J.P.Morgan

Australia Equity Research
21 February 2014

Santos Limited

Positive capital management talk undone by a poor reserves statement

Neutral

STO.AX, STO AU

Price: A$13.59

▼ **Price Target: A$13.88**
Previous: A$14.28

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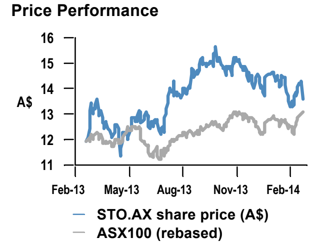
Price Performance



	YTD	1m	3m	12m
Abs	-7.1%	-5.7%	-5.5%	14.2%
Rel	-8.6%	-7.7%	-8.2%	4.4%

Unfortunately another result call today that was squarely focused on the poor quality of the Santos year end reserves statement. Yet again, GLNG failed to register meaningful 2P reserve growth and 2C contingent resources were down. Over the last three years, 2P reserves growth has been +5%, +2% and +1%; 2C contingent resources have declined by -12%, -50% and -16% respectively. Together we view 2P+2C as an indication of ultimate resource recovery. Following GLNG inking a 3rd third-party gas purchase agreement last year with Origin we noted that the opaqueness of the upstream component of the GLNG project increased further. We think the reserve report today provides more cause for concern over the long term cash flow generation of GLNG and hence the return on capital of the project. We are maintaining our Neutral recommendation on Santos and a sector preference for Woodside.

- **Small result beat.** Santos' statutory CY13 NPAT of A$516 was 2% ahead of our A$506m forecast, normalised NPAT was A$504m (+4% vs JPMe A$486m). Cash generation was strong, year end net debt of A$5,127m (gearing 33%) was ~A$100m ahead of our A$5,244m (gearing 34%) forecast. Two positives from the result were NSW CSG progress and capital management talk. Santos has secured a commitment from the NSW government to finalise the approvals process for Narrabri CSG by Jan 2015. Santos also articulated its intention to adopt a progressive dividend policy as PNG LNG and GLNG begin to contribute cashflow from the end of this year. This may be a slight disappointment, as we had hoped for some more inventive capital management such as an off-market buyback given Santos' A$845m franking credit balance and its prior off-market buybacks in 2007/08. Management did not rule out supplementary capital management initiatives but it seemed to us that the dividend will be the primary tool.

- **GLNG reserves puzzle.** We do not think management were able to provide a complete answer as to why GLNG reserves have stagnated despite reporting improved flow rates from Fairview and drilling another 200+ wells this year. Cooper Basin 2P reserve growth is also tracking well behind Santos' +1000PJ target.

Santos Limited (Reuters: STO.AX, Bloomberg: STO AU)

Year-end Dec (A$)	FY11A	FY12A	FY13A	FY14E	FY15E
Revenue (A$ mn)	2,530	3,220	3,602	4,423	5,539
EBITDA (A$ mn)	1,416	1,706	1,743	2,016	3,120
Net Profit (A$ mn)	753	519	516	507	1,015
EPS (A$)	0.84	0.54	0.53	0.52	1.03
P/E (x)	16.2	25.0	25.5	26.2	13.2
EV/EBITDA (x)	9.5	8.8	10.7	10.4	6.7
DPS (A$)	0.30	0.30	0.30	0.35	0.55
Dividend Yield	2.2%	2.2%	2.2%	2.6%	4.0%
Normalised EPS (A$)	0.51	0.64	0.52	0.52	1.03
Normalised EPS Growth	13.6%	25.5%	(18.0%)	(0.3%)	98.5%
Normalised PE	26.8	21.4	26.1	26.1	13.2

Source: Company data, Bloomberg, J.P. Morgan estimates.

Company Data	
Shares O/S (mn)	966
Market Cap (A$ mn)	13,122.56
Market Cap ($ mn)	11,817.87
Price (A$)	13.59
Date Of Price	21 Feb 14
Free Float(%)	-
3M - Avg daily vol (mn)	3.23
3M - Avg daily val (A$ mn)	45.48
3M - Avg daily val ($ mn)	41.0
ASX100	4513.10
Exchange Rate	0.90
Price Target End Date	31-Dec-14
Price Target (A$)	13.88

See page 13 for analyst certification and important disclosures, including non-US analyst disclosures.

CY13 results – slight underlying earnings miss

For CY13 Santos reported statutory NPAT was A$516 (+2% vs JPMe A$506m, but -5% vs consensus A$544m). Normalised NPAT was A$504m (+4% vs JPMe A$486m). The net A$12m of abnormal items primarily related to gains on asset sales, impairments and FX gains. Normalised EBITDAX was in line with our forecast.

Final dividend was A15cps fully franked (in line with JPMe) for a CY13 full year dividend of A30cps. It is in line with previously indicated policy during the LNG projects build phase. The DRP discount is 2.5% but is not underwritten.

Table 1: Santos CY13 result vs JPMe and PCP

(A$ millions)	CY12A	CY13A	CY13 JPMe	Diff	Diff %
Sales revenue	3,220	3,602	3,603	(1)	0%
Other revenue	79	61	50	11	23%
Total revenue	**3,299**	**3,663**	**3,653**	**10**	0%
Production costs	(647)	(690)	(679)	(11)	2%
Hydrocarbon purchase costs	(465)	(745)	(745)	0	0%
Pipeline tariffs	(117)	(122)	(124)	2	-1%
Royalties, excise	(89)	(85)	(68)	(17)	25%
Movt in stock	35	79	54	25	46%
SG&A operating expense	(119)	(108)	(103)	(5)	4%
Other	(26)	(57)	(58)	1	-2%
Total Operating Costs	**(1,428)**	**(1,728)**	**(1,724)**	**(4)**	0%
EBITDAX	**1,871**	**1,935**	**1,929**	**6**	0%
Exploration write-off	(165)	(192)	(199)	7	-4%
EBITDA	**1,706**	**1,743**	**1,730**	**13**	1%
Depreciation & amortisation	(773)	(888)	(903)	15	-2%
EBIT	**933**	**855**	**827**	**28**	3%
Net Interest Expense	79	(17)	11	(28)	-257%
Pre-Tax Profit	**1,012**	**838**	**838**	**(0)**	0%
Corporate Tax	(331)	(277)	(293)	16	-6%
PRRT post tax	(75)	(57)	(59)	2	-4%
Significant items (after tax)	(87)	12	20	(8)	-40%
Reported NPAT	**519**	**516**	**506**	**10**	2%
NPAT (pre-sig items)	**606**	**504**	**486**	**18**	4%
Final dividend (Acps)	15	15	15	-	0%
Full year dividend (Acps)	30	30	30	-	0%
Net debt	1,547	5,127	5,244	(117)	-2%
Gearing ND:ND+E	14%	33%	34%		
Operating cash flow	1,658	1,628	1,326	302	23%

Source: J.P. Morgan estimates, company data.

