

### CORPORATE ACTIVITY

#### BG Group

**16 JUNE:** Shell received clearance from the US Federal Trade Commission for its proposed acquisition of BG Group. The takeover, aimed to be completed by early 2016, still requires clearance from Chinese, Brazilian, UK and EU authorities. Australian regulators must also clear the deal, with the ACCC's review likely to focus on any lessening of competition in the east coast gas market should Shell add ownership of QGC's gas reserves to its half interest in Arrow Energy. The ACCC is already been conducting a broader inquiry into competitiveness within the east coast gas market, as directed by the Federal Government.

#### Comet Ridge

**15 JUNE:** Comet Ridge announced the retirement of Tony Gilby from his non-executive Directorship. Mr Gilby, co-founder and MD of Sunshine Gas until its acquisition, had been on the company's Board since 2009. He continues as MD and CEO of the Botswana-focussed CSG explorer Tlou Energy.

#### AGL Energy

**4 JUNE:** AGL Energy is to exit the Galilee Basin in the first withdrawal from its upstream gas investments. The company will hand its 50% operating interest in ATP 529P to JV partner Galilee Energy at no cost, and will also contribute \$0.6m to future costs. AGL has invested tens of millions of dollars in the tenement and its Glenaras Pilot but a series of water management and operational issues have meant the five-spot pilot has never delivered commercial gas flows. AGL first farmed-in to the Galilee in 2008, drilling the five well Glenaras pilot at Rodney Creek. Galilee Energy, which has started investing in US oil and gas assets in the last couple of years, will seek to recomplete a number of wells at Glenaras with a new design aiming to avoid excessive water flows.

#### APA Group

**4 JUNE:** APA Group completed the acquisition of the QCLNG gas transmission pipeline from BG Group, renaming the 543 km, 42-inch diameter pipeline network the Wallumbilla Gladstone Pipeline. The final purchase price was US\$4.6b (\$5.97b), adjusted down from the US\$5.0b price announced in December as it was tied to a US commodities price index. APA's purchase of the pipeline is underwritten by 20-year take-or-pay gas transportation agreements with the QCLNG project with the company expecting EBITDA earnings from its first full year of ownership of US\$355m. The GTAs are further extendable for two ten-year periods after the end of the initial term.

### EXPLORATION AND APPRAISAL

#### AGL Energy

**26 JUNE:** AGL Energy advised that it had engaged a contractor to dispose of flowback water from its Waukivory Pilot in the Gloucester Basin, with the water to be trucked more than 700 km to Narangba on the north of Brisbane. Two previous contractors refused to continue disposal of water within NSW after coming under community and local government pressure. Now that it has secured a flowback water disposal method and been cleared of two investigations after the detection of trace amounts of BTEX AGL is clear to resume testing operations at Waukivory.

#### Comet Ridge

**12 JUNE:** Comet Ridge reported that the Mahalo-7 horizontal well would be workedover in July, with replacement of a malfunctioning downhole pump. Mahalo-7 was drilled by project operator Santos in November last year to effect more efficient dewatering of the Mahalo Pilot. Some gas flows were detected in March before the current pumping problems. Comet Ridge has a 40% interest in the Mahalo Block with Santos and APLNG each holding 30%.

### LNG AND INFRASTRUCTURE

#### Icon Energy

**26 JUNE:** Icon Energy advised that the deadline to satisfy conditions precedent for its Gas Sales Agreement for 40 MT of LNG with Shantou SinoEnergy had been mutually extended until 30 June 2018. The agreement was first signed by the two companies in 2011 and calls for Icon to supply Shantou with 2 MTPA of LNG for twenty years. The conditions for the deal require Icon to obtain an independent reserves estimate of 2 tcf of gas and all approvals for gas production and LNG liquefaction and export facilities, Shantou in return is required to obtain Chinese government approvals for the construction and operation of an LNG import terminal. Icon's 35.1% share of ATP 855 in the Nappamerri Trough gives it net 2C contingent resources of 552 bcf.

