

## CORPORATE ACTIVITY

### Envestra

**30 MAY:** Envestra announced that it had agreed to be taken over by a consortium composed of companies owned by major shareholder the Cheung Kong Group. The off market bid of \$1.32 cash per Envestra share values the company at \$2.37b and scuppers APA Group's proposed acquisition of the company by a Scheme of Arrangement. APA had offered Envestra shareholders 0.1919 of its securities for each of its shares or \$1.17 in cash per share capped at a total of \$241m of cash consideration.

With Li Ka-Shing's Cheung Kong owning a 17.6% stake in Envestra and APA holding a 33% interest the proposed Cheung Kong takeover has a 50% minimum acceptance condition. The Cheung Kong offer was judged superior to APA's by an independent committee of Envestra's Board that excluded APA and Cheung Kong appointed Directors.

### LNG Limited

**21 MAY:** LNG Limited advised that China Huanqiu Contracting and Engineering Corporation (HQCEC) had sold down its interest in the company from 11.2% to 2.6%. HQCEC, a wholly owned subsidiary of China National Petroleum Corporation, purchased a 19.9% interest in LNG in 2011, intending to participate in the proposed Gladstone LNG Project at Fisherman's Landing. With the project effectively stalled due to a lack of gas LNG is now focussing on a proposed LNG development in Louisiana. Along with the sell down HQCEC representative Yao Guihua (Grace) has resigned as Executive Director and co-CEO of LNG although she will stay on the company's Board as a non-executive Director, Zhang Gaowu (Gavin) has also resigned as a non-executive Director of the Australian company. Maurice Brand is now once again the sole CEO and MD of LNG.

### WestSide Corporation

**16 MAY:** In its target's statement in response to Landbridge Group's \$0.40 per share off market takeover bid WestSide Corporation recommended that its shareholders reject the bid as inadequate and opportunistic. The company also disclosed that it is in discussions with a number of parties that could see an alternative takeover offer emerge. WestSide sees the Landbridge offer as substantially undervaluing the company, particularly after it entered into a twenty-year gas sales agreement for up to 65 TJ/day with the GLNG JV. The contract is particularly attractive for WestSide as it allows it to ramp up supply from its 51% owned Meridian Field as it sees fit. It also gives GLNG the right to purchase any Meridian gas production above that maximum rate.

The contract is due to commence in 2015 at an Australian dollar fixed gas price before it moves to a US dollar price linked to the Japanese Customs-cleared Crude (JCC) price in 2016. In 2017 when the contract allows supply of up to the maximum 65 TJ/day rate the price formula will slightly change in WestSide's favour. In its target's statement the company provided estimates of the gas price under the contract in 2017, based around the 14 May 2014 JCC price of US\$110/bbl and the A\$/US\$ exchange rate of 0.9261.

### Estimate of GLNG Contract Gas Prices from 2017

|                     |      |      |      |
|---------------------|------|------|------|
| JCC (US\$/bbl)      | 100  | 110  | 120  |
| Gas price (US\$/GJ) | 7.95 | 8.60 | 9.24 |
| Gas price (A\$/GJ)  | 8.58 | 9.28 | 9.98 |

Source: WestSide Corporation

Using these figures and assuming GLNG operator Santos' usual conversion factor of 1 GJ of sales gas being equal to 0.172 barrels of oil the contract price can be calculated as:

Landbridge's offer for WestSide is scheduled to close on the 24th of June. The Chinese company holds a 19.99% stake in the target company and the reaction to the bid of New Hope Coal, with a 17.6% interest in WestSide, and Mitsui, the company's JV partner in the Meridian Seamgas field, remain important as to its chance of success. Landbridge has secured all necessary Chinese approvals for its proposed takeover clearing one of the hurdles for a successful bid. After the release of WestSide's target's statement the market sent the company's shares above Landbridge's \$0.40 offer price and they closed at \$0.415 on the 30th of May.

