



GLNG plant site image, Curtis Island, Australia

#### **GLNG**

Peter Cleary
VP Strategy & Corporate Development
Chair of GLNG Operating Committee

### Strong progress since FID

First LNG expected in 2015 on schedule from US\$16 billion two-train project

Strong team

 World-class contractors executing with experienced project partnership team

**Upstream** 

- 383 wells drilled, 520 landholder agreements
- Fairview capacity of 1.3 TJ/day per well

Water management Transparent water management with beneficial use for regional communities

Gas transmission pipeline

 Production of line-pipe commenced, >100km already manufactured

Plant and port

- Clearing of LNG plant site complete and construction commenced
- Bulk earthworks 35% complete



#### Strong partnership and contractors

Project partners have industry leading expertise providing end-to-end supply chain coverage



Predominantly fixed-price EPC contracting strategy with world-class contractors

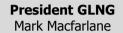








### Experienced leadership team





#### **Experience:**

25 years oil & gas experience. Held position of Vice President Eastern Australia for Santos

**GM Human** 

Resources

Peter White

#### Director **Gas Supply** Mike Hughes



25+ years (including 20+ years oil & gas) extensive operational and finance management, business development, international management and strategic planning experience

**GLNG Program** Director Christian Placines



35+ years oil

and gas, 15

years LNG

experience

project

Project

& Port

Total secondee, 40 years project management experience

Director Plant





**PETRONAS** secondee. Previously Managed MLNG. 28 years operations experience

GM Downstream



**GM Upstream** 

Operations

Rob Simpson

30+ years operations and project experience

**GM Business** Services Olivier Depraz



Total secondee. 29 years oil & gas experience over a range of projects with Total



**GM External** 

Affairs

Victoria Somlyay

15+ years HR 15+ years experience, political & significant oil senior & gas corporate experience, affairs project experience experience within construction

industry



**PETRONAS** secondee. 13 years in oil & gas industry with 8 years in LNG marketing & trading covering Atlantic & Asia Pacific regions

**GM Marketing** 

Kartina Amin

(Acting)



20 years legal experience in construction, infrastructure, resources and finance projects globally

GM Legal

Patrick Ronan

**Execute** 

**Operate** 

**Support** 

... structured for delivery



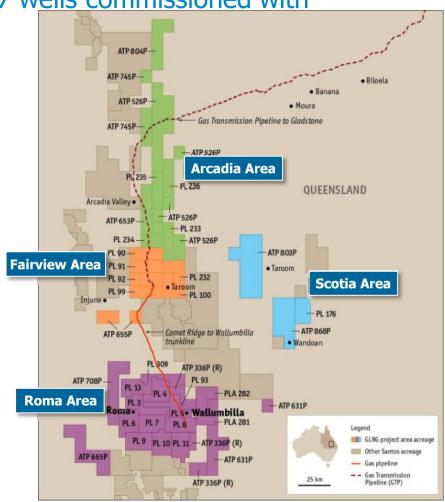
#### Upstream

383 wells drilled to date, with 207 wells commissioned with

capacity of 240 TJ/d

 Santos operates on grazing land, not cropping land

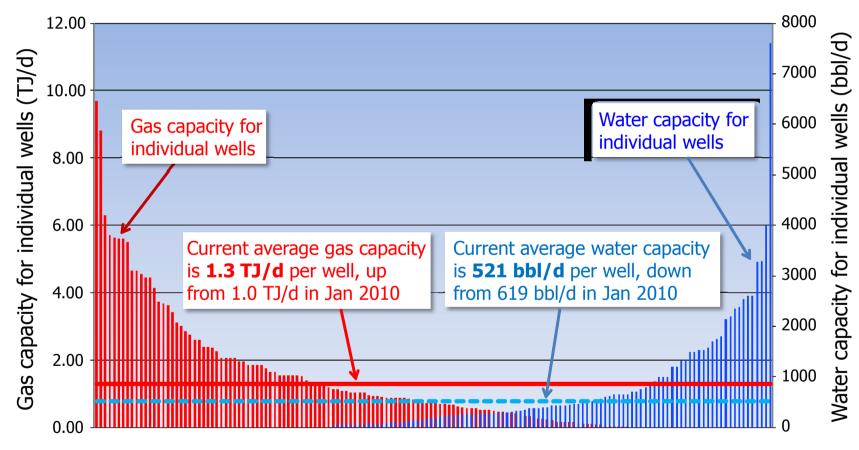
- 520 agreements in place with 200 landowners
- 34,000 hectares of land owned to be used for key development activities and environmental offsets
- Field production is optimised
  - Producing to domestic nomination
  - Remaining gas is injected into storage
- Roma underground gas storage
  - Ramp gas management tool
  - Injection commenced and ramping up





