Annual Report
2019

Santos

ABN 80 007 550 923

This 2019 Annual Report is a summary of Santos' operations, activities and financial position as at 31 December 2019.

All references to dollars, cents or $ in this document are to US currency, unless otherwise stated.

An electronic version of this report is available on Santos' website, **www.santos.com**

Santos' Corporate Governance Statement can be viewed at: **www.santos.com/who-we-are/corporate-governance**

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Cover image:
Darwin LNG, Wickham Point, Northern Territory

About Santos
An Australian energy pioneer

Santos is an Australian natural gas company. Established in 1954, the Company's 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.

Five core long-life natural gas assets sit at the heart of a clear and consistent strategy to Transform, Build and Grow the business: Western Australia, the Cooper Basin, Queensland and NSW, Northern Australia and Timor-Leste, and Papua New Guinea. Each core asset provides stable production, long-term revenue streams and significant upside opportunities.

With one of the largest exploration and production acreages in Australia, a significant and growing footprint in Papua New Guinea and a strategic infrastructure position, Santos is well positioned to benefit from the growing global demand for energy.

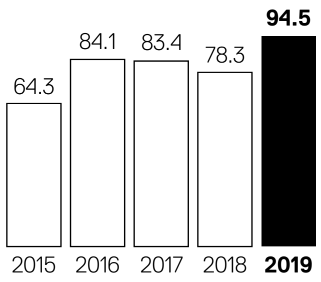
To deliver our vision to be Australia's leading natural gas company by 2025, we will aspire to:

- reduce emissions and improve air quality across Asia and Australia by displacing coal with natural gas, and support the economic development of combined gas and renewable energy solutions;
- be the leading national supplier of domestic gas in Australia;
- 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 and lowest-cost onshore gas developer in Australia;
- become the market leader in running the safest and lowest-cost facilities and infrastructure operations;
- 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.

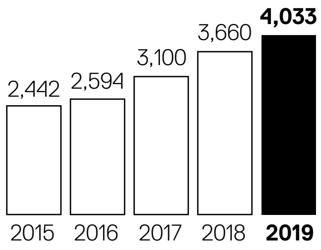
Santos today is a safe, low-cost, reliable and high-performance business, proudly delivering the economic and environmental benefits of natural gas to homes and businesses throughout Australia and Asia.

Financial Overview

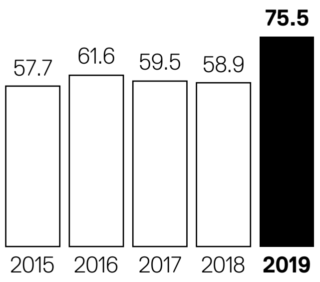
Sales volume
mmboe



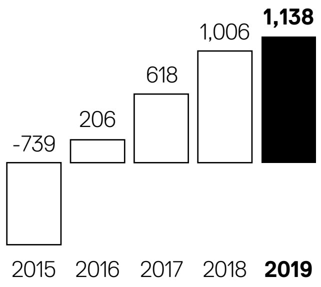
Sales revenue
US$million



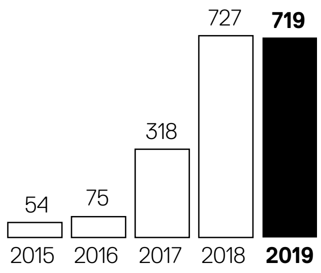
Production
mmboe



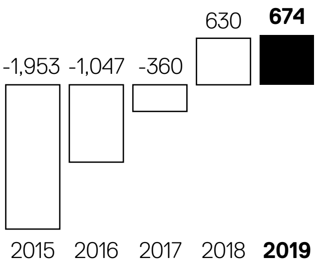
Free cash flow
US$million



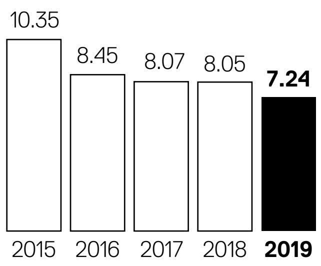
Underlying net profit after tax
US$million



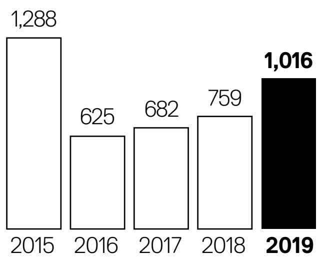
Net profit after tax
US$million



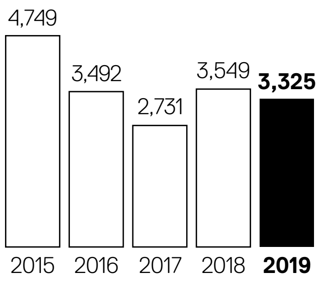
Unit production costs
US$ per boe



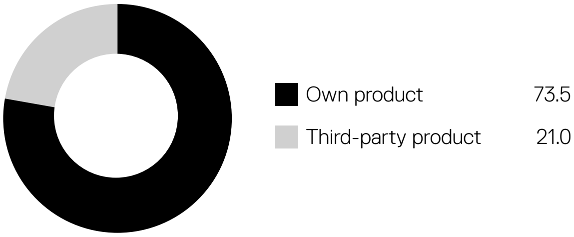
Capital expenditure
US$million



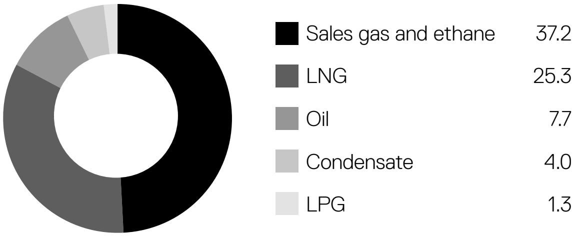
Net debt
US$million



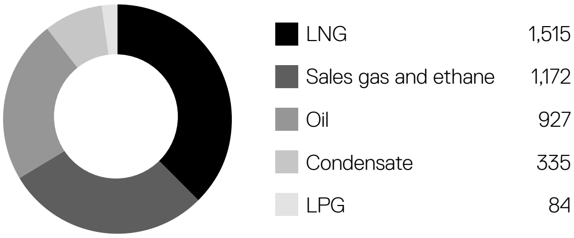
2019 Sales volumes
mmboe



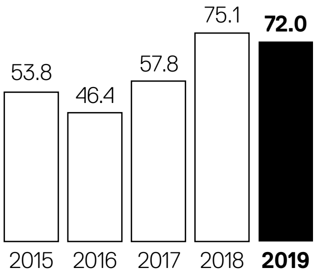
2019 Production
mmboe



2019 Sales revenue
US$million



Average realised oil price
US$ per barrel



2019 Results

		2015	**2016**	**2017**	**2018**	**2019**
Sales volume	mmboe	64.3	84.1	83.4	78.3	**94.5**
Production	mmboe	57.7	61.6	59.5	58.9	**75.5**
Average realised oil price	US$ per barrel	53.8	46.4	57.8	75.1	**72.0**
Net profit after tax	US$million	-1,953	-1,047	-360	630	**674**
Underlying net profit after tax	US$million	54	75	318	727	**719**
Sales revenue	US$million	2,442	2,594	3,100	3,660	**4,033**
Operating cash flow	US$million	811	840	1,248	1,578	**2,046**
Free cash flow	US$million	-739	206	618	1,006	**1,138**
EBITDAX	US$million	1,454	1,199	1,428	2,160	**2,457**
Total assets	US$million	15,949	15,262	13,706	16,811	**16,509**
Earnings per share	US cents	-169.5	-58.2	-17.3	30.2	**32.4**
Dividends declared		A20cps	–	–	US9.7cps	**US11cps**
Number of employees		2,946	2,366	2,080	2,190	**2,178**

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

Dear Shareholder,

In 2016 Santos unveiled a new corporate strategy to Transform, Build and Grow the business to restore and drive shareholder value.

Over the past four years, the successful implementation of this strategy has resulted in a simplified and high-graded portfolio of five core long-life asset hubs. Non-core assets have been sold and value accretive acquisitions have delivered operatorship of low-cost, strategic domestic gas assets and LNG infrastructure.

Our disciplined Operating Model and focus on safe, low-cost, efficient operations has underpinned our competitive advantage and provided the framework for the continued generation of strong and stable cash flows. Dividends have been reinstated and our strengthened balance sheet remains supportive of our disciplined growth strategy.

In 2019, the ongoing successful execution of the Transform, Build and Grow strategy delivered:

- Record free cash flow of $1,138 million
- Record sales volumes of 94.5 mmboe
- Record production volumes 75.5 mmboe
- Underlying net profit after tax of $719 million, and
- Dividends of US11 cents per share, fully franked, which includes the final 2019 dividend of US5 cents per share

Our portfolio of assets are now geographically diverse and balanced between onshore and offshore operations, between natural gas and liquids and our sales volumes between oil price-linked and CPI-linked contracts. Not only are we a leading national supplier of domestic gas across both the east and west coast markets here in Australia, but our LNG projects are benefiting from rapid urbanisation and the switch from coal to natural gas as Asian countries seek to reduce air pollution and lower greenhouse gas emissions.

Our disciplined Operating Model continues to ensure that the whole Company remains focused on continuous improvement. With each of our five core long-life asset hubs required to generate free cash flow at an oil price of less than US$40 per barrel, we are constantly looking at ways to challenge the status quo to drive efficiencies and deliver greater shareholder value. In 2019, our relentless focus on safe, low-cost, efficient operations resulted in a free cash flow breakeven oil price of US$29 per barrel, before hedging.

The successful implementation of our disciplined Operating Model enables Santos to continue to fund the Transform, Build and Grow strategy in a lower oil price environment and importantly, benefit from significant cash generation in a higher oil price environment. Free cash flow generation is critical to the continued success of our business as these proceeds are used to pay sustainable dividends, reduce debt, replace reserves and resources, and fund major growth projects.

Our acquisition of ConocoPhillips' northern Australia assets, coming just 12 months after we bought Quadrant Energy in Western Australia, is testament to the strength of the Company and the hard work of our people to turn the business around and drive shareholder value. The value accretive acquisition is fully aligned with our growth strategy to build on existing infrastructure positions and delivers operatorship and control of strategic LNG infrastructure at Darwin.

OPERATING PERFORMANCE

Our focus on safe, low-cost, efficient operations continued to drive strong results across each of our five core long-life asset hubs in 2019.

Western Australia

The successful integration of Quadrant Energy into the Santos business over the course of 2019 transformed the scale of our operations in Western Australia and also significantly strengthened our offshore operating expertise and capabilities.

As a result of the acquisition and strong operating performance, sales volumes increased 134% to 30.4 mmboe and production volumes 147% to 30.9 mmboe.

A successful appraisal program in the shallow, shelf-waters of the Bedout and Carnarvon Basins confirmed larger than anticipated resource volumes and significantly de-risked future development options.

The Dorado appraisal program resulted in a significant resource upgrade and proved the Bedout Basin, where Santos has a controlling position, to be a world class liquids-rich petroleum system with high quality reservoirs. Development options for the Dorado discovery are currently being worked through and are expected to result in an initial oil and condensate development followed by a future gas phase development. Front End Engineering and Design (FEED) for the project is targeted to commence in the second quarter of 2020.

Building on our exploration and appraisal success in the Bedout Basin, in September we were pleased to be awarded new acreage on-trend with the Dorado discovery in a joint venture with BP. We are excited at the opportunity to increase our exposure to this highly prospective region, leveraging our shallow water offshore operating expertise to build on the success of our 2019 drilling campaign.

In the Carnarvon Basin, the drilling of the Corvus-2 gas appraisal well confirmed one of the largest columns ever discovered across the North West Shelf. With 100% ownership of two gas plants in the region, near-term development opportunities are consistent with our brownfield growth strategy to build on existing infrastructure positions.

Western Australia is now Santos' largest asset hub where our high-margin, conventional, natural gas assets are backed by medium- to long-term CPI-linked contracts and our heavy sweet crude oil is commanding a significant premium to the Brent oil price due to the high demand for viscous, low sulfur crude on the back of cleaner global ship-fuel standards.

Cooper Basin

In the Cooper Basin our low-cost disciplined Operating Model continues to underpin our capital allocation decisions supporting more efficient outcomes. In 2019, drilling activity increased 35% to 115 wells and production grew for the second consecutive year to 15.8 mmboe.

Advances in drilling technology drove development costs down further and contributed to enhanced reservoir deliverability. Project cycle times were again a focus with the fastest ever total well execution recorded of 4 days, rig release to rig release.

The opportunity sets within the Basin continue to grow now that we have significantly reduced the cost base of the asset. The appraisal of Moomba South was the first of several large-scale project appraisal programs focused on resource conversion. In 2019 our drilling activity combined with the successful appraisal program at Moomba South delivered a 183% 2P reserves replacement. This is the first time since 2012 that the Cooper has more than replaced its annual production.

With current resources of approximately 300 million barrels of oil equivalent, the Cooper Basin will remain a high-value swing producer supportive of east coast gas markets as well as the strong Asian demand for LNG for decades to come.

Queensland & NSW

In Queensland a record 393 wells were drilled across the GLNG acreage, a 29% increase on 2018. Well cost discipline was maintained despite the higher level of activity as we continued to maximise value from our regional expertise and low-cost Operating Model.

Upstream gas production continued to build throughout the year and in October, GLNG achieved its targeted sales run-rate of 6 mtpa. With the right rigs in place, experienced crews and high volume, repeatable drilling program in motion, we are confident that upstream field performance will continue to improve and underpin our new sales run-rate target of ~6.2 mtpa from 2020.

In New South Wales, we remain focused on securing approval for the Narrabri Gas Project. Manufacturers on the east coast are calling for more gas supply and more competition will put downward pressure on gas prices. We have committed 100 percent of Narrabri gas to the domestic market, enough to supply up to half of NSW's needs and help support about 300,000 jobs in NSW that rely on natural gas. Santos is awaiting a decision on its Environmental Impact Assessment submission which is expected in the first-half of 2020.

Northern Australia & Timor-Leste

In Northern Australia & Timor-Leste, Darwin LNG continued its strong operating performance in 2019, producing 2.9 million tonnes of LNG.

On 14 October, we announced the value accretive acquisition of ConocoPhillips' northern Australia business, delivering shareholders operating interests in long-life, low-cost natural gas assets and strategic LNG infrastructure.

The acquisition is supportive of a Final Investment Decision (FID) on the low risk, brownfield Barossa project to supply backfill gas to Darwin LNG. The Barossa project is expected to extend the operating life of Darwin LNG by more than 20 years and more than double Santos' production in Northern Australia & Timor-Leste.

The Bayu-Undan field is expected to come to the end of its field life in late 2022 with life extension works planned at Darwin LNG plant prior to backfill production coming online in late 2024. In light of this, Santos is also working with our joint venture partners to evaluate infill drilling opportunities to extend the life of the Bayu-Undan reservoirs.

Onshore, following the successful stimulation of the Tanumbrini-1 well in the McArthur Basin and the approval of environmental plans by the Northern

Message from the Chairman and from the Managing Director & Chief Executive Officer
continued

Territory government, we now expect to drill two appraisal wells in 2020 following the wet season. The McArthur Basin has significant gas resources and has the potential to provide feed gas to support future backfill and/or expansion opportunities through Darwin LNG.

PNG

PNG LNG continues to be a well-run, high-performing asset in our portfolio, delivering 8.5 million tonnes of LNG in 2019, up 15% following the severe earthquake that impacted the Southern Highland and Hela Provinces in 2018.

Santos' acreage position in PNG is supportive of our long-term commitment to the region as we look to work with our joint-venture partners and the PNG Government to continue to align interests to support and participate in opportunities through the PNG LNG project.

RESILIENCE AND OPPORTUNITIES IN A LOWER CARBON FUTURE

Natural gas today remains a crucial part of the energy mix if we are to solve the twin challenges of reducing carbon emissions while meeting the growing demand for secure and reliable power generation.

Santos is committed to a lower-carbon future and our Climate Change Policy guides the Company's activities to reduce carbon emissions as it produces the reliable, affordable and cleaner energy required to meet domestic and global demand. Through the commitments made in our Climate Change Policy, Santos is striving to contribute to the global aspiration to limit temperature rise to less than 2 degrees Celsius.

We have set medium-term targets that align to these objectives and have set a pathway to achieving our long-term aspiration of net-zero emissions by 2050.

The transition to a lower-carbon future also creates opportunities for Santos with natural gas expected to account for a quarter of total global energy demand by 2040 in all IEA (International Energy Agency) World Energy Outlook 2018 scenarios.

In 2016 Santos set up an Energy Solutions business to build resilience and identify and create opportunities for a lower carbon future. Since then, more than 100,000 tonnes of annual CO_2 emissions reduction have been delivered with many more opportunities identified.

In 2019 we made significant investments to deploy renewable energy and recover waste heat across our operations, as well as test for large scale commercial carbon capture and storage (CCS) in the Cooper Basin, which has the potential to store 20 million tonnes of carbon dioxide per year.

Australia could be a world leader in CCS and create an exciting new industry supporting hydrogen production and ensuring the sustainability of existing industries including oil and gas, steel, coal, cement and chemicals.

Australia has a competitive advantage in CCS, built on the availability of vast, high quality storage reservoirs; the skills, technology, expertise and infrastructure of the oil and gas industry; and a strong reputation for environmental regulation and carbon measurement and accounting integrity.

We think CCS is an exciting opportunity for Santos and in the future, for our customers as well.

To learn more about the Company's resilience as well as the opportunities in a lower carbon future, we would encourage you to read our third Climate Change Report, available on our website at www.santos.com

LOOKING AHEAD

It has been 50 years since the very first molecule of natural gas from our Moomba processing plant in the Cooper Basin arrived in suburban Blair Athol, less than 10 kilometres from the Adelaide CBD. As an Australian energy pioneer, we are proud that from these humble beginnings, our Company has now grown into a leading supplier of secure and reliable energy for homes and industry across the nation and LNG into Asia.

As we look to build on our recent success, it was pleasing to see our 2020 Graduate, Apprenticeship and Traineeship programs attract exceptional talent and for Santos to increasingly be considered an employer of choice.

Female representation was strong across all the programs accounting for 60% of our Apprenticeship intake and 50% of our Traineeship intake. Of the Graduate program, 45% of the intake were female, the highest proportion since the program was launched.

In order to continue to attract and retain talent within the organisation and support employees to better balance work and family life, in 2019 Santos increased its paid parental leave and introduced a child care subsidy. This initiative builds on Santos' leadership in this area, having introduced paid maternity leave over a decade ago, and being the first, and still one of only a few companies in the resources sector to offer 'superannuation top-ups' for periods of unpaid maternity leave.

In 2020 we will continue to execute our clear and consistent strategy to Transform, Build and Grow the business to deliver a safe, low-cost, reliable and high performance business.

- In Northern Australia & Timor-Leste we will look to complete the ConocoPhillips acquisition and take a Final Investment Decision (FID) on the Barossa project to supply backfill gas to Darwin LNG.
- In Western Australia we are targeting Front End Engineering and Design (FEED) on our Dorado oil and condensate development to bring these resources to market.
- In Papua New Guinea we continue to work with our joint-venture partners and the PNG Government to safely commercialise the country's gas resources and provide support to local communities across a wide range of economic and social programs.
- In Queensland & New South Wales we are targeting sales of ~6.2 mtpa at GLNG and expect a determination for the Narrabri Gas Project from the NSW Department of Planning ahead of a decision by the Independent Planning Commission.
- In the Cooper Basin, in addition to our focus on improved capital efficiency to unlock additional resources, we are seeking to advance our carbon capture and storage project to offset emissions and generate new sources of revenue.

In summary, our clear and consistent strategy to focus on low-cost, long life assets utilising our existing infrastructure positions to generate sustainable free cash flow through the oil price cycle continues to deliver strong shareholder returns. Our balance sheet is positioned to deliver these growth opportunities in our portfolio. Record financial performance, good cost control, resource growth and the successful integration of Quadrant Energy highlight a business that has transformed and is positioned for further success.

Santos remains committed to our stated purpose which 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.

On behalf of the Board, we would like to thank you, our shareholders, for your continued support. We remain committed to driving shareholder value as we target production of 120 mmboe by 2025.

Yours sincerely,

K.W. Spence

KEITH SPENCE
Chairman

K. T. Gallagher

KEVIN GALLAGHER
Managing Director
and Chief Executive Officer

Board of Directors

KEITH SPENCE

Chairman

BSc (First Class Honours in Geophysics), FAIM

Mr Spence 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 Ltd and Chair of the Nomination Committee.

Mr Spence has over 40 years' experience in managing and governing oil and gas operations in Australia, Papua New Guinea, the Netherlands and Africa.

A geologist and geophysicist by training, Mr Spence commenced his career as an exploration geologist with Woodside Petroleum Limited in 1977. He subsequently joined Shell (Development) Australia, where he worked for 18 years. In 1994, he was seconded to Woodside to lead the North West Shelf Exploration team. In 1998, he left Shell to join Woodside. He retired from Woodside in 2008 after a 14-year tenure in top Executive positions in the company. He has expertise in exploration and appraisal, development, project construction, operations and marketing.

Upon his retirement he took up several board positions, working in oil and gas, energy, mining, engineering and construction services and renewable energy. This included Clough Limited, where he served as Chairman from 2010 to 2013, Geodynamics Limited, where he served as a non-executive Director from 2008 to 2016 (including as Chairman from 2010 to 2016) and Oil Search Limited, where he served as a non-executive Director from 2012 to 2017. Mr Spence is also a past Chair of the National Offshore Petroleum Safety and Environmental Management Authority Board and led the Commonwealth Government's Carbon Storage Taskforce.

Other Current Directorships: Chair of Base Resources Limited (since 2015), non-executive 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 to 2017).

KEVIN GALLAGHER

Managing Director and Chief Executive Officer

BEng (Mechanical) Hons, FIEAust

Mr Gallagher 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. Mr Gallagher is a member of the Environment, Health, Safety and Sustainability Committee and is also a Director of Santos Finance Limited.

Mr Gallagher commenced his career as a drilling engineer with Mobil North Sea, before joining Woodside in Australia in 1998.

At Woodside, Mr Gallagher 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, which underpinned a new domestic gas market, fuelling the mining sector and other industries in Western Australia.

In 2011, Mr Gallagher joined Clough Limited as CEO and Managing Director where, over four years, he transformed the business and delivered record financial results. He oversaw the development of innovative programs to improve safety and drive productivity and executed an international expansion strategy.

Since joining Santos, Mr Gallagher has delivered a Transform, Build, Grow strategy that has instituted a disciplined low-cost operating model, strengthened the balance sheet and improved production. Under Mr Gallagher's leadership, Santos is now focused on a long-life portfolio of natural gas assets with some exciting oil and liquids opportunities and is well positioned to deliver significant growth and sustainable returns to shareholders throughout the oil price cycle.

Other Current Directorships: Chair of APPEA (since 2019).

Former Directorships in the last 3 years: Nil.

YASMIN ALLEN

BCom, FAICD

Ms Allen 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.

Ms Allen has extensive experience in finance and investment banking, including senior roles at Deutsche Bank AG, ANZ and HSBC Group Plc, as former Chairman of Macquarie Global Infrastructure Funds, and a former Director of EFIC (Export, Finance and Insurance Corporation). Ms Allen was appointed a member of the Australian Government Takeovers Panel in March 2017 and is presently the Acting President, is a member (and former Council member) of Chief Executive Women and a former non-executive Director of Insurance Australia Group (2004 to 2015).

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), Chair of Advance (since 2018), member of the Australian Government Takeovers Panel (since 2017), and Chair of the Digital Technology Skills Organisation Pilot (since 2020).

Former Directorships in the last 3 years: Nil.

GUY COWAN

BSc (Hons), Engineering, FCA (UK), MAICD

Mr Cowan is an independent non-executive 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.

Mr Cowan had a 23-year career with Shell International in various senior commercial and financial roles. His last two roles were as CFO and Director of Shell Oil US and CFO of Shell Nigeria. He was CFO of Fonterra Co-operative Ltd between 2005 and 2009. Mr Cowan was a Director of Ludowici Limited (2009 to 2012) where he chaired the Audit and Risk Committee and was also a Shell-appointed alternate Director of Woodside between 1992 and 1995.

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

Former Directorships in the last 3 years: Director of UGL Limited (2008 to 2017).

HOCK GOH

BEng (Hons) Mech Eng

Mr Goh 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.

Mr Goh has more than 35 years' experience in the global oil and gas industry, having spent 25 years with Schlumberger Limited, including as President of Network and Infrastructure Solutions division in London, President of Asia, and Vice President and General Manager of China. He previously held managerial and staff positions in Asia, the Middle East and Europe. Mr Goh commenced his career as a field engineer on the rigs in Indonesia and subsequently in Roma and Sale in Australia. Mr Goh is a former Operating Partner of Baird Capital Partners Asia, based in China, (2007 to 2012) and non-executive Director of Xaloy Holding Inc in the US (2006 to 2008) and BPH Energy Ltd (2007 to 2015).

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: Chair of MEC Resources (2005 to 2018) and Director of Harbour Energy (2015 to 2018).

YU GUAN

MSc, E&E EMBA

Mr Guan is a non-executive Director. He joined the Board on 3 May 2019 as a nominee of a substantial shareholder and is a member of the People and Remuneration Committee.

Mr Guan has more than 22 years of professional experience, including five years in China's Ministry of Power and State Power Cooperation, and 18 years in management roles in multi-national companies. His industry experience covers power and energy in China and the US. His specialties include corporate management, business management, corporate M&A, and investment and construction management for large-scale power and energy infrastructures.

Other Current Directorships: President and Board member of ENN Ecological (since 2018).

Former Directorships in the last 3 years: Nil.

COMMITTEES OF THE BOARD

Audit and Risk Committee

Mr G Cowan (Chair)
Ms Y Allen
Mr H Goh
Ms J McArdle

Nomination Committee

Mr K Spence (Chair)
Ms Y Allen
Mr H Goh
Mr P Hearl

People and Remuneration Committee

Ms Y Allen (Chair)
Dr V Guthrie
Mr P Hearl
Mr Y Guan

Environment, Health, Safety and Sustainability Committee

Mr P Hearl (Chair)
Mr K Gallagher
Mr H Goh
Dr V Guthrie

Board of Directors
continued

VANESSA GUTHRIE

Hon DSc, PhD, BSc (Hons)

Dr Guthrie 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.

Dr Guthrie has more than 30 years' experience in the resources sector in diverse roles such as operations, environment, community and indigenous affairs, corporate development and sustainability.

She has qualifications in geology, environment, law and business management including a PhD in geology. She was awarded an Honorary Doctor of Science from Curtin University in 2017 for her contribution to sustainability, innovation and policy leadership in the resources industry. She is an active member of the Australian Institute of Company Directors and Chief Executive Women, and a Fellow of the Australian Academy of Technological Sciences and Engineering.

Other Current Directorships: Director of Australian Broadcasting Corporation (since 2017), Adelaide Brighton Limited (since 2018) and Tronox Holding PLC (since 2019), member of the Association of Mining and Exploration Companies, Deputy Chair of Western Australian Cricket Association, Council member of Curtin University, member of the Australia–India Council and member of the Vocational Education and Training Expert Skills Panel.

Former Directorships in the last 3 years: Director of Vimy Resources Limited (2017 to 2018).

PETER HEARL

BCom. (UNSW With Merit), FAICD, MAIM, MAMA

Mr Hearl 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. He previously served on the Company's Audit and Risk Committee.

During an 18-year career in the oil industry with Exxon in Australia and the USA, he held a variety of senior marketing, operations, logistics and strategic planning positions. Mr Hearl joined YUM Brands (formerly PepsiCo Restaurants) as KFC Australia's Director of Operations in 1991. He subsequently had several senior international leadership roles, as well as being President of Pizza Hut USA, before assuming the global role of YUM Brands' Chief Operations and Development Officer in 2006, based in Dallas, Texas and Louisville, Kentucky, and from where he retired in 2008.

Other Current Directorships: Director of Telstra Ltd (since 2014), Chairman-Elect of Endeavour Group Ltd (since 2019), Member of Investment Committee of the Stepping Stone Foundation, a Sydney based NFP (since 2018).

Former Directorships in the last 3 years: Chair of Woolworths Petrol Pty Ltd (2018), Director of Treasury Wine Estates (2012 to 2017).

JANINE MCARDLE

BS (Chemical Engineering), MBA

Ms McArdle is an independent non-executive Director. She joined the Board on 23 October 2019 and is a member of the Audit and Risk Committee.

Ms McArdle has more than 30 years' experience in the global oil and gas industry. She most recently spent 13 years with Apache Corporation in the United States, where she held roles including Executive Officer, Senior Vice President of Global Gas Monetization, President of Kitimat LNG Co, and Vice President, Worldwide Oil and Gas Marketing. Prior to joining Apache, she worked with Acquila Energy for nine years in the United States and United Kingdom, in a senior leadership position with responsibilities across trading, mergers and acquisition and e-commerce. Ms McArdle is also the Founder, CEO and President of Apex Strategies, a global consultancy business providing advisory services to companies engaged in midstream and downstream operations within the energy industry.

Other Current Directorships: Member of University of Nebraska's College of Engineering Advisory Board (since 2017).

Former Directorships in the last 3 years: Director of Halcon Resources (2018 to 2019) and Palmer Drug Abuse Program in Houston, Texas (2003 to 2018).

Santos Leadership Team

KEVIN GALLAGHER

Managing Director and Chief Executive Officer

BEng (Mechanical) Hons, FEIAust

Mr Gallagher's biography can be read on page 8.

DAVID BANKS

Executive Vice President Onshore Oil and Gas

BE (Hons), MBA, GAICD

David joined Santos in 2018 and is responsible for Santos' onshore upstream business.

David has over 25 years' international and domestic experience in the upstream oil and gas industry. He started his career with Schlumberger in Southeast Asia before joining BHP in Australia in 1994. Whilst at BHP, David's roles included operational, technical and functional leadership roles including General Manager Shale Oil, Vice President HSE, Vice President Shale Drilling and Completion and Bass Strait Asset Manager. Beyond business and function leadership, David led BHP's Petroleum Transformation and was Integration Manager for US shale assets.

BRETT DARLEY

Executive Vice President Offshore Oil and Gas

BEng (Civil), SPE

Brett joined Santos in 2018. He has more than 30 years' experience in the upstream oil and gas industry, both in Australia and overseas, with technical, operational, commercial and management experience across varied assets, onshore and offshore.

Before moving to Santos, Brett held senior leadership roles including Chief Executive Officer of Quadrant Energy, Managing Director and Region Vice President for Apache Energy Limited, Vice President of Drilling and Completions at Woodside Energy and Drilling Manager at Santos.

Brett holds a Bachelor of Civil Engineering degree from the University of Queensland and is a Chartered Engineer. He is a current member of the Curtin Business School Advisory Council, an elected member of the General Council of the Chamber of Commerce and Industry of WA, and a member of the Society of Petroleum Engineers.

JODIE HATHERLY

General Counsel and Vice President Legal, Risk and Governance

BA, LLB

Jodie joined Santos in 2019. She is the General Counsel and Company Secretary of the Santos Group and is responsible for legal, company secretariat, risk, governance and corporate environment, health and safety across the business. Jodie joined Santos from INPEX Australia, where she was General Counsel and General Manager Legal for the Ichthys LNG project and INPEX's Australia business. Jodie brings to the table a demonstrated history of delivering some of the biggest projects in the oil and gas industry.

Jodie commenced her career in the legal private sector before taking on senior in-house roles in the oil and gas industry. Jodie also serves on the advisory board of the Curtin University Law School as well as Muscular Dystrophy WA. Jodie was recognised on The Legal 500 GC Powerlist Australia in 2018.

Santos Leadership Team
continued

ANGUS JAFFRAY

Executive Vice President People and Sustainability

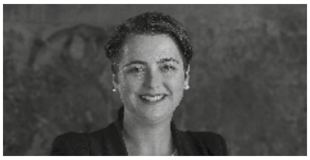
BA (Hons) Geography, MBA

Angus joined Santos in 2016 and was appointed Executive Vice President People and Sustainability in February 2019, with responsibility for human resources, remuneration and performance, organisational and learning development, public affairs, sustainability, and organisational integration.

He previously held the roles of Executive Vice President Strategy, Business Development and Technology and Executive Vice President Organisational Integration.

Angus has over 20 years of leadership and consulting experience as a Director of Azure Consulting, a Partner at The Boston Consulting Group and a Supply Chain Manager with the global packaging group Crown Cork and Seal.

At Azure Consulting, Angus supported companies in developing strategy and driving organisational change. At BCG, Angus set up the Perth office, led the Australian Operations practice and was a core member of both the Mining and Metals practice and the Energy Practice. He served clients in Australia, New Zealand, Asia, Europe and North America building strong capabilities in strategy, operational efficiency and running transformation programs. As a Supply Chain Manager, Angus was accountable for procurement, planning, logistics and product delivery.



NAOMI JAMES

Executive Vice President Midstream Infrastructure and Energy Solutions

LLB (Hons), MLM

Naomi joined Santos in 2016 and is responsible for Santos' oil, gas and LNG processing facilities at Moomba, Port Bonython and Darwin and for Santos' Energy Solutions team established to pursue new low-carbon revenue and growth opportunities.

Previously Naomi was Executive Vice President EHS and Governance, with responsibility for Santos' risk and audit, legal, company secretary, sustainability, safety, environment and access functions.

Prior to joining Santos, Naomi held a range of functional and line leadership roles with Arrium including Chief Executive of the Group's non-integrated steel businesses, Chief Legal Officer and Chief Executive, Strategy, leading major acquisitions and divestments, business restructuring and turnaround and the legal, company secretary, government affairs and strategy functions.

Naomi has previously worked in private practice at law firms in Australia and the UK.

ANTHONY NEILSON

Chief Financial Officer

B.Comm; MBA; FFin; FCA

Anthony joined Santos as Chief Financial Officer in 2016 and is responsible for the finance, tax, treasury, strategy, business development, investor relations and IT functions. He brings over 25 years' experience in chartered accounting, banking and corporate financial roles including over 15 years' experience in the upstream and downstream oil and gas industry.

Prior to joining Santos, Anthony was CEO of Roc Oil Company Ltd (ROC), which was acquired in 2014 by Hong Kong-listed investor Fosun International Limited. Previously, Anthony was Chief Financial Officer of ROC (ASX listed) and has held commercial, finance and business services roles at Caltex Australia, Credit Suisse First Boston (London) and Arthur Andersen (Sydney).

Anthony holds a Masters of Business Administration from Australian Graduate School of Management and is a Fellow of the Financial Services Institute of Australasia and a Fellow of Chartered Accountants Australia and New Zealand.

BILL OVENDEN

Executive Vice President Exploration and New Ventures

BSc (Hons) Geology and Geophysics

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.

Bill is a geologist with over 30 years of experience in the oil and gas industry. He has worked on exploration projects in Australia, Central and South East Asia, North Africa, the Middle East and South America, with Sun Oil, Kufpec, ExxonMobil and Ampolex. He joined Santos after working for ExxonMobil in Indonesia. Bill is a member of the APPEA Exploration Committee.

VINCE SANTOSTEFANO

Executive Vice President Production Operations

BEng (Civil), SPE

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

Vince retired from Woodside Energy in November 2013 as Chief Operating Officer. As COO he was responsible for Woodside's producing Business Units; the Production Function including six LNG trains with associated offshore infrastructure, four FPSOs, the Marine Division and the Brownfields Projects Group. During 2014 and 2015, Vince was engaged in Board work as a non-executive Director and various management-consulting assignments. Vince has a deep and respected knowledge of the industry, with significant experience in onshore and offshore operations and asset management. He has a proven capability to manage a demanding workload and to drive cultural change.

PETTER UNDEM

Executive Vice President Marketing, Trading and Commercial

MSc (PE), MBA (High Hons)

Petter joined Santos in August 2019 and has responsibility for the marketing and trading of all Santos gas, LNG and liquid hydrocarbon products as well as the commercial and procurement functions.

Petter has over 32 years' experience in the oil and gas industry both overseas and in Australia and joined Santos from Total, Paris, where he held the position of Deputy Vice President New Ventures E&P. Petter commenced his career as a petroleum engineer with Total and held engineering and management positions in both Exploration and Production. From 2009 to 2011, Petter was Business Development Director of Total E&P UK before joining Total Austral in Argentina in the same position, where he was responsible for technical studies for new development projects, corporate planning and strategy, new business ventures, joint venture partners, commercial sales and commercial gas strategy. From 2015 to 2018, Petter was Managing Director (Country Chair) for Total E&P Australia.

Petter has a Master of Science in Petroleum Engineering from the Norwegian Institute of Technology and a Master of Business Administration in General Administration and Finance from the Booth School of Business, University of Chicago, USA.

TRACEY WINTERS

Strategic Adviser External Affairs

BSc (Australian Environmental Studies)

Tracey joined Santos in 2017 and is responsible for government engagement and strategic communications.

Tracey joined Santos with 30 years of experience in the oil and gas industry, in diverse roles including government and regulatory affairs, media and communications, environment, land access, project commercialisation, construction and asset management. Tracey held a senior role in federal resources and energy policy and politics for seven years and over more than a decade built and ran a successful consultancy serving some of Australia's biggest resources companies and delivering major project approvals for some of the nation's biggest gas and pipeline projects. From 2011 to 2016, Tracey drove the environmental approvals and land access processes to deliver the QCLNG project.

Prior to joining Santos, Tracey was an adviser to Caltex on public affairs and strategic issues management, in particular wage underpayment by franchisees.

BRETT WOODS

Executive Vice President Developments

BSc (Hons) Geology and Geophysics

Brett joined Santos in 2013 and is accountable for development across Santos' onshore and offshore assets, including major capital projects, drilling and completions, and reservoir development, as well as overseeing Santos' joint venture in PNG LNG.

At Santos, Brett has previously held the roles of Executive Vice President Onshore Upstream, and Vice President, Eastern Australia. Brett has held other roles within Santos including responsibilities for exploration in Western Australia and the Northern Territory, leading the Western Australian offshore operations including development of Fletcher Finucane, Darwin LNG and the domestic gas business.

Brett has 25 years of oil and gas industry experience including senior management, technical and business development roles at Woodside Energy and as CEO and Managing Director of Rialto Energy. He has a track record of delivering projects and efficient exploration and production operations and has both domestic and international experience. Brett is a graduate of the Harvard Business School Advanced Management Program.

Reserves Statement
for the year ended 31 December 2019

RESERVES AND RESOURCES

Proved plus probable (2P) reserves increased by 42 million barrels of oil equivalent (mmboe) before production in 2019. The annual 2P reserves replacement ratio (RRR) was 56% and the three-year RRR 152%.

Successful appraisal and development activity in the Australian onshore assets added 36 mmboe to 2P reserves during the year. The Cooper Basin achieved 183% RRR by adding 29 mmboe 2P reserves before production (including 18 mmboe from the successful Moomba South project) and 7 mmboe was added in Queensland including the successful Arcadia appraisal. A net 6 mmboe was added in the Western Australia offshore assets.

2C contingent resources increased to over 1.9 billion barrels of oil equivalent, primarily due to increases in Dorado (+46 mmboe) and Barossa (+34 mmboe), and a maiden booking in the Northern Territory McArthur Basin shale (+22 mmboe).

Santos' acquisition of ConocoPhillips' business in northern Australia and Timor-Leste announced in October 2019 is expected to complete in the first quarter of 2020, subject to third-party consents and regulatory approvals. Had the acquisition completed on 31 December 2019, it would have increased 2019 2P reserves by 39 mmboe to 1,028 mmboe (106% 2P RRR) and 2C contingent resources by 480 mmboe to 2,400 mmboe (before any sell-down of the acquired interests).

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

Santos share	Unit	2019	2018	%change
Proved reserves	mmboe	548	586	(7%)
Proved plus probable reserves	mmboe	989	1,022	(3%)
2C contingent resources	mmboe	1,920	1,800	7%

RESERVES AND 2C CONTINGENT RESOURCES BY PRODUCT (SANTOS SHARE AS AT 31 DECEMBER 2019)

Santos share	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	Total mmboe
Proved reserves	2,930	20	21	526	548
Proved plus probable reserves	5,277	38	36	1,169	989
2C contingent resources	9,506	150	125	2,217	1,920

KEY METRICS

Annual proved reserves replacement ratio	49%
Annual proved plus probable reserves replacement ratio	56%
Three-year proved plus probable reserves replacement ratio	152%
Organic annual proved plus probable reserves replacement ratio	56%
Organic three-year proved plus probable reserves replacement ratio	62%
Developed proved plus probable reserves as a percentage of total reserves	55%
Reserves life[1]	13 years

1 2P reserves life as at 31 December 2019 using annual production of 75 mmboe.

PROVED RESERVES

Santos share as at 31 December 2019

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe Developed	Undeveloped	Total
Cooper Basin	271	8	4	502	48	14	62
Queensland & NSW[1]	830	-	0	-	101	42	143
PNG	770	0	8	-	86	53	140
Northern Australia & Timor-Leste	20	-	0	24	4	-	4
Western Australia	1,039	12	8	-	151	47	198
Total 1P	**2,930**	**20**	**21**	**526**	**390**	**157**	**548**
Percentage of total proved reserves that are unconventional							26%

1 Queensland proved sales gas reserves include 655 PJ GLNG and 175 PJ other Santos non-operated Eastern Queensland assets.

