



# Australian Oil & Gas News Summer 2006

**John McCaffrey**

08/2006

U.S. Commercial Service Melbourne, Australia

## **Welcome to Australian Oil & Gas**

This quarterly newsletter is prepared by the United States Commercial Service Australia to advise US exporters on developments and opportunities in the Australian Oil & Gas market.

The Australian oil & gas industry continues to expand strongly through both the development of its local and international assets. Conditions in the industry are buoyant with over USD \$25 billion in scheduled and proposed projects.

Concerns of the industry are the availability of skilled labor and the escalating costs of components for projects. Demand for Australian petroleum products is strong with companies striking large long-term contracts with Asian buyers of LNG.

Despite the rosy outlook there are still concerns regarding the amount of exploration required to drive further development of the industry, particularly in frontier areas.

For further information relating to this sector contact:

John McCaffrey  
Commercial Specialist – Oil & Gas  
US Commercial Service – Melbourne  
[john.mccaffrey@mail.doc.gov](mailto:john.mccaffrey@mail.doc.gov)  
Tel: +61 3 9526 5924  
Fax: +61 3 9510 4660  
[www.buyusa.gov/australia](http://www.buyusa.gov/australia)

## **Inside This Edition**

**2. Coal Seam Methane**

**3. Santos**

**4. Industry news**

**5. Oil & Gas Projects**

**6. AOG 2007**



# Coal Seam Gas in Australia

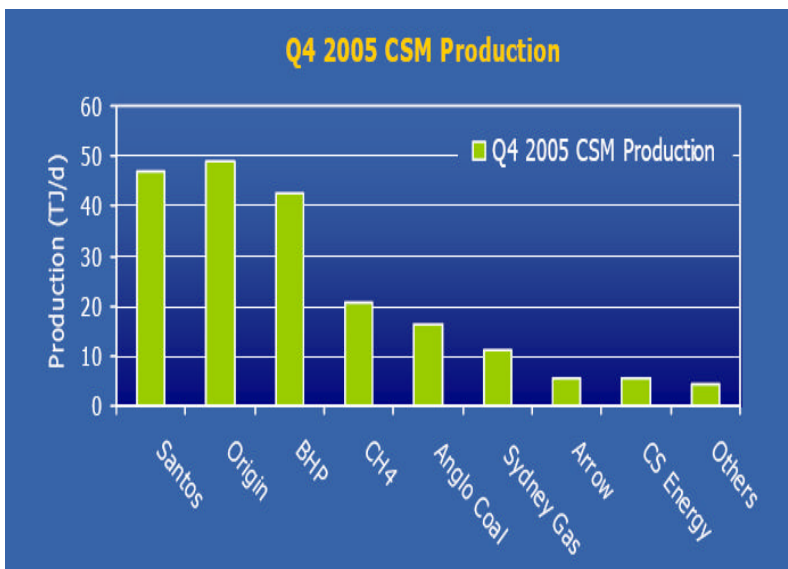
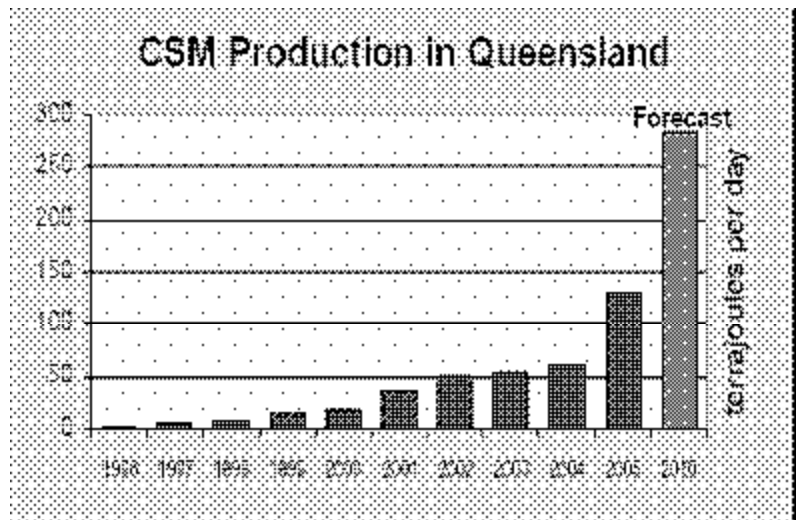
Despite the focus of the industry being on the exploration and production of petroleum products such as oil and liquid natural gas (LNG), the growth in Australia's coal seam gas industry has been significant over the past five years. Coal seam gas also known as coal seam methane (CSM) in Australia is a fast growing industry in the Australian states of Queensland (QLD) and New South Wales (NSW).