### AGL Energy

**14 MAY:** AGL Energy advised that MD Michael Fraser would retire from his role by the 30th of June next year. Mr Fraser has led AGL since 2006 and has worked for the company for thirty years. The AGL Board has commenced a process to identify a new MD.

### Dart Energy

**9 MAY:** Dart Energy advised that it had agreed to be taken over by UK onshore oil producer and shale and CSG explorer IGas Energy in an all share deal valuing the company at \$212m. Dart's shareholders will receive 0.08117 of an AIM-listed IGas share for each of their Dart shares with the takeover to be effected by way of a Scheme of Arrangement. The deal validates the target company's decision to rationalise its many international investments and focus on its UK shale and CSG plays and came just prior to a planned Dart listing on the AIM.

Dart's Board unanimously recommends that its shareholders support the takeover if it is cleared by an independent expert and no alternative superior approach emerges, with 16.3%

shareholder New Hope Coal indicating that it will accept the offer under those conditions. At this early stage it is unclear what intentions IGas has with regards to Dart's NSW CSG acreage but with the focus of the enlarged company firmly on the UK and the NSW Government's anti-CSG stance the assets are unlikely to be considered of particular value.

## LNG

### APLNG

**29 MAY:** APLNG upstream operator Origin Energy advised that it had completed drilling 700 production wells as part of its APLNG Phase 1 drilling program, designed to be completed by the time the project starts LNG production. Origin is currently utilising 11 drilling rigs, 7 completion rigs and 3 flush-by rigs, with 587 of the 700 wells already completed. APLNG's planning assumes Phase 1 wells, located at the Spring Gully, Combabula/Reedy Creek, Condabri and Talinga/Orana CSG fields, will produce at an average rate of 1.2 TJ/day, giving total production of 1,200 TJ/day. This planning estimate is up from 1.1 TJ/day at the end of 2012, reflecting good performance as development of the fields has progressed. APLNG also expects to receive 200 TJ/day of production from non-operated CSG wells at project start-up; each of APLNG's two 4.5 MTPA LNG trains will require a gas feed of 730 TJ/day.

In the period between APLNG's start-up and 2020 Origin expects to drill some 300 wells per year in APLNG acreage to sustain production. The company is aiming to bring down the current average \$3m cost to drill, complete and connect development wells to reduce ongoing capital costs. Origin also expects APLNG participation in a further 300 non-operated wells per year during this period, with APLNG ownership interests ranging from 20-40%. As at 30 April Origin estimates the upstream part of APLNG is 71% complete with the downstream part operated by JV partner ConocoPhillips 70% complete.

## REGULATION AND LEGISLATION

### Metgasco

**22 MAY:** Metgasco was forced to cancel the planned drilling of its Rosella E-01 conventional gas exploration well in the Clarence-Moreton Basin after its drilling approval was suspended. The suspension was announced on the 15th of May by the NSW Minister for Resources and Energy Anthony Roberts who advised that the state's Office of Coal Seam Gas (OCSG) had suspended the approval after it determined that the company had not undertaken genuine and effective community consultation as required in the licence conditions for PEL 16. This followed a meeting between the Director of the OCSG, the NSW Land and Water Commissioner and local landholders on the 13th of May. Minister Roberts also announced that he had referred matters surrounding shareholdings in Metgasco to the state's Independent Commission Against Corruption. This is understood to refer to links between the Chairman of ERM Power, Metgasco's

largest shareholder with a 13% stake, and Eddie Obeid.

With Metgasco having planned to mobilise a drilling rig to the Rosella E-01 site on the 20th of May the company estimates the cancellation of the well will cost it \$3m. The company's Chairman Len Gill was infuriated with the OCSG's actions, particularly as the agency had not raised any issues about the company's consultation processes in the past and did not provide the company with any chance to respond to its finding before the suspension was imposed.

