

Fourth Quarter
Activities Report
For period ending 31 December 2013



23 January 2014

Comparative performance at a glance

Corresponding period	Q4 2013	Q4 2012	Change
Production (mmboe)	13.1	13.2	-1%
Sales (mmboe)	15.6	15.6	0%
Sales revenue (\$million)	1,065	877	+21%
Quarterly comparison	Q4 2013	Q3 2013	Change
Production (mmboe)	13.1	13.4	-2%
Sales (mmboe)	15.6	15.5	+1%
Sales revenue (\$million)	1,065	1,027	+4%
Full-year comparison	2013	2012	Change
Production (mmboe)	51.0	52.1	-2%
Sales (mmboe)	58.5	61.3	-5%
Sales revenue (\$million)	3,602	3,223	+12%

Record sales revenue and strong progress on growth projects

- > Santos today announced record sales revenue of \$1.1 billion for the fourth quarter of 2013. The record result was driven by the company's highest oil production in six years, strong oil prices and higher third party sales volumes. Total sales revenue for 2013 of \$3.6 billion was also a record and 12% higher than 2012.
- > Fourth quarter production of 13.1 million barrels of oil equivalent (mmboe) was in line with the corresponding period and 2% lower than the third quarter of 2013.
- > Gas production of 53.2 petajoules (PJ) (9.1 mmboe) was 6% lower than the corresponding period, with higher production from the Carnarvon Basin offset by lower production in the Cooper Basin and Asia.
- > The average gas price of \$5.53/GJ for the December quarter was 10% higher than the corresponding quarter, driven by higher gas prices in Western Australia and Indonesia, and higher LNG prices from Darwin LNG.
- > Quarterly crude oil production of 3.0 million barrels was 5% higher than the previous quarter, driven by higher production from Fletcher Finucane and Chim São. The average oil price for the quarter was A\$127 per barrel.

Key activities during the period

- > PNG LNG is over 90% complete and on track for first LNG in the second half of 2014, with commissioning gas from the Kutubu field introduced into the upstream Hides Gas Conditioning Plant in December. Commissioning is also ramping up at the LNG plant with gas circulating in train 1, the refrigeration compressors being test run, and the LNG loading jetty and both LNG tanks completed.
- > The GLNG project is over 72% complete and on track for first LNG in 2015, with over 230 CSG wells drilled for the year, the first new Fairview and Roma wells connected to the new water processing infrastructure, pre-commissioning of the gas transmission pipeline underway and 90% of the train 1 modules delivered to Curtis Island.
- > Further shale gas success in the Cooper Basin: the Moomba-194 vertical shale well flowed gas at an average rate of 3 million standard cubic feet (mmscf) per day.

Santos Managing Director and Chief Executive Officer David Knox said that the last quarter of 2013 saw the company continue to make strong progress in the delivery of its major projects, underpinning its strategy to expose its resources to Asian markets.

“In the second half of 2014 the first of these projects, PNG LNG, is on track to commence LNG shipments to Asia, delivering a significant boost in production and cashflow for the company. We are very pleased with the progress being made on the project, with commissioning of the upstream and LNG plant facilities well underway.”

“The GLNG project remains on track for first LNG in 2015, and we are confident that this year will see the project achieve a number of major milestones.”

“The estimated capital cost for both the PNG LNG and GLNG projects is unchanged.”

“Last year we continued to increase our understanding of our shale resources in the Cooper Basin, with the Moomba-194 and 191 wells delivering encouraging results. The proximity of these resources to existing infrastructure provides us with a real advantage, and our exploration efforts will continue in 2014.”

“For Santos, 2014 will also see the company continue to build and strengthen its base business here in Australia, while exploring opportunities for focused growth in Asia,” Mr Knox said.

2013 Guidance

Production in 2013 was in line with the revised guidance of 51 mmboe provided to the market on 4 December 2013. While guidance for production costs remains unchanged, depreciation, depletion and amortisation guidance has been increased by 7% to \$17.70/boe reflecting updated operator estimates for future development costs and anticipated changes to reserves bookings for Australian offshore assets. Royalty-related taxation expense guidance has been updated to reflect the 2013 average realised oil price of approximately A\$120 per barrel (previous guidance assumed A\$100 per barrel).

Item	2013	
	Previous guidance	Updated guidance
Production (mmboe)	51	No change
Production costs (\$million)	670 - 690	No change
Depreciation, depletion & amortisation (DD&A) expense (\$/boe)	16.50	17.70
Royalty-related taxation expense (\$million after tax) ¹	50	60
Capital expenditure (including exploration and evaluation) (\$billion) ²	4	4.1

¹Royalty-related taxation expense guidance assumes an average realised oil price of A\$120 per barrel.

²Capital expenditure guidance excludes capitalised interest.