Proved reserves reconciliation

Product	Unit	2018	Production	Revisions and extensions	Net acquisitions and divestments	2019
Sales gas	PJ	**3,123**	(363)	171	-	**2,930**
Crude oil	mmbbl	**23**	(8)	5	-	**20**
Condensate	mmbbl	**23**	(4)	2	-	**21**
LPG	000 tonnes	**562**	(151)	115	-	**526**
Total 1P	**mmboe**	**586**	**(75)**	**37**	**-**	**548**

Reserves Statement
for the year ended 31 December 2019 continued

PROVED PLUS PROBABLE RESERVES

Santos share as at 31 December 2019

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe Developed	Undeveloped	Total
Cooper Basin	690	16	9	1,132	98	54	153
Queensland & NSW[1]	1,871	-	0	-	102	220	322
PNG	1,108	0	13	-	128	75	203
Northern Australia & Timor-Leste	30	-	1	37	6	-	6
Western Australia	1,578	21	14	-	209	97	306
Total 2P	**5,277**	**38**	**36**	**1,169**	**543**	**446**	**989**
Percentage of total proved plus probable reserves that are unconventional							33%

1 Queensland proved plus probable sales gas reserves include 1,441 PJ GLNG and 430 PJ other Santos non-operated Eastern Queensland assets.

Proved plus probable reserves reconciliation

Product	Unit	2018	Production	Revisions and extensions	Net acquisitions and divestments	2019
Sales gas	PJ	5,408	(363)	232	-	**5,277**
Crude oil	mmbbl	45	(8)	1	-	**38**
Condensate	mmbbl	39	(4)	1	-	**36**
LPG	000 tonnes	1,259	(151)	61	-	**1,169**
Total 2P	**mmboe**	**1,022**	**(75)**	**42**	**-**	**989**

2C CONTINGENT RESOURCES

Santos share as at 31 December 2019

Asset	Sales gas PJ	Crude oil mmbbl	Condensate mmbbl	LPG 000 tonnes	All products mmboe
Cooper Basin	1,308	33	18	2,217	294
Queensland & NSW	2,648	0	0	-	455
PNG	405	-	3	-	72
Northern Australia & Timor-Leste	3,341	-	49	-	620
Western Australia	1,805	117	55	-	479
Total 2C	**9,506**	**150**	**125**	**2,217**	**1,920**

2C Contingent resources reconciliation

Product	2018	Production	Revisions and extensions	Discoveries	Net acquisitions and divestments	2019
Total 2C (mmboe)	1,800	-	17	29	74	1,920

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 Barbara Pribyl, 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 Barbara Pribyl 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 2019.

3 Santos prepares its petroleum reserves and contingent resources estimates in accordance with the 2007 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 that 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 2019 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 2019.

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 The 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
B Pribyl	Santos Ltd	SPE
J Bunz	Santos Ltd	APEGA
B Camac	Santos Ltd	SPE, PESA
C Harwood	Santos Ltd	PESA, AAPG
S Lawton	Santos Ltd	SPE
D Nicolson	Santos Ltd	SPE
N Pink	Santos Ltd	SPE
D Smith	NSAI	SPE
A White	Santos Ltd	SPE

SPE: Society of Petroleum Engineers

APEGA: The Association of Professional Engineers and Geoscientists of Alberta

PESA: Petroleum Exploration Society of Australia

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

Directors' Report

DIRECTORS' REPORT

The Directors present their report together with the consolidated Financial Report of the consolidated entity, being Santos Limited ("Santos" or "the Company") and its controlled entities, for the financial year ended 31 December 2019, and the Auditor's Report thereon. Information in the Annual Report referred to in this report, including the Remuneration Report, or contained in a note to the financial statements referred to in this report, forms part of, and is to be read as part of, this report.

DIRECTORS, DIRECTORS' SHAREHOLDINGS AND DIRECTORS' MEETINGS

Directors and Directors' shareholdings

The names of Directors of the Company in office at the date of this report and details of the relevant interest of each of those Directors in shares in the Company at that date are as set out below:

Surname	Other Names	Shareholdings in Santos Limited
Allen	Yasmin Anita	48,883
Cowan	Guy Michael	33,600
Gallagher	Kevin Thomas	713,298
Goh	Hock	67,215
Guan	Yu	–
Guthrie	Vanessa Ann	16,437
Hearl	Peter Roland	48,808
McArdle	Janine Marie	5,000
Shi	Eugene	–
Spence	Keith William (Chairman)	65,000

The above-named Directors held office during the financial year. Mr Eugene Shi retired as a Director on 2 May 2019. Mr Yu Guan was appointed as a Director on 3 May 2019. Ms Janine McArdle was appointed as a Director on 23 October 2019.

There were no other persons who acted as Directors at any time during the financial year and up to the date of this report. All shareholdings are of fully paid ordinary shares. No Director holds a relevant interest in a related body corporate of Santos Limited.

At the date of this report, Mr Gallagher holds 2,628,586 share acquisition rights (SARs) and 220,149 restricted deferred shares. No other Director holds options or SARs.

Details of the qualifications, experience and special responsibilities of each Director are set out in the Directors' biographies on pages 8, 9 and 10 of this Annual Report. This information includes details of other listed company directorships held during the last three years.

Directors' meetings

The number of Directors' meetings and meetings of committees of Directors held during the financial year and the number of meetings attended by each Director are set out below:

Table of Directors' meetings

Director		Directors' Meeting	Audit & Risk Committee	Environment Health, Safety & Sustainability Committee	People & Remuneration Committee	Nomination Committee
		Attended/Held[1]	Attended/Held[1]	Attended/Held[1]	Attended/Held[1]	Attended/Held[1]
Allen	Yasmin A.	7 of 7	4 of 4	n/a	4 of 4	4 of 4
Cowan	Guy M.	7 of 7	3 of 4	n/a	n/a	n/a
Gallagher	Kevin T.	7 of 7	n/a	4 of 4	n/a	n/a
Goh	Hock	7 of 7	4 of 4	4 of 4	n/a	4 of 4
Guan[2]	Yu	4 of 4	n/a	n/a	2 of 2	n/a
Guthrie	Vanessa A.	7 of 7	n/a	4 of 4	4 of 4	n/a
Hearl	Peter R.	7 of 7	n/a	4 of 4	4 of 4	4 of 4
McArdle[3]	Janine M.	2 of 2	n/a	n/a	n/a	n/a
Shi[4]	Eugene	0 of 3	1 of 1	n/a	1 of 1	n/a
Spence	Keith W.	7 of 7	n/a	n/a	n/a	4 of 4

1 Reflects the number of meetings held during the time the Director held office, or was a member of the committee, during the year.

2 Mr Yu Guan was appointed as a Director on 3 May 2019 and as a member of the People and Remuneration Committee on 21 August 2019.

3 Ms Janine Marie McArdle was appointed as a Director on 23 October 2019 and as a member of the Audit and Risk Committee on 28 November 2019.

4 Mr Eugene Shi retired as a Director on 2 May 2019.

Directors' Report
continued

OPERATING AND FINANCIAL REVIEW

Santos' principal activities during 2019 were the exploration for, and development, production, transportation and marketing of, hydrocarbons. There were no significant changes in the nature of these activities during the year. Revenue is derived primarily from the sale of gas and liquid hydrocarbons.

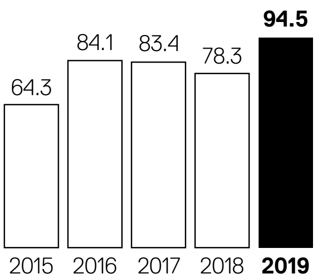
A review of the operations and of the results of those operations of the consolidated entity during the year is as follows:

Summary of results table

	2019 mmboe	2018 mmboe	Variance %
Production volume	**75.5**	58.9	28
Sales volume	**94.5**	78.3	21
	US$million	US$million	
Product sales	**4,033**	3,660	10
EBITDAX[1]	**2,457**	2,160	14
Exploration and evaluation expensed	**(103)**	(105)	(2)
Depreciation and depletion	**(1,000)**	(667)	50
Net impairment loss	**(61)**	(100)	(39)
Change in future restoration assumptions	**2**	46	(96)
EBIT[1]	**1,295**	1,334	(3)
Net finance costs	**(277)**	(228)	21
Taxation (expense)/benefit	**(344)**	(476)	(28)
Net profit/(loss) for the period and attributable to equity holders of Santos	**674**	630	7
Underlying profit for the period[1]	**719**	727	(1)
Underlying earnings per share (cents)[1]	**34.5**	34.9	(1)

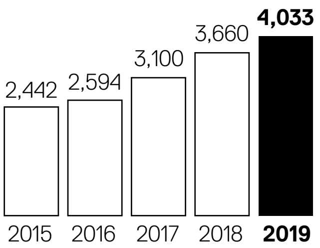
1 EBITDAX (earnings before interest, tax, impairment, depreciation (or depletion), amortisation and exploration and evaluation expense), EBIT (earnings before interest and tax) and underlying profit are non-IFRS measures that are presented to provide an understanding of the underlying performance of Santos' operations. Underlying profit excludes the impacts of asset acquisitions, disposals and impairments, as well as items that are subject to significant variability from one period to the next, including the effects of fair value adjustments and fluctuations in exchange rates. Please refer to page 23 for the reconciliation from net profit to underlying profit for the period. Underlying earnings per share represents underlying profit for the period divided by the weighted average number of shares on issue during the year. The non-IFRS financial information is unaudited, however the numbers have been extracted from the audited financial statements.

Sales volume
mmboe



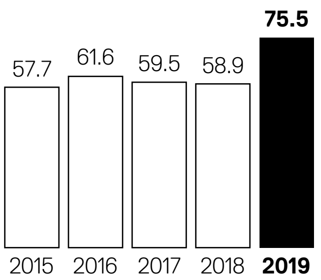
Sales volumes of 94.5 million barrels of oil equivalent (mmboe) were 21% higher than the previous year reflecting a full-year contribution from the acquisition of Quadrant Energy combined with higher volumes in the Cooper Basin and Queensland. PNG volumes recovered following the Highlands earthquake in 2018.

Product sales revenue
$million



Sales revenue increased 10% compared to the previous year to $4 billion, primarily due to higher sales volumes partially offset by lower realised prices. The average realised oil price decreased 4% to US$72/bbl and the average realised domestic gas price decreased 14% to US$4.31/GJ. LNG prices were stable at US$9.77/mmBtu.

Production volume
mmboe



Production was up 28% to a record 75.5 mmboe primarily due to the Quadrant acquisition, higher production in the Cooper Basin and Queensland, and recovery in PNG production following the Highlands earthquake in 2018. This was partially offset by the sale of Santos' Asian assets in the second half of 2018.

Review of operations

Santos' operations are focused on five core, long-life asset hubs: Cooper Basin, Queensland and NSW, Papua New Guinea, Northern Australia and Timor-Leste, and Western Australia.

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.

Santos' strategy in the Cooper Basin is to deliver production growth by being a low-cost business, increasing reserves, investing in new technology to lower development and exploration costs, increasing utilisation of infrastructure including the Moomba plant and assessing the significant potential for carbon capture and storage.

Cooper Basin	**2019**	2018
Production (mmboe)	**15.8**	15.5
Sales volume (mmboe)	**23.2**	21.6
Revenue (US$m)	**1,164**	1,146
Production cost (US$/boe)	**7.77**	8.17
EBITDAX (US$m)	**529**	518
Capex (US$m)	**308**	245

Cooper Basin EBITDAX of $529 million is 2% higher than 2018, primarily due to higher volumes and lower costs.

Cooper Basin production increased for the second consecutive year to 15.8 mmboe. Santos' share of sales gas and ethane production of 61.5 petajoules (PJ) was 2% higher than the previous year (60.6 PJ) as new development activity more than offset the impact of natural field decline. Santos' share of crude oil production of 3.2 mmbbl was in-line with the previous year.

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.

The LNG plant has two LNG trains with a combined capacity of 8.6 mtpa. 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.

The LNG plant produced 5.2 million tonnes of LNG in 2019 and shipped 87 cargoes. Annual LNG production was higher than the previous year (4.9 million tonnes) due to the ramp-up in GLNG upstream equity gas supply.

Santos aims to build GLNG gas supply through upstream development, seek opportunities to extract value from existing infrastructure and drive efficiencies to operate at lowest cost.

Queensland and NSW	**2019**	2018
Production (mmboe)	**13.0**	12.2
Sales volume (mmboe)	**22.4**	22.0
Revenue (US$m)	**1,055**	1,016
Production cost (US$/boe)	**5.51**	5.77
EBITDAX (US$m)	**624**	570
Capex (US$m)	**260**	244

Queensland and NSW EBITDAX of $624 million increased by 9% compared to 2018. This was a result of higher volumes and lower costs.

Directors' Report
continued

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.

The LNG plant near Port Moresby has two LNG trains with the combined capacity to produce more than eight million tonnes per annum. Production from both trains commenced in 2014.

The LNG plant produced 8.5 million tonnes of LNG in 2019 and shipped 111 cargoes. Annual LNG production was higher than the previous year (7.4 million tonnes) due to recovery from the 2018 earthquake.

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.

PNG	**2019**	2018
Production (mmboe)	**12.8**	11.2
Sales volume (mmboe)	**12.1**	10.8
Revenue (US$m)	**663**	630
Production cost (US$/boe)	**6.23**	6.23
EBITDAX (US$m)	**540**	506
Capex (US$m)	**51**	39

PNG EBITDAX of $540 million increased 7% compared to 2018, mainly due to the resumption of normal operations during 2019, not interrupted by the earthquake that occurred in 2018.

Northern Australia and Timor-Leste

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 DLNG.

The LNG plant near Darwin has a single LNG train with a capacity of 3.7 mtpa. The plant produced 2.9 million tonnes of LNG in 2019 and shipped 46 cargoes. Annual LNG production was lower than the previous year (3.3 million tonnes), in-line with the shipping schedule.

Santos' strategy in northern Australia is to support plans to progress Darwin LNG backfill, expand the Company's acreage footprint and appraise the onshore McArthur Basin.

In October 2019, Santos announced the acquisition of ConocoPhillips' business in northern Australia and Timor-Leste, including Darwin LNG, Bayu-Undan, Barossa and Poseidon for $1.39 billion plus a $75 million contingent payment subject to FID on Barossa. The acquisition provides operating interests in long-life, low-cost natural gas assets and strategic LNG infrastructure consistent with Santos' core asset growth strategy. The acquisition will increase Santos' interests in DLNG to 68.4% and Barossa to 62.5%, before any subsequent sell-downs. Completion is expected around the end of the first quarter of 2020, subject to third-party consents and regulatory approvals.

The Barossa project is planned to backfill Darwin LNG. Successful development of Barossa would extend the operating life of Darwin LNG for more than 20 years and significantly increase Santos' production in northern Australia.

Santos also intends to appraise the onshore gas potential of the McArthur Basin in the Northern Territory in 2020 with two horizontal wells planned.

Northern Australia and Timor-Leste	**2019**	2018
Production (mmboe)	**3.1**	3.7
Sales volume (mmboe)	**3.1**	3.6
Revenue (US$m)	**165**	183
Production cost (US$/boe)	**21.75**	20.17
EBITDAX (US$m)	**102**	116
Capex (US$m)	**50**	66

Northern Australia and Timor-Leste EBITDAX of $102 million was 12% lower than 2018 due to lower sales volumes and lower realised LNG pricing.

Western Australia

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

In late 2018, Santos completed the acquisition of Quadrant Energy for $2.15 billion plus contingent payments related to the Bedout Basin. Quadrant significantly strengthened Santos' position in Western Australia, including 100% ownership and operatorship of the Varanus Island and Devil Creek domestic gas hubs, and a leading position in the highly prospective Bedout Basin.

Santos successfully completed the appraisal of the Dorado field (Santos 80% interest) in the Bedout Basin in 2019. A FEED-entry decision for a potential Dorado development is targeted for the second quarter of 2020.

Western Australia	**2019**	2018
Production (mmboe)	**30.9**	12.5
Sales volume (mmboe)	**30.4**	13.0
Revenue (US$m)	**955**	422
Production cost (US$/boe)	**7.30**	8.68
EBITDAX (US$m)	**684**	283
Capex (US$m)	**270**	93

Western Australia EBITDAX of $684 million was 142% higher than 2018.

Gas and liquids production in Western Australia was significantly higher in 2019 due to the Quadrant acquisition. Santos' share of gas production was up 130% to 145 PJ, while oil production increased by 370% to 4.5 mmbbl.

Net profit

The 2019 net profit attributable to equity holders of Santos Limited of $674 million is $44 million higher than the net profit of $630 million in 2018. This increase is primarily due to lower impairment losses of $46 million after tax ($94 million in 2018) and higher sales revenue as a result of higher volumes, partly offset by lower realised pricing.

Net profit includes items before tax of $59 million ($45 million after tax), as referred to in the reconciliation of net profit to underlying profit below. Underlying profit was $719 million, $8 million lower than 2018.

Reconciliation of net profit/(loss) to underlying profit[1]

	2019 US$million			2018 US$million		
	Gross	**Tax**	**Net**	Gross	Tax	Net
Net profit after tax attributable to equity holders of Santos Limited			**674**			**630**
Add/(deduct) the following:						
Net gains on sales of non-current assets	**(12)**	**4**	**(8)**	(112)	18	(94)
Impairment losses	**61**	**(15)**	**46**	100	(6)	94
Fair value adjustments on embedded derivatives and hedges	**4**	**(1)**	**3**	2	-	2
Fair value adjustments on commodity hedges	**6**	**(2)**	**4**	67	(21)	46
Costs associated with acquisitions and disposals	**–**	**–**	**–**	58	(9)	49
	59	**(14)**	**45**	115	(18)	97
Underlying profit[1]			**719**			**727**

1 Underlying profit is a non-IFRS measure that is presented to provide an understanding of the underlying performance of Santos' operations. The measure excludes the impacts of asset acquisitions, disposals and impairments, as well as items that are subject to significant variability from one period to the next, including the effects of fair value adjustments and fluctuations in exchange rates. The non-IFRS financial information is unaudited, however the numbers have been extracted from the financial statements which have been subject to audit by the Company's auditor.

Directors' Report
continued

Financial position

Summary of financial position

	2019 US$million	2018 US$million	Variance US$million
Exploration and evaluation assets	**1,187**	981	206
Oil and gas assets and other land, buildings, plant and equipment	**11,619**	11,402	217
Restoration provision	**(2,282)**	(2,093)	(189)
Other net assets/(liabilities)[1]	**456**	308	148
Total funds employed	**10,980**	10,598	382
Net debt[2]	**(3,325)**	(3,549)	224
Net tax assets/(liabilities)[3]	**21**	230	(209)
Net assets/equity	**7,676**	7,279	397

1 Other net assets/(liabilities) comprises trade and other receivables, prepayments, inventories, other financial assets, share of investments in joint ventures, offset by trade and other payables, deferred income, provisions and other financial liabilities.

2 Net debt reflects the net borrowings position and includes interest-bearing loans, net of cash and interest rate and cross-currency swap contracts.

3 Net tax assets/(liabilities) comprises deferred tax assets and tax receivable, offset by deferred tax liabilities and current tax payable.

Impairment of assets

During the Company's regular review of asset carrying values, Santos undertook an impairment review as part of the preparation of its 2019 full-year accounts.

At 31 December 2019, non-cash, after-tax impairment losses of $46 million were recognised. The total after-tax impairment losses relate to the impairment of late-life producing assets and exploration and evaluation assets.

Exploration and evaluation assets

Exploration and evaluation assets were $1,187 million compared to $981 million at the end of 2018, a increase of $206 million, due to the acquisition of Quadrant Energy, 2019 capital expenditure, including drilling in Dorado, Roc South-1, Barossa Caldita and South Amadeus, along with evaluation studies, in addition to acquisition costs comprising interests in Muruk and South Nicholson; offset by impairment losses before tax of $24 million and exploration and evaluation expenses of $24 million.

Oil and gas assets and other land, buildings, plant and equipment

Oil and gas assets and other land and buildings, plant and equipment of $11,619 million were $217 million higher than in 2018 mainly due to the right-of-use assets raised as a result of the adoption of AASB 16 *Leases* accounting standard, and 2019 capital expenditure across Cooper Basin, GLNG, WA Offshore and PNG; offset by depreciation and depletion charges.

Restoration provision

Restoration provision balances have increased by $189 million to $2,282 million mainly due to a change in discount rates, offset by revised restoration cost estimates and favourable exchange differences.

Net debt

Net debt of $3,325 million was $224 million lower than at the end of 2018 primarily as a result of the repayment of debt facilities during 2019, offset by the issue of a new Reg-S bond and free cash flow before asset acquisitions and divestments of $1,138 million.

Net tax assets/(liabilities)

Net tax assets/(liabilities) of $21 million have decreased by $209 million in comparison to 2018 primarily as a result of the finalisation of the acquisition of Quadrant Energy and associated tax bases, and the utilisation of carry-forward tax losses recognised by the group.

Net assets/equity

Total equity increased by $397 million to $7,676 million at year end. The increase primarily reflects the net profit after-tax attributable to owners of Santos of $674 million, partially offset by payments of dividends to shareholders of $251 million.

Future commitments

Due to the nature of Santos' operations, the Company has future obligations for capital expenditure, for which no amounts have been provided in the financial statements. Santos also has certain requirements to perform minimum exploration work and spend minimum amounts of money pursuant to the terms of the granting of petroleum exploration permits in order to maintain rights of tenure. The minimum exploration commitments are less than the normal level of exploration expenditures expected to be undertaken by the Company.

Oil price hedging

The objectives of Santos' oil price hedging policy are to reduce the effect of commodity price volatility and support annual capital expenditure plans. The Company will continue to monitor commodity market conditions and will enter hedging transactions as appropriate.

As at 31 December 2019, the Company has hedged 6.2 million barrels of production, using a re-participating three-way option structure with an average floor price of $54.19/bbl, a temporary ceiling of $69.03/bbl and re-participation at $76.78/bbl.

Business strategy and prospects for future financial years

Business strategy

Santos' clear and consistent Transform, Build, Grow strategy drives shareholder value by utilising a disciplined, low-cost operating model to deliver strong cash flows through the oil price cycle. Five core, long-life asset hubs sit at the heart of the Company's operations, each with significant upside potential.

The successful execution of the strategy since 2016 has transformed the Company into a safe, reliable and low-cost producer positioned for disciplined growth and sustainable shareholder returns.

Disciplined execution combined with targeted acquisitions have reduced the Company's breakeven oil price, which was approximately US$29 per barrel in 2019, and delivered operated interests in long-life, low-cost assets and strategic LNG infrastructure.

The Company is now positioned for disciplined growth leveraging existing infrastructure in all five core asset hubs and is targeting annual production of 120 mmboe by 2025, more than double the output in 2018.

This disciplined growth portfolio includes:

- Barossa LNG
- Dorado liquids
- PNG LNG expansion
- GLNG ramp-up to ~6.2 mtpa sales from 2020
- Cooper Basin production growth

Santos is also executing a focused exploration strategy to identify new high-value targets and unlock future core assets.

The Company is also focused on generating new revenue through maximising utilisation of its infrastructure and implementing low-carbon energy solutions projects such as carbon capture and storage.

Prospects for future financial years

Santos has a clear strategy and a solid platform for growth. The business focus is aligned with the strategy as the Company continues to drive efficiencies through the low-cost operating model and progress growth opportunities across the five core asset hubs. This focus will enable Santos to remain a low-cost and high-performing business with significant upside opportunities across the portfolio.

Natural gas is expected to supply a quarter of the world's total energy demand by 2040, according to forecasts from the International Energy Agency. Santos remains confident in the long-term underlying demand for energy and particularly natural gas due to Asian economic growth, the rising global population, rapid urbanisation in developing economies and growing demand for lower-emissions fuels. Through its Energy Solutions business, Santos is also investing in projects to lower emissions and assessing the significant potential for carbon capture and storage in the Cooper Basin.

Santos expects 2020 sales volumes to be in the range of 99–107 mmboe and production to be in the range of 79–87 mmboe. Capital expenditure is expected to be approximately $1.5 billion. 2020 guidance assumes completion of the acquisition of ConocoPhillips' business in Northern Australia and Timor-Leste and expected sell-down of 25% interests in Bayu-Undan and Darwin LNG both occur at the end of the first quarter of 2020.

Material business risks

The achievement of Santos' purpose and vision, business strategy, production growth outlook and future financial performance is subject to various risks including the material business risks summarised below. Santos undertakes steps to identify, assess and manage these risks and operates under a Board-approved enterprise-wide Risk Management Framework.

This summary is not an exhaustive list of all risks that may affect the Company, nor have they been listed in any particular order of materiality.

Directors' Report
continued

Strategic risks

Volatility in oil and gas prices

Santos' business relies primarily on the production and sale of oil and gas products (including LNG) to a variety of buyers under a range of short-term and long-term contracts. The majority of oil and gas produced (or to be produced) in Santos' portfolio will be sold under sales contracts where the sale price is linked to the global price of oil. Lower global oil prices will therefore reduce Santos' revenues and the profitability of its operations.

Global oil prices are affected by numerous factors beyond the Company's control and historically these have fluctuated widely. Santos' three-tiered strategy, Operating Model and Hedging Policy introduced in 2016 directly address oil price risk to build resilience to oil price fluctuations. This includes a clear focus on cash flow management, operational and cost efficiencies, debt reduction and production growth opportunities.

Santos' acquisition of Quadrant in 2018 adds conventional domestic natural gas assets backed by medium- to long-term CPI-linked offtake contracts to complement Santos' predominantly oil-linked revenues.

Oil and gas reserves development

Calculations of recoverable oil and gas reserves and resources contain significant uncertainties, which are inherent in the reservoir geology, seismic and well data available and other factors such as project development and operating costs, together with commodity prices. A failure to successfully develop existing reserves may impact Santos' ability to fully support LNG, gas or oil under customer contracts.

Santos has adopted a reserves management process that is consistent with the Society of Petroleum Engineers' Petroleum Resource Management System. The Company's reserves and resources estimations are subject to independent audits and evaluations on a rolling basis.

Santos applies an integrated management system across all aspects of business performance, including reserves estimation and delivery. Progress against key reserves metrics is routinely reviewed by senior management and the Board, and reserves estimates are published annually (pages 14 to 17).

Exploration and reserves replacement

Santos' long-term prospects are also directly related to the success of efforts to replace existing oil and gas reserves as they are depleted through production, from either exploration or acquisition. Exploration activities are subject to geological and technological uncertainties and the failure to replace utilised reserves is a risk inherent in the industry.

Exploration risks are managed through an established exploration prospect evaluation methodology and risking process. In addition, business development processes identify, review and progress opportunities to build reserves through acquisition in support of the Company's strategy to Transform, Build and Grow the business.

Demand and market

The demand for oil, gas, LNG and other products Santos markets may be adversely affected by a range of external factors including competition from alternative suppliers or other sources of energy supply, and changes in consumer behaviour or government policy.

A robust business strategy development and review process considers independent oil, gas and LNG market forecasts, and other relevant macro-economic factors, to assess the Company's portfolio under a range of scenarios, to enable the delivery of plans in support of the Company's purpose and vision.

Project development

Investment is undertaken in a variety of oil and gas projects to extract, process and supply oil and gas to a variety of customers, including long-term high-volume contracts to supply feedstock gas to the GLNG project. Failure to deliver or protracted delays in delivering projects may occur for various reasons, including unanticipated economic, financial, operational, engineering, technical, environmental, contractual, regulatory, community and/or political events. Delays, changes in scope, cost increases or poor performance outcomes pose risks that may impact the Company's financial performance.

Santos has comprehensive project management and governance, risk management and reporting practices in place. Progress and performance of material projects is regularly reviewed by senior management and the Board.

Joint venture arrangements

Much of Santos' business is carried out through joint ventures. The use of joint ventures is common in the oil and gas exploration and production industry and serves to mitigate the risk and associated cost of exploration, production and operational failure. However, failure of agreement or alignment with joint venture partners, or the failure of third-party joint venture operators, could have a material impact on Santos' business. The failure of joint venture partners to meet their commitments and share costs and liabilities can result in increased costs to Santos.

Santos has defined critical expectations and requirements for participation in and operation of joint ventures in order to optimise the Company's commercial and operational interests. The Company works closely with its joint venture partners to reduce the risk of misalignment in joint venture activities.

Operational risks

Technical and engineering

Santos is exposed to risks in relation to its ongoing oil and gas exploration and production activities, such as failure of drilling and completions equipment, pipeline and facilities integrity failures, major processing or transportation incidents, release of hydrocarbons or other substances, security incidents and other well control and process safety risks, which may have an adverse effect on Santos' profitability and results of operations.

An integrated management system is applied across all operational activities to manage and monitor operations performance and material risk controls. The management system includes all relevant technical, operational, asset reliability and integrity standards and incident management standards and competency requirements. The system is designed to ensure the Company meets regulatory and industry standards in all operations.

Access and licence to operate

Santos has interests in areas that may be subject to claims by communities and landowners, who may have concerns over the social or environmental impacts of oil and gas operations or the distribution of oil and gas royalties and access to mining- and petroleum-related benefits. This has the potential to impact on land access or result in community unrest and activism and may adversely impact on the Company's reputation.

A number of Santos interests are subject to one or more claims or applications for native title determination. In Australia, compliance with the requirements of the *Native Title Act 1993* (Cth) can delay the grant of mineral and petroleum tenements and subsequent timing of exploration, development and production activities.

Santos and its operating joint venture partners work closely with all relevant stakeholders, including governments, communities, landowners and indigenous groups, to ensure all concerns are fairly addressed and managed, and Santos' operations benefit from their support. In addition, Santos and its operating joint venture partners develop and employ security and risk management plans, and are committed to conducting operations in a way that protects the security of its personnel, facilities and operations.

Santos has a long history of safe and sustainable operations working with communities and landholders across the country. Land access agreements are in place and a team of experienced community and land access representatives work with Aboriginal stakeholders, landholders and communities to ensure that issues are understood and addressed appropriately.

Cyber security

Cyber security risks, including threats to information and operational systems from computer viruses, unauthorised access, cyber-attack and other similar disruptions, have evolved rapidly and can impact all sectors of the economy, including the energy sector. The increasing technological advances in operations require monitoring and protection to ensure cyber security threats are appropriately managed and prevented. Cyber security risks may lead to disruption of critical business processes, a breach of privacy and theft of commercially sensitive information. A cyber event may lead to adverse impacts on Santos' profitability and reputation.

Focused cyber security risk management is incorporated into Santos' risk management and assurance processes and practices across the Company's business and operational information management systems.

Workforce

Santos' future success is significantly influenced by the expertise and continued service of certain key executives and technical personnel. An inability to attract or retain such personnel could adversely affect business continuity and, as such, employment arrangements and succession plans are designed to secure and retain the services of key personnel. Key workforce metrics and succession plans are routinely reviewed by senior management and the Board.

Environmental, safety and sustainability risks

Health, safety and environment

The size, nature and complexity of Santos' operations pose risks in relation to the health and safety of employees and contractors, and a range of environmental risks exist when carrying out exploration and production activities. Environmental incidents, and real or perceived threats to the environment or the amenity of local communities, could result in a loss of Santos' licence to operate, leading to delays, disruption or the shut-down of exploration and production activities.

Santos has a comprehensive approach to management of health, safety and environmental risks. The Company's management system integrates technical and engineering requirements with personal health and safety requirements to comprehensively manage health, safety and environmental risks within Company operations.

Directors' Report
continued

Climate change

Santos anticipates its activities will be subject to increasing regulation and costs associated with climate change and the management of carbon emissions.

Strategic, regulatory and operational risks and opportunities associated with climate change are incorporated into policy, strategy and risk management processes and practices. The Company actively monitors current and emerging climate change risk and proactively takes steps to prevent and mitigate any impacts on its objectives and activities. Reduction of waste and emissions is an integral part of delivery of cost efficiencies and forms part of the Company's routine operations.

Financial risks

The financial risk management strategy seeks to ensure that Santos is able to fund its corporate objectives and meet its obligations to stakeholders. Financial risk management is carried out by a central treasury department that operates in line with a Board-approved policy and framework. The framework and principles for overall financial risk management address specific financial risks, such as commodity price risk, foreign exchange risk, interest rate risk and credit risk, approved derivative and non-derivative financial instruments, and liquidity management.

An oil price hedging policy is in place with the objective of reducing the effect of commodity price volatility and to support annual capital expenditure plans. Santos continues to monitor commodity market conditions and will enter hedging transactions as appropriate.

Foreign currency

Foreign exchange risk arises from commercial transactions and valuations of assets and liabilities that are denominated in a currency that is not the entity's functional currency.

Exposure to foreign currency risk arises principally through the sale of products denominated in currencies other than the functional currency, and capital and operating expenditure incurred in currencies other than US$, principally A$. Santos also holds investment interests in domestic operations whose net assets are exposed to foreign currency translation risk.

A foreign currency hedging policy is in place with the objective of reducing the effect of foreign currency exchange rate volatility and to support annual capital expenditure plans. Santos continues to monitor foreign currency market conditions and will enter hedging transactions as appropriate.

Credit

Credit risk represents a potential financial loss if counterparties fail to perform as contracted, and arises from investments in cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions. Credit exposures exist to customers in the form of outstanding receivables and committed transactions.

Access to capital and liquidity

Santos' business and, in particular, the development of large-scale projects, relies on access to debt and equity financing. The ability to secure financing, or financing on acceptable terms, may be adversely affected by volatility in the financial markets. These effects may be global or affecting a particular geographic region, industry or economic sector. Access to debt and equity funding may also be negatively affected by a downgrade in its credit rating.

Santos had $3.0 billion in liquidity (cash and undrawn bilateral bank facilities) available as at 31 December 2019.

Contract and counterparty risks

As part of its ongoing commercial activities, Santos is party to a number of material contracts including finance agreements, infrastructure access agreements, agreements for the sale and purchase of hydrocarbon, transportation agreements, joint venture agreements, and engineering, procurement and construction (EPC) contracts. Santos also enters into sale and purchase contracts with third parties for the sale and purchase of natural gas, LNG and other products.

The economic effects of these contracts over their term may be impacted by fluctuations in commodity prices, price reviews, operational performance and other market conditions. Failure to perform material obligations under these contracts by Santos and/or the applicable counterparties, or to secure any extensions or amendments to these contracts, may result in a material impact on Santos' operations and financial results.

Santos tracks key contractual obligations and monitors performance across its material contracts.

Political and legal risks

Political, legal and regulatory

Santos' business is subject to various laws and regulations in each of the jurisdictions in which it operates that relate to the development, production, marketing, pricing, transportation and storage of its products. A change in the laws which apply to the Company's business, or the way in which it is regulated, could have a materially adverse effect on Santos' business, on the results of operations and the Company's financial performance. For example, a change in taxation laws, environmental laws or land access laws could have a material effect on the Company.

The domestic gas business and GLNG project, including its ability to purchase gas, develop future growth projects and meet supply commitments', may also be adversely impacted by any governmental intervention, including limitations on LNG export volumes and the redirection of gas from export to domestic markets. Any such intervention may also have broader implications for the future of the gas industry in Australia.

Continuous monitoring of legislative and regulatory changes and associated risks is undertaken and regular engagement with regulators and governments supports the management of risks arising from these changes.

Litigation and dispute

The nature of Santos' business means that it is likely to be involved in litigation or regulatory actions arising from a wide range of matters. Santos may also be involved in investigations, inquiries or disputes, debt recoveries, commercial and contractual disputes, native title claims, land tenure and access disputes, environmental claims or occupational health and safety claims. Any of these claims or actions could result in delays, increase costs or otherwise adversely impact Santos' assets and operations, and adversely impact Santos' financial performance and future financial prospects.

Santos has an experienced legal team that monitors and manages potential and actual claims, actions and disputes.

Material prejudice

As permitted by sections 299(3) and 299A(3) of the *Corporations Act 2001* (Cth), Santos has omitted some information from the above Operating and Financial Review in relation to the Company's business strategy, future prospects and likely developments in operations and the expected results of those operations in future financial years on the basis that such information, if disclosed, would be likely to result in unreasonable prejudice (for example, because the information is premature, commercially sensitive, confidential or could give a third party a commercial advantage). The omitted information typically relates to internal budgets, forecasts and estimates, details of the business strategy, and contractual pricing.

Forward-looking statements

This report contains forward-looking statements, including statements of current intention, opinion and predictions regarding the Company's present and future operations, possible future events and future financial prospects. While these statements reflect expectations at the date of this report, they are, by their nature, not certain and are susceptible to change. Santos makes no representation, assurance or guarantee as to the accuracy of or likelihood of fulfilling any such forward-looking statements (whether express or implied) and, except as required by applicable law or the ASX Listing Rules, disclaims any obligation or undertaking to publicly update such forward-looking statements.

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS

The Material Business Risks section (pages 25 to 29) refers to risks which, if materialised, may have a significant effect on the state of affairs of the Company.

Dividends

On 19 February 2020, the Directors resolved to pay a fully franked final dividend of US5 cents per fully paid ordinary share on 26 March 2020 to shareholders registered in the books of the Company at the close of business on 26 February 2020 ("Record Date"). This final dividend amounts to approximately US$104 million. The Board also resolved that the Dividend Reinvestment Plan (DRP) will not be in operation for the 2019 final dividend.

In addition, a fully franked interim dividend of US6 cents per share was paid to members on 26 September 2019. The DRP was not in operation for the interim dividend.

Environmental regulation

The consolidated entity's Australian operations are subject to various environmental regulations under Commonwealth, state and territory legislation. Applicable legislation and requisite environmental licences are specified in the consolidated entity's EHS Compliance Database, which forms part of the consolidated entity's overall management system. Environmental compliance performance is monitored on a regular basis and in various forms, including audits conducted by regulatory authorities and by the Company, either through internal or external resources.

On 19 March 2019, Santos received a penalty infringement notice and $12,615 fine from the Queensland Department of Environment and Science for a loss of pond hydraulic integrity incident.

On 27 June 2019, Santos received two penalty infringement notices and two fines totalling $26,100 from the Queensland Department of Environment and Science for an unauthorised release of contaminants to land and failure to operate measures, plant and equipment in a proper and effective manner.

Directors' Report
continued

On 20 September 2019, Santos received a penalty infringement notice and $13,055 fine from the Queensland Department of Environment and Science for a produced water release to a watercourse.

On 8 November 2019, Santos received a penalty infringement notice and $13,345 fine from the Queensland Department of Environment and Science for a black smoke release causing an environmental nuisance.

The consolidated entity undertook corrective measures in respect of the infringements to prevent re-occurrences.

POST BALANCE DATE EVENTS

On 19 February 2020, the Directors of Santos Limited resolved to pay a final dividend on ordinary shares in respect of the 2019 financial year. The financial effect of these dividends has not been brought to account in the full-year Financial Report for the year ended 31 December 2019.

SHARES UNDER OPTION AND UNVESTED SHARE ACQUISITION RIGHTS (SARS)

Options

There are no unissued ordinary shares of Santos Limited under options at the date of this report.

Unvested SARs

Unissued ordinary shares of Santos Limited under unvested SARs at 31 December 2019 are as follows:

Date SARs granted	Number of shares under unvested SARs
14 June 2016	3,828,286
17 March 2017	3,506,507
19 May 2017	671,641
29 September 2017	492,660
21 March 2018	2,737,455
1 April 2018	700,452
7 May 2018	520,183
9 July 2018	407,336
14 November 2018	7,649
15 March 2019	2,595,423
12 April 2019	48,234
18 April 2019	469,987
9 May 2019	637,631
7 June 2019	49,772
18 July 2019	10,734
24 July 2019	567,876
20 August 2019	26,364
30 August 2019	1,271,549
4 October 2019	238,023
	18,787,762

Since 31 December 2019, 28,923 additional SARs have been granted over unissued ordinary shares of Santos Limited.

No amount is payable on the vesting of SARs. SARs do not confer an entitlement to participate in a bonus or rights issue, prior to the vesting of the SAR. Further details regarding the SARs (including when they will lapse) are contained in the Remuneration Report commencing on page 32 of this report and in note 7.2 to the Financial Report.

SHARES ISSUED ON THE EXERCISE OF OPTIONS AND ON THE VESTING OF SARS

Options

No options were exercised during the year ended 31 December 2019 or up to the date of this report.

Vested SARs

The following ordinary shares of Santos Limited were allocated during the year ended 31 December 2019 on the vesting of SARs granted under the Santos Employee Equity Incentive Plan (SEEIP) (formerly known as the Santos Employee Share Purchase Plan (SESPP)) and ShareMatch Plan (ShareMatch). No amount is payable on the vesting of SARs and accordingly no amounts are unpaid on any of the shares.

Date SARs granted	Number of shares issued
31 August 2016	560,560
19 April 2017	80,571
29 September 2017	15,372
9 July 2018	10,532
14 November 2018	7,650
24 July 2019	1,636
	676,321

Since 31 December 2019, no ordinary shares of Santos Limited have been allocated on the vesting of SARs granted under the SEEIP and ShareMatch.

DIRECTORS' AND SENIOR EXECUTIVES' REMUNERATION

Details of the Company's remuneration policies and the nature and amount of the remuneration of the Directors and senior management (including shares, options and SARs granted during the financial year) are set out in the Remuneration Report commencing on page 32 of this report and in notes 7.2 and 7.3 to the Financial Report.

Remuneration Report

MESSAGE FROM YASMIN ALLEN, PEOPLE AND REMUNERATION COMMITTEE CHAIR

Dear fellow Shareholders,

On behalf of the Board, I am pleased to introduce Santos' Remuneration Report for 2019.

The purpose of this introductory message is to summarise key remuneration outcomes for 2019 and the link to Santos' performance. I also want to flag the outcomes of a review of Santos' Executive Reward Strategy and some changes to reward arrangements for 2020 onwards, which will further align Executive reward at Santos with performance and shareholder interests.