Estimates of the potential size of CSM reserves suggest there could be around 275,000PJ, which is significantly greater than the currently identified reserves of conventional natural gas estimated at 160,000PJ. The local industry has often been compared to the US in terms of potential for industry development and size. Much of the technology used in the local industry has been adopted from the US, however unlike the US, government assistance for CSM in Australia has been limited.

One of the key advantages of the CSM industry in Australia is its close proximity to the large gas consumption markets on Australia's east coast. This reduces the cost of delivering the gas, which can amount to USD \$0.50 to \$0.75 per GJ. It has been estimated that current production costs are about USD \$2.25 per GJ at the wellhead. Whilst more expensive than the natural gas alternative (delivered cost of about USD \$3 per GJ) CSM is certainly economic in its own right.

Around 65% of the inferred CSM resource volume is found in the state of Queensland. The graph to the right illustrates the growth in the industry over its relatively short life.

Current estimates suggest CSM accounts for around 7% of gas used in Australia, with the expectation that this will rise to around 12% by 2020 with a projected use of 100PJ per year. CSM is likely to be a larger component of the NSW and QLD gas mixes compared to other states. Production in QLD at the moment is already 20PJ and is supply 25% of gas needs.



The industry has been undergoing significant growth with both specialist CSM and conventional gas companies vying for position and exploration tenements. As in any such dynamic industry M&A activity has resulted in the growth of larger players. The table to the right presents some of the larger industry players in Australian CSM. Since Q4 2005, Arrow and CH4 have merged, AGL has bought BHP's production and Origin has increased its main field production. More movement is afoot in the industry as this report is being prepared with further plans to increase the volume of CSM produced.

# Commonly Asked Questions About Santos



## 1. Who is Santos?

Santos is the third largest oil & gas company in Australia with a market capitalization of around USD \$6 billion. The largest operator of onshore oil assets in Australia, Santos has expanded its activities to take in offshore exploration and production, as well as ventures in Egypt, Indonesia, Kyrgyzstan, Papua New Guinea, Vietnam and the United States. Founded in 1954 Santos has grown for a small oil & gas explorer into one of Australia's top 40 companies.



## 2. What is Santos's history?

Santos was one of the first companies to become established in the Australian oil and gas industry. The name Santos is an acronym that references its origins as a company - South Australia Northern Territory Oil Search. These regions are very sparsely populated and comprise some of the toughest operating areas in Australia. Santos's exploration of the central Australian oil and gas basins led to the discovery of gas in the Cooper Basin at Moomba in the mid 1960's. The size of the discovery was considered sufficient to supply the state of South Australia and underwrote the construction of a 500 mile pipeline to Adelaide. Shortly after the Moomba discovery additional oil & gas discoveries in the Cooper Basin supported the building of another major pipeline to supply hydrocarbons to the east coast market of Sydney. Today these two pipelines are major elements in Australia oil & gas distribution system.