#### AGL Energy

**12 JUNE:** AGL Energy officially opened its Newcastle Gas Storage Facility. The \$310m LNG facility has a storage tank with a 1.5 PJ capacity and a liquefaction plant and will be used to boost gas supply in the Hunter region during peak demand periods.

## GLNG

**5 JUNE:** Santos announced that it had completed the third and final gas processing hub to be developed as part of the GLNG project. The Roma hub has been fully commissioned and follows the completion of two new Fairview hubs over the last eight months. Together the three new hubs have a nameplate capacity of 555 TJ/day (201 PJ/year). Santos expects the GLNG JV will sanction a near doubling of the 145 TJ/day capacity of the Roma hub this year, with this cost to be outside the US\$18.5b project budget. First LNG from GLNG is expected at the end of the third quarter.

## GOVERNMENT AND REGULATION

### NSW

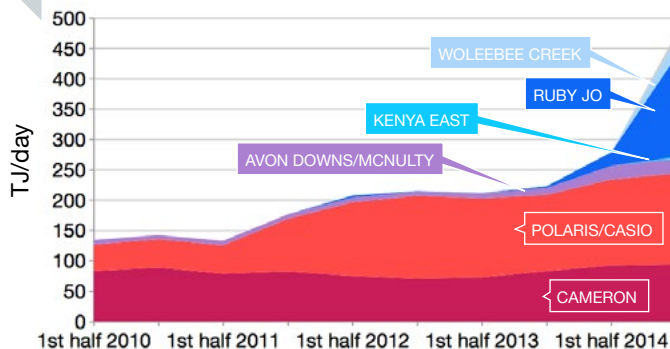
**13 JUNE:** There was spirited debate over CSG exploration at the NSW Nationals Party annual conference, with the Nationals having lost the seat of Ballina in the Northern Rivers to the Greens at the recent state election as a result of community opposition to the industry. A motion to ban CSG exploration in the Northern Rivers region, targeted primarily at Metgasco and its Clarence-Moreton Basin acreage, was given support by Party leader and NSW Deputy Premier Troy Grant. Eventually however, the conference elected not to vote on the motion avoiding a potential split on the issue within the Coalition Government.

## CSG PRODUCTION

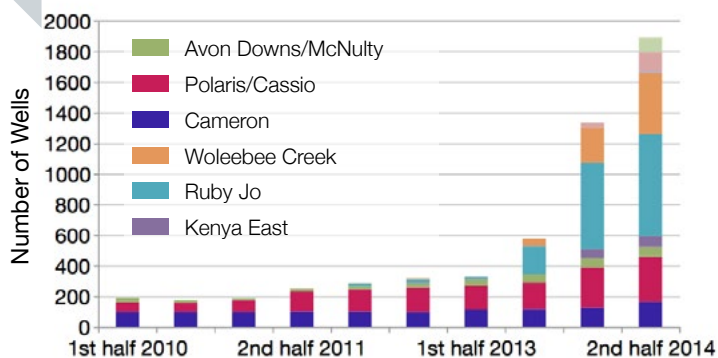
The following graphs show CSG production and the number of producing wells for Arrow Energy and BG Group's QGC subsidiary. The data is sourced from reports made by the companies to the Queensland Department of Natural Resources on a tenement-by-tenement basis. It gives some insight into the contrasting activity within the CSG fields of the two companies. With QGC making massive investments into its upstream fields to supply QCLNG production and the number of producing wells in its fields has soared, particularly in the last year. The ramp-up of production towards the end of 2014 and the start-up of QCLNG Train 1 is clear to see. Many of the wells at new fields such as Woleebee Creek and Avon Downs/McNulty are continuing to dewater and will provide further large production increases as water pressure is drawdown.

In contrast to QGC Arrow Energy has made little investment into its CSG assets over the past few years as the planned Arrow LNG Project was shelved by owners Shell and PetroChina. Arrow's production remains relatively flat and the number of producing wells across the companies' fields has actually fallen. Looking at the differing production profiles raises the question of when and how Arrow's substantial CSG reserves will be developed. This is particularly pertinent considering the ongoing claims made by large east coast gas consumers of difficulties in securing new gas supplies and Shell's looming purchase of QGC through its proposed takeover of BG.