Your Company has performed very strongly in 2019 including the delivery of:

- improved safety and environmental performance;
- record annual production, sales volumes and sales revenue;
- strong onshore performance driven by the continued focus on our disciplined operating model;
- successful appraisal of the Dorado field offshore Western Australia adding significant resources;
- record free cash flow and lower production costs; and
- announcement of the acquisition of ConocoPhillips' northern Australia and Timor-Leste assets.

Following assessment of the Company's performance in 2019, the Board has approved a Company Scorecard result of 120% of its target performance level out of a possible 167%. This has been used to determine Short-Term Incentive (STI) awards. Further detail on the KPIs and performance assessment is available in Table 3 on page 41.

Long-Term Incentive (LTI) awards granted in 2016 were tested following the end of their four-year performance period at 31 December 2019. The Company delivered Total Shareholder Return outcomes which placed it in the top quartile against both the ASX100 and the S&P Global 1200 Energy Index comparator groups. The Company also achieved Free Cash Flow Breakeven Point of US$23.72 in 2019, compared to the circa US$50/boe at the time of grant and a Return on Average Capital Employed of 139% of Weighted Average Cost of Capital. As a result 100% of the 2016 LTI awards vested. This followed eight consecutive years of the LTI not vesting and reflects the strong turnaround achieved since 2016.

Realised Remuneration outcomes for 2019 are shown in Table 11 on page 47. Realised Remuneration includes the value of equity-related awards which vested during the year, valued at the share price on the vesting date, which includes the value of share price appreciation between award and vesting.

Nearly three-quarters (72%) of the CEO's Realised Remuneration for 2019 as disclosed in Table 11 resulted from performance related equity awards which vested in full. The value at vesting included significant share price appreciation between the awards being granted (in 2016 in respect of the LTI and 2018 in respect of the Deferred 2017 STI) and vesting, demonstrating strong alignment with shareholders.

The Board believes that total remuneration outcomes are aligned with the Company's performance in 2019 and the significant value which has been generated for shareholders.

EXECUTIVE REWARD STRATEGY REVIEW AND CHANGES TO REWARD ARRANGEMENTS FOR 2020 ONWARDS

A holistic review of the Company's Reward Strategy was conducted during 2019. The review identified several opportunities to strengthen the alignment of Executives and shareholders and further drive a performance culture which will be implemented for 2020 including the following:

- A Minimum Shareholding Requirement has been introduced which will require the CEO and Executive Vice Presidents to build over a five-year period and then maintain, a minimum shareholding of Santos shares. The minimum shareholding is set as a fixed number of shares which for the CEO is approximately three times annual Total Fixed Remuneration (TFR) and for Executive Vice Presidents is approximately one and a half times the average TFR. These levels of minimum shareholdings are significant, compared to typical market practice.
- The proportion of pay at risk and linked to performance will be increased within the overall mix. The target fixed pay positioning for Executive remuneration will be set below market median, with incentives set at a level that delivers competitive total remuneration contingent on the delivery of Santos' disciplined operating model and the challenging performance targets on the Company Scorecard and Long-Term Incentive awards. The impact of these changes is described further in section 4 of the Remuneration Report.
- The Free Cash Flow Breakeven Point (FCFBP) and Return on Average Capital Employed (ROACE) performance conditions attaching to 2020 LTI awards are being made more challenging to reflect the significant improvements in company performance realised in recent years. For the 2020 LTI award, the FCFBP at which full vesting is achieved is being reduced from US$35/boe to US$30/boe. Threshold vesting of the ROACE component will only occur if ROACE is more than 110% of Weighted Average Cost of Capital (it was 100% for the 2019 awards) and 100% vesting will only be achieved if ROACE is equal to or greater than 140% of Weighted Average Cost of Capital (compared to 120% for the 2019 awards).

Thank you for taking the time to review our Remuneration Report.

Yasmin Allen
Chair, People and Remuneration Committee

The Directors of Santos present this Remuneration Report for the consolidated entity for the year ended 31 December 2019. The information provided in this Report has been audited as required by section 308(3C) of the *Corporations Act 2001* (Cth) (Corporations Act) and forms part of the Directors' Report.

The Remuneration Report outlines the Company's key remuneration activities in 2019 and remuneration information for Key Management Personnel (KMP) of the consolidated entity for the purposes of the Corporations Act and Accounting Standards, as set out below.

Remuneration is disclosed in US$ (unless otherwise indicated) with all remuneration components having been converted from A$ to US$ using an average rate of $0.6880 for 2019 and $0.7475 for 2018. This means year-on-year changes in remuneration amounts when stated in US$ are partly attributable to exchange rate variations and not necessarily a change in the amount paid in A$.

Report structure

The Remuneration Report is set out in the following sections

1. KMP covered by the Remuneration Report and summary of 5-year Company performance
2. Remuneration governance
3. Executive remuneration approach
4. Remuneration mix
5. Short-Term Incentive framework and 2019 outcomes
6. Long-Term Incentive and vesting outcomes
7. Realised Remuneration (non-IFRS and non-audited)
8. Statutory remuneration for Executive KMP
9. KMP equity
10. Key terms of Executive KMP employment contracts
11. Non-executive Director (NED) Remuneration

Remuneration Report
continued

1. KMP COVERED BY THE REMUNERATION REPORT AND SUMMARY OF 5-YEAR COMPANY PERFORMANCE

KMP are the personnel who had authority and responsibility for planning, directing and controlling the activities of the Company's major financial, commercial and operating divisions during 2019. The KMP for 2019 are set out in Table 1.

Table 1: 2019 Key management personnel

Executive KMP	Non-executive Directors
Kevin Thomas Gallagher, Managing Director and Chief Executive Officer (CEO)	Keith William Spence, Independent non-executive Chair
David Maxwell Banks, EVP Onshore Oil and Gas	Yasmin Anita Allen, Independent non-executive Director
Brett Anthony Darley, EVP Offshore Oil and Gas	Guy Michael Cowan, Independent non-executive Director
Anthony Myles Neilson, Chief Financial Officer (CFO)	Hock Goh, Independent non-executive Director
Vincent Santostefano, EVP Production Operations	Yu Guan, non-executive Director[3]
Petter Undem, EVP Marketing, Trading and Commercial[1]	Vanessa Ann Guthrie, Independent non-executive Director
Brett Kenneth Woods, EVP Developments	Peter Roland Hearl, Independent non-executive Director
Philip Ambrose Byrne, EVP Marketing, Trading and Commercial[2]	Janine Marie McArdle, Independent non-executive Director[4]
	Eugene Shi, non-executive Director[5]

1 Petter Undem commenced as KMP on 5 August 2019
2 Philip Byrne ceased being KMP on 4 August 2019
3 Yu Guan commenced as KMP on 3 May 2019
4 Janine McArdle commenced as KMP on 23 October 2019
5 Eugene Shi ceased being KMP on 2 May 2019

Table 2 sets out the Company's performance over the past five years in respect of key financial and non-financial indicators and the STI and LTI awards during this period.

Table 2: Key metrics of Company performance 2015 – 2019

	2015	2016	2017	2018	**2019**
Injury frequency:					
Total recordable case frequency	2.8	2.2	3.5	4.5	**4.3**
Lost time injury rate[1]	0.5	0.4	0.4	0.6	**0.6**
Moderate harm rate[2]	-	-	-	0.4	**0.3**
Production (mmboe)	57.7	61.6	59.5	58.9	**75.5**
Reserve replacement rate – 2P organic (one-year average %)	0	19	62	69	**56**
Net profit/(loss) after tax[3] (US$m)	(1,953)	(1,047)	(360)	630	**674**
Dividends per ordinary share (cents)	A 20	0	0	US 5	**US 11**
Share price – closing price on last trading day of year[4] (A$)	3.68	4.02	5.45	5.48	**8.18**
Company Scorecard result expressed as % of target of 100%	89.3%	115.3%	118.0%	138.8%	**120.0%**
LTI performance (% vesting) – shown against final year of performance period	0%	0%	0%	0%	**100%**

1 The outcome for 2018 and prior years is presented as a 3-year average. Annual performance reporting applied in 2019.
2 Moderate harm rate was introduced in 2018 as the Company adopted a harm-based approach, in addition to lost time reporting for injury classification.
3 2015 Net Profit After Tax (NPAT) figures have been translated from A$ to US$ at an applicable exchange rate for the year for comparison purposes following the change in the Company's presentation currency in 2016.
4 The closing share price on the last trading day of 2014 was A$7.18.

2. REMUNERATION GOVERNANCE

The People and Remuneration Committee (Committee) oversees and formulates recommendations to the Board on the remuneration policies and practices of the Company generally (including the remuneration of non-executive Directors, the CEO and Senior Executives) and reviewing whether they are aligned to the Company's values, strategic direction and risk appetite.

The Committee operates under a Charter approved by the Board and regularly conducts a review of its performance, structure, objectives and purpose. The Committee Charter is available on the Company's website at www.santos.com.

External advisors and remuneration advice

The Board has adopted a protocol for engaging and seeking advice from independent remuneration consultants. In 2019, some remuneration benchmarking exercises were undertaken to provide information on market remuneration levels for KMP, however no remuneration recommendations were provided by remuneration consultants.

Remuneration Report
continued

3. EXECUTIVE REMUNERATION APPROACH

The fundamental purpose of Santos' remuneration policy is to develop and maintain an effective remuneration framework which supports and reinforces the ongoing successful execution of the Transform, Build, Grow business strategy and the delivery of Vision 2025. The following diagram includes adjustments to the remuneration approach which are applicable from 2020.

Remuneration policy objective

Attracting, motivating and retaining talented and qualified Executives	Focusing Executives to deliver superior performance	Align Executive and shareholder interests

Enabled through the Company's Executive remuneration framework

Total Fixed Remuneration (TFR)
(base salary plus superannuation)

- Remuneration levels are market-aligned against similar roles in comparable companies.
- Individual remuneration is set with regard to the Executive's role and responsibilities and also the individual's experience and competencies.
- The target market position for fixed remuneration for Executives is below market median in line with the Company's cost focus.

Short-term incentive (STI)

- A significant component of remuneration is "at risk". The value to the Executive is dependent on the Company and individual meeting challenging targets.
- Short-Term Incentive levels are set to ensure that total compensation appropriately rewards the delivery of Santos' operating model and the increasingly demanding STI scorecard metrics.
- Short-term incentive outcomes are based on a balanced scorecard of annual performance measures aimed at delivering challenging outcomes for the Company across a range of financial, safety, environment, growth and culture KPIs.
- Half (50%) of Executives' STI award is delivered as cash following the end of the performance year.
- The other 50% is delivered in equity, subject to a further two-year restriction period.

Long-term incentive (LTI)

- Long-term incentives are delivered as Share Acquisition Rights (SARs).
- Vesting of long-term incentives is contingent on achieving performance hurdles that are aligned with creation of long-term shareholder value (Relative Total Shareholder Return, Return On Average Capital Employed and the generation of strong stable cash flows through the oil price cycle).
- Executives cannot hedge equity incentives that are unvested or subject to restrictions. These incentives are also subject to clawback.

4. REMUNERATION MIX

The remuneration mix indicates the extent to which Executive remuneration is:

- fixed and not at risk;
- variable and at risk.

The charts below show the remuneration mix for the CEO and Senior Executives at the following performance levels:

- Minimum comprises TFR for the year only;
- Target comprises TFR for the year, STI at the target level (provided half in cash and half in deferred equity vesting two years after the end of the performance year) and target LTI. LTI awards are allocated on a face value basis. Vesting of awards is subject to the achievement of the relevant performance conditions. The target LTI values in the charts below are shown on a "fair value" basis by applying a 40% discount to the face value of the award; and
- Maximum comprises TFR, STI at the maximum level (provided half in cash and half in deferred equity vesting two years after the end of the performance year) and the maximum LTI being the face value of the award.

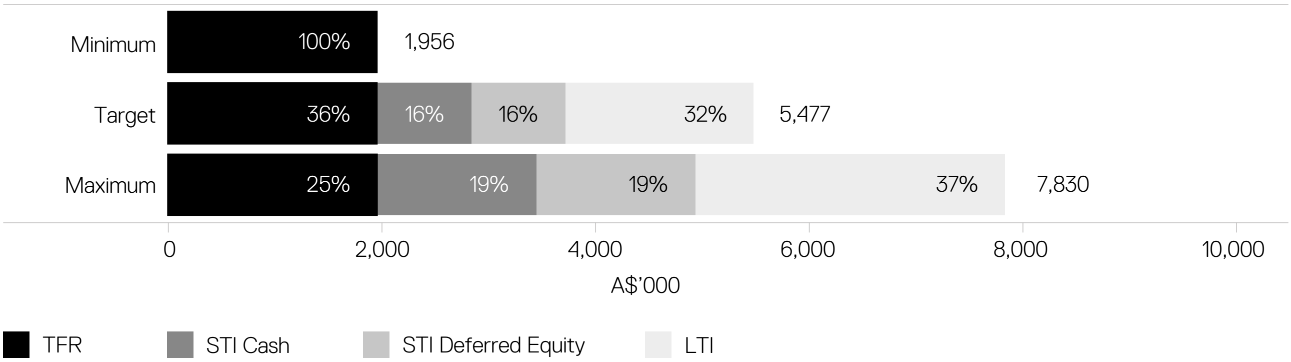
The value of the STI deferred equity award and LTI does not include the impact of future share price movements or dividend payments.

The actual remuneration mix in any year varies with actual performance and incentive outcomes.

2019 CEO remuneration quantum and mix

The remuneration quantum and mix for the CEO at minimum, target and maximum performance for 2019 is shown in Chart 1.

Chart 1: 2019 CEO remuneration quantum and mix



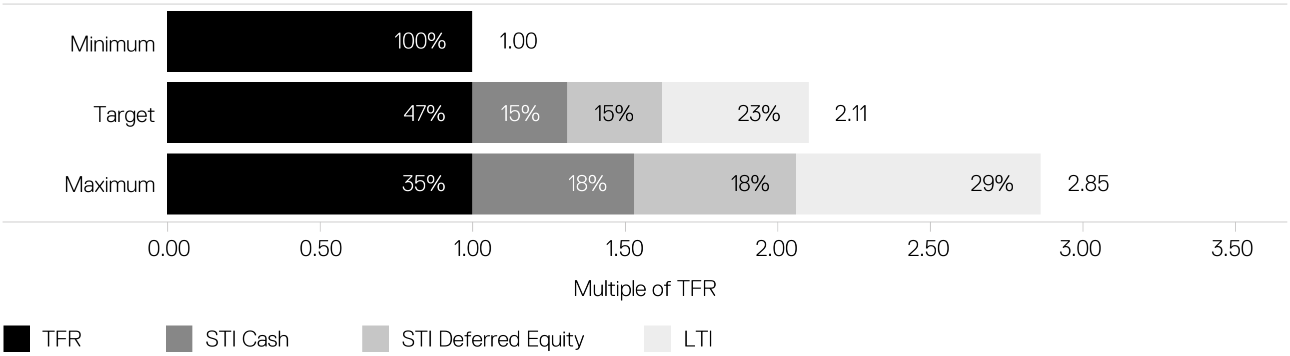
- Minimum: 2019 TFR of A$1,956,150.
- Target: 2019 TFR, STI at the target level (a cash award of 45% of TFR and a deferred equity award of 45% of TFR) and target LTI of 90% of TFR.
- Maximum: 2019 TFR, STI at the maximum level (a cash award of 75% of TFR and a deferred equity award of 75% of TFR) and the maximum LTI award of 150% of TFR.

Remuneration Report
continued

2019 Senior Executive remuneration mix and quantum

The remuneration quantum and mix for Senior Executives at minimum, target and maximum performance for 2019 is shown in Chart 2.

Chart 2: 2019 Senior Executive remuneration quantum and mix



Quantum is expressed as a multiple of TFR as Senior Executives have different TFRs.

- Minimum: 2019 TFR only.
- Target: 2019 TFR, STI at the target level (a cash award of 31.5% of TFR and a deferred equity award of 31.5% of TFR) and target LTI award of 48% of TFR.
- Maximum: 2019 TFR, STI at the maximum level (a cash award of 52.5% of TFR and a deferred equity award of 52.5% of TFR) and the maximum LTI award of 80% of TFR.

The STI opportunity in Mr Banks' 2019 incentive structure differs from other Senior Executives. This is set out in Table 5.

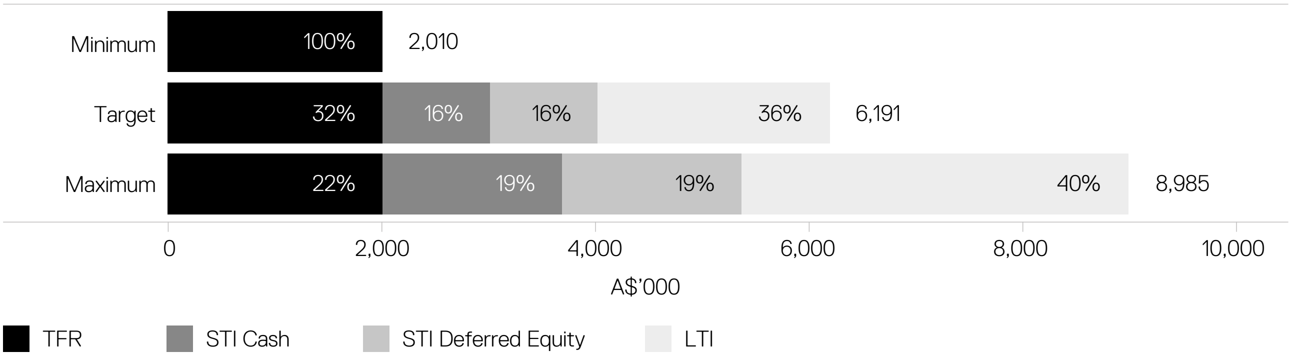
Changes to remuneration mix for 2020

Following the Executive reward strategy review conducted in 2019 the incentive arrangements for the CEO and Senior Executives were recalibrated to place a greater proportion of Executive remuneration at risk and aligned with Company performance.

2020 CEO remuneration quantum and mix

The remuneration quantum and mix for the CEO at minimum, target and maximum performance for 2020 is shown in Chart 3.

Chart 3: 2020 CEO remuneration quantum and mix

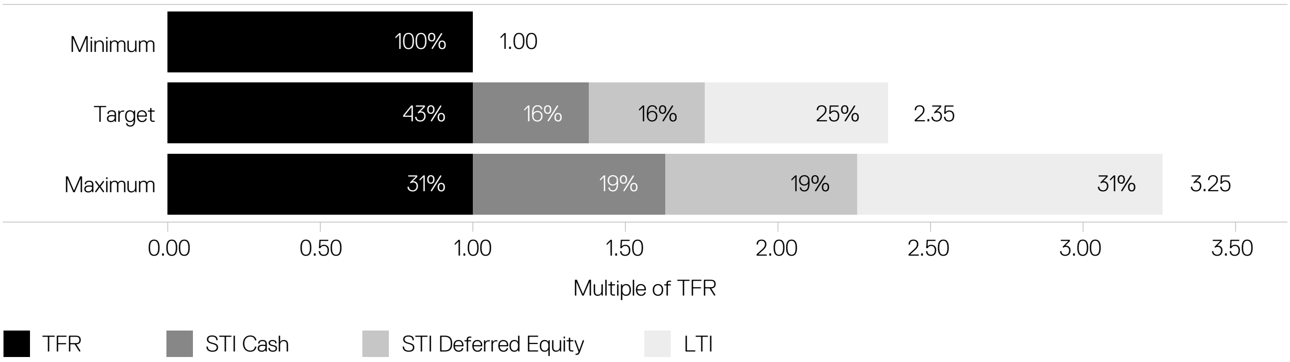


- Minimum: 2020 TFR of A$2,010,000.
- Target: 2020 TFR, STI at the target level (a cash award of 50% of TFR and a deferred equity award of 50% of TFR) and target LTI of 108% of TFR.
- Maximum: 2020 TFR, STI at the maximum level (a cash award of 83.5% of TFR and a deferred equity award of 83.5% of TFR) and the maximum LTI award of 180% of TFR.

2020 Senior Executive remuneration quantum and mix

The remuneration quantum and mix for Senior Executives at minimum, target and maximum performance for 2020 is shown in Chart 4.

Chart 4: 2020 Senior Executive remuneration quantum and mix



Quantum is expressed as a multiple of TFR as Senior Executives have different TFRs

- Minimum: 2020 TFR only.
- Target: 2020 TFR, STI at the target level (a cash award of 37.5% of TFR and a deferred equity award of 37.5% of TFR) and target LTI of 60% of TFR.
- Maximum: 2020 TFR, STI at the maximum level (a cash award of 62.5% of TFR and a deferred equity award of 62.5% of TFR) and the maximum LTI award of 100% of TFR.

Remuneration Report
continued

5. SHORT-TERM INCENTIVE FRAMEWORK AND 2019 OUTCOMES

The STI framework aligns Executive interests with the delivery of the operating model and the Company's challenging short-term operational and financial goals for the year. Goals are chosen to drive outcomes and behaviours that support safe operations and the delivery of the business outcomes which will delight shareholders and lead to long-term growth in shareholder value.

STI award is based on performance for a one-year period. Half (50%) of the award is provided as deferred equity, restricted for two years. Deferral provides increased alignment with shareholders and encourages longer-term thinking given the equity exposure.

Deferred STI is forfeited if the Executive leaves the Company during the vesting period due to resignation or summary dismissal (including for fraud or misconduct). STI awards are also subject to clawback.

The Company's annual performance is assessed using the Company Scorecard. The Scorecard contains a balance of challenging financial and operational KPIs which support the execution of the business strategy and which drive business performance. In 2019, Scorecard KPIs covered a range of areas including production, operating efficiency, safety, growth and culture.

The measures include lagging indicators to assess the Company's past performance, as well as forward-looking indicators to ensure the Company is positioning itself effectively for future growth. The Board believes that this Scorecard is balanced and focuses the CEO and Senior Executives on achieving the key outcomes necessary to deliver stronger returns to shareholders.

The STI award is subject to a free cash flow gate that requires that the Company is free cash flow positive for an STI award to be made, regardless of performance against all other KPIs. This is aligned with the Company's position to its shareholders under the Dividend Policy which is to deliver strong cash flows through the oil price cycle.

The actual STI pool for the year is set by reference to the Company Scorecard result (2019 results are outlined in Table 3 on page 41). The Scorecard result is generally applied as a percentage of the target pool size (subject to the application of any Board discretion).

The Company Scorecard is comprised of a range of KPIs with set threshold, target and stretch goals agreed with the Board at the start of the performance year. The relative importance of each KPI is determined and assigned a proportionate weighting of the total Scorecard result.

Each KPI receives a percentage score relative to target performance, as follows:

- 0% for performance below threshold,
- 67–100% for performance between threshold and target,
- 100–167% for performance between target and stretch, and
- 167% for performance at or above stretch.

The KPI weightings are then applied to these scores to derive a rating for each KPI. The overall Scorecard result is a weighted average of KPI scores.

The 2019 Scorecard has a maximum result of 167% of target. This maximum result can only be achieved for exceptional Company performance. The Board believes the above method of assessment is rigorous and provides a balanced assessment of the Company's performance.

The People and Remuneration Committee formally assesses the Company's performance against the overall Scorecard at the end of each financial year, and this forms the basis of a recommendation to the Board.

The CEO assesses Senior Executive performance and determines STI award proposals which are then formally endorsed by the People and Remuneration Committee. The Board assesses the CEO's performance and determines his STI award.

Performance against 2019 Company Scorecard

The Company's performance against the 2019 Company Scorecard, as assessed by the Board resulted in an outcome of 120% of target. This outcome is used to set the available STI pool. Individual STI outcomes will depend on Executives' contractual entitlements and individual performance during the year, as detailed in Table 5 on page 43.

Table 3 provides further details of Scorecard KPIs and the Company's performance against them.

Table 3: 2019 Company Scorecard – KPI performance

	KPI	Rationale	Performance	Result (relative to target of 100%)
Production (30%)	**Production (mmboe) (adjusted for disposals)**	Production is critical to the Company's profitability which is a key measure of the Company's overall performance, underpinning annual earnings and cash flow.	Production of 75.5 mmboe delivered at Target performance.	100%
Cost (20%)	**Unit production cost (US$/boe) (adjusted for disposals)**	Included to ensure that the Company maintains its cost and efficiency focus for every unit of production	Unit Production Cost US$7.24/boe exceeds Stretch performance.	167% (capped)
	Free cash flow breakeven point (FCFBP) (US$/bbl)	Included to ensure continual reduction in the Company's cost base and to reinforce Santos' disciplined operating model.	Free Cash Flow Breakeven Point US$23.72/bbl (including impact of hedges) exceeds Stretch performance.	
Reserves & Resources (20%)	**Company 2P reserves life (years)**	A viable reserves position and track record for maintaining and growing reserves life ensures the Company is a more attractive and sustainable business.	Company 2P Reserves Life is 13 years and below Threshold.	70%
	Cooper 2P + 2C reserves & resources life (years)		Cooper Reserves and Resources Life is 23 years, which is between Target and Stretch performance.	
Safety & Environment (30%)	**Personal safety** Measured by the number of moderate harm injuries per million hours worked over the 12-month period.	The Company is committed to providing a workplace without injury or illness.	Moderate harm rate of 0.28 and no severe harm incidents yielded stretch performance. Moderate harm is defined as temporary disablement or medium-term impairment. Lost time injury rate was 0.57.	167% (capped)
	Process safety & environment Measured by the number of Tier 1 and Tier 2 loss of containment of hydrocarbon incidents. Measured by the number of environmental incidents of moderate or greater consequence.	The integrated target for Environment and Process Safety represents the Company's commitment to reducing the number of process safety-related incidents with potential for high impact consequences, and the occurrence of significant environmental incidents.	There were four Tier 1 and four Tier 2 loss of containment incidents, which is a significant improvement on 2018. There were no environmental incidents of moderate or greater consequence. Combined, the outcome exceeds Stretch performance.	

Remuneration Report
continued

	KPI	Rationale	Performance	Result (relative to target of 100%)
Sustainability (10%)	**Community**	The Company aims to make meaningful, positive long-term contributions in the communities it operates.	Community sentiment remains strong in the Port Bonython, Cooper Basin, Roma and Gladstone communities, with areas requiring the greatest improvement being Narrabri, Exmouth/Karratha and Darwin. Threshold performance was achieved.	
	Emissions	The Company is held to account on emissions to air, land and water within targets and transparent reporting, in line with the recommendations of the G20 Task Force on Climate-related Financial Disclosures.	Projects implemented within operations resulting in 1.5% (101 $ktCO_2e$) emissions reduction. FEED entry has been achieved for Carbon Capture and Storage, a step change emissions reduction project. Stretch performance was achieved.	93%
	Culture and capability	Included to reinforce the importance of cultural improvement and employee engagement as well as the development of capability to support future business growth.	Capability plans were developed for each of the business and corporate functions. The program for leadership, culture and diversity was agreed and the 2019 employee survey was delivered. This resulted in Threshold performance.	
	Continuous improvement	Included to ensure business activity complies within the Company's policies, procedures and management standards, and continuous improvement thereof.	Internal audits rendered an outcome at Threshold performance.	

2019 STI OUTCOME FOR THE CEO

The CEO's performance is primarily assessed using the Company Scorecard. In determining the CEO's final STI payment for 2019, the Board also considered outcomes outside of the Scorecard and the impact of the CEO's personal performance and leadership on corporate activities which have grown shareholder value, future proofed the business, and improved leadership, culture and stakeholder engagement.

Key elements that comprise the CEO's performance include:

- the successful integration of Quadrant Energy into Santos and the realisation of significant value accretive synergies;
- strong stakeholder engagement and industry thought leadership; and
- improvement of organisational capability and safety leadership.

The STI amount for 2019 represents an outcome which is 132% of the target amount (79% of maximum STI opportunity). This represents a moderated amount which is slightly above the Company Scorecard outcome of 120% of target. This delivers an STI amount for 2019 of US$1,598,847, of which half will be awarded as cash, and the other half will be awarded as Deferred Shares, restricted for two years.

2019 STI outcomes for Senior Executives

The Company performance result based on the Company Scorecard outcomes outlined above sets the size of the pool. Individual allocations of the pool are then modified to reflect individual performance and demonstration of the Santos Values.

The Company's performance against the 2019 STI Scorecard, as assessed by the Board, resulted in a score of 120% of target (72% of maximum).

The 2019 STI outcomes for the Senior Executives ranged from 89% to 150% of target (53% to 90% of their maximum opportunity), depending on their individual performance contribution. Half (50%) of STI outcomes will be delivered as cash, and the other half (50%) will be awarded as Restricted Shares, restricted for two years.

Further detail of each individual Senior Executive's outcome is provided in Table 5 on page 43.

All Senior Executives had KPIs relating to environment, health, safety, culture and leadership. Role-specific KPIs by Senior Executive are set out in Table 4 below.

Table 4: Senior Executive role-specific KPIs

Note, some KPIs contain commercially sensitive information that cannot be detailed here.

Senior Executive	KMP Role	Role-specific KPIs
DM Banks	EVP Onshore Oil and Gas	• Production volume and cost • Development cost • 2C to 2P conversion rate • Wells drilled and connected • Growth strategy implementation • Achieved emission redirection targets
BA Darley	EVP Offshore Oil and Gas	• Production volume and cost • WA and NT Capex projects • Transition of Quadrant to Santos • Achieved emission redirection targets
AM Neilson	Chief Financial Officer	• Corporate cost reduction • Balance sheet improvement • Capital management • Finance and supply chain systems and structure • Investor relations outcomes
V Santostefano	Chief Operations Officer	• Operated processing costs • Low-cost operations and maintenance service delivery • Production support and optimisation
BK Woods	EVP Developments	• Major Growth Project production targets • Resource to reserves maturation • Operational cost efficiency • Progressed Energy Solutions emission reduction project including Carbon Capture and Storage
P Undem From 5 August 2019	EVP Marketing, Trading and Commercial	• Sales (LNG, Domestic Gas and Liquids) • LNG trading • Improvements in commercial arrangements
PA Byrne From 1 January to 4 August 2019	EVP Marketing, Trading and Commercial	• Sales (LNG, Domestic Gas and Liquids) • LNG trading • Improvements in commercial arrangements

Table 5 sets out the individual STI outcomes for Senior Executives in 2019, as a percentage of their STI target and maximum STI opportunity.

Table 5: Senior Executive 2019 STI outcomes

	Target 2019 STI (% of TFR)	Actual 2019 STI (% of TFR)	2019 STI as a % of Maximum	% of Maximum STI forfeited
Directors				
KT Gallagher	90%	118.8%	79.2%	20.8%
Senior Executives				
DM Banks	54%	81.0%	90.0%	10.0%
BA Darley	63%	79.4%	75.6%	24.4%
AM Neilson	63%	90.7%	86.4%	13.6%
V Santostefano	63%	71.8%	68.4%	31.6%
P Undem[1]	63%	30.2%	57.6%	42.4%
BK Woods	63%	75.6%	72.0%	28.0%
Former Senior Executive				
PA Byrne	63%	55.9%	53.3%	46.7%

1 Mr Undem's 2019 STI award is pro-rated for six months based on his appointment terms.

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6. LONG-TERM INCENTIVE AND VESTING OUTCOMES

The LTI aligns the interests of Senior Executives with the creation of long-term shareholder value.

The relative TSR performance criteria provide for vesting when there are strong shareholder returns against relevant peer groups. The FCFBP and ROACE measures vest when the Company demonstrates underlying operational efficiency which generates free cash flow throughout the oil price cycle, and disciplined use of capital to generate shareholder returns over a four-year period.

LTI amounts are based on a set percentage of the Executive's TFR allocated on a face value basis and provided in the form of Share Acquisition Rights (SARs). SARs are a conditional entitlement to a fully paid ordinary share at zero price, subject to satisfaction of the relevant performance conditions.

If SARs vest, shares are automatically allocated to the Executive. Nothing is payable by Executives if SARs vest. Trading in these shares is subject to compliance with the Company's Securities Dealing Policy and the Minimum Shareholding Requirement.

The Board has discretion to settle the value of vesting SARs in cash.

Share Acquisition Rights have a four-year performance period. This period represents an appropriate balance between providing a genuine and foreseeable incentive to Senior Executives and fostering a long-term view of shareholder interests.

Vesting of the 2019 LTI is assessed against four equally weighted performance measures described in Table 6.

Table 6: LTI performance measures and rationale

Weighting	Performance measures	Description and Rationale
25%	Relative TSR measured against companies of the ASX100	The calculation of TSR takes into account share price and dividend yield and is therefore a robust and objective measure of shareholder returns. TSR continues to effectively align the interests of individual Senior Executives with that of the Company's shareholders by motivating Senior Executives to achieve superior shareholder outcomes relative to Santos' competitors for investor capital and its energy sector peers.
25%	Relative TSR measured against companies of the S&P Global 1200 Energy Index (GEI)	
25%	Free Cash Flow Breakeven Point (FCFBP)	FCFBP is the US$ oil price at which cash flows from operating activities equal cash flows from investing activities, as published in the Company's financial statements. As the aim of the performance hurdle is to measure the performance of the underlying business, the Board has discretion to adjust the FCFBP for individual material items including asset acquisitions and disposals that may otherwise distort the measurement.
25%	Return on Average Capital Employed (ROACE) compared with weighted average cost of capital (WACC)	ROACE is measured as the underlying earnings before interest and tax (EBIT) divided by the average capital employed, being shareholders' equity plus net debt, as published in the Company's financial statements. The use of ROACE as a performance measure aligns Senior Executives with shareholder interests by focusing on the efficient and disciplined use of capital to generate shareholder returns.

The vesting scales set out in the tables below apply to both the CEO's and Senior Executives' LTI performance grants. SARs that do not vest upon testing of the performance condition lapse. There is no re-testing of the performance condition.

Table 7: Relative TSR against the ASX100 and S&P GEI

TSR percentile ranking	% of grant vesting
Below 51st percentile	0%
51st percentile	50%
straight line pro-rata vesting in between	
76th percentile and above	100%

Table 8: Free Cash Flow Breakeven Point (FCFBP)

FCFBP	% of grant vesting
Above US$40/bbl	0%
Equal to US$40/bbl	50%
straight line pro-rata vesting in between	
Equal to or below US$35/bbl	100%

When the FCFBP hurdle was introduced in 2016, Santos' FCFBP was approximately US$50/bbl. There was concern from some shareholders that this KPI could result in under investment in onshore drilling activity leading to further production decline and reserves liquidation. However, over the past four years Santos has increased investment in drilling across Queensland and Cooper Basin onshore operations year on year and in 2019 achieved a record drilling activity level of more than 500 wells drilled. Production has also increased in Queensland and the Cooper basin during this period with resource and reserves growth also achieved in the Cooper basin.

FCFBP being a non-market measure is tested and audited internally and all results externally audited as part of the Annual Report release. The Board has discretion to adjust the results on this measure, based on the agreed methodology.

Table 9: Return On Average Capital Employed (ROACE)

ROACE	% of grant vesting
Below 100% of WACC	0%
Equal to 100% of WACC	50%
straight line pro-rata vesting in between	
Equal to or above 120% of WACC	100%

ROACE being a non-market measure is tested and audited internally and all results externally audited as part of the Annual Report release. The Board has discretion to adjust the results on this measure, based on the agreed methodology.

Changes to vesting schedules for 2020 awards

For 2020 LTI awards, the stretch level to achieve full vesting of the FCFBP component will be set at equal to or below US$30/bbl. This better reflects the significantly improved cost base of the business but recognises that there is an optimal level of investment required to sustain the business.

In addition, the ROACE targets will also be lifted. The gate-opener to achieve any vesting will be increased so that Santos' ROACE must be at least equal to 110% of WACC and if that measure is satisfied, then vesting will be determined using the scale in Table 10 below. Full vesting of the ROACE component will be achieved for an outcome of equal to or greater than 140% of WACC, compared to equal to or greater than 120% of WACC for the 2019 award.

Table 10: Return On Average Capital Employed (ROACE) for 2020 awards

ROACE percentile ranking	% of grant vesting
Santos ROACE <= 110% of WACC	0%
Santos ROACE > 110% of WACC then:	50%
straight line pro rata vesting in between	
Relative ROACE >= 140% of WACC	100% vesting

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Treatment on termination and change of control

Generally, if an Executive resigns or is summarily dismissed, their unvested SARs will lapse. In all other circumstances (including death, total and permanent disability, redundancy and termination by mutual agreement), unvested SARs remain on foot and will vest or lapse in accordance with their original terms, unless the Board determines otherwise.

Where there is a change in control, the Board may determine whether, and the extent to which, SARs may vest.

Clawback

The share plan rules give the Company the discretion to lapse or forfeit unvested equity awards under the STI or LTI programs, and claw back any vested shares or cash paid in certain circumstances.

These circumstances include dishonest or fraudulent conduct, breach of material obligations, miscalculation or error, a material misstatement or omission in the accounts of a group company or events which require re-statement of the group's financial accounts in circumstances where an LTI or deferred STI award would not otherwise have been granted or would not have vested. This is in addition to any rights the Company has under the plan rules and general legal principles to seek to recover payments made in error.

Securities hedging

Under the Company's Securities Dealing Policy, Directors, Executives and employees cannot enter into hedging or other financial arrangements which operate to limit the economic risk associated with holding Santos securities prior to the vesting of those securities or while they are subject to a holding lock or restriction on dealing.

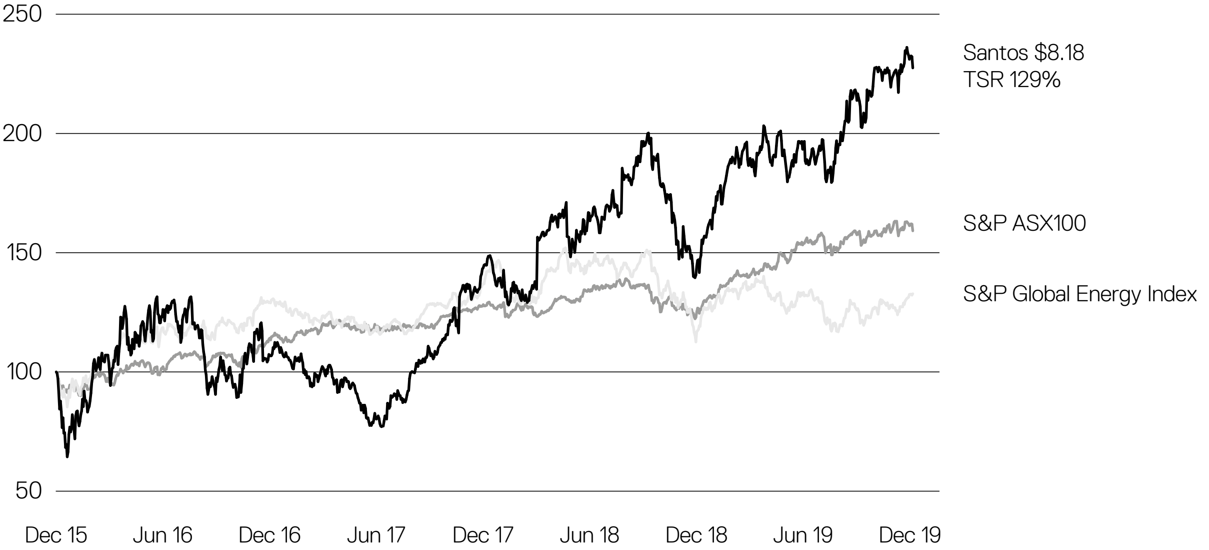
Performance results for the 2016 LTI award

The 2016 LTI award was tested over the four-year performance period 1 January 2016 to 31 December 2019.

For the 2016 LTI grant, a base share price of A$3.85 was used instead of the 2015 year-end share price which was lower. This was the price shareholders paid to exercise their entitlements under the accelerated pro-rata renounceable rights issue announced by the Company on 9 November 2015. The CEO who joined the Company in February 2016 agreed to adopt the same starting share price for alignment with the Executives.

Santos achieved an adjusted Total Shareholder Return of 129% over the performance period, placing it at the 79th percentile against the ASX100 comparator group and at the 96th percentile against the S&P Global 1200 Energy Index comparator group.

Chart 5: TSR Performance against ASX100 and S&P Global 1200 Energy Index



Santos' FCFBP for the FCFBP component was US$23.72 (including the impact of hedging). ROACE was 139% of WACC. This means 100% of each of these components has vested.

As a result, the 2016 LTI awards vested in full. This followed eight consecutive years of the LTI not vesting.

7. REALISED REMUNERATION

Table 11 shows Realised Remuneration for the CEO and Senior Executives in 2018 and 2019.

Realised Remuneration differs from statutory remuneration reported in Table 12 and other statutory tables which are prepared in accordance with the Corporations Act and Accounting Standards which require a value to be placed on share-based payments at the time of grant, and to be reported as remuneration, even though the CEO and Senior Executives may ultimately not realise any actual value from the share-based payments.

The Realised Remuneration table is shown in Australian dollars (the currency in which remuneration is paid), whereas the statutory tables are shown in US dollars which is the Company's reporting currency. Showing remuneration in Australian dollars removes the impact of exchange rate movements.

Realised Remuneration has been calculated as:

- TFR paid in the year;
- Cash STI awards earned in respect of performance for the year (albeit paid after the end of the year);
- Deferred STI awards from prior years which vested in the year; and
- LTI SARs which were tested at 31 December in the year.

Vesting deferred STI awards and SARs are valued at the closing share price on 31 December of the respective year. Termination payments and leave movements are not included in the table below.