Further detail of 2013 capital expenditure, including exploration and evaluation expenditure, is reported in the table on page 8 of this report.

Guidance on 2013 financial outcomes above is preliminary and subject to finalisation. As such, the actual results for the year ended 31 December 2013 may differ from the guidance given in this update.

Santos will announce its results for the year ended 31 December 2013 on Friday 21 February 2014. The full-year report (incorporating Appendix 4E) and associated investor briefing presentation will be available on Santos' website at www.santos.com. A webcast briefing, including analyst/investor questions, will be available on Santos' website from 11:00 am AEDST on 21 February 2014. Santos will also release its annual reserves statement on 21 February 2014.

2014 Guidance

As announced to the market on 4 December 2013, Santos expects 2014 production to be in the range of 52-57 mmbbl and estimated capital expenditure (excluding capitalised interest) of \$3.5 billion.

Guidance on financial items will be provided with the full-year results on 21 February 2014.

The 2014 first quarter activities report will be released on Thursday 17 April 2014.



Hides Gas Conditioning Plant, PNG LNG, November 2013.

I. Production (Santos share)

	Quarter ended			Full-year	
	Q4 2013	Q4 2012	Q3 2013	2013 ¹	2012
Sales gas, ethane and LNG (PJ)					
Carnarvon	16.6	15.5	16.3	64.9	65.0
Cooper	16.1	17.3	16.8	61.0	66.6
Indonesia	6.3	6.4	6.7	26.9	28.1
Otway	4.7	5.0	4.8	18.4	19.4
Darwin LNG	3.7	4.0	4.6	16.7	14.4
Denison/Scotia/Spring Gully	3.2	3.0	3.1	12.0	11.2
GLNG	2.3	3.1	2.4	9.6	10.8
Bangladesh	-	1.7	0.2	1.9	4.9
Vietnam	0.2	0.4	0.4	1.5	2.1
PNG LNG	0.1	-	-	0.1	-
Total production (PJ)	53.2	56.4	55.3	213.0	222.5
Total production (mmboe)	9.1	9.7	9.5	36.6	38.3
Condensate (000 bbls)					
Cooper	260.6	251.7	283.7	1,043.0	1,030.7
Bayu-Undan	180.9	295.5	236.1	967.5	1,174.1
Carnarvon	149.2	157.2	162.5	627.5	635.6
Amadeus	7.9	7.3	6.2	28.4	29.9
Otway	4.3	6.0	4.2	16.9	19.7
Indonesia	1.4	1.2	1.1	4.8	5.6
Bangladesh	0.5	-	-	2.2	-
Queensland	0.6	0.1	0.4	1.5	1.8
Total production (000 bbls)	605.4	719.0	694.2	2,691.8	2,897.4
Total production (mmboe)	0.6	0.7	0.6	2.5	2.7
LPG (000 tonnes)					
Cooper	32.7	30.9	33.7	125.7	125.1
Bayu-Undan	9.9	17.6	14.1	55.9	69.4
Total production (000 tonnes)	42.6	48.5	47.8	181.6	194.5
Total production (mmboe)	0.4	0.4	0.4	1.6	1.6
Crude oil (000 bbls)					
Cooper	848.7	817.7	818.4	3,104.4	3,226.1
Vietnam	679.3	746.8	571.3	2,658.5	2,870.2
Mutineer-Exeter/Fletcher Finucane	894.3	113.5	815.3	2,167.9	604.0
Stag	263.5	406.3	329.8	1,124.3	1,411.6
Barrow	132.9	138.6	138.1	541.5	566.6
Indonesia	50.3	79.2	54.5	203.1	340.2
Thevenard	52.3	56.7	51.2	198.9	180.6
Amadeus	38.1	46.6	44.5	173.1	198.0
Queensland	13.1	11.9	13.5	49.9	66.8
PNG	9.8	14.4	10.2	49.8	73.8
Total production (000 bbls)	2,982.3	2,431.7	2,846.8	10,271.4	9,537.9
Total production (mmboe)	3.0	2.4	2.9	10.3	9.5
TOTAL					
Production (mmboe)	13.1	13.2	13.4	51.0	52.1

¹ Preliminary and subject to audit.

