## Energy for the future

To download the 2018 Annual Report please visit the Santos website:

www.santos.com

Record underlying profit

\$727m

**\$1,006m** 

Record sales revenue

\$3,660m

**Dividends reinstated** 

(fully-franked)

US9.7¢

## **Quadrant Energy Acquisition**







#### On 22 August 2018, Santos announced the acquisition of Quadrant Energy in Western Australia.

Quadrant Energy's gas and oil producing assets are located in the resource rich Carnaryon Basin offshore north Western Australia (WA).

The portfolio includes:

- + three gas hubs that feed into an extensive domestic natural gas pipeline network supporting some of WA's largest and most respected industrial and resource companies
- + two oil Floating Production Storage and Offloading Facilities (FPSO)
- + a large inventory of discovered resources to backfill existing infrastructure, and
- + a leading position in the highly prospective Bedout Basin, including the recent significant Dorado oil-well discovery.

Quadrant Energy's portfolio of high-margin conventional domestic natural gas assets backed by medium to long-term CPI-linked offtake contracts provide strong and stable cash flows and further balance to Santos' existing oil-linked revenue streams.

Having enjoyed a long-established joint-venture partner relationship with Quadrant prior to the acquisition, Santos knows the assets well. Our focus now is to bring the businesses together and capture the benefits that scale. offshore operating expertise and growth optionality can provide.

#### **OUR PURPOSE**

Our Purpose is to provide sustainable returns for our shareholders by supplying reliable, affordable and cleaner energy to improve the lives of people in Australia and Asia.

#### **OUR VISION 2025**

Our Vision is to be Australia's leading natural gas company by 2025.

To deliver our Vision we will aspire to:

- + Reduce emissions & improve air quality across Asia & Australia by displacing coal with natural gas and supporting the economic development of combined gas & renewable energy solutions
- + Be the leading national supplier of domestic gas
- + Be a leading regional LNG supplier by increasing LNG sales to our Asian customers to over 4.5 million tonnes per annum
- + Be recognised as the safest & lowest cost onshore gas developer in Australia
- + Become the market leader in running the safest and lowest cost facilities and infrastructure
- + Contribute positively to the communities in which we operate by providing jobs, energy supply and local partnerships
- + Develop our people and culture to deliver our vision

#### **INSIDE**

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## Welcome to the Shareholder Review 2018

#### Message from the Chairman and Managing Director and Chief Executive Officer

Dear Shareholder,

Santos today is a safe, low-cost, reliable and high performance business. The successful, ongoing implementation of our Transform, Build, Grow strategy has enabled our Company to generate strong, stable cash flows through the oil price cycle and pay a sustainable dividend. Santos is now positioned to deliver the significant growth across our five core long-life natural gas assets.

Consistent with our disciplined Operating Model, Santos' diversified portfolio of five core assets each generate free cash flow at an oil price of less than US\$40 per barrel. Our focus on lowcost, efficient operations ensures that in a lower oil price environment Santos can continue to fund the Transform, Build, Grow strategy and in a rising oil price environment, benefit from higher margins.

Santos' full-year results serve to highlight the benefits of a diversified portfolio of natural gas assets underpinned by a disciplined, cash generative Operating Model. In 2018 we delivered:

- + A 129% increase in underlying net profit after tax to a record \$727 million
- + A 63% increase in free cash flow to a record \$1 billion
- + An 18% increase in sales revenue to a record
- + Dividends of US9.7 cents per share, fully-franked, including a final dividend of US6.2 cents per share.

A strong operating performance across our portfolio of five core assets, including one month's production and sales volumes from our Quadrant Energy acquisition in Western Australia, resulted in sales volumes of 78.3 million barrels of oil equivalent (mmboe) and production of 58.9 mmboe.

With the turnaround complete and the strategy and Operating Model embedded, 2018 marked a significant milestone for the company whereby we achieved our first full-year net profit after tax since 2013 of \$630 million.

This successful turnaround was also recognised by others in the market when in April we received a proposal from a private equity firm to acquire the business. The Santos Board, however, rejected this offer as it did not represent appropriate value for the company. In rejecting the bid the Board unanimously deemed the offer price to be too low, the control premium inadequate and the highly-leveraged private equity transaction structure complex, high risk and uncertain.

We are of the firm view that Santos' well-developed strategy, strong management team, highly-skilled workforce and outstanding growth opportunities will deliver superior shareholder value over time.

#### **CAPITAL MANAGEMENT**

Since 2016 we have simplified the business, reduced costs, increased efficiencies and delivered on our clear and consistent strategy to Transform, Build and Grow.

During this period we prioritised debt repayment to restore balance sheet strength and position the company for growth. It was therefore very pleasing in 2018 that we reached our net debt reduction target of \$2 billion more than a year ahead of plan. This milestone gave us the flexibility to not only acquire the low cost, high margin conventional assets of Quadrant Energy in Western Australia but also, very importantly, announce a return to dividends.

In-line with Santos' stated purpose to provide sustainable returns to our shareholders through

the oil price cycle, our new sustainable Dividend Policy targets a payout of free cash flow<sup>1</sup> generated per annum in the range of 10% to 30% as well as additional returns to shareholders above the ordinary dividend when business conditions permit.

#### **PNG EARTHQUAKE**

In late February we were deeply saddened by the loss of life and injuries suffered by communities in the Southern Highlands and Hela Provinces of Papua New Guinea as a result of the severe earthquake in the region and numerous aftershocks. Our PNG LNG expertise and resources were deployed to assist the humanitarian relief effort and Santos donated \$200,000 to help provide urgently needed food, water and medical supplies to more than 30,000 people isolated in remote villages.

We would like to thank and acknowledge the efforts of our joint-venture partners, ExxonMobil and Oil Search, on a coordinated humanitarian relief and recovery program in conjunction with our community partners, aid agencies and the PNG and Australian governments.

