbon Energy – demonstration facility, 5 years.
- Swan Hills, Canada:
  - Demonstration facility.
  - Deep ISG in salt water, 1,200 meters.
  - Utilising standard oil-field equipment.

Swan Hills ISG Project

Conclusions from the partially government funded Swan Hills ISG trials (Canada)

"There is no scale-up required to move into commercial project development"

"Planned future developments of ISG will involve simple replication"

"Ready for replication based deployment in commercial project developments"

Stage 1 - Demonstration Gas Flaring

Outcome:

- Show government and community that ISG can be done;
  - ☑ Safely,
  - ☑ Minimal impact on environment.

Data obtained allows:

- ☑ Binding gas sales contracts executed.
- ☑ Government to approve Stage 2 Commercial Project.
- ☑ Fine tuning of plant design.
- ☑ Accurate gas production costs.

Gas Shortage in Australia

- Eastern Aust. gas demand trebles with 3 new LNG plants in Qld.
- New LNG plants secured most existing gas resource 80+% non-conventional.
- Current Aust. gas users are short gas, e.g. AGL.
- Gas production cost to rise from historical $2-3/GJ to long term marginal cost of $6-8/GJ.
- **Gas shortage remains even after LCEP is in full production.**
- At present there is no gas available to feed expansion of Qld LNG.

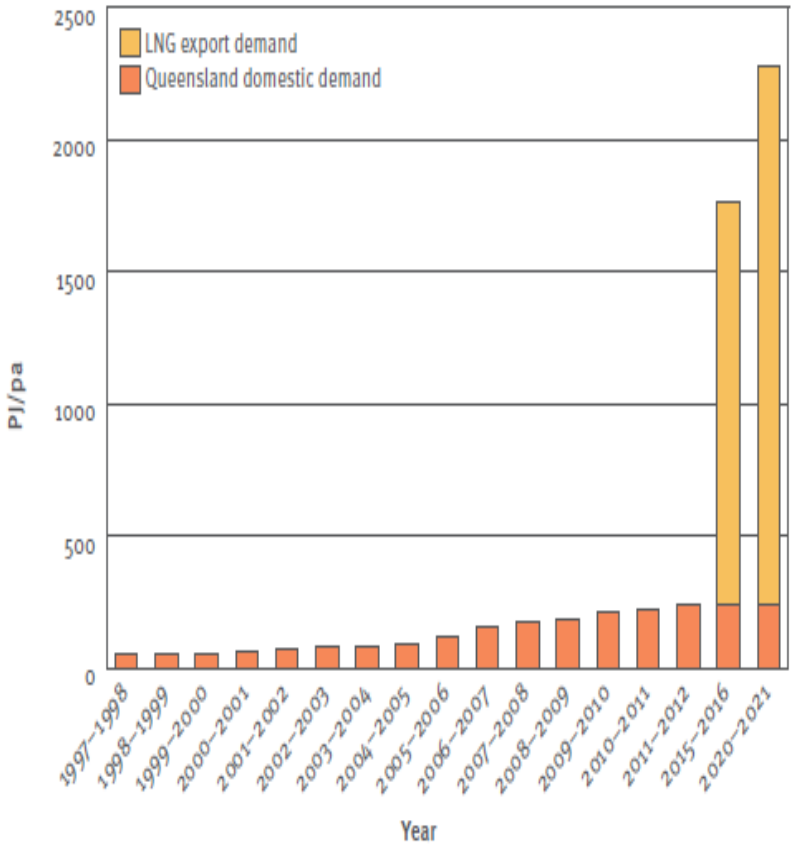
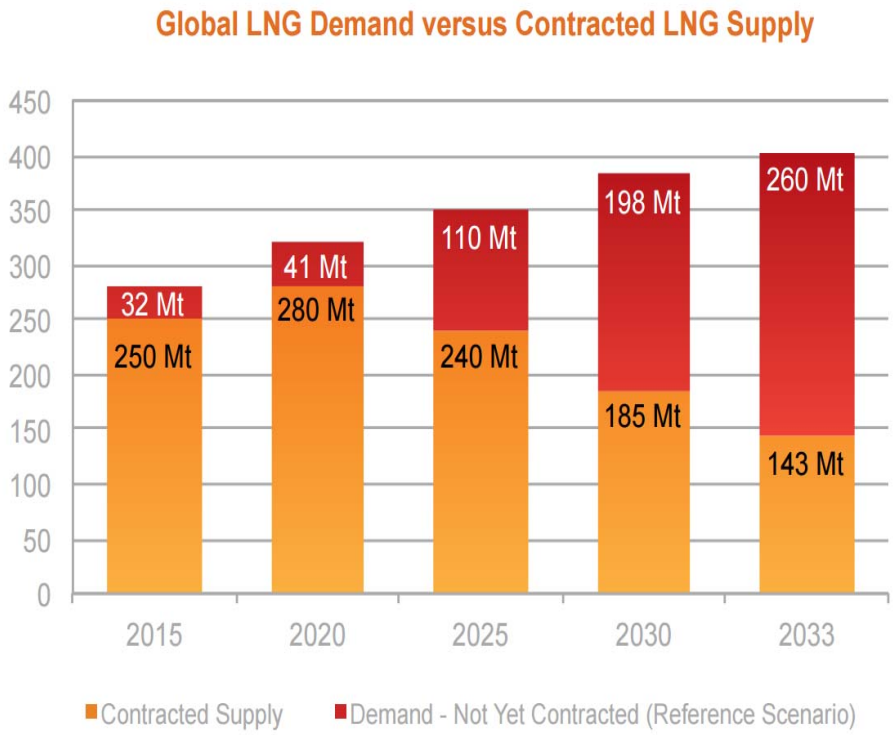