The site selected for Rosella E-01, located on privately owned land near Lismore, has been the scene of protests for months and protestors had planned to blockade the site to prevent access by the drilling rig. NSW authorities had expected thousands of protestors and were planning to mobilise hundreds of police to the site. Many of the protestors as well as media reports made little of the fact that it was a conventional rather than CSG well. Metgasco had planned to drill Rosella E-01 to test the conventional petroleum potential of the Ripley Road Sandstones and the tight gas sands of the Gattton Formation within the Great Mackellar structure.

Metgasco has now asked NSW Premier Mike Baird for an independent review of the decision to suspend the drilling approval. It has also advised the OCSG that it considers its actions to be unlawful. The company's shares were hit hard by the government's treatment of the company, closing at \$\$ on the 30th of May and down 50% over the month.

### Queensland

**20 MAY:** The Queensland Parliament passed the *Land and Other Legislation Amendment Act 2014* including reforms to the *Petroleum and Gas (Production and Safety) Act 2004*. The amendments to the Petroleum Act extend all current Authorities to Prospect (exploration permits) from a four year to a six year term and defer the compulsory 33% relinquishment to the end of the extended term. The changes also introduce a process to allow a "special amendment" to work program or relinquishment requirements and make it easier to secure a petroleum lease. The requirement for 20% of discovered petroleum resources to be classified as proven and probable reserves before a PL is granted has been replaced with a requirement for a statement that commercial quantities of hydrocarbons are present. The statement must be prepared by a "suitably qualified person" however there is no requirement that this person is independent of the applying company. The Queensland Government's efforts to make petroleum exploration in the state easier stand in stark contrast to restrictions imposed by governments in New South Wales and Victoria. The Petroleum Act amendments will go into force once the Land Amendment bill receives royal assent.

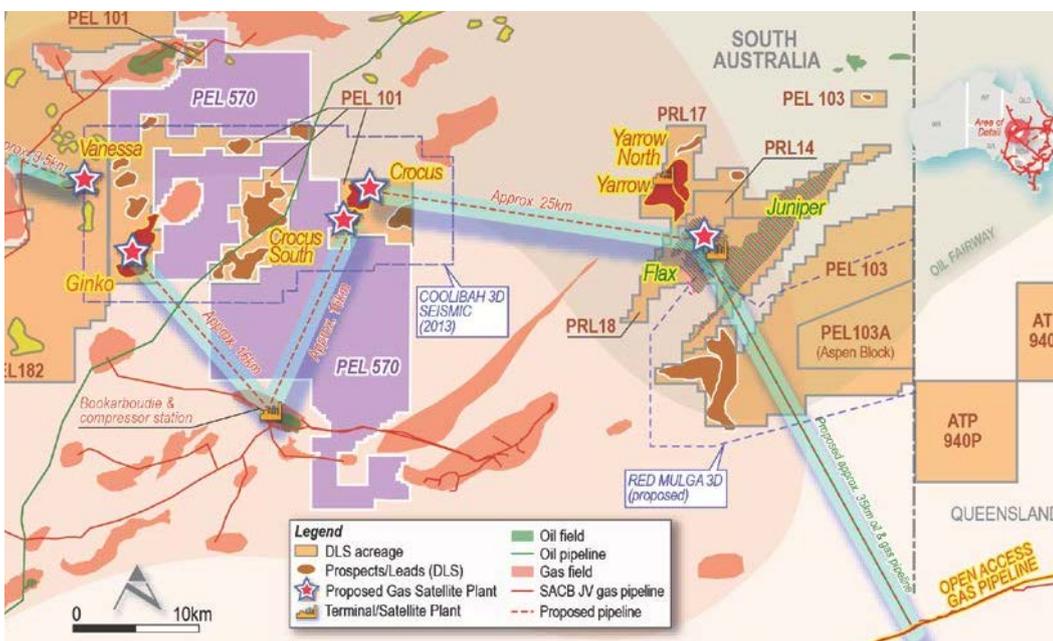
## CORPORATE ACTIVITY

### Ambassador Energy

**28 MAY:** Ambassador Energy announced that it had agreed to be taken over by Drillsearch Energy in an all shares deal valuing the company at \$41.6m. The bid is by way of an off-market takeover with Ambassador's shareholders to receive 1 Drillsearch share for every 5.4 of their shares. The deal values Ambassador at \$0.293 per share based on Drillsearch's closing share price of \$1.58 on the 27th of May, a 51% premium to Ambassador's three month VWAP of \$0.193. Drillsearch has already secured a 19.9% stake in the target company and other shareholders holding a 17.6% interest have indicated they will accept within 14 days of the offer opening in the absence of a superior offer.