2. Sales volumes and sales revenue (Santos share)

	Quarter ended			Full-year	
	Q4 2013	Q4 2012	Q3 2013	2013 ¹	2012
Sales gas, ethane and LNG					
Sales – own product (PJ)	47.5	52.9	49.7	198.7	218.0
Sales – third party (PJ)	8.7	7.4	9.5	28.7	40.0
Total sales (PJ)	56.2	60.3	59.2	227.4	258.0
Total sales (mmboe)	9.7	10.4	10.1	39.1	44.4
Average gas price (A\$/GJ)	5.53	5.04	5.98	5.64	5.12
Total sales revenue (\$million)	311	304	353	1,282	1,322
Condensate					
Sales – own product (000 bbls)	810.7	843.5	792.9	2,664.8	2,982.7
Sales – third party (000 bbls)	70.7	51.0	60.8	155.4	197.8
Total sales (000 bbls)	881.4	894.5	853.7	2,820.2	3,180.5
Total sales (mmboe)	0.8	0.9	0.8	2.6	3.0
Average condensate price (A\$/bbl)	123.52	99.77	112.34	110.09	101.04
Average condensate price (US\$/bbl)	114.73	103.63	102.82	105.96	104.64
Total sales revenue (\$million)	108	89	96	310	321
LPG					
Sales – own product (000 tonnes)	42.9	41.5	47.3	176.3	181.7
Sales – third party (000 tonnes)	3.4	0.7	4.0	10.5	10.0
Total sales (000 tonnes)	46.3	42.2	51.3	186.8	191.7
Total sales (mmboe)	0.4	0.3	0.4	1.6	1.6
Average LPG price (A\$/tonne)	1,115.95	1,120.32	945.57	939.56	933.52
Average LPG price (US\$/tonne)	1,036.50	1,163.68	865.38	904.33	966.75
Total sales revenue (\$million)	52	47	49	176	179
Crude oil					
Sales – own product (000 bbls)	2,753.5	3,019.7	2,607.3	9,830.3	9,532.7
Sales – third party (000 bbls)	1,917.0	1,006.4	1,550.8	5,333.1	2,776.8
Total sales (000 bbls)	4,670.5	4,026.1	4,158.1	15,163.4	12,309.5
Total sales (mmboe)	4.7	4.0	4.2	15.2	12.3
Average crude oil price (A\$/bbl)	127.16	108.46	127.31	120.96	113.78
Average crude oil price (US\$/bbl)	118.11	112.66	116.51	116.43	117.83
Total sales revenue (\$million)	594	437	529	1,834	1,401
Total					
Sales – own product (mmboe)	12.1	13.3	12.2	48.0	51.4
Sales – third party (mmboe)	3.5	2.3	3.3	10.5	9.9
Total sales volume (mmboe)	15.6	15.6	15.5	58.5	61.3
Third party product purchases (\$m)	249	114	234	745	465
Sales – own product (\$million)	768	722	766	2,772	2,696
Sales – third party (\$million)	297	155	261	830	527
Total sales revenue (\$million)	1,065	877	1,027	3,602	3,223

¹ Preliminary and subject to audit.

3. Production by area

Comparisons between periods for gas, condensate and LPG production are made between the current quarter and the same quarter from the previous year, as production is heavily influenced by seasonal factors. Conversely, comparisons for crude oil are made with the immediate previous quarter, as oil production rates are not generally subject to seasonal variations. Both comparisons are available in the table on page 4.

Cooper Basin

Sales gas production was 7% lower than the corresponding quarter in 2012, and 4% lower than the previous quarter in 2013 due to greater planned field and plant maintenance activities. Gas production capacity continued to be added during the quarter with 29 new gas wells brought on line, compared to 16 in the previous quarter. LPG production of 32,700 tonnes and condensate production of 260,600 barrels was higher than the corresponding quarter, due to higher liquids yields.

In the South Australian Cooper Basin, the gas development program continued with 10 wells cased and suspended as future gas producers. The final well of the 16-well Cowralli pad was drilled in mid-October, and as at the end of the quarter, 13 of the 16 Cowralli wells had been fracture stimulated and brought on line with the remaining wells to be brought on line in Q1 2014. Infill drilling at the four-well Moomba North pad was also completed, with all wells cased and suspended as future gas producers. Drilling is currently underway on the five-well Big Lake pad, which forms part of the Big Lake infill drilling program of over 30 wells. Two wells were cased and suspended and drilling is currently underway on the third well.

In south-west Queensland, a three-well conventional gas exploration program was completed, with all three wells cased and completed as future producers. A three-well development drilling campaign is also underway in the Barrolka field, with all three wells suspended for further deepening.

Crude oil production of 848,700 barrels was 4% higher than the previous quarter, due to results from additional wells brought on line at Charo, Cuisinier and Irtalie East supported by reduced downtime in the quarter. Santos' share of Cooper Basin oil production for 2013 was 3.1 million barrels.

Oil drilling activity increased during the quarter, with successful results in six oil wells. In south-west Queensland, Santos completed the drilling of the five-well Zeus-Minos-Tennaperra field appraisal and development campaign, with all five wells cased and suspended as future Birkhead formation oil producers. In the Tintaburra Block, Santos commenced a five-well drill appraisal campaign in the Ipundu and Ipundu North area, with the first well Ipundu 17 cased and suspended as a future Wyandra and Murta producer.