Figure 1 Queensland domestic gas demand and projected gas demand for LNG exports

Forecast Qld gas demand

Gas Shortage Globally (Long Term)

- Global LNG supply presently influenced by large # of new projects starting.
  - 7 in Australia!
- Spot LNG price falling and low.
- Over time gas demand keeps rising;
  - Population growth,
  - Rising GDP, and
  - Move to cleaner energy.
- New LNG plants required.
- LNG shortage estimated at 260mtpa by 2033.
- **Global Gas shortage looming long term.**

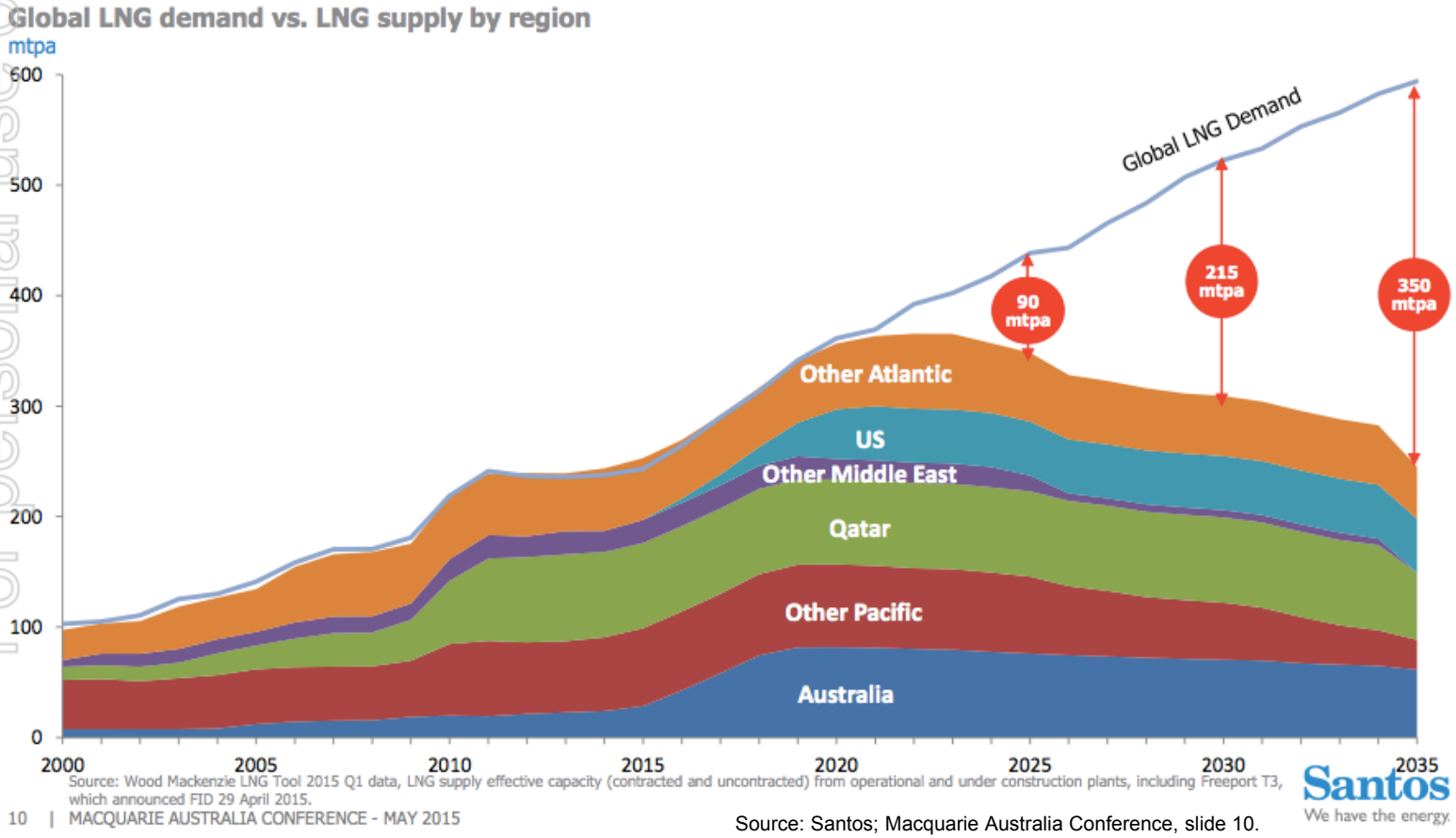


*Source: Core Energy

Global LNG Demand & Supply Outlook

Global LNG demand and supply outlook

A gap between LNG supply and demand continues to widen into the next decade



Source: Santos; Macquarie Australia Conference, slide 10.

Gas Price in Eastern Australia

- Recent wholesale gas sales prices estimated at $7/GJ (pre-pipeline charge).
- Contracted gas supply developed ahead of LNG project start-up.
- As gas supply capability rises it causes short term over supply – “ramp up gas”.
- We use $8/GJ for internal forecasts vs medium estimate of $10/GJ.