Table 11: Realised Remuneration (non-IFRS and non-audited)

	Year	TFR[1] A$	Cash STI[2] A$	2017 Deferred STI that vested in 2019[3] A$	LTI[4] A$	Other vested grants A$	Other[5] A$	Total A$
Executive Director								
KT Gallagher Managing Director and Chief Executive Officer	2019	1,956,150	1,161,953	766,752	7,372,798	–	6,069	11,263,722
	2018	1,890,000	1,175,600	608,488	–	851,246	6,082	4,531,416
Senior Executives								
DM Banks EVP Onshore Oil & Gas	2019	715,755	290,600	–	–	–	–	1,006,355
	2018	58,333	22,300	–	–	–	–	80,633
BA Darley EVP Offshore Oil & Gas	2019	840,000	333,400	–	–	–	11,614	1,185,014
	2018	77,000	31,200	–	–	–	1,094	109,294
AM Neilson Chief Financial Officer (CFO)	2019	853,771	408,200	280,280	–	–	–	1,542,251
	2018	822,500	347,800	–	–	–	–	1,170,300
V Santostefano EVP Production Operations	2019	878,927	317,600	250,954	1,444,752	–	6,069	2,898,302
	2018	859,562	361,500	207,528	–	–	6,082	1,434,672
P Undem EVP Marketing, Trading and Commercial	2019	307,853	56,700	–	–	–	60,417	424,970
	2018	–	–	–	–	–	–	–
BK Woods EVP Developments	2019	764,063	290,600	235,208	1,138,820	–	6,069	2,434,760
	2018	742,500	327,900	172,938	–	–	6,082	1,249,420
Former Senior Executive								
PA Byrne EVP Marketing, Trading and Commercial	2019	419,686	237,482	85,653	–	–	3,758	746,579
	2018	700,000	286,700	–	–	–	6,082	992,782

1 TFR comprises base salary and superannuation. The amounts shown here are actually received TFR, i.e. they are pro-rated amounts for the period that Executives were in KMP roles.

2 The "Cash STI" column reflects the 50% of the STI award for 2019 performance for continuing Executives that will be paid in cash. The remaining 50% will be awarded as equity restricted for two years.

3 The deferred restricted equity from the 2017 STI award that vested on 31 December 2019, at a closing share price of A$8.18.

4 The 2016 LTI was tested at the end of its performance period on 31 December 2019 and 100% of awards vested. The value shown in the table is based on the closing share price on 31 December 2019 of A$8.18. For the value of share-based payments calculated in accordance with the Accounting Standards, see Table 12 "Statutory Executive KMP remuneration details" on page 49.

5 "Other" comprises ad hoc payments treated as remuneration, such as assignment and mobilisation allowances and other non-monetary benefits.

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Notes on Mr Gallagher's Realised Remuneration for 2019

Mr Gallagher's Realised Remuneration for 2019 included the following at-risk performance related elements:

- The cash component of Mr Gallagher's Short-Term Incentive award based on 2019 performance;
- The value of Mr Gallagher's deferred Short-Term Incentive award from 2017 which vested on 31 December 2019; and
- The value of Mr Gallagher's Long-Term Incentive award from 2016 which was tested at 31 December 2019.

Mr Gallagher's 2019 STI award was awarded at 132% of target in line with the Company Scorecard outcome. This will be delivered half in cash and half in deferred Santos equity. The basis for this award is described in section 5 above.

Mr Gallagher's 2017 STI was awarded two thirds in cash and one third in Restricted Shares. The Restricted Shares vested on 31 December 2019. The award was allocated at A$5.30 and the closing price on 31 December 2019 was A$8.18.

Chart 6: Realised value of Mr Gallagher's 2017 deferred STI

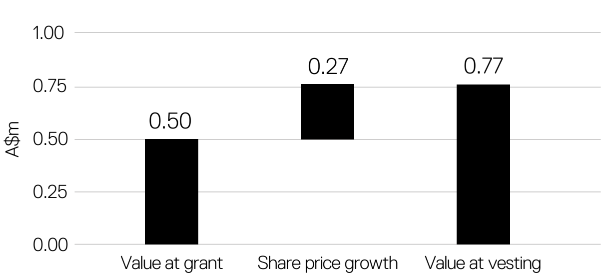
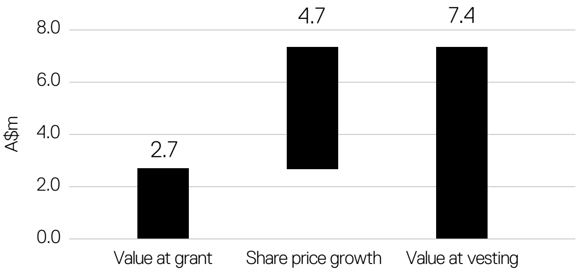


Chart 7: Realised value of Mr Gallagher's 2016 LTI



As noted above, Santos achieved top quartile performance against both TSR comparator groups and achieved stretch outcomes on the FBFBP and ROACE measures, meaning 100% of the 2016 LTI vested.

Mr Gallagher's 2016 LTI allocation had a face value at grant of A$2.7m, being 150% of his then TFR. The value based on the closing share price on 31 December 2019 of A$8.18 was A$7.37m, meaning 63.4% of the value delivered from the 2016 LTI came from share price growth over the 4-year vesting period.

8. STATUTORY REMUNERATION FOR EXECUTIVE KMP

Table 12 presents summarised details of the remuneration for Executive KMPs in 2018 and 2019 as required under the Corporations Act. The current KMPs are the Executives that have the requisite authority and responsibility to meet the definition of key management personnel as required under the Corporations Act.

All remuneration components have been converted from A$ to US$ using an average rate of $0.6880 for 2019 and $0.7475 for 2018.

Table 12: Statutory Executive KMP remuneration details

		Short-term employee benefits			Post-employment	Share-based payments[1]							
		Base salary	STI[2]	Other[3]	Superannuation contributions	LTI	Deferred STI[4]	Options	Total share-based payments	Termination	Other long-term benefits (long service)[5]	Total	Total "at risk"
		US$	US$	US$	US$	US$	US$	US$	US$	US$	US$	US$	%
Executive Director													
KT Gallagher	2019	1,328,631	799,424	4,176	17,200	1,604,578	711,809	–	2,316,387	–	34,674	4,500,492	69%
	2018	1,394,088	878,761	4,546	18,688	1,043,352	501,708	–	1,545,060	–	19,011	3,860,154	63%
Senior Executives													
DM Banks[6]	2019	444,009	199,933	–	46,621	132,154	137,325	–	269,479	–	7,828	967,870	48%
	2018	39,461	16,669	–	4,143	4,360	4,960	–	9,320	–	–	69,593	37%
BA Darley	2019	560,720	229,379	7,991	17,200	315,591	85,327	–	400,918	–	8,016	1,224,224	51%
	2018	55,844	23,322	818	1,713	–	702	–	702	–	8,390	90,789	26%
AM Neilson	2019	570,194	280,842	–	17,200	247,018	232,403	–	479,421	–	16,611	1,364,268	56%
	2018	596,131	259,981	–	18,688	138,018	126,918	–	264,936	–	8,528	1,148,264	46%
V Santostefano	2019	587,502	218,509	4,176	17,200	351,999	211,767	–	563,766	–	15,536	1,406,689	56%
	2018	623,836	270,221	4,546	18,688	216,353	159,771	–	376,124	–	8,439	1,301,854	50%
P Undem	2019	204,636	39,010	41,567	7,167	34,210	15,817	–	50,027	–	–	342,407	26%
	2018	–	–	–	–	–	-	–	–	–	–	–	–
BK Woods	2019	508,475	199,933	4,176	17,200	290,665	193,693	–	484,358	–	25,352	1,239,494	55%
	2018	536,331	245,105	4,546	18,688	215,798	143,543	–	359,341	–	17,382	1,181,393	51%
Former Senior Executives													
PA Byrne[7]	2019	278,578	163,388	2,585	10,166	118,207	56,382	–	174,589	43,376	6,758	679,440	50%
	2018	504,563	214,308	4,546	18,688	52,900	83,609	–	136,509	–	5,907	884,521	40%

1 In accordance with the requirements of the Accounting Standards, remuneration includes a proportion of the value of the equity-linked compensation determined as at the grant date and progressively expensed over the vesting period. The amount allocated as remuneration is not relative to or indicative of the actual benefit (if any) that the Executives may ultimately realise should the equity instruments vest. The value of equity-linked compensation was determined in accordance with AASB 2 *Share-based Payments* applying the Monte Carlo simulation method. Details of the assumptions underlying the valuation are set out in note 7.2 to the financial statements.

2 This amount represents the cash portion of the STI performance award for 2019, which will be paid during March 2020.

3 "Other" comprises ad hoc payments treated as remuneration, such as assignment and mobilisation allowance and other non-monetary benefits.

4 This amount represents a proportion of the estimated value of the deferred STI, determined in accordance with the requirements of AASB 2 *Share-based Payment* and progressively expensed over a three-year vesting period being the year of performance and a two-year period of service to which the grant relates. The amount allocated as remuneration is not relative to or indicative of the actual benefit (if any) that the Senior Executives may ultimately realise should the equity instruments vest. The value has been calculated in accordance with AASB 2 *Share-based Payment* based on an estimate of the fair value of the equity instruments.

5 "Other long-term benefits" represents the movement in the Executive's long service leave entitlements measured as the present value of the estimated future cash outflows to be made in respect of the Senior Executive's service between the respective reporting dates.

6 Figures shown for Mr Banks in 2018 are for the period from commencement as KMP on 1 December 2018 to 31 December 2018.

7 Figures shown for Mr Byrne in 2019 are for the period 1 January 2019 to cessation as KMP on 4 August 2019.

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Tables 13 and 14 contain details of the number and value of SARs and shares granted, vested and lapsed for the CEO in 2019.

Table 13: 2019 SARs outcomes for the CEO

	Granted		Vested[3]		Lapsed
	Number[1]	Maximum value[2]	Number	Value	Number
		US$		US$	
SARs	535,442	2,151,363	901,320	5,072,485	–

1 The SARs granted to the CEO relate to his 2019 LTI performance grant as approved at the 2019 Annual General Meeting (AGM). This grant relates to the LTI award for the four-year performance period ending on 31 December 2022.

2 Maximum value represents the fair value of LTI grants received in 2019 determined in accordance with AASB 2 *Share-based Payment*. The fair value of each SAR as at the grant date of 9 May 2019 is A$5.84. Details of the assumptions underlying the valuations are set out in note 7.2 to the financial statements. The minimum total value of the grant to the CEO, if the applicable vesting conditions are not met, is nil in all cases. All values have been converted to US$.

3 The number of SARs vested for the CEO relates to the CEO's 2016 LTI performance grants as approved at the 2016 Annual General Meeting. This was tested based on performance to 31 December 2019 with 100% of the award vested as described in section 6.

Table 14: 2019 Restricted Shares outcomes for the CEO

	Granted		Vested		Lapsed
	Number[1]	Maximum value	Number[2]	Value	Number
		US$		US$	
Shares	220,149	1,032,974	93,735	527,526	–

1 The restricted shares granted to the CEO relate to his 2018 STI award. The maximum value is the fair value of the 2018 STI grant of deferred shares received in 2018 determined with AASB 2 *Share-based Payment*. The fair value of the deferred 2018 STI grant as at the grant date of 15 March 2019 was A$6.82. The minimum total value of the restricted shares granted to the CEO is nil. All values have been converted to US$.

2 This relates to the 2017 STI grant that was deferred for two years from 1 January 2018 to 31 December 2019 and vested in full on 31 December 2019.

Tables 15 and 16 contain details of the number and value of SARs and shares granted, vested and lapsed for Senior Executives in 2019. No Senior Executive had any options granted, vesting or lapsing in 2019.

Table 15: Movements in SARs for Senior Executives

	Granted[1]		Vested[3]		Lapsed
	Number	Maximum value[2]	Number	Value	Number
		US$		US$	
Senior Executives					
DM Banks	104,744	426,618	–	–	–
BA Darley	306,873[4]	1,345,550[5]	–	–	–
AM Neilson	124,197	505,849	–	–	–
V Santostefano	129,097	525,807	176,620	993,989	–
P Undem	109,489	464,023[6]	–	–	–
BK Woods	112,226	457,092	139,220	783,508	–
Former Senior Executives					
PA Byrne	104,744	426,618	–	–	–
Total	**991,370**	**4,151,557**	**315,840**	**1,777,497**	**–**

1 This relates to the 2019 LTI award.

2 Maximum value represents the fair value of LTI grants received in 2019 determined in accordance with AASB 2 *Share-based Payment*. The fair value of each SAR as at the grant date of 15 March 2019 is A$5.92. Details of the assumptions underlying the valuations are set out in note 7.2 to the financial statements. The minimum total value of the grant to the Senior Executives, if the applicable vesting conditions are not met, is nil in all cases. All values have been converted to US$.

3 Vesting of SARs that relates to the 2016 LTI award. The value is determined by the share price of A$8.18 on the date of vesting at 31 December 2019.

4 Number of SARs comprises a sign-on grant of 88,879, a 2018 LTI award of 95,367 and a 2019 LTI award of 122,627.

5 Fair value of LTI grants differ as they relate to separate time periods in 2018 and 2019. The value of Mr Darley's sign-on grant was based on the fair value unit price of A$6.89, the 2018 LTI award on A$6.21 and the 2019 LTI award on A$6.13. The grant date and fair valuation for all three grants was 18 April 2019.

6 The fair value for Mr Undem's 2019 LTI award was determined A$6.16 as at 4 October 2019.

Table 16: Movements in Restricted Shares for Senior Executives

	Granted[1]		Vested		Lapsed
	Number	Maximum value[2]	Number	Value	Number
		US$		US$	
DM Banks	45,355	212,813	–	–	–
BA Darley	5,823	27,322	–	–	–
AM Neilson	65,112	305,516	34,264	192,832	–
V Santostefano	67,677	317,551	30,679	172,657	–
P Undem	–	–	–	–	–
BK Woods	61,404	288,117	28,754	161,823	–
PA Byrne	53,670	251,828	10,471[3]	58,929	–
Total	**299,041**	**1,403,147**	**104,168**	**586,241**	**–**

1 This relates to the 2018 STI award delivered as Restricted Shares.

2 For the Restricted Shares, maximum value represents the fair value of 2018 STI shares determined in accordance with AASB 2 *Share-based Payment*. The fair value of the deferred STI grant as at the grant date of 15 March 2019 was A$6.82. The minimum total value of the grant, if the applicable vesting conditions are not met, is nil. All values have been converted to US$.

3 This relates to the 2017 STI grant that was deferred for two years from 1 January 2018 to 31 December 2019 and vested in full on 31 December 2019 after cessation of Mr Byrne's term as KMP on 4 August 2019.

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9. KMP EQUITY

Ordinary shareholdings

Table 17 sets out the movements during the reporting period in the number of fully paid ordinary shares of the Company held directly, indirectly or beneficially, by each KMP, including their related parties, is as follows.

Full details of all outstanding equity awards can be found in note 7.2 to the financial statements and in prior Remuneration Reports.

Table 17: 2019 movements in ordinary shareholdings for KMP

	Opening balance	Received vesting of SARs[2]	Purchased	Sold	Deferred 2017 STI that vested on 31 December 2019	Other Changes	Closing balance	Balance held nominally at end of the year
Ordinary shares – fully paid								
Non-executive Directors								
YA Allen	48,883	–	–	–	–	–	48,883	–
GM Cowan	25,000	–	8,600	–	–	–	33,600	–
H Goh	67,215	–	–	–	–	–	67,215	–
Y Guan	–	–	–	–	–	–	–	–
V Guthrie	5,000	–	11,437	–	–	–	16,437	–
PR Hearl	48,808	–	–	–	–	–	48,808	–
J McArdle	–	–	5,000	–	–	–	5,000	–
K Spence	65,000	–	–	–	–	–	65,000	–
Former Non-executive Director								
E Shi	–	–	–	–	–	–	–	–
Executive Director								
KT Gallagher	619,563	–	–	–	93,735	–	713,298	–
Senior Executives								
DM Banks	800	–	–	–	–	–	800	–
BA Darley	–	–	–	–	–	–	–	–
AM Neilson	23,777	–	–	–	34,264	–	58,041	–
V Santostefano	62,049	–	–	–	30,679	–	92,728	–
P Undem	–	–	–	–	–	–	–	–
BK Woods	109,177	–	–	–	28,754	–	137,931	–
Former Senior Executives								**–**
PA Byrne	5,804	–	–	–	10,471[1]	–	16,275	–
Total	**1,081,076**	**–**	**25,037**	**–**	**197,903**	**–**	**1,304,016**	**–**

1 Mr Byrne's 2017 Deferred STI grant vested on 31 December 2019 after cessation of his term as KMP on 4 August 2019.

2 The 2016 LTI was tested at the end of its performance period on 31 December 2019 and 100% vested. The vested SARs convert to ordinary shares after 31 December 2019.

Executive KMP SARs and Restricted Shares

Tables 18 and 19 set out the movement during the reporting period in the number of SARs and deferred shares of the Company held directly, indirectly or beneficially, by each KMP, including their related parties. There are no options held by KMPs.

Table 18 – Movement in Executive KMP SARs

	Grant date	Balance at 1 Jan 2019	Rights granted	Rights vested[1]	Rights lapsed	Balance at 31 Dec 2019	% Vested in the year	% Forfeited in the year	Financial year of vesting
Directors									
KT Gallagher	29/6/16	901,320	–	(901,320)	–	–	100%	0%	2019
	19/5/17	671,641	–	–	–	671,641			2020
	7/5/18	520,183	–	–	–	520,183			2021
	9/5/19	–	535,442	–	–	535,442			2022
	Total	**2,093,144**	**535,442**	**(901,320)**	**–**	**1,727,266**			
Senior Executives									
DM Banks	21/3/18	102,752	–	–	–	102,752			2021
	9/7/18	800	–	–	–	800			2021
	15/3/19	–	104,744	–	–	104,744			2022
	Total	**103,552**	**104,744**	**–**	**–**	**208,296**			
BA Darley	18/4/19	–	88,879[2]	–	–	88,879			2021
	18/4/19	–	95,367[3]	–	–	95,367			2021
	18/4/19	–	122,627[4]	–	–	122,627			2022
	Total	**–**	**306,873**	**–**	**–**	**306,873**			
AM Neilson	17/3/17	199,004	–	–	–	199,004			2020
	21/3/18	121,834	–	–	–	121,834			2021
	15/3/19	–	124,197	–	–	124,197			2022
	Total	**320,838**	**124,197**	**–**	**–**	**445,035**			
V Santostefano	29/6/16	176,620	–	(176,620)	–	–	100%	0%	2019
	17/3/17	169,154	–	–	–	169,154			2020
	21/3/18	126,642	–	–	–	126,642			2021
	15/3/19	–	129,097	–	–	129,097			2022
	Total	**472,416**	**129,097**	**(176,620)**	**–**	**424,893**			
P Undem	4/10/19	–	109,489	–	–	109,489			2022
	Total	**–**	**109,489**	**–**	**–**	**109,489**			
BK Woods	29/6/16	139,220	–	(139,220)	–	–	100%	0%	2019
	17/3/17	133,333	–	–	–	133,333			2020
	21/3/18	110,091	–	–	–	110,091			2021
	15/3/19	–	112,226	–	–	112,226			2022
	Total	**382,644**	**112,226**	**(139,220)**	**–**	**355,650**			
Former Senior Executives									
PA Byrne	21/3/18	102,752	–	–	–	102,752			2021
	15/3/19	–	104,744	–	–	104,744			2022
	Total	**102,752**	**104,744**	**–**	**–**	**207,496**			

1 Rights Vested represents SARs that had satisfied their vesting performance conditions at 31 December 2019. The rights vested do not convert to ordinary shares until 2020.

2 Mr Darley received a sign on award to compensate him for interests forgone upon commencement with Santos which will vest three years after his commencement subject to continued employment at the vesting date.

3 Mr Darley commenced employment with Santos following the acquisition of Quadrant Energy. Mr Darley received an LTI award for 2018 from Santos which was granted following his commencement on similar terms to other Santos executives. Mr Darley did not receive an LTI award from Quadrant Energy in respect of 2018.

4 Mr Darley's LTI award for 2019.

Remuneration Report
continued

Table 19 – Movements in Executive KMP Restricted Shares

	Grant date	Balance at 1 Jan 2019	Restricted Shares granted	Restricted Shares vested	Restricted Shares forfeited	Balance at 31 Dec 2019	% Vested in the year	% Forfeited in the year	Financial year of vesting
Directors									
KT Gallagher	5/3/18	93,735	–	(93,735)	–	–	100%	0%	2019
	15/3/19	–	220,149	–	–	220,149			2020
	Total	**93,735**	**220,149**	**(93,735)**	**–**	**220,149**			
Senior Executives									
DM Banks	15/3/19	–	45,355	–	–	45,355			2020
	Total	**–**	**45,355**	**–**	**–**	**45,355**			
BA Darley	15/3/19	–	5,823	–	–	5,823			2020
	Total	**–**	**5,823**	**–**	**–**	**5,823**			
AM Neilson	5/3/18	34,264	–	(34,264)	–	–	100%	0%	2019
	15/3/19	–	65,112	–	–	65,112			2020
	Total	**34,264**	**65,112**	**(34,264)**	**–**	**65,112**			
V Santostefano	5/3/18	30,679	–	(30,679)	–	–	100%	0%	2019
	15/3/19	–	67,677	–	–	67,677			2020
	Total	**30,679**	**67,677**	**(30,679)**	**–**	**67,677**			
P Undem		–	–	–	–	–			
	Total	**–**	**–**	**–**	**–**	**–**			
BK Woods	5/3/18	28,754	–	(28,754)	–	–	100%	0%	2019
	15/3/19	–	61,404	–	–	61,404			2020
	Total	**28,754**	**61,404**	**(28,754)**	**–**	**61,404**			
Former Senior Executives									
PA Byrne	5/3/18	10,471	–	(10,471)[1]	–	–	100%	0%	2019
	15/3/19	–	53,670	–	–	53,670			2020
	Total	**10,471**	**53,670**	**(10,471)[1]**	**–**	**53,670**			

1 Mr Byrne's 2017 Deferred STI grant vested on 31 December 2019 after cessation of his term as KMP on 4 August 2019.

Loans to key management personnel

There have been no loans made, guaranteed or secured, directly or indirectly, by the Company or any of its subsidiaries at any time throughout the year to any KMP, including to their related party.

10. KEY TERMS OF EMPLOYMENT CONTRACTS FOR EXECUTIVE KMP

The main terms of employment contracts for Executive KMP are set out in Table 20.

Table 20 – Executive KMP contract terms

	Contract duration	Notice period – Company	Notice Period – Individual	Termination provision
KT Gallagher	Ongoing	12 months	12 months	Employment may be ended immediately in certain circumstances including misconduct, incapacity and mutual agreement or in the event of a fundamental change in the CEO's role or responsibility. The Company may elect to pay the CEO in lieu of any unserved notice period. If termination is by mutual agreement the CEO will receive a payment of \$1.5m. In the case of death, incapacity or fundamental change the CEO is entitled to a payment equivalent to 12 months' base salary.
Other KMP	Ongoing	6 months	6 months	In a company-initiated termination, the Company may make a payment in lieu of notice equivalent to the TFR that the Senior Executive would have received over the notice period. All Senior Executives' service agreements may be terminated immediately for cause whereupon no payments in lieu of notice or other termination payments are payable under the agreement.

Remuneration Report
continued

11. NON-EXECUTIVE DIRECTOR REMUNERATION

Remuneration policy

The key objectives of Santos' non-executive Director remuneration policy and how these are implemented through the Company's remuneration framework are as follows:

Remuneration policy objective

Securing and retaining talented, qualified Directors	Promoting independence and impartiality	Aligning Director and shareholder interest

Enabled through the non-executive Director Remuneration Framework

Fee levels are set with regard to: • time commitment and workload; • the risk and responsibility attached to the role; • experience and expertise; and • market benchmarking.	Fee levels do not vary according to the performance of the Company or individual Director performance from year to year. Non-executive Director's performance is assessed at the time of re-election.	Santos encourages its non-executive Directors to build a long-term stake in the Company Non-executive Directors are required to acquire and maintain a shareholding in the Company equivalent in value to one year's remuneration

Under the Minimum Shareholding Requirement, non-executive Directors must acquire (over a four-year period) and maintain a shareholding in the Company equal in value to at least one year's remuneration (base fee and committee fees).

Maximum aggregate amount

Total fees paid to all non-executive Directors in a year, including Board Committee fees, must not exceed A$2,600,000, being the amount approved by shareholders at the 2013 AGM.

Remuneration

Fees paid to non-executive Directors are reviewed periodically and are fixed by the Board. Table 21 summarises the current fee structure for main Board and committees.

Table 21: Non-executive Directors' annual fee structure[1]

	Chair[2] A$	Member A$
Board	521,325	185,325
Audit and Risk Committee	42,000	21,000
Environment, Health, Safety and Sustainability Committee	29,000	19,000
Nomination Committee[3]	N/A	10,000
People and Remuneration Committee	39,000	21,000

1 Fees are shown inclusive of superannuation.
2 The Chair of the Board does not receive any additional fees for serving on or chairing any Board committee.
3 The Chair of the Board is the Chair of the Nomination Committee, in accordance with its Charter.

Directors may also be paid additional fees for special duties or exertions and are entitled to be reimbursed for all business-related expenses. The total remuneration provided to each non-executive Director in 2018 and 2019 is shown in Table 22.

Superannuation and retirement benefits

Superannuation contributions are made on behalf of non-executive Directors in accordance with the requirements of the Company's statutory superannuation obligations. Non-executive Directors are not entitled to retirement benefits (other than mandatory statutory entitlements).

Statutory remuneration for non-executive Directors

Details of the fees and other benefits paid to non-executive Directors in 2019 are set out in Table 22. Differences in fees received between 2018 and 2019 reflect changes in roles and responsibilities (i.e. Chair or Committee appointments) and currency movements as fees are paid in Australian dollars but disclosed in US dollars.

No share-based payments were made to any non-executive Director.

Table 22: 2019 and 2018 non-executive Director remuneration

		Short-term benefits			Retirement benefits		
Director	**Year**	**Directors' fees (incl. committee fees)**	**Fees for special duties or exertions**	**Other**	**Superannuation[1]**	**Share-based payments**	**Total**
		US$	**US$**	**US$**	**US$**	**US$**	**US$**
YA Allen	2019	161,376	–	–	14,288	–	175,664
	2018	174,007	–	–	15,167	–	189,174
GM Cowan	2019	142,112	–	–	13,501	–	155,613
	2018	154,759	–	–	14,702	–	169,461
H Goh	2019	161,312	–	–	591	–	161,903
	2018	174,748	–	–	410	–	175,158
Y Guan[2]	2019	80,444	–	–	8,407	–	88,851
	2018	–	–	–	–	–	–
V Guthrie	2019	140,736	–	–	13,370	–	154,106
	2018	148,667	–	–	14,123	–	162,790
PR Hearl	2019	154,496	–	–	14,288	–	168,784
	2018	165,971	–	–	15,167	–	181,138
J McArdle[3]	2019	21,682	–	–	2,060	–	23,742
	2018	–	–	–	–	–	–
K Spence	2019	344,384	–	–	14,288	–	358,672
	2018	339,523	–	–	15,167	–	354,690
Former Director							
E Shi[4]	2019	48,042	–	–	4,716	–	52,758
	2018	153,824	–	–	15,167	–	168,991

1 Includes superannuation guarantee payments. Superannuation guarantee payments are made to Mr Goh and Ms McArdle only in relation to days worked in Australia.

2 Mr Guan joined the Board on 3 May 2019 and was appointed as a member of the People and Remuneration Committee on 21 August 2019.

3 Ms McArdle joined the Board on 23 October 2019 and was appointed as a member of the Audit and Risk Committee on 28 November 2019.

4 Mr Shi retired from the Board on 2 May 2019.

INDEMNIFICATION

Rule 61 of the Company's Constitution provides that the Company indemnifies, on a full indemnity basis and to the full extent permitted by law, officers of the Company for all losses or liabilities incurred by the person as an officer of the Company, a related body corporate or trustee of a company-sponsored superannuation fund. Rule 61 does not permit the Company to indemnify an officer for any liability involving a lack of good faith.

Rule 61 also permits the Company to purchase and maintain a Directors' and officers' insurance policy.

In conformity with Rule 61, the Company is party to Deeds of Indemnity in favour of each of the Directors referred to in this report who held office during the year and certain Senior Executives of the consolidated entity. The indemnities operate to the full extent permitted by law and are not subject to a monetary limit. Santos is not aware of any liability having arisen, and no claims have been made during or since the financial year ending 31 December 2019 under the Deeds of Indemnity.

During the year, the Company paid premiums in respect of Directors' and officers' liability and legal expenses insurance contracts for the year ended 31 December 2019, and since the end of the year the Company has paid, or agreed to pay, premiums in respect of such contracts for the year ending 31 December 2020. The insurance contracts insure against certain liability (subject to exclusions) persons who are or have been Directors or officers of the Company and its controlled entities. A condition of the contracts is that the nature of the liability indemnified and the premium payable not be disclosed.

NON-AUDIT SERVICES

Amounts paid or payable to the Company's auditor, Ernst & Young, for non-audit services provided during the year were:

Taxation and other services	$2,592,000
Assurance services not required to be performed by the Company's auditor	$226,000
Other assurance services required by legislation to be performed by the Company's auditor	$47,000

The Directors are satisfied, based on the advice of the Audit and Risk Committee, that the provision of the non-audit services detailed above by Ernst & Young is compatible with the general standard of independence for auditors imposed by the *Corporations Act 2001* (Cth).

The reason for forming this opinion is that all non-audit services have been reviewed by the Audit and Risk Committee to ensure they do not impact the impartiality and objectivity of the auditor.

A copy of the auditor's independence declaration as required under section 307C of the *Corporations Act 2001* (Cth) is set out on page 142.

ROUNDING

Australian Securities and Investments Commission Corporations (Rounding in Financial/Directors' Reports) Instrument 2016/191 applies to the Company. Accordingly, amounts have been rounded off in accordance with that Instrument, unless otherwise indicated.

This report is made out on 19 February 2020 in accordance with a resolution of the Directors.

K W Spence

Director

Financial Report

Consolidated Income Statement
for the year ended 31 December 2019

	Note	**2019 US$million**	2018 US$million
Revenue from contracts with customers – Product sales	2.2	**4,033**	3,660
Cost of sales	2.3	**(2,714)**	(2,329)
Gross profit		**1,319**	1,331
Revenue from contracts with customers – Other	2.2	**153**	113
Other income	2.7	**109**	180
Impairment of non-current assets	3.3	**(61)**	(100)
Other expenses	2.3	**(233)**	(194)
Finance income	5.2	**37**	30
Finance costs	5.2	**(314)**	(258)
Share of net profit of joint ventures	6.3(c)	**8**	4
Profit before tax		**1,018**	1,106
Income tax expense	2.4(a)	**(341)**	(439)
Royalty-related tax expense	2.4(b)	**(3)**	(37)
Total tax expense		**(344)**	(476)
Net profit for the period attributable to owners of Santos Limited		**674**	630
Earnings per share attributable to the equity holders of Santos Limited (¢)			
Basic profit per share	2.5	**32.4**	30.2
Diluted profit per share	2.5	**32.1**	30.0
Dividends per share (¢)			
Paid during the period	2.6	**12.2**	3.5
Declared in respect of the period	2.6	**11.0**	9.7

The Consolidated Income Statement is to be read in conjunction with the notes to the consolidated financial statements.

Consolidated Statement of Comprehensive Income
for the year ended 31 December 2019

	2019 US$million	2018 US$million
Net profit for the period	**674**	630
Other comprehensive income/(loss), net of tax		
Items to be reclassified to the income statement in subsequent periods		
Exchange loss on translation of foreign operations	**–**	(245)
Foreign currency translation reserve recycled to the income statement	**–**	(72)
Tax effect	**–**	–
	–	(317)
Loss on foreign currency loans designated as hedges of net investments in foreign operations	**–**	(171)
Tax effect	**–**	51
	–	(120)
(Loss)/gain on derivatives designated as cash flow hedges	**(8)**	4
Tax effect	**2**	(1)
	(6)	3
Net other comprehensive income/(loss) to be reclassified to the income statement in subsequent periods	**(6)**	(434)
Items not to be reclassified to the income statement in subsequent periods		
Remeasurement of defined benefit obligation	**–**	3
Tax effect	**–**	(1)
	–	2
Fair value changes on financial liabilities designated at fair value due to own credit risk	**(6)**	–
Tax effect	**1**	–
	(5)	–
Net other comprehensive (loss)/income not to be reclassified to the income statement in subsequent periods	**(5)**	2
Other comprehensive loss, net of tax	**(11)**	(432)
Total comprehensive income attributable to owners of Santos Limited	**663**	198

The Consolidated Statement of Comprehensive Income is to be read in conjunction with the notes to the consolidated financial statements.

Consolidated Statement of Financial Position
as at 31 December 2019

	Note	**2019** **US$million**	(Restated) 2018 US$million
Current assets			
Cash and cash equivalents	4.1	**1,067**	1,316
Trade and other receivables	4.2	**554**	521
Prepayments		**40**	32
Contract assets	2.2(b)	**23**	28
Inventories	4.3	**301**	288
Other financial assets	5.5(g)	**195**	28
Current tax assets		**–**	13
Total current assets		**2,180**	2,226
Non-current assets			
Prepayments		**–**	16
Contract assets	2.2(b)	**130**	157
Investments in joint ventures	6.3(b)	**13**	31
Other financial assets	5.5(g)	**29**	31
Exploration and evaluation assets	3.1	**1,187**	981
Oil and gas assets	3.2	**11,396**	11,283
Other land, buildings, plant and equipment		**223**	119
Deferred tax assets	2.4(d)	**870**	1,486
Goodwill	6.2(a)	**481**	481
Total non-current assets		**14,329**	14,585
Total assets		**16,509**	16,811
Current liabilities			
Trade and other payables	4.4	**719**	661
Other liabilities		**–**	3
Contract liabilities	2.2(b)	**125**	38
Lease liabilities	3.5	**114**	1
Interest-bearing loans and borrowings	5.1	**196**	966
Current tax liabilities		**38**	63
Provisions	3.4	**122**	116
Other financial liabilities	5.5(g)	**5**	6
Total current liabilities		**1,319**	1,854
Non-current liabilities			
Other liabilities		**1**	2
Contract liabilities	2.2(b)	**233**	335
Lease liabilities	3.5	**311**	61
Interest-bearing loans and borrowings	5.1	**3,800**	3,891
Deferred tax liabilities	2.4(d)	**811**	1,206
Provisions	3.4	**2,329**	2,159
Other financial liabilities	5.5(g)	**29**	24
Total non-current liabilities		**7,514**	7,678
Total liabilities		**8,833**	9,532
Net assets		**7,676**	7,279
Equity			
Issued capital	5.3	**9,010**	9,031
Reserves	5.4	**759**	607
Accumulated losses	5.4	**(2,093)**	(2,359)
Equity attributable to owners of Santos Limited		**7,676**	7,279
Total equity		**7,676**	7,279

The Consolidated Statement of Financial Position is to be read in conjunction with the notes to the consolidated financial statements.

Consolidated Statement of Cash Flows
for the year ended 31 December 2019

	Note	2019 US$million	2018 US$million
Cash flows from operating activities			
Receipts from customers		**4,266**	3,740
Interest received		**37**	30
Dividends received		**15**	6
Pipeline tariffs and other receipts		**146**	106
Payments to suppliers and employees		**(1,892)**	(1,816)
Restoration expenditure		**(24)**	(36)
Exploration and evaluation seismic and studies		**(83)**	(98)
Royalty and excise paid		**(90)**	(85)
Borrowing costs paid		**(227)**	(194)
Income taxes paid		**(30)**	(69)
Royalty-related taxes paid		**(97)**	(13)
Insurance proceeds		**28**	3
Other operating activities		**(3)**	4
Net cash provided by operating activities	4.1(b)	**2,046**	1,578
Cash flows from investing activities			
Payments for:			
Exploration and evaluation assets		**(222)**	(66)
Oil and gas assets		**(619)**	(490)
Other land, buildings, plant and equipment		**(18)**	(10)
Acquisitions of exploration and evaluation assets		**(18)**	(10)
Acquisition of subsidiary, net of cash acquired		**(177)**	(1,933)
Costs associated with acquisition of subsidiaries		**(5)**	(10)
Proceeds from disposal of non-current assets	2.7	**10**	26
Proceeds from disposal of subsidiaries		**–**	126
Net proceeds associated with disposal		**18**	–
Borrowing costs paid		**(15)**	(6)
Return of capital – investment in joint ventures		**13**	–
Net cash used in investing activities		**(1,033)**	(2,373)
Cash flows from financing activities			
Dividends paid	2.6	**(251)**	(73)
Drawdown of borrowings		**592**	1,193
Repayment of borrowings		**(1,474)**	(220)
Repayment of lease liabilities		**(87)**	–
Purchase of shares on-market (Treasury shares)	5.3	**(31)**	(10)
Net cash (used in)/provided by financing activities		**(1,251)**	890
Net (decrease)/increase in cash and cash equivalents		**(238)**	95
Cash and cash equivalents at the beginning of the period		**1,316**	1,231
Effects of exchange rate changes on the balances of cash held in foreign currencies		**(11)**	(10)
Cash and cash equivalents at the end of the period	4.1	**1,067**	1,316

The Consolidated Statement of Cash Flows is to be read in conjunction with the notes to the consolidated financial statements.

Consolidated Statement of Changes in Equity
for the year ended 31 December 2019

		Equity attributable to owners of Santos Limited					
US$million	Note	**Issued capital**	**Foreign currency trans-lation reserve**	**Hedging reserve**	**Accum-ulated profits reserve**	**Accum-ulated losses**	**Total equity**
Balance at 1 January 2018		9,034	(528)	(16)	595	(1,934)	7,151
Transfer retained profits to accumulated profits reserve		–	–	–	1,063	(1,063)	–
Items of comprehensive income							
Net profit for the period		–	–	–	–	630	630
Other comprehensive (loss)/income for the period		–	(437)	3	–	2	(432)
Total comprehensive (loss)/income for the period		–	(437)	3	–	632	198
Transactions with owners in their capacity as owners							
Dividends paid	2.6	–	–	–	(73)	–	(73)
On-market share purchase (Treasury shares)	5.3	(10)	–	–	–	–	(10)
Share-based payment transactions		7	–	–	–	6	13
Balance at 31 December 2018		9,031	(965)	(13)	1,585	(2,359)	7,279
Opening balance adjustment on adoption of new accounting standard (refer note 8.4(c))		–	–	–	–	(6)	(6)
Balance at 1 January 2019		**9,031**	**(965)**	**(13)**	**1,585**	**(2,365)**	**7,273**
Transfer retained profits to accumulated profits reserve		**–**	**–**	**–**	**400**	**(400)**	**–**
Reclassification of own credit risk reserve		**–**	**–**	**14**	**–**	**(14)**	**–**
Items of comprehensive income							
Net profit for the period		**–**	**–**	**–**	**–**	**674**	**674**
Other comprehensive loss for the period		**–**	**–**	**(11)**	**–**	**–**	**(11)**
Total comprehensive (loss)/income for the period		**–**	**–**	**(11)**	**–**	**674**	**663**
Transactions with owners in their capacity as owners							
Shares issued	5.3	**1**	**–**	**–**	**–**	**–**	**1**
Dividends paid	2.6	**–**	**–**	**–**	**(251)**	**–**	**(251)**
On-market share purchase (Treasury shares)	5.3	**(31)**	**–**	**–**	**–**	**–**	**(31)**
Share-based payment transactions		**9**	**–**	**–**	**–**	**12**	**21**
Balance at 31 December 2019		**9,010**	**(965)**	**(10)**	**1,734**	**(2,093)**	**7,676**

The Consolidated Statement of Changes in Equity is to be read in conjunction with the notes to the consolidated financial statements.

Notes to the Consolidated Financial Statements for the year ended 31 December 2019
Section 1: Basis of Preparation

This section provides information about the basis of preparation of the Financial Report, and certain accounting policies that are not disclosed elsewhere in the Financial Report. Accounting policies specific to individual elements of the financial statements are located within the relevant section of the report.

1.1 STATEMENT OF COMPLIANCE

The consolidated Financial Report of Santos Limited ("the Company") for the year ended 31 December 2019 was authorised for issue in accordance with a resolution of the Directors on 19 February 2020.

The consolidated Financial Report of the Company for the year ended 31 December 2019 comprises the Company and its controlled entities ("the Group"). Santos Limited ("the Parent") is a company limited by shares incorporated in Australia, whose shares are publicly traded on the Australian Securities Exchange ("ASX"), and is the ultimate parent entity of the Group. The Group is a for-profit entity for the purpose of preparing the Financial Report. The nature of the operations and principal activities of the Group are described in the Directors' Report.

This consolidated Financial Report is:

- a general purpose Financial Report that has been prepared in accordance with the requirements of the *Corporations Act 2001* (Cth), Australian Accounting Standards and other authoritative pronouncements of the Australian Accounting Standards Board ("AASB");
- compliant with Australian Accounting Standards as issued by the AASB and International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board, including new and amended accounting standards issued and effective for reporting periods beginning on or after 1 January 2019;
- presented in United States dollars ("US$");
- prepared on the historical cost basis except for derivative financial instruments and other financial instruments measured at fair value; and
- rounded to the nearest million dollars, unless otherwise stated, in accordance with ASIC Corporations (Rounding in Financial/Directors' Reports) Instrument 2016/191.