Denison/Scotia/Spring Gully

Sales gas production of 3.2 PJ was higher than Q4 2012 due to higher production from the Scotia field. Four CSG coreholes were drilled during the quarter, with core samples successfully taken and the wells plugged and abandoned as planned.

Narrabri

Rig operations commenced as part of Santos' exploration and appraisal program in the Narrabri area in north-west NSW where 15 new appraisal wells are planned. In the fourth quarter, the drilling of three appraisal wells and two coreholes were completed or underway, with results in line with expectations. Work is also underway on a new water storage facility and associated flowlines.

GLNG

Sales gas production of 2.3 PJ was lower than Q4 2012 due to lower customer nominations. Gross average daily production from the Fairview field during the quarter was 106 TJ/day.

Otway

Sales gas production of 4.7 PJ was 6% lower than Q4 2012 due to natural well decline and the Henry-2 well being offline for maintenance. Production from the Casino hub was 4.2 PJ of sales gas and 2,700 barrels of condensate. Minerva production was 0.5 PJ of sales gas and 1,600 barrels of condensate.

Carnarvon

Gas production of 16.6 PJ was 7% higher than Q4 2012, with higher production from Reindeer due to the commencement of new short-term gas sales contracts during the quarter. This was partially offset by lower production from Varanus Island due to lower customer nominations. Condensate production of 149,200 barrels was 5% lower than Q4 2012.

Total oil production for the quarter of 1,343,000 barrels was in line with the previous quarter, with increased production from Fletcher Finucane offset by lower production at Stag and Mutineer-Exeter. Gross production from Fletcher Finucane during the quarter was 20,140 barrels per day, as production recovered from the issues with the water separation systems during the third quarter. During the quarter, Santos' share of Fletcher Finucane production was 884,800 barrels, and 9,600 barrels from Mutineer-Exeter. Stag production of 263,500 barrels was lower due to workovers in the fourth quarter.

Bayu-Undan/Darwin LNG

Gross Bayu-Undan gas production of 52.83 PJ was 3% lower than Q4 2012 due to higher downtime. Santos' net entitlement to production was 3.7 PJ.

Gross Bayu-Undan condensate production of 2.9 mmbbl and gross LPG production of 143,900 tonnes were 38% lower than Q4 2012 due to lower offshore well capacity. Santos' net entitlement to production was 180,900 barrels of condensate and 9,900 tonnes of LPG.

Work is underway on the Bayu-Undan Phase 3 project which will deliver incremental liquids recovery and higher offshore well capacity through the development of two subsea wells tied back into the existing platform. First gas from the project is targeted for 2015.

Indonesia

Santos' net entitlement to gas production of 6.3 PJ was in line with the corresponding period. Combined Wortel and Oyong gross gas production for the quarter was 73 mmscf/day. Gross production from Maleo was 70 mmscf/day. Santos' net entitlement to Oyong oil production was 50,300 barrels.

Vietnam

Gross average oil production from Chim Sáo during the December quarter was 24,055 barrels per day. Santos' net entitlement to production of 679,300 barrels for the quarter was 19% higher as full oil and gas production resumed in December 2013 following the repair of the damaged gas export pipeline. As at the end of December 2013, gross oil production from Chim Sáo was 29,000 barrels per day. Santos' share of gas production during the December quarter was 0.2 PJ.

Bangladesh

As previously reported, production from the Sangu field ceased in the third quarter of 2013. Work on the shutdown and handover activities of the Sangu facilities to Petrobangla is underway.

PNG

SE Gobe oil production for the fourth quarter of 9,800 barrels was lower than the third quarter, due to facility shutdowns to enable well work-overs to be performed. Santos' share of the commissioning gas for the PNG LNG project was 0.1 PJ for the quarter.

4. Capital expenditure

Total exploration, evaluation and development expenditure is summarised in the table below. Numbers for 2013 are preliminary and subject to audit.

	Quarter ended			Full-year	
	Q4 2013	Q4 2012	Q3 2013	2013	2012
Capital expenditure (\$million)					
Exploration	87	71	118	394	162
Evaluation	98	53	40	227	161
Development and other PP&E	1,031	864	910	3,524	2,847
Capitalised interest	67	49	60	228	183
Total capital expenditure	1,283	1,037	1,128	4,373	3,353

Exploration and evaluation expensed (\$million)					
From current year expenditure:					
Exploration	103	19	19	141	77
Evaluation	19	20	14	62	86
Total current year expenditure	122	39	33	203	163
Write-off of amounts capitalised in prior years	-	-	-	3	2
Total expensed	122	39	33	206	165