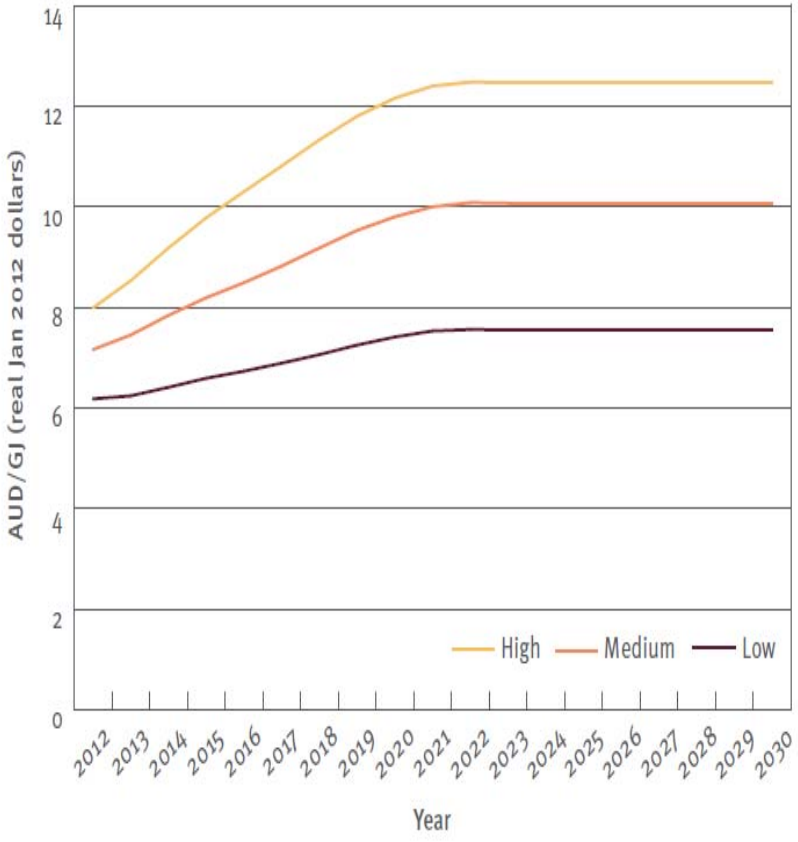


Figure 3 Range of Queensland long-term ex-field gas contract price outcomes ($/GJ)

Recent Progress

Recent Milestones & Workflow		
Formal approval process with SA Govt.	**Complete**	**PEL 650 granted 18 Nov 2014. Appraisal drilling approved 30 June 2015.**
Site access protocols & visits.	**Ongoing**	**HoA with Alinta Energy signed, Safety and mine site co-operation.**
Independent geological & valuation reports.	**Complete**	**Docs included in LCK EGM 27 May 2015.**
Listing – Shell (back door).	**Complete**	**LCK on 3 July 2015.**
East coast gas marketing.	**Ongoing**	**Market study undertaken, customer contact commenced, data room soon to go live.**
Build human capacity, including technical team.	**Underway**	**Move to Adelaide city 11 Sept 2015.**
Sell Treasury shares.	**Underway**	**15m**

Next Steps

- Appraisal drilling at LCEP:
  - ☑ Approvals.
  - ❑ Drilling
  - ❑ Establish JORC 2012 resources.
  - ❑ Repeat prior UCG geotechnical.
  - ❑ Establish gas in place.
- Establish technical team:
  - ☑ Safety & Geology.
  - ☑ Environmental
  - ☑ ISG engineers
- Gas marketing:
  - ☑ Alert gas buyers.
  - ❑ Contract book ramp up indications.
- Design & Approvals:
  - ❑ Stage 1, gas flaring.
  - ❑ Stage 2, commercial
  - ❑ Stage 3, fertiliser
- Intended Funding:
  - ❑ Sale of Treasury shares (15m).
  - ❑ Gas monetisation

**Source: Google Earth. Internal estimates of all distances are approximations.*

Gas Marketing Underway

Next steps intended include:

- Further gas customer meetings (domestic and LNG).
- Signing CA's (confidentiality agreements).
- Opening of data room.
- Drill data from appraisal drilling to achieve:
  - ☑ JORC 2012 resources,
  - ☑ Gas certification.
- Short listing following non-binding indicative offers.
- Site visits.
- Formal bids.

Gas sales in ground to support Qld LNG project decisions totalled over $21 billion in 2008 with 3P resource prices of ~$1/GJ.

- ☑ Independent expert outlined LCEP exploration target of 220 – 530mt. Equating to 56,000 – 135,000 million m^3 gas in place*.
- Prior seismic re-processed.

