

8 December 2016

### Santos announces new strategy to drive shareholder value

Santos today outlined its new strategy to drive sustainable shareholder value by becoming a low-cost, reliable and high performance business.

Speaking at the company's Investor Day in Sydney, Santos Managing Director and Chief Executive Officer Kevin Gallagher said Santos will implement a disciplined, three-phase strategy to drive shareholder value.

- Transform: Simplify the business to focus on five core, long-life natural gas assets: Cooper Basin; GLNG; PNG; Northern Australia, and Western Australia Gas. The remaining assets will be packaged and run separately for value as a standalone business.
- Build: Progress growth opportunities across higher margin conventional assets and maximise production across operated assets. Open infrastructure and facilities to increase throughput and drive down unit costs.
- Grow: Develop focused exploration strategy and capability, and identify additional gas supply to drive long-term value from the five core, long-life natural gas assets.

The strategy will be underpinned by disciplined capital management. Santos will target a US\$1.5 billion reduction in net debt to less than US\$3 billion by the end of 2019 through increased operating cash flow and releasing capital through non-core asset and infrastructure sales.

Mr Gallagher said substantial progress had been made in 2016 on the Santos turnaround.

"We have reduced the free cash flow breakeven oil price to US\$39 per barrel, down from US\$47 per barrel at the start of the year," Mr Gallagher said.

"Capital expenditure and upstream unit production costs have been reduced by 53% and 17% respectively, headcount has been reduced by more than 500 positions, and the business has been free cash flow positive for each of the last seven months."

2016 sales volumes are expected to be at the top end of the 81-83 mmboe guidance range and upstream unit production costs below US\$9/boe (previous guidance range US\$9-9.50/boe). 2016 production is expected to be in the top half of the 60-62 mmboe guidance range.

"Our turnaround strategy also brings significant oil price leverage, with operating cash flow forecast to increase by US\$300 million in 2017 for a US\$10 per barrel oil price move above US\$50 per barrel," Mr Gallagher said.

Santos also announced it has appointed Mr Bruce Clement as Vice President to run the new standalone low-cost business comprising all non-core assets. Mr Clement was previously Chief Executive Officer of AWE Limited and will bring a low-cost mindset to the management of these assets. Mr Clement will be based in Sydney.

Further information on the new Santos strategy is available in the attached presentation. A live webcast of the Investor Day presentation will be available on the company's website <a href="www.santos.com">www.santos.com</a> from 9am AEDT today.

Ends.

# Santos 2016 Investor Day

8 December 2016





This presentation contains forward looking statements that are subject to risk factors associated with the oil and gas industry. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, geotechnical factors, drilling and production results, gas commercialisation, development progress, operating results, engineering estimates, reserve 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.

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

# Introduction and overview

Kevin Gallagher Managing Director and CEO

# **Santos**



Overview Santos

Driving sustainable shareholder value by becoming a low-cost, reliable and high performance business. Strategy summarised as three stories

- + Turnaround story starting to deliver
  - + free cash flow breakeven<sup>1</sup> US\$39/bbl, down from US\$47/bbl
- + Portfolio simplification story and focus to drive improved performance and further productivity gains
- Oil price leverage story
  - + operating cash flow leverage of US\$300 million in 2017 for a US\$10/bbl oil price movement<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Free cash flow breakeven is the average annual oil price in 2016 at which cash flows from operating activities equals cash flows from investing activities. Excludes one-off restructuring and redundancy costs and asset divestitures.

<sup>&</sup>lt;sup>2</sup> 2017 OCF leverage calculated using US\$50-US\$62.85/bbl oil price range where realised oil price is achieved under 2017 zero-cost three-way-collar hedge.

Session 1	Strategy, Markets and Finance	Presenter	
9:00	Welcome	Andrew Nairn	
9:05	Overview	Kevin Gallagher	
9:15	Strategy	Kevin Gallagher	
9:50	Marketing	John Anderson	
10:05	Finance & Capital Management	Andrew Seaton	
10:20	Q&A - Session 1	Kevin Gallagher	
10:35	Morning Tea		
Session 2	5 Core Long-Life Gas Assets		
10:55	GLNG and Cooper Basin - Development	Brett Woods	
11:25	GLNG and Cooper Basin - Operations	Vincent Santostefano	
11:40	PNG, Northern Australia & WA Gas	Brett Woods	
11:55	Exploration	Bill Ovenden	
12:10	Q&A – Session 2	Kevin Gallagher	
12:40	Close	Kevin Gallagher	
12:45	Lunch		
	·	·	

2016 in review Santos

Strong progress made to stabilise the business, reduce costs and strengthen the balance sheet. More to be done

#### Stabilise the business

- Excom appointed
- + Focus on strong technical leadership
- New operating model established
- + CEO asset review
- Decision making and planning processes centralised
- Strong safety performance maintained
- Low-cost, high performance mindset progressing
- + Free cash flow positive for each of the last seven months

#### Reduce costs

- + Free cash flow breakeven US\$39/bbl, down from US\$47/bbl
- + Capital expenditure down 53% to US\$536 million<sup>1</sup>
- Unit upstream production costs down 17% to US\$8.52 per boe¹
- Headcount reduced by over
   500 people

### Strengthen the balance sheet

- Net debt reduced by US\$455 million<sup>1</sup>
- Asset sales proceeds of US\$433 million received¹
- + Nil interim dividend declared
- Oil hedging strategy implemented
- Sale of Stag asset completed
- Sale of Victorian assets announced for up to A\$82 million
- Initiatives underway to monetise other non-core assets

<sup>&</sup>lt;sup>1</sup> As at 30 November 2016



Transforming GLNG to deliver steady-state operations and a cash flow positive business

CEO Asset Review

### Historical upstream development

- Upstream development deferred due to capital constraints
- Roma field development infrastructure led, not subsurface led

### 2016

# Improved understanding of field performance

- + Fairview production remains strong
- Raslie remediation strategy implemented
- No material change to GLNG 2P reserves expected in 2016

# Right team and field development plans in place

- Strong technical leadership
- Subsurface led development plan
- + Plan to drill 130-150 wells in 2017 increasing to ~250 wells in 2018

### Ramp-up

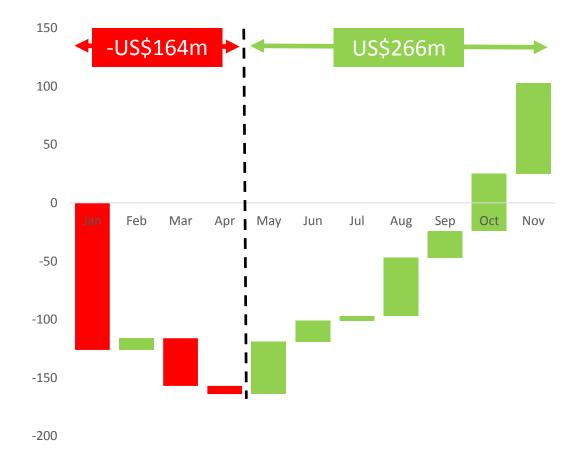
- Aiming to ramp-up GLNG LNG sales from current levels to ~6 mtpa over the next three years
- No material change in ongoing capital expenditure guidance<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Refer to appendix

Free cash flow breakeven reduced to US\$39/bbl, down from US\$47/bbl

- Santos free cash flow positive for each of the last seven months
- Strong operating performance
  - + 2016 sales volumes expected to be at the upper end of guidance (81-83 mmboe)
  - + 2016 production expected to be in the top half of guidance (60-62 mmboe)
  - 2016 upstream production costs expected to be below US\$9/boe (guidance previously US\$9-9.50/boe)

# 2016 YTD free cash flow (before asset sales) as at 30 November 2016 US\$million



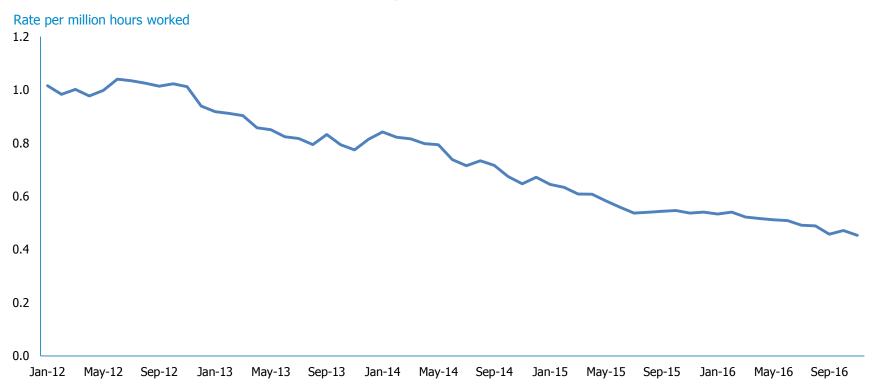
Free cash flow breakeven is the average annual oil price in 2016 at which cash flows from operating activities equals cash flows from investing activities. Excludes one-off restructuring and redundancy costs and asset divestitures.