The gas plant maintained integrity throughout the earthquake period and there were no releases of hydrocarbons and no significant injuries to personnel. Production was safely resumed within two months of the first earthquake and full rates were achieved by the end of April.

#### **OPERATING PERFORMANCE**

With a focus on operational excellence we are constantly looking at ways to eliminate waste and inefficiency and set new, higher standards and ways of working.

In Western Australia, production and sales volumes were higher in 2018 due to a strong operating performance and the commencement of two new sales contracts. The acquisition of Quadrant Energy further strengthens the Santos portfolio as the assets are backed by medium to long-term CPI-linked offtake agreements. As Santos enters a period of major growth project delivery, these agreements provide strong and stable cash flows and provide balance and diversification to Santos' predominantly oil-linked revenues.

In the Cooper Basin our low-cost, efficient operations have not only halted long-term production decline but contributed to 8% production growth in 2018, including our highest daily oil production rates since 2009. Drilling activity increased 40% over the course of the year to 85 wells and a fourth rig was added within the disciplined framework of our Operating Model. A renewed focus on exploration and appraisal remains in place as we seek to commercialise the vast discovered resource that remains undeveloped.

In-line with our plans to grow the Cooper Basin, we successfully executed the 'Moomba South' appraisal drilling campaign, the first of several large scale project appraisal programs focused on delivering resource conversion to support future production growth.

With improved capital efficiency, in 2019 we expect to drill ~100 wells, targeting higher production and reserves additions over time. Strong fundamentals in the Cooper Basin continue to support our purpose to supply reliable, affordable and cleaner energy to the east coast domestic market and benefit from the strong demand for LNG in Asia.

At GLNG our low-cost, efficient operations continue to support an accelerated development plan to unlock more gas over time. In 2018 we drilled a record 305 wells, 77% higher than 2017. During the year the ~480-well Roma East field development



run-rate, including LNG volumes redirected to the

domestic market, by the end of 2019.

In New South Wales we are focused on securing approval of the Narrabri Gas Project to unlock the wealth of this resource for the people of NSW, delivering natural gas to the state's industries and providing jobs, small business opportunities and community investment for the people of the Narrabri region. The Narrabri Gas Project is currently being assessed by the NSW Department of Planning ahead of a decision of the NSW Independent Planning Commission. One hundred per cent of Narrabri gas would go into the domestic market, potentially supplying up to half of NSW natural gas demand, helping to put downward pressure on energy prices.

In Northern Australia, Darwin LNG remains an important and strategic infrastructure project for the future development of onshore and offshore resources. Plant performance in 2018 was again strong with LNG production higher than 2017 despite a one month planned maintenance shutdown. In the upstream, the 3-well Bayu Undan infill program was delivered 40% under budget and the final well was brought on-line over three months ahead schedule. The successful program resulted in higher liquids production and increased offshore well capacity. With the Bayu Undan field expected to cease production early next decade, the Barossa project is being progressed as the lead candidate to backfill Darwin LNG. In 2018 we entered Front End Engineering and Design, with detailed engineering design being advanced across a number fronts. The development of the Barossa project would more than double Santos' production in Northern Australia.

At PNG LNG, plant optimisation activities, including planned upgrades at both the Hides Gas Conditioning Plant and LNG plant, were undertaken during downtime as a result of the earthquake. These upgrades resulted in a record daily production rates equivalent to 9.2 mtpa being achieved in the second half of the year.

In May 2018 we announced the sale of our Asian asset portfolio for \$221 million. The sale was consistent with Santos' strategy to realise value from its late-life non-core assets.

#### RELIABLE, AFFORDABLE AND **CLEANER ENERGY SUPPLY**

For more than 60 years, Santos has been working in partnership with local communities to safely and sustainably develop Australia's natural gas, now more than ever, the fuel for the future. Between now and 2040, the International Energy Agency expects natural gas to grow to a market share of approximately a quarter of all global energy demand. In Asia, demand continues to grow as countries switch from coal to natural gas to reduce air pollution and greenhouse gas emissions.

Leading the way is China, where air pollution in 62 cities tracked by the World Health Organisation dropped by an average of 30% between 2013 and 2016. Cleaner air (with lower particulates) is being driven by large-scale replacement of coal with gas in industry and household heating. When used for power generation, natural gas is 50% less emissions intensive than coal. China's "Blue Sky Defence" policy will continue to support coal to gas replacement and drive natural gas demand through the 2020s.



Santos is actively participating in the wholesale commercial and industrial market, adding to competition in the domestic market and helping to deliver more competitive natural gas prices and terms for Australian industry. In 2018 two new gas sales contracts commenced in Western Australia and three significant new direct-sales agreements were signed with companies on the east coast, further demonstrating Santos' commitment to secure the future of Australian resource and manufacturing jobs.

#### **LOOKING AHEAD**

gas export industry.

We are excited about the company's future prospects and remain dedicated to providing an inclusive workplace and organisational culture that embraces diversity. In 2019, we will continue to execute our clear and consistent Transform, Build, Grow strategy to deliver a safe, low-cost, reliable and high performance business.

In PNG we will seek to complete the farm-in to the P'nyang acreage, further aligning Santos with our joint-venture partners in the PNG LNG project, and evaluate potential brownfield LNG plant expansion opportunities. In Northern Australia we are working toward the Final Investment Decision in late 2019 / early 2020 on the Barossa project in the Bonaparte Basin to backfill Darwin LNG from around 2023. Onshore Australia we will continue to implement our development plans as we target ramping-up GLNG sales to ~6 mtpa by 2019 year-end. In the Cooper Basin we will leverage our strong technical expertise and subsurface focus to drill ~100 wells. In Western Australia we will continue to realise significant synergies following the acquisition of Quadrant Energy and will appraise the exciting Dorado oil discovery in the Bedout Basin.