Ambassador's sole asset is a 47.5% interest in PEL 570 in the Cooper Basin. New Standard Energy operates the tenement under a farm-in agreement that will see Ambassador free carried for \$42.5m of work focussed on the tight gas potential of the Patchawarra Trough within the permit. In the announcement of its bid Drillsearch highlighted the potential for conventional stratigraphic traps holding liquids rich gas in Ambassador's tenement. Drillsearch has made a number of such wet gas discoveries in adjacent tenements that it owns and completed a 3D seismic survey over portions of its tenements and part of PEL 570 in 2013. Drillsearch plans to lodge a bidder's statement around the middle of June allowing Ambassador to respond with a target's statement around the end of June.

### Ambassador Energy's PEL 570



Source: Drillsearch Energy

### Buru Energy

**23 MAY:** Buru Energy reported that Eric Streitberg had been appointed as the company's Executive Chairman. This followed the resignation of non-executive Chairman Graham Riley from his position and Buru's Board at the company's AGM. Mr Streitberg is a co-founder of Buru and the company's largest shareholder with a 9.6% stake; he served as an Executive Director until January this year when he moved to a non-executive Director role. With the company's Board now having only three members, MD Dr Keiran Wulff and independent non-executive Director Peter Jones in addition to Mr Streitberg, Buru plans to appoint additional independent non-executive Directors.

During the AGM Dr Wulff advised that Buru and JV partner Mitsubishi were currently in discussions with parties interested in farming-in to their core Canning Superbasin acreage. Buru is currently producing oil from the Ungani Field in this area and plans a fracing program targeting the Laurel Formation tight gas play later this year after it has received EPA approval and traditional owner support. Buru and Mitsubishi have already farmed out interests in some of their JV tenements on the edge of the Canning Basin to Apache Energy.

### Empire Oil & Gas

**23 MAY:** The WA Supreme Court ruled that Empire Oil & Gas and ERM Power were justified in ejecting Wharf Resources from the EP 389 JV for defaulting on its share of development costs for the Red Gully gas and condensate project. The UK company's 10% interest in the JV has been distributed on a pro rata basis, giving Empire a 76.4% interest in the Perth Basin project and ERM a 23.6% stake.

The performance of Red Gully has been disappointing with a number of commissioning issues as well as production data showing recovery from the producing D Sands interval is likely to be lower than expected due to pressure depletion. Empire plans to commence a program to test the production potential of the shallower B Sands during June, with this interval containing more gas than the D Sands.

## FARM-INS

### Key Petroleum

**29 MAY:** Key Petroleum announced that Rey Resources would farm-in to its Northern Perth Basin tenement EP 437. Rey will earn a 43.5% interest in the tenement by funding 87% of the costs of the proposed Dunnart-2 well, up to a cap of \$1.7m. The well will be drilled to a planned depth of 670 m to test a structural closure with a best estimate of potential resource of 2 mmbbls of recoverable oil. After the farm-in is completed Rey and Key will each hold 43.5% of EP 437 with Caracal Resources holding the remaining 13%. As well as coal tenements in the Canning Basin ASX-listed Rey also holds 25% interests in two Buru Energy operated petroleum tenements in the Canning.