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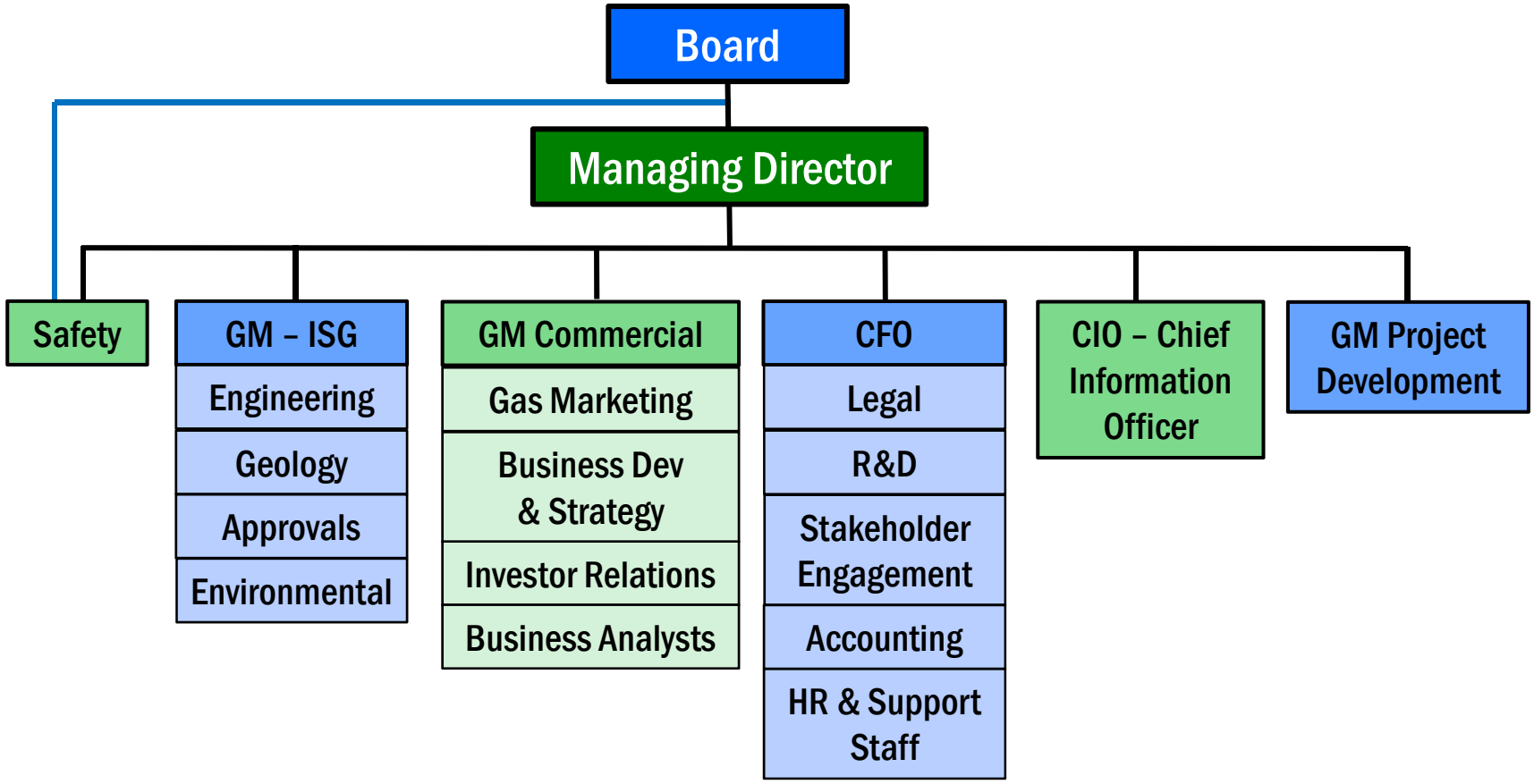
Board of Directors & Management

Justyn Peters, Executive Chairman	Lawyer, former experienced Senior Manager with Linc Energy and Queensland Government and Federal agencies. Representative of ARP.
David Shearwood, Managing Director	Mining engineer, post graduate qualifications in finance & HR. 30 years experience in funds management and investment banking. Representative of ARP.
Peter Williams, NED, Dep Chair	Accountant, former partner with Deloitte. Former Chair of Marathon Resources Ltd.
Christopher Schacht, NED	Former Australian Federal Government Senator. Chair of the Audit Committee.
Justin Haines GM Technical	Mining engineer, Geologist, Project engineer. Formally head of technical with Carbon Energy Limited (CNX), who successfully demonstrated ISG in Australia.

Board strengthening underway, total 5-7 directors capable of exercising appropriate oversight and add skills and experience to the Company.

Organisation Structure



Team presently being built and organisational capability being enhanced.

News Flow Intended

Operational & other milestones.

- Appraisal drilling to achieve JORC & PRMS gas resources.
- Investor relations program – from Sept 2015.
- Gas in ground monetisation (part) – aiming for March qrt. 2016.
- Remaining gas in ground deserves value.
- When > $100m market cap – most Aust. small cap funds can invest.
- Stage 1 gas flaring approval.
- Stage 1 gas flaring.
- Pre-order long lead time plant.
- Stage 2 commercial gas approvals – aim Jun half 2017.