In addition, our renewed exploration focus will see the drilling of the Roc South-1 near field exploration well adjacent the Dorado well, offshore Western Australia, the Dukas-1 wildcat well in the Amadeus Basin, central Australia, and a 2-well program in the McArthur Basin, onshore Northern Territory, to test the deliverability of the largest and most promising shale gas opportunity in Australia, subject to regulatory approval.

Finally, we would like to thank you, our shareholders for your ongoing support. Santos is now positioned for disciplined growth across each of our five core long-life natural gas assets as we target production of more than 100 mmboe by 2025, almost double the levels in 2018

Yours sincerely.

M. Spence **KEITH SPENCE** 

Chairman

K. T. Gallay

**KEVIN GALLAGHER** 

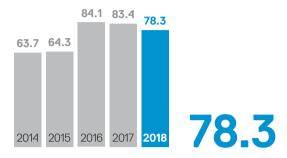
Managing Director and Chief Executive Officer

Free cash flow is operating cash flow less investing cash flow (including all sustaining capital expenditure, exploration spend and interest payments). The Board will have the discretion to adjust free cash flow for individually material items, including major growth spend (for example, capital expenditure associated with the proposed Barossa development and PNG LNG expansion projects), and asset acquisitions and disposals.

## **Financial** overview

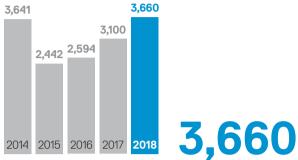
#### **SALES VOLUME**

mmboe



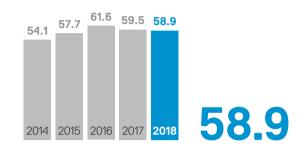
US\$million

**SALES REVENUE** 



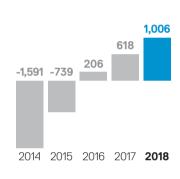
#### **PRODUCTION**

mmboe

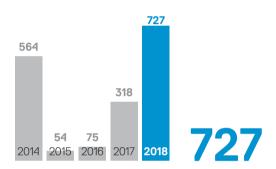


#### **FREE CASH FLOW**

US\$million

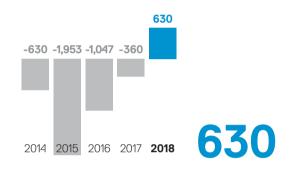


**UNDERLYING NET PROFIT AFTER TAX** US\$million



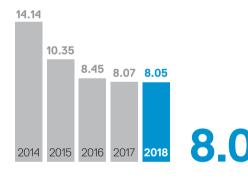
#### **NET PROFIT AFTER TAX**

US\$million

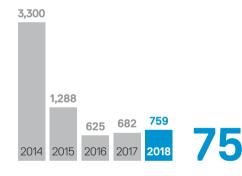


#### **UNIT PRODUCTION** COSTS

US\$ per boe

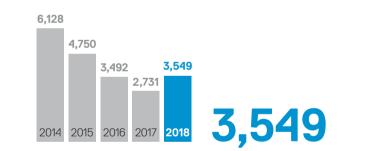


**CAPITAL EXPENDITURE** US\$million



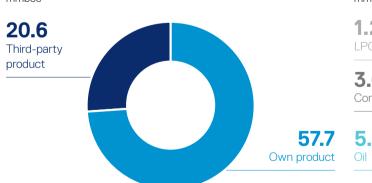
**NET DEBT** 

US\$million



#### **2018 SALES VOLUMES**

mmboe



1,006

#### **2018 PRODUCTION**

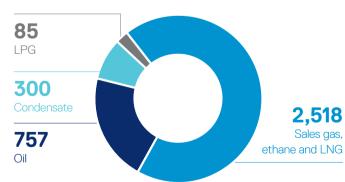
mmboe 1.2 LPG



#### **2018 SALES REVENUE**

US\$million

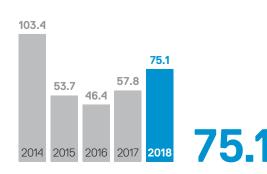
25.7



2018 RESULTS						
		2014	2015	2016	2017	2018
Sales volume	mmboe	63.7	64.3	84.1	83.4	78.3
Production	mmboe	54.1	57.7	61.6	59.5	58.9
Average realised oil price	US\$ per barrel	103.4	53.7	46.4	57.8	75.1
Net profit after tax	US\$million	-630	-1,953	-1,047	-360	630
Underlying net profit after tax	US\$million	564	54	75	318	727
Sales revenue	US\$million	3,641	2,442	2,594	3,100	3,660
Operating cash flow	US\$million	1,633	811	840	1,248	1,578
Free cash flow	US\$million	-1,591	-739	206	618	1,006
EBITDAX	US\$million	2,076	1,454	1,199	1,428	2,160
Total assets	US\$million	18,281	15,949	15,262	13,706	17,134
Earnings per share	US cents	-64.4	-169.5	-58.2	-17.3	30.2
Dividends declared		A\$0.35	A\$0.20	-	-	US\$0.097
Number of employees		3,636	2,946	2,366	2,080	2,190

#### AVERAGE REALISED OIL PRICE

US\$ per barrel



# Strengthening our capabilities in 2018



#### 15 Feb

Santos strikes ~A\$100 million, four year, domestic gas deal to provide gas for electricity generation at New Century Resources' zinc mine near Mt Isa. Santos is proud to support jobs, investment and regional communities in northwest Queensland.

#### 21 Feb

Santos releases its inaugural Climate Change Report setting an aspirational target to achieve net-zero emissions from our operations by 2050. The report aligns with the G20's Taskforce on Climate-Related Financial Disclosure (TCFD) guidelines.

#### 27 Feb

PNG LNG facilities safely shut-down following a major earthquake and a series of aftershocks in the Papua New Guinea highlands.

#### 27 Feb

GLNG Roma East development sanctioned incorporating the drilling of ~440 new wells and the connection of ~40 existing appraisal wells. This important project will create up to 400 construction jobs and help to sustain and boost local business opportunities in the Roma area.