### Falcon Oil & Gas

**2 MAY:** Falcon Oil & Gas reported that Origin Energy and Sasol would farm-in to its Beetaloo Basin acreage in a deal worth some \$200m. Origin and Sasol, already JV partners in a CSG project in Botswana, may each earn up to a 35% interest in the three NT tenements. Canada-based Falcon will retain a 30% interest in the tenements if the Origin Energy operated farm-in program is fully executed. Completion of the farm-in agreement is subject to regulatory approvals; if Sasol does not obtain the requisite approvals for its participation Origin will assume its interest in the agreement.

The initial focus of exploration will be the Middle Velkerri shale formation, considered prospective for both oil and gas. The farm-in calls for a nine well exploration and appraisal program over five years to be funded by Origin and Sasol, including:

| Program  | Estimated cost and duration                           |
|--|---|
| Three vertical coreholes   | \$64m over three years                                |
| One fraced vertical exploration well                             | (Origin and Sasol right to withdraw after completion) |
| One fraced horizontal exploration well                           |   |
| Studies and resource assessment                                  |   |
| Two fraced horizontal wells with 90-day production tests         | \$53m, one year                                       |
| Micro seismic  | (Origin and Sasol right to withdraw after completion) |
| Two further fraced horizontal wells with 90-day production tests | \$48m, one year                                       |

The JV plans to commence the work during 2014 if possible, subject to approvals and drilling rig availability. Exploration of the acreage will be aided by 3,500 km of 2D seismic acquired during 2013 and funded by Hess Corporation under a previous farm-in agreement that was terminated after its first stage. As well as funding the \$165m of planned exploration and appraisal Origin and Sasol will pay Falcon \$20m upfront in cash and contribute US\$14m to call options that allow the JV to reduce the ORR on the acreage from 4% to 1%, if they are exercised.

The Beetaloo deal is Origin's first farm-in to an Australian unconventional play outside the Cooper Basin and Sasol's first entry into onshore Australia. As the developer of a number of GTL projects the South African company could be an ideal partner if a large gas resource is discovered in the Beetaloo. Its Sasol Slurry Phase Distillate Process allows gas to be transformed into products including fuels, base oils, waxes, paraffins and naphtha. Sasol uses the process at its ORYX GTL project in Qatar, developed in partnership with Qatar Petroleum, with the facility producing above its nameplate capacity of 34,000 bpd of liquids.

# SHALE IN AUSTRALIA –

## LARGE POSITIONS COULD SLOW DEVELOPMENT

In contrast to the United States there are far fewer explorers in each shale play in Australia. As a result of the exploration tenement system many companies, including junior explorers, hold massive acreage positions across basins and plays within Australia. New Standard Energy for one holds an eleven million acre position in the Goldwyer Shale play within Western Australia's Canning Superbasin, Buru Energy's acreage across the Laurel Formation play to the north is even larger. Although such large positions offer a potentially huge payoff if a play proves to be commercial one of the conditions that contributed to the rapid growth of the American shale industry is lost. Without the presence of a number of active explorers in each play there is less opportunity to learn from the experiences of other companies. When this is allayed with the high mobilisation and infrastructure costs inherent in many of Australia's frontier basins it ensures that progress in assessing most plays will be slower and more expensive than seen in America. Even in the Cooper Basin's Nappamerri Trough, location of Australia's most advanced unconventional plays, there are only three active operators.

The conditions also make it far more difficult for junior explorers to advance a play. In some cases in Australia the inevitable trial and error process required to "crack the code" for a particular play has started with just one operator. When this operator is a small company with limited fund raising ability its exploration and appraisal can be extremely risky. This has been the experience of junior explorer Armour Energy. Since raising \$75m in its IPO in April 2012 Armour has focussed its exploration efforts on large acreage positions in the McArthur Basin in the NT and the South Nicholson Basin in Queensland. As the only operator to drill wells in either of the basins since the shale revolution hit Australia the company has been out in front in testing the plays. Although it has had some exploration success Armour has not been able to reach a level where it could raise further capital and now has a suspended horizontal well that it cannot afford to fully test. The company has now cut back on operating expenses and is seeking to attract a farm-in partner to allow continued exploration.