- **Operating costs.** The primary differences in the normalised result versus JPMe related to the result showing (i) higher "other revenue" such as processing tolls and trading revenue, (ii) higher production costs, (iii) higher royalties, (iv) higher admin costs, and (v) a large positive movement in stock. From this it could be argued the EBITDAX beat was a weak one. Below the EBITDA line, the main differences were higher net interest expense and lower D&A and income tax.
- **Operating CF** was A$1628m (+23% vs JPMe A$1326m). Most of this beat was working capital, which was A$286m better than we forecast.
- **Net debt** was A$5127m (-2% vs JPMe A$5244m) with book gearing of 33% (vs JPMe 34%).

Guidance and outlook for CY14

Santos reaffirmed its prior guidance for production of 52-57mmboe (JPMe 56.2mmboe) and cash capex of A$3.5b plus A$0.25b capitalised interest.

New guidance at the result includes production costs A$820-880m (vs. JPMe A$741m prior to the result), DD&A expense of A$18.5/boe (in line with JPMe A$18.6/boe), and PRRT expense of A$60m after tax @ A$110/bbl (vs JPMe A$126m prior to the result). We have updated our production cost and PRRT forecasts as discussed in the earnings revision section of this note.

Santos implicitly expects production costs in CY14 to be ~A$15.6/boe. This compares to A$12.7/boe in CY12 and A$13.5/boe in CY13. The A$130-190m expected increase in production costs is due to new assets such as PNG LNG (+A$80m vs CY13), the planned 35-40 day shutdown in 3Q14 of DLNG/Bayu Undan (+$40m vs CY13), and other costs including workovers (+A$10-70m).

Table 2: Santos CY14 guidance and revised JPM forecasts

	Guidance Low	Guidance High	JPMe
Production (mmboe)	52	57	56.2
Production costs (A$m)	820	880	843
Production costs (A$/boe)	15.8	15.4	15.0
DD&A (A$/boe)	18.5	18.5	18.5
PRRT post tax (A$m)*	60	60	60
Cash capex - incl expl and eval (A$b)	3.5	3.5	3.5
Capitalized interest capex (A$b)	0.25	0.25	0.38

Source: Company reports and J.P. Morgan estimates. *Guidance assumes A$110/bbl Brent oil.

Reserves statement – GLNG again disappointing

1. General comments

The reserves movement over CY13 was rather weak. Santos replaced just 3% of its CY13 production with new reserves. As a result, total 2P reserves decreased by -3% overall or -38mmboe.

Santos' 2C resources decreased 96mmboe net, with the primary impact being 150mmboe due to adoption of new SPE-PRMS guidelines – although this was offset by some other significant gains. In general, the new SPE-PRMS certification guidelines, rather than fundamental information changes, put pressure on estimated reserves and resources especially on the unconventional (hence downgrade to Cooper Shale of -140mmboe).

GLNG was among the most disappointing as its CSG gas 2P reserves increased a mere +1%, and its GLNG 2C resource decreased -16%.

Table 3: Santos 2P reserves summary

2P reserves (mmboe)	End CY12	Production	Other changes*	End CY13
Cooper Basin	280	(15.6)	(8.4)	264
Southern Australia	71	(3.2)	(1.8)	68
Qld CSG	330	(3.8)	25.8	326
Qld conventional	7	-	-	7
NSW CSG	196	-	-	196
Carnarvon	177	(15.8)	(5.2)	161
Bonaparte	41	(4.3)	(8.7)	37
Amadeus	31	(0.2)	5.2	31
PNG	235	(0.1)	0.1	235
Indonesia	17	(4.8)	3.8	12
Bietnam & Bangladesh	21	(3.2)	1.2	18
Total	**1406**	**(50.9)**	**12.9**	**1355**

Source: Company reports. Note: *additions, revisions, acquisitions and divestments – JPMe

2. GLNG reserves – stagnation of 2P and slide in 2C continues

Table 4 shows the gross gas reserves and resources internal to the project CSG fields. In CY13, the movements were 2P +1% (pcp +2%), 2C -16% (pcp -50%) and total resource 2P+2C -3% (pcp -18%).

Given GLNG spudded a further 237 wells in CY13, we expected more than a 1% increase in 2P reserves. The fact that the Fairview wells are now flowing 1.8 TJ/d indicates that field is performing better than expected, and hints that EURs per well may be due for a positive review. The lack of additional reserves prove-up still puzzles us.

The recent history of 2C resources is even more negative. In CY11, there was a 5% or 200PJ decrease in 2C after adjusting for conversion into 2P reserves. In CY12, GLNG 2C decreased a further 50% which was explained as a combination of (i) lower expected recovery factors in Northern Arcadia field deep coals, which are less important as they are not due to be developed for 10-15 years, and (ii) a change in SPE certification guidelines. In CY13, the further 15% decrease was again attributed to a review under the harsher SPE guidelines. According to Santos, the guidelines on 2C are now relatively stringent on (a) extrapolating the aerial extent of unconventional plays from flows to surface, and (b) needing a near term appraisal program to be planned - the details are not clear.