#### 4 Mar

Santos donates US\$200,000 to aid agencies in PNG to help get urgently-needed food, water and medical supplies to more than 30,000 people isolated in small villages in the PNG Southern Highlands and Hela Provinces.

#### 3 Apr

Unsolicited, non-binding, indicative and conditional proposal received from private-equity backed suitor to acquire 100% of Santos Ltd.

#### 13 Apr

Production of liquefied natural gas (LNG) at PNG LNG safely resumes following a temporary shutdown of operations following the severe earthquake in February 2018.

#### 17 Apr

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (NT) concludes that the onshore shale gas industry can be appropriately managed. With exploration and appraisal success, the McArthur Basin has the potential to provide the NT the competitive advantage required to support energy-intensive industries and generate wealth for the nation.

#### 22 Apr

Longest ever well drilled in the Cooper Basin – 14,029' MD. Low-cost, efficient operations set the stage for continued future growth.

## 27

#### 23 Apr

Agreement reached with Santos' joint-venture partners to enter the Front-End Engineering and Design (FEED) phase for the development of the Barossa project to backfill Darwin LNG. A successful Barossa development would more than double Santos' current production out of Northern Australia.

#### 24 Apr

Fastest ever gas well drilled in the Cooper Basin: 3.1 days from spud to rig release.

#### 26 Apr

The 85-well Scotia Project to boost gas supply to GLNG delivered ahead of schedule and 16% under budget reflecting our focus on cost of supply, innovation and efficiency as Australia's lowest cost onshore developer.



#### 3 May

Sale of non-core Asian assets announced for \$221 million consistent with Santos' strategy to realise value from its late-life non-core assets.

#### 22 May

Private-equity backed proposal to acquire 100% of Santos Ltd rejected by the Board and discussions terminated. The bid was deemed not to represent full value for the company and when combined with the associated risks, was not considered in the best interests of Santos shareholders.

#### **31 May**

Final Investment Decision (FID) taken on the 137-well Arcadia project to boost gas supply to GLNG. The project will create up to 300 construction jobs and local business opportunities in the Central Highlands region of Queensland.

#### 7 Jun

200th cargo of LNG shipped from GLNG

## 魚

#### 13 Jun

Santos commits to the Aboriginal Power Cup for another 3 years. With a competitive football carnival as its centrepiece, the Aboriginal Power Cup focuses on engaging young people in Aboriginal culture, education, healthy lifestyle choices, teamwork, leadership and life skills.

#### 28 Jun

New dividend policy announced in-line with Santos' stated purpose to provide sustainable returns to our shareholders. Santos will look to pay ordinary dividends that are sustainable through the oil price cycle and will target a range of 10% to 30% payout of free cash flow generated per annum. Furthermore, given the cyclical nature of the industry, the Board will also consider additional returns to shareholders above the ordinary dividend when business conditions permit.



#### 8 Aug

Barikewa-3 appraisal well success in PNG. Located approximately 10 kilometres from the PNG LNG gas pipeline, it is well placed to play a part in future LNG expansion projects.

#### 10 Aug

Santos donates ~A\$200,000 to help drought-affected farmers and local communities in Queensland and New South Wales.

### 13 Aug

Santos accelerates Cooper Basin natural gas development with a fourth rig commencing operations. Drilling more wells and lowering production costs – extracting more gas for less money – is the best way to keep downward pressure on gas prices.

# Aboriginal Power Cup

#### 22 Aug

\$2.15 billion acquisition of Quadrant Energy in Western Australia announced. The transaction is materially value accretive for Santos shareholders and advances our aim to be Australia's leading domestic natural gas supplier.

#### **23 Aug**

Half-year results released. US3.5c dividend announced and a doubling of underlying net profit.

#### 10 Sep

New domestic wholesale gas agreement signed with Visy Industries to supply its New South Wales operations.

#### 12 Sep

New long-term domestic wholesale supply agreement for up to 15PJ of gas signed with Brickworks Limited for its east coast operations through to the end of 2024.

#### 26 Sep

Santos outlines plans targeting production of more than 100 mmboe by 2025, almost doubling current levels of production.

\$2 billion net debt reduction target achieved, more than a year ahead of plan.

#### 15 Nov

Santos appointed as preferred tenderer to explore new acreage in Queensland's key gasproducing Surat and Bowen Basins, in a 50-50 joint venture with Shell. Positive exploration results may potentially unlock a material new gas supply source for the Australian east coast domestic gas market.

#### 27 Nov

Quadrant Energy acquisition completes increasing Santos' ownership and operatorship of a high quality portfolio of low production cost, long-life conventional Western Australian natural gas assets with stable cash flows.

#### 3 Dec

In Northern Australia, the Bayu Undan gas/condensate infill well program was completed 40% below budget and 3 months ahead of schedule.

#### 18 Dec

A project to convert all Cooper Basin oil well pumps to run on solar power and batteries announced. The solar pumps will reduce emissions and waste from oil production, saving 140 barrels of oil per day.



## Our asset performance

#### Five core long-life natural gas assets



#### Western Australia

Santos is one of the largest producers of natural gas for the domestic market in Western Australia and is also a significant producer of oil and natural gas liquids.

In August 2018, Santos announced the acquisition of Quadrant Energy for US\$2.15 billion. The acquisition completed on 27 November 2018 and is fully aligned with Santos' growth strategy to build on existing infrastructure positions around the company's core

The Quadrant Energy acquisition delivers Santos:

+ operatorship of existing Western Australia gas hubs, providing the flexibility to optimise operations and

capture value from backfill and third party gas opportunities

- + offshore operating expertise and capabilities to drive future growth opportunities across offshore Western Australia and Northern Australia,
- + high-margin conventional domestic natural gas assets backed by medium to long-term CPI-linked offtake contracts providing strong and stable cash flows, and
- + a significant position in the highly prospective Bedout Basin, including the Dorado oil discovery which provides near-term development opportunity, subject to an appraisal program in 2019.