#### Fairview wells capacity of 200 TJ/d

Fairview wells averaging 1.3 TJ/day, up 30% on Jan 2010



Fairview wells - well stock 15 October 2011 (154 wells)



#### Upstream development

# Expect to drill ~135 wells in 2011 and ~170 wells in 2012; updating rig fleet in 2012

- Six drilling rigs and six completion rigs in operation
  - Wet weather in first quarter of 2011 affected the drilling program
- Updating the rig fleet
  - Pad drilling
  - Reduced footprint, higher productivity
- Fluor to deliver field development
  - >500 Fluor personnel working on project and mobilisation to field commenced
  - All long-lead items ordered
- EIS approval for 2,650 wells
  - Sufficient for current field development plans



Multi-pad well heads



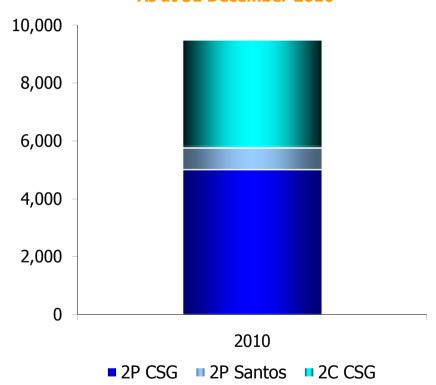
#### Reserves and resources

#### GLNG has 9 Tcf of dedicated reserves and resources

#### NSAI estimates GLNG ultimate 2P CSG reserves maturation of 9,848 PJ from existing acreage<sup>1</sup>

- In addition to CSG reserves,
   Santos to supply 750 PJ
- <sup>1</sup> Excludes 750 PJ of Santos portfolio supply
- $^{2}$  1,000 PJ = 0.94 tcf





NSAI: Netherland, Sewell & Associates, Inc. Based on their analysis, NSAI believe that continued development and appraisal drilling in the GLNG dedicated areas has a reasonable likelihood of extending the 2P reserves area into most of the regions now categorised as possible reserves or 2C contingent resources.



### Producing, not reducing, water

Queensland-first partnership between a CSG company and a private landholder

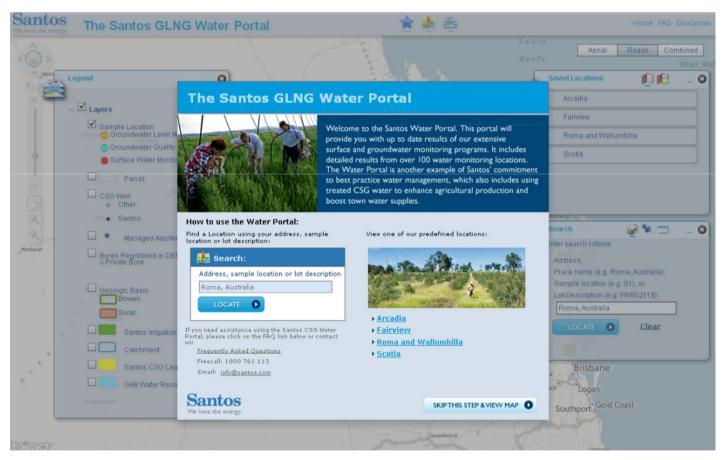
- Treated CSG water is an opportunity for landholders
- Mount Hope Station irrigation project
  - Santos providing up to 700 ML of treated water
  - Further projects to be rolled out
- Planning Roma aquifer re-charge
  - Inject 10 ML of treated water per day
  - Will provide Roma with about 50 years of extra water supply





#### Transparent water monitoring

Santos GLNG water portal includes detailed results from more than 100 water monitoring locations