# Strong safety performance has been maintained

Lowest three-year rolling average lost time injury frequency rate (LTIFR) in five years, with a number of operations achieving record LTI free periods

### Lost Time Injury Frequency Rate three year rolling average

January 2012 – November 2016



# Strategy

Kevin Gallagher Managing Director & CEO **Santos** 



### Disciplined, focused strategy to drive shareholder value





- + Focus on five core long-life natural gas assets
  - + portfolio simplification to drive improved performance and further productivity gains
- + Operating model
  - + build capabilities and focus on disciplined cost structure to drive value
  - + establish midstream facilities and infrastructure business
  - + target lowest-cost Australian onshore operations
- + Maximise operating cash flow and reduce debt
  - + targeting US\$1.5 billion reduction in net debt by end 2019
- + Run non-core assets for value
  - packaged and run as a standalone business based in Sydney

+ Develop core portfolio

**Build** 

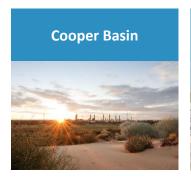
- + progress growth opportunities across higher margin conventional assets
- + maximise indigenous production across operated assets
- + Maximise value from midstream business
  - utilise infrastructure and facilities to increase throughput and drive down unit costs
- + Develop focused exploration strategy and capability
  - identify additional gas supply to drive value from five core long-life natural gas assets

 Develop and execute new exploration plays

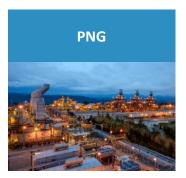
**Grow** 

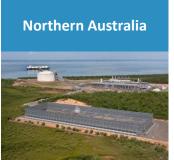
+ find and unlock sixth core long-life natural gas asset

Portfolio simplification to drive improved performance and further productivity gains







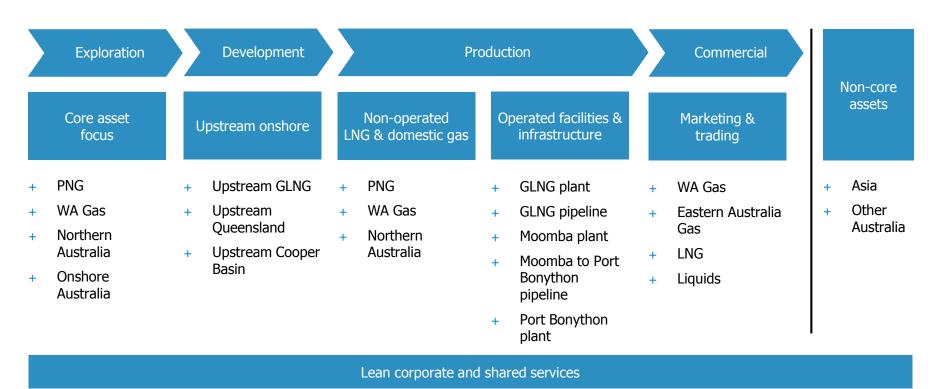




- + Five core long-life natural gas assets provide:
  - stable production
  - + a portfolio that targets free cash flow breakeven in a US\$35-\$40/bbl oil price range
  - long-term revenue streams
  - upside opportunities
    - + a clear line-of-sight to higher-margin conventional E&P growth opportunities
    - + the focus required to deliver Australia's lowest-cost onshore operations



Establish midstream facilities and infrastructure business. Target lowest-cost Australian onshore operations





### Creating a low-cost business

Transform GLNG and Cooper Basin upstream cost base and improve returns from existing infrastructure. Focus on maximising operating cash flow to reduce debt

### Upstream onshore

- + Establish low-cost, highly efficient 'drill-complete-connect' business
  - operating model designed-to-cost
  - rapid learning cycles and application of technology
  - subsurface expertise at the heart of operations; focus on improving recovery and flow-rates from wells
  - + transform upstream cost base

### Operated facilities & infrastructure

- + Establish midstream facilities and infrastructure business
- + Improve returns from existing infrastructure by
  - + lowering costs
  - + increasing gas supply
  - opening access to other upstream producers



# Maximise operating cash flow to reduce debt

### Santos

### Targeting US\$1.5 billion reduction in net debt by end 2019

- Net debt reduced by US\$455 million to US\$4.3 billion as at 30 November 2016
- Target US\$1.5 billion reduction in net debt by end 2019 via:
  - growth in operating cash flow
  - further sales of non-core assets and monetisation of infrastructure
- Refinance 2019 maturities
- Operating cash flow leverage of US\$300 million in 2017 for a US\$10/bbl oil price movement<sup>1</sup>
- Asset sale program delivering results
  - proceeds of US\$433 million received YTD
  - sale of Otway and Gippsland assets announced

#### **Net debt profile US**\$billion



<sup>&</sup>lt;sup>1</sup> 2017 OCF leverage calculated using US\$50-US\$62.85/bbl oil price range where realised oil price is achieved under 2017 zero-cost three-way-collar hedge.



### Run non-core assets for value

### Packaged and run separately as a standalone business

- Bruce Clement appointed
   Vice President to run standalone
   non-core assets, based in
   Sydney
- Producing assets provide nearterm positive cash flow
- A lean, fit-for-purpose operating model to drive efficiency and increase productivity
- Portfolio to be continually optimised to maximise value
  - sweat or exit assets
  - + re-phase capital investment
- Allows main business to focus on the five core long-life natural gas assets

#### **Onshore** Offshore Asia Australia **Australia** Indonesia Mutineer Exeter / Narrabri Fletcher Finucane Mereenie Vietnam Barrow Malaysia Thevenard Bangladesh Otway / Gippsland (sale announced)



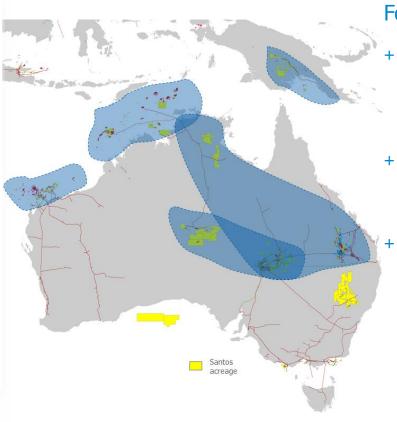


# Build and grow

### Develop core portfolio and focused exploration strategy and capability

### Develop core portfolio

- Progress brownfield growth opportunities across higher margin conventional assets
- + Papua New Guinea
  - expansion of PNG LNG likely and details evolving
- Northern Australia
  - Barossa-Caldita well positioned for Darwin LNG backfill
- WA Gas
  - grow market via uncontracted reserves



### Focused exploration

- Identify additional gas supply to drive value from five core long-life gas assets
- Retain and develop highly effective exploration capability
- Drive value from existing infrastructure and lower unit costs

Summary

**Santos** 

Driving sustainable shareholder value by becoming a low-cost, reliable and high performance business. Strategy summarised as three stories