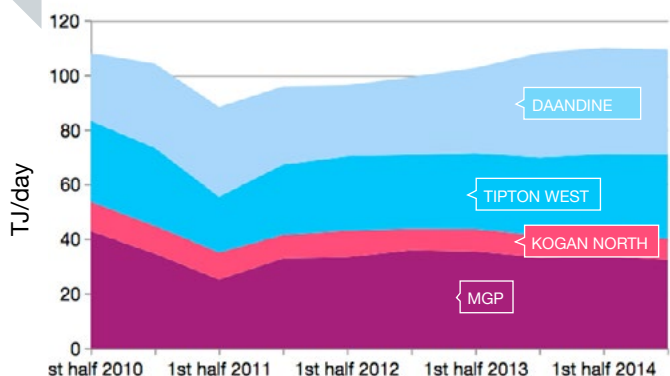
**QGC CSG Production**



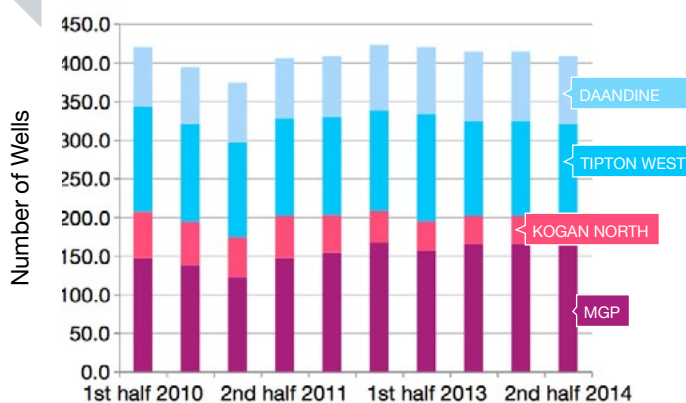
**QGC Producing Wells**



**Arrow Energy CSG Production**



**Arrow Energy Producing Wells**

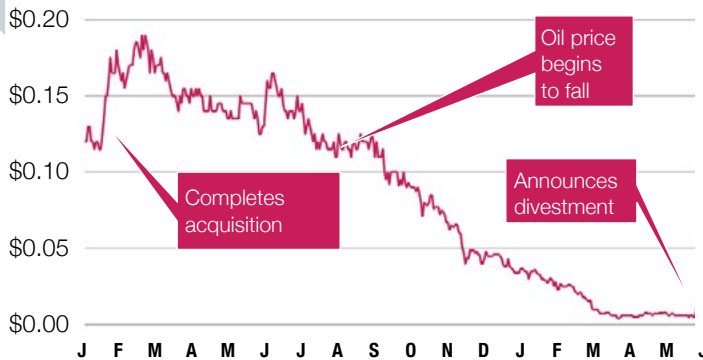


## CORPORATE ACTIVITY

### New Standard Energy

**29 JUNE:** New Standard Energy announced the sale of its Eagle Ford and Cooper Basin assets to Sundance Energy. Sundance will assume \$20.7m of debt and issue New Standard 3m shares valued at \$3.2m as consideration, in return gaining ownership of 5,500 Eagle Ford acres and a 17.5% interest in the Patchawarra Trough tenement PEL 570. Once again New Standard's only assets will be its unconventional acreage in the Canning and Carnarvon Basins in WA. The company will have just a few million dollars of cash on hand, compared to the near \$40m it had before it made its ill-timed foray into the US and the Cooper at the beginning of 2014. Although New Standard's share price doubled to \$0.012 on announcement of the sale the company was still down more than 90% since the announcement of the assets' acquisition. New Standard's shareholders will have a chance to vote on the proposed Sundance deal at the end of July.