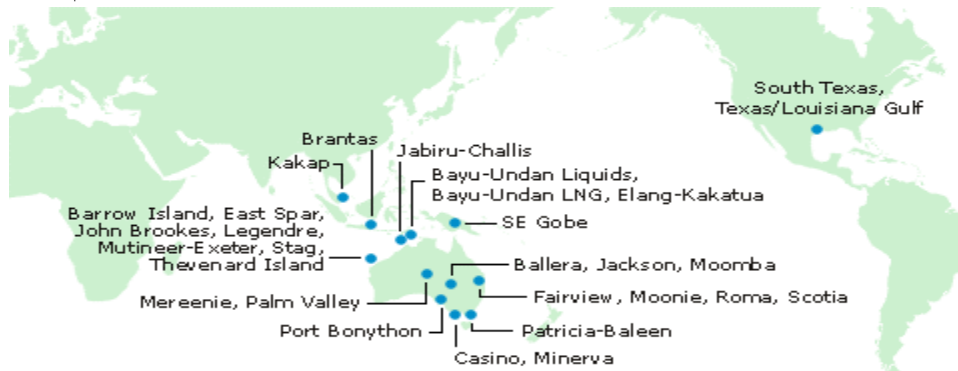
Santos began acquiring smaller Australian oil & gas companies in the early to mid 1980's, which eventually led to them acquiring both Peko Oil and Elf Aquitaine Exploration Australia in 1989. This gave Santos exposure to both offshore areas to the north of Australia as well as assets overseas. Continued growth by exploration and acquiring both acreage and assets of other companies has resulted in a company that produced 56 mmbob in 2005.

## 3. Where is Santos headed?

Santos spent around USD \$145million on exploration in 2005 and is looking to increase this by around 20% in 2006. This spend translates to around 25 wells with the following proposed location:

- Central Australia – 4
- Offshore Australia – 6
- Indonesia – 8
- Egypt – 3
- USA (gulf coast) - 4

Aside from exploration Santos is looking at increasing its production volume in its central Australia areas through the drilling of 100 additional wells in 2006 at an estimated costs of USD \$120, with potential to expand the program to a further 70 wells. Indications are that over 1000 wells could be drilled in this province by 2010 at a cost approaching USD \$1billion.



The map to the left presents details of Santos's current production centers worldwide.

NB: Information in the above article has been sourced from a number of sources including the company website [www.santos.com.au](http://www.santos.com.au), recent press articles and the Australian Stock Exchange [www.asx.com.au](http://www.asx.com.au)

## Government heeds call of oil barons with \$135m grant

By **BARRY FITZGERALD**  
RESOURCES EDITOR

AUSTRALIA'S oil exploration and production industry cannot believe its luck. Despite record oil prices and record profitability, the Federal Government will pump \$135 million into a data collection and research effort aimed at spurring the hunt for new oilfields.

The industry measures its exploration effort in hundreds of millions of dollars and its profits in billions. By comparison, the Government's "energy security package" is small beer. But yesterday the industry's view was that, at long last, there was an acknowledgement of its warnings about the perils of declining oil self-sufficiency.

The package, announced by Resources Minister Ian Macfarlane, has at its centre Geoscience Australia, the national agency for geoscience research and the collection of pre-competitive geological data.

Mr Macfarlane said the funding would allow Geoscience to "supply the information necessary for companies to consider exploration reconnaissance".

"Building a credible geological story is essential to gain the attention of the global exploration industry," he said.

Geoscience will get \$76.4 million to expand its Big New Oil program, enabling it to treble its geological data acquisition in offshore areas to 2 million square kilometres over the next five years. The hope is that the work will identify prospects that will entice big-spending exploration commitments in underexplored or ignored offshore locations — the "frontier" areas that experts say hold the best hope for a new generation of oil discoveries.



Explorers or perish.

PICTURE: KOSKA UNFOLD

Geoscience will also get \$58.9 million to investigate the latest in geophysical imaging and mapping technologies.

The Australian Petroleum Production and Exploration Association said it "strongly endorsed" the boost for Geoscience.

APPEA chief executive Belinda Robinson said the decline in the nation's oil production could now start to be "addressed through an energised

commitment to petroleum exploration in Australia's frontier and underexplored areas".

Last week, APPEA helped set the scene for the package release by reporting that Australia's crude oil production fell more than 10 per cent in the June year, to 113.3 million barrels. That represents fewer than two days of current global oil consumption.

**LINK**  
▶ [www.geoscience.gov.au](http://www.geoscience.gov.au)

## THE AGE

### Australian crude oil production drops

August 11, 2006

Australia's crude oil production dropped by 10.3 per cent in 2005/2006, in what is a long-term declining trend, according to the Australian Petroleum Production & Exploration Association.

Crude oil production was down from 126.3 million barrels in 2004/05 to 113.3 million barrels last year, according to preliminary data.