1.2 KEY EVENTS IN THE CURRENT PERIOD

The financial position and performance of the Group was particularly impacted by the following events and transactions during the year:

- production of 75.5 mmboe (2018: 58.9 mmboe), and sales of 94.5 mmboe (2018: 78.3 mmboe);
- average realised oil price of $71.99 per barrel compared to $75.05 per barrel in 2018;
- net profit after tax of $674 million for 2019 (2018: $630 million);
- free cash flow generated of $1,138 million for 2019 (2018: $1,006 million); and
- net debt decreased to $3,325 million at 31 December 2019, from $3,549 million at 31 December 2018.

Notes to the Consolidated Financial Statements
Section 1: Basis of Preparation

1.3 SIGNIFICANT ACCOUNTING JUDGEMENTS, ESTIMATES AND ASSUMPTIONS

The carrying amounts of certain assets and liabilities are often determined based on management's judgement regarding estimates and assumptions of future events. The key judgements, estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amount of certain assets and liabilities within the next annual reporting period are disclosed in the following notes:

- Note 2.4 Taxation
- Note 3.1 Exploration and evaluation assets
- Note 3.2 Oil and gas assets
- Note 3.3 Impairment of non-current assets
- Note 3.4 Restoration obligations and other provisions
- Note 3.6 Leases
- Note 6.2 Acquisitions and disposals of subsidiaries

In addition to the significant judgements referenced above, other areas of estimation and judgement are highlighted throughout the Financial Report.

1.4 FOREIGN CURRENCY

Functional and presentation currency

The Group's financial statements are presented in United States dollars ("US$"), as that presentation currency most reliably reflects the global business performance of the Group as a whole and is more comparable with our peers.

The functional currency of the Parent changed from Australian dollars ("A$") to United States dollars, effective 1 January 2019 (refer note 8.4(b)).

The assets, liabilities, income and expenses of non-US dollar denominated functional operations are translated into US dollars using the following applicable exchange rates:

Foreign currency amount	Applicable exchange rate
Income and expenses	Average rate prevailing for the relevant period
Assets and liabilities	Period-end rate
Equity	Historical rate
Reserves	Historical and period-end rate
Statement of cash flows	Average rate prevailing for the relevant period

Foreign exchange differences resulting from translation to presentation currency are initially recognised in the foreign currency translation reserve and subsequently transferred to the income statement on disposal of the operation.

The period-end exchange rate used was A$/US$ 1:0.7000 (2018: 1:0.7044).

Transactions and balances

Transactions in currencies other than an entity's functional currency are initially recorded in the functional currency by applying the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in currencies other than an entity's functional currency are translated at the foreign exchange rate ruling at the reporting date. Foreign exchange differences arising on translation are recognised in the income statement.

Foreign exchange differences that arise on the translation of monetary items that form part of the net investment in a foreign operation are recognised in the translation reserve in the consolidated financial statements.

Non-monetary assets and liabilities that are measured at historical cost in currencies other than an entity's functional currency are translated using the exchange rate at the date of the initial transaction. Non-monetary assets and liabilities denominated in currencies other than an entity's functional currency that are stated at fair value are translated to the functional currency at foreign exchange rates ruling at the dates the fair value was determined.

Group companies

The results of subsidiaries with a functional currency other than US$ (the functional currency of the Parent) are translated to US$ as at the date of each transaction. The assets and liabilities are translated to US$ at foreign exchange rates ruling at the reporting date. Foreign exchange differences arising on translation are recognised directly in the translation reserve.

Exchange differences arising from the translation of the net investment in foreign operations and of related hedges are recognised in the translation reserve. They are released into the income statement upon disposal of the foreign operation.

Also refer to note 5.5(c) for further details on the net investment hedge in place.

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

This section focuses on the operating results and financial performance of the Group. It includes disclosures of segmental financial information, taxes, dividends and earnings per share, including the relevant accounting policies adopted in each area.

2.1 SEGMENT INFORMATION

The Group has identified its operating segments to be the five key assets/operating areas of the Cooper Basin, Queensland & NSW, Papua New Guinea ("PNG"), Northern Australia & Timor-Leste, and Western Australia, based on the nature and geographical location of the assets, and "Other" non-core assets. This is the basis on which internal reports are provided to the Chief Executive Officer for assessing performance and determining the allocation of resources within the Group.

In the prior period, the assets acquired as part of the Quadrant Energy acquisition were incorporated into the Western Australia segment, since acquisition date of 27 November 2018.

Segment performance is measured based on earnings before interest, tax, impairment, exploration and evaluation, depletion, depreciation and amortisation ("EBITDAX"). Corporate and exploration expenditure and inter-segment eliminations are included in the segment disclosure for reconciliation purposes.

Changes to segment information

As at 1 January 2019, the "Asia" reporting segment was no longer required, due to the divestment of the majority of the assets that were reported under that segment. Further, the "Northern Australia" reporting segment has been renamed "Northern Australia & Timor-Leste" following the signing of the new maritime boundary between Australia and Timor-Leste during 2019. Comparative disclosures have been restated to a consistent basis.

2.1 SEGMENT INFORMATION (CONTINUED)

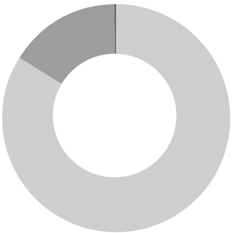
US$million	Cooper Basin 2019	Queens-land & NSW 2019	PNG 2019	Northern Australia & Timor-Leste 2019	Western Australia 2019	Corporate, exploration, elimin-ations & other 2019	Total 2019
Revenue							
Product sales to external customers	951	960	652	165	921	384	4,033
Inter-segment sales[1]	151	62	–	–	–	(213)	–
Revenue – other from external customers	62	33	11	–	34	13	153
Total segment revenue	**1,164**	**1,055**	**663**	**165**	**955**	**184**	**4,186**
Costs							
Production costs	(123)	(71)	(80)	(67)	(225)	20	(546)
Other operating costs	(74)	(87)	(51)	–	(13)	(81)	(306)
Third-party product purchases	(475)	(242)	(1)	–	–	(167)	(885)
Inter-segment purchases[1]	(2)	(72)	–	–	–	74	–
Other	39	41	9	4	(33)	(52)	8
EBITDAX	**529**	**624**	**540**	**102**	**684**	**(22)**	**2,457**
Depreciation and depletion	(207)	(274)	(135)	(48)	(320)	(16)	(1,000)
Exploration and evaluation expensed	–	–	–	–	–	(103)	(103)
Net impairment loss	(2)	(11)	(10)	–	(36)	(2)	(61)
Change in future restoration assumptions	–	–	–	–	2	–	2
EBIT	**320**	**339**	**395**	**54**	**330**	**(143)**	**1,295**
Net finance costs						(277)	(277)
Profit before tax							**1,018**
Income tax expense						(341)	(341)
Royalty-related tax (expense)/benefit	(13)	(1)	–	5	6	–	(3)
Net profit							**674**
Asset additions and acquisitions:							
Exploration and evaluation assets	8	13	12	52	120	55	**260**
Oil and gas assets[2, 3]	418	401	119	5	200	–	**1,143**
	426	**414**	**131**	**57**	**320**	**55**	**1,403**

1 Inter-segment pricing is determined on an arm's length basis. Inter-segment sales and purchases are eliminated on consolidation.

2 Includes impact on restoration assets following changes in future restoration provision assumptions (refer note 3.4).

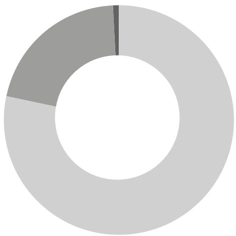
3 Includes impact of AASB 16 recognition of right-of-use assets (refer note 3.5).

2019 Revenue from external customers by geographical location US$million



Australia	3,519
Papua New Guinea	663
Other	4
Total	4,186

2019 Non-current assets by geographical location (excluding financial and deferred tax assets) US$million



Australia	10,176
Papua New Guinea	2,691
Other	82
Total	12,949

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

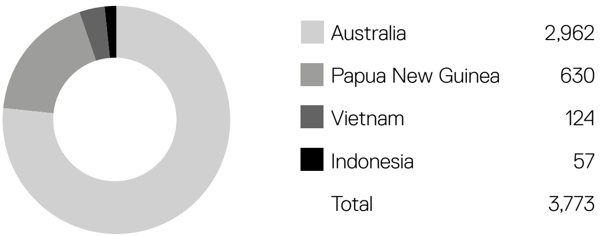
2.1 SEGMENT INFORMATION (CONTINUED)

US$million	Cooper Basin 2018	Queens-land & NSW 2018	PNG 2018	Northern Australia & Timor-Leste 2018	Western Australia 2018	Corporate, exploration, elimin-ations & other 2018	Total 2018
Revenue							
Product sales to external customers	975	957	621	183	408	516	3,660
Inter-segment sales[1]	105	47	–	–	–	(152)	–
Revenue – other from external customers	66	12	9	–	14	12	113
Total segment revenue	**1,146**	**1,016**	**630**	**183**	**422**	**376**	**3,773**
Costs							
Production costs	(127)	(71)	(70)	(74)	(108)	(24)	(474)
Other operating costs	(68)	(80)	(52)	–	(17)	(98)	(315)
Third-party product purchases	(421)	(293)	–	–	–	(133)	(847)
Inter-segment purchases[1]	(3)	(33)	–	–	–	36	–
Other	(9)	31	(2)	7	(14)	10	23
EBITDAX	**518**	**570**	**506**	**116**	**283**	**167**	**2,160**
Depreciation and depletion	(196)	(167)	(123)	(51)	(99)	(31)	(667)
Exploration and evaluation expensed	–	–	–	–	–	(105)	(105)
Net impairment loss	–	(12)	(33)	–	(8)	(47)	(100)
Change in future restoration assumptions	–	22	–	–	24	–	46
EBIT	**322**	**413**	**350**	**65**	**200**	**(16)**	**1,334**
Net finance costs						(228)	(228)
Profit before tax							**1,106**
Income tax expense						(439)	(439)
Royalty-related tax benefit/(expense)	5	6	–	1	(56)	7	(37)
Net profit							**630**
Asset additions and acquisitions:							
Exploration and evaluation assets	18	14	30	34	591	5	692
Oil and gas assets[2]	215	195	47	30	2,230	61	2,778
	233	**209**	**77**	**64**	**2,821**	**66**	**3,470**

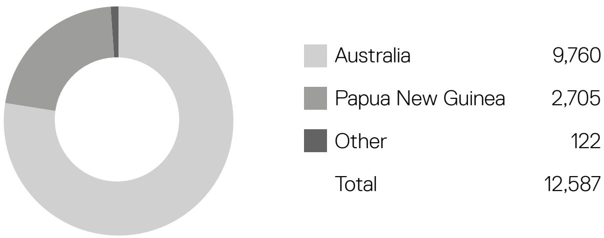
1 Inter-segment pricing is determined on an arm's length basis. Inter-segment sales and purchases are eliminated on consolidation.

2 Includes impact on restoration assets following changes in future restoration provision assumptions (refer note 3.4).

2018 Revenue from external customers by geographical location US$million



2018 Non-current assets by geographical location (excluding financial and deferred tax assets) US$million



2.2 REVENUE FROM CONTRACTS WITH CUSTOMERS

Revenue from contracts with customers is recognised in the income statement when the performance obligations are considered met, which is when control of the hydrocarbon products or services provided are transferred to the customer. Revenue is recognised at an amount that reflects the consideration the Group expects to be entitled to, net of goods and services tax or similar taxes.

Revenue from contracts with customers – Product sales

Revenue from contracts with customers – product sales is recognised using the "sales method" of accounting. The sales method results in revenue being recognised based on volumes sold under contracts with customers, at the point in time where performance obligations are considered met. Generally, regarding the sale of hydrocarbon products, the performance obligation will be met when the product is delivered to the specified measurement point (gas) or point of loading/unloading (liquids). No adjustments are made to revenue for any differences between volumes sold to customers and unsold volumes that the Group is entitled to sell based on its working interest.

The Group's sales of crude oil, liquefied natural gas, ethane, condensate, LPG, and in some contractual arrangements, natural gas, are based on market prices. In contractual arrangements with market-based pricing, at the time of the delivery, there is only a minimal risk of a change in transaction price to be allocated to the product sold. Accordingly, at the point of sale where there is not a significant risk of revenue reversal relative to the cumulative revenue recognised, there is no constraining of variable consideration.

The Group applies the allocation exception that allows an entity to allocate the market price to product sales as delivered, rather than recognising an average price over the term of the contract. For those contractual arrangements based on market pricing, the aggregate transaction price allocation to unsatisfied performance obligations is fully constrained at the end of the reporting period. Revenue for existing contracts will be recognised over varying contract tenures.

During the year, revenue from one customer amounted to $651 million (2018: $489 million), arising from sales from one segment of the Group.

Contract liabilities

On acquisition of Quadrant Energy (refer note 6.2(a)), pre-existing revenue contracts were fair valued, resulting in contract liabilities being recognised. The contract liabilities represent the differential in contract pricing and market price, and will be realised as performance obligations are considered met in the underlying revenue contract. To the extent the contract liability represents the fair value differential between contract price and market price, it will be unwound through "revenue – other" upon satisfaction of the performance obligation.

Contract liabilities – Deferred revenue

A contract liability for deferred revenue is recorded for obligations under sales contracts to deliver natural gas in future periods for which payment has already been received. Where the period between when payment is received and performance obligations are considered met, is more than 12 months, an assessment will be made for whether a significant financing component is required to be accounted for. Deferred revenue liabilities unwind as "revenue from contracts with customers", upon settlement of the obligation, and if a significant financing component associated with deferred revenue exists, this will be recognised as "interest expense" over the life of the contract.

Contract assets

On acquisition of Quadrant Energy (refer note 6.2(a)), pre-existing revenue contracts were fair valued, resulting in contract assets being recognised. The contract assets represent the differential in contract pricing and market price, and will be realised as performance obligations are considered met in the underlying revenue contract. The contract asset will be unwound through other expenses. Where different tranches exist within a contractual arrangement, individual contracts acquired may contain both a contract liability in respect of deferred revenue and a contract asset arising from revenue contracts being fair valued on acquisition.

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

2.2 REVENUE FROM CONTRACTS WITH CUSTOMERS (CONTINUED)

(a) Revenue from contracts with customers

	2019 US$million	2018 US$million
Product sales		
Gas, ethane and liquefied natural gas	**2,687**	2,518
Crude oil	**927**	757
Condensate and naphtha	**335**	300
Liquefied petroleum gas	**84**	85
Total product sales[1]	**4,033**	3,660
Revenue – other		
Liquidated damages	**26**	11
Pipeline tolls & tariffs	**76**	84
Contract liabilities – recognised on settlement of obligation	**7**	–
Other	**44**	18
Total revenue – other	**153**	113
Total revenue from contracts with customers	**4,186**	3,773

1 Total product sales include third-party product sales of $1,022 million (2018: $997 million).

(b) Assets and liabilities related to contracts with customers

The Group has recognised the following assets and liabilities related to contracts with customers:

	2019 US$million	(Restated) 2018 US$million
Acquired contract assets		
Current		
Acquired contract assets	**23**	28
	23	28
Non-current		
Acquired contract assets	**130**	157
	130	157
Total acquired contract assets	**153**	185
Contract liabilities		
Current		
Acquired contract liabilities	**6**	6
Deferred revenue	**119**	32
	125	38
Non-current		
Acquired contract liabilities	**20**	27
Deferred revenue	**213**	308
	233	335
Total contract liabilities	**358**	373

2.2 REVENUE FROM CONTRACTS WITH CUSTOMERS (CONTINUED)

(b) Assets and liabilities related to contracts with customers (continued)

The following table illustrates the movement in contract asset and contract liability balances for the current reporting period:

	Note	2019 US$million	(Restated) 2018 US$million
Acquired contract assets			
Opening balance		**185**	–
Contract assets arising from acquisition		**–**	185
Other expenses	2.3	**(32)**	–
Total acquired contract assets		**153**	185
Acquired contract liabilities			
Opening balance		**33**	–
Contract liabilities arising from acquisition		**–**	33
Revenue – other	2.2(a)	**(7)**	–
		26	33
Contract liabilities – Deferred income			
Opening balance		**340**	131
Deferred revenue arising from acquisition		**–**	209
Additional receipts in advance		**45**	–
Revenue from contracts with customers – product sales		**(65)**	–
Interest accretion for financing component	5.2	**18**	–
Other		**(6)**	–
		332	340
Total contract liabilities		**358**	373

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

2.3 EXPENSES

	2019 US$million	2018 US$million
Cost of sales:		
Production costs		
Production expenses	**546**	436
Production facilities – operating leases	**–**	38
Total production costs	**546**	474
Other operating costs		
LNG plant costs	**56**	64
Pipeline tariffs, processing tolls and other	**158**	169
Movements in onerous contracts	**(16)**	(18)
Royalty and excise	**97**	82
Shipping costs	**11**	18
Total other operating costs	**306**	315
Total cash cost of production	**852**	789
Depreciation and depletion:		
Depreciation of plant, equipment and buildings	**622**	417
Depletion of subsurface assets	**377**	248
Total depreciation and depletion	**999**	665
Third-party product purchases	**885**	847
(Increase)/decrease in product stock	**(22)**	28
Total cost of sales	**2,714**	2,329
Other expenses		
Selling	**12**	14
General & administration	**54**	75
Costs associated with acquisitions and disposals	**–**	58
Depreciation	**1**	2
Foreign exchange losses/(gains)	**11**	(146)
Fair value hedges losses/(gains)		
On the hedging instrument	**9**	17
On the hedged item attributable to the hedged risk	**(5)**	(15)
Fair value losses on commodity derivatives (oil hedges)	**6**	67
Exploration and evaluation expensed	**103**	105
Contract assets recognised upon satisfaction of the performance obligation	**32**	–
Other	**10**	17
Total other expenses	**233**	194

2.4 TAXATION

Income tax

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the income statement except in relation to items recognised directly in equity.

Current tax is the amount of income tax payable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from, or paid to, the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Group operates and generates taxable income. Where applicable, tax balances include an estimate of any amounts expected to be paid to settle uncertain tax positions if it is probable that an amount will settle the obligation, and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of an amount of tax payable to be reimbursed, the expense relating to the income tax payable is presented in the income statement net of any reimbursement that is virtually certain. If the effect of the time value of money is material, current tax payable is discounted.

The Company and all of its wholly-owned Australian resident entities are part of a tax-consolidated group under Australian taxation law. Santos Limited is the head entity in the tax-consolidated group. The head entity and the controlled entities in the tax-consolidated group continue to account for their own current and deferred tax amounts. Current tax liabilities and assets and deferred tax assets arising from unused tax losses and tax credits of the members of the tax-consolidated group are recognised by the Company (as head entity in the tax-consolidated group).

The Company and the other entities in the tax-consolidated group have entered into a tax funding agreement and a tax sharing agreement.

Royalty-related tax

Petroleum Resource Rent Tax ("PRRT"), Resource Rent Royalty and Timor-Leste's and PNG's Additional Profits Tax are accounted for as income tax.

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

2.4 TAXATION (CONTINUED)

Income tax and royalty-related tax recognised in the income statement for the Group are as follows:

	2019 US$million	2018 US$million
(a) Income tax expense		
Current tax expense/(benefit)		
Current year	**44**	70
Adjustments for prior years	**(3)**	(4)
	41	66
Deferred tax expense		
Origination and reversal of temporary differences	**264**	365
Adjustments for prior years	**36**	8
	300	373
Total income tax expense	**341**	439
(b) Royalty-related tax expense		
Current tax expense		
Current year	**78**	36
	78	36
Deferred tax (benefit)/expense		
Origination and reversal of temporary differences	**(75)**	1
	(75)	1
Total royalty-related tax expense (net of income tax benefit)	**3**	37
(c) Numerical reconciliation between pre-tax net profit and tax expense		
Profit before tax	**1,018**	1,106
Prima facie income tax expense at 30% (2018: 30%)	**305**	332
Increase/(decrease) in income tax expense due to:		
Foreign losses not recognised	**(4)**	4
Non deductible expenses	**6**	3
Exchange and other translation variations	**–**	99
Tax adjustments relating to prior years	**33**	4
Other	**1**	(3)
Income tax expense	**341**	439
Royalty-related tax expense (net of income tax benefit)	**3**	37
Total tax expense	**344**	476

2.4 TAXATION (CONTINUED)

(d) Deferred tax assets and liabilities

Deferred tax is determined using the statement of financial position approach, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the appropriate tax bases.

The following temporary differences are not provided for:

- the initial recognition of assets or liabilities that affect neither accounting or taxable profit; nor
- differences relating to investments in subsidiaries to the extent it is probable that they will not reverse in the foreseeable future.

The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

Significant judgement – Uncertain tax positions

The calculation of the Group's tax charge involves a degree of estimation and judgement in respect of certain items for which the ultimate tax determination is uncertain.

The Group recognises deferred tax assets only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Future taxable profits are estimated by internal budgets and forecasts. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

	Assets		**Liabilities**		**Net**	
Recognised deferred tax assets and liabilities	**2019 US$million**	(Restated) 2018 US$million	**2019 US$million**	(Restated) 2018 US$million	**2019 US$million**	(Restated) 2018 US$million
Exploration and evaluation assets	**58**	64	**(289)**	(85)	**(231)**	(21)
Oil and gas assets	**647**	644	**(801)**	(668)	**(154)**	(24)
Other assets	**34**	88	**(90)**	(111)	**(56)**	(23)
Derivative financial instruments	**18**	–	**(20)**	(16)	**(2)**	(16)
Interest-bearing loans and borrowings	**184**	126	**–**	–	**184**	126
Provisions	**44**	73	**–**	–	**44**	73
Royalty-related tax	**–**	397	**(479)**	(947)	**(479)**	(550)
Other items	**2**	19	**–**	(186)	**2**	(167)
Tax value of carry-forward losses recognised	**751**	882	**–**	–	**751**	882
Tax assets/(liabilities)	**1,738**	2,293	**(1,679)**	(2,013)	**59**	280
Set-off of tax	**(868)**	(807)	**868**	807	**–**	–
Net tax assets	**870**	1,486	**(811)**	(1,206)	**59**	280

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

2.4 TAXATION (CONTINUED)

(d) Deferred tax assets and liabilities (continued)

Accounting judgement and estimate – Deferred taxes unrecognised

Deferred tax assets have not been recognised in respect of the following items set out below, because it is not probable that the temporary differences will reverse in the future and that there will be sufficient future taxable profits against which the benefits can be utilised. There are no tax losses which are expected to expire. The remaining deductible temporary differences and tax losses do not expire under current tax legislation.

Unrecognised deferred tax assets	2019 US$million	2018 US$million
Deferred tax assets have not been recognised in respect of the following items:		
Temporary differences in relation to investments in subsidiaries	**3,814**	4,500
Deductible temporary differences relating to royalty-related tax (net of income tax)	**1,428**	5,858
Tax losses	**440**	228
	5,682	10,586

2.5 EARNINGS PER SHARE

Basic earnings per share amounts are calculated by dividing net profit or loss for the year attributable to ordinary equity holders of Santos Limited by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share amounts are calculated by adjusting basic earnings per share by the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares.

Earnings used in the calculation of basic and diluted earnings per share reconciles to the net profit or loss after tax in the income statement as follows:

	2019 US$million	2018 US$million
Earnings used in the calculation of basic and diluted earnings per share	**674**	630

The weighted average number of shares used for the purpose of calculating diluted earnings per share reconciles to the number used to calculate basic earnings per share as follows:

	2019 Number of shares	2018 Number of shares
Basic earnings per share	**2,083,007,100**	2,083,028,582
Dilutive potential ordinary shares	**16,499,100**	15,065,580
Diluted earnings per share	**2,099,506,200**	2,098,094,162

Earnings per share attributable to the equity holders of Santos Limited	2019 ¢	2018 ¢
Basic earnings per share	**32.4**	30.2
Diluted earnings per share	**32.1**	30.0

2.6 DIVIDENDS

Dividends are recognised as a liability at the time the Directors resolve to pay or declare the dividend.

Dividends recognised during the year	Franked/ unfranked	Dividend per share US¢	Total US$million
2019			
2018 Final ordinary dividend – paid on 28 March 2019	Franked	**6.2**	**127**
2019 Interim ordinary dividend – paid on 26 September 2019	Franked	**6.0**	**124**
		12.2	**251**
2018			
2018 Interim ordinary dividend – paid on 27 September 2018	Franked	3.5	73
		3.5	73

Dividends declared in respect of the year	Franked/ unfranked	Dividend per share US¢	Total US$million
2019			
Final ordinary dividend	Franked	**5.0**	**104**
Interim ordinary dividend	Franked	**6.0**	**124**
		11.0	**228**
2018			
Final ordinary dividend	Franked	6.2	127
Interim ordinary dividend	Franked	3.5	73
		9.7	200

Dividend franking account	2019 US$million	2018 US$million
30% franking credits available to the shareholders of Santos Limited for future distribution	**232**	331

Notes to the Consolidated Financial Statements
Section 2: Financial Performance

2.7 OTHER INCOME

	Note	**2019 US$million**	2018 US$million
Other income			
Change in future restoration assumptions	3.4	**2**	46
Gain on sale of non-current assets		**12**	56
Gain on disposal of subsidiaries		**–**	56
Other income associated with lease arrangements	3.5	**42**	–
Insurance recoveries		**28**	3
Overriding royalties		**13**	9
Dividend income		**2**	3
Other		**10**	7
Total other income		**109**	180
Net gain on sale of non-current assets:			
Proceeds on disposals		**10**	26
Adjusted for:			
Book value of oil and gas liabilities disposed		**–**	34
Book value of other land, buildings, plant and equipment disposed		**–**	(4)
Book value of working capital disposed		**2**	–
Total net gain on sale of non-current assets		**12**	56
Comprising:			
Net gain on sale of oil and gas assets		**12**	52
Net gain on sale of other land, buildings, plant and equipment		**–**	4
		12	56
Reconciliation to cash inflows from proceeds on disposal of non-current assets:			
Proceeds after recoupment of current year exploration and evaluation expenditure		**10**	26
Amounts received from disposals		**10**	26
Total proceeds on disposal of non-current assets		**10**	26
Comprising:			
Proceeds from disposal of oil and gas assets		**12**	18
Proceeds from disposal of other land, buildings, plant and equipment		**–**	8
Proceeds from disposal of working capital		**(2)**	–
		10	26

Notes to the Consolidated Financial Statements
Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

This section includes information about the assets used by the Group to generate profits and revenue, specifically information relating to exploration and evaluation assets, oil and gas assets, associated restoration obligations, and commitments for capital expenditure not yet recognised as a liability.

The life cycle of the Group's assets is summarised as follows:

Exploration and evaluation ▶ Appraisal drilling ▶ Development ▶ Production ▶ Decommissioning ▶ Abandonment and restoration

3.1 EXPLORATION AND EVALUATION ASSETS

Exploration and evaluation expenditure

Exploration and evaluation activity involves the search for hydrocarbon resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource. Expenditure in respect of each area of interest is accounted for using the successful efforts method of accounting.

The successful efforts method requires all exploration and evaluation expenditure to be expensed in the period it is incurred, except the costs of acquiring interests in new exploration and evaluation assets, the cost of successful wells and appraisal costs relating to determining development feasibility, which are capitalised as intangible exploration and evaluation assets.

Exploration and evaluation expenditure is recognised in relation to an area of interest when the rights to tenure of the area of interest are current and either:

- such expenditure is expected to be recovered through successful development and commercial exploitation of the area of interest or, alternatively, by its sale; or
- the exploration activities in the area of interest have not yet reached a stage that permits reasonable assessment of the existence of economically recoverable reserves and active and significant operations in, or in relation to, the area of interest are continuing.

Where an ownership interest in an exploration and evaluation asset is exchanged for another, the transaction is recognised by reference to the carrying value of the original interest. Any cash consideration paid, including transaction costs, is accounted for as an acquisition of exploration and evaluation assets. Any cash consideration received, net of transaction costs, is treated as a recoupment of costs previously capitalised with any excess accounted for as a gain on disposal of non-current assets.

No amortisation is charged during the exploration and evaluation phase.

Acquisition of assets

All assets acquired are recorded at their cost of acquisition, being the amount of cash or cash equivalents paid, and the fair value of assets given, shares issued or liabilities incurred. The cost of an asset comprises the purchase price including any incidental costs directly attributable to the acquisition, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating, and the estimate of the costs of dismantling and removing the asset and restoring the site on which it is located.

Exploration licence and leasehold property acquisition costs are capitalised as intangible assets. Licence costs paid in connection with a right to explore in an existing exploration area are capitalised and amortised over the term of the permit.

Notes to the Consolidated Financial Statements
Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

3.1 EXPLORATION AND EVALUATION ASSETS (CONTINUED)

Significant judgement – Exploration and evaluation

The application of this policy requires management to make certain estimates and assumptions as to future events and circumstances, particularly in relation to the assessment of whether economic quantities of resources have been found. Any such estimates and assumptions may change as new information becomes available. If, after having capitalised exploration and evaluation expenditure, management concludes that the capitalised expenditure is unlikely to be recovered by future exploitation or sale, then the relevant capitalised amount will be impaired through the income statement.

	2019 US$million	(Restated) 2018 US$million
Cost	**2,527**	2,530
Less: Impairment	**(1,340)**	(1,549)
Balance at 31 December	**1,187**	981
Reconciliation of movements		
Balance at 1 January	**981**	459
Acquisitions	**18**	606
Additions	**242**	86
Disposals	**–**	(2)
Expensed relating to unsuccessful wells	**(24)**	(10)
Impairment losses	**(24)**	(129)
Transfer to oil and gas assets in production	**(6)**	–
Exchange differences	**–**	(29)
Balance at 31 December	**1,187**	981
Comprising:		
Acquisition costs	**675**	667
Successful exploration wells	**440**	242
Pending determination of success	**72**	72
	1,187	981

3.2 OIL AND GAS ASSETS

Oil and gas assets are usually single oil or gas fields being developed for future production or that are in the production phase. Where several individual oil or gas fields are to be produced through common facilities, the individual oil or gas field and the associated production facilities are managed and reported as a single oil and gas asset.

Assets in development

When the technical and commercial feasibility of an undeveloped oil or gas field has been demonstrated and approval of commercial development occurs, the field enters its development phase from the exploration and evaluation phase. Expenditure on the construction, installation or completion of infrastructure facilities such as platforms, pipelines, and the drilling of development wells, as well as exploration and evaluation costs, are capitalised as tangible assets within oil and gas assets. Other subsurface expenditures include the costs of de-watering coal seam gas fields to provide access to coal seams to enable production from coal seam gas reserves. De-watering costs include the costs of extracting, transporting, treating and disposing of water during the development phase of the coal seam gas fields.

When commercial operation commences, the accumulated costs are transferred to oil and gas producing assets.

3.2 OIL AND GAS ASSETS (CONTINUED)

Producing assets

The costs of oil and gas assets in production are separately accounted for as tangible assets and include past exploration and evaluation costs, pre-production development costs and the ongoing costs of continuing to develop reserves for production and to expand or replace plant and equipment and any associated land and buildings.

Ongoing exploration and evaluation activities

Often the initial discovery and development of an oil or gas asset will lead to ongoing exploration for, and evaluation of, potential new oil or gas fields in the vicinity with the intention of producing any near-field discoveries using the infrastructure in place.

Exploration and evaluation expenditure associated with oil and gas assets is accounted for in accordance with the policy in note 3.1. Exploration and evaluation amounts capitalised in respect of oil and gas assets are separately disclosed in the table below.

Depreciation and depletion

Depreciation charges are calculated to write-off the value of buildings, plant and equipment over their estimated economic useful lives to the Group. Each component of an item of buildings, plant and equipment with a cost that is significant in relation to the total cost of the asset is depreciated separately.

Depreciation of onshore buildings, plant and equipment and corporate assets is calculated using the straight-line method of depreciation from the date the asset is available for use, unless a units of production method represents a more reasonable allocation of the asset's depreciable value over its economic useful life.

The estimated useful lives for each class of onshore assets for the current and comparative periods are generally as follows:

- Buildings 20 – 50 years
- Pipelines 10 – 30 years
- Plant and facilities 10 – 50 years

Depreciation of offshore plant and equipment is calculated using the units of production method from the date of commencement of production.

Depletion charges are calculated to amortise the depreciable value of carried forward exploration, evaluation and subsurface development expenditure over the life of the estimated Proved plus Probable ("2P") reserves for a hydrocarbon reserve, together with future subsurface costs necessary to develop the respective hydrocarbon reserve.

Significant judgement – Estimates of reserve quantities

The estimated quantities of Proved plus Probable ("2P") hydrocarbon reserves reported by the Group are integral to the calculation of depletion and depreciation expense and incorporated into the assessment of impairment of assets. Estimated reserve quantities are based upon interpretations of geological and geophysical models and assessments of the technical feasibility and commercial viability of producing the reserves. These assessments require assumptions to be made regarding future development and production costs, commodity prices, exchange rates and fiscal regimes. The estimates of reserves may change from period to period as the economic assumptions used to estimate the reserves can change from period to period, and as additional geological data is generated during the course of operations. Reserves estimates are prepared in accordance with the Group's policies and procedures for reserves estimation which conform to guidelines prepared by the Society of Petroleum Engineers.

Accounting judgement and estimate – Depletion charges

Depletion and certain depreciation charges are calculated using the units of production method. This is based on barrels of oil equivalent which will amortise the cost of carried-forward exploration, evaluation and subsurface development expenditure ("subsurface assets") over the life of the estimated 2P hydrocarbon reserves for an asset or group of assets, together with future subsurface costs necessary to develop the hydrocarbon reserves in the respective asset or group of assets.

Notes to the Consolidated Financial Statements
Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

3.2 OIL AND GAS ASSETS (CONTINUED)

	2019			(Restated) 2018		
	Subsurface assets US$million	**Plant and equipment US$million**	**Total US$million**	Subsurface assets US$million	Plant and equipment US$million	Total US$million
Cost	**9,646**	**16,544**	**26,190**	9,441	16,187	25,628
Less: Accumulated depreciation, depletion and impairment	**(6,506)**	**(8,288)**	**(14,794)**	(6,365)	(7,980)	(14,345)
Balance at 31 December	**3,140**	**8,256**	**11,396**	3,076	8,207	11,283
Reconciliation of movements						
Assets in development						
Balance at 1 January	**134**	**156**	**290**	119	65	184
Additions[1]	**10**	**21**	**31**	16	91	107
Transfer to oil and gas assets in production	**(90)**	**(123)**	**(213)**	–	–	–
Exchange differences	**–**	**–**	**–**	(1)	–	(1)
Balance at 31 December	**54**	**54**	**108**	134	156	290
Producing assets						
Balance at 1 January	**2,942**	**8,051**	**10,993**	2,019	7,333	9,352
Additions[1,2]	**428**	**684**	**1,112**	212	159	371
Acquisition	**–**	**–**	**–**	1,176	1,124	2,300
Transfer from exploration and evaluation assets	**6**	**–**	**6**	–	–	–
Transfer from oil and gas assets in development	**90**	**123**	**213**	–	–	–
Disposals	**–**	**–**	**–**	(148)	(8)	(156)
Depreciation and depletion	**(377)**	**(622)**	**(999)**	(239)	(405)	(644)
Net impairment (losses)/reversals	**(3)**	**(34)**	**(37)**	29	–	29
Exchange differences	**–**	**–**	**–**	(107)	(152)	(259)
Balance at 31 December	**3,086**	**8,202**	**11,288**	2,942	8,051	10,993
Total oil and gas assets	**3,140**	**8,256**	**11,396**	3,076	8,207	11,283
Comprising:						
Exploration and evaluation expenditure pending commercialisation	**55**	**6**	**61**	86	5	91
Other capitalised expenditure	**3,085**	**8,250**	**11,335**	2,990	8,202	11,192
	3,140	**8,256**	**11,396**	3,076	8,207	11,283

1. Includes impact on restoration assets following changes in future restoration provision assumptions (refer note 3.4).
2. Includes impact of AASB 16 recognition of right-of-use assets (refer note 3.5).

3.3 IMPAIRMENT OF NON-CURRENT ASSETS

Impairment of goodwill

Goodwill arises as a result of a business combination and has an indefinite useful life which is not subject to amortisation. Goodwill is initially measured at cost and is subsequently measured at cost less any accumulated impairment losses. For the purposes of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units ("CGU") that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. Goodwill that is created on acquisition as a consequence of deferred tax balances is tested for impairment net of those associated deferred tax balances. Goodwill is tested at least annually for impairment and more frequently if events or changes in circumstances indicate that it might be impaired.

Where goodwill has been allocated to a CGU and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal.

Impairment of oil and gas assets

The carrying amounts of the Group's oil and gas assets are reviewed at each reporting date to determine whether there is any indication of impairment or impairment reversal. Where an indicator of impairment or impairment reversal exists, a formal estimate of the recoverable amount is made.

a) Indicators of impairment – Exploration and evaluation assets

The carrying amounts of the Group's exploration and evaluation assets are reviewed at each reporting date, to determine whether any of the following indicators of impairment exists:

- tenure over the licence area has expired during the period or will expire in the near future, and is not expected to be renewed; or
- substantive expenditure on further exploration for, and evaluation of, mineral resources in the specific area is not budgeted or planned; or
- exploration for, and evaluation of, resources in the specific area have not led to the discovery of commercially viable quantities of resources, and the Group has decided to discontinue activities in the specific area; or
- sufficient data exists to indicate that although a development is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or from sale.

b) Cash-generating units – Oil and gas assets

Oil and gas assets, land, buildings, plant and equipment are assessed for impairment on a CGU basis. A CGU is the smallest grouping of assets that generates independent cash inflows, and generally represents oil and gas fields, that are being produced through a common facility.

Individual assets within a CGU may become impaired if their ongoing use changes or if the benefits to be obtained from ongoing use are likely to be less than the carrying value of the individual asset. An impairment loss is recognised in the income statement whenever the carrying amount of an asset or its CGU exceeds its recoverable amount.

Impairment losses or reversal of impairment losses

An impairment loss is recognised in the income statement whenever the carrying amount of an asset or its CGU (including any amount of allocated goodwill) exceeds its recoverable amount. Impairment losses recognised in respect of CGUs are allocated to reduce goodwill first (if goodwill is included within the carrying amount of the CGU) and then allocated to reduce the carrying amount of the assets in the CGU on a pro-rata basis.

A reversal of impairment losses is recognised in the income statement when the recoverable amount of an asset or CGU exceeds its carrying amount. An impairment loss is reversed only to the extent that the assets carrying amount does not exceed the carrying amount that would have been determined, if no impairment loss had been recognised.

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Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

3.3 IMPAIRMENT OF NON-CURRENT ASSETS (CONTINUED)

Recoverable amount

The recoverable amount of an asset or CGU is the greater of its fair value less costs of disposal ("FVLCD") (based on level 3 fair value hierarchy) and its value-in-use ("VIU"), using an asset's estimated future cash flows (as described below) discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Significant judgement – Impairment of oil and gas assets

For oil and gas assets, the expected future cash flow estimation is based on a number of factors, variables and assumptions, the most important of which are estimates of reserves, future production profiles, commodity prices, costs and foreign exchange rates. Current climate change legislation is also factored into the calculation and future uncertainty around climate change risks continue to be monitored. In most cases, the present value of future cash flows is most sensitive to estimates of future oil price and discount rates.

The estimated future cash flows for the VIU calculation are based on estimates, the most significant of which are hydrocarbon reserves, future production profiles, commodity prices, operating costs including third-party gas purchases and any future development costs necessary to produce the reserves. Under a FVLCD calculation, future cash flows are based on estimates of hydrocarbon reserves in addition to other relevant factors such as value attributable to additional resource and exploration opportunities beyond reserves based on production plans.

Estimates of future commodity prices are based on the Group's best estimate of future market prices with reference to external market analysts' forecasts, current spot prices and forward curves. Future commodity prices are reviewed at least annually. Where volumes are contracted, future prices are based on the contracted price.

Future Brent prices (US$/bbl) used were:

2020	2021	2022[1]	2023[1]	2024[1]	2025[1]
65.00	66.30	72.83	74.28	75.77	77.29

1 Based on US$70/bbl (2020 real) from 2022 escalated at 2.0% p.a.

Forecasts of the exchange rate for foreign currencies, where relevant, are estimated with reference to observable external market data and forward values, including analysis of broker and consensus estimates. The future estimated rates applied were (A$/US$):

2020	2021	2022	2023[1]
0.70	0.72	0.72	0.75

1 From 2023 the long-term exchange rate assumption remains at A$:US$0.75.

The discount rates applied to the future forecast cash flows are based on the weighted average cost of capital, adjusted for risks where appropriate, including functional currency of the asset, and risk profile of the countries in which the asset operates. The range of pre-tax discount rates that have been applied to non-current assets is between 11% and 19%.

In the event that future circumstances vary from these assumptions, the recoverable amount of the Group's oil and gas assets could change materially and result in impairment losses or the reversal of previous impairment losses.

Due to the interrelated nature of the assumptions, movements in any one variable can have an indirect impact on others and individual variables rarely change in isolation. Additionally, management can be expected to respond to some movements, to mitigate downsides and take advantage of upsides, as circumstances allow. Consequently, it is impracticable to estimate the indirect impact that a change in one assumption has on other variables and hence, on the likelihood, or extent, of impairments, or reversals of impairments, under different sets of assumptions in subsequent reporting periods.