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# Marketing

John Anderson

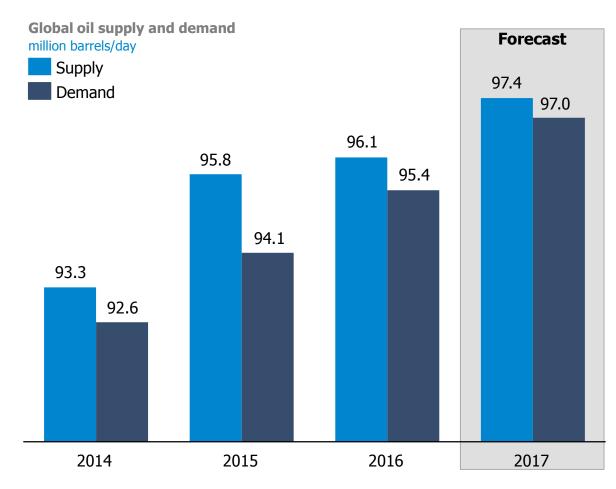
Executive Vice President Commercial & Business Development





Global oil demand is growing faster than supply, the market is returning to balance

- Global supply growth has slowed in 2016, driven by cuts in capital spending
- Demand growth is forecast to remain robust at 1.6 million barrels/day in 2017
- Recent OPEC agreement designed to bring market into balance sooner and support draw down of inventories

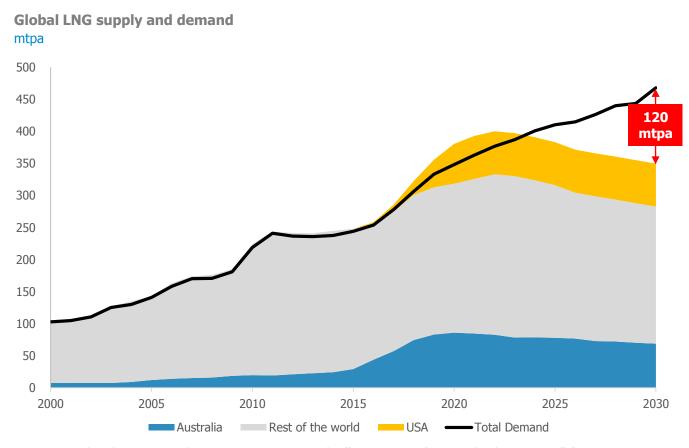


Source: EIA, Short-term Energy Outlook, December 2016; OPEC

# Global LNG – supply and demand outlook

Strong demand growth into the next decade will quickly counter short-term oversupply. Asia Pacific demand growth driven by non-traditional markets

- Santos' contracted LNG position minimises exposure to weak spot prices during oversupply period
- Santos has competitive low-cost brownfield options well placed to meet long-term demand

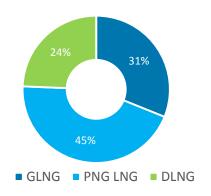


Source: Wood Mackenzie LNG Tool, Q3 2016 Dataset, LNG supply effective capacity (contracted and uncontracted) from existing and under construction plants.

LNG pricing **Santos** 

Santos' LNG portfolio is underpinned by long-term, high value contracts with quality Asian buyers

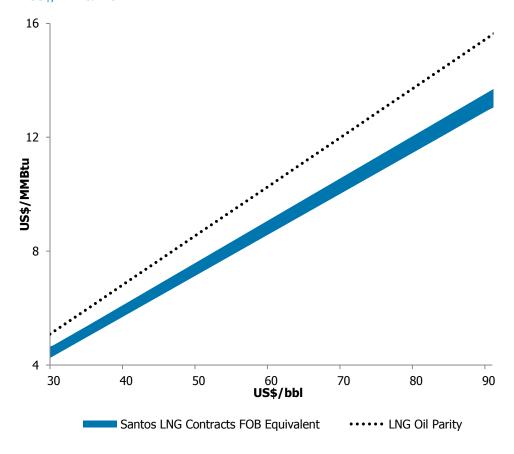
### Santos 2016 YTD October LNG cargoes by project



### Santos 2016 YTD October LNG cargoes by type



### Santos LNG contract pricing US\$/MMBtu FOB



<sup>\*</sup>GLNG Commissioning complete with no future commissioning cargoes expected

Established relationships and reliable performance provide the foundation to grow Santos' supply of LNG into Asia







**PNG LNG** 

Field production greater than forecast

Additional LNG sales due to performance above nameplate capacity

Cost competitive brownfield expansion

Uncommercialised upstream resource development

**GLNG** 

Continued sanction approval of upstream development

2 LNG trains commissioned and fully operational

Spare capacity provides additional monetisation routes

Cost reductions enabling additional field development

Collaboration

**DLNG** 

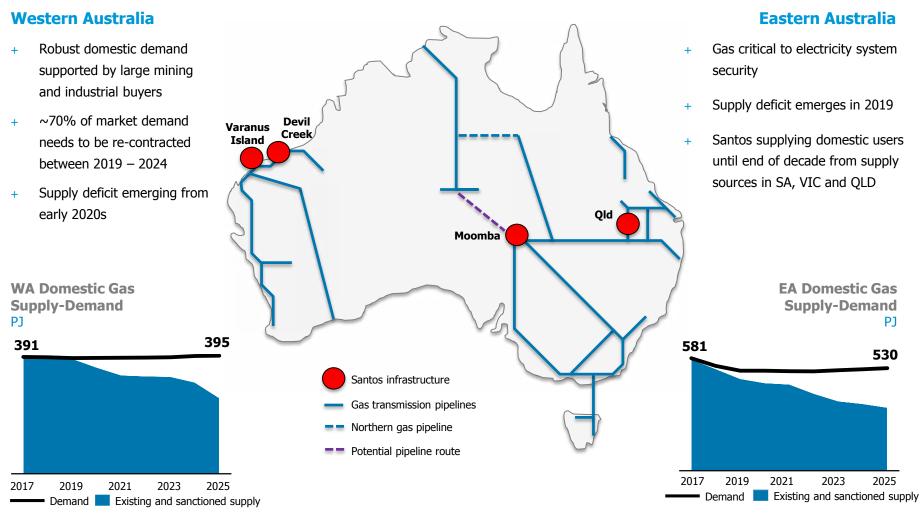
Strong field performance

Long-term reliable performance above nameplate capacity

Maximise capacity usage with tolling consideration for backfill volumes

Foundation relationships

Quality Santos resource options to backfill (Barossa-Caldita, Petrel-Tern, Crown-Lasseter) Santos has opportunities in both Eastern and Western markets with existing infrastructure and supply portfolio



# Finance and Capital Management

Andrew Seaton CFO





# Improving cash flow and reducing debt

Net debt reduced by US\$455 million to US\$4.3 billion as at November 2016

- + Free cash flow positive for each of the last seven months (US\$266 million)
- + Free cash flow breakeven at <US\$40/bbl
- + Cash balance US\$1.3 billion<sup>1</sup>
- No material maturities until 2019 (optional hybrid redemption in 2017)
- + Hedging used to manage oil price risk
- Non-core asset and infrastructure sales.

### Cash allocation priorities

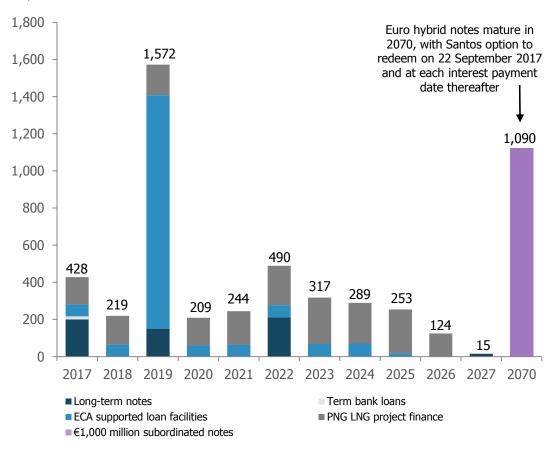
- 1. Invest capital to maintain production
- 2. Reduce net debt by US\$1.5 billion to <US\$3.0 billion by end 2019
- 3. Disciplined allocation of capital for growth opportunities

### 2016 YTD movement in net debt **US**\$million (433)4,749 38 (739)4,294 636 Opening net Asset sales Operating Investing Final 2015 Other non Closing net debt (31 Dec cash flow cash flow dividend debt (30 cash 2015) Nov 2016)

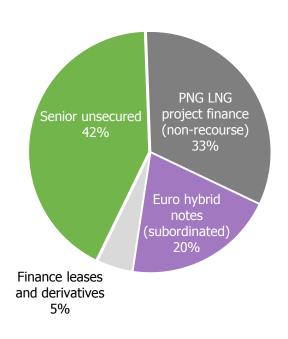
<sup>&</sup>lt;sup>1</sup> As at 30 November 2016

### Debt structure provides flexibility

# **Drawn debt maturity profile as at 30 November 2016**<sup>1</sup> US\$million



### Breakdown of drawn debt facilities as at 30 November 2016



<sup>&</sup>lt;sup>1</sup> Excludes finance leases and derivatives (including cross-currency swap related to Euro hybrid note maturing in September 2017). Refer to appendix.