4.1 Exploration activity

Well name	Basin / area	Target	Santos %	Well status
Dufresne-1	Browse – WA	Gas	30	P&A
Moomba-194	Cooper – SA	Gas	66.6	C&S, shale gas discovery
Moomba-193H	Cooper – SA	Gas	66.6	Drilling
Roswell-2H	Cooper – SA	Gas	66.6	C&S; fracture stimulation pending
Bolah-1	Cooper – QLD	Gas	60.06	C&S, successful gas
Kaiden-1	Cooper – QLD	Gas	60.06	C&S, successful gas, possible oil discovery
Marama West-1	Cooper – QLD	Gas	61.2	C&S, successful gas
Westgrove-8	Denison - QLD	CSG	50	CSG corehole, suspended for further evaluation
Garlands-1	Denison - QLD	CSG	50	P&A, CSG corehole
Kupio-1	Papuan – PNG	Gas	30 [#]	P&A
Manta-1	Papuan – PNG	Gas	30 [#]	Drilling

[#]Santos' acquisition of a 30% interest is subject to certain conditions precedent and on obtaining PNG Government approval.

Dufresne-1, located in WA-408-P in the Browse Basin, was spudded on 27 June 2013 and reached a total depth of 5,231 metres. The well did not intersect economic hydrocarbons and was plugged and abandoned.

The Cooper Basin unconventional gas exploration program continued during the quarter with significant activity across all three key unconventional plays: Basin Centred Gas (BCG) tight sand play, the Shale play and the Deep Coal play.

Santos currently has three projects underway in the Moomba area, which are focused on appraising the Roseneath, Epsilon and Murteree (REM) shale play and other unconventional plays; the Roswell, Aurora and Fortuna projects. In the Roswell project, the Roswell-2 horizontal well targeting the REM shale was drilled to a measured depth of 3,481 metres, and achieved a 550 metre horizontal lateral length within the lower Murteree shale. Fracture stimulation activities to evaluate the Murteree and Epsilon flow potential will be undertaken in Q1 2014.

The Aurora project is designed as a follow-up to the successful Moomba-191 producing shale well, and comprises the Moomba-192 vertical well and the Moomba-193H horizontal well. The Moomba-193H horizontal well was spudded on 17 December 2013, and is currently drilling within the intermediate build angle section at 2,700 metres measured depth. A 1,000 metre horizontal lateral in the Murteree Shale is planned, which will be fracture stimulated with micro-seismic monitoring to be undertaken from the nearby vertical Moomba-192 well.

The Fortuna project, located in the Nappamerri Trough area of the Cooper Basin, consists of a vertical-horizontal well pair and is designed to appraise the REM shale and other unconventional plays. During the quarter, the Moomba-194 vertical well was successfully drilled to a depth of 3,368 metres, and five fracture stimulation stages were placed within shale, tight sand and coal targets. Following completion of the stimulation activities on 8 December 2013, the well was put on production test for one week and recorded a gas flow prior to production logging of 3.1 mmscf/day at 1,075 psi through a 28/64 inch choke. Initial production logging indicates that all targets are contributing to flow. Engineering and construction planning for a connection into the production infrastructure is underway.

In the Basin Centred Gas (BCG) play, a ten-stage fracture stimulation treatment across multiple targets was completed at the Langmuir-1 well, and the well is currently on clean-up flow and flowing gas and fracturing liquids to surface. Fracture stimulation of the Van der Waals-1 well was commenced with two of the nine planned stages completed as at the end of the quarter.

A three-well conventional exploration campaign was undertaken within ATP-259P in the south-west Queensland Cooper Basin with all three vertical wells successful. Bolah-1, drilled to a depth of 2,863 metres, discovered conventional gas within the Toolachee and Patchawarra Formations. Kaiden-1, drilled to a depth of 3,094 metres, discovered conventional gas within the Paning Member of the Nappamerri Group and the Toolachee formation. Kaiden-1 also encountered good oil shows within the Poolowanna Formation indicating a possible oil discovery which will be reviewed for potential further evaluation. Marama West-1, drilled to a depth of 3,028 metres, was also a discovery with gas encountered in the Paning Member, the Toolachee Formation and the Pre-Permian Basement.

In the Denison Trough in Queensland, the Westgrove-8 exploration corehole was drilled to a total depth of 1,700 metres, and following wireline logging and testing was fully cased and suspended for further evaluation of prospective CSG targets. The Garlands-1 exploration corehole was drilled to a total depth of 1,743 metres, and following wireline logging was plugged and abandoned as planned.

A three-well campaign in the Western Province of Papua New Guinea, operated by Talisman, commenced in 2013 with the drilling of Kupio-1 in PPL 261. The well was plugged and abandoned and the rig released on 2 November 2013. The second well, Manta-1 in PPL 426, was spudded on 16 December 2013, with operations currently ongoing. The third well, NW Koko-1 in PPL2 61, is expected to spud in the first quarter of 2014.