3.3 IMPAIRMENT OF NON-CURRENT ASSETS (CONTINUED)

Impairment expense	**2019 US$million**	2018 US$million
Current assets		
Assets held for sale, subsequently disposed of	**–**	47
Total impairment of current assets	**–**	47
Non-current assets		
Exploration and evaluation assets	**24**	53
Oil and gas assets	**37**	–
Total impairment of non-current assets	**61**	53
Total impairment	**61**	100

Recoverable amounts and resulting impairment write-downs recognised in the year ended 31 December 2019:

2019	**Segment**	**Subsurface assets US$million**	**Plant and equipment US$million**	**Total US$million**	**Recoverable amount[1] US$million**
Oil and gas assets – producing:					
Barrow	Western Australia	–	34	34	nil
Other	Various	3	–	3	nil
Total impairment of oil and gas assets		**3**	**34**	**37**	
Exploration and evaluation assets:					
Gunnedah Basin	Queensland & NSW	11	–	11	nil[2]
PNG – PPL 395 & PPL 464	PNG	9	–	9	nil[2]
Other	Various	4	–	4	nil[2]
Total impairment of exploration and evaluation assets		**24**	**–**	**24**	
Total impairment of oil and gas assets and exploration and evaluation assets		**27**	**34**	**61**	

1 Recoverable amounts represent the carrying values of assets before deducting the carrying value of restoration liabilities. All producing oil and gas asset amounts are calculated using the value-in-use ("VIU") method, whilst all exploration and evaluation asset amounts use the fair value less costs of disposal ("FVLCD") method.

2 Impairment of exploration and evaluation assets relates to certain individual licenses/areas of interest that have been impaired to nil.

Oil and gas assets

Barrow

The impairment of Barrow has arisen due to an increase in oil and gas asset carrying values, following remeasurement of restoration obligations. The recoverable amount of the asset is nil.

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Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

3.3 IMPAIRMENT OF NON-CURRENT ASSETS (CONTINUED)

Recoverable amounts and resulting impairment write-downs recognised in the year ended 31 December 2018:

2018	Segment	Subsurface assets US$million	Plant and equipment US$million	Total US$million	Recoverable amount US$million
Exploration and evaluation assets:					
Gunnedah Basin	Queensland & NSW	12	–	12	nil[1]
PNG – PPL 426	PNG	29	–	29	nil[1]
PNG – PPL 261	PNG	4	–	4	nil[1]
WA-214 (Davis 1)	Western Australia	8	–	8	nil[1]
Total impairment of exploration and evaluation assets		53	–	53	

1 Impairment of exploration and evaluation assets relates to certain individual licences/areas of interest that have been impaired to nil.

Exploration and evaluation assets

The impairment of PNG – PPL 426 and PNG – PPL 261 has arisen mainly from the impact of uncertainty around access to necessary infrastructure and viability and timing of future third-party export routes.

3.4 RESTORATION OBLIGATIONS AND OTHER PROVISIONS

Provisions recognised for the period are as follows:

	Note	2019 US$million	(Restated) 2018 US$million
Current			
Restoration obligations		**59**	59
Other provisions		**63**	57
		122	116
Non-current			
Restoration obligations		**2,223**	2,034
Other provisions		**106**	125
		2,329	2,159

Restoration obligations

Provisions for future removal and environmental restoration costs are recognised where there is a present obligation as a result of exploration, development, production, transportation or storage activities having been undertaken, and it is probable that future outflow of economic benefits will be required to settle the obligation. The estimated future obligations include the costs of removing facilities, abandoning wells and restoring the affected areas and is the best estimate of the present value of the future expenditure required to settle the restoration obligation at the reporting date, based on current legal requirements or observed industry analogs. Any changes in the estimate are reflected in the present value of the restoration provision at the reporting date, with a corresponding change in the cost of the associated asset. In the event the restoration provision is reduced, the cost of the related oil and gas asset is reduced by an amount not exceeding its carrying value. If the decrease in restoration provision exceeds the carrying amount of the asset, the excess is recognised immediately in the income statement as other income.

The amount of the provision for future restoration costs relating to exploration, development and production facilities is capitalised and depleted as a component of the cost of those activities.

Significant judgement – Provision for restoration

The Group estimates the future removal and restoration costs of oil and gas production facilities, wells, pipelines and related assets at the time of installation of the assets and reviews these assessments periodically. In most instances the removal of these assets will occur many years in the future. The estimate of future removal costs therefore requires management to make judgements regarding the removal date, future environmental legislation, and the extent of restoration activities required.

The Group has recorded provisions for restoration obligations as follows:

	2019 US$million	2018 US$million
Current provision	**59**	59
Non-current provision	**2,223**	2,034
	2,282	2,093

Movements in the provision during the financial year are set out below:

	Total restoration US$million
Balance at 1 January 2019	**2,093**
Provisions made and changes to assumptions during the year	**(156)**
Provisions used during the year	**(35)**
Unwind of discount	**48**
Change in discount rate	**342**
Exchange differences	**(10)**
Balance at 31 December 2019	**2,282**

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Section 3: Capital Expenditure, Operating Assets and Restoration Obligations

3.4 RESTORATION OBLIGATIONS AND OTHER PROVISIONS (CONTINUED)

Other provisions

In addition to the provision for restoration shown above, other items for which a provision has been recorded are:

	Note	2019 US$million	(Restated) 2018 US$million
Current			
Employee benefits	7.1	**56**	55
Onerous contracts		**2**	2
Other provisions		**5**	–
		63	57
Non-current			
Employee benefits	7.1	**12**	9
Defined benefit obligations	7.1	**–**	1
Onerous contracts		**8**	29
Remediation provision		**21**	–
Other provisions		**65**	86
		106	125

3.5 LEASES

Definition of a lease

The Group has adopted AASB 16 *Leases* from 1 January 2019 (refer note 8.4(c) for related transition disclosures).

The Group assesses whether a contract is or contains a lease based on the new definition of a lease. Under AASB 16, a contract is, or contains a lease, if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as a lessee

Recognition of lease liabilities and right-of-use assets

Under AASB 16, as a lessee the Group will recognise a right-of-use asset, representing its right to use the underlying asset, and a lease liability, for all leases with a term of more than 12 months; exempting those leases where the underlying asset is deemed to be of a low value.

The Group recognises a right-of-use asset and a lease liability at the lease commencement date, i.e. when the underlying asset is first available for use. The right-of-use asset is initially measured to be equal to the lease liability and adjusted for any lease incentives received, initial direct costs and estimates of costs to dismantle or remove the underlying leased asset. Subsequently the right-of-use asset is measured at cost less any accumulated depreciation and impairment losses, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate, adjusted for asset-specific factors.

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether purchase, renewal or termination options are reasonably certain to be exercised.

The Group has applied judgement to determine the lease term for some lease contracts in which it is a lessee that include purchase, renewal or termination options. The assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which affects the value of lease liabilities and right-of-use assets recognised.

3.5 LEASES (CONTINUED)

Modifications to lease arrangements

In the event that there is a modification to a lease arrangement, a determination of whether the modification results in a separate lease arrangement being recognised needs to be made.

Where the modification does result in a separate lease arrangement needing to be recognised, due to an increase in scope of a lease through additional underlying leased assets and a commensurate increase in lease payments, the measurement requirements as described above need to be applied.

Where the modification does not result in a separate lease arrangement, from the effective date of the modification, the Group will remeasure the lease liability using the redetermined lease term, lease payments and applicable discount rate. A corresponding adjustment will be made to the carrying amount of the associated right-of-use asset. Additionally, where there has been a partial or full termination of a lease, the Group will recognise any resulting gain or loss in the income statement.

Lease impact on joint operating arrangements

Where lease arrangements impact the Group's joint operating arrangements ("JOA"), the facts and circumstances of each lease arrangement in a JOA are assessed to determine the Group's rights and obligations associated with the lease arrangement.

The Group applies judgement in its determination of which party directs the use of a leased asset. Outlined below are a number of scenarios that could exist for lease arrangements which impact the Group's JOAs:

1) Where it has been determined that the Group directs the use of the leased asset, and is the only party with legal obligation to pay the lessor, the Group will recognise the full lease liability and right-of-use asset on its statement of financial position. Depreciation is then recognised on the entire right-of-use asset, however, other income would be recognised for any amount of the lease payments that are recoverable from other parties, representing other income associated with lease arrangements; or
2) If it has been determined that the leased asset is either jointly controlled by all parties in a joint operation, or is utilised by a single joint operation, and the Group is the only party with a legal obligation to pay the lessor, the Group will recognise the full lease liability, its net share of the right-of-use asset, a receivable for the amounts recoverable from other parties; or
3) In instances where it has been determined that all parties to the joint arrangement jointly have the right to control the leased asset and all parties have a legal obligation to make lease payments to the lessor, the Group will recognise only its net share of the lease liability and right-of-use asset on its consolidated statement of financial position.

The Group's leasing activities

The Group leases a number of different types of assets, including properties and plant and production equipment, such as oil rigs. The lease arrangements have varying renewal and termination options. Lease terms for major categories of leased asset are shown below:

- Oil rigs 1 – 5 years
- Marine vessels, including LNG tankers 3 – 30 years
- Helicopters 1 – 5 years
- Building office space 10 – 20 years
- Other plant and production equipment 2 – 20 years

The Group presents the following in relation to AASB 16, within its consolidated statement of financial position:

- "Other land, buildings, plant and equipment" or "Oil and gas assets" – right-of-use assets are presented in either, depending on the type of leased asset;
- "Lease liabilities" – Lease liabilities; and
- "Other financial assets" – Sublease receivables.

Set out below are the carrying amounts of right-of-use assets recognised and their movements during the period:

US$million	Oil and gas assets	Other land, buildings, plant and equipment	Total
31 December 2018 – assets relating to previously recognised finance leases	**54**	**–**	**54**
Transition – right-of-use assets recognised 1 January 2019	**185**	**79**	**264**
Additions	**140**	**32**	**172**
Depreciation	**(84)**	**(6)**	**(90)**
Balance at 31 December 2019	**295**	**105**	**400**

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3.5 LEASES (CONTINUED)

Where the payments made under a lease contract would previously have been capitalised, the depreciation on the corresponding right-of-use asset is capitalised in lieu. During the period, $26 million of depreciation on right-of-use assets has been capitalised and forms a component of additions to "Oil and gas assets", this capitalisation results in a difference between the amount of depreciation expense recorded during the period and the movement in accumulated depreciation.

Set out below are the carrying amounts of lease liabilities and the movements during the period:

	Lease liabilities US$million
31 December 2018 – lease liabilities relating to previously recognised finance leases	**62**
Transition – lease liabilities recognised 1 January 2019	**280**
Additions	**172**
Accretion of interest	**19**
Payments	**(106)**
Foreign exchange gain on lease liabilities	**(2)**
Balance at 31 December 2019	**425**

Set out below are the maturity of the lease liabilities:

	2019 US$million	2018 US$million
Not later than one year	**117**	9
Later than one year but not later than five years	**241**	37
Later than five years	**217**	106
Minimum lease payments	**575**	152
Future finance charges	**(150)**	(90)
Total lease liabilities[1]	**425**	62
Lease liabilities		
Current	**114**	1
Non-current	**311**	61
Total lease liabilities at 31 December 2019	**425**	62

1 For leases not yet commenced at reporting date refer to note 3.6.

Short-term and low-value lease asset exemptions

The Group had total cash outflows for leases of $286 million in 2019, including outflows for short-term leases, leases of low-value assets, and variable lease payments.

For the 12-month period ended 31 December 2019, the following payments have been made for lease arrangements that have been classified as short-term or for low-value assets:

	2019 US$million
Short-term leases	**55**
Leases for low-value assets	**56**
Total payments made	**111**

3.5 LEASES (CONTINUED)

Variable lease payments

The Group holds lease contracts which contain variable payments based on the usage profile of the leased asset. The type and quantum of activities undertaken utilising these assets (primarily oil rigs) is entirely at the Group's discretion in response to operational requirements.

The lease liability and corresponding right-of-use asset for these lease contracts is calculated based on the fixed rental payment components of the contracts. The table below indicates the relative magnitude of variable payments to fixed payments made during the year ended 31 December 2019, for those lease contracts which contain a variable payment component.

	2019 US$million
Fixed payments (included in calculation of lease liability)	**105**
Variable payments	**70**
Total payments made for leases with a variable payment component	**175**

Other income associated with lease arrangements

Where it has been determined that the Group directs the use of the leased asset, and is the only party with legal obligation to pay the lessor, the Group recognises other income for any amount of the lease payments that are recoverable from other parties, representing "other income associated with lease arrangements" in the income statement. For the year ending 31 December 2019, the amount recognised was $42 million (2018: $nil).

3.6 COMMITMENTS FOR EXPENDITURE

The Group has certain obligations to perform minimum exploration work and expend minimum amounts of money pursuant to the terms of the granting of petroleum exploration permits in order to maintain rights of tenure.

These commitments may be varied as a result of renegotiations of the terms of the exploration permits, licences or contracts or alternatively upon their relinquishment. The minimum exploration commitments are less than the normal level of exploration expenditures expected to be undertaken by the Group.

The Group has the following commitments for expenditure for which no liabilities have been recorded in the financial statements as the goods or services have not been received, including commitments for non-cancellable lease arrangements where the lease term has not commenced:

	Capital		**Minimum exploration**		**Leases**	
Commitments	**2019 US$million**	2018 US$million	**2019 US$million**	2018 US$million	**2019 US$million**	2018[1] US$million
Not later than one year	**106**	112	**71**	180	**1**	34
Later than one year but not later than five years	**98**	12	**251**	417	**3**	106
Later than five years	**–**	–	**2**	3	**–**	102
	204	124	**324**	600	**4**	242

1 Refer to note 8.4(c) for a reconciliation of lease commitments disclosed to the lease liability recognised on transition to AASB 16 *Leases*.

Notes to the Consolidated Financial Statements
Section 4: Working Capital Management

This section provides information about the Group's working capital balances and management, including cash flow information. Cash flow management is a significant consideration in running our business in an efficient and resourceful manner. We also consider inventories which contribute to the business platform for generating profits and revenues.

4.1 CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash balances and short-term deposits that are readily convertible to cash, are subject to an insignificant risk of changes in value, and generally have an original maturity of three months or less.

The carrying amounts of cash and cash equivalents represent fair value. Bank balances and short-term deposits earn interest at floating rates based upon market rates.

	2019 US$million	2018 US$million
Cash at bank and in hand	**344**	467
Short-term deposits	**723**	849
	1,067	1,316

(a) Restricted cash balances

In accordance with the terms of the PNG LNG project financing, cash relating to the Group's interest in undistributed cash flows from the PNG LNG project is required to be held in restricted bank accounts. As at 31 December 2019 $99 million (2018: $147 million) was held in these accounts.

(b) Reconciliation of cash flows from operating activities

	2019 US$million	2018 US$million
Net profit after income tax	**674**	630
Add/(deduct) non-cash items:		
Depreciation and depletion	**1,000**	667
Exploration and evaluation expensed – unsuccessful wells	**24**	10
Net impairment loss	**61**	100
Net loss on fair value derivatives	**10**	69
Share-based payment expense	**12**	11
Unwind of the effect of discounting on provisions	**53**	46
Foreign exchange losses/(gains)	**11**	(146)
Gain on sale of non-current assets and subsidiaries	**(12)**	(112)
Other income associated with disposal	**(7)**	–
Other	**(2)**	(2)
Net cash provided by operating activities before changes in assets or liabilities	**1,824**	1,273
Add/(deduct) change in operating assets or liabilities, net of acquisitions or disposals of businesses:		
Increase in trade and other receivables	**(1)**	–
(Increase)/decrease in inventories	**(13)**	13
Decrease in other assets	**8**	4
Increase in net deferred tax assets	**221**	336
(Decrease)/increase in net current tax liabilities	**(12)**	25
Increase/(decrease) in trade and other payables	**32**	(60)
Decrease in provisions	**(13)**	(13)
Net cash provided by operating activities	**2,046**	1,578

4.1 CASH AND CASH EQUIVALENTS (CONTINUED)

(c) Reconciliation of liabilities arising from financing activities to financing cash flows

US$million	Short-term borrowings	Long-term borrowings	Lease liabilities	Assets held to hedge borrowings	Total
Balance at 1 January 2018	206	3,674	63	(61)	3,882
Financing cash flows[1]	(220)	1,193	–	–	973
Non-cash changes:					
Changes in fair values	–	(19)	(1)	27	7
Reclassification to current liability	977	(977)	–	–	–
Other	3	20	–	–	23
Balance at 31 December 2018	966	3,891	62	(34)	4,885
Balance at 1 January 2019	**966**	**3,891**	**62**	**(34)**	**4,885**
Lease liabilities recognised on transition to AASB 16	**–**	**–**	**280**	**–**	**280**
Financing cash flows[1]	**(974)**	**92**	**(87)**	**–**	**(969)**
Non-cash changes:					
Changes in fair values	**7**	**(3)**	**–**	**8**	**12**
Reclassification to current liability	**210**	**(210)**	**–**	**–**	**–**
Additions to lease liabilities	**–**	**–**	**172**	**–**	**172**
Other	**(13)**	**30**	**(2)**	**–**	**15**
Balance at 31 December 2019	**196**	**3,800**	**425**	**(26)**	**4,395**

1 Financing cash flows consist of the net amount of proceeds from borrowings, repayments of borrowings and repayment of lease liabilities in the statement of cash flows.

4.2 TRADE AND OTHER RECEIVABLES

Trade and other receivables are initially recognised at transaction price, which in practice is the equivalent of cost, less any impairment losses.

Long-term receivables are initially recognised at fair value and are subsequently stated at amortised cost, less any impairment losses.

Trade receivables are non-interest-bearing and settlement terms are generally within 30 days.

	2019 US$million	2018 US$million
Trade receivables	**348**	368
Other receivables	**206**	153
	554	521

Due to the nature of the Group's receivables, their carrying amount is considered to approximate their fair value.

The Group applies the simplified approach to providing for expected credit losses for all trade receivables as set out in note 5.5(e).

Notes to the Consolidated Financial Statements
Section 4: Working Capital Management

4.3 INVENTORIES

Inventories are stated at the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. Cost is determined as follows:

- drilling and maintenance stocks, which include plant spares, consumables and maintenance and drilling tools used for ongoing operations, are valued at weighted average cost; and
- petroleum products, which comprise extracted crude oil, liquefied petroleum gas, condensate and naphtha stored in tanks and pipeline systems and processed sales gas and ethane stored in subsurface reservoirs, are valued using the absorption cost method.

	2019 US$million	2018 US$million
Petroleum products	**186**	173
Drilling and maintenance stocks	**115**	115
Total inventories at lower of cost and net realisable value	**301**	288
Inventories included above that are stated at net realisable value	**20**	9

4.4 TRADE AND OTHER PAYABLES

Trade and other payables are recognised when the related goods or services are received, at the amount of cash or cash equivalents that will be required to discharge the obligation, gross of any settlement discount offered. Trade payables are non-interest-bearing and are settled on normal terms and conditions.

	2019 US$million	2018 US$million
Trade payables	**507**	503
Non-trade payables	**212**	158
	719	661

The carrying amounts of trade and other payables are considered to approximate their fair values, due to their short-term nature.

Section 5: Funding and Risk Management

Our business has exposure to capital, credit, liquidity and market risks. This section provides information relating to our management of, as well as our policies for measuring and managing, these risks.

Capital risk management objectives

The Group's objectives when managing capital are to safeguard its ability to continue as a going concern, allowing returns to shareholders and benefits for other stakeholders to be maintained, and to retain an efficient capital structure. In order to optimise the capital structure, the Group may adjust its dividend distribution policy, return capital to shareholders, issue new shares, draw or repay debt or undertake other corporate initiatives consistent with its strategic objectives.

In applying these objectives, the Group aims to:

- minimise the weighted average cost of capital whilst retaining appropriate financial flexibility;
- ensure ongoing access to a range of debt and equity markets; and
- maintain an investment-grade credit rating.

A range of financial metrics are used to monitor the capital structure including ratios measuring gearing, funds from operations to debt ("FFO-to-Debt") and debt to earnings before interest, tax, depreciation and amortisation ("Debt-to-EBITDA"). The Group monitors these capital structure metrics on both an actual and forecast basis.

At 31 December 2019 Santos Limited's corporate credit rating was BBB- (stable outlook) from Standard & Poor's.

5.1 INTEREST-BEARING LOANS AND BORROWINGS

Interest-bearing loans and borrowings are recognised initially at fair value, net of transaction costs incurred. Subsequent to initial recognition, interest-bearing loans and borrowings are stated at amortised cost with any difference between cost and redemption value being recognised in the income statement over the period of the borrowings on an effective interest basis. The carrying values of the Group's interest-bearing loans and borrowings are shown below.

Fixed-rate notes that are hedged by interest rate swaps are recognised at fair value.

All borrowings are unsecured, with the exception of the secured bank loans and lease liabilities.

All interest-bearing loans and borrowings, with the exception of secured bank loans and lease liabilities, are borrowed through Santos Finance Ltd, which is a wholly-owned subsidiary of Santos Limited. All interest-bearing loans and borrowings by Santos Finance Ltd are guaranteed by Santos Limited. Refer to note 3.5 for disclosures related to leases.

	Ref	**2019 US$million**	2018 US$million
Current			
Bank loans – secured	(a)	**136**	156
Bank loans – unsecured	(b)	**60**	657
Long-term notes	(c)	**–**	153
		196	966
Non-current			
Bank loans – secured	(a)	**1,187**	1,318
Bank loans – unsecured	(b)	**978**	1,535
Long-term notes	(c)	**1,635**	1,038
		3,800	3,891

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.1 INTEREST-BEARING LOANS AND BORROWINGS (CONTINUED)

The Group's weighted average interest rate on interest-bearing liabilities was 5.47% for the year ended 31 December 2019 (2018: 5.28%).

(a) Bank loans – secured

Facility	***PNG LNG***
Currency	US dollars
Limit	$1,371 million (2018: $1,537 million)
Drawn principal	$1,371 million (2018: $1,537 million)
Accounting balance	$1,323 million (2018: $1,474 million) including prepaid amounts
Effective interest rate	6.45% (2018: 6.10%)
Maturity	2024 and 2026
Other	Loan facilities for the PNG LNG project, in which Santos entities hold an equity interest of 13.5%, were entered into by the joint venture participants on 15 December 2009 and are provided by commercial banks and export credit agencies, bear fixed and floating rates of interest and have final maturity dates of June 2024 and June 2026 respectively. *Assets pledged as security and restricted cash* The PNG LNG facilities include security over assets and entitlements of the participants in respect of the project. The total carrying value of the Group's assets pledged as security is $2,738 million at 31 December 2019 (2018: $2,762 million). As referred to in note 4.1, under the terms of the project financing, cash relating to the Group's interest in undistributed project cash flows is required to be held in secured bank accounts.

(b) Bank loans – unsecured

Facility	***Term bank loans***
Currency	US dollars
Limit	$700 million (2018: $1,200 million)
Drawn principal	$700 million (2018: $1,200 million)
Accounting balance	$695 million (2018: $1,194 million) including prepaid amounts
Effective interest rate	4.08% (2018: 4.18%)
Maturity	2024
Other	Term bank loans bear a floating interest rate. During 2019 Santos repaid the $500 million 2-year bridge facility.

Facility	***Export credit agency supported loan facilities***
Currency	US dollars
Limit	$343 million (2018: $1,001 million)
Drawn principal	$343 million (2018: $1,001 million)
Accounting balance	$343 million (2018: $998 million) including prepaid amounts
Effective interest rate	3.75% (2018: 3.02%)
Maturity	2020–2024
Other	Loan facilities are supported by various export credit agencies and bear a floating interest rate. During 2019 Santos repaid the remaining $600 million balance of the uncovered facility.

5.1 INTEREST-BEARING LOANS AND BORROWINGS (CONTINUED)

(c) Long-term notes

Facility	***US private placement notes***
Currency	US dollars
Limit	$227 million (2018: $377 million)
Drawn principal	$227 million (2018: $377 million)
Accounting balance	$255 million (2018: $405 million) including fair value accounting measurement and prepaid amounts
Effective interest rate	2.89% (2018: 1.58%)
Maturity	2022 and 2027
Other	Long-term notes bear a fixed interest rate of 6.45% to 6.81% (2018: 6.30% to 6.81%), which have been swapped to floating rate commitments.

Facility	***Regulation-S bond***
Currency	US dollars
Limit	$1,400 million (2018: $800 million)
Drawn principal	$1,400 million (2018: $800 million)
Accounting balance	$1,380 million (2018: $786 million) including prepaid amounts
Effective interest rate	4.79% (2018: 4.40%)
Maturity	2027 and 2029
Other	Both bonds bear fixed interest rates.

5.2 NET FINANCE COSTS

Borrowing costs

Borrowing costs relating to major oil and gas assets under development are capitalised as a component of the cost of development. Where funds are borrowed specifically for qualifying projects, the actual borrowing costs incurred are capitalised. Where the projects are funded through general borrowings, the borrowing costs are capitalised based on the weighted average cost of borrowing. Borrowing costs incurred after commencement of commercial operations are expensed to the income statement.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

Interest income

Interest income is recognised in the income statement as it accrues using the effective interest method.

	2019 US$million	2018 US$million
Finance income		
Interest income	**37**	30
Total finance income	**37**	30
Finance costs		
Interest paid to third parties	**239**	210
Interest on lease liabilities	**19**	8
Deduct borrowing costs capitalised	**(15)**	(6)
	243	212
Unwind of the effect of discounting on contract liabilities – deferred revenue	**18**	–
Unwind of the effect of discounting on provisions	**53**	46
Total finance costs	**314**	258
Net finance costs	**277**	228

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.3 ISSUED CAPITAL

Ordinary share capital

Ordinary share capital is classified as equity. The issued shares do not have a par value and there is no limit on the authorised share capital of the Company.

Fully paid ordinary shares carry one vote per share, which entitles the holder to participate in dividends and the proceeds on winding up of the Company in proportion to the number of, and amounts paid on, the shares held. The market price of the Company's ordinary shares on 31 December 2019 was A$8.18 (2018: A$5.48).

Transaction costs

Transaction costs of an equity transaction are accounted for as a deduction from equity, net of any related income tax benefit. During 2019 no transaction costs in respect of capital raisings completed have been deducted from equity (2018: $nil).

Movement in ordinary shares	Note	**2019 Number of shares**	2018 Number of shares	**2019 US$million**	2018 US$million
Balance at 1 January		**2,082,979,345**	2,083,070,879	**9,031**	9,034
Issue of new shares		**155,000**	–	**1**	–
Shares purchased on-market (Treasury shares)		**–**	–	**(31)**	(10)
Utilisation of Treasury shares on vesting of employee share schemes		**–**	–	**9**	7
Replacement of ordinary shares with shares purchased on-market		**(37,719)**	(91,534)	**–**	–
Balance at 31 December		**2,083,096,626**	2,082,979,345	**9,010**	9,031

Included within the Group's ordinary shares at 31 December 2019 are 10,000 (2018: 10,000) ordinary shares paid to one cent with a value of $nil (2018: $nil).

Treasury shares

Treasury shares are purchased primarily for use on vesting of employee share schemes. Shares are accounted for at weighted average cost. During the period, $31 million (2018: $10 million) of Treasury shares were purchased on-market.

Movement in Treasury shares	Note	**2019 Number of shares**	2018 Number of shares
Balance at 1 January		**1,231,710**	587,993
Shares purchased on-market		**5,750,000**	2,500,000
Treasury shares utilised:			
Santos Employee Share1000 Plan	7.2	**(150,192)**	(176,480)
Santos Employee ShareMatch Plan	7.2	**(572,196)**	(439,664)
Utilised on vesting of SARs	7.2	**(588,100)**	(615,471)
Executive STI (deferred shares)	7.2	**(696,921)**	(312,731)
Executive STI (ordinary shares)		**(88,221)**	–
2016 Executive sign-on grants		**–**	(209,496)
Santos Employee Share1000 Plan (relinquished shares)		**2,227**	4,093
Replacement of partially paid shares with shares purchased on-market		**–**	(15,000)
Issue of new shares		**155,000**	–
Replacement of ordinary shares with shares purchased on-market		**(37,719)**	(91,534)
Balance at 31 December		**5,005,588**	1,231,710

5.4 RESERVES AND ACCUMULATED LOSSES

The balance of the Group's reserves and accumulated losses and movements during the period, are disclosed in the statement of changes in equity.

Foreign currency translation reserve

The Foreign currency translation reserve is used to record foreign exchange differences arising from the translation of the financial statements of foreign entities from their functional currency to the Group's presentation currency.

Prior to 1 January 2019, the Parent entity (Santos Limited) and certain entities within the Group had a functional currency of Australian dollars as a result of the economic environment in which they were operating. These entities were translated into the presentation currency of the Group (US dollars), with exchange differences arising on translation taken to the foreign currency translation reserve in equity.

Effective 1 January 2019, the Parent entity and certain entities within the Group changed functional currency to US dollars, the same currency as the presentation currency of the Group.

Foreign exchange differences resulting from translation to presentation currency are recognised in the foreign currency translation reserve and subsequently transferred to the income statement on disposal of the operation.

Hedging reserve

The hedging reserve comprises of the cash flow hedge reserve and the own credit revaluation reserve. The cash flow hedge reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred. The own credit risk revaluation reserve comprises the cumulative changes in the fair value of the financial liabilities designated at fair value through profit or loss attributable to changes in the Group's own credit risk. Refer to note 5.5(g) for a reconciliation and movement of cash flow hedge reserve and own credit revaluation reserve.

Accumulated profits reserve

The accumulated profits reserve acts to quarantine profits generated in current and prior periods. The reserve was established during 2015.

Accumulated losses

Accumulated losses represents the cumulative net profits/(losses) that have been generated across the Group.

5.5 FINANCIAL RISK MANAGEMENT

Exposure to foreign currency risk, interest rate risk, commodity price risk, credit risk and liquidity risk arises in the normal course of the Group's business. The Group's overall financial risk management strategy is to seek to ensure that the Group is able to fund its corporate objectives and meet its obligations to stakeholders. Derivative financial instruments may be used to hedge exposure to fluctuations in foreign exchange rates, interest rates and commodity prices.

The Group uses various methods to measure the types of financial risk to which it is exposed. These methods include cash flow at risk and sensitivity analysis in the case of foreign exchange, interest rate and commodity price risk, and ageing and credit rating concentration analysis for credit risk.

Financial risk management is carried out by a central treasury department ("Treasury") which operates under Board-approved policies. The policies govern the framework and principles for overall risk management and cover specific financial risks, such as foreign exchange risk, interest rate risk and credit risk, approved derivative and non-derivative financial instruments, and liquidity management.

(a) Financial instruments

The Group classifies its financial instruments in the following categories: financial assets at amortised cost, financial assets at fair value through profit or loss ("FVTPL"), financial assets at fair value through other comprehensive income ("FVOCI"), financial liabilities at amortised cost, financial liabilities at FVTPL and derivative instruments. The classification depends on the purpose for which the financial instruments were acquired, which is determined at initial recognition based upon the business model of the Group.

Financial assets at amortised cost

The Group classifies its financial assets at amortised cost if the asset is held with the objective of collecting contractual cash flows and the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest. These include trade receivables and bank term deposits. Bank term deposits are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are financial assets at amortised cost and are included in current assets, except for those with maturities greater than 12 months after the reporting date.

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(a) Financial instruments (continued)

Financial assets at fair value through profit or loss

The Group classifies its financial assets at fair value through profit or loss if they are acquired principally for the purpose of selling in the short term, i.e. are held for trading. The Group has not elected to designate any financial assets at fair value through profit or loss.

Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income comprise debt securities where the contractual cash flows are solely principal and interest and the objective of the Group's business model is achieved both by collecting contractual cash flows and selling financial assets. Upon disposal, any balance within the OCI reserve for these debt investments is reclassified to retained earnings.

Financial liabilities

On initial recognition, the Group measures a financial liability at its fair value minus, in the case of a financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the issue of the financial liability.

After initial recognition, trade payables and interest-bearing loans and borrowings are stated at amortised cost. Fixed-rate notes that are hedged by an interest rate swap are recognised at fair value. For financial liabilities classified as fair value through profit or loss, the element of gains or losses attributable to changes in the Group's own credit risk are recognised in other comprehensive income.

Policies for the recognition and subsequent measure of derivative liabilities are as outlined below.

Derivative instruments

Derivative financial instruments entered into by the Group for the purpose of managing its exposures to changes in foreign exchange rates and interest rates arising in the normal course of business qualify for hedge accounting. The principal derivatives that may be used are forward foreign exchange contracts, cross-currency swaps and interest rate swaps. Commodity derivatives are also used to manage the Group's exposure to changes in oil prices. The use of derivative financial instruments is subject to a set of policies, procedures and limits approved by the Board of Directors. The Group does not trade in derivative financial instruments for speculative purposes.

The Group holds the following financial instruments:

Financial assets	**2019 US$million**	2018 US$million
Financial assets at amortised cost		
Cash and cash equivalents	**1,067**	1,316
Trade receivables	**554**	521
Amounts held in escrow – acquisitions[1]	**150**	–
Amounts related to acquisitions	**39**	–
Other	**7**	1
Financial assets at FVTPL		
Equity investments	**–**	2
Derivative financial instruments	**28**	53
	1,845	1,893

1 Amounts represent cash held in escrow for pending acquisitions of assets that have yet to complete as at 31 December.

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(a) Financial instruments (continued)

Financial liabilities	2019 US$million	2018 US$million
Financial liabilities at amortised cost		
Trade and other payables	**719**	661
Borrowings at amortised cost	**3,741**	4,452
Lease liabilities	**425**	62
Financial liabilities at FVTPL		
Borrowings designated at FVTPL	**255**	405
Derivative financial instruments	**–**	6
Other	**34**	24
	5,174	5,610

The Group's financial instruments resulted in the following income, expenses, gains and losses recognised in the income statement:

	2019 US$million	2018 US$million
Interest on cash investments	**37**	30
Interest on debt held at FVTPL	**(20)**	(24)
Interest on debt held at amortised cost	**(219)**	(210)
Interest on derivative financial instruments	**15**	30
Interest accretion on lease liabilities	**(19)**	(8)
Fair value gains on debt held at FVTPL	**5**	15
Fair value losses on derivative financial instruments	**(15)**	(84)
Net foreign exchange (losses)/gains	**(11)**	146
	(227)	(105)

(b) Liquidity

The Group adopts a prudent liquidity risk management strategy and seeks to maintain sufficient liquid assets and available committed credit facilities to meet short-term to medium-term liquidity requirements. The Group's objective is to maintain flexibility in funding to meet ongoing operational requirements, exploration and development expenditure, and other corporate initiatives.

The following tables analyse the contractual maturities of the Group's financial assets and liabilities held to manage liquidity risk. The relevant maturity groupings are based on the remaining period to the contractual maturity date, as at 31 December. The amounts disclosed in the table are the contractual undiscounted cash flows comprising principal and interest repayments. Estimated variable interest expense is based upon appropriate yield curves as at 31 December.

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(b) Liquidity (continued)

Financial assets and liabilities held to manage liquidity risk 2019	Less than 1 year US$million	1 to 2 years US$million	2 to 5 years US$million	More than 5 years US$million
Cash and cash equivalents	**1,067**	**–**	**–**	**–**
Derivative financial assets				
Interest rate swap contracts	**13**	**15**	**17**	**3**
Non-derivative financial liabilities				
Trade and other payables	**(719)**	**–**	**–**	**–**
Lease liabilities	**(117)**	**(87)**	**(154)**	**(217)**
Bank loans	**(289)**	**(305)**	**(1,697)**	**(391)**
Long-term notes	**(79)**	**(79)**	**(422)**	**(1,659)**
	(124)	**(456)**	**(2,256)**	**(2,264)**

Financial assets and liabilities held to manage liquidity risk 2018	Less than 1 year US$million	1 to 2 years US$million	2 to 5 years US$million	More than 5 years US$million
Cash and cash equivalents	1,316	–	–	–
Derivative financial assets				
Interest rate swap contracts	24	15	31	4
Non-derivative financial liabilities				
Trade and other payables	(675)	–	–	–
Lease liabilities	(9)	(9)	(28)	(106)
Bank loans	(933)	(797)	(1,024)	(1,414)
Long-term notes	(207)	(48)	(342)	(951)
	(484)	(839)	(1,363)	(2,467)

(c) Foreign currency risk

Foreign exchange risk arises from commercial transactions and valuations of assets and liabilities that are denominated in a currency that is not the entity's functional currency.

The Group is exposed to foreign currency risk principally through the sale of products, borrowings and capital and operating expenditure incurred in currencies other than the entity's functional currency. In order to economically hedge foreign currency risk, the Group may enter into forward foreign exchange, foreign currency swap and foreign currency option contracts.

The Group also has certain investments in domestic and foreign operations whose net assets are exposed to foreign currency translation risk.

All external borrowings of the Group are denominated in US dollars.

On 1 January 2019, Santos Limited adopted US dollars as its functional currency. US dollar denominated borrowings, previously held by AU dollar functional currency companies, are now held by US dollar functional currency companies (refer to note 8.4(b) for further detail). All associated hedges of US dollar denominated investments in foreign operations ($1,407 million principal value) were terminated on 1 January 2019. As a result, there were no net foreign currency gains or losses arising from translation of US dollar denominated borrowings recognised in the income statement in 2019.

The Group has AU dollar denominated lease liabilities, and other monetary items, including financial assets and liabilities, denominated in currencies other than the functional currency of an operation. These items are restated to US dollar equivalents at each period end, and the associated gain or loss is taken to the income statement. The exception is foreign exchange gains or losses on foreign currency provisions for restoration at operating sites that are capitalised in oil and gas assets.

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(c) Foreign currency risk (continued)

Sensitivity to foreign currency movement

Based on the Group's net financial assets and liabilities at 31 December 2019, the estimated impact of a ±15 cent movement in the Australian dollar exchange rate (2018: ±15 cent) against the US dollar, with all other variables held constant is $13 million (2018: $21 million) on post-tax profit and $13 million (2018: $1,550 million) on equity.

(d) Market risk

Cash flow and fair value interest rate risk

The Group's interest rate risk arises from its borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk. Borrowings issued at fixed rates expose the Group to fair value interest rate risk.

The Group adopts a policy of ensuring that the majority of its exposure to changes in interest rates on borrowings is on a floating rate basis. Interest rate swaps have been entered into as fair value hedges of long-term notes. When transacted, these swaps had maturities ranging from 1 to 20 years, aligned with the maturity of the related notes.

The Group's interest rate swaps have a notional contract amount of $227 million (2018: $1,577 million) and a net fair value of $26 million (2018: $34 million). The net fair value amounts were recognised as fair value derivatives.

Sensitivity to interest rate movement

Based on the net debt position as at 31 December 2019, taking into account interest rate swaps, it is estimated that if the US dollar London Interbank Offered Rate ("LIBOR") interest rates changed by ±0.50% (2018: ±0.50%) and Australian Bank Bill Swap reference rate ("BBSW") changed by ±0.50% (2018: ±0.50%), with all other variables held constant, the impact on post-tax profit is $3 million (2018: $4 million).

This assumes that the change in interest rates is effective from the beginning of the financial year and the net debt position and fixed/floating mix is constant over the year. However, interest rates and the debt profile of the Group are unlikely to remain constant and therefore the above sensitivity analysis will be subject to change.

Commodity price risk exposure

The Group is exposed to commodity price fluctuations through the sale of petroleum products and other oil price linked contracts. The Group may enter into crude oil price swap and option contracts to manage its commodity price risk. At 31 December 2019, the Group has 6.2 million barrels of open oil price swap and option contracts (2018: 4.9 million), covering 2020 exposures, which are designated in cash flow hedge relationships. The 3-way collar option structure utilised to hedge 2018 oil exposures did not qualify for hedge accounting, resulting in movement in fair value being recorded in the income statement during 2018.

(e) Credit risk

Credit risk represents the potential financial loss if counterparties fail to complete their obligations under financial instrument or customer contracts. Santos employs credit policies which include monitoring exposure to credit risk on an ongoing basis through management of concentration risk and ageing analysis.

The majority of Santos' gas contracts are spread across major energy retailers and industrial users. Contracts exist in every mainland state, whilst the largest customer accounts for less than 16% of sales revenue.

The Group considers the probability of default upon initial recognition of the asset and whether there has been a significant depreciation in credit quality on an ongoing basis throughout each reporting period. A significant decrease in credit quality is defined as a debtor being greater than 30 days past due in making a contractual payment. The Group applies the simplified approach to providing for expected credit losses prescribed by AASB 9, which permits the use of the lifetime expected loss provision for all trade receivables and contract assets.

A default on a financial asset is when the counterparty fails to make contractual payments within 60 days of when they fall due.

Financial assets are written-off when there is no reasonable expectation of recovery. The Group categorises a loan or receivable for write-off when a debtor fails to make contractual repayments greater than 120 days past due. Where loans or receivables have been written-off, the Group continues to engage in enforcement activity to attempt to recover the receivable due. Where recoveries are made, these are recognised in the income statement.

At 31 December 2019, there were no significant concentrations of credit risk within the Group and financial instruments are spread amongst a number of financial institutions to minimise the risk of counterparty default.

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(e) Credit risk (continued)

The maximum exposure to financial institution credit risk is represented by the sum of all cash deposits plus accrued interest, bank account balances and fair value of derivative assets. The Group's counterparty credit policy limits this exposure to commercial and investment banks, according to approved credit limits based on the counterparty's credit rating. The minimum credit rating is A- from Standard & Poor's.

Under the simplified approach, determination of the loss allowance provision and expected loss rate incorporates past experience and forward-looking information, including the outlook for market demand and forward-looking interest rates. As the expected loss rate at 31 December 2019 is nil (2018: nil), no loss allowance provision has been recorded at 31 December 2019 (2018: $nil).