		PAPUA
Santos acreage		NEW GUINEA
— Gas pipeline		1/2
Oil pipeline		
NORTHERN	2	Port Moresby
AUSTRALIA	And Water of	
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nd third party gas	Accet KDIo	2010 2017

Asset KPIs	2018	2017
Production (mmboe)	12.5	10.5
Sales volume (mmboe)	13.0	10.8
Revenue (\$m)	422	332
Production cost (\$/boe)	8.68	10.14
EBITDAX (\$m)	283	224
Capex (\$m)	93	79



#### Cooper Basin

The Cooper Basin produces natural gas, gas liquids and crude oil. Gas is sold primarily to domestic retailers, industry and for the production of liquefied natural gas, while gas liquids and crude oil are sold in domestic and export markets.

In 2018 the Cooper Basin production decline was arrested, the asset returned to growth and our low-cost, disciplined Operating Model continued to encourage innovation. In 2018 we drilled 85 wells, a 40% increase on 2017, including 19 exploration wells. We drilled our fastest ever gas development well, 3.1 days from spud to rig release and our well costs1

are now down 50% to \$2.4 million from 2015. By drilling more wells and lowering production costs we can extract more gas for less money and meet our purpose to supply reliable, affordable and cleaner energy to the east coast domestic market and meet the strong and growing demand for LNG in Asia.

Asset KPIs	2018	2017
Production (mmboe)	15.5	14.4
Sales volume (mmboe)	21.6	21.0
Revenue (\$m)	1,146	851
Production cost (\$/boe)	8.17	9.32
EBITDAX (\$m)	518	329
Capex (\$m)	245	199



#### Queensland and NSW

GLNG produces liquefied natural gas (LNG) for export to global markets from the LNG plant at Gladstone. Gas is also sold into the domestic market. Santos has a 30% interest in GLNG. Production from Train 1 commenced in September 2015 and Train 2 in May 2016. Feed gas is sourced from GLNG's upstream fields, Santos portfolio gas and third-party suppliers.

GLNG equity gas production continued to build during the year with project producing ~5.5 million tonnes of LNG equivalent, including volumes redirected to the domestic market. 80 cargoes were shipped during the year including our 200th cargo since start-up in June.

Our low-cost, efficient operations are supporting an accelerated development plan. In 2018 we drilled a record 305 wells, a 70% increase on 2017. Average drilling times have reduced substantially, from 6.3 days in 2015 to 2.6 days, rig release to rig release, and Roma well costs<sup>1</sup> are down 72% to \$0.85 million per well over the same period.

1 Vertical and deviated wells gas development wells: drill,

1 Drill, complete, connect

Asset Kris	2010	2017
Production (mmboe)	12.2	11.7
Sales volume (mmboe)	22.0	22.6
Revenue (\$m)	1,016	769
Production cost (\$/boe)	5.77	5.83
EBITDAX (\$m)	570	322
Capex (\$m)	244	190



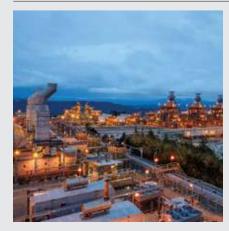
#### Northern Australia

Santos' business in Northern Australia is focused on the Bayu-Undan/Darwin LNG (DLNG) project. In operation since 2006, DLNG produces LNG and gas liquids for export to global markets. Santos has an 11.5% interest

In Northern Australia, excellent Darwin LNG performance resulted in production of 3.3 million tonnes of LNG despite a scheduled one-month shutdown for plant maintenance activities in May. In the upstream, a three-well infill project was delivered 40% under budget and ahead of schedule which resulted in higher condensate production and increased well capacity

In April 2018, Santos announced that agreement had been reached with its joint venture partners to enter the front-end engineering and design (FEED) phase for the development of the Barossa project to backfill Darwin LNG. A final investment decision (FID) is targeted for late 2019 / early 2020. Santos has a 25% interest in Barossa and the successful development of the project would extend the operating life of Darwin LNG by more than 20 years and more than double Santos' current production in Northern Australia.

Asset KPIs	2018	2017
Production (mmboe)	3.7	4.0
Sales volume (mmboe)	3.6	4.0
Revenue (\$m)	184	153
Production cost (\$/boe)	20.17	18.95
EBITDAX (\$m)	116	87
Capex (\$m)	66	63



#### Papua New Guinea

Santos' business in PNG is centred on the PNG LNG project. Completed in 2014, PNG LNG produces LNG for export to global markets, as well as sales gas and gas liquids. Santos has a 13.5% interest in PNG LNG.

PNG LNG production and sales were significantly impacted by a severe earthquake that struck the PNG Highlands region in February 2018. PNG LNG was safely shut-in and there were no releases of hydrocarbons or significant injuries to personnel. Production recommenced in April and resumed full rates in Mav.

The LNG plant produced 7.4 million tonnes of LNG in 2018 and shipped 98 cargoes.

Santos' strategy in PNG is to work with its partners to align interests, and support and participate in backfill and expansion opportunities at PNG LNG. Santos along with the other PNG LNG parties are in discussions to build alignment for the proposed construction of three additional LNG trains at the PNG LNG site. Santos is also in discussions regarding a proposal received for Santos to farm-in to PRL 3 which contains the multi-tcf P'nyang field.

Asset KPIs	2018	2017
Production (mmboe)	11.3	12.6
Sales volume (mmboe)	10.8	12.0
Revenue (\$m)	630	534
Production cost (\$/boe)	6.23	4.37
EBITDAX (\$m)	506	432
Capex (\$m)	39	32

## Resilience and opportunity in a lower-carbon future

Santos is committed to supporting the twin objectives of limiting greenhouse gas emissions while providing access to reliable and affordable energy to domestic and global markets.

We have set medium-term targets that align with these objectives and have a long term aspiration target of net-zero emissions from our operations by 2050.