Canadian company PetroFrontier had a similar experience after it drilled and fraced three horizontal wells targeting the Lower Arthur Creek Shale play in the Southern Georgina Basin during 2012. It was only able to test one of the wells, with a flow test recovering no hydrocarbons; one of the other wells was abandoned after a casing failure and the third was unable to be tested economically due to the presence of hydrogen sulphide. After this experience PetroFrontier failed to secure promised financing and was forced to consider selling the company before it was rescued when JV partner Statoil increased its farm-in commitments and took over as operator of the company's acreage. As it lost operatorship over its only asset PetroFrontier became little more than a holding company for its share of the Southern Georgina acreage.

Although juniors with large Australian shale positions are now increasingly attracting farm-ins from deep-pocketed companies these are usually across all of the multiple tenements they hold in a play. Understandably the larger company farming-in wants to secure an interest in all of the available acreage, the better to hold any potential sweet spots. Although this may suit the larger company the likelihood is that advancing the play will take longer than if there were multiple farm-outs and more operators in the play. For the small company, if it were possible, attracting more than one farm-in partner to its acreage could be a better proposition.

In a similar manner, the actions of some state petroleum regulators to relax normal tenement restrictions for pioneers of particular shale plays could potentially result in delaying development of the plays. In Western Australia Buru Energy and JV partner Mitsubishi concluded a 'state agreement' with the government relaxing normal exploration permit requirements in return for a promise to deliver gas to the state's domestic market. The agreement covers five Canning tenements and delays relinquishment requirements until 2024 while also allowing appraisal work on a particular discovery to be credited against exploration work requirements in other tenements. In South Australia Beach Energy and JV partner Chevron have been offered a retention lease of up to 15 years across all of exploration tenement PEL 218, covering the largest portion of the Nappamerri Trough. Although these agreements provide a reward for the pioneers of shale exploration in each of the plays subjecting the companies to normal relinquishment conditions may have brought new operators into the areas and spurred more rapid exploration and appraisal.

The Australian exploration tenement system has allowed some companies to establish massive positions in frontier shale plays. This may allow the companies concerned to generate very large returns if a play proves viable. However, as it has restricted the number of operators in each play it may also ensure more time is required to establish this viability. This longer time scale may have been exacerbated in some plays where state petroleum regulators have relaxed certain tenement conditions for chosen companies.