(f) Fair values

Fair value is the price that would be received to sell an asset or the price that would be paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- in the principal market for the asset or liability; or
- in the absence of a principal market, in the most advantageous market for the asset or liability that is accessible by the Group.

The financial assets and liabilities of the Group are all initially recognised in the statement of financial position at their fair values. Receivables, payables, interest-bearing liabilities and other financial assets and liabilities, which are not subsequently measured at fair value, are carried at amortised cost. The following summarises the significant methods and assumptions used in estimating the fair values of financial instruments:

Derivatives

The fair value of interest rate swaps is calculated by discounting estimated future cash flows based on the terms of maturity of each contract, using market interest rates for a similar instrument at the reporting date.

The fair value of oil derivative contracts is determined by estimating the difference between the relevant market prices and the contract strike price, for the notional volumes of the derivative contracts.

Financial liabilities

Fair value is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date. Where these cash flows are in a foreign currency, the present value is converted to US dollars at the foreign exchange spot rate prevailing at the reporting date.

Interest rates used for determining fair value

The interest rates used to discount estimated future cash flows, where applicable, are based on the market yield curve and credit spreads at the reporting date.

The interest rates including credit spreads used to determine fair value were as follows:

	2019 %	2018 %
Derivatives	**1.5 – 2.1**	1.5 – 2.8
Loans and borrowings	**1.5 – 2.1**	1.5 – 2.8

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1: quoted (unadjusted) prices in active markets for identical assets and liabilities;

Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly;

Level 3: techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

All of the Group's financial instruments were valued using the Level 2 valuation technique.

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(g) Derivatives and hedging activity

The Group's accounting policy for fair value and cash flow hedges are as follows:

Types of hedges	Fair value hedges	Cash flow hedges
What is it?	A derivative or financial instrument designated as hedging the change in fair value of a recognised asset or liability.	A derivative or financial instrument designated to hedge the exposure to variability in cash flows attributable to a particular risk associated with an asset, liability or forecast transaction.
Recognition date	At the date the instrument is designated as a hedging instrument.	At the date the instrument is designated as a hedging instrument.
Measurement	Measured at fair value (refer to note 5.5(f)).	Measured at fair value (refer to note 5.5(f)).
Changes in fair value	The gains or losses on both the derivative or financial instrument and hedged asset or liability attributable to the hedged risk are recognised in the income statement immediately. The gain or loss relating to the effective portion of interest rate swaps hedging fixed-rate borrowings is recognised in the income statement within finance costs, together with the loss or gain in the fair value of the hedged fixed-rate borrowings attributable to interest rate risk. The gain or loss relating to the ineffective portion is recognised in the income statement within other income or other expenses. If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item, for which the effective interest method is used, is amortised to the income statement over the period to maturity using a recalculated effective interest rate. Movements in fair value of liabilities designated at FVTPL due to changes in the Group's own credit risk are recorded in the own credit reserve through OCI and do not get recycled to the income statement.	Changes in the fair value of derivatives designated as cash flow hedges are recognised directly in other comprehensive income and accumulated in equity in the hedging reserve to the extent that the hedge is effective. Ineffectiveness is recognised on a cash flow hedge where the cumulative change in the designated component value of the hedging instrument exceeds on an absolute basis the change in value of the hedged item attributable to the hedged risk. In hedges of foreign currency purchases this may arise if the timing of the transaction changes from what was originally estimated. To the extent that the hedge is ineffective, changes in fair value are recognised immediately in the income statement within other income or other expenses. Amounts accumulated in equity are transferred to the income statement or the statement of financial position, for a non-financial asset, at the same time as the hedged item is recognised. When a hedging instrument expires or is sold, terminated or exercised, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the underlying forecast transaction occurs. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments to ensure that an economic relationship exists between the hedged item and hedging instrument. The Group enters into hedge relationships where the critical terms of the hedging instrument match exactly with the terms of the hedged item, and so a qualitative assessment of effectiveness is performed. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to assess effectiveness.

Notes to the Consolidated Financial Statements
Section 5: Funding and Risk Management

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(g) Derivatives and hedging activity (continued)

Hedge of monetary assets and liabilities

When a derivative financial instrument is used to hedge economically the foreign exchange exposure of a recognised monetary asset or liability, hedge accounting is not applied and any gain or loss on the hedging instrument is recognised in the income statement.

Hedge of net investment in a foreign operation

The gain or loss on an instrument used to hedge a net investment in a foreign operation is recognised directly in equity. On disposal of the foreign operation, the cumulative value of any such gains or losses recognised directly in equity is transferred to the income statement. There was no such hedging activity during 2019.

Other financial assets and liabilities

The table below contains all other financial assets and liabilities as shown in the statement of financial position, including derivative financial instruments used for hedging:

	2019 US$million	2018 US$million
Current assets		
Commodity derivatives (oil hedges)	**2**	19
Interest rate swap contracts	**–**	8
Amounts held in escrow – acquisitions	**150**	–
Amounts related to acquisitions	**39**	–
Other	**4**	1
	195	28
Non-current assets		
Interest rate swap contracts	**26**	26
Equity investments	**–**	2
Defined benefit surplus	**–**	3
Other	**3**	–
	29	31
Current liabilities		
Commodity derivatives (oil hedges)	**–**	6
Other	**5**	–
	5	6
Non-current liabilities		
Lease incentive	**7**	–
Other	**22**	24
	29	24

5.5 FINANCIAL RISK MANAGEMENT (CONTINUED)

(g) Derivatives and hedging activity (continued)

The effects of applying hedge accounting on the Group's financial position and performance are as follows:

Fair value hedge: Derivative financial instruments – Interest rate swap contracts	**2019 US$million**	2018 US$million
Carrying amount	**26**	34
Notional amount	**227**	1,577
Maturity date	**2022–2027**	2019–2027
Hedge ratio[1]	**1:1**	1:1
Change in value of outstanding hedging instruments since 1 January	**(8)**	(27)
Change in value of hedged item used to determine hedge effectiveness	**8**	27
Weighted average hedged rate	**1.75%**	1.10%

Cash flow hedge: Derivative financial instruments – Oil derivative contracts	**2019 US$million**	2018 US$million
Carrying amount	**2**	19
Notional amount (mmbbl)	**6.2**	4.9
Maturity date	**2020**	2019
Hedge ratio[1]	**1:1**	1:1
Change in value of outstanding hedging instruments since 1 January	**(17)**	19
Change in value of hedged item used to determine hedge effectiveness	**17**	(19)
Weighted average hedged rate	**$54.19**	$50.88

Reserves – Cash flow hedge reserve	**2019 US$million**	2018 US$million
Balance at 1 January	**(8)**	(5)
Add: Change in fair value of hedging instrument recognised in OCI for the year (effective portion)	**8**	(4)
Less: Deferred tax	**(2)**	1
Balance at 31 December	**(2)**	(8)

Reserves – Own credit revaluation reserve	**2019 US$million**	2018 US$million
Balance at 1 January	**21**	21
Add: Fair value changes on financial liabilities designated at fair value due to own credit risk	**6**	–
Less: Deferred tax	**(1)**	–
Less: Reclassified to retained earnings	**(14)**	–
Balance at 31 December	**12**	21

1 The value of the derivative contract is the same as the value of the underlying instrument that is being hedged. Therefore, the hedge ratio is 1:1.

Notes to the Consolidated Financial Statements
Section 6: Group Structure

This section provides information which will help users understand how the Group structure affects the financial position and performance of the Group as a whole. Specifically, it contains information about consolidated entities, acquisitions and disposals of subsidiaries, joint arrangements as well as parties to the Deed of Cross Guarantee under which each company guarantees the debts of others.

6.1 CONSOLIDATED ENTITIES

Subsidiaries are entities controlled by the Company. Control exists when the Company is exposed to, or has the rights to, variable returns from its involvement with an entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Acquisitions of subsidiaries are accounted for using the acquisition method of accounting. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the Group measures the non-controlling interest in the acquiree at the lower of either fair value or the proportionate share of the acquiree's identifiable net assets.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date.

If the business combination is achieved in stages, the previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognised in the income statement.

Any contingent consideration to be transferred by the acquirer will be recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration which is deemed to be an asset or liability will be recognised in accordance with AASB 9 either in the income statement or as a charge to other comprehensive income. If the contingent consideration is classified as equity, it shall not be remeasured until it is finally settled within equity. In instances where the contingent consideration does not fall within the scope of AASB 9, it is measured in accordance with the appropriate AASB standard.

A change in ownership interest of a subsidiary that does not result in the loss of control is accounted for as an equity transaction.

Intra-group balances and any unrealised gains and losses or income and expenses arising from intra-group transactions are eliminated in preparing the consolidated financial statements.

6.1 CONSOLIDATED ENTITIES (CONTINUED)

Name	Country of incorporation
Santos Limited[1] (Parent Company)	**AUS**
Controlled entities:	
Alliance Petroleum Australia Pty Ltd[1]	AUS
Basin Oil Pty Ltd[1]	AUS
Bridgefield Pty Ltd	AUS
Bridge Oil Developments Pty Ltd[1]	AUS
Bronco Energy Pty Ltd[1]	AUS
Doce Pty Ltd	AUS
Fairview Pipeline Pty Ltd[1]	AUS
Gidgealpa Oil Pty Ltd	AUS
Moonie Pipeline Company Pty Ltd	AUS
Reef Oil Pty Ltd[1]	AUS
Santos Australian Hydrocarbons Pty Ltd	AUS
Santos (BOL) Pty Ltd[1]	AUS
Controlled entity of Santos (BOL) Pty Ltd	
Bridge Oil Exploration Pty Ltd	AUS
Santos Browse Pty Ltd	AUS
Santos CSG Pty Ltd[1]	AUS
Santos Darwin LNG Pty Ltd	AUS
Santos Direct Pty Ltd	AUS
Santos Finance Ltd	AUS
Santos GLNG Pty Ltd	AUS
Controlled entity of Santos GLNG Pty Ltd	
Santos GLNG Corp	USA
Santos Infrastructure WA Holdings Pty Ltd[1,2]	AUS
Controlled entities of Santos Infrastructure WA Holdings Pty Ltd	
Santos Devil Creek Pty Ltd[1,2]	AUS
Santos Resources Pty Ltd	AUS
Santos International Holdings Pty Ltd	AUS
Controlled entities of Santos International Holdings Pty Ltd	
Barracuda Ltd	PNG
Lavana Ltd	PNG
Sanro Insurance Pte Ltd	SGP
Santos Americas and Europe LLC[3]	USA
Controlled entities of Santos Americas and Europe LLC	
Santos TPY LLC[3]	USA
Controlled entities of Santos TPY LLC	
Santos Queensland LLC[3]	USA
Santos TOG LLC[3]	USA
Controlled entities of Santos TOG LLC	
Santos TPY CSG LLC[3]	USA
Santos TOGA Pty Ltd	AUS
Santos Bangladesh Ltd	GBR
Santos (BBF) Pty Ltd	AUS
Santos Hides Ltd	PNG
Santos P'nyang Ltd	PNG
Santos Sangu Field Ltd	GBR
Santos (UK) Limited	GBR
Controlled entities of Santos (UK) Limited	
Santos Northwest Natuna B.V.	NLD
Santos Vietnam Pty Ltd	AUS
Santos (JPDA 91–12) Pty Ltd	AUS
Santos (NARNL Cooper) Pty Ltd[1]	AUS
Santos NSW Pty Ltd	AUS
Controlled entities of Santos NSW Pty Ltd	
Santos NSW (Betel) Pty Ltd	AUS
Santos NSW (Hillgrove) Pty Ltd	AUS
Santos NSW (Holdings) Pty Ltd	AUS
Controlled entities of Santos NSW (Holdings) Pty Ltd	
Santos NSW (LNGN) Pty Ltd	AUS
Santos NSW (Pipeline) Pty Ltd	AUS
Santos NSW (Narrabri Energy) Pty Ltd	AUS
Controlled entity of Santos NSW (Narrabri Energy) Pty Ltd	
Santos NSW (Eastern) Pty Ltd	AUS
Santos NSW (Narrabri Power) Pty Ltd	AUS
Santos NSW (Operations) Pty Ltd	AUS
Santos (N.T.) Pty Ltd	AUS
Controlled entity of Santos (N.T.) Pty Ltd	
Bonaparte Gas & Oil Pty Ltd	AUS
Santos Offshore Pty Ltd[1]	AUS
Santos Petroleum Pty Ltd[1]	AUS
Santos QLD Upstream Developments Pty Ltd	AUS
Santos QNT Pty Ltd[1]	AUS
Controlled entities of Santos QNT Pty Ltd	
Outback Energy Hunter Pty Ltd	AUS
Santos QNT (No. 1) Pty Ltd[1]	AUS
Controlled entities of Santos QNT (No. 1) Pty Ltd	
TMOC Exploration Proprietary Limited	AUS
Santos QNT (No. 2) Pty Ltd	AUS
Controlled entity of Santos QNT (No. 2) Pty Ltd	
Petromin Pty Ltd	AUS
Santos TPC Pty Ltd	AUS
Santos Wilga Park Pty Ltd	AUS
Santos (TGR) Pty Ltd	AUS
Santos Timor Sea Pipeline Pty Ltd	AUS
Santos Ventures Pty Ltd	AUS
Santos WA Holdings Pty Ltd[1]	AUS
Controlled entities of Santos WA Holdings Pty Ltd	
Santos KOTN Holdings Pty Ltd[2]	AUS
Controlled entities of Santos KOTN Holdings Pty Ltd	
Santos KOTN Pty Ltd[2]	AUS
Santos WA AEC Pty Ltd[1]	AUS

Notes to the Consolidated Financial Statements
Section 6: Group Structure

Name	Country of incorporation
Santos WA Energy Holdings Pty Ltd[1]	AUS
Controlled entities of Santos WA Energy Holdings Pty Ltd	
Santos WA Asset Holdings Pty Ltd[1]	AUS
Controlled entities of Santos WA Asset Holdings Pty Ltd	
Santos WA Lowendal Pty Limited	AUS
Santos WA International Pty Ltd	AUS
Harriet (Onyx) Pty Ltd[1]	AUS
Santos WA Energy Limited[1]	AUS
Controlled entities of Santos WA Energy Limited	
Ningaloo Vision Holdings Pte. Ltd	SGP
Northwest Jetty Services Pty Ltd	AUS
Santos WA DC Pty Ltd[2]	AUS
Santos WA (Exmouth) Pty Ltd	AUS
Santos WA East Spar Pty Limited[1]	AUS
Santos WA Julimar Holdings Pty Ltd	AUS
Santos WA Kersail Pty Ltd[1]	AUS
Santos WA LNG Pty Ltd	AUS
Santos WA Northwest Pty Ltd[1]	AUS
Santos WA Onshore Holdings Pty Ltd	AUS
Santos WA Southwest Pty Limited[1]	AUS
Santos WA Varanus Island Pty Ltd	AUS
Santos WA Management Pty Ltd	AUS
Controlled entities of Santos Management Pty Ltd	
Santos WA Finance Holdings Pty Limited	AUS
Controlled entities of Santos WA Finance Holdings Pty Limited	
Santos WA Finance General Partnership	AUS
Santos WA PVG Holdings Pty Ltd[1]	AUS
Controlled entities of Santos WA PVG Holdings Pty Ltd	
Santos WA PVG Pty Ltd[1]	AUS
SESAP Pty Ltd	AUS
Vamgas Pty Ltd[1]	AUS

Notes

1 Company is party to a Deed of Cross Guarantee (refer note 6.5).
2 Companies incorporated during the 2019 financial year.
3 Companies changed from Corporations to Limited Liability Companies.

Country of incorporation

AUS – Australia
GBR – United Kingdom
NLD – Netherlands
PNG – Papua New Guinea
SGP – Singapore
USA – United States of America

6.2 ACQUISITIONS AND DISPOSALS OF SUBSIDIARIES

(a) Acquisitions

On 27 November 2018 the Group acquired 100% of the shares in Quadrant Energy, an Australian oil and gas producer. Finalisation of the purchase price accounting was completed within the 12-month measurement period, resulting in changes to the provisional fair values presented in the 31 December 2018 Financial Report.

Details of the revised purchase consideration, net identifiable assets acquired and goodwill are as follows:

Fair value of net identifiable assets and goodwill acquired on acquisition date	Final US$million	Provisional US$million
Cash	174	174
Trade and other receivables	148	148
Net contract assets	152	104
Inventories	52	52
Exploration and evaluation assets	588	610
Oil and gas assets	2,300	2,241
Other land, buildings and equipment	23	23
Trade and other payables	(76)	(76)
Deferred revenue	(209)	(136)
Restoration provision	(903)	(903)
Employee provisions	(32)	(32)
Other provisions	(86)	(74)
Current tax liability	(24)	(24)
Interest-bearing liabilities	(533)	(533)
Deferred tax assets	*695*	*699*
Deferred tax liabilities	*(1,176)*	*(1,327)*
Net deferred tax liability	(481)	(628)
Net identifiable assets acquired	**1,093**	**946**
Goodwill arising on acquisition	481	628
Purchase consideration transferred	**1,574**	**1,574**

The finalisation of acquisition accounting resulted in a number of fair value adjustments completed during the measurement period, including a $147 million reduction in the deferred tax liability (and corresponding reduction in the goodwill balance recorded). This relates to the finalisation of tax bases associated with the acquired net assets. Other adjustments were not significant and did not impact the total fair value of net identified assets acquired.

The prior year balances have been restated to reflect the final fair value adjustments, to the extent these were identified during the measurement period. Due to the offsetting nature of adjustments there is no impact on reported net assets, profit after tax, or comprehensive income as previously disclosed for the comparative period.

Notes to the Consolidated Financial Statements
Section 6: Group Structure

6.2 ACQUISITIONS AND DISPOSALS OF SUBSIDIARIES (CONTINUED)

(a) Acquisitions (continued)

Goodwill

Goodwill arising from the acquisition has been recognised as the excess of consideration paid above the fair value of the assets acquired and liabilities assumed as part of the business combination. The goodwill is attributable solely to the net deferred tax liability recognised on acquisition, in accordance with accounting standards. The deferred tax liability that leads to the goodwill being created primarily arises as a consequence of PRRT being treated as an income tax in accordance with Australian Accounting Standards. The deferred income tax liability arises because the assets acquired are subject to the PRRT regime, and the historical expenditure incurred has already been deducted for PRRT purposes. The PRRT deferred tax liability is deductible for income tax purposes and a corresponding income tax deferred tax asset arises on acquisition.

Refer to note 3.3 for accounting policy with regards to impairment of goodwill.

Business combination accounting

The Company typically uses a discounted cash flow model to estimate the expected future cash flows of the oil and gas assets acquired, based on 2P reserves at acquisition date. The expected future cash flows are based on estimates of future production and commodity prices, operating costs, and forecast capital expenditures using the life-of-field models as at the acquisition date.

Contingent and prospective resources are separately valued using methods including expected future cash flow models and resource multiples established by evaluating recent comparable transactions. These amounts are included in “Exploration and evaluation assets”.

Contractual assets and liabilities are recognised in respect of gas sales agreements ("GSAs") and other contractual arrangements, which are required to be recognised at fair value under the accounting standards. Valuations of contracts are calculated taking into account the difference between the market prices and contract prices, adjusted for the time value of money.

Restoration provisions are recognised on acquisition at fair value, taking into account the risks associated with the specific restoration obligations. Other provisions are measured by estimating amounts expected to be paid to settle the obligations if it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Contingent assets and liabilities arising in a business combination are accounted for in accordance with AASB 3 *Business Combinations*. For contingent liabilities an amount is recognised at fair value at acquisition date if there is a present obligation, arising from a past event that can be reliably measured, even if it is not probable that an outflow of resources will be required to settle the obligation. Under AASB 3 an indemnification asset in a business combination is measured on the same basis as the indemnified item, subject to any valuation allowance recorded.

A number of performance guarantees were in place, over subsidiaries acquired, for fulfilment of obligations on contracts. There is a floating charge in place over certain assets of those subsidiaries, which ranks subordinate to the external debt in place. As at the date of this report the Group expects to meet all current obligations under the contracts and as a result, no provision has been recognised in the financial statements for these guarantees.

(b) Disposals

There were no disposals of subsidiaries during 2019.

6.3 JOINT ARRANGEMENTS

The Group's investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations each investor has, rather than the legal structure of the joint arrangement. Santos' exploration and production activities are often conducted through joint arrangements governed by joint operating agreements, production sharing contracts or similar contractual relationships.

The differences between joint operations and joint ventures are as follows:

Types of arrangement	**Joint operation**	**Joint venture**
Characteristics	A joint operation involves the joint control, and often the joint ownership, of assets contributed to, or acquired for the purpose of, the joint operation. The assets are used to obtain benefits for the parties to the joint operation and are dedicated to that purpose.	The Group has interests in joint ventures, whereby the venturers have contractual arrangements that establish joint control over the economic activities of the entities.
Rights and obligations	Each party has control over its share of future economic benefits through its share of the joint operation, and has rights to the assets, and obligations for the liabilities, relating to the arrangement.	Parties that have joint control of the arrangement have rights to the net assets of the arrangement.
Accounting method	The interests of the Group in joint operations are brought to account by recognising the Group's share of jointly controlled assets, share of expenses and liabilities incurred, and the income from its share of the production of the joint operation.	The Group recognises its interest in joint ventures using the equity method of accounting. Under the equity method, the investment in a joint venture is initially recognised in the Group's statement of financial position at cost and adjusted thereafter to recognise the post-acquisition changes to the Group's share of net assets of the joint venture. After application of the equity method, the Group determines whether it is necessary to recognise any impairment loss with respect to the Group's net investment in the joint venture. The Group's share of the joint venture's post-acquisition profits or losses is recognised in the income statement and its share of post-acquisition movements in reserves is recognised in the statement of changes in equity and, when applicable, in the statement of comprehensive income. Dividends receivable from the joint venture reduce the carrying amount of the investment in the consolidated financial statements of the Group.

Notes to the Consolidated Financial Statements
Section 6: Group Structure

6.3 JOINT ARRANGEMENTS (CONTINUED)

(a) Joint operations

The following are the material joint operations in which the Group has an interest:

Joint operation	Area of cash-generating unit/area of interest	Principal activities	2019 % Interest	2018 % Interest
Oil and gas assets – Producing assets				
Barrow Island	Barrow	Oil production	**28.6**	28.6
Bayu-Undan	Bayu-Undan	Gas and liquids production	**11.5**	11.5
Combabula	GLNG	Gas production	**7.3**	7.3
Fairview	GLNG	Gas production	**22.8**	22.8
GLNG Downstream	GLNG	LNG facilities	**30.0**	30.0
Halyard/Spar	Varanus Island	Gas production	**100.0**	100.0
Harriet	Barrow-HJV	Oil and gas production	**100.0**	100.0
John Brookes	Varanus Island	Gas production	**100.0**	100.0
Macedon/Pyrenees	North Carnarvon	Oil and gas production	**28.6**	28.6
PNG LNG	PNG LNG	Gas and liquids production	**13.5**	13.5
Reindeer	Reindeer	Gas production	**100.0**	100.0
Roma	GLNG	Gas production	**30.0**	30.0
SA Fixed Factor Area	Cooper Basin	Oil and gas production	**66.6**	66.6
SWQ Unit	Cooper Basin	Gas production	**60.1**	60.1
Exploration and evaluation assets				
Caldita/Barossa	Bonaparte Basin	Contingent gas resource	**25.0**	25.0
EP161, EP162 and EP189	McArthur Basin	Contingent gas resource	**75.0**	75.0
WA-435-P, WA-437-P	Bedout	Contingent oil and gas	**80.0**	80.0
WA-436-P, WA-438-P	Bedout	Oil and gas exploration	**70.0**	70.0
WA-58-R (WA-274-P)	Bonaparte Basin	Gas development	**30.0**	30.0
WA-80-R	Browse	Contingent gas resource	**47.8**	47.8
WA-281-P	Browse	Gas and liquids exploration	**70.5**	70.5
Muruk 1	PNG	Gas and liquids exploration	**20.0**	20.0
Petrel	Bonaparte Basin	Contingent gas resource	**40.3**	40.3
PRL-9	PNG	Gas and liquids exploration	**40.0**	40.0
Tern, Frigate[1]	Bonaparte Basin	Contingent gas resource	**100.0**	46.0

1 Santos acquired an additional 54% interest in Tern and Frigate during 2019, resulting in Santos' interest increasing to 100%.

6.3 JOINT ARRANGEMENTS (CONTINUED)

(b) Share of investments in joint ventures

The Group's only material joint venture is Darwin LNG Pty Ltd, which operates the Darwin LNG liquefaction facility that currently processes gas from the Bayu-Undan gas fields.

Summarised financial information of the joint venture, based on the amounts presented in its financial statements, and a reconciliation to the carrying amount of the investment in the consolidated financial statements, are set out below:

Share of investment in Darwin LNG Pty Ltd	**2019 US$million**	2018 US$million
Reconciliation to carrying amount:		
Opening net assets 1 January	**267**	375
Net profit for the period	**70**	38
Reduction in capital	**(113)**	(120)
Dividends paid	**(108)**	(26)
Closing net assets 31 December	**116**	267
Group's share (%)	**11.5%**	11.5%
Group's share of closing net assets	**13**	31
Carrying amount of investments in joint ventures	**13**	31
Summarised statement of comprehensive income:		
Net profit for the period	**70**	38
Other comprehensive income	**–**	–
Total comprehensive income	**70**	38
Group's share of net profit	**8**	4
Dividends received from joint venture	**12**	3

The following are the joint ventures in which the Group has an interest, including those which are immaterial:

Joint venture	**2019 % Interest**	2018 % Interest
Darwin LNG Pty Ltd	**11.5**	11.5
GLNG Operations Pty Ltd	**30.0**	30.0
GLNG Property Pty Ltd	**30.0**	30.0

(c) Income from all joint ventures

A reconciliation of the Group's total income from all joint ventures:

	2019 US$million	2018 US$million
Share of Darwin LNG Pty Ltd net profits	**8**	4
Total share of net profits	**8**	4

At 31 December 2019, the Group reassessed the carrying amount of its investments in joint ventures for indicators of impairment. As a result, no impairment was recorded (2018: $nil).

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6.4 PARENT ENTITY DISCLOSURES

Selected financial information of the ultimate parent entity in the Group, Santos Limited, is as follows:

	2019 US$million	2018 US$million
Net profit for the period	**594**	1,082
Total comprehensive income	**594**	1,084
Current assets	**632**	353
Total assets	**8,608**	10,512
Current liabilities	**241**	309
Total liabilities	**652**	2,912
Issued capital	**9,037**	9,036
Accumulated profits reserve	**1,734**	1,585
Other reserves	**(1,306)**	(1,306)
Accumulated losses	**(1,509)**	(1,715)
Total equity	**7,956**	7,600

Commitments of the parent entity

The parent entity's commitments are:

	2019 US$million	2018 US$million
Capital expenditure commitments	**38**	42
Minimum exploration commitments	**12**	25

Guarantees entered into by the parent entity in relation to the debts of its subsidiaries

All interest-bearing loans and borrowings, as disclosed in note 5.1, with the exception of the lease liabilities and secured bank loans, are arranged through Santos Finance Ltd, which is a wholly-owned subsidiary of Santos Limited. All interest-bearing loans and borrowings of Santos Finance Ltd are guaranteed by Santos Limited.

Contingent liabilities of the parent entity

Contingent liabilities arise in the ordinary course of business through claims against Santos Limited, including contractual, third-party and contractor claims. In most instances it is not possible to reasonably predict the outcome of these claims, and as at reporting date Santos Limited believes that the aggregate of such claims will not materially impact the Company's Financial Report.

6.5 DEED OF CROSS GUARANTEE

Pursuant to ASIC Corporations (Wholly-owned Companies) Instrument 2016/785 ("the Instrument"), the Company and each of the wholly-owned subsidiaries identified in note 6.1 (collectively, "the Closed Group") are relieved from the *Corporations Act 2001* requirements for preparation, audit and lodgement of their financial reports.

As a condition of the Instrument, the Closed Group has entered into a Deed of Cross Guarantee ("the Deed"). The effect of the Deed is that the Company has guaranteed to pay any deficiency in the event of winding up of any of the subsidiaries under certain provisions of the *Corporations Act 2001*. The subsidiaries have also given a similar guarantee in the event that the Company is wound up.

Set out below is a consolidated income statement, consolidated statement of comprehensive income and summary of movements in consolidated accumulated losses for the year ended 31 December 2019 of the Closed Group.

	2019 US$million	2018 US$million
Consolidated income statement		
Product sales	**2,288**	1,585
Cost of sales	**(1,683)**	(1,149)
Gross profit	**605**	436
Other revenue	**101**	95
Other income	**176**	465
Other expenses	**(111)**	(187)
Reversal of impairment of non-current assets	**342**	242
Interest income	**12**	43
Finance costs	**(217)**	–
Profit before tax	**908**	1,094
Income tax expense	**(108)**	(123)
Royalty-related tax expense	**(22)**	(23)
Total tax expense	**(130)**	(146)
Net profit for the period	**778**	948
Consolidated statement of comprehensive income		
Net profit for the period	**778**	948
Other comprehensive income, net of tax:		
Net actuarial gain on defined benefit plan	–	2
Total comprehensive income	**778**	950
Summary of movements in the Closed Group's accumulated losses:		
Accumulated losses at 1 January	**(2,260)**	(2,153)
Opening balance adjustment on adoption of new accounting standard	**(6)**	–
Adjusted accumulated losses at 1 January	**(2,266)**	(2,153)
Transfer to accumulated profits reserve	**(400)**	(1,063)
Net profit for the period	**778**	948
Net actuarial gain on defined benefit plan	**–**	2
Share-based payment transactions	**12**	6
Adjustments for companies added to the Deed during the year	**(705)**	–
Accumulated losses at 31 December	**(2,581)**	(2,260)

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6.5 DEED OF CROSS GUARANTEE (CONTINUED)

Set out below is a consolidated statement of financial position as at 31 December 2019 of the Closed Group.

	2019 US$million	2018 US$million
Current assets		
Cash and cash equivalents	**119**	98
Trade and other receivables	**4,159**	2,856
Other current assets	**245**	147
Total current assets	**4,523**	3,101
Non-current assets		
Other financial assets	**6,768**	8,221
Exploration and evaluation assets	**986**	192
Oil and gas assets	**4,440**	2,064
Other non-current assets	**1,422**	650
Total non-current assets	**13,616**	11,127
Total assets	**18,139**	14,228
Current liabilities		
Trade and other payables	**6,072**	2,500
Other current liabilities	**269**	100
Total current liabilities	**6,341**	2,600
Non-current liabilities		
Interest-bearing loans and borrowings	**2,817**	3,713
Provisions	**1,926**	842
Other non-current liabilities	**281**	114
Total non-current liabilities	**5,024**	4,669
Total liabilities	**11,365**	7,269
Net assets	**6,774**	6,959
Equity		
Issued capital	**9,037**	9,036
Reserves	**318**	183
Accumulated losses	**(2,581)**	(2,260)
Total equity	**6,774**	6,959

Section 7: People

This section includes information relating to the various programs the Group uses to reward and recognise our people. It includes details of our employee benefits, share-based payment schemes and key management personnel.

7.1 EMPLOYEE BENEFITS

Wages, salaries and sick leave

Liabilities for wages and salaries, including non-monetary benefits that are expected to be settled within 12 months of the reporting date, are recognised in respect of employee service up to the reporting date. They are measured at the amounts expected to be paid when the liabilities are settled. Expenses for non-vesting sick leave are recognised when the leave is taken and are measured at the rates paid or payable.

Long-term service benefits

Liabilities for long service leave and annual leave that is not expected to be taken within 12 months of the respective service being provided, are recognised and measured at the present value of the estimated future cash outflows to be made in respect of employee service up to the reporting date.

Defined benefit plan

Effective 31 October 2019, the defined benefit entitlements under the defined benefit fund were converted to accumulation benefits under the existing Santos Superannuation Plan. The defined benefit plan has therefore been closed.

The Group's net obligation in respect of the defined benefit superannuation plan is calculated by estimating the discounted amount of future benefits that employees have earned in relation to their service in the current and prior periods and deducting the fair value of any plan assets. Actuarial gains or losses that arise in calculating the Group's obligation in respect of the plan are recognised directly in retained earnings.

Defined benefit members of the Santos Superannuation Plan receive a lump sum benefit on retirement, death, disablement or withdrawal. During the period, an expense of $nil (2018: $4 million) was recorded in relation to the defined benefit plan, up to the date of conversion.

The remaining net defined benefit surplus of $4 million, at the date of conversion, will be utilised to fund contributions to the Santos Superannuation Plan accumulation fund, of which $1 million has been used to 31 December 2019. There will be no further contributions made to the defined benefit superannuation plan as this has been closed.

Defined contribution plans

The Group makes contributions to several defined contribution superannuation plans. Obligations for contributions are recognised as an expense in the income statement as incurred. The amount incurred during the year was $10 million (2018: $8 million).

The following amounts are recognised in the Group's statement of financial position in relation to employee benefits:

	2019 US$million	2018 US$million
Current assets		
Defined contribution surplus	**3**	–
Non-current assets		
Defined benefit surplus	**–**	3
Current provisions		
Employee benefits	**56**	55
Non-current provisions		
Employee benefits	**12**	9
Defined benefit obligations	**–**	1
Total non-current provisions	**12**	10
Total employee benefits provisions	**68**	65

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7.2 SHARE-BASED PAYMENT PLANS

The Group provides benefits to employees of the Group through share-based incentives. Employees are paid for their services or incentivised for their performance in part through shares or rights over shares.

There are two main share-based payment plans: equity-settled share-based payment plans and cash-settled share-based payment plans. The equity-settled plans consist of the general employee share-based payment plans, Executive Long-Term Incentive share-based payment plans and Executive Short-Term Incentive share-based payment plans.

The amounts recognised in the income statement of the Group during the financial year in relation to shares issued under the share plans are summarised as follows:

	2019 US$000	2018 US$000
Employee expenses:		
General employee share plans:		
Share1000 Plan	**(724)**	(824)
ShareMatch Plan (matched SARs)	**(1,857)**	(1,947)
Executive Long-Term Incentive share-based payment plans – equity settled	**(11,068)**	(5,693)
Executive Short-Term Incentive share-based payment plans – equity settled	**(3,194)**	(2,244)
	(16,843)	(10,708)

The net impact on accumulated losses from share-based payment plans, net of Treasury shares utilised in the current year, is $12 million. The net impact on accumulated losses from share-based payment plans in 2018 was $6 million.

7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

(a) Equity-settled share-based payment plans

The cost of equity-settled transactions is determined by the fair value at the grant date using an appropriate valuation model. The cost is recognised, together with a corresponding increase in other capital reserves in equity, over the period in which the performance and/or service conditions are met. Currently, the Company has four equity-settled share-based payment plans in operation, the details of which are as follows:

i. General employee share plans

Santos operates two general employee share plans, the Share1000 Plan and the ShareMatch Plan. Eligible employees have the option to participate in either the Share1000 Plan or the ShareMatch Plan. Members of the Executive Committee ("Excom"), Directors of the Company, casual employees, employees on fixed-term contracts and employees on international assignment are excluded from participating in the Share1000 Plan and the ShareMatch Plan.

	Share1000	**ShareMatch**
What is it?	The Share1000 Plan provides for grants of fully paid ordinary shares up to a value determined by the Board, which in 2019 was A$1,000 per employee (2018: A$1,000).	The ShareMatch Plan allows for the purchase of shares through salary sacrificing up to A$5,000 over a maximum 12-month period, and to receive matched SARs at a 1:1 ratio or as otherwise set by the Board.
The employee's ownership and right to deal with them	Subject to restrictions until the earlier of the expiration of the three-year restriction period and the time when the employee ceases to be in employment.	Upon vesting, subject to restrictions until the earlier of the expiration of the three-year restriction period and the time when he or she ceases to be an employee.
How is the fair value recognised?	The fair value of these shares is recognised as an employee expense with a corresponding increase in issued capital, and the fair value per share is determined by the Volume Weighted Average Price ("VWAP") of ordinary Santos shares on the ASX during the week up to and including the date of issue of the shares.	The fair value of the shares is recognised as an increase in issued capital and a corresponding increase in loans receivable. The fair value per share is determined by the VWAP of ordinary Santos shares on the ASX during the week up to and including the date of issue of the shares. The fair value of services required in return for matched SARs granted is measured by reference to the fair value of matched SARs granted. The estimate of the fair value of the services received is measured by discounting the share price on the grant date using the assumed dividend yield and recognised as an employee expense for the term of the matched SARs.

The following shares were issued pursuant to the employee share plans during the period:

		Share1000 Plan		**ShareMatch Plan**	
Year	**Issue date**	**Issued shares No.**	**Fair value per share A$**	**Issued shares No.**	**Fair value per share A$**
2019	**24 July 2019**	**150,192**	**6.94**	**572,196**	**6.94**
2018	9 July 2018	176,480	6.24	439,664	6.24

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7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

i. General employee share plans (continued)

The number of SARs outstanding, and movements throughout the financial year are:

Year	Beginning of the year No.	Granted No.	Lapsed No.	Vested No.	End of the year No.
2019 Total	**1,513,743**	**572,196**	**(29,967)**	**(588,100)**	**1,467,872**
2018 Total	1,764,952	439,664	(75,402)	(615,471)	1,513,743

The inputs used in the valuation of the SARs are as follows:

Matched SARs grant	2019
Share price on grant date (A$)	**7.00**
Exercise price (A$)	**nil**
Right life (weighted average, years)	**2.4**
Expected dividends (% p.a.)	**1.9**
Fair value at grant date (A$)	**6.69**

The loan arrangements relating to the ShareMatch Plan are as follows:

During the year the Company utilised $3 million of Treasury shares (2018: $2 million) under the ShareMatch Plan, with $2 million (2018: $2 million) received from employees under loan arrangements. The movements in loans receivable from employees are:

	2019 US$000	2018 US$000
Employee loans at 1 January	**1,104**	1,327
Treasury shares utilised during the year	**2,798**	2,040
Cash received during the year	**(2,188)**	(2,152)
Foreign exchange movement	**(43)**	(111)
Employee loans at 31 December	**1,671**	1,104

ii. Executive Long-Term Incentive share-based payment plans

The Company's Executive Long-Term Incentive Program ("LTI Program") provides for eligible executives selected by the Board to receive SARs upon the satisfaction of set market and non-market performance conditions. Each SAR is a conditional entitlement to a fully paid ordinary share, subject to the satisfaction of performance or service conditions, on terms and conditions determined by the Board. The Board has the discretion to cash-settle SARs granted under the amended Santos Employee Equity Incentive Plan.

The fair value of SARs is recognised as an employee expense with a corresponding increase in equity. The fair value is measured at grant date and recognised over the period during which the executive becomes unconditionally entitled to the SARs. The fair value of the performance-based SARs granted is measured using a Monte Carlo simulation method, taking into account the terms and market conditions upon which the SARs were granted. The fair value of the deferred SARs granted is measured by discounting the share price on the grant date using the assumed dividend yield for the term of the SAR. The amount recognised as an expense is only adjusted when SARs do not vest due to non-market-related conditions.

The 2019 LTI Program offers consisted only of SARs. Performance Awards were granted to eligible executives in 2019 who were granted one four-year grant (1 January 2019 – 31 December 2022).

7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

ii. Executive Long-Term Incentive share-based payment plans (continued)

Vesting of the grants is based on the following performance targets:

- 25% of the SARs are subject to Santos' Total Shareholder Return ("TSR") relative to the performance of the ASX 100 companies ("ASX 100 comparator group");
- 25% are subject to Santos' TSR relative to the performance of the Standard & Poor's Global 1200 Energy Index companies ("S&P GEI comparator group");
- 25% are subject to Santos' Free Cash Flow Breakeven Point ("FCFBP") relative to internal targets; and
- 25% are subject to Santos' Return on Average Capital Employed ("ROACE") relative to internal targets, measured at the end of the performance period.