However, LNG production jumped 15.9 per cent to 569.6 million cubic feet, LPG rose 3.3 per cent to 27 million barrels, condensate production increased 2.8 per cent to 45.9 million barrels and gas production managed a 1.5 per cent gain to 780.5 million cubic feet.

Chief Executive Belinda Robinson said there has been a very clear decline in production since 2000. "We're producing 60 to 65 per cent of what we consume - it used to be 80 to 90 per cent," she said.

Ms Robinson also warned that unless substantial new oil discoveries are made, the decline will continue. "We do have very large unexplored areas of Australia and we still don't know the extent of the reserves we have," she explained. "The finds are fewer and smaller, and that is primarily because exploration tends to be confined to the known areas."

The continuing decline in domestic production comes amid increasing global demand and geopolitical tensions push up energy prices.

Source AAP

## CSG enough for Queensland

21 August 2006

Source PPO Monthly - [www.ppo.com.au](http://www.ppo.com.au)

The Queensland gas market does not necessarily need gas piped from PNG, according to a recent industry report. According to the report, from industry consultant RLMS, CSG will be a viable supplier to the whole of eastern Australia.

The report says that the current proved and probable (2P) reserves of CSG in the Bowen and Surat Basins in Queensland account for one third of the current 2P gas reserves in eastern Australia.

With such key players as Origin, Arrow, CH4 and QGC focusing on CSG production and with 2P gas reserves at 5,000 PJ in Queensland, the report says that there will be enough gas to not only meet Queensland's gas needs, currently at 125 PJ/a, but also to contribute supply to other gas markets.

The PNG-Queensland Pipeline could commence supplying gas to Australia by mid-2009, but by this time 2P reserves of CSG will reportedly be up around 10,000 PJ, around the same amount as controlled by the PNG gas project partners, according to the report.

Origin spokesperson Wayne Gregory told PPO Latest that with or without PNG gas, the Queensland market is very competitive and that the "Cinderella story" of CSG would continue.

## Australian Oil & Gas Project List

The following table presents some of the major projects envisaged for the Australian market in the coming years and their current status. A number of projects has pushed back their development time as a result of increasingly scarce technical resources and project cost escalation.

Developer	Project	Location	Cost USD\$mil	Status
Woodside	Angel Gas Field	North West Shelf, WA	1200	Project is in under construction with first production scheduled for 2008
BHP Billiton	Stybarrow	40 mile NW offshore of Exmouth, WA	600	Development announced in Nov05, construction commenced first production expected in Q1, 2008
Woodside	North West Shelf LNG Train V	Dampier, WA	1500	Construction has commenced on this 4.2 MMT/yr LNG project. Completion scheduled in 2008/09
Woodside	Vincent Oil Field	35 mile NW offshore of Exmouth, WA	750	Project has been approved and is in design with an expected first oil for mid 2008
GTL Resources	Methanol Plant	Burrup Peninsula, WA	530	Project feasibility complete, currently on hold. Was planning for 2007 start
Coogee Resources	Skua Oil Field	Timor Sea, north of Australia	335	Project pre-feasibility under way, potential first delivery 2008
ENI	Black Tip gas field	Timor Sea, north of Australia	565	Development has started with an estimated gas delivery date of 2009
Darwin Clean Fuels	Condensate Processing Plant	Darwin, NT	340	Project development ongoing, construction in 2007 with expected completion 2009
Exxon	Kipper Gas Project	150 mile SE offshore Melbourne, VIC	225	Project is in pre-feasibility with FID expected in 2007
Exxon	PNG to Gladstone Gas Pipeline	PNG - Gladstone, QLD	4000	Project is in advanced FEED but awaiting investment decision from partners, some delays on gas sales contracts.
DBP Group	Dampier-Bunbury Pipeline - stage 5	Dampier - Bunbury (720 miles)	1125	Construction of first part of stage 5 expected in 2007 for completion in 2008, second part of stage 5 may be delayed
Chevron	Gorgon Gas	100 mile SW offshore of North West Shelf	8500	Project is going through final environmental approvals in the coming months.
Woodside	Pluto Gas Field	120 mile offshore NW Karratha, WA	3800	FEED has commenced targeting FID date in mid 2007, first production aiming at 2010
Methanol Australia	Tassie Shoals Methanol Project	Timor Sea, 110 mile north of Australia	1300	Some pre-feasibility work has been done, project is seeking farm-in for upstream gas, expected completion phase 1 is 2010
BHP Billiton	Pilbara LNG Plant + Scarborough Gas	170 mile NW offshore of North West Shelf	3000	Still in planning stage with investment decision some time off, anticipated construction completion date 2011
Inpex	Ichthys Gas	170 mile offshore of Broome WA	4800	Newly announced project in pre-feasibility. Possible gas delivery in 2012
Woodside	Sunrise	275 mile NW of Darwin	3800	Project is still on hold pending resolution of the maritime boundary between Australia and East Timor