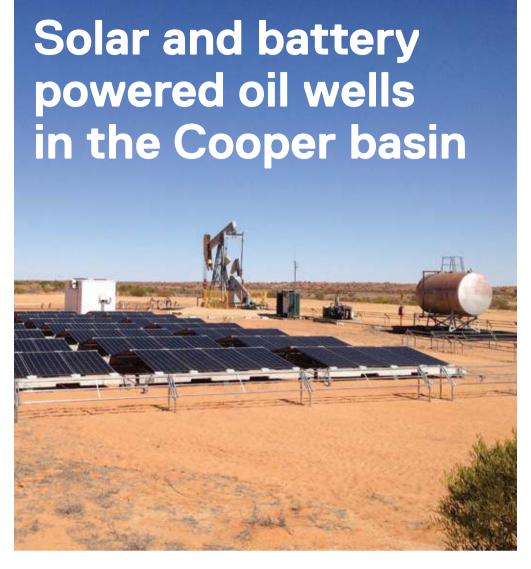
Our Energy Solutions team is actively pursuing projects to reduce fuel use and emissions across our business, as well as identifying step-change technology that will help achieve our long-term aspiration.

Our natural gas portfolio is economically resilient under different scenarios consistent with global efforts to reduce greenhouse gas emissions.

Santos recognises the risks that climate change poses for our business, from policy changes to the physical risks associated with more extreme weather events. These risks are managed through our enterprise-wide risk management process, and are overseen and monitored by Executive Management and the Board.

Transition to a lower-carbon future also creates opportunities. Natural gas has a critical role to play in providing energy in a lower-carbon future. This is because natural gas is a reliable and affordable source of energy that produces 50% less greenhouse gas emissions than coal when used to generate electricity and is much cleaner with regards to local air pollutants.

Through its disciplined, low-cost operating model, proximity to Asian markets and the scale of its Australian natural gas business, Santos is in a strong position to supply Australia and Asia's growing energy demands in a lower-carbon future.



The Santos Energy
Solutions team has started
work on a program to
convert oil well pumps
to run on solar power
and batteries.

A pilot pump a the Hobbes-1 oil well has been operating on solar power and batteries since August 2018, proving that solar power and batteries can maintain reliability and availability in the harsh environment of the Cooper Basin.

Santos now plans to convert over 200 existing pumps to use solar power and ultimately, use solar power as the standard energy source for new oil wells.

At present, the pumps are powered by generators burning crude oil.

In December 2018, Santos received a grant under the Advancing Renewables Program to convert 56 wells in 2019 and 2020.

Using solar power will deliver environmental and commercial benefits by reducing crude oil consumption, long distance fuel haulage and emissions associated with burning crude oil.



Number of wells converting to solar power in 2019 and 2020

56

# Carbon capture, utilisation and storage

Reducing emissions with carbon capture, utilisation and storage (CCUS)

Santos is actively pursuing a project to capture  $CO_2$  emissions from the Moomba processing plant and inject it into Cooper Basin oil reservoirs to enhance oil production from these reservoirs.

In September 2018, Santos announced a dedicated appraisal program to test the potential for  ${\rm CO}_2$  injection.

The work we are doing on this project could result in the development of Australia's first commercial-scale use of carbon capture, utilisation and storage for enhanced oil recovery and contribute to a significant reduction in Santos'  ${\rm CO_2}$  emissions in the Cooper Basin.

When  $\mathrm{CO}_2$  is injected into oil reservoirs to enhance oil recovery, some of the  $\mathrm{CO}_2$  remains held within the reservoir whilst some returns to surface with the produced oil and is captured for re-injection.

During 2018, Santos completed studies indicating positive potential for carbon capture, utilisation and storage. These included miscibility testing, static reservoir modelling and concept studies.

Throughout 2019, we will spend approximately \$10 million to execute a defined appraisal program to assess incremental improvements in oil recovery from oil reservoirs in the Cooper Basin using captured  $\mathrm{CO}_2$ .

As part of the ongoing appraisal program, Santos is partnering with experts in the field, such as the CSIRO, who have substantial scientific and practical expertise in  ${\rm CO}_2$  injection.

The project involves centralised capture and compression of  $\mathrm{CO}_2$  at the Moomba Gas Plant, enabling the development of multiple target reservoirs and development phases. The initial phase is estimated to capture approximately 0.3  $\mathrm{MtCO}_2\mathrm{e}$  from the Moomba Gas Plant through injection and recycling.

This project has the potential to be scaled up in future phases to capture all the  ${\rm CO_2}$  generated in the Cooper Basin. In the longer term, the Cooper Basin could become a storage hub for Eastern Australia

Globally there are currently 18 large-scale CCUS facilities in operation, including 14 that are used for enhanced oil recovery<sup>1</sup>.

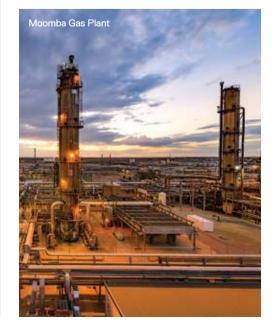
In the United States, where the majority of these projects currently operate,  $\mathrm{CO}_2$  captured through enhanced oil recovery methods are now being recognised for their contribution to the reduction in carbon emissions, with a new law passed in 2018 to grant credits for every tonne of  $\mathrm{CO}_2$  permanently stored through the process¹.

In the longer term, technology developments such as CCUS will be required to meet both emissions reduction targets and growing energy demand.

Climate
→ Change
Report 2018

To view Santos' 2019 Climate Change Report, please visit our website at

www.santos.com/sustainability



1 Global CCS Institute. The Global Status of CCUS 2018.



Large-scale CCUS facilities in operation globally

18

## **Board of Directors**











#### 1. KEITH SPENCE

Chairman

Keith is an independent non-executive Director. He joined the Board on 1 January 2018 and became Chairman on 19 February 2018.