Table 4: GLNG gross internal gas reserves (PJ)

PJ	2007	2008	2009	2010	2011	2012	2013
1P reserves	545	1167	1232	1432	1789	1797	1,844
2P reserves	1344	3246	4003	5009	5268	5376	5,406
3P reserves	4000	5999	5954	7680	7939	6823	Na*
2C cont. resource	4798	2647	2769	3732	3277	1638	1,374
2P + 2C	**6142**	**5893**	**6772**	**8741**	**8545**	**7014**	**6,780**
Growth annual 1P	na	114%	6%	16%	25%	0%	3%
Growth annual 2P	na	142%	23%	25%	5%	2%	1%
Growth annual 3P	na	50%	-1%	29%	3%	-14%	Na*
Growth annual 2C	na	-45%	5%	35%	-12%	-50%	-16%
Growth annual 2P + 2C	na	-4%	15%	29%	-2%	-18%	-3%

Source: Company reports. Note: *STO did not provide 3P for Dec-13

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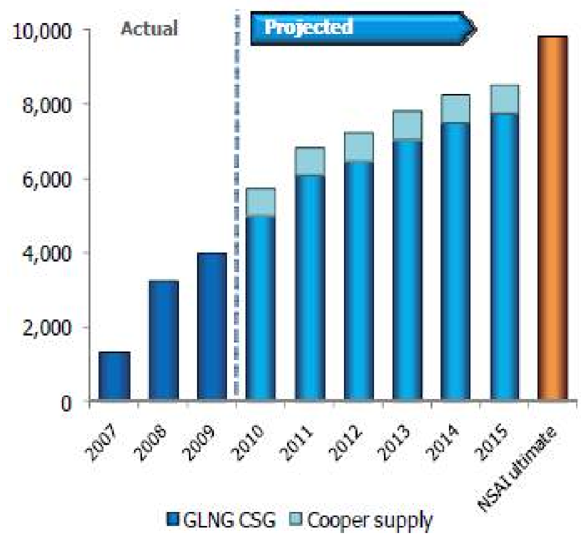
Cumulatively, GLNG has added just 400PJ of 2P over 2011-13, versus target at FID of 2,000PJ

3. The 2P prove up continues to lag Santos guidance at FID

The 7.8mtpa GLNG project will consume >8,000PJ feedgas over 20 years. We estimate the total resources required for the GLNG life cycle is >10,000PJ including ramp-up and tail gas. Prior to first LNG, GLNG intends to produce only enough gas to meet its domestic modest contracts and fill its underground storage.

At FID at the beginning of 2011, NSAI estimated "ultimate 2P reserves maturation of 9,848PJ in the GLNG CSG acreage". Proving up GLNG CSG reserves toward this figure is an important part of building investor confidence in the project. STO said c.75-80% of this prove-up is scheduled to be completed by first LNG in 2015. From the Santos graph below, we estimate this meant 7,700PJ of 2P by 2015.

Figure 1: GLNG 2P reserves prove-up plan (at FID in Jan 2011)



Source: Company reports (Jan 2011)

As Figure 8 above and Table 5 below show, GLNG originally planned to add ~2,000PJ to 2P reserves across 2011-13. In fact it has added just ~400PJ leaving a shortfall of ~1,600PJ versus the target at FID.

Table 5: GLNG's FID target for 2P prove up vs. actual 2P additions

GLNG target 2P (PJ)	2007a	2008a	2009a	2010e	2011e	2012e	2013e	2014e	2015e
Start	Na	1344	3246	4003*	5003	6003	6403	7003	7403
Addition		1902	757	1000*	1000	400	600	400	300
End	**1344**	**3246**	**4003**	**5003***	**6003**	**6403**	**7003**	**7403**	**7703**
GLNG actual 2P (PJ)	**2007a**	**2008a**	**2009a**	**2010a**	**2011a**	**2012a**	**2013a**		
2P actual	1344	3246	4003	5009	5268	5376	5406		
2P additions net	na	1902	757	1006	259	108	30		
Difference vs target in this year*	na	na	na	6	(741)	(292)	(570)		
Difference vs target cumulative since FID*	na	na	na	6	(735)	(1,027)	(1,597)		

Source: J.P. Morgan estimates, Company data. Note: Jan 2011 FID expectations were provided by STO prior to the CYE 2010 reserves report in Feb 2011

Table 5 shows at FID that GLNG intended to reach ~7,700PJ by end CY15. We doubt GLNG can add 2,300 PJ this year to reach that target.

This will remain an issue for the stock over the next couple of years. At FID STO stated it would prove up the reserves much faster than it has. The company has now publicly relied on different justifications for not hitting those expectations, including wet weather (2011) and focus on deliverability rather than reserves (2012).

The latter reason means that GLNG would drill and prove up reserves progressively as needed, to deliver the best economic outcome, rather than undertake capital expenditure on appraisal unnecessarily early. We agree that this is rational if the project proponents have confidence in the ultimate 2P figure. However, we think the equity market is yet to be convinced that confidence is justified. The current 2P figure indicates the reserves certifiers are not convinced – albeit they are often conservative.

Silver lining for STO

The advantage of the GLNG project for STO is that to the extent QLD CSG project reserves fall short of feed gas requirements, STO is the main swing producer on the east coast that can supply gas (other than the other CSG-LNG projects).

If GLNG falls short of gas in the future and needs more external gas, STO takes a 30% detriment via its shareholding. But to the extent STO is the vendor of its portfolio gas in a tight gas market, it keeps 100% of the margin over its cost of production. This should at least mitigate any loss to STO from GLNG reserves shortfalls. It could even provide a net benefit to STO.

Our issue is that the ability to capture that benefit may only be solidly demonstrated in decades to come, whereas the stock price impact from inadequate GLNG reserves is immediate.

4. Cooper Basin reserves additions are behind target, too

Two years ago in its reserves report (dated Dec-11) Santos said it sought to add 2P Cooper conventional reserves of 300PJ in 2011 and a further 1,000PJ of gas over four years of 2012 to 2015. This implies reserves additions should average 250PJ/yr.

STO gross 2P additions exceeded the rate required in CY11 (+328PJ vs. 300PJ), underachieved in CY12 (+150PJ vs. 250PJ) and strongly underachieved in CY13 (-44PJ vs. 250PJ). The 2P reduction in Dec-13 is wholly related to the disappointing result in Greater Tindilpie (Cowralli 16 well pad) where 3 wells drilled down dip were poor performers.

Santos is now almost ~400PJ behind target, two years into the four year program. On the CY13 result call, Santos CEO David Knox said it probably will not reach the 1,000PJ addition target by 2015.

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Table 4: Santos net Cooper 2P sales gas reserves

2P Cooper gas (PJ)	2009	2010	2011	2012	2013	2014	2015
Year start	750	762	868	1130	1213	1,108	TBC
Production	(79)	(67)	(66)	(67)	(61)	TBC	TBC
Additions, etc	91	173	328	150	(44)	TBC	TBC
Year end	**762**	**868**	**1130**	**1213**	**1108**	**TBC**	**TBC**
Target 2P additions (avg. cum.)*				250	500	750	**1,000**
Actual 2P additions (cum.)				150	106		
Shortfall cumulative				**-100**	**-394**		

Source: Company data, JPMorgan estimates Note: * based on STO CY11 result target of 300PJ in 2011 and 1,000PJ over 2012-15

Growth LNG projects – trucking on

Santos maintained the headline expected capex budgets or start-up dates for its large LNG projects due 3Q14 (PNG LNG) and 2015 (GLNG).