New Standard Share Price



### Norwest Energy

**5 JUNE:** Norwest Energy advised that it had completed a share placement to raise \$0.5m, issuing new shares at \$0.047. Half of the placement was taken up by Rey Resources, giving it around 4% of Norwest. The two companies are also holding discussions relating to potential farm-ins by Rey to Norwest's Perth Basin acreage.

### Central Petroleum

**4 JUNE:** Central Petroleum announced that it would buy a 50% operating interest in the Mereenie Oil and Gas Field from Santos. The initial purchase price is \$45m, with Central also to carry Santos in a \$10m work program aimed at rapidly increasing 2P gas reserves at the field to support the business case for the proposed NEGI gas pipeline. If the NEGI is

sanctioned Central will pay Santos a further \$15m and fully carry a \$55m - \$75m work program to prepare the field for gas sales to the east coast through the pipeline. Santos will remain operator of six of Central's southern Amadeus Basin tenements where it is currently farming-in and will be given the option to acquire a 50% interest in two of Central's tenement application areas, EP(A)s 111 and 124.

Mereenie was discovered in 1964 and first brought into production in 1984. Since a long-term gas contract ended in 2008 the field has been geared towards oil sales with most gas production recycled. The installed infrastructure has a production capacity of 45 TJ/day (15 PJ/year) with around 25 TJ/day of gas currently being reinjected. Santos invested \$100m in an eight well oil appraisal program at Mereenie in 2013 with the field producing 225,600 barrels of oil and 41,000 barrels of condensate in 2014. Central will also take a 50% interest in a 270 km oil pipeline connecting the field to Alice Springs.

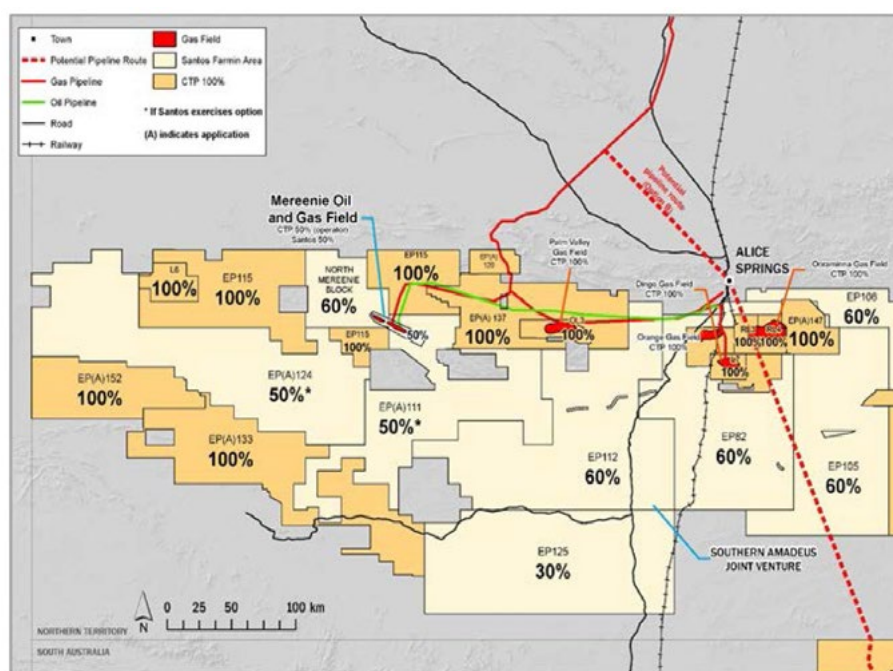
The deal gives Central control of all three of the producing fields in the Amadeus, after buying Palm Valley and Dingo from Magellan Petroleum in 2014. The acquisition of Mereenie will be funded under the same loan agreement with Macquarie Bank that funded that purchase, with the size of the credit facility to be increased from \$50m to \$90m. At the end of the most recent quarter Central had drawn down \$43m, with funds also used for the development of Dingo. Central expects to make cost savings by operating all three of the Amadeus fields, with operating costs of \$2/GJ at Palm Valley and Dingo to fall to less than \$1.50/GJ across the three. Dingo's development was underpinned by a 1.5 PJ/year GSA and Palm Valley and Mereenie both sell similar amounts of gas.