He is Chairman of Santos Finance Limited and Chair of the Nomination Committee

Other Current Directorships: Chairman of Base Resources Limited (since 2015): Nonexecutive Director of Independence Group NL (since 2014) and Murray and Roberts Holdings Limited (since 2015).

Former Directorships in the last 3 years: Oil Search Limited (2012-2017)

#### 2. KEVIN GALLAGHER Managing Director &

Chief Executive Officer

Kevin joined Santos as Managing Director and Chief Executive Officer on 1 February 2016, bringing more than 25 years' international experience in managing oil and gas operations. Kevin is also a Director of Santos Finance Limited and a member of the Environment, Health, Safety and Sustainability Committee.

Kevin commenced his career as a drilling engineer with Mobil North Sea, before joining Woodside in Australia in 1998. At Woodside, Kevin led the drilling organisation through rapid growth, delivering several Australian and international development projects and exploration campaigns, before leading the Australian oil business. Then, as CEO of the North West Shelf Venture, he was responsible for production from Australia's first ever LNG project.

In 2011 Kevin joined Clough Limited as CEO and Managing Director where, over four years, he transformed the business and delivered record financial results.

#### 3. YASMIN ALLEN

Yasmin is an independent non-executive Director. She joined the Board on 22 October 2014 and is the Chair of the People and Remuneration Committee and a member of the Audit and Risk Committee and Nomination Committee.

Other Current Directorships: Director of Cochlear Limited (since 2010), National Portrait Gallery (since 2013), The George Institute for Global Health (since 2014), ASX Limited and ASX Clearing and Settlement boards (since 2015) and Chair of Advance (since 2018).

Former Directorships in the last 3 years: National Director (2010 to 2016) and acting Chair (2015 to 2016) of the Australian Institute of Company Directors.

#### 4. GUY COWAN

Guy is an independent nonexecutive Director. He joined the Board on 10 May 2016 and is the Chair of the Audit and Risk Committee and a Director of Santos Finance Limited.

Other Current Directorships: Chairman of Queensland Sugar Limited (since 2015) and Buderim Ginger Limited (since 2018) and Director of Winson Group Pty Ltd (since 2014).

Former Directorships in the last 3 years: Director of UGL Limited (2008 to 2017) and Coffey International (2012 to 2016).

#### 5. HOCK GOH

Hock is an independent non-executive Director. He joined the Board on 22 October 2012 and is a member of the Environment, Health, Safety and Sustainability Committee, Audit and Risk Committee and Nomination Committee.

Other Current Directorships: Non-executive Director of Stora Enso Oyj (Finland) (since 2012), AB SKF (Sweden) (since 2014) and Vesuvius PLC (UK) (since 2015).

Former Directorships in the last 3 years: Chairman of MEC Resources (2005 to 2018) and Director of Harbour Energy (2015 to 2018).

#### 6. DR VANESSA GUTHRIE

Vanessa is an independent non-executive Director. She joined the Board on 1 July 2017 and is a member of the People and Remuneration Committee and Environment, Health, Safety and Sustainability Committee.

Other Current Directorships: Director of Australian Broadcasting Corporation (since 2017) and Adelaide Brighton Limited (since 2018), Chair of Minerals Council of Australia, Deputy Chair of Western Australian Cricket Association, Council member of Curtin University.

Former Directorships in the last 3 years: Managing Director and CEO of Toro Energy Limited (2013 to 2016).

#### 7. PETER HEARL

Peter is an independent non-executive Director. He joined the Board on 10 May 2016 and is

Chair of the Environment, Health, Safety and Sustainability Committee, a member of the People and Remuneration Committee and the Nomination Committee; having earlier served on the Company's Audit and Risk Committee.

Other Current Directorships: Director of Telstra Limited (since 2014) and Member of Investment Committee of the Stepping Stone Foundation, a Sydney based NFP (since 2018).

Former Directorships in the last 3 years: Director of Treasury Wine Estates (2012 to 2017)

#### 8. EUGENE SHI

Eugene is a non-executive Director. He joined the Board on 26 June 2017 as a nominee of a substantial shareholder. Eugene is a member of the People and Remuneration Committee and the Audit and Risk Committee.

Eugene has more than 20 years of professional experience, including five years in management consultancy and 15 years in senior management roles.

His industry experience covers energy, health care, retail and finance in Europe and Asia-Pacific. His specialties include M&A and restructuring, strategy, value management, and cost optimisation.

Eugene has held the role of Vice President, ENN Ecological since February 2017. His previous roles include Department Head of Business Performance Service with KPMG China and Transformation Service with KPMG Europe.

## Santos Executive Committee

#### 1. KEVIN GALLAGHER

Managing Director & CEO

Please see Board of Directors.

#### 2. DAVID BANKS

Executive Vice President Onshore Upstream

David joined Santos in 2018 and is accountable for Santos' onshore upstream assets including the Cooper Basin, GLNG and Narrabri.

#### 3. PHILIP BYRNE

Executive Vice President Marketing, Trading & Commercial

Philip joined Santos in 2017 and is accountable for the marketing and trading of all Santos gas, LNG and liquid hydrocarbon products as well as the commercial function.

#### 4. BRETT DARLEY

Executive Vice President Offshore

Brett joined Santos in 2018 and is accountable for the development and growth of our conventional assets across Western Australia and Northern Australia.

#### **5. ANGUS JAFFRAY**

**Executive Vice President** People and Sustainability

Angus joined Santos in 2016 and is accountable for Human Resources, Remuneration and Performance, Organisational and Learning Development, Sustainability and Organisational

#### 6. NAOMI JAMES

Executive Vice President Midstream Infrastructure

Naomi joined Santos in 2016 and is accountable for maximising the utilisation and value of Santos' midstream infrastructure, including oil and gas processing facilities at Moomba and Port Bonython and LNG facilities in the GLNG and Darwin LNG projects.

#### 7. ANTHONY NEILSON

Chief Financial Officer

Anthony joined Santos in 2016 and is accountable for the finance, tax, treasury, planning, business development, investor relations and IT functions.