The main investor focus was on GLNG, particularly its reserves position as discussed in the sections above, and on the ex-LNG capex as discussed here.

- **The US$18.5b GLNG capex budget excludes ~US$1.8b of non-LNG costs**. STO disclosed that since FID it had spent A$0.41b net (A$1.4b gross) on "non-LNG project capex" including domestic gas development and exploration costs in GLNG field areas. These were not included in the US$18.5b GLNG budget. This was the first we had heard of additional costs outside the originally stated budget. The confusion generated by this exclusion is not unusual. It reminds us of the confusion when STO said that the GLNG 3rd party gas contracts were always contemplated by the budget and hence would not justify a decrease in budget. That was news to investors, too. STO said it has been putting the A$0.41b in extra costs through corporate level exploration capex etc, so it has been accounted for. If GLNG is only 75% complete, it suggests a further cost of A$0.4b gross (A$0.14b net) to completion for a total of A$1.8b gross. This is not material to STO but might make investors question what else they are not aware of regarding the project.
- **First LNG still likely by mid CY15**. The progress of commissioning suggests to us that T1 could be RFSU (ready for start up) in 2Q15. We also note that an incentive bonus KPI for CEO David Knox is the loading of the first LNG cargo by 30 June 2015. T1 ramp up may take 3-6 months. Santos expects T2 will begin production 6-9 months later by end 2015. As noted previously, T2 can take up to 3 years to ramp up under the off-take contracts.

NSW CSG development update

- **New Narrabri CSG approvals timeline.** STO has signed an MOU with the NSW government re the Narrabri CSG project which guarantees an accelerated approvals timetable under certain conditions. STO must lodge an EIS by 30 June. *The AFR* (21 Feb 2014) reports that provided several interim steps are satisfied, the NSW Planning Assessment Commission will make a decision just 7 months later by 23 Jan 2015. This is positive for the project given the timeframe has been continually pushed out. However, it does not exempt the project from any of the tougher environmental and social regulations around CSG developments in NSW.
- **Narrabri CSG development program update.** Almost two years after it was first proposed, the appraisal program of 16 wells is underway. Five core and

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appraisal wells have been drilled, with results in line with expectations, the remainder will be drilled soon. STO aims to submit an EIS to the NSW government by mid year to meet its part of the accelerated approvals MOU timetable. Simultaneously CEO Knox said it will have 7-8 pilots de-watering into the new water treatment facilities. STO will take FID after the well results are in, around end 2015 or early 2016. If all goes to schedule, the field could still be connected to the Moomba-Sydney pipeline via a 180km pipeline by the company's target of 2017. Some time ago STO was targeting ~50 wells and ~A$500m capex for the initial phase although it has not updated these figures recently.

- Note the updated reserves report showed no change in 2P reserves for NSW CSG.

Capital management

Santos currently targets an A30cps dividend, and currently maintains a DRP with a 2.5% discount, which is not underwritten. Management says its Board is firmly behind a progressive dividend policy once the LNG projects begin to produce. It will focus on steadily increasing the dividend to a sustainable level.

We interpret this to mean STO will slowly increase its dividend to a set Xcps amount, rather than targeting a particular profit payout ratio like Woodside. This is conservative and we believe it would allow management to sit on more cash than would be optimal for strict capital discipline.

STO did not rule out other methods to return cash to holders, such as a buyback. It also commented that its franking credits balance was ~A$845m and it could distribute some of this with a higher dividend combined with a DRP.

Earnings and valuation revisions

Our STO earnings and NPV revisions are displayed in the table below.

We have upgraded our CY14 earnings forecast by 3% reflecting lower forecast PRRT expense in line with Santos guidance, partly offset by higher forecast production costs as per guidance again. We have lowered our CY15 earnings forecast by 2% on higher production coast.

We have downgraded our risk weighted DCF valuation by 1% to A$16.65/shr reflecting higher production costs and lower resource recoveries given the disappointing reserves report today. We have rolled forward our price target by 6 months to end Dec-14 which is 3% lower than our prior price target due to NAV downgrades.

Table 5: Santos earnings revisions

CY 2014	Revised	Previous	% change	change
NPAT (pre sig, $m)	507	493	2.9%	14.4
EPS (pre sig, cents)	51.8	50.5	2.7%	1.4
DPS (c)	35.0	30.0	16.7%	5.0
Op Cash flow ($m)	1677	1696	-1.1%	(19.3)
Op Cash flow/share (c)	171.9	174.3	-1.3%	(2.3)
Brent oil price (US$/bbl)	105.5	105.5	0.0%	0.0
Exchange rate (US$/A$)	0.92	0.92	0.0%	0.00
Production (mmboe)	56.2	56.1	0.3%	0.2
CY 2015				
NPAT (pre sig, $m)	1015	1030	-1.4%	-14.8
EPS (pre sig, cents)	102.9	104.7	-1.8%	-1.8
DPS (c)	55.0	52.3	5.1%	2.7
Op Cash flow ($m)	1957	1989	-1.6%	(31.7)
Op Cash flow/share (c)	199.0	202.9	-1.9%	(3.9)
Brent oil price (US$/bbl)	100.3	100.3	0.0%	0.0
Exchange rate (US$/A$)	0.90	0.90	0.0%	0.00
Production (mmboe)	67.9	67.8	0.2%	0.1
Valuation (A$/share)	16.65	16.87	-1.3%	-0.22
Price Target (A$/share)	13.88	14.28	-2.8%	-0.40

Source: J.P. Morgan estimates.

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Investment Thesis, Valuation and Risks

Santos Limited *(Neutral; Price Target: A$13.88)*

Investment Thesis

GLNG is contracted to quality off-takers. We believe that the construction cost risk is strongly mitigated by largely fixed price downstream capex contracts, and some fixed price per unit of labour and kit for the upstream infrastructure capex. The core GLNG CSG acreage is in the western Surat/Bowen Basin; this is lower-value grazing land, with lower population density, and STO has good landholder relations relative to other operators in QLD. We think the risks have been overestimated.