# Hedging reduces impact of commodity price volatility

### Significant oil price leverage remains

- + 11 million barrels hedged in 2017 using zero-cost threeway collars
- Hedging structure provides downside protection to low oil prices and sustaining capex, while maintaining reasonable upside participation

#### 2017 Zero-cost three-way collar hedge

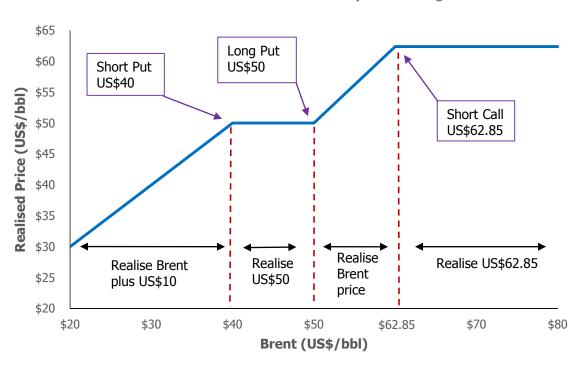


Chart as at 7 December 2016

After adjusting for asset sales, 2017 sales volumes expected to be between 73 and 80 mmboe and production to be between 55 and 60 mmboe

2016 Guidance				
Sales volumes	81-83 mmboe			
Production	60-62 mmboe			
Upstream production costs	<us\$9 boe<="" td=""></us\$9>			
DD&A	US\$800 million			
Capital expenditure	US\$640 million			
2017 Guidance				
Sales volumes	73-80 mmboe			
Production	55-60 mmboe			
Capital expenditure	US\$700-750 million			

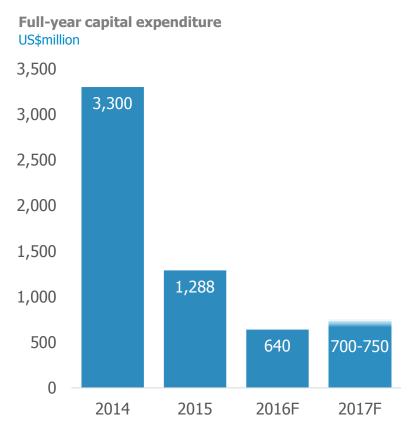
#### 2016 Guidance

- + sales volumes expected to be at the top end of the range and production expected to be in the top half
- upstream production costs expected to be below US\$9/boe (quidance previously US\$9-9.50/boe)

#### 2017 Guidance

- 2017 Sales and production volumes influenced by:
  - asset sales, -2.5 mmboe (Victoria, Stag)
  - natural field decline, -3.5 mmboe (primarily Cooper, Indonesia, Vietnam)
  - higher GLNG and WA Gas production, +2 mmboe

2016 capex guidance reduced to US\$640 million from US\$700 million 2017 capex guidance US\$700-750 million



US\$million	2016F	2017F
Cooper Basin	175	200-225
GLNG - upstream	105	150-175 <sup>1</sup>
GLNG – pipeline and plant	100	20
PNG LNG	5	30
Northern Australia	15	60
WA gas	15	60
Exploration	110	110
Non-core assets	115	70 <sup>2</sup>
Total capital expenditure	640	700-750

Capital expenditure guidance includes abandonment expenditure but excludes capitalised interest.

<sup>&</sup>lt;sup>1</sup> GLNG upstream includes Santos share of Combabula and Spring Gully

<sup>&</sup>lt;sup>2</sup> Includes 2017 forecast Thevenard abandonment expenditure (~\$US40 million)

# Development – GLNG & Cooper

Brett Woods Vice President Development

# **Santos**



### Driving a culture of rapid learning and lowest cost execution

### Field development

- Subsurface led development plan
- Raslie area water ingress and mitigation strategy
- Solids management strategy
- Reservoir management strategy

# Efficiencies and cost out

- + 66% reduction in drilling costs, 74% reduction in connect costs (since FID)
- Spud to spud time reduced to 4.3 days from 11.25 days
- Well uptime improved from 85% to 95%
- Well workover reduced to 10 days in 2016 from 45 days in 2014

### Increased drilling activity

- + Drilling rig count increasing from 1 to 3 by Q2 2017
- + Drill 130-150 wells in 2017 increasing to ~250 wells in 2018

# Strong Fairview performance

- Production remains stable through better than anticipated delivery of new wells
- + 30 wells planned to be drilled in 2017-2018

### No material change in GLNG capital expenditure guidance

2017-2020

~US\$650 million average gross per annum

Post 2020

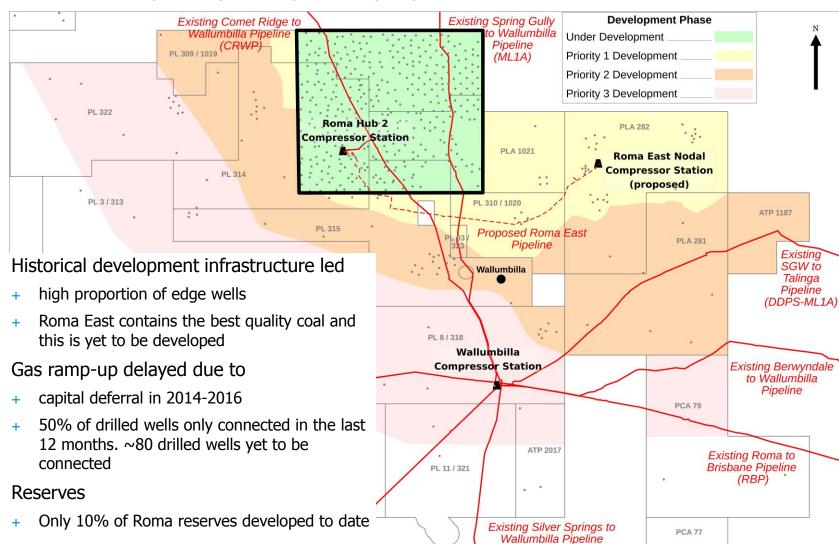
~US\$375 million average gross per annum

Guidance assumes 0.75 long-term AUD/USD exchange rate

# Roma development

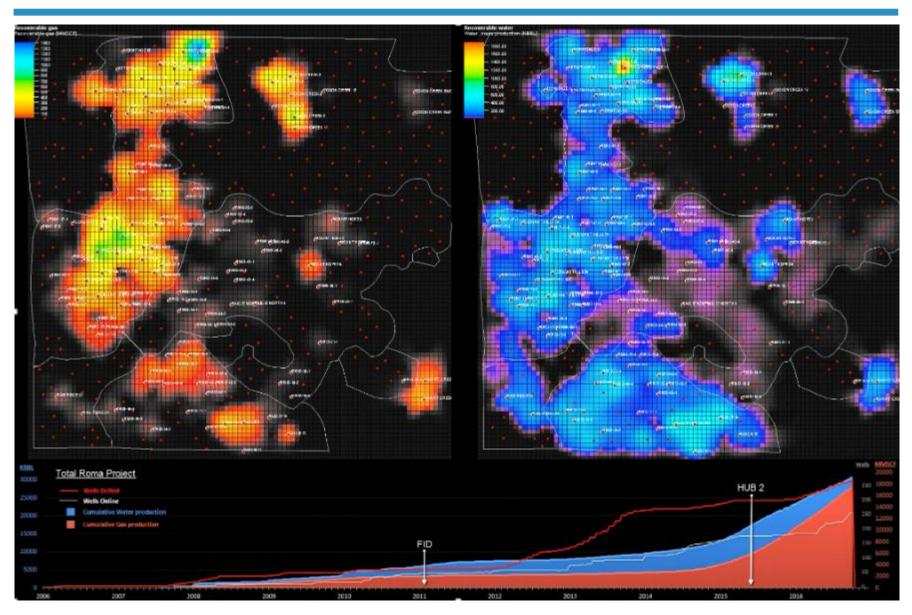
### **Santos**

### 2014-2016 development pace impacted by capital deferral



# Roma developed area simulation 2006-2016

### **Santos**



### Subsurface led development plan in place

#### Raslie

- + Strong gas fundamentals in Raslie
- + Independent reserves assessment shows no change in the Raslie area
- + Remediation plans being executed
- Future well completion revised to better manage water ingress