With most of the NT gas market supplied by ENI's Blacktip field there is limited scope to increase sales from the Amadeus fields within the Territory. As a result Central's MD Richard Cottee has become one of the strongest supporters of the NEGI pipeline project. He aims to boost 2P gas reserves in the Amadeus as quickly as possible, both to support the investment case for the NEGI and to make the southern route option through the Amadeus Basin to Moomba more attractive than the northern route to Mt Isa.

Current 2P gas reserves at Mereenie are 123 PJ with Central planning to immediately start investing \$10m to increase this figure. This will involve well workovers and a review of existing data, with the aim of boosting reserves at the field to 280 PJ by the end of this year. Central is targeting gross 2P gas reserves of 300 PJ - 400 PJ across the three Amadeus fields by the end of 2015. Mr Cottee believes this amount would be sufficient to provide half of the required reserves for the NEGI project.

Although estimates of NT unconventional resources as high as 200 tcf have been made this gas remains undiscovered and cannot be used to support the business case for the NEGI. Additionally, most of the gas reserves located offshore to the north of the NT have been earmarked for LNG by their owners, making it difficult to see where the other half of the required reserves will come from. NT Chief Minister Adam Giles has ruled out government subsidies for the pipeline ensuring a commercial case for investment must be made. What is certain is that if the NEGI does get the go-ahead in the next few years Mr Cottee will have positioned Central to be one of the biggest beneficiaries. If it doesn't his company making bets may start to turn sour as Central will be required to service debts that could easily reach \$100m.

### Central Petroleum Amadeus Basin



Source: Central Petroleum

### Eneabba Gas

**2 JUNE:** Eneabba Gas completed the acquisition of a half share in the Perth Basin tenement EP 447. The company paid Greenpower Energy \$0.82m and granted the company a 1.5% production royalty for the stake. Fellow junior UIL Energy operates the permit and owns the remaining 50% interest; it plans to acquire further 2D seismic coverage of the acreage early next year. Eneabba also holds 10% of the Ocean Hill block where Finder Exploration is funding \$15m of exploration to earn a 90% stake.

## EXPLORATION AND APPRAISAL

### AWE

**16 JUNE:** AWE advised that the Waitsia-1 appraisal well had intersected net gas pay of 18 m in the Kingia and High Cliff Sandstones conventional reservoirs, after reaching a total depth of 3,507 m. The results indicate potential upside from the 2C contingent resource estimate of 290 bcf for the Waitsia field as the reservoirs were thicker and of better quality than in Senecio-3, the Waitsia discovery well. AWE has commenced planning for the development of the field with initial production through already installed infrastructure targeted for the middle of 2016. A full development could see gross production of 100 TJ/day, shared between equal owners AWE and Origin Energy. Waitsia-1 also intersected the Senecio tight gas reservoir and detected gas shows in the Irwin River Coal Measures and the Carynginia Shale. AWE will now drill Waitsia-2 to test the southern part of the field.