4.2 Seismic activity

Permit	Basin / area	Survey	Type	km / km ²	Status
EP 82/82M EP 105/106/107 EP 112/125/125M RL2	Amadeus – NT	Southern Amadeus	Onshore 2D	1,587 km	Complete
PPL 6/91/140 PEL 513	Cooper – SA	Cowralli micro-seismic	Passive monitoring	28 km ²	Complete
EP 161	McArthur – NT	Tamboran	Onshore 2D	500 km	Complete
ATP 631P, ATP 336P	Surat – QLD	Yuleba South phase 2	Onshore 2D	16 km	Complete
ATP 804P	Surat – QLD	Humboldt phase 2	Onshore 2D	38 km	Complete

5. Development projects

Development expenditure during the fourth quarter of 2013 was \$1,031 million. The status of development projects during the fourth quarter is as follows.

Dua (Santos 31.875%, Premier Oil operator)

The Dua oil project is located in Block 12W in the Nam Con Son Basin, offshore Vietnam. The project was sanctioned in August 2012 and involves the development of a three-well subsea tie-back to the existing Chim São facilities. The average gross production rate is estimated to be 8,000 barrels per day for the first 12 months of production.

The project is over 67% complete and on track for first oil in mid-2014. FPSO modifications, riser pull-in and spool tie-in activities have been successfully completed and tested. Development drilling is expected to commence in January 2014.

Peluang (Santos 67.5%, operator)

Sanctioned in February 2013, the Peluang gas project is located adjacent to the Maleo gas field, offshore East Java in Indonesia. It will be developed as a tie-back to the existing facilities at Maleo, and will include one horizontal gas well, a minimum facility stand-alone wellhead platform and a pipeline to the Maleo platform.

The project is over 85% complete and on track for first gas in the first half of 2014, with an anticipated gross peak production of 25 mmscf/day. The platform jacket and deck have now been installed, the horizontal well has intersected the reservoir and the well is currently being completed.

PNG LNG (Santos 13.5%, ExxonMobil operator)

Sanctioned in December 2009, the PNG LNG project will develop gas and condensate resources in the Hides, Angore and Juha fields and associated gas resources in the operating oil fields of Kutubu, Agogo, Gobe and Moran in the Southern Highlands, Hela and Western Provinces of Papua New Guinea. The gas will be transported by pipeline to a gas liquefaction plant 25 kilometres north-west of Port Moresby with a capacity of 6.9 mtpa. The project has an estimated gross capital cost of US\$19 billion.

The project is more than 90% complete and on track for first LNG delivery in the second half of 2014, within the current budget. Construction continues at the upstream locations, and commissioning activities are now well advanced at the LNG plant.

A key milestone was reached in December 2013 with commissioning gas from the Kutubu field introduced into the Hides Gas Conditioning Plant (HGCP). The power generation units at HGCP are being commissioned and work is proceeding on process equipment tie-ins and interconnecting pipework.

Construction is well progressed on the remaining section of onshore pipeline between Kutubu and the HGCP, with the 200mm diameter condensate line now complete and being used to supply commissioning gas from Kutubu to HGCP, while the main 800mm diameter gas line and the spinline pipeline from the Hides well pads to the HGCP are proceeding to plan.

Drilling continues at Hides, with four of the eight initial production wells now complete and work progressing on the four remaining wells. The two wells on B pad and two wells on C pad have been successfully drilled and completed. The two drilling rigs are now in operation on the D and G drill pads, with progress in line with the plan. The D1 well was spudded on 20 September 2013, the D2 well was spudded on 9 October 2013 and the G1 well was spudded on 27 December 2013.

Commissioning is ramping up at the LNG plant with gas circulating in train 1 and the refrigeration compressors being test run. All gas turbine generators are now operable, and the LNG loading jetty and both LNG tanks are complete.

GLNG project (Santos 30%, operator)

Sanctioned in January 2011, GLNG includes the development of CSG resources in the Bowen and Surat Basins in south-east Queensland, construction of a 420-kilometre underground gas transmission pipeline to Gladstone, and two LNG trains with a combined nameplate capacity of 7.8 mtpa on Curtis Island. The project has an estimated gross capital cost of US\$18.5 billion from the final investment decision to the end of 2015 when the second train is expected to be ready for start-up, based on foreign exchange rates which are consistent with the assumptions used at FID (A\$/US\$ 0.87 average over 2011-15). The project is over 72% complete and remains on track for first LNG in 2015.

Upstream

Forty-three wells were spudded in the GLNG acreage during the fourth quarter, which included 38 development wells (21 at Fairview, 17 at Roma) and five appraisal wells. In total, 237 wells were spudded during 2013, which included 208 development wells (75 at Fairview, 133 at Roma) and 29 appraisal wells.