Santos's share price has recently increased from attributing only c.25-50% of the value of the GLNG project to incorporating c.70% of its value (ignoring PNGLNG T3). In our view, the current STO share price looks a less compelling entry point to GLNG exposure than previously as the stock has rerated strongly over the past year.

We believe Santos is still trading at a discount to fair value, offering 21% potential fundamental valuation upside to spot. However, so is much of the ASX oil & gas sector. We have a Neutral recommendation on relative value.

Valuation

Our STO valuation is A$16.55/shr and our Dec-14 share price target is A$13.88/shr.

Our valuations and price targets are based upon our sum-of-the-parts DCF. We apply risk factors to the various growth projects in a company's portfolio based on our confidence in the project. Our DCF valuation includes full value for PNG LNG T1&2, full value for GLNG T1&2, and 50% of estimated value of a PNG LNG expansion train (T3+). We employ a WACC of 9% for STO.

We assume a long-term real oil price of US$90/bbl. For our base-case valuations, we use a long-term exchange rate of A$/US$0.80, however, for our price targets we use a more conservative US$0.90 to reflect the market's apparent view on the FX rate.

Risks to Rating and Price Target

The main upside risks include:

- Rising oil and domestic gas prices, and weak A$ vs US$ in the long term
- Exploration success for PNG LNG Train 3
- Cooper infill and unconventional and NSW CSG development

The main downside risks include:

- Falling oil and domestic gas prices, and strong A$ vs US$ in the long term
- Execution risk for GLNG build
- Lack of exploration success for PNG LNG Train 3 in Santos licences

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Sector Scenario Valuation Table

	Oil price (LT Brent oil US$/bbl) FX rate (LT A$/US$)		70 0.80		90 0.80		110 0.80	
Company	Valuation Scenario (incl. unrisked projects)	Share price (A$)	DCF val (A$/shr)	Upside to DCF	DCF val (A$/shr)	Upside to DCF	DCF val (A$/shr)	Upside to DCF
WPL	Base Case: Existing projects, Laverda 50%, CO2	39.17	32.21	-18%	40.04	2%	46.50	19%
	+ Pluto 2 assuming 3rd party gas only		35.73	-9%	43.56	11%	50.02	28%
	+ Sunrise FLNG		38.37	-2%	48.09	23%	56.44	44%
	+ Leviathan domestic plus onshore LNG		41.30	5%	53.77	37%	64.89	66%
	+ Browse floating LNG		44.23	13%	61.08	56%	76.50	95%
STO	Base Case: Existing projects excl growth LNG, CO2	13.59	-0.81	-106%	0.56	-96%	1.67	-88%
	+ PNG LNG project T1/T2		4.64	-66%	7.55	-44%	10.16	-25%
	+ 2 train GLNG		9.78	-28%	15.62	15%	20.97	54%
	+ PNGLNG T3 expansion		11.13	-18%	17.68	30%	23.76	75%
OSH	Base Case: Oil business (excl. PNG LNG and debt)	8.49	1.15	-86%	1.33	-84%	1.51	-82%
	– less net debt, incl PNG LNG project debt		-1.86	-122%	-1.68	-120%	-1.50	-118%
	+ PNG LNG T1/T2		5.06	-40%	7.17	-16%	9.28	9%
	+ PNG LNG T3 expansion, 3tcf, 30% OSH share		5.91	-30%	8.67	2%	11.41	34%
	+ Mananda 5 development		6.03	-29%	8.92	5%	11.77	39%
AUT	Base Case: EFS 80 acre well spacing, 164 wells pa	4.11	1.04	-75%	2.87	-30%	4.77	16%
	+ AC well spacing to 60 acres, 50% of acreage		2.34	-43%	4.97	21%	7.71	88%
	+ EUR per well improves +10%		3.46	-16%	6.33	54%	9.34	127%
BPT	Base Case: Incl. A$23/t CO2	1.53	1.12	-26%	1.44	-5%	1.76	15%
	+ Cooper Basin oil linked contract uplift		1.08	-29%	1.44	-6%	1.80	18%
	+ Cooper unconventional 1 tcf gross development		1.08	-29%	1.44	-6%	1.92	26%
AWE	Base Case: Incl. Netherby reserves, A$23/t CO2	1.42	1.05	-26%	1.35	-5%	1.66	17%
	+ Trefoil 2 & Rockhopper 1 unrisked		1.30	-9%	1.62	14%	1.95	38%
	+ Ande Ande Lamut (oil) unrisked		1.83	29%	2.39	69%	2.96	108%
	+ Risked exploration value upside		1.88	32%	2.46	74%	3.05	115%
SXY	Net debt/cash, other assets, corporate costs, CO2	0.77	-0.02	-103%	-0.02	-103%	-0.03	-104%
	+ Cooper oil (33% expl success thru FY17)		0.56	-27%	0.64	-16%	0.72	-5%
	+ Queensland CSG (1 tcf gross)		0.77	1%	0.86	12%	0.94	23%
	+ Cooper unconventional gas (2 tcf)		1.48	94%	1.71	123%	1.93	152%
DLS	Cooper oil & wet gas base case, net debt, corp	1.57	0.85	-45%	1.00	-36%	1.14	-27%
	+ Cooper oil upside		1.09	-30%	1.31	-17%	1.53	-3%
	+ Cooper wet gas upside		1.66	6%	1.95	25%	2.24	43%
	+ Cooper unconventional gas (4 tcf gross)		1.66	6%	2.82	80%	4.70	200%
BRU	Net debt/cash, other assets, corporate costs, CO2	1.55	-0.09	-106%	-0.09	-106%	-0.09	-106%
	+ Ungani oil (20mmbbls)		0.48	-69%	0.63	-60%	0.78	-50%
	+ Valhalla stage 2 (2 tcf, 100mmbbls)		1.65	7%	2.54	64%	3.40	119%
	+ Conventional oil targets		6.14	296%	8.44	445%	10.72	592%
ROC	Base Case: incl. Beibu Gulf, Expl. Value	0.51	0.44	-13%	0.50	-3%	0.55	8%
	+ Balai Cluster Malaysian RSC		0.58	13%	0.71	38%	0.83	62%