Frequent gas shortage and high priced gas contracts news anticipated.

Funding

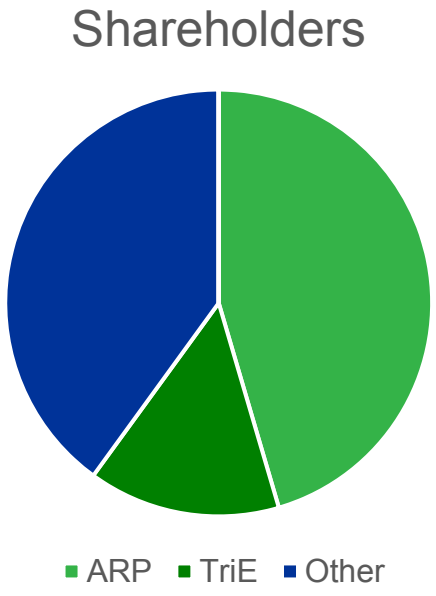
Sources:

1. Early gas monetisation of resources in ground,
2. Equity if needs not provided by gas monetisation, and
3. Project finance (debt) if available.

Gas monetisation:

- Common energy project funding.
- Eastern Australian gas shortages and high gas prices supportive.

Major shareholders are committed to minimise dilution *by future capital raisings where possible and prudent.*



Appendix 1 – Low Liquidity

LCK has a "tight" share register.

LCK Share Register				
Shareholder	**#**	**%**	**Escrow**	**Details**
Allied Resource Partners Pty Ltd ("**ARP**")	104,767,190	45.45	Yes	2 years till 4 Jul 2017
Other former ARP TriEnergy shareholders	33,544,493	14.55	Yes	1 year till 4 Jul 2016
CITIC	17,242,855	7.48	No	
Treasury shares (LCK in LCK)	15,000,000	6.50	No	
Other	59,964,934	26.02	No	
Total	**230,519,472**	**100.00**		

Appendix 2 – Corporate Targets

Objective aim over 3-4 years as follows;

- ✓ Develop company **organisation structures, systems & processes**.
- ✓ **Safety** culture systems developed & maintained.

1. Complete **appraisal drilling** campaign.
2. Establish and maintain a "**social license**" to operate.
3. Complete **early gas sales** contracts (non binding).
4. Successfully **complete gas demonstration** (Stage 1) at LCEP.
5. Execute **commercial gas sales agreements**.
6. Develop **commercial gas operation** (Stage 2) at LCEP.
7. Develop **commercial fertiliser operation** (Stage 3) at LCEP.
8. Identify and acquire **further ISG related assets** (long term).

Appendix 3 – Other Tenements

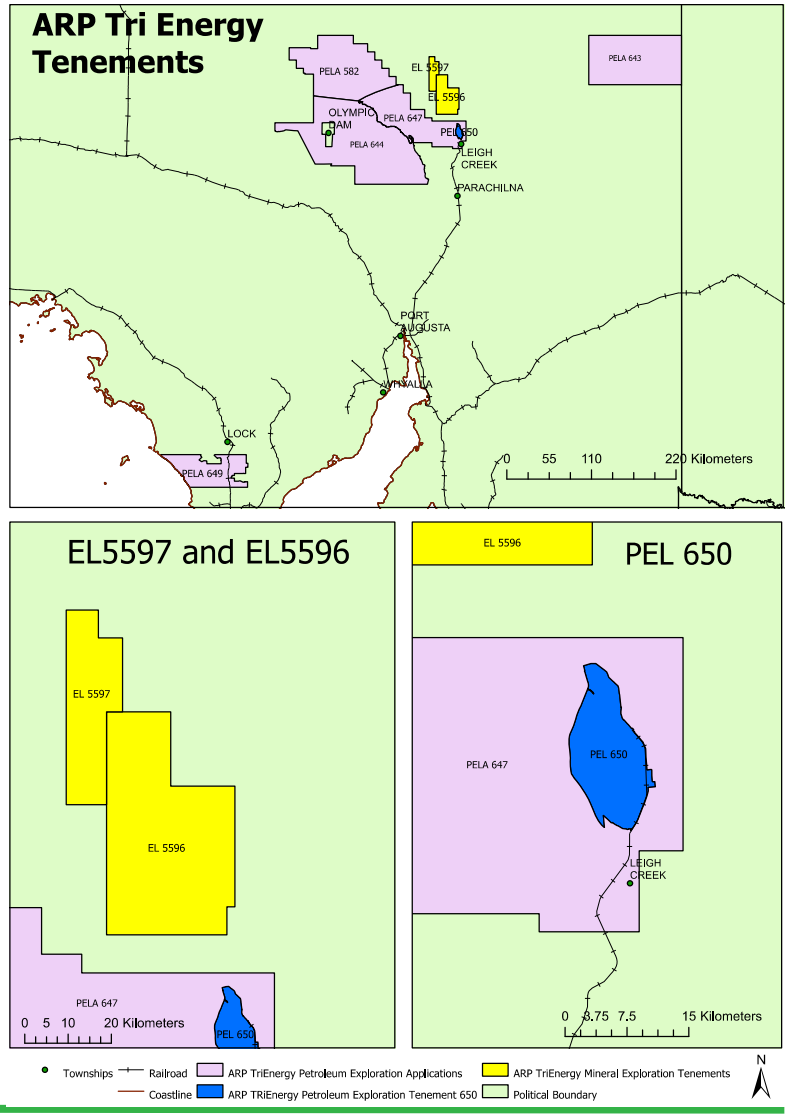
Held within ARP TriEnergy Pty Ltd (100% owned).