The numbers of SARs outstanding at the end of, and movements throughout, the financial year are:

Year	Beginning of the year No.	Granted No.	Lapsed No.	Vested No.	End of the year No.
2019 Total	**11,332,550**	**3,783,073**	**(68,478)**	**(3,828,286)**	**11,218,859**
2018 Total	11,498,252	3,300,981	(3,466,683)	–	11,332,550

The SARs granted during 2019 totalling 3,783,073 were issued across the following four tranches, each with varying valuations:

Senior Executive LTI – granted 15 March 2019

	2019			
Performance Awards	**Q1**	**Q2**	**Q3**	**Q4**
Performance index	ASX 100	S&P GEI	FCFBP	ROACE
Fair value at grant date (A$)	5.26	5.31	6.56	6.56
Share price on grant date (A$)	7.05	7.05	7.05	7.05
Exercise price (A$)	nil	nil	nil	nil
Expected volatility (weighted average, % p.a.)	46	46	46	46
Right life (weighted average, years)	4	4	4	4
Expected dividends (% p.a.)	1.9	1.9	1.9	1.9
Risk-free interest rate (% p.a.)	1.5	1.5	1.5	1.5
Total granted (No.)	631,602	631,588	631,568	631,553

Senior Executive LTI – granted 18 April 2019

	2019			
Performance Awards	**Q1**	**Q2**	**Q3**	**Q4**
Performance index	ASX 100	S&P GEI	FCFBP	ROACE
Fair value at grant date (A$)	5.48	5.57	6.77	6.77
Share price on grant date (A$)	7.22	7.22	7.22	7.22
Exercise price (A$)	nil	nil	nil	nil
Expected volatility (weighted average, % p.a.)	46	46	46	46
Right life (weighted average, years)	4	4	4	4
Expected dividends (% p.a.)	1.9	1.9	1.9	1.9
Risk-free interest rate (% p.a.)	1.5	1.5	1.5	1.5
Total granted (No.)	95,282	95,277	95,276	95,273

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7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

ii. Executive Long-Term Incentive share-based payment plans (continued)

CEO and Senior Executive LTI – granted 9 May 2019

	2019			
Performance Awards	**Q1**	**Q2**	**Q3**	**Q4**
Performance index	ASX 100	S&P GEI	FCFBP	ROACE
Fair value at grant date (A$)	5.19	5.19	6.49	6.49
Share price on grant date (A$)	6.96	6.96	6.96	6.96
Exercise price (A$)	nil	nil	nil	nil
Expected volatility (weighted average, % p.a.)	46	46	46	46
Right life (weighted average, years)	4	4	4	4
Expected dividends (% p.a.)	1.9	1.9	1.9	1.9
Risk-free interest rate (% p.a.)	1.3	1.3	1.3	1.3
Total granted (No.)	159,409	159,408	159,407	159,407

Senior Executive LTI – granted 4 October 2019

	2019			
Performance Awards	**Q1**	**Q2**	**Q3**	**Q4**
Performance index	ASX 100	S&P GEI	FCFBP	ROACE
Fair value at grant date (A$)	5.59	5.61	6.72	6.72
Share price on grant date (A$)	7.28	7.28	7.28	7.28
Exercise price (A$)	nil	nil	nil	nil
Expected volatility (weighted average, % p.a.)	43	43	43	43
Right life (weighted average, years)	4	4	4	4
Expected dividends (% p.a.)	2.5	2.5	2.5	2.5
Risk-free interest rate (% p.a.)	0.6	0.6	0.6	0.6
Total granted (No.)	59,509	59,507	59,504	59,503

The above tables include the valuation assumptions used for Performance Awards SARs granted during the current year. The expected vesting period of the SARs is based on historical data and current expectations and is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility over a period similar to the life of the SARs is indicative of future trends, which may not necessarily be the actual outcome.

7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

ii. Executive Long-Term Incentive share-based payment plans (continued)

Vesting of Performance Awards

All Performance Awards are subject to hurdles based on the Company's TSR relative to both the ASX 100 and S&P GEI comparator group over the performance period, as well as the FCFBP and ROACE at the end of the vesting period. There is no re-testing of performance conditions. Each tranche of the Performance Awards subject to TSR granted during 2019 vests in accordance with the following vesting schedule:

TSR percentile ranking	% of grant vesting
< 51st percentile	0%
= 51st percentile	50%
52nd to 75th percentile	Further 2.0% for each percentile over 51st
≥ 76th percentile	100%

Restriction period

Shares allocated on vesting of SARs granted in 2014 onwards are subject to additional restrictions on dealing for four years after the original grant date. Shares allocated on vesting of SARs granted in 2013 may be subject to additional restrictions on dealing for three or seven years after the original grant date, depending on whether the executive elected to extend the trading restrictions period beyond the vesting date. Shares allocated on the vesting of SARs that were granted prior to 2010 will be subject to further restrictions on dealing for a maximum of 10 years after the original grant date. No amount is payable on grant or vesting of the SARs.

iii. Executive Deferred Short-Term Incentives ("STIs")

Deferred shares

Deferred STIs represent a proportion of the total executive STI of the applicable year that has been deferred into shares. The deferred shares are subject to a 24-month continuous service period following the year to which the STI related. The number of deferred STIs outstanding at the end of, and movements throughout, the financial year are:

Year	Beginning of the year No.	Granted No.	Lapsed No.	Vested No.	End of the year No.
2019 Total	**312,731**	**696,921**	**–**	**(312,731)**	**696,921**
2018 Total	261,011	312,731	–	(261,011)	312,731

On 15 March 2019 the Company issued 696,921 deferred shares to eligible executives. The share price on the grant date was A$7.05 and the fair value was A$6.82 after applying a 1.9% dividend yield assumption to the valuation.

iv. Other equity grants

The SARs in the table below are subject to varying continuous service periods, depending on the specific grant. The other SARs granted during the year are as follows:

2019							
		Continuous Service Period			Grant Date		
Grant Date	SARs Granted	Commencing	Expiring	Vesting Date	Share Price	Fair Value	Dividend Yield
15 Mar 2019	49,772	11 Feb 2019	10 Feb 2021	11 Feb 2021	7.05	6.77	1.9%
15 Mar 2019	19,340	1 Jan 2019	31 Dec 2021	1 Jan 2022	7.05	6.59	1.9%
12 Apr 2019	9,117	1 Apr 2019	31 Mar 2020	1 Apr 2020	7.03	6.92	1.9%
12 Apr 2019	9,117	1 Apr 2019	31 Mar 2021	1 Apr 2021	7.03	6.72	1.9%
12 Apr 2019	30,000	1 Jan 2019	31 Dec 2021	1 Jan 2022	7.03	6.77	1.9%
18 Apr 2019	88,879	27 Nov 2018	26 Nov 2021	27 Nov 2021	7.22	6.89	1.9%
7 Jun 2019	49,772	1 Jun 2019	31 Dec 2021	1 Jan 2022	6.79	6.16	1.9%
18 Jul 2019	10,734	10 Jul 2019	9 Jul 2022	10 Jul 2022	6.92	6.34	2.5%
20 Aug 2019	26,364	12 Aug 2019	11 Aug 2022	12 Aug 2022	6.89	6.31	2.5%
30 Aug 2019	635,741	26 Aug 2019	15 Sep 2022	16 Sep 2022	7.21	6.59	2.5%
30 Aug 2019	635,808	26 Aug 2019	15 Sep 2023	16 Sep 2023	7.21	6.40	2.5%

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7.2 SHARE-BASED PAYMENT PLANS (CONTINUED)

iv. Executive and other equity grants (continued)

2018

Grant Date	SARs Granted	Continuous Service Period Commencing	Continuous Service Period Expiring	Vesting Date	Grant Date Share Price	Grant Date Fair Value	Dividend Yield
1 Apr 2018[1]	235,878	1 Apr 2018	31 Mar 2020	1 Apr 2020	5.89	5.76	1.3%
1 Apr 2018[2]	515,181	1 Apr 2018	31 Mar 2021	1 Apr 2021	5.89	5.68	1.3%
14 Nov 2018	7,650	5 Nov 2018	4 Nov 2019	5 Nov 2019	6.37	6.28	1.3%
14 Nov 2018	7,649	5 Nov 2018	4 Nov 2020	5 Nov 2020	6.37	6.20	1.3%

1 During 2018, 7,981 SARs lapsed, leaving 227,897 SARs remaining at 31 December 2019.

2 During 2019, 42,626 SARs lapsed, leaving 472,555 SARs remaining at 31 December 2019.

(b) Options

The Company has not granted options over unissued shares under the Executive Long-Term Incentive share-based payment plans since 2009. The information as set out below relates to options issued under the Executive Long-Term Incentive share-based payment plans in 2009 and earlier that have vested in prior years:

	Beginning of the year No.	Lapsed No.	Exercised No.	End of the year No.	Exercisable at end of the year No.
2019					
Vested in prior years	**50,549**	**(50,549)**	**–**	**–**	**–**
Weighted average exercise price (A$)	**14.81**	**14.81**	**–**	**–**	**–**
2018					
Vested in prior years	807,988	(757,439)	–	50,549	50,549
Weighted average exercise price (A$)	15.55	15.60	–	14.81	14.81

(c) Cash-settled share-based payment plans

The Group recognises the fair value of cash-settled share-based payment transactions as an employee expense with a corresponding increase in the liability for employee benefits. The fair value of the liability is measured initially, and at the end of each reporting period until settled, at the fair value of the cash-settled share-based payment transaction, by using a Monte Carlo simulation method.

7.3 KEY MANAGEMENT PERSONNEL DISCLOSURES

(a) Key management personnel compensation

	2019 US$000	2018 US$000
Short-term benefits	**7,932**	7,794
Retirement benefits	**236**	205
Other long-term benefits	**115**	73
Termination benefits	**43**	31
Share-based payments	**4,739**	2,757
	13,065	10,860

(b) Loans to key management personnel

There have been no loans made, guaranteed or secured, directly or indirectly, by the Company or any of its subsidiaries at any time throughout the year to any key management personnel, including their related parties.

Notes to the Consolidated Financial Statements
Section 8: Other

This section provides information that is not directly related to the specific line items in the financial statements, including information about contingent liabilities, events after the end of the reporting period, remuneration of auditors and changes to accounting policies and disclosures.

8.1 CONTINGENT LIABILITIES

Contingent liabilities arise in the ordinary course of business through claims against the Group, including contractual, third-party and contractor claims. In most instances it is not possible to reasonably predict the outcome of these claims, and as at reporting date the Group believes that the aggregate of such claims will not materially impact the Group's Financial Report.

8.2 EVENTS AFTER THE END OF THE REPORTING PERIOD

On 19 February 2020, the Directors of Santos Limited resolved to pay a final dividend of US5.0 cents in respect of the 2019 financial year. Consequently, the financial effect of these dividends has not been brought to account in the full-year financial statements for the year ended 31 December 2019. Refer to note 2.6 for details.

8.3 REMUNERATION OF AUDITORS

The auditor of Santos Limited is Ernst & Young.

(a) Audit and review services

Amounts received or due and receivable for an audit or review of the Financial Report of the entity and any other entity in the Group by:

	2019 US$000	2018 US$000
Audit of statutory report of Santos Limited Group	**1,361**	1,558
Audit of statutory report of controlled entities	**274**	265
	1,635	1,823

(b) Other services

Amounts received or due and receivable for other services in relation to the entity and any other entity in the Group by:

	2019 US$000	2018 US$000
Ernst & Young for other assurance services required by legislation, to be performed by the auditor	**47**	66
Ernst & Young (Australia) for other assurance services, not required to be performed by the auditor	**226**	394
Ernst & Young (Australia) for taxation and other services	**2,592**	1,708
	2,865	2,168

Notes to the Consolidated Financial Statements
Section 8: Other

8.4 ACCOUNTING POLICIES

(a) Changes in accounting policies and disclosures

The Group applied the following amendments to accounting standards applicable for the first time for the financial year beginning 1 January 2019:

- AASB 16 *Leases*
- AASB 2018-6 *Amendments to Australian Accounting Standards – Definition of a Business*
- IFRIC 23 *Uncertainty Over Income Tax Treatments*

The adoption of these standards and other new accounting policies are disclosed in more detail below.

In addition, several other standard amendments and interpretations were applicable for the first time in 2019, but were not relevant to the Company and do not impact the Group's annual consolidated financial statements or half-year condensed financial statements.

(b) Functional currency

The Group performed a reassessment of the functional currency of the Parent entity (Santos Limited) and certain entities within the Group, resulting in it changing functional currency to US dollars, effective 1 January 2019. Prior to 1 January 2019, Santos Limited and these entities had a functional currency of Australian dollars.

The change in functional currency was driven by a reassessment of the primary and where necessary, secondary indicators of economic environment that impacts the cash inflows and outflows of the companies. This included factors such as a change in mix of income stream and in some instances where companies were acting as extensions of the Parent. The US dollar was determined to be the currency that predominantly impacted each of the companies.

The presentation currency of the Group remains US dollars.

(c) Adoption of AASB 16

Description

AASB 16 introduced a single, on-balance sheet accounting model for lessees, which replaced AASB 117 *Leases* and AASB Interpretation 4 *Determining Whether an Arrangement contains a Lease*. As a result, the Group, as a lessee, has recognised right-of-use assets representing its right to use the underlying asset, and lease liabilities, representing its obligation to make lease payments.

The Group has applied AASB 16 using the modified retrospective approach, under which the cumulative effect of initial application is recognised in retained earnings at 1 January 2019. Accordingly, the comparative information presented for 2018 has not been restated – i.e. it is presented as previously reported under AASB 117 and related interpretations. The details of the change in accounting policy are disclosed below.

Transition

The Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred substantially all of the risks and rewards of ownership. Under AASB 16, the Group as a lessee recognises right-of-use assets and lease liabilities for contracts that convey a right to control the use of an identified asset for a period of time in exchange for consideration.

The Group applied the modified retrospective transition approach, resulting in the cumulative effect of adopting AASB 16 as an adjustment to opening retained earnings at 1 January 2019, with no restatement to comparative information.

At transition, for leases classified as operating leases under AASB 117:

- lease liabilities were measured at present value of the remaining lease payments, discounted using the determined incremental borrowing rate, as appropriate for each identified lease arrangement, as at 1 January 2019, given the rate implicit within each identified lease arrangement was not readily determinable;
- right-of-use assets were measured at either: (i) their carrying amount as if AASB 16 had been applied since the commencement date, discounted using the lessee's incremental borrowing rate at the date of initial application; or (ii) an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments; and
- in addition, the Group elected to apply the option to adjust the carrying amount of the right-of-use assets for any onerous lease provisions that had been recognised on the Group's statement of financial position as at 31 December 2018.

8.4 ACCOUNTING POLICIES (CONTINUED)

(c) Adoption of AASB 16 (continued)

The impact on transition is summarised below:

	1 January 2019 US$million
Oil and gas assets – right-of-use assets	**185**
Other land, buildings, plant and equipment – right-of-use assets	**79**
Other financial assets – net investment in sub-lease	**4**
Reduction of onerous lease provision	**4**
Lease liabilities	**(280)**
Net impact on accumulated losses, before tax	**(8)**
Deferred tax asset	**2**
Net impact on accumulated losses, after tax	**(6)**

When measuring lease liabilities for leases that were previously classified as operating leases, the Group discounted lease payments using its incremental borrowing rate at 1 January 2019. The weighted-average rate applied is 4.68%.

Transition practical expedients:

The Group elected to apply the following transition practical expedients:

i. exemption for lease arrangements with a short-remaining-term from the date of initial application;

ii. discount rates applied to a portfolio of leases with similar characteristics;

iii. exemption for leases where the value of the underlying leased asset is deemed to be low-value; and

iv. use of hindsight with regards to determination of the lease term.

With the application of the above transition practical expedients, the Group recognises the lease payments associated with short-remaining-term and low-value leases as an expense on a straight-line basis over the lease term. The disclosed operating lease commitments in note 3.5 of the Group's annual financial statements for the year ended 31 December 2018, included amounts related to such leases.

Leases that were classified as finance leases under AASB 117 will continue to be recognised in the statement of financial position under AASB 16. The carrying amount of the right-of-use asset and the lease liability at 1 January 2019 were determined to be the carrying amount of the lease asset and lease liability under AASB 117 immediately before that date.

The table below reconciles the Group's operating lease commitments at 31 December 2018 to the transition lease liabilities recognised at 1 January 2019:

	1 January 2019 US$million
Operating lease commitment at 31 December 2018	**242**
Adjusted for:	
Short-remaining-term leases exemption	**(4)**
Low-value leases exemption	**(3)**
Leases with a commencement date post 1 January 2019	**(11)**
Arrangements reassessed as service-type arrangements	**(26)**
Gross lease liabilities at 1 January 2019	**198**
Effect of discounting	**(51)**
Redetermination of lease term	**42**
Lease arrangements previously disclosed within capital commitments	**91**
Lease liability recognised on adoption of AASB 16 at 1 January 2019	**280**
Present value of existing finance leases at 31 December 2018	**62**
Total lease liabilities recognised at 1 January 2019	**342**

Notes to the Consolidated Financial Statements
Section 8: Other

8.4 ACCOUNTING POLICIES (CONTINUED)

(c) Adoption of AASB 16 (continued)

Current period

The Group leases a number of different types of assets, including properties and plant and production equipment, such as oil rigs. The Group presents the following in relation to AASB 16:

- Depending on the type of leased asset, right-of-use assets are presented in either 'Other land, buildings, plant and equipment' or 'Oil and gas assets'; and
- Lease liabilities in 'Lease liabilities' in the statement of financial position.

The table below provides a summary of the impact of AASB 16 on the Group's consolidated income statement, consolidated statement of financial position and consolidated statement of cash flows for the year ended 31 December 2019:

	Ref	31 December 2019 US$million
Consolidated income statement		
Expenses		
Depreciation		**16**
Depreciation, related to JOA recoveries	a.	**42**
Production expenses	b.	**(9)**
Shipping costs	b.	**(9)**
Other expenses	b.	**(2)**
Finance cost		**11**
Income		
Other income, related to JOA recoveries	a.	**42**
Foreign exchange gain		**2**
Net expense recognised in the income statement		**5**

Formerly under AASB 117, operating lease costs were either expensed as operating expenses (predominantly production costs) or capitalised as part of non-current assets.

	31 December 2019 US$million
Consolidated statement of financial position	
Assets	
Oil and gas assets – right-of-use assets	**244**
Other land, buildings, plant and equipment – right-of-use assets	**105**
Other financial assets – net investment in sublease	**3**
Deferred tax asset	**2**
Reduction in value capitalised to oil and gas assets	**(4)**
Liabilities	
Lease liabilities	**363**
Onerous lease provisions	**(2)**
Net impact on net assets	**(11)**
Equity	
Income statement impact related to leases for the period	**(5)**
Net impact on retained earnings on transition to AASB 16	**(6)**
Total impact on equity	**(11)**

8.4 ACCOUNTING POLICIES (CONTINUED)

(c) Adoption of AASB 16 (continued)

	Note	31 December 2019 US$million
Consolidated statement of cash flows		
Operating cash flows		
Pipeline tariffs and other receipts *(Inflow)*	a.	**42**
Payments to suppliers and employees *(Inflow)*	c.	**29**
Payment of lease liability financing costs *(Outflow)*		**(10)**
Investing cash flows		
Oil and gas assets *(Inflow)*	c.	**26**
Financing cash flows		
Repayment of lease liabilities *(Outflow)*		**(87)**
Net impact on cash flows		**–**

Notes:

a. Where the Group has recognised the gross right-of-use asset and is the only party with a legal obligation to pay the lessor, depreciation is recognised on the entire right-of-use asset and a finance cost is recognised on the lease liability. Any recovery of the lease payments from other parties is recognised as other income – related to JOA recoveries in the income statement. This results in an insignificant impact to the income statement and an operating cash inflow for any recovery of these lease payments.

b. The decrease in operating expenses represents the operating lease costs that were previously expensed under AASB 117, now capitalised as part of the right-of-use asset under AASB 16, which will be depreciated.

c. The impact on operating cash flows and investing cash flows is the removal of the payments for operating lease costs incurred (previously under AASB 117), which were either expensed through operating costs or capitalised to non-current assets. These cash flows are now presented as financing cash outflows related to lease liability payments.

(d) AASB 2018-6 Amendments to Australian Accounting Standards – Definition of a Business

Description

The effect of these changes is that the new definition of a business is narrower. The new definition clarifies that to be considered a business, the acquired set of activities and assets should at minimum include an input and substantive process, that together significantly contribute to the ability to create outputs.

This could result in fewer business combinations being recognised, more specifically where acquisitions and disposals relate to exploration and evaluation assets. Whilst the amendments provide additional guidance, it introduces a number of considerations and decision points which need to be assessed to apply the new definition. The standard also provides an optional 'asset concentration test', which when applied offers a simplified assessment of whether the acquisition is a business or not.

Impact

The recognition criteria and other considerations will be applied to any acquisition and disposal transactions from 1 January 2019 onwards.

Notes to the Consolidated Financial Statements
Section 8: Other

8.4 ACCOUNTING POLICIES (CONTINUED)

(e) IFRIC 23 – Uncertainty Over Income Tax Treatments

Description

The Group have applied IFRIC 23 from 1 January 2019 and it serves to clarify how to apply the recognition and measurement requirements of AASB 112 *Income Taxes*, when there are uncertain tax positions ("UTP").

When there is a UTP, the interpretation addresses the following:

- Recognition and measurement using either a:
  - (i) 'most likely amount' methodology – when the outcome is binary or concentrated to a specific matter; or
  - (ii) 'expected value' or probability-weighted methodology – when there is a range of possible outcomes;
- Additional disclosure considerations, more specifically, around the judgements and estimates/assumptions used in determining tax related balances; and
- Whether UTPs are to be assessed separately or bundled together.

Impact

The recognition, measurement and disclosure requirements of the standard have been applied to any UTPs which were under consideration for the year ended 31 December 2019.

Where UTPs have required significant estimates and judgements to be made around determination of related tax balances, these will be disclosed.

(f) New standards and interpretations not yet adopted

A number of new standards, amendments to standards and interpretations are effective for annual reporting periods beginning on or after 1 January 2020, and have not been applied in preparing these consolidated financial statements. The Group's assessment of the impact of these new standards, amendments to standards and interpretations is set out below.

i) AASB 2019-1 *Amendments to References to Conceptual Framework in AASB Standards*	
Description	The main changes to the Framework's principles have implications for how and when assets and liabilities are recognised and derecognised in the financial statements. Some of the concepts in the revised Framework are entirely new – such as the 'practical ability' approach to liabilities. There is some uncertainty with regards to challenges preparers of financial statements may face as a result.
Impact on Group Financial Report	There is not expected to be an immediate impact on the Group's results as a result of the amendments to the Conceptual Framework.
Application of standard	1 January 2020

ii) AASB 2019-3 *Amendments to Australian Accounting Standards – Interest Rate Benchmark Reform*	
Description	The amendments provide mandatory temporary reliefs which enable hedge accounting to continue during the period of uncertainty before the replacement of an existing interest rate benchmark with an alternative nearly risk-free interest rate.
Impact on Group Financial Report	It is not expected that there will be a material impact to the Group as a result of this amendment to the standard.
Application of standard	1 January 2020

iii) AASB 2014-10 *Amendments to Australian Accounting Standards – Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*	
Description	The amendments clarify the accounting treatment for sales or the contribution of assets between an investor and its associates or joint ventures. The accounting treatment depends on whether the non-monetary assets sold or contributed to an associate or joint venture constitutes a 'business' (as defined in AASB 3 *Business Combinations*) and if so, how the gain or loss will be recognised by the investor.
Impact on Group Financial Report	It is yet to be determined what the impact on the Group would be as a result of this amendment to the standard.
Application of standard	1 January 2022

Several other amendments to standards and interpretations will apply on or after 1 January 2020, and have not yet been applied, however they are not expected to impact the Group's annual consolidated financial statements.

Directors’ Declaration
for the year ended 31 December 2019

In accordance with a resolution of the Directors of Santos Limited (“the Company”), we state that:

1. In the opinion of the Directors:
   (a) the financial statements and notes of the consolidated entity are in accordance with the *Corporations Act 2001* (Cth), including:
      (i) giving a true and fair view of the consolidated entity’s financial position as at 31 December 2019 and of its performance for the year ended on that date; and
      (ii) complying with Accounting Standards and the *Corporations Regulations 2001* (Cth); and
   (b) the financial statements and notes comply with International Financial Reporting Standards as disclosed in note 1.1 and
   (c) there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.
2. This declaration has been made after receiving the declarations required to be made to the Directors in accordance with section 295A of the *Corporations Act 2001* (Cth) for the financial year ended 31 December 2019.
3. As at the date of this declaration, there are reasonable grounds to believe that the members of the Closed Group identified in note 6.5 will be able to meet any obligations or liabilities to which they are or may become subject by virtue of the Deed of Cross Guarantee between the Company and those members of the Closed Group pursuant to ASIC Corporations (Wholly owned Companies) Instrument 2016/785.

Dated this 19th day of February 2020

On behalf of the Board:

Director

Independent Auditor's Report
to the Members of Santos Limited

Building a better working world

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REPORT ON THE AUDIT OF THE FINANCIAL REPORT

Opinion

We have audited the Financial Report of Santos Limited (the Company) and its subsidiaries (collectively the Group), which comprises the consolidated statement of financial position as at 31 December 2019, the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, notes to the financial statements, including a summary of significant accounting policies, and the directors declaration.

In our opinion, the accompanying Financial Report of the Group is in accordance with the *Corporations Act 2001*, including:

a) giving a true and fair view of the consolidated financial position of the Group as at 31 December 2019 and of its consolidated financial performance for the year ended on that date; and

b) complying with Australian Accounting Standards and the *Corporations Regulations 2001*.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Group in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* (the Code) that are relevant to our audit of the Financial Report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Financial Report of the current year. These matters were addressed in the context of our audit of the Financial Report as a whole, and in forming our opinion thereon, but we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the Financial Report. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying Financial Report.

Estimation of oil and gas reserves and resources

Why significant	How our audit addressed the key audit matter
Estimation of oil and gas reserves and resources was conducted for the Group, by experts, being specialist engineers, requiring significant judgment and the use of a number of assumptions, particularly those disclosed in Note 3.2 of the Financial Report. These estimates can have a material impact on the financial statements and the results of the Group, primarily in the following areas: • capitalisation and classification of expenditure as exploration and evaluation assets (refer Note 3.1), or oil and gas assets (Note 3.2); • valuation of oil and gas assets and impairment testing (Note 3.3); • calculation of depreciation, depletion and amortisation of assets (Note 3.2); and • calculation of decommissioning and restoration provisions (Note 3.4).	Our audit procedures focused on the work of the Group's experts and included the following: • assessed the qualifications, competence and objectivity of both the Group's internal and external experts involved in the estimation process. • evaluated the adequacy of the experts' work to determine if the work undertaken was appropriate. • considered the Group's reserves estimation process and controls, including its internal certification process for technical and commercial experts who are responsible for reserves, and the design of Santos Reserves Guidelines and Reserves Management Process and its alignment with the guidelines prepared by the Society of Petroleum Engineers (SPE). • assessed the Group's controls over the estimation process, to assess and approve the reserves and resources volumes in accordance with the guidelines prepared by the SPE. • assessed whether key economic assumptions used in the estimation of reserves and resources volumes were consistent with those utilised by the Group in the impairment testing of exploration and evaluation and oil and gas assets, where applicable. • analysed the reasons for reserve revisions or the absence of reserves revisions where expected, and assessed changes in reserves or lack of changes in reserves for consistency with other information that we obtained throughout the audit. • agreed the reserves and resources volumes to the applicable financial information, including the calculation of depreciation, depletion and amortisation and valuation of assets and impairment testing, as applicable.

Independent Auditor's Report
to the Members of Santos Limited (continued)

Recovery of carrying value of exploration and evaluation and oil and gas assets

Why significant	How our audit addressed the key audit matter
Australian Accounting Standards, require the Group to assess throughout the reporting period whether there is any indication that an asset may be impaired, or that reversal of a previously recognised impairment may be required. If any such indication exists, an entity shall estimate the recoverable amount of the asset. The Group identified impairment indicators in respect of certain oil and gas cash generating units (CGUs). Impairment testing was undertaken which resulted in an impairment charge of $37m being recorded during the year, as set out in Note 3.3 of the Financial Report. The Group identified impairment indicators in respect of certain exploration and evaluation assets. Impairment testing was undertaken which resulted in an impairment charge of $24m being recorded during the year, as set out in Note 3.3 of the Financial Report. The assessment for indicators of impairment and reversal of impairment is judgmental, and includes assessing a range of external and internal factors which could impact the recoverable amount of the CGUs. In determining whether there was an indicator of impairment or impairment reversal, the Group considered where there was any significant changes in external and internal factors. Where impairment indicators are identified, the impairment testing process can be complex and highly judgmental. Assumptions and estimates are affected by expected future performance and market conditions. Key assumptions, judgments and estimates used in the formulation of the Group's impairment assessment are set out in the Financial Report in Note 3.3	We evaluated the assessment of indicators of impairment, and impairment testing performed by the Group. Our procedures on the Group's assessment of indicators of impairment focused on whether there had been any significant changes in the external and internal factors which would indicate an impairment or reversal of impairment existed. When an indicator of impairment was present and impairment testing was performed, we assessed the discounted cash flow models and other data supporting the Group's assessment. We involved our valuation specialists to assist in these procedures. Our audit procedures included evaluating the assumptions, methodologies and conclusions used by the Group, in particular, those relating to the determination of CGUs, forecast cash flows, and inputs used to formulate them. We evaluated external and internal factors, assessed for significant changes, and gathered and reconciled to supporting documentation as appropriate. Depending on the CGU, these procedures included: • reconciled future production profiles compared to latest reserves and resources estimates (as outlined in the key audit matter above), current sanctioned development budgets, long-term asset plans, and historical operations. • evaluated movements in commodity price assumptions with reference to contractual arrangements, market prices (where available), broker consensus, analyst views and historical performance. • evaluated movements in discount rates and foreign exchange rates with reference to risk free rates, market indices, market risk, broker consensus, and historical performance. • understood operational performance of the CGUs relative to plan, comparing future operating and development expenditure to current sanctioned budgets, historical expenditure and long-term asset plans, and ensured variations were in accordance with our expectations based upon other information obtained throughout the audit. • examined the reasons for changes to recoverable amounts relative to previous assessments. • tested the mathematical accuracy of the Group's discounted cash flow models. For exploration and evaluation assets, we assessed whether any impairment indicators, as set out in AASB 6: *Exploration for and Evaluation of Mineral Resources,* were present, and assessed the conclusions reached by management. We also focused on the adequacy of the Financial Report disclosures regarding the assumptions, key estimates and judgements applied by management for the Group's assessment of indicators of impairment and reversal of impairment for oil and gas and exploration and evaluation assets, and the recoverable amount of the Group's assets.

Accounting for deferred tax, Petroleum Resource Rent Tax and uncertain tax positions

Why significant	How our audit addressed the key audit matter
The Financial Report of the Group includes deferred tax assets arising from income taxes, including in respect of income tax losses, and Petroleum Resource Rent Tax (PRRT). The determination of the quantum, likelihood and timing of the realisation of deferred tax assets arising from income taxes and PRRT is judgmental, due to the interpretation of PRRT and income tax legislation, as well as the estimation of future taxable income. There may be changes in, or uncertainties with respect of the application of tax legislation, which requires the Group to make assumptions, judgments and estimates in assessing the impacts of tax legislation on the Group. The actual tax outcomes may differ from the estimates made by management. On 27 November 2018 the Group completed the acquisition of Quadrant Energy Holdings Pty Ltd (Quadrant). As outlined in Note 6.2 the acquisition accounting was finalised during the period. The final net deferred tax liability recognised upon the acquisition was $481 million compared to a provisional net deferred tax liability of $628 million at 31 December 2018. The Group recognised a deferred tax asset of $870 million at 31 December 2019, which is disclosed in Note 2.4 of the Financial Report.	We assessed the Group's determination of tax payable now and in the future. We involved our taxation specialists to assist in this assessment. We considered the Group's methodologies, assumptions and estimates in relation to the calculation of current taxes and the generation of future taxable profits to support the recognition of deferred tax assets. We considered forecasts of taxable profits and the consistency of these forecasts with the Group's budgets approved by the Board. We have assessed new information obtained, about facts and circumstances that existed at acquisition date of Quadrant, which could lead to a material change in the fair value of the deferred tax liability. We have involved our tax specialists to assist in evaluating the impact of any changes made since the provisional values were calculated including on deferred tax outcomes, and the provision of tax contingencies included in the acquisition balances. We evaluated the assessment of uncertain tax positions, estimates and assumptions made through enquiries with the Group's taxation department, reviewed correspondence with tax authorities and advisers, and involved our tax specialists, where appropriate, to assess the associated provisions and disclosures. We assessed the Group's disclosures in respect of PRRT and Income Taxes, included in the summary of significant accounting policies in Note 2.4 of the Financial Report.

Independent Auditor’s Report
to the Members of Santos Limited (continued)

Information Other than the Financial Report and Auditor’s Report Thereon

The Directors are responsible for the other information. The other information comprises the information included in the Company’s 2019 Annual Report, but does not include the Financial Report and our auditor’s report thereon.

Our opinion on the Financial Report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon, with the exception of the Remuneration Report and our related assurance opinion.

In connection with our audit of the Financial Report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Financial Report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Report

The Directors of the Company are responsible for the preparation of the Financial Report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the Directors determine is necessary to enable the preparation of the Financial Report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the Financial Report, the Directors are responsible for assessing the Group’s ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the Financial Report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this Financial Report.

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Financial Report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group’s internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- Conclude on the appropriateness of the Directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the Financial Report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Financial Report, including the disclosures, and whether the Financial Report represents the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Financial Report. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated to the Directors, we determine those matters that were of most significance in the audit of the Financial Report of the current year and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON THE AUDIT OF THE REMUNERATION REPORT

Opinion on the Remuneration Report

We have audited the Remuneration Report included in pages 32 to 57 of the Directors' Report for the year ended 31 December 2019.

In our opinion, the Remuneration Report of Santos Limited for the year ended 31 December 2019, complies with section 300A of the *Corporations Act 2001*.

Responsibilities

The Directors of the Company are responsible for the preparation and presentation of the Remuneration Report in accordance with section 300A of the *Corporations Act 2001*. Our responsibility is to express an opinion on the Remuneration Report, based on our audit conducted in accordance with Australian Auditing Standards.

Ernst & Young

Ernst & Young

R J Curtin
Partner

L A Carr
Partner

Adelaide
19 February 2020

Auditor's Independence Declaration
to the Directors of Santos Limited

Building a better
working world

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As lead auditor for the audit of the Financial Report of Santos Ltd for the financial year ended 31 December 2019, I declare to the best of my knowledge and belief, there have been:

a) no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and

b) no contraventions of any applicable code of professional conduct in relation to the audit.

This declaration is in respect of Santos Ltd and the entities it controlled during the financial year.

Ernst & Young

Ernst & Young

R J Curtin
Partner

Adelaide
19 February 2020

Securities Exchange and Shareholder Information

Listed on the Australian Securities Exchange at 31 January 2020 were 2,083,066,041 fully paid ordinary shares. Unlisted were 5,000 partly paid Plan 0 shares, 5,000 partly paid Plan 2 shares, 19,273 restricted fully paid ordinary shares issued to eligible Senior Executives pursuant to Santos Employee Equity Incentive Plan (“SEEIP”) (formerly known as the Santos Employee Share Purchase Plan (“SESPP”)) and 11,312 fully paid ordinary shares issued with further restrictions pursuant to the ShareMatch Plan.

There were 105,653 holders of all classes of issued ordinary shares, including: 1 holder of Plan 0 shares: 1 holder of Plan 2 shares: 6 holders of restricted shares pursuant to the SESPP: 14 holders of ShareMatch shares with further restrictions. This compared with 115,810 holders of all classes of issued ordinary shares a year earlier.

As at the date of this report there were also: 252 holders of 17,348,813 Share Acquisition Rights pursuant to the SEEIP and 975 holders of 1,482,704 Share Acquisition Rights pursuant to the ShareMatch Plan.

The listed issued ordinary shares plus the ordinary shares issued pursuant to the SEEIP, and the restricted shares issued pursuant to the SESPP and ShareMatch Plan represent all of the voting power in Santos. The holdings of the 20 largest holders of ordinary shares represent 77.45% of the total voting power in Santos (74.37% on 31 January 2019). The largest shareholders of fully paid ordinary shares in Santos as shown in the Company’s Register of Members at 31 January 2020 were:

Name	Balance as at 31-01-2020	%
HSBC Custody Nominees	587,902,014	28.22%
Citicorp Nominees Pty Limited	467,690,085	22.45%
J P Morgan Nominees Australia Pty Limited	310,304,408	14.90%
National Nominees Limited	105,213,925	5.05%
BNP Paribas Nominees Pty Ltd <Agency Lending DRP A/c>	46,755,923	2.24%
Citicorp Nominees Pty Limited <Colonial First State Inv A/c>	23,984,732	1.15%
BNP Paribas Noms Pty Ltd	18,815,058	0.90%
Argo Investments Limited	10,942,014	0.53%
HSBC Custody Nominees (Australia) Limited <NT-Comnwlth Super Corp A/c>	8,251,657	0.40%
AMP Life Limited	5,845,339	0.28%
Sesap Pty Ltd	4,983,792	0.24%
HSBC Custody Nominees	4,300,271	0.21%
Netwealth Investments Limited <Wrap Services A/c>	2,849,592	0.14%
National Nominees Pty Ltd	2,742,500	0.13%
BNP Paribas Nominees Pty Ltd	2,498,380	0.12%
Warbont Nominees Pty Ltd	2,306,674	0.11%
BNP Paribas Nominees Pty Ltd	2,197,600	0.11%
UBS Nomnees Pty Ltd	2,136,650	0.10%
HSBC Custody Nominees (Australia) Limited – A/c 2	1,862,978	0.09%
HSBC Custody Nominees (Australia) Limited	1,815,205	0.09%
Total:	**1,613,398,797**	**77.45%**

Securities Exchange and Shareholder Information (continued)

ANALYSIS OF SHARES – RANGE OF SHARES HELD

	Fully paid ordinary shares (holders)	% of holders	% of shares held
1-1,000	38,396	36.34%	0.850
1,001-5,000	45,146	42.73%	5.450
5,001-10,000	12,817	12.13%	4.430
10,001-100,000	9,045	8.56%	9.140
100,001 and over	249	0.24%	80.130
Total	**105,653**	**100.00**	**100.000**
Less than a marketable parcel of $500	3,322		

Substantial Shareholders as disclosed by notices received by the Company as at 31 January 2020:

Name	Number of voting shares held	Date of Notice
Hony Partners Group, L.P. and others	309,734,518*	5 May 2017
ENN Ecological Holdings Co Ltd and others	314,734,518*	21 September 2018
Santos Limited	318,192,274*	27 June 2017

* As at 27 June 2017, Hony held approximately 4.8% of Santos' issued capital and ENN held approximately 10.31%. Hony and ENN have a relevant interest in each other's shares by reason of Acting in Concert agreement dated 27 April 2017. Santos has a relevant interest in the shareholdings of Hony and ENN by reason of the Strategic Relationship agreement announced by Santos on 27 June 2017.

For Directors' shareholdings see the Directors' Report as set out on page 18 of this Annual Report.

VOTING RIGHTS

Every member present in person or by an attorney, a proxy or a representative shall on a show of hands, have one vote and upon a poll, one vote for every fully paid ordinary share held. Pursuant to the Rules of the Santos Executive Share Plan, Plan 2 and Plan 0 shares do not carry any voting rights except on a proposal to vary the rights attached to Plan shares.

Glossary

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

boe
Barrels of oil equivalent.

the Company
Santos Ltd and all its subsidiaries.

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 that are estimated, on a given date, to be potentially recoverable from known accumulations, but that 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.

EBITDAX
Earnings before interest, tax, impairment, depreciation (or depletion), amortisation and exploration and evaluation expense.

exploration
Drilling, seismic or technical studies undertaken to identify and evaluate regions or prospects with the potential to contain hydrocarbons.

FEED
Front end engineering design.

FID
Final investment decision.

hydrocarbon
Compounds containing only the elements hydrogen and carbon, which may exist as solids, liquids or gases.

joules
Joules are the metric measurement unit for energy.

A gigajoule (GJ) is equal to 1 joule × 10^9

A terajoule (TJ) is equal to 1 joule × 10^{12}

A petajoule (PJ) is equal to 1 joule × 10^{15}

liquid hydrocarbons (liquids)
A sales product in liquid form; for example, condensate and LPG.

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

lost-time injury frequency rate (LTIFR)
A statistical measure of health and safety performance, calculated by the number of hours worked. A lost-time injury is a work-related injury or illness that results in a person's disability, or time lost from work of one day shift or more.

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

market capitalisation
A measurement of a company's stock market value at a given date. Market capitalisation is calculated as the number of shares on issue multiplied by the closing share price on that given date.

mmbbl
million barrels

mmboe
million barrels of oil equivalent.

mmBtu
million British thermal units

mtpa
million tonnes per annum

oil
A mixture of liquid hydrocarbons of different molecular weights.

proved reserves (1P)
Reserves that, to a high degree of certainty (90% confidence), are recoverable. There is relatively little risk associated with these reserves. Proved developed reserves are reserves that can be recovered from existing wells with existing infrastructure and operating methods. Proved undeveloped reserves require development.

proved 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 proved plus probable reserves.

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

Santos
Santos Limited and its subsidiaries.

seismic survey
Data used to gain an understanding of rock formations beneath the earth's surface using reflected sound waves.

t
tonnes

Conversion factors

Sales gas and ethane	1 PJ = 171.937 boe x 10^3
Crude oil	1 barrel = 1 boe
Condensate	1 barrel = 0.935 boe
LPG	1 tonne = 8.458 boe
LNG	1 PJ = 18,040 tonnes
LNG	1 tonne = 52.54 mmBtu

For a comprehensive online conversion calculator tool, please visit our homepage at **www.santos.com**

Corporate Directory

Santos Limited ABN 80 007 550 923

SECURITIES EXCHANGE LISTING

Santos Limited. Incorporated in Adelaide, South Australia, on 18 March 1954.

Quoted on the official list of the Australian Securities Exchange (ordinary shares code STO).

COMPANY SECRETARY

Jodie Hatherly
General Counsel and Vice President Legal, Risk and Governance
BA, LLB

Jodie joined Santos in 2019 and is the General Counsel and Company Secretary of the Santos Group and is responsible for Legal, Company Secretariat, Risk, Governance and, Corporate Environment, Health and Safety across the business.

Amanda Devonish
Senior Corporate Lawyer and Assistant Company Secretary
BCom, LLB (with Hons)

Amanda joined Santos in 2012 and was appointed to the role of Company Secretary in 2017. She has over 15 years' experience in commercial and corporate legal practice.

REGISTERED AND HEAD OFFICE

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SHARE REGISTER

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Shareholder Access: **www.investorserve.com.au**
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Santos