#### 8. BILL OVENDEN

**Executive Vice President** Exploration & New Ventures

Bill joined Santos in 2002 and is accountable for developing and executing a targeted exploration and appraisal strategy across Santos' core asset hubs, while identifying new high value exploration targets

#### 9. VINCE SANTOSTEFANO

Chief Operations Officer Operations Services

Vince joined Santos in 2016 and is accountable for the provision of technical and operational services to increase the scale and strategic value of Santos' assets.

#### 10. BRETT WOODS Executive Vice President

Developments

Brett joined Santos in 2013 and is accountable for development across Santos' onshore and offshore assets, including major capital projects, drilling & completions, and reservoir development, as well as energy solutions and technology and overseeing Santos' Joint Venture in PNG LNG.























## **Glossary**

#### barrel/bbl

The standard unit of measurement for all oil and condensate production. One barrel = 159 litres or 35 imperial gallons.

#### barrel of oil equivalent/boe

A unit of energy approximately equal to the energy released by burning one barrel (159 litres) of crude oil.

#### condensate

A natural gas liquid that occurs in association with natural gas and is mainly composed of pentane and heavier hydrocarbon fractions.

#### contingent resources (2C)

Those quantities of hydrocarbons which are estimated, on a given date, to be potentially recoverable from known accumulations, but which are not currently considered to be commercially recoverable. Contingent resources may be of a significant size, but still have constraints to development. These constraints, preventing the booking of reserves, may relate to lack of gas marketing arrangements or to technical, environmental or political barriers.

#### crude oil

A general term for unrefined liquid petroleum or hydrocarbons.

Earnings before interest, tax, depreciation, depletion, exploration and impairment.

#### free cash flow

Cash flow from operating activities less cash flow from investing activities.

#### free cash flow breakeven

The average annual oil price at which cash flow from operating activities (including hedging) equals cash flows from investing activities. Excludes one-off restructuring and redundancy costs, and asset divestitures and acquisitions.

Front end engineering and design

#### FID

Final investment decision

#### **FPSO**

Floating production, storage and offloading vessel

#### joules

Joules are the metric measurement unit for energy. A petajoule (PJ) is equal to 1 joule  $\times$  10<sup>15</sup>.

#### **LNG**

Liquefied natural gas. Natural gas that has been liquefied by refrigeration to store or transport it. Generally, LNG comprises mainly methane.

#### **LPG**

Liquefied petroleum gas. A mixture of light hydrocarbons derived from oil-bearing strata which is gaseous at normal temperatures but which has been liquefied by refrigeration or pressure to store or transport it. Generally, LPG comprises mainly propane and butane.

Petroleum Retention License

#### Proven plus probable reserves (2P)

Reserves that analysis of geological and engineering data suggests are more likely than not to be recoverable. There is at least a 50% probability that reserves recovered will exceed proven plus probable reserves.

#### Sales gas

Natural gas (methane) that has been processed by gas plant facilities and meets the required specifications under gas sales agreements.

#### Train (LNG)

The infrastructure that purifies and cools natural gas to a liquid state ready for transport.

#### Units of measure

**bbl** - barrel

**boe** – barrel of oil equivalent

mmboe - million barrels of oil equivalent

mmBtu - million British thermal units

mtpa - million tonnes per annum

#### Conversion factors

Sales gas and ethane  $-1 \text{ PJ} = 171.937 \text{ boe} \times 10^3$ 

Crude oil -1 barrel =1 boe

**Condensate** -1 barrel = 0.935 boe

**LPG** -1 tonne = 8.458 boe

**LNG** - 1 PJ = 18,040tonnes

**LNG** – 1 tonne = 52.54 mmBtu

For a comprehensive online conversion calculator tool, please visit our homepage at



www.santos.com

#### **Investor information**

Santos Limited ABN 80 007 550 923

#### **REGISTERED AND HEAD OFFICE**

Adelaide SA 5000

GPO Box 2455 Adelaide SA 5001

Telephone: +61 8 8116 5000 Facsimile: +61 8 8116 5050 Website: www.santos.com

#### **SECURITIES EXCHANGE LISTING**

#### SANTOS WERSITE

reporting and presentations please visit the Investors page at www.santos.com/investors

#### **2018 ANNUAL REPORT**

To view a copy of our 2018 Annual Report please visit our website at www.santos.com or from the Share Registrar either by email at santos@boardroomlimited.com.au or by telephone on 1300 096 259 (within Australia) or + 61 2 8016 2832 (International)

#### SHAREHOLDING ENQUIRIES

Level 12, 225 George Street Sydney NSW 2000

GPO Box 3993 Sydney NSW 2001

Website: www.boardroomlimited.com.au Telephone: 1300 096 259 (within Australia)

#### **INVESTOR ENQUIRIES**

Investor Relations, Santos Ltd GPO Box 2455 Adelaide SA 5001

Email: investor.relations@santos.com

#### **UPDATE YOUR DETAILS ONLINE**

dividend reinvestment plan options, tax file www.investorserve.com.au or telephone on 1300 096 259 (within Australia)

#### Shareholder Calendar

2018 Fourth Quarter Activities Report	24 Jan 2019
2018 Full-year results	21 Feb 2019
Ex-dividend date for 2018 full-year dividend	26 Feb 2019
Record date for 2018 full-year dividend	27 Feb 2019
Payment date for 2018 full-year dividend	28 Mar 2019
2019 First Quarter Activities Report	17 Apr 2019
Annual General Meeting	2 May 2019
2019 Second Quarter Activities Report	18 Jul 2019
2019 Half-year results	22 Aug 2019
Ex-dividend date for 2019 interim dividend	27 Aug 2019
Record date for 2019 interim dividend	28 Aug 2019
Payment date for 2019 interim dividend	26 Sep 2019
2019 Third Quarter Activities Report	17 Oct 2019