PELA's

- **582 –** To NW of Leigh Creek – possible shale gas, possible oil prone in northern section.
- **643 –** SE Cooper Basin, possible deep coal on NW flank of basin.
- **644** – West of Lake Torrens and over Olympic Dam.
- **647 –** Extends NW of Leigh Creek.
- **649 –** West coast of Eyre Peninsula, located over the Polda Basin.

ELA's

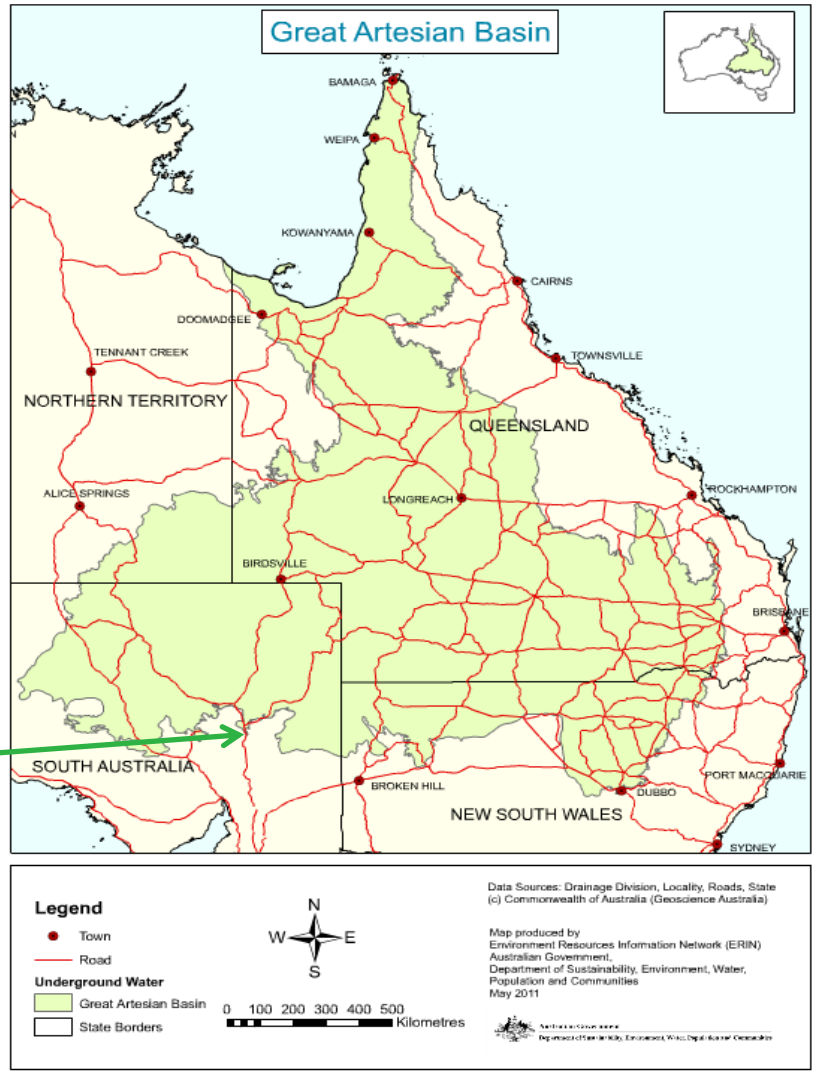
- Nth of Leigh Creek: **EL5596 & EL5597**



