

15 February 2021

Annual Reserves & Resource Statement and expected impairment

Santos today released its Annual Reserves and Resource Statement. Proved plus probable (2P) reserves were 933 million barrels of oil equivalent (mmboe) at the end of 2020, an increase of 34 mmboe before production.

Key highlights:

- 138 per cent three-year 2P reserves replacement
- 102 per cent Cooper Basin three-year 2P reserves replacement
- 184 per cent GLNG 2P reserves replacement in 2020
- 41 mmboe 2P reserves added in Northern Australia and Timor-Leste through the ConocoPhillips acquisition and sanction of infill drilling at Bayu-Undan
- Reserve revisions of -15 mmboe in PNG and -20 mmboe in Western Australia, including the Reindeer gas field in WA leading to expected US\$98 million impairment of goodwill

2P reserves increased by 34 mmboe before production in 2020. The annual 2P reserves replacement was 38 per cent and the three-year replacement 138 per cent.

Santos Managing Director and Chief Executive Officer Kevin Gallagher said the company was pleased to release its Annual Reserves Statement, highlighting strong overall reserves replacement over three years and positive results in the onshore assets.

“Today’s statement is the result of Santos’ disciplined annual reserves review and accounting processes, which include external audit of approximately 95 per cent of total 2P reserves. We are also pleased to revert to our previous process of releasing our reserves and resources ahead of our annual results,” Mr Gallagher said.

The acquisition of ConocoPhillips’ assets in Northern Australia and Timor-Leste combined with the sanction of infill drilling in the Bayu-Undan field added 41 mmboe in 2020.

A final investment decision on the Barossa project is expected in the first half of 2021, which would see approximately 380 mmboe commercialised to 2P reserves.

Consistent application of Santos’ disciplined operating model delivered reserves increases in the onshore assets in 2020. The Cooper Basin achieved 102 per cent three-year 2P reserves replacement and a 2C to 2P conversion rate of approximately 70%. Reserves upgrades were also delivered in GLNG’s Fairview, Roma and Arcadia fields, and GLNG achieved 184 per cent 2P reserves replacement in 2020.

These reserve additions were partially offset by a reclassification of 16 mmboe of Juha 2P reserves in PNG to contingent resources and a 27 mmboe 2P reserves revision at the Reindeer gas field offshore Western Australia. The revision at Reindeer is due to water ingress occurring earlier than previously modelled combined with seismic analysis showing a

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lower structure across a portion of the field. The Reindeer revision was partially offset by reserves increases at the Spar-Halyard and Van Gogh fields in WA of nine mboe in aggregate.

Santos acquired an additional 55 per cent interest in the Reindeer field through the Quadrant Energy acquisition in 2018. The acquisition has delivered significant value for shareholders through synergies of over US\$60 million per annum and a leading position in the highly prospective Bedout Basin, including an 80 per cent interest in the world-class Dorado field (150 mmbbl liquids gross 2C) where FEED-entry is targeted for the first half of 2021.

After accounting for the Reindeer revision and 2020 production, Santos had 1,277 petajoules of 2P sales gas reserves in WA at the end of 2020, providing approximately 1.8-times coverage for existing contracts. In addition, Santos had 1,275 petajoules of 2C sales gas resource in WA at end 2020 and 401 mboe of total 2C resource when including liquids.

Santos expects to recognise an impairment of goodwill of approximately US\$98 million before and after tax in the 2020 full-year results to be released on 18 February 2021 as a result of the Reindeer reserves revision, and other impairment charges of approximately US\$41 million before tax (US\$29 million after tax) related to other late-life, exploration and evaluation assets as part of the regular review of asset carrying values.

The expected impairments will be in addition to the US\$756 million before tax impairment due to lower oil price assumptions included in Santos' 2020 half-year results released in August 2020.

Expected impairment charges to be included in Santos' 2020 full-year results:

Asset	First half before tax US\$m	Second half before tax US\$m	Full-year before tax US\$m	Full-year after tax US\$m
GLNG – lower oil prices	655	-	655	458
Other assets	101	-	101	68
WA gas goodwill – reserves revision	-	98	98	98
Other assets	-	41	41	29
Total	756	139	895	653

The expected impairment charges will be excluded from underlying earnings and are subject to finalisation of the full-year accounts, auditor processes and Board approval.

Ends.

Attachment: 2020 Annual Reserves Statement

This ASX announcement was approved and authorised for release by Kevin Gallagher, Managing Director and Chief Executive Officer.

Reserves Statement

for the year ended 31 December 2020

RESERVES AND RESOURCES

Proved plus probable (2P) reserves increased by 34 million barrels of oil equivalent before production in 2020. The annual 2P reserves replacement ratio (RRR) was 38% and the three-year RRR 138%.

Reserves were added in Northern Australia and Timor-Leste (+41 mmbob) through the acquisition of ConocoPhillips' assets and sanction of infill drilling in the Bayu-Undan field.