### Solids production and well availability

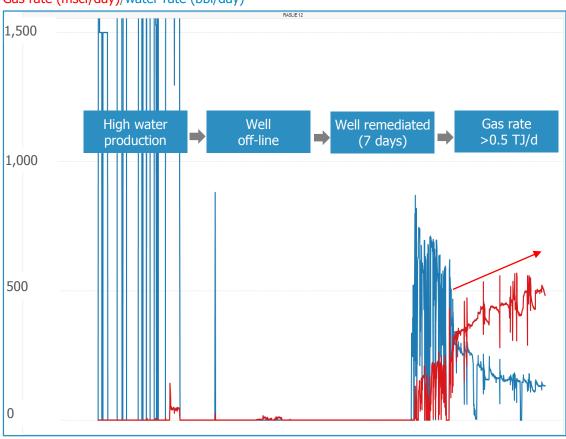
- + Solids production affected well availability
- Deviated wells have performed poorly due to the inability to lift solids
- Future well completion design modified to largely vertical wells and completion targeted to limit solids migration

### Managed drawdown

- Rapid drawdown led to lower production rates and limited gas ramp-up
- New controlled drawdown strategy ensures wells produce at optimum rates

#### **Raslie well remediation**

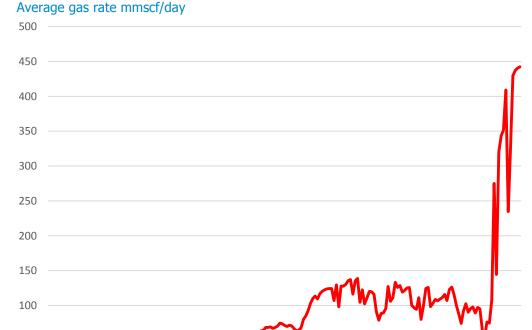
### Gas rate (mscf/day)/water rate (bbl/day)



## Fairview development

Fairview production performing well, planning underway for additional enhancements in future developments

- + Fairview is a world-class gas field with areas of high deliverability
- The change in optimum field capacity has no impact on reserves
- + Fairview production remains stable through better than anticipated delivery of new wells
- Optimisation opportunities include:
  - installation of artificial lift systems in liquid loaded wells
  - well interventions to increase production from existing wells
  - + drilling of infill wells to enhance field dewatering and increase gas production rates
- Compression capacity matched to current field pressure (515 TJ/day)
- + 30 wells planned to be drilled in Fairview in 2017-18

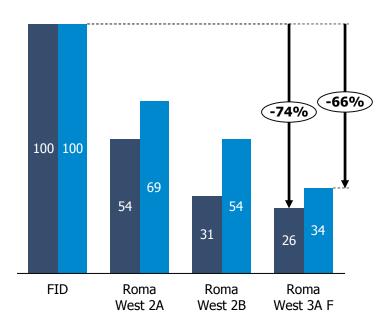


**Fairview production** 

 $2000\ 2001\ 2002\ 2003\ 2004\ 2005\ 2006\ 2007\ 2008\ 2009\ 2010\ 2011\ 2012\ 2013\ 2014\ 2015\ 2016$ 

Right team and improved development plans in place to deliver highest productivity at lowest unit cost

Roma drill, complete and connect costs per well Cost reference comparison (%)



- Surface facility connection costs
- Drilling costs

- Future development plans
  - subsurface led
  - concentric development to optimise learnings and accelerate dewatering
  - + closing gap between drill to online time
- + Key enablers to deliver reduced costs and deliver gas faster
  - + lean-skid design standardised and optimised
  - simplification of work scope and improved cycle time
  - drilling consistent scope, schedule, equipment and team; procurement and performance focused

#### Cooper cost-out creates opportunity for higher future reserves

2017F

Wells drilled with 2 rigs
No of wells

2014A

+**74%**47

27

31

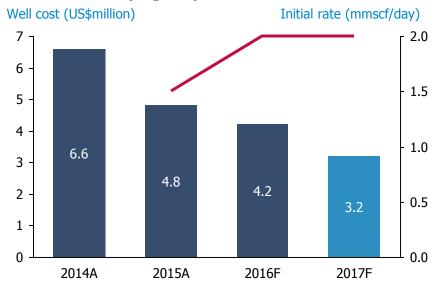
 Drilling technical limit achieved through visibility of best in field performance statistics and performance culture

2016F

2015A

- + Strong contractor integration and retention improving competence
- + Diversion fracturing delivers 10% sustainable lower stimulation costs and unlocks volumes
- + Drilling performance improvement facilitates ~3 rigs of activity per year (47 wells) with 2 rigs

2015 - 2017 Gas program performance<sup>1</sup>



- + 33% improvement in 2016 initial rate performance<sup>2</sup>
- + 52% reduction in unit well cost forecast delivered compared to 2014 via contract savings and execution efficiencies
- Drilling cost reductions provide scope for maturing of 2C resource to 2P reserve

<sup>&</sup>lt;sup>1</sup> Drill, stimulate, complete

<sup>&</sup>lt;sup>2</sup> 30 day average incremental rate

# Operations – GLNG & Cooper

Vincent Santostefano Chief Operations Officer **Santos** 



## Target lowest-cost onshore Australian operations

Transforming Cooper & GLNG to low cost, efficient drill-complete-connect-operate businesses

### Discipline

- + Long term, disciplined approach to integrated asset management
- + Competitive capital allocation mechanism focused on value creation
- + All assets required to be self-funding

#### Cost

- 2016 upstream unit production costs expected to be below previous guidance at <US\$9/boe</li>
- Reducing upstream production cost by A\$100 million per annum across Cooper & GLNG<sup>1</sup>
- + Simplification, rationalisation and outsourcing of non-core infrastructure

#### Volume

- + Building a production focused culture
- + Extracting maximum value from infrastructure
- Delivering GLNG LNG sales ramp

<sup>&</sup>lt;sup>1</sup> Gross, 2017 forecast vs 2016 forecast

Driving efficiencies and reducing costs to develop and operate at lowest cost

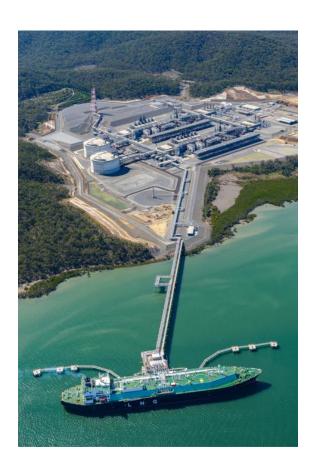
# Upstream unit production cost¹ US\$/GJ



<sup>1</sup> Excludes electricity and carbon.