Construction at the three upstream gas hubs continues to progress. During the quarter, all of the water ponds at the hub sites were completed, and the first of the new development wells at Fairview and Roma are now on line and dewatering has commenced.

On 25 October 2013, GLNG signed cooperation agreements with APLNG to facilitate gas swaps and infrastructure connections in the upstream. Under the terms of the agreement, two pipeline connection points will be built between the GLNG and APLNG infrastructure and a number of gas swap agreements undertaken to minimise gas transport and operational costs.

On 19 December 2013, the GLNG partners executed an agreement with Origin Energy for the purchase of 100 PJ of gas supply to the GLNG project. The gas will be supplied at Wallumbilla over a period of five years commencing in January 2016 based on oil-linked pricing. Under the terms of the agreement, Origin can supply additional volumes of up to 94 PJ of gas during the same five-year period.

Gas transmission pipeline

The 420-kilometre gas transmission pipeline is progressing well, and remains on track for completion in the second quarter of 2014. On the mainland and Curtis Island, clearing, grading, stringing and automatic welding is complete. Over 390 kilometres of the pipeline has been buried, and rehabilitation has been completed on over 195 kilometres of the pipeline route. Works commenced on the QCLNG interconnector site at Mount Larcom and the metering skid was delivered to site.

Pre-commissioning of parts of the pipeline is underway, with clean and gauge activities successfully completed on half of the pipeline length and hydro-testing has commenced.

Tunnelling works on the 4.3-kilometre marine crossing continue to progress, with the tunnel construction now 95% complete with approximately 200 metres remaining. Construction of the reception shaft for the tunnel boring machine is complete on Curtis Island and preparation activities have commenced for pipe installation.

LNG plant

Construction on Curtis Island continues to progress well. Seventy-four of the 82 train 1 modules have been delivered to site and the remaining eight modules are under assembly. Twenty-seven of the 29 train 2 modules are also under assembly. During the quarter, train 1 module installation continued, the firewater tank roofs were lifted into position and the marine flare was set. All train 2 refrigeration compressor strings were installed, and both the propane substation and compressor control buildings were installed.

The LNG tanks are progressing well, with both concrete roof pours completed and work underway on the tank B nickel shell plate. At the LNG jetty, the installation of the jetty modules and loading arms were completed and pipe welding of the trestle modules commenced.

GLNG project (Santos 30%, operator) continued



GLNG plant site on Curtis Island, 2 December 2013.



Train 1 compressor deck on Curtis Island with LNG tank B in the background, 2 December 2013.

7. Drilling summary

7.1 Appraisal/evaluation wells

The table below details wells drilled during the fourth quarter and their status.

Well name	Basin / area	Target	Santos %	Well status
Kullanda-2	Arcadia – QLD	Gas	21.21	P&A
Ipundu North-14	Cooper – QLD	Oil	60	Suspended for further deepening
Ipundu-17	Cooper – QLD	Oil	60	C&S, successful oil
Ipundu-18	Cooper – QLD	Oil	60	Drilling
Ipundu-19	Cooper – QLD	Oil	60	Suspended for further deepening
Minos-2	Cooper – QLD	Oil	70	C&S, successful oil
Peregrin-1 [#]	Cooper – QLD	Oil	6.79	P&A
Zeus-9	Cooper – QLD	Oil	70	C&S, successful oil
Corella Creek-1	Denison – QLD	CSG corehole	50	P&A, core sample obtained
Cotton Gin-1	Denison – QLD	CSG corehole	50	P&A, core sample obtained
Garlands-1	Denison – QLD	CSG corehole	50	P&A, core sample obtained
Rewan-1	Denison – QLD	CSG corehole	50	P&A, core sample obtained
FV03-15-3	Fairview – QLD	CSG	23.85	Drilling
Springwater-9	Fairview – QLD	CSG	23.85	C&S, successful CSG
Springwater-10	Fairview – QLD	CSG	23.85	C&S, successful CSG
Yebna North-4	Fairview – QLD	CSG	23.85	C&S, successful CSG
Dewhurst-22	Gunnedah – NSW	CSG corehole	80	C&S, successful CSG
Dewhurst-24	Gunnedah – NSW	CSG	80	C&S, successful CSG
Dewhurst-25	Gunnedah – NSW	CSG	80	Drilling
Dewhurst-25DW1	Gunnedah – NSW	CSG	80	Drilling
Dewhurst-8A	Gunnedah – NSW	CSG corehole	80	C&S, successful CSG

7.2 Development wells

The table below details development wells drilled during the fourth quarter and their status.