Consistent application of Santos' disciplined operating model delivered reserves increases in the onshore assets in 2020. The Cooper Basin achieved 102 per cent three-year 2P reserves replacement and reserves upgrades were delivered in GLNG's Fairview, Roma and Arcadia fields. GLNG achieved 184 per cent 2P reserves replacement in 2020.

These reserve additions were partially offset by a reclassification of 16 mmbob of Juha 2P reserves in PNG to contingent resources and a 27 mmbob 2P reserves write-down at the Reindeer gas field offshore Western Australia. The revision at Reindeer is due to water ingress occurring earlier than previously modelled combined with seismic analysis showing a lower structure across a portion of the field. The Reindeer revision was partially offset by reserves increases at the Spar-Halyard and Van Gogh fields in WA of nine mmbob in aggregate.

After production of 89 mmbob, 2P reserves at the end of 2020 were 933 mmbob.

2C contingent resources increased to over 2.2 billion barrels of oil equivalent, primarily due to the acquisition of ConocoPhillips' business in Northern Australia and Timor-Leste.

A final investment decision on the Barossa project is expected in the first half of 2021, which would see approximately 380 mmbob commercialised to 2P reserves at Santos' expected 50% interest level in the project.

RESERVES AND 2C CONTINGENT RESOURCES (SANTOS SHARE AS AT 31 DECEMBER 2020)

Santos share	Unit	2020	2019	% change
Proved reserves	mmbob	496	548	(9%)
Proved plus probable reserves	mmbob	933	989	(6%)
2C contingent resources	mmbob	2,282	1,920	19%

RESERVES AND 2C CONTINGENT RESOURCES BY PRODUCT (SANTOS SHARE AS AT 31 DECEMBER 2020)

Santos share	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	Total mmbob
Proved reserves	2,650	22	16	466	496
Proved plus probable reserves	4,960	39	33	1,269	933
2C contingent resources	11,361	165	148	3,014	2,282

KEY METRICS

Annual proved reserves replacement ratio	42%
Annual proved plus probable reserves replacement ratio	38%
Three-year proved plus probable reserves replacement ratio	138%
Organic annual proved plus probable reserves replacement ratio	11%
Organic three-year proved plus probable reserves replacement ratio	41%
Developed proved plus probable reserves as a proportion of total reserves	52%
Reserves life ¹	10 years

¹ 2P reserves life as at 31 December 2020 using annual production of 89 mmbob.

Reserves Statement

for the year ended 31 December 2020
continued

PROVED RESERVES

Santos share as at 31 December 2020

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe		Total
					Developed	Undeveloped	
Cooper Basin	243	7	3	441	45	11	56
Queensland & NSW ¹	956	-	-	-	108	56	164
PNG	647	0	5	-	75	41	116
Northern Australia & Timor-Leste	72	-	0	25	13	-	13
Western Australia	733	15	7	-	108	39	147
Total 1P	2,650	22	16	466	349	147	496
Proportion of total proved reserves that are unconventional							33%

¹ Queensland proved sales gas reserves include 792 PJ GLNG and 157 PJ other Santos non-operated Eastern Queensland assets.

Proved reserves reconciliation

Product	Unit	2019	Production	Revisions and extensions	Net acquisitions and divestments	2020
Sales gas	PJ	2,930	(448)	102	65	2,650
Crude oil	mmbbl	20	(5)	7	-	22
Condensate	mmbbl	21	(5)	(1)	2	16
LPG	000 tonnes	526	(221)	74	87	466
Total 1P	mmboe	548	(89)	24	14	496

Reserves Statement

for the year ended 31 December 2020
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PROVED PLUS PROBABLE RESERVES

Santos share as at 31 December 2020

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe		Total
					Developed	Undeveloped	
Cooper Basin	652	16	8	1,084	93	52	145
Queensland & NSW ¹	1,906	-	-	-	108	220	328
PNG	964	0	9	-	116	58	174
Northern Australia & Timor-Leste	162	-	3	186	18	14	32
Western Australia	1,277	23	12	-	154	100	254
Total 2P	4,960	39	33	1,269	490	443	933

Proportion of total proved plus probable reserves that are unconventional 35%

¹ Queensland proved plus probable sales gas reserves include 1,491 PJ GLNG and 405 PJ other Santos non-operated Eastern Queensland assets.