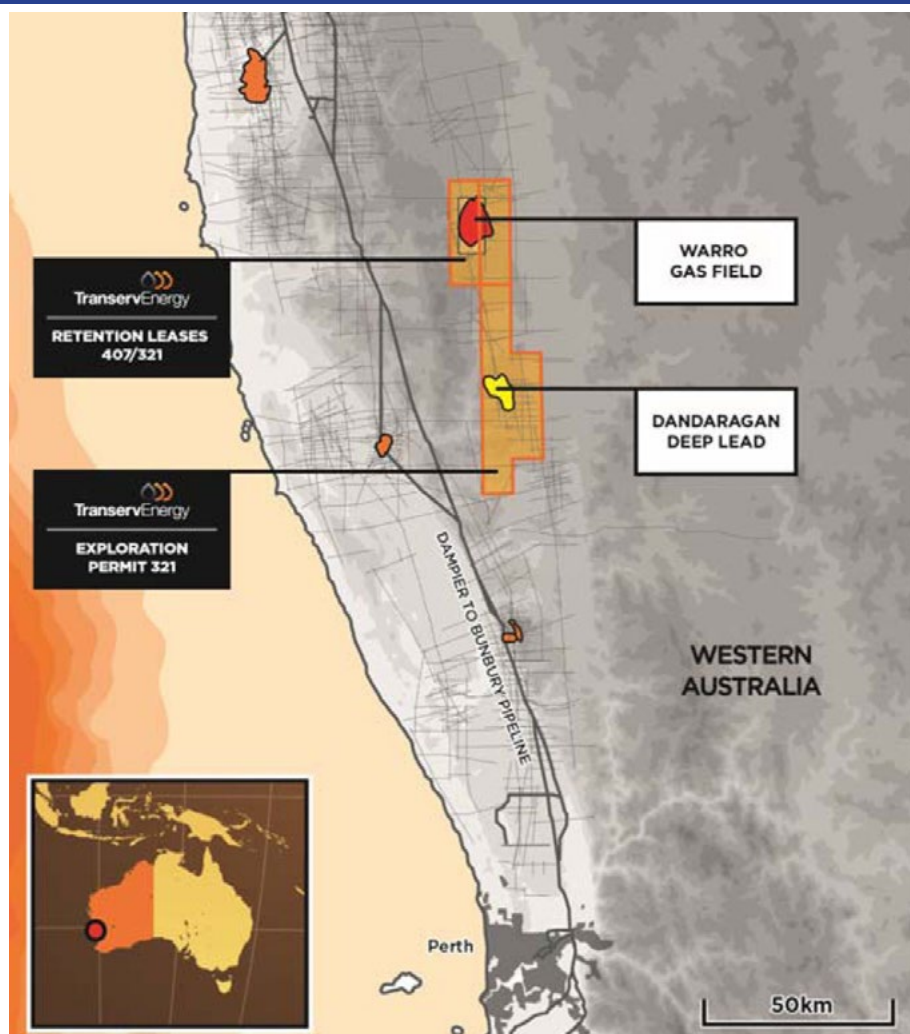
### Drillsearch Energy

**11 JUNE:** Drillsearch Energy advised that an eight well exploration campaign in its Western Cooper Wet Gas JV with Santos had been completed with a seventh gas discovery. Moonanga South-1 intersected 4.3 m of net pay across two Patchawarra Formation zones and was cased and suspended as a future producer. Santos is farming-in to earn a 60% interest in PEL 513 and has already commenced planning to bring the tenement into production in the second half of this year.

## Transerv Energy

**11 JUNE:** Transerv Energy advised that its environmental plan for the proposed Warro-5 and Warro-6 wells had been approved by the WA Department of Mines and Petroleum. The company expects to commence drilling at the Warro tight gas field at the end of August, once the Enerdrill-3 rig has completed drilling Waitsia-2 for AWE. The company has also contracted Condor Energy to fracc both wells. Alcoa will fund the Warro appraisal program under a farm-in that will see it earn up to a 65% interest in the field for \$100m of investment.