Well name	Basin / area	Target	Santos %	Well status
Big Lake-95	Cooper – SA	Gas	66.6	C&S, successful gas
Big Lake-96	Cooper – SA	Gas	66.6	C&S, successful gas
Big Lake-97	Cooper – SA	Gas	66.6	Drilling
Cowralli-21	Cooper – SA	Gas	66.6	C&S, successful gas
Kurunda-6	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-196	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-197	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-198	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-199	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-200	Cooper – SA	Gas	66.6	C&S, successful gas
Moomba-201	Cooper – SA	Gas	66.6	C&S, successful gas
Barrolka-11	Cooper – QLD	Gas	60.06	Suspended for further deepening
Barrolka-12	Cooper – QLD	Gas	60.06	Suspended for further deepening
Barrolka-13	Cooper – QLD	Gas	60.06	Suspended for further deepening
Munkah-13	Cooper – QLD	Gas	60.06	C&S, successful gas

Well name	Basin / area	Target	Santos %	Well status
Tennaperra-3	Cooper – QLD	Oil	70	C&S, successful oil
Zeus-8	Cooper – QLD	Oil	70	C&S, successful oil
Zeus-10	Cooper – QLD	Oil	70	C&S, successful oil
Peluang-2	East Java – Indonesia	Gas	67.5	Drilling
FV11-31-4 ^o	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV11-31-5 [^]	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV12-01-2	Fairview – QLD	CSG	23.85	Drilling
FV12-01-3	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV12-01-4	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV12-02-1 [^]	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV12-02-2 [*]	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV12-02-3 [*]	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV13-09-1	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-2	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-3	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-5	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-6	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-7	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-09-8	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV13-14-1	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV13-14-2	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV13-14-3	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV13-14-4	Fairview – QLD	CSG	23.85	Drilling
FV13-14-5 [*]	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-1	Fairview – QLD	CSG	23.85	C&S, successful CSG
FV18-15-2	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-3	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-4	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-5	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-6	Fairview – QLD	CSG	23.85	Suspended for further deepening
FV18-15-7	Fairview – QLD	CSG	23.85	Suspended for further deepening
Hides C1 ^{^#}	Papuan – PNG	Gas	13.50	C&C, successful gas
Hides C2 ^{^#}	Papuan – PNG	Gas	13.50	C&C, successful gas
Hides D1 ^{*#}	Papuan – PNG	Gas	13.50	Drilling
Hides D2 ^{*#}	Papuan – PNG	Gas	13.50	C&S, successful gas
Hides G1 [#]	Papuan – PNG	Gas	13.50	Drilling
RM03-62-1	Roma – QLD	CSG	30	C&S, successful CSG
RM03-64-1	Roma – QLD	CSG	30	C&S, successful CSG
RM03-66-1	Roma – QLD	CSG	30	C&S, successful CSG
RM03-68-1	Roma – QLD	CSG	30	C&S, successful CSG
RM03-80-1	Roma – QLD	CSG	30	C&S, successful CSG
RM07-04-1 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM07-04-2 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM08-14-1 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM08-14-2 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM08-14-3 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM08-16-1	Roma – QLD	CSG	30	C&S, successful CSG

Well name	Basin / area	Target	Santos %	Well status
RM08-16-2	Roma – QLD	CSG	30	C&S, successful CSG
RM08-16-3	Roma – QLD	CSG	30	Drilling
RM09-01-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-02-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-03-1 [*]	Roma – QLD	CSG	30	C&S, successful CSG
RM09-11-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-12-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-15-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-16-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-18-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-34-1	Roma – QLD	CSG	30	C&S, successful CSG
RM09-35-1	Roma – QLD	CSG	30	C&S, successful CSG

^{*} Spudded during third quarter 2013

[^] Spudded during second quarter 2013

[°] Spudded during first quarter 2013

[#] Not operated by Santos

8. Abbreviations and conversion factors

Abbreviations		Conversion factors	
PJ	petajoules	Sales gas and ethane, 1 PJ	171.937 boe x 10 ³
TJ	terajoules	Crude oil, 1 barrel	1 boe
GJ	gigajoules	Condensate, 1 barrel	0.935 boe
mmbbl	million barrels	LPG, 1 tonne	8.458 boe
mmboe	million barrels of oil equivalent	LNG, 1 PJ	18,040 t
mmbtu	million British thermal units		
mmscf	million standard cubic feet		
mtpa	million tonnes per annum		
t	tonnes		
P&A	plugged and abandoned		
C&S	cased and suspended		
C&C	cased and completed		
P&S	plugged and suspended		
NFE	Near-field exploration		
WI	water injector		
ST	side track		
CSG	coal seam gas		
LNG	liquefied natural gas		
pa	per annum		
PSC	production sharing contract		
FPSO	floating production, storage & offloading		