Proved plus probable reserves reconciliation

Product	Unit	2019	Production	Revisions and extensions	Net acquisitions and divestments	2020
Sales gas	PJ	5,277	(448)	14	117	4,960
Crude oil	mmbbl	38	(5)	6	-	39
Condensate	mmbbl	36	(5)	(1)	3	33
LPG	000 tonnes	1,169	(221)	170	152	1,269
Total 2P	mmboe	989	(89)	9	24	933

2C CONTINGENT RESOURCES

Santos share as at 31 December 2020

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe
Cooper Basin	1,291	31	19	1,839	286
Queensland & NSW	2,523	0	0	-	434
PNG	293	-	5	-	55
Northern Australia & Timor-Leste	5,979	-	83	4	1,106
Western Australia	1,275	134	41	1,171	401
Total 2C	11,361	165	148	3,014	2,282

2C Contingent resources reconciliation

Product	2019	Production	Revisions and extensions	Discoveries	Net acquisitions and divestments	2020
Total 2C (mmboe)	1,920	-	(79)	2	439	2,282

Reserves Statement

for the year ended 31 December 2020

continued

Notes

1. This reserves statement:
 - a. is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, the qualified petroleum reserves and resources evaluators listed in note 14 of this reserves statement. Details of each qualified petroleum reserves and resources evaluator's employment and professional organisation membership are set out in note 14 of this reserves statement; and
 - b. as a whole has been approved by Paul Lyford, who is a qualified petroleum reserves and resources evaluator and whose employment and professional organisation membership details are set out in note 14 of this reserves statement; and
 - c. is issued with the prior written consent of Paul Lyford as to the form and context in which the estimated petroleum reserves and contingent resources and the supporting information are presented.
2. The estimates of petroleum reserves and contingent resources contained in this reserves statement are as at 31 December 2020.
3. Santos prepares its petroleum reserves and contingent resources estimates in accordance with the 2018 Petroleum Resources Management System (PRMS) sponsored by the Society of Petroleum Engineers (SPE).
4. This reserves statement is subject to risk factors associated with the oil and gas industry. It is believed that the expectations of petroleum reserves and contingent resources reflected in this statement are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, geotechnical factors, drilling and production results, gas commercialisation, development progress, operating results, engineering estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals and cost estimates.
5. All estimates of petroleum reserves and contingent resources reported by Santos are prepared by, or under the supervision of, a qualified petroleum reserves and resources evaluator or evaluators. Processes are documented in the Santos Reserves Policy which is overseen by a Reserves Committee. The frequency of reviews is dependent on the magnitude of the petroleum reserves and contingent resources and changes indicated by new data. If the changes are material, they are reviewed by the Santos internal technical leaders and externally audited.
6. Santos engages independent experts Gaffney, Cline & Associates, Netherland, Sewell & Associates, Inc. and RISC Advisory Pty Ltd to audit and/or evaluate reserves and contingent resources. Each auditor found, based on the outcomes of its respective audit and evaluation, and its understanding of the estimation processes employed by Santos, that Santos' 31 December 2020 petroleum reserves and contingent resources quantities in aggregate compare reasonably to those estimates prepared by each auditor. Thus, in the aggregate, the total volumes summarised in the tables included in this reserves statement represent a reasonable estimate of Santos' petroleum reserves and contingent resources position as at 31 December 2020.
7. Unless otherwise stated, all references to petroleum reserves and contingent resources quantities in this reserves statement are Santos' net share.

8. Reference points for Santos' petroleum reserves and contingent resources and production are defined points within Santos' operations where normal exploration and production business ceases, and quantities of produced product are measured under defined conditions prior to custody transfer. Fuel, flare and vent consumed to the reference points are excluded.
9. Petroleum reserves and contingent resources are aggregated by arithmetic summation by category and, as a result, proved reserves may be a very conservative estimate due to the portfolio effects of arithmetic summation.
10. Petroleum reserves and contingent resources are typically prepared by deterministic methods with support from probabilistic methods.
11. Any material concentrations of undeveloped petroleum reserves that have remained undeveloped for more than 5 years: (a) are intended to be developed when required to meet contractual obligations; and (b) have not been developed to date because they have not yet been required to meet contractual obligations.
12. Petroleum reserves replacement ratio is the ratio of the change in petroleum reserves (excluding production) divided by production. Organic reserves replacement ratio excludes net acquisitions and divestments.
13. Information on petroleum reserves and contingent resources quoted in this reserves statement is rounded to the nearest whole number. Some totals in the tables may not add due to rounding. Items that round to zero are represented by the number 0, while items that are actually zero are represented with a dash "-".
14. Qualified Petroleum Reserves and Resources Evaluators

Name	Employer	Professional organisation
P Lyford	Santos Ltd	SPE
N Pink	Santos Ltd	SPE
A White	Santos Ltd	SPE
D Nicolson	Santos Ltd	SPE
S Lawton	Santos Ltd	SPE
J Hattner	NSAI	SPE, AAPG

SPE: Society of Petroleum Engineers

AAPG: American Association of Petroleum Geologists

Abbreviations

1P	proved reserves
2P	proved plus probable reserves
GJ	gigajoules
LNG	liquefied natural gas
LPG	liquefied petroleum gas
mmbbl	million barrels
mmboe	million barrels of oil equivalent
NGLs	natural gas liquids
PJ	petajoules
tcf	trillion cubic feet
TJ	terajoules

Conversion factors

Sales gas and ethane, 1 PJ	171,937 boe
Crude oil, 1 barrel	1 boe
Condensate, 1 barrel	0.935 boe
LPG, 1 tonne	8,458 boe