### The Warro Tight Gas Field



Source: Transerv Energy

# EASTERN AUSTRALIA CSG:

Reserves at 31 December 2014, production second half 2014 Averages

Field	Ownership	State	Basin	Reserves (PJ)			Production Tenure (TJ/day)
				1P	2P	3P	
<b>AGL ENERGY</b>							
Camden Gas Project	AGL Energy* 100%	NSW	Sydney	48	48		16 PPLs 1, 2, 4, 5; PELs 2, 4, 5, 267
Gloucester Basin Project	AGL Energy* 100%	NSW	Gloucester	454	565		PEL 285
Hunter Gas Project	AGL Energy* 100%	NSW	Sydney				PELs 4,267
<b>Total for AGL Energy including projects operated by others</b>				<b>1,824</b>	<b>3,447</b>		<b>32</b>
<b>ARROW ENERGY</b>							
Moranbah Gas Project	Arrow Energy* 50% AGL Energy 50%	Qld	Bowen	160	2,512	5,350	31
Blackwater	Arrow Energy* 100%	Qld	Bowen				
Comet	Arrow Energy* 100%	Qld	Bowen				
Norwich Park	Arrow Energy* 100%	Qld	Bowen				
Surat Basin Fields	Arrow Energy* 50%-100%	Qld	Surat				
Tipton West JV	Arrow Energy* 100%	Qld	Surat				25
Kogan North	Arrow Energy* CS Energy 50%	Qld	Surat				7
Daandine	Arrow Energy* 100%	Qld	Surat				27
<b>Total for Arrow Energy</b>				<b>160</b>	<b>2,512</b>	<b>5,350</b>	<b>90</b>
<b>BG GROUP</b>							
94% ownership of QCLNG project operator							
<b>Total for BG Group including projects operated by others</b>				<b>3,096</b>	<b>10,326</b>	<b>18,876</b>	<b>121</b>
<b>BLUE ENERGY</b>							
Sapphire Field	Blue Energy* 100%	Qld	Bowen	50	180		ATP 814P
<b>Total for Blue Energy</b>				<b>50</b>	<b>180</b>		
<b>ERM POWER</b>							
Clarence-Moreton	ERM Power *50% CMR 30%, Red Sky 20%	NSW	Clarence- Moreton	17	159		PEL 457
<b>Total for ERM Power</b>				<b>9</b>	<b>190</b>		
<b>HARCOURT PETROLEUM</b>							
Mungji/Harcourt	Harcourt*67.1% Mitsui 32.9%	QLD	Bowen	36	448	1,064	3 PL 94Sublease, ATP 56 4P
Timmy	Harcourt*62.9% Mitsui 37.1%	QLD	Bowen		67	175	ATP 602P
<b>Total for Harcourt Petroleum</b>				<b>36</b>	<b>515</b>	<b>1,239</b>	<b>3</b>
<b>LANDBRIDGE GROUP</b>							
Meridan	Landbridge* 51% Mitsui 49%	QLD	Bowen	93	680	1,524	8 PL 94, Coal Mining Leases
Paranui	Landbridge* 25.5% Mitsui 24.5% BG 50%	QLD	Bowen			270	ATP 769 W
Tibrook	Landbridge* 25.5% Mitsui 24.5% BG 50%	QLD	Bowen			152	ATP 688P W
<b>Total for Landbridge</b>				<b>47</b>	<b>347</b>	<b>885</b>	<b>4</b>
<b>ORIGIN ENERGY</b>							
37.5% ownership of APLNG and project upstream operator							
Ironbark Project	Origin 100%				259	869	ATP 788P
<b>Total for Origin Energy including projects operated by others</b>				<b>1,718</b>	<b>5,543</b>	<b>7,416</b>	<b>135</b>
<b>SANTOS</b>							
30% ownership of GLNG and project operator							
Narrabri CSG Project	Santos* 80% EnergyAustralia 20%	NSW	Gunnedah	233	971		PEL 238
<b>Total for Santos including projects operated by others</b>				<b>978=</b>	<b>2,964</b>		<b>33</b>
<b>SENEX ENERGY</b>							
Western Surat Project	Senex Energy* 100% - 45%	Qld	Surat		488		ATPs 767, 795, 889, 593, 791
<b>Total for Senex Energy including projects operated by others</b>					<b>488</b>		