Source: J.P. Morgan estimates

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Santos Limited

Neutral — Y/E Dec — **Shares: 975.4m** — **Price: A$13.59**

Profit & Loss Statement

(A$ millions)	CY11A	CY12A	CY13A	CY14E	CY15E
Sales revenue	2,530	3,220	3,602	4,423	5,539
Other revenue	98	79	61	58	60
Total revenue	**2,628**	**3,299**	**3,663**	**4,481**	**5,600**
Production costs	(557)	(647)	(690)	(843)	(1,020)
Hydrocarbon purchase costs	(229)	(465)	(745)	(996)	(840)
Pipeline tariffs	(109)	(117)	(122)	(136)	(151)
Royalties, excise	(52)	(89)	(85)	(88)	(118)
Movt in stock	22	35	79	-	-
SG&A operating expense	(120)	(119)	(108)	(116)	(118)
Other	-	(26)	(57)	(76)	(92)
Total Operating Costs	**(1,045)**	**(1,428)**	**(1,728)**	**(2,255)**	(2,340)
EBITDAX	**1,583**	**1,871**	**1,935**	**2,226**	**3,260**
Exploration write-off	(167)	(165)	(192)	(210)	(140)
EBITDA	**1,416**	**1,706**	**1,743**	**2,016**	**3,120**
Depreciation & amortisation	(641)	(773)	(888)	(1,040)	(1,092)
EBIT	**775**	**933**	**855**	**976**	**2,028**
Net Interest Expense	91	79	(17)	(115)	(364)
Pre-Tax Profit	**866**	**1,012**	**838**	**861**	**1,664**
Corporate Tax	(322)	(331)	(277)	(294)	(454)
PRRT post tax	(91)	(75)	(57)	(60)	(195)
Significant items (after tax)	300	(87)	12	-	-
Reported NPAT	**753**	**519**	**516**	**507**	**1,015**
NPAT (pre-sig items)	**453**	**606**	**504**	**507**	**1,015**
NPAT (pre-sig, post prefs)	**453**	**606**	**504**	**507**	**1,015**
EBITDAX margin (%)	60.2%	56.7%	52.8%	49.7%	58.2%
Effective tax rate (%)	37.2%	32.7%	33.1%	34.1%	27.3%
EPS reported post prefs (cps)	83.9	54.3	53.2	51.8	102.9
EPS pre-sig post prefs (cps)	50.5	63.4	52.0	51.8	102.9
DPS (cps)	30	30	30	35	55
Payout ratio (%)	59%	47%	58%	68%	53%
Franking (%)	100%	100%	100%	100%	100%

Cashflow Statement

(A$ millions)	CY11A	CY12A	CY13A	CY14E	CY15E
Net op cash flow	**1,253**	**1,658**	**1,519**	**1,677**	**1,957**
Acquisitions	(1)	(51)	(205)	-	-
Exploration & Evaluation	(171)	(200)	(581)	(300)	(200)
Capex	(2,781)	(2,927)	(3,565)	(3,608)	(1,142)
Asset Sales	323	-	-	-	-
Other investing cash flows	488	(20)	41	-	-
Dividends	(155)	(159)	(157)	(204)	(309)
Debt Proceeds/(Repayment)	(31)	437	1,410	2,287	(464)
Equity funding	96	88	9	-	-
Other financing cash flows	-	-	-	-	-
Net cashflow	**(979)**	**(1,174)**	**(1,529)**	**(149)**	**(158)**
GCFPS (cps)	140.1	173.8	157.1	171.9	199.0
Free cashflow	(1,699.0)	(1,469.0)	(2,627.0)	(2,231.4)	615.2
FCF/share (cps)	(189.9)	(154.0)	(271.8)	(228.8)	62.6

Balance Sheet

(A$ millions)	CY11A	CY12A	CY13A	CY14E	CY15E
Current assets	**4,752**	**3,258**	**2,078**	**2,137**	**2,319**
Exploration & Development	1,386	1,510	1,964	2,784	2,797
Propert, Plant & Eqp.	9,068	11,675	15,823	17,661	17,759
Other non current assets	608	592	744	744	744
Total assets	**15,814**	**17,035**	**20,609**	**23,327**	**23,618**
Total liabilities	6,851	7,670	10,397	12,812	12,398
Shareholder funds	**8,963**	**9,365**	**10,212**	**10,515**	**11,220**
Total debt	3,261	3,704	5,771	8,058	7,594
Cash	3,332	2,151	644	495	337
Net debt	**(71)**	**1,553**	**5,127**	**7,563**	**7,257**
Operational working capital	377	148	179	259	549
Ave diluted shares (m)	895	895	895	895	895

Source: J.P. Morgan Estimates and Company Data

Production Volumes

(million BOE)	CY11A	CY12A	CY13A	CY14E	CY15E
Cooper	16.4	16.7	15.6	17.3	18.8
Surat/Denison (incl GLNG)	4.1	3.9	3.8	4.0	9.4
Amadeus	0.2	0.2	0.2	0.2	0.2
Otway	3.3	3.4	3.2	3.0	3.1
John Brookes/East Spar	8.3	8.6	6.9	8.4	9.0
Jabiru/Challis and Legendre	-	-	-	-	-
Mutineer/Exeter (Incl Fletcher)	0.7	0.6	2.2	2.6	1.5
Thevenard	0.2	0.2	0.2	0.1	-
Barrow	0.5	0.6	0.5	0.5	0.5
Stag	1.7	1.4	1.1	0.3	-
Bayu-Undan (DLNG)	4.4	4.2	4.3	4.0	4.2
Indonesia	6.1	5.2	4.8	4.8	4.1
SE Gobe (PNG)	0.1	0.1	0.0	0.0	0.0
Vietnam	0.7	3.2	2.9	2.6	2.1
Bangladesh	0.6	0.8	0.3	-	-
Reindeer	-	2.5	3.1	3.8	3.8
Greater East Spar	-	0.8	1.7	1.7	1.7
Kipper	-	-	-	-	-
NSW CSG (Gunnedah)	-	-	-	0.0	0.3
PNG LNG	-	-	0.0	2.8	9.3
Total	**47.2**	**52.2**	**50.9**	**56.2**	**67.9**

Key Commodity Price Assumptions

	CY11A	CY12A	CY13A	CY14E	CY15E
Aust dollar (US$)	1.033	1.036	0.971	0.918	0.900
Brent Oil (US$/bbl)	111.8	112.8	109.1	105.5	100.3
East Coast gas (A$/Gj)	4.37	4.53	4.94	5.26	7.23
West Coast gas (A$/Gj)	4.65	4.75	4.77	5.09	7.23
LNG price (Bayu, US$/t fob)	460	481	465	447	428
LPG price (A$/kt)	861	934	942	934	910