- + 75% reduction in upstream unit production cost
- 95% uptime for field and compression
- + 35% reduction in workover unit costs
- Updated operating model
- Contractor management
- Rationalisation of non-core infrastructure

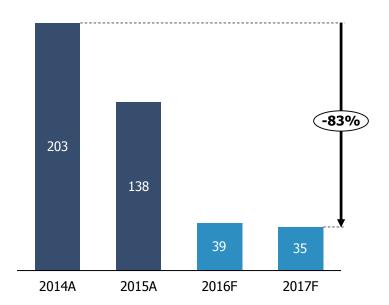
#### 64 LNG cargoes delivered in first 12 months of operation



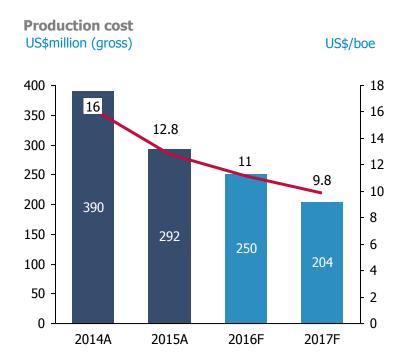
- + Train 2
  - start-up delivered to schedule May 2016
  - practical completion achieved August 2016
- + Train 1 shutdown successfully completed to plan October 2016
- + High plant reliability (Train 1 95% / Train 2 86% Sept YTD 2016)
- + Construction project completed October 2016
- + Custody and control of entire LNG plant received October 2016
- Contractor demobilised October 2016
- + Collaboration with other LNG plants
  - + joint logistics
  - opportunistic gas purchases during outages realising higher sales volumes

#### Transforming the Cooper to deliver a low cost, cash flow positive business

## Facilities & infrastructure capex US\$million (gross)



- + 83% forecast reduction in facilities and infrastructure capital expenditure vs 2014
- Waste elimination and rigorous focus on project value generation
- + Simplifying, rationalising equipment and non-core assets
- + Improved efficiency and management of integrity and process safety



- + 48% forecast reduction in production cost vs 2014
- Structural reductions in cost independent of oil price
- Simplified operating model focusing on highest value activities
- + Relentless discipline and cost focus
- + Getting the fundamentals right at low prices

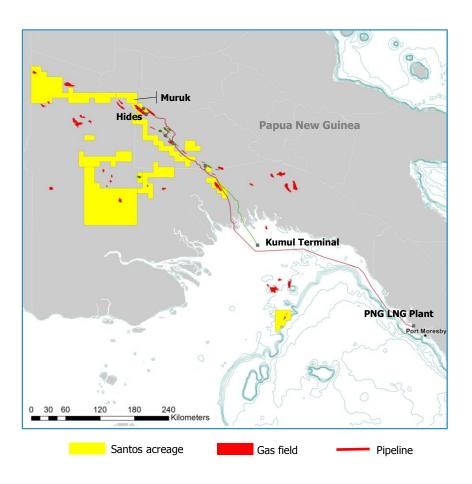
# PNG, Northern Australia and WA Gas

Brett Woods Vice President Development





Working with partners to align interests to support expansion opportunities



- + Strengthen and consolidate Santos position
  - acreage footprint supportive of long-term commitment to the region
- ExxonMobil continues to deliver excellent PNG LNG operating performance
  - ~8.0 mtpa annualised production rate in Q3 2016 compared to nameplate capacity of 6.9 mtpa
  - progress toward the tie-in of the two completed
     Angore production wells and Hides F1 is underway
  - continuing work on further debottlenecking
- Expansion of PNG LNG likely and details evolving
  - + Santos as a PNG LNG foundation partner has an ability to influence expansion
  - Discussions continue on mechanism of incorporating P'nyang into PNG LNG
  - Papua LNG and PNG LNG operators have expressed a desire to explore downstream integration

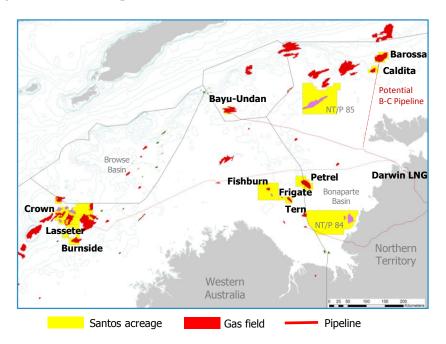
Darwin LNG operating at record capacity, backfill opportunities being progressed

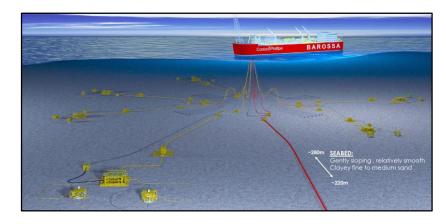
- ConocoPhillips continues to deliver strong DLNG production
  - DLNG operating at record annualised capacity of ~4 mtpa
- Detailed plans for infill drilling in Bayu Undan to deliver additional feed gas for DLNG are well progressed, with FID planned for Q1 2017
- Opportunity to backfill DLNG being progressed
- + Brownfield development leveraging existing infrastructure
- Capacity for expansion of DLNG with environmental approval in place for 10 mtpa LNG at existing site



#### Extensive discovered resource to backfill and expand existing LNG infrastructure

- + Santos' extensive discovered resource position across Northern Australia includes
  - + Barossa-Caldita (Santos 25%)
  - + Petrel-Tern (Santos 35-40%)
  - + Crown-Lasseter (Santos 30%)
- Discovered resource well positioned to backfill and expand existing LNG infrastructure
- Barossa-Caldita being progressed as the lead candidate for DLNG backfill
  - subsurface studies, pre-FEED engineering, regulatory and commercial activities underway
  - + FPSO concept, tied into existing Bayu Undan export pipeline
  - + acquisition of new 3D seismic completed
  - appraisal drilling scheduled for 1H 2017





Established domestic gas hubs provide capacity to meet short and long-term demand

- + Santos in two WA domestic gas hubs: Varanus Island and Devil Creek
- + Strong relationship with operator Quadrant Energy
- Robust domestic demand supported by large industrial buyers – supply deficit emerging early 2020s
- + Low cost operations, well positioned against competing suppliers
- Opportunity to grow market with capacity and uncontracted reserves
- + Execution of Spar-2 and inlet compression projects will increase offshore deliverability to meet market demand
- Resource build for long-term backfill supported by successful near field discoveries in 2016 at Davis and Spartan