# AustralAsian Oil and Gas 2007

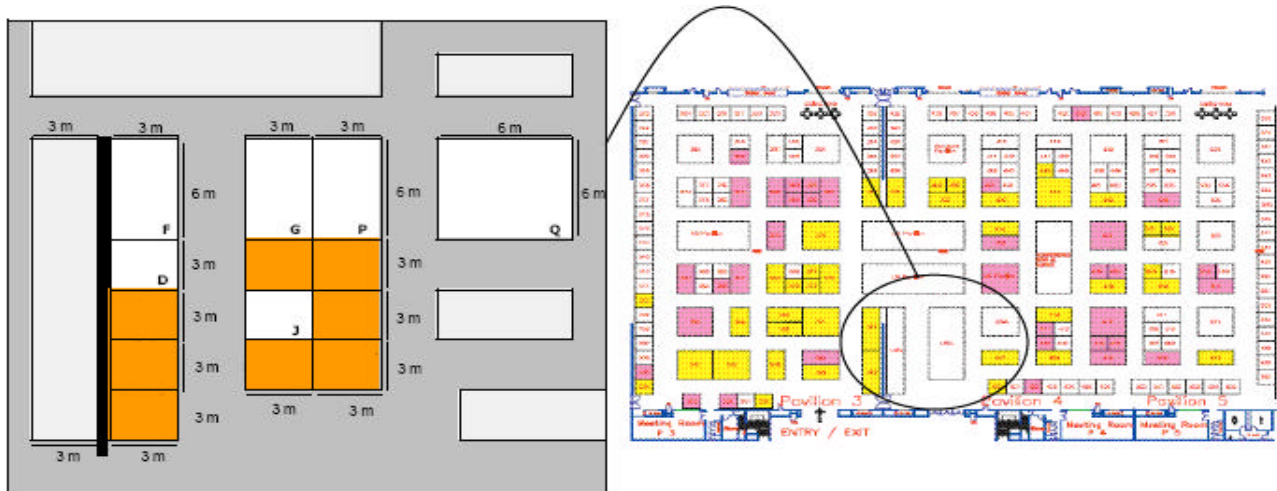


**AustralAsian**  
**Oil & Gas**  
**Exhibition & Conference**



The Commercial Service in association with IMEX Management and Swan Exhibition is providing US exporters with a unique opportunity to gain access to Australia's oil and gas industry. Next year's Australasian Oil and Gas Show (AOG), run by Swan Exhibitions, has been selected as a Department of Commerce approved Trade Fair. IMEX Management and the Commercial Service are putting together a dedicated US pavilion to showcase US companies. The US is recognized as being one of the key suppliers of oil & gas equipment to the Australian petroleum industry. With the volume of resource projects being undertaken in Australia in the next few years, securing the latest technologies and reliable suppliers is a key concern for many of those companies developing projects in Australia.

To date response from US exhibitors for this event has been excellent with much of the space allocated for the US pavilion already taken. The floor plan below shows the location of the US pavilion, and the remaining slots available for US companies interested in exhibiting with us.



**Dates:** February 21-23, 2007

**Location:** Perth Convention Exhibition Centre  
Perth, Western Australia

**For More Information:** Sarah Vacchiano – IMEX Management  
[sarahv@imexmgt.com](mailto:sarahv@imexmgt.com)  
Tel: 704-365-0041  
<http://www.buyusa.gov/australia/en/aogexpo.html>