Financial Ratios

	CY11A	CY12A	CY13A	CY14E	CY15E
PE reported (x)	16.1	25.0	25.5	26.1	13.2
PE normalised (x)	26.9	21.4	26.1	26.2	13.2
EV/EBITDAX (x)	11.6	9.8	9.5	8.3	5.6
P/GCFPS (x)	9.7	7.8	8.6	7.9	6.8
Dividend yield (%)	2.2%	2.2%	2.2%	2.6%	4.0%
ROE (%)	8.4%	5.5%	5.1%	4.8%	9.0%
ROIC (%)	8.5%	4.8%	3.4%	2.8%	5.5%
Gearing (ND/(ND+E), %)	-0.8%	14.2%	33.4%	41.8%	39.3%
Interest cover	n/c	n/c	n/c	n/c	n/c

DCF Valuation at 9%

cashflows from Jun-14, LT US$90/bbl & 0.8US$/A$	A$m	A$
Cooper Basin (excl shale gas)	3,283	3.37
Surat/Denison excl GLNG	269	0.28
Amadeus	77	0.08
Otway	213	0.22
John Brookes	566	0.58
Fletcher Finucane	146	0.15
Other WA oil	252	0.26
Bayu-Undan	436	0.45
Kipper	518	0.53
SE Gobe (PNG)	7	0.01
Indonesia	63	0.06
Reindeer	801	0.82
Greater East Spar	461	0.47
Vietnam	119	0.12
PNG LNG	6,815	6.99
GLNG (unrisked)	7,874	8.07
NSW CSG (Narrabri etc)	551	0.57
Corp & Unallocated	(1,477)	(1.51)
Pre-FID projects incl PNGLNG T3 (risked)	1,005	1.03
Exploration	360	0.37
Ande Ande Lamut (45% equity, risked at 75%)	201	0.21
Bonaparte LNG (40% interest)	163	0.17
Other/asset sale proceeds (net)	22	0.02
Asset EV	**22,727**	**23.30**
Net Debt	(6,488)	(6.65)
Equity value	**16,239**	**16.65**
Equity valuation prem/(disc) to share price	22.5%	

Other Companies Discussed in This Report (all prices in this report as of market close on 21 February 2014)
Woodside Petroleum (WPL.AX/A$39.17/Overweight)

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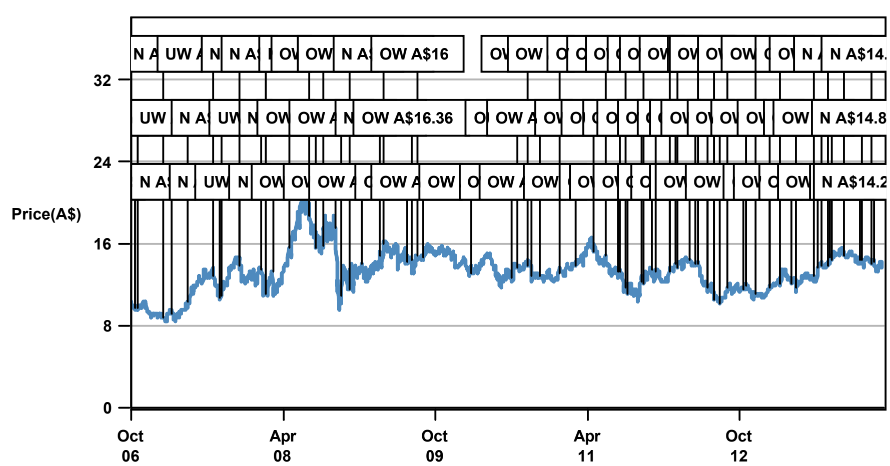
Santos Limited (STO.AX, STO AU) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Oct 13, 2006.

Date	Rating	Share Price (A$)	Price Target (A$)
13-Oct-06	N	9.65	10.03
26-Oct-06	N	9.70	10.58
24-Jan-07	N	8.76	10.00
22-Feb-07	N	9.25	9.70
24-Apr-07	UW	10.29	10.25
26-Jul-07	UW	12.78	12.25
14-Aug-07	N	10.80	12.25
23-Aug-07	N	10.89	12.75
22-Oct-07	N	14.68	13.00
25-Oct-07	UW	13.84	12.00
09-Jan-08	UW	13.53	13.60
24-Jan-08	N	11.15	14.70
21-Feb-08	N	13.24	14.50
23-Apr-08	N	15.53	16.15
01-Jul-08	N	18.64	25.53
02-Jul-08	OW	18.64	25.53
24-Jul-08	OW	15.68	27.53
21-Aug-08	OW	15.88	28.90
02-Oct-08	OW	17.59	28.40
23-Oct-08	OW	10.82	26.80
24-Nov-08	OW	11.59	22.30
06-Jan-09	OW	13.98	20.30
12-Mar-09	N	14.77	18.40

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27-Mar-09	N	15.99	18.67
18-Jun-09	OW	14.19	17.40
02-Jul-09	OW	14.43	16.36
23-Jul-09	OW	14.82	16.00
20-Aug-09	OW	14.65	16.60
08-Feb-10	OW	13.15	15.90
29-Jun-10	OW	12.59	15.60
22-Jul-10	OW	13.55	16.10
26-Aug-10	OW	13.84	17.00
10-Sep-10	OW	12.79	17.20
12-Oct-10	OW	12.91	16.10
17-Dec-10	OW	12.97	16.50
17-Feb-11	OW	13.80	18.30
20-Apr-11	OW	15.26	18.07
01-Jun-11	OW	14.76	17.95
16-Jul-11	OW	13.23	17.07
21-Jul-11	OW	13.31	16.87
12-Aug-11	OW	11.70	19.08
19-Aug-11	OW	11.07	18.94
11-Oct-11	OW	12.33	18.59
20-Oct-11	OW	12.07	18.67
15-Nov-11	OW	13.44	18.66
01-Dec-11	OW	13.25	18.59
17-Jan-12	OW	13.21	18.59
19-Jan-12	OW	13.25	18.90
08-Feb-12	OW	14.00	18.87
17-Feb-12	OW	13.55	19.13
04-Apr-12	OW	14.33	20.82
19-Apr-12	OW	14.04	19.05
02-May-12	OW	14.03	18.96
06-Jun-12	OW	11.74	18.92
07-Jun-12	OW	11.74	18.39
26-Jun-12	OW	11.08	18.00
29-Jun-12	OW	10.45	17.18
19-Jul-12	OW	10.10	16.65
18-Aug-12	OW	11.78	17.78
11-Oct-12	OW	11.59	18.02
19-Oct-12	OW	11.79	18.43
22-Nov-12	OW	11.05	17.92
15-Jan-13	OW	11.73	18.00
17-Jan-13	OW	11.80	17.17
22-Feb-13	OW	12.05	16.85
05-Apr-13	OW	12.16	16.75
19-Apr-13	OW	11.65	16.63
19-Jun-13	OW	12.79	16.64
09-Jul-13	OW	13.68	18.02
19-Jul-13	OW	13.74	17.73
12-Aug-13	OW	13.80	15.04
16-Aug-13	OW	14.54	15.10
22-Aug-13	OW	14.46	15.09
10-Oct-13	N	14.82	14.93
04-Dec-13	N	14.41	15.07
11-Dec-13	N	14.37	14.82
14-Jan-14	N	14.04	14.49
23-Jan-14	N	14.26	14.28