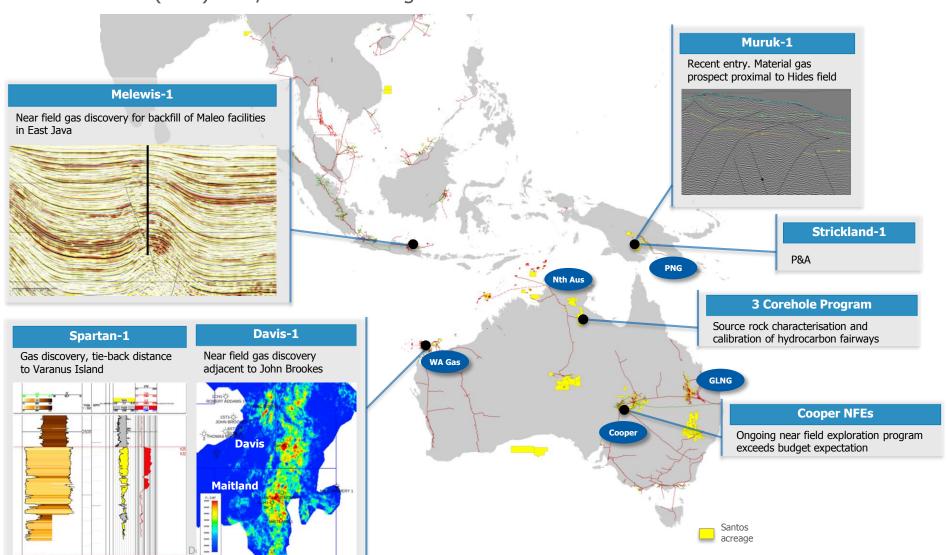
# **Exploration**

Bill Ovenden Vice President Exploration

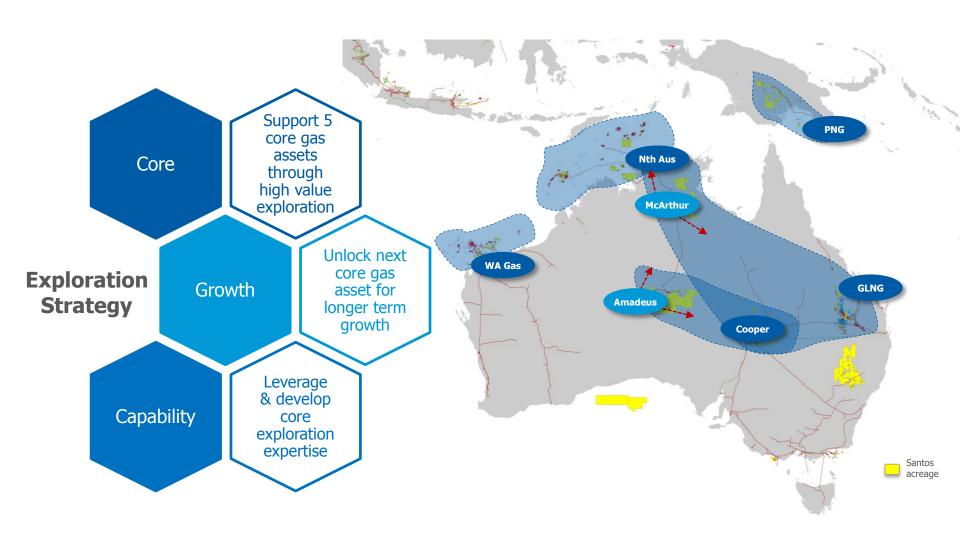




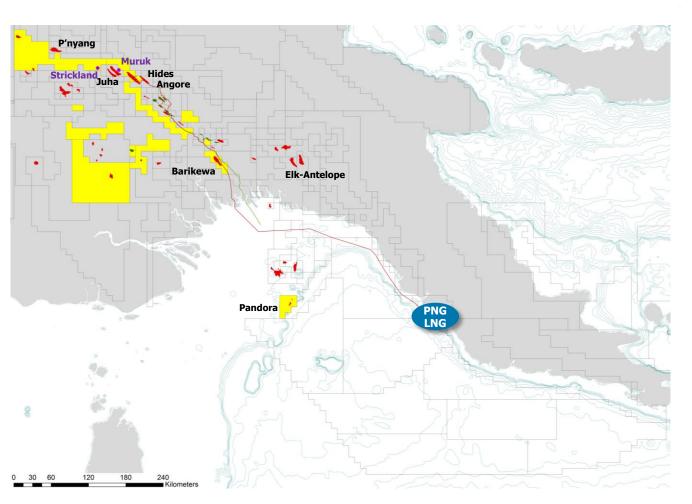
Successful near field exploration drilling program in WA, Cooper and Indonesia. Strickland-1 (PNG) P&A, Muruk-1 drilling

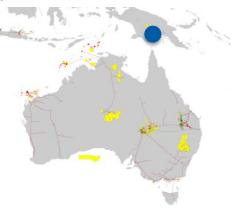


### Emphasis on five core assets



Seeking alignment with PNG LNG partners in every tcf+ scale opportunity



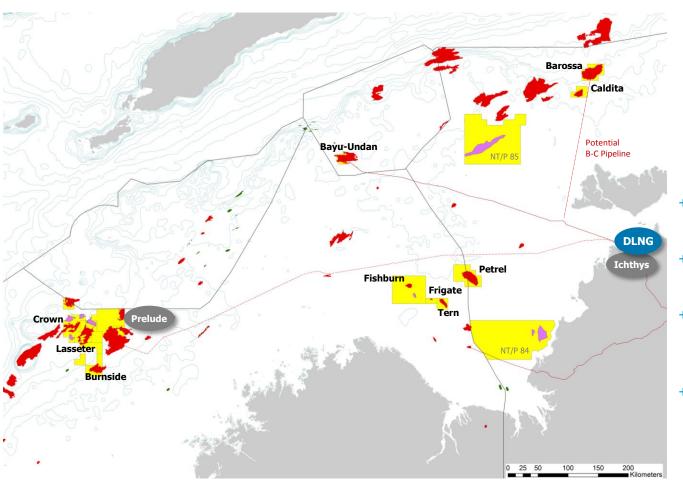


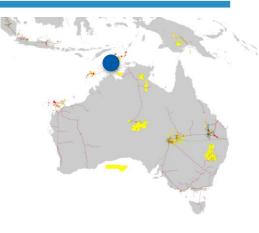
- + Exceptional yet-to-find potential
- Pre-drill alignment with PNG LNG partners
- Muruk: recent Santos entry, material gas prospect adjacent to and on-trend with Hides field
- Strickland: P&A.
   Forecast Santos share of well cost ~US\$40 million

## Northern Australia - offshore

### **Santos**

Grow existing resource position to underpin core LNG growth



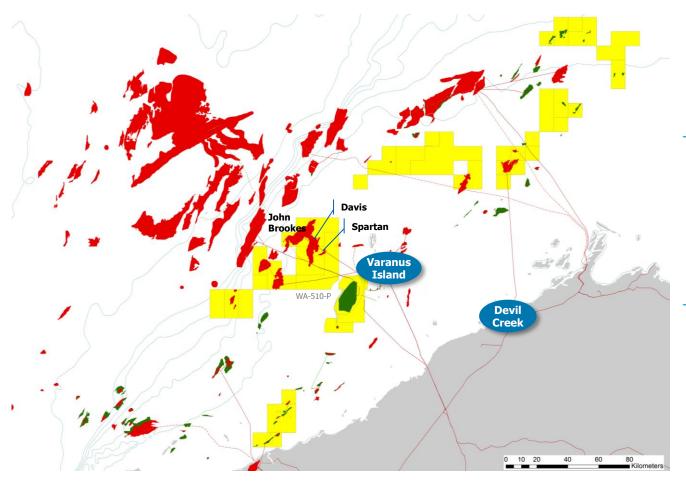


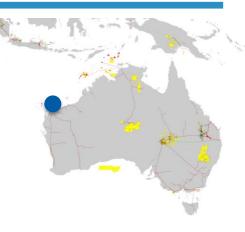
- Brownfield LNG backfill and expansion space
- Strong growth portfolio to leverage position
- Exploration positioning to supply next material resource tranche
- Secure strategic resources with acreage retention

WA Gas

### **Santos**

Exploration opportunities aligned to WA domestic gas infrastructure





- Recent high-value near field exploration success
  - + Davis-1, adjacent to John Brookes
  - Spartan-1, within tie-back range to Varanus Island
- Aligned strategy with Quadrant to leverage WA domestic gas opportunities
  - + Entered WA-510-P (Spartan discovery overlap)<sup>1</sup>
  - 2017 seismic program to de-risk additional NFE opportunities

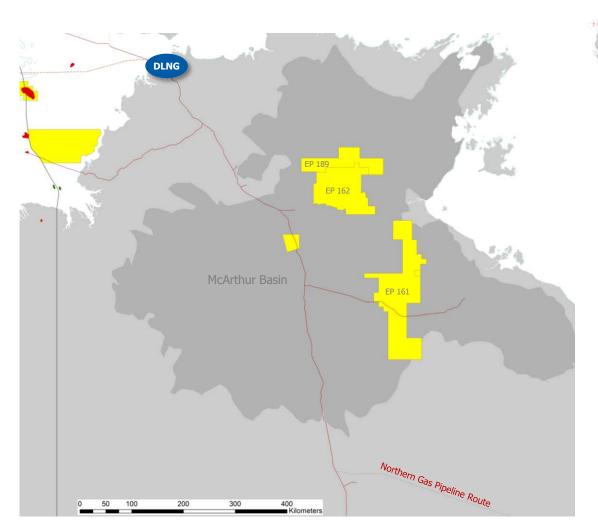
<sup>&</sup>lt;sup>1</sup> subject to regulator approval of title transfer with regard to WA-510-P.