# EASTERN AUSTRALIA CSG:

Reserves at 31 December 2012, production second half 2012 Averages

| Field  | Ownership                              | State | Basin                | Reserves (PJ) |              |               | Production Tenure<br>(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;<br>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>  |  |       |                      |               |              |               |  |            |
| 100% ownership of Arrow Energy LNG project                           |  |       |                      |               |              |               |  |            |
| <b>Total for Arrow Energy</b>  |  |       |                      |               | <b>669</b>   | <b>9,494</b>  | <b>13,970</b>                            | <b>71</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%,<br>Red Sky 20% | NSW   | Clarence-<br>Moreton |               | 17           | 159           | PEL 457                                  |            |
| <b>Total for ERM Power</b>   |  |       |                      |               | <b>9</b>     | <b>190</b>    |  |            |
| <b>HARCOURT PETROLEUM</b>  |  |       |                      |               |              |               |  |            |
| Mungi/Harcourt   | Harcourt*72% Mitsui 28%                | QLD   | Bowen                | 36            | 448          | 1,064         | 3 PL 94, ATP 56 4P                       |            |
| Lilyvale   |  |       |                      |               |              |               |  |            |
| 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>METGASCO</b>  |  |       |                      |               |              |               |  |            |
| Casino Gas Project   | Metgasco 100%                          | NSW   | Clarence-<br>Moreton | 3             | 428          | 2,542         | PEL 13, 16                               |            |
| <b>Total for Metgasco</b>  |  |       |                      | <b>3</b>      | <b>338</b>   | <b>2,055</b>  |  |            |
| <b>ORIGIN ENERGY</b>   |  |       |                      |               |              |               |  |            |
| 37.5% ownership of APLNG and project upstream operator               |  |       |                      |               |              |               |  |            |
| Ironbark Project   | Origin 100%                            |       |                      |               | 165          | 881           | ATP 788P                                 |            |
| <b>Total for Origin Energy including projects operated by others</b> |  |       |                      |               | <b>5,165</b> | <b>6,919</b>  | <b>135</b>                               |            |
| <b>SANTOS</b>  |  |       |                      |               |              |               |  |            |
| 30% ownership of GLNG and project operator                           |  |       |                      |               |              |               |  |            |
| Narrabri CSG Project   | Santos* 80%<br>EnergyAustralia 20%     | NSW   | Gunnedah             |               | 1,141        |               | PEL 238                                  |            |
| <b>Total for Santos including projects operated by others</b>        |  |       |                      |               | <b>3,061</b> |               | <b>33</b>                                |            |
| <b>SENEX ENERGY</b>  |  |       |                      |               |              |               |  |            |
| Don Juan CSG Project   | Senex Energy* 45%, Arrow<br>Energy 55% | Qld   | Surat                |               | 101          | 197           | ATP 771P                                 |            |
| <b>Total for Senex Energy including projects operated by others</b>  |  |       |                      |               | <b>157</b>   | <b>358</b>    |  |            |
| <b>WESTSIDE CORPORATION</b>  |  |       |                      |               |              |               |  |            |
| Meridan  | Westside* 51% Mitsui 49%               | QLD   | Bowen                | 93            | 680          | 1,524         | 8 PL 94, Coal<br>Mining Leases           |            |
| Paranui  | Westside* 25.5% Mitsui<br>24.5% BG 50% | QLD   | Bowen                |               |              | 270           | ATP 769 W                                |            |
| Tibrook  | Westside* 25.5% Mitsui<br>24.5% BG 50% | QLD   | Bowen                |               |              | 152           | ATP 688P W                               |            |
| <b>Total for Westside</b>  |  |       |                      | <b>47</b>     | <b>347</b>   | <b>885</b>    | <b>4</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>   | 2P: 13,334 PJ 3P 16,101 PJ<br>2C: 3,644 PJ  |       |                     |
|   | Train 2 first LNG Q4-2015   |       |       |                    |   |       |                     |
| <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                 |
| ARROW ENERGY (ARROW ENERGY LNG PROJECT) |   |       |       |                    |   |       |                     |
| <b>Ownership:</b>                       | Shell 50% / PetroChina 50%  |       |       | <b>Site:</b>       | Boatshed Point, Curtis Island   |       |                     |
| <b>Operatorship:</b>                    | Arrow Energy  |       |       | <b>Customers:</b>  | None announced  |       |                     |
| <b>Status:</b>                          | EIS currently being undertaken  |       |       | <b>Reserves:</b>   | 1P: 669 PJ 2P: 9,594 PJ 3P: 14,096 PJ   |       |                     |
| <b>Size:</b>                            | 2 x 4 MTPA LNG trains (four-train 16 MTPA ultimate potential)                       |       |       | <b>Production:</b> | 71 TJ/day (25.9 PJ/year)  |       |                     |
| Major Fields                            | Ownership   | State | Basin | Reserves (PJ)      |   |       | Production (TJ/day) |
|   |   |       |       | 1P                 | 2P  | 3P    |                     |
| 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                  |
| 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: 1,797 PJ 2P: 5,376 PJ 2C: 1,638 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 90% Train 1 and 97.5% Train 2 / CNOOC 10% 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>                          | FID taken October 2010, first LNG 2014, second train to start-up a year later       |       |       | <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* 80% VicPet 20%  | Qld   | Surat |                    |   |       |                     |
| Lawton                                  | BG* 70% VicPet 30%  | Qld   | Surat |                    |   |       |                     |