Appendix 4 – LCEP outside GAB

Great Artesian Basin – sub-surface fresh water source that moves from the high-rainfall NE Queensland to the dry SE Central Australia (desert).

- Nationally significant on water & environmental grounds.
- Creates both State & Federal environmental legislative & regulatory interest.
- LCEP located outside the GAB (to the south).
- Sub-surface water at Leigh Creek coal mine is saline.



Source: Australian Government – Environmental Resources Information Network (ERIN)

Appendix 5 – Supportive Government

Strong support for ISG in SA

- Specifically contemplated & supported by Petroleum & Geothermal Energy Act.
- December 2012 Unconventional Gas Policy:

  "… issue can be mitigated through careful project design, site selection and monitoring." "ISG has enormous potential for harnessing the energy of coal resources that would otherwise be too expensive or difficult to reach."

Department (DSD) policy & collaborative culture moves projects from exploration to production:

- Well organised administration,
- One-Stop-Shop service,
- Inter-departmental agreements with referral agreements, and
- **Designated response times.**

PGE Act allows incremental approvals & progress.

Appendix 6 – Gas In Ground Sales

Previous Gas in Ground Sales

Buyer	Seller	Date	Interest %	Price A$m	Reserve 3P PJ	Price Paid 3P A$/GJ	Notes
AGL	AJL/MPO	Dec-08	70/30	370	380	0.97	AJL = AJ Lucas MPO = Molopo
AGL	SGL	Dec-08	100	171	54	3.17	SGL = Sydney Gas
AOE	PES	Dec-08	100	673	1,241	0.54	AOE = Arrow Energy PES = Pure Energy
Conoco Phillips	ORG	Sep-08	50	6,000	5,069	1.18	ORG = Origin Energy
Petronas	STO	May-08	40	2,114	1,600	1.32	STO = Santos
QGS	SHG	Aug-08	100	811	1,097	0.74	QGS = Qld Gas SHG = Sunshine Gas
Shell	AOE	Jun-08	30	644	938	0.69	
Weighted Avg. Price Paid A$/GJ						1.04	

Appendix 7 – Fiscal Inputs

Key fiscal inputs are as tabled.

LCK Fiscal Inputs			
Inputs	**Unit**	**#**	**Notes**
Corporate Tax Rate	%	30	Australian Federal Government
State Royalty – South Aust.	%	10	Well head value less certain costs – likely to end up closer to 5%
TriE Royalty (Founders)	$/GJ	0:30	Real $ gas price 31 Dec 2014 basis or 3% whichever is greater, or $0:15 real 31 Dec 2014 if gas price < $6/GJ.

Appendix 8 – Prior LCEP ISG work

Study 1985 Golder Associates - Results favourable for ISG

- "…results suggest that both **groundwater inflow and groundwater drawdown will be acceptable**."
- "..**roof rock was considered to be of sufficient strength to provide controlled caving** without suppressing" the ISG process.
- Major **faults can be avoided**. Minor faults "should therefore have little effect on the continuity of the gasification process."
- "…**good correlation exists between the boreholes and seismic traverse**."
- "…**substantial additional evidence of the suitability of the Main Series coal seam for gasification**."
- "The obvious possibility involves **recovery from the Main and Lower Series over the full seam length**."
- "Based on a very preliminary assessment of deep seismic survey data, **the Main Series seam down dip of the area proposed for gasification appears to maintain its thickness and continuity**."