#### Focused strategy to find new resources for Cooper and GLNG core assets

#### Queensland **McArthur** Ongoing alignment in Multi-tcf prospective resource exploration with GLNG position analogous to US shale partners plays Santos Scale to satiate east coast demand **McArthur** Cooper **Amadeus** Ongoing high value, near Basin scale running room in multiple field program plays Wildcat inventory build Frontier sub-salt province has proof targeting new conventional of concept and offers multi-TCF plays with scale QLD potential Evacuate through Moomba hub **Amadeus** Cooper

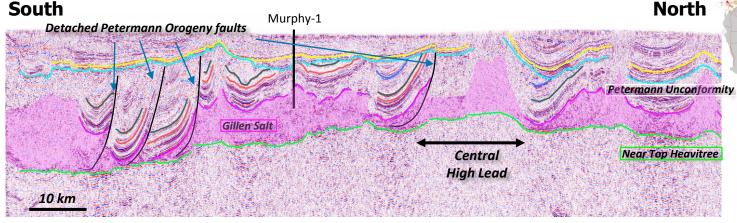
## Onshore Australia - McArthur Basin

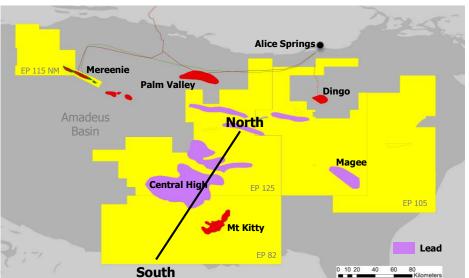
Very large in-place gas resource in mid-Velkerri shale play Potential east coast gas supply



### Onshore Australia – Amadeus Basin

Target Amadeus conventional sub-salt play opener Potential east coast gas supply





- Proven sub-salt petroleum system (gas flows from two tests at Mt Kitty and Magee)
- + Helium gas component offers value enhancement
- Significant structures identified (up to 400 km²) with multi-tcf potential
- + 2016-17 2D seismic survey planned to delineate central high lead and mature to drill-ready

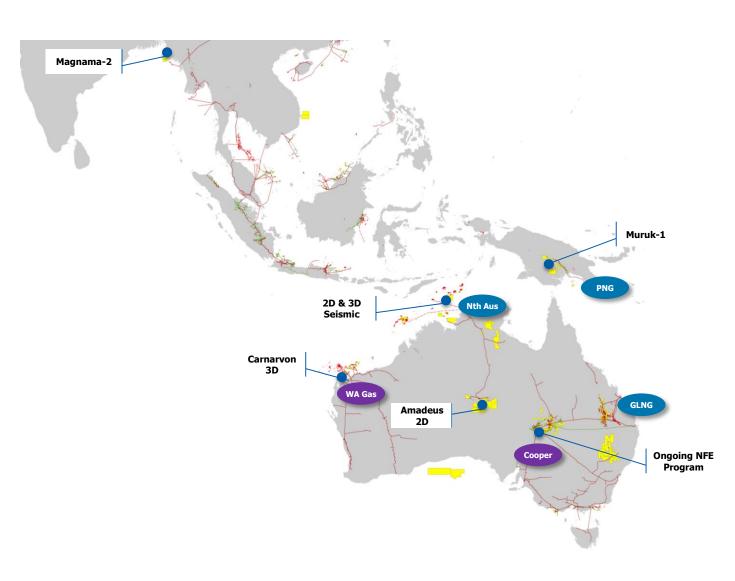
### 2017 capex focused on core business positions

#### + Wells

- + Muruk-1
- + Magnama-2
- + Cooper NFE

#### + Seismic

- + Bonaparte 2D and 3D
- + Carnarvon 3D
- + Amadeus 2D
- + Cooper 2D and 3D



# Wrap-up

Kevin Gallagher Managing Director and CEO

# **Santos**



# Santos 2016 Investor Day

**Santos** 

Appendix

## Liquidity and net debt as at 30 November 2016

Santos

US\$3.6 billion in cash and committed undrawn debt facilities

Liquidity (US\$million)	30 November 2016	
Cash		1,258
Undrawn bilateral bank debt facilities		2,34:
Total liquidity		3,599
Debt (US\$million)		
Export credit agency supported loan facilities	Senior, unsecured	1,73
US Private Placement	Senior, unsecured	60
PNG LNG project finance	Non-recourse	1,81
Euro-denominated hybrid notes	Subordinated	1,09
Other	Finance leases and derivatives	31
Total debt		5,552
Total net debt		4,29

## GLNG reference data – infrastructure & commercial

### **Santos**

Midstream infrastructure

GLNG plant	<ul> <li>ConocoPhillips Optimised Cascade Liquefaction technology</li> <li>2 x 3.9 mtpa LNG trains (7.8 mtpa nameplate capacity)</li> <li>2 x 140,000m³ storage tanks</li> <li>360 metre loading jetty; 4 loading arms</li> </ul>
First LNG	+ Train 1 September 2015 + Train 2 May 2016
GLNG pipeline	<ul> <li>420 kilometre gas transmission pipeline</li> <li>42 inch diameter</li> </ul>

Joint venture partners and LNG offtake

GLNG partners	+ Santos 30% (operator) + PETRONAS 27.5% + Total 27.5% + KOGAS 15%		
Offtake agreements	LNG sold to PETRONAS and KOGAS under 20-year contracts		

Capital and operating expenditure guidance

Capex (gross)	+ 2017-2020 + Post 2020	~US\$650 million average per annum ~US\$375 million average per annum
Opex (gross)	<ul><li>+ Upstream field</li><li>+ Midstream</li></ul>	~US\$0.80/GJ (excludes electricity and carbon) ~US\$130 million per annum (pipeline, plant and port)

# GLNG reference data - upstream

### Santos

+ Wells

Production area	Total development wells drilled	Total wells connected to sales	
Fairview	438	435	
Roma	379	295	
Scotia	38	26	
Arcadia	13	13	
Total	868	769	

as at 30 November 2016

+ Drilling

	Steady state operations		
Average drilling rate	~250-300 wells per annum		
Average well cost	~US\$1.5 million per vertical well (drill, stimulate, complete, connect)		

Storage capacity

	Capacity	Max injection/delivery rate	No of injection wells
	PJ	TJ/d	on-line
RUGS	70	100	15

Compression capacity

Production area	Existing TJ/d gross	Sanctioned additional TJ/d gross	
Fairview / Arcadia	480-550 <sup>1</sup>	-	
Roma	145	+1402	
Scotia	30	+403	
Total	655-725	+180	

<sup>&</sup>lt;sup>1</sup> capacity varies with inlet pressure conditions

Water treatment facilities

Production area	Water treatment facility ML/d
Fairview	24
Roma	10

<sup>&</sup>lt;sup>2</sup> Roma West Phase 2B under construction

<sup>&</sup>lt;sup>3</sup> Scotia CF-1 (Central Flank) under construction

## GLNG reference data – third party gas supply

#### **Santos**

Third party gas supply

Supplier	Quantity PJ	Rate TJ/day	From	Term	Price basis
Santos portfolio 'Horizon'	750	140	2015	15 years	Oil-linked
Origin	365	100	2015	10 years	Oil-linked
Origin	194¹	50-100 <sup>1</sup>	2016	5 years	Oil-linked
Other suppliers	85	10-15 60-100	2015 2016	7 years 21 months	Oil-linked
Meridian JV	445 <sup>2</sup>	20-65	2016	20 years	Oil-linked
AGL	254	60	2017	11 years	Oil-linked
Senex	340	up to 50	2018	20 years	Oil-linked
Combabula	<b>52</b> <sup>3</sup>	3-20	2015	20 years	Oil-linked
Spring Gully	<b>17</b> <sup>3</sup>	2-5	2015	20 years	Oil-linked
Uncommitted Combabula/Spring Gully/Ramyard	321	5-45	2015	15 years+	Oil-linked

 <sup>1 100</sup> PJ firm volume over 5 years. Origin has the option to supply additional volumes of up to 94 PJ during the same period.
 2 Source: WestSide Corporation Target Statement of 16 May 2014. Excludes additional gas production by the Meridian Joint

Venture beyond 65 TJ/day. Volumes subject to Meridian field production performance and implementation of expansion plans. <sup>3</sup> Combabula and Spring Gully volumes currently committed to GLNG. Depletion style Gas Sales Agreements linked to field production.