#### Gas transmission pipeline

# Production of line-pipe commenced, >100km already manufactured at 1.8 km/day

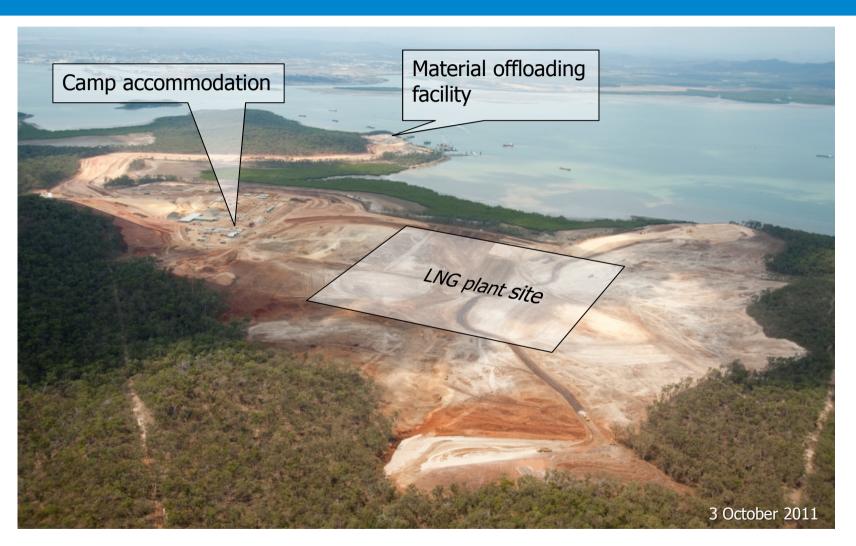
- Fixed price, lump-sum turnkey contract with Saipem
  - GLNG personnel embedded with Saipem in Farno, Italy
  - Expected to start laying pipeline 2012, on schedule
  - Two full pipe laying seasons to complete
  - All cultural heritage clearances obtained
- Engineering and procurement more than 40% complete
- Marine crossing line-pipe complete and in storage in Batam, Indonesia
- Geotechnical survey has been completed along the main pipeline route



Line-pipe at Jindal SAW, India



## Curtis Island clearing is complete





#### LNG plant

# Construction commenced on 7.8 mtpa two-train LNG plant and mainland logistics facilities

- Site clearing completed, bulk earthworks 35% complete
- Construction of accommodation facility commenced
- Engineering and procurement>33% complete
- Completed first factory acceptance test for refrigeration gas turbine
- All key equipment purchase orders for train 1 and train 2 issued



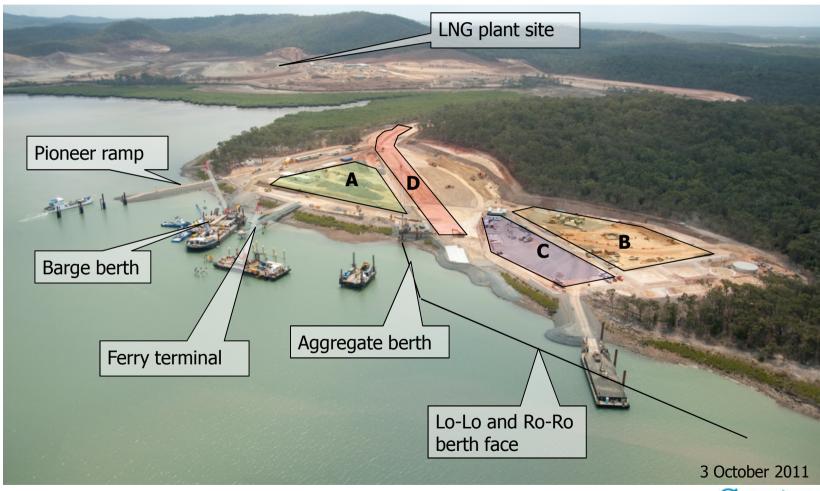


Plant site, Curtis Island



### Material offloading facility

#### Construction well advanced



A – J Holland's office and laydown

B - RO plant area

C – Batch plant

D – Haul road

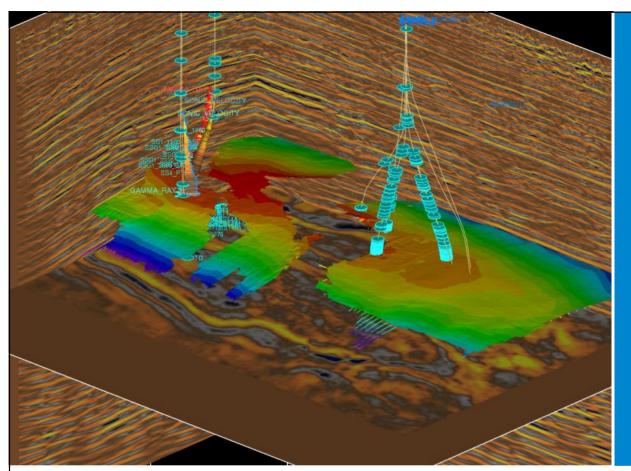




Drilling rig, Cooper Basin, Australia

# Questions







Sangu and South Sangu fields, Bay of Bengal, Bangladesh

# **Exploration and Subsurface**

Trevor Brown VP Exploration & Subsurface

#### **Exploration and Subsurface**

Strong track record of resource adds

- 10-year track record of adding contingent resources and converting to reserves and production
- Competitive finding costs

Significant discoveries in 2011

- Zola
- Finucane South

Conventional

Material prospects in WA and Asia

Unconventional