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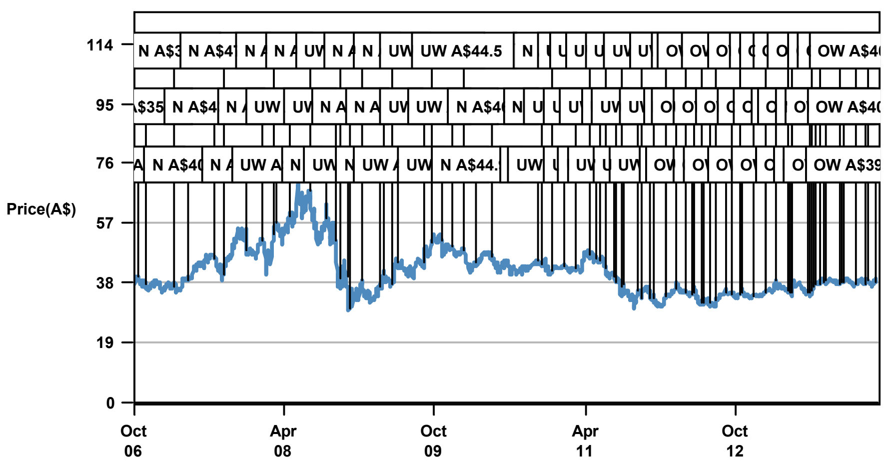
Woodside Petroleum (WPL.AX, WPL AU) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Oct 19, 2006.

Date	Rating	Share Price (A$)	Price Target (A$)
19-Oct-06	N	40.10	37.00
16-Nov-06	N	37.43	35.50
21-Feb-07	N	37.17	36.70
18-Apr-07	N	38.94	40.50
19-Jul-07	N	45.71	43.05
23-Aug-07	N	40.99	47.50
15-Nov-07	N	48.20	45.50
09-Jan-08	N	51.36	51.70
20-Feb-08	N	53.59	54.00
29-Feb-08	UW	57.00	54.00
17-Apr-08	UW	59.29	56.00
01-Jul-08	N	67.50	69.30
27-Aug-08	N	58.42	70.90
02-Oct-08	UW	51.48	61.20
16-Oct-08	UW	39.15	60.00
13-Nov-08	UW	39.99	59.00
24-Nov-08	N	30.07	44.00
06-Jan-09	N	38.61	41.00
12-Mar-09	N	36.99	40.50
27-Mar-09	N	41.00	41.00
24-Apr-09	N	37.65	40.00
20-May-09	UW	44.81	40.00
19-Aug-09	UW	44.28	42.00
17-Sep-09	UW	50.82	43.50
23-Oct-09	UW	51.80	43.00
03-Dec-09	UW	49.80	44.00
13-Jan-10	UW	48.58	44.50
24-Feb-10	N	44.41	44.90
23-Apr-10	N	46.31	46.50
12-Oct-10	N	44.94	48.00
22-Oct-10	N	44.16	47.00
01-Dec-10	N	41.71	46.00
12-Jan-11	UW	43.20	42.25
22-Feb-11	UW	42.58	43.40
19-Apr-11	UW	46.77	42.80
06-May-11	UW	45.55	44.60
23-May-11	UW	45.23	45.15
17-Jun-11	UW	42.41	43.88
16-Jul-11	UW	40.04	43.21
19-Jul-11	UW	38.25	43.05
12-Aug-11	UW	36.99	44.07
17-Aug-11	UW	37.76	45.25
11-Oct-11	UW	35.59	44.73
21-Oct-11	UW	33.38	44.89
25-Nov-11	UW	33.36	44.28
08-Dec-11	UW	32.90	44.64
17-Jan-12	UW	33.65	44.54
19-Jan-12	UW	34.11	42.06
22-Feb-12	UW	35.95	42.19
04-Apr-12	UW	35.28	43.43
19-Apr-12	UW	34.55	43.40
01-May-12	N	34.92	45.53
29-May-12	N	31.64	45.75
06-Jun-12	OW	32.03	46.82

26-Jun-12	OW	31.52	45.84
19-Jul-12	OW	32.67	46.12
22-Aug-12	OW	34.90	47.40
18-Sep-12	OW	34.60	44.95
11-Oct-12	OW	34.10	44.31
19-Oct-12	OW	35.20	42.81
03-Dec-12	OW	33.80	43.42
15-Jan-13	OW	35.17	43.92
17-Jan-13	OW	35.31	46.43
20-Feb-13	OW	39.07	45.15
05-Apr-13	OW	35.51	44.77
12-Apr-13	OW	35.28	44.89
18-Apr-13	OW	35.08	44.92
23-Apr-13	OW	37.96	45.20
19-Jun-13	OW	34.91	43.50
28-Jun-13	OW	35.01	43.34
03-Jul-13	OW	35.82	42.61
09-Jul-13	OW	36.59	42.86
18-Jul-13	OW	37.45	43.25
29-Jul-13	OW	37.78	43.20
12-Aug-13	N	38.37	39.25
21-Aug-13	N	38.70	39.34
10-Oct-13	OW	37.50	39.60
17-Oct-13	OW	38.00	39.66
28-Oct-13	OW	38.45	40.08
11-Dec-13	OW	37.57	41.26
13-Jan-14	OW	37.57	40.10
16-Jan-14	OW	38.63	40.38
20-Jan-14	OW	38.80	40.26
19-Feb-14	OW	38.37	39.47

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