# QUEENSLAND CSG-TO-LNG PROJECTS:

## APLNG (AUSTRALIA PACIFIC LNG PROJECT)

<b>Ownership:</b>	Origin Energy 37.5% / ConocoPhillips 37.5% / Sinopec 25%	<b>Site:</b>	Laird Point, Curtis Island
<b>Operatorship:</b>	Upstream and pipelines: Origin / LNG: ConocoPhillips	<b>Customers:</b>	Sinopec 7.6 MTPA for 20 years, Kansai 1.0 MTPA for 20 years
<b>Status:</b>	Train 1 first LNG mid-2015	<b>Reserves:</b>	1P: 4,581 PJ 2P: 14,091 PJ 3P: 17,459 PJ 2C: 2,679 PJ
<b>Size:</b>	2 x 4.5 MTPA LNG trains (four-train 18 MTPA ultimate potential)	<b>Production:</b>	333 TJ/day (121.8 PJ/year)

Major Fields	Ownership	State	Basin	Reserves (PJ)			Production (TJ/day)
				1P	2P	3P	
Spring Gully	APLNG* 96.6% Santos 3.4%	Qld	Bowen	162	2,31	5,104	129
Peat	APLNG* 100%	Qld	Bowen				9
Talinga/Orana	APLNG* 100%	Qld	Surat				115

## GLNG (GLADSTONE LNG PROJECT)

<b>Ownership:</b>	Santos 30% / PETRONAS 27.5% / Total 27.5% / KOGAS 15%	<b>Site:</b>	Hamilton Point West, Curtis Island
<b>Operatorship:</b>	Santos	<b>Customers:</b>	PETRONAS and KOGAS both to take 3.5 MTPA for 20 years
<b>Status:</b>	FID taken January 2011, first LNG 2015	<b>Reserves:</b>	1P: 2,245 PJ 2P: 5,603 PJ 2C: 1,202 PJ
<b>Size:</b>	2 x 3.9 MTPA LNG trains (three-train 10 MTPA ultimate potential)	<b>Production:</b>	111 TJ/day (40.5 PJ/year)

Major Fields	Ownership	State	Basin	Reserves (PJ)			Production (TJ/day)
				1P	2P	3P	
Fairview	GLNG* 76.07% APLNG 23.93%	Qld	Bowen				105
Scotia	GLNG* 100%	Qld	Bowen				21
Arcadia	GLNG* 100%	Qld	Bowen				
Roma Shelf	GLNG* 100%	Qld	Surat				

## QCLNG (QUEENSLAND CURTIS LNG PROJECT)

<b>Ownership:</b>	BG Group 50% Train 1 and 97.5% Train 2 / CNOOC 50% Train 1 / Tokyo Gas 2.5% Train 2	<b>Site:</b>	North China Bay, Curtis Island
<b>Operatorship:</b>	QGC (100%-owned subsidiary of BG Group)	<b>Customers:</b>	CNOOC 3.6 MTPA from Train 1 for 20 years, Tokyo Gas 1.2 MTPA from Train 2 for 20 years, Chubu Electric up to 20 cargoes over 20 years, BG portfolio supply: up to 1.7 MTPA to Quintero LNG in Chile to 2030, up to 3.0 MTPA to Singapore for 20 years
<b>Status:</b>	First LNG from Train 1 Dec 2014, Train 2 to follow in 2015	<b>Reserves:</b>	1P: 3,096 PJ 2P: 10,326 PJ 3P: 18,876 PJ 2C: 13,700 PJ
<b>Size:</b>	2 x 4.25 MTPA LNG trains (three-train 12.75 MTPA ultimate potential)	<b>Production:</b>	121 TJ/day (44.2 PJ/year)

Major Fields	Ownership	State	Basin	Reserves (PJ)			Production (TJ/day)
				1P	2P	3P	
QGC Central Walloons	BG* 59.4%-100%	Qld	Surat				204
Berwyndale South	BG* 100%	Qld	Surat				67
Kenya-Argyle	BG* 59.4% APLNG 40.6%	Qld	Surat				126
Woleebee Creek	BG* 80% Toyota 15% CNOOC 4% Tokyo Gas 1%	Qld	Surat				
Lacerta	BG* 100%	Qld	Surat				
Bellevue	BG* 70.6% APLNG 30.4%	Qld	Surat				7
Paradise Downs	BG* 100%	Qld	Surat				
Lawton	BG* 100%	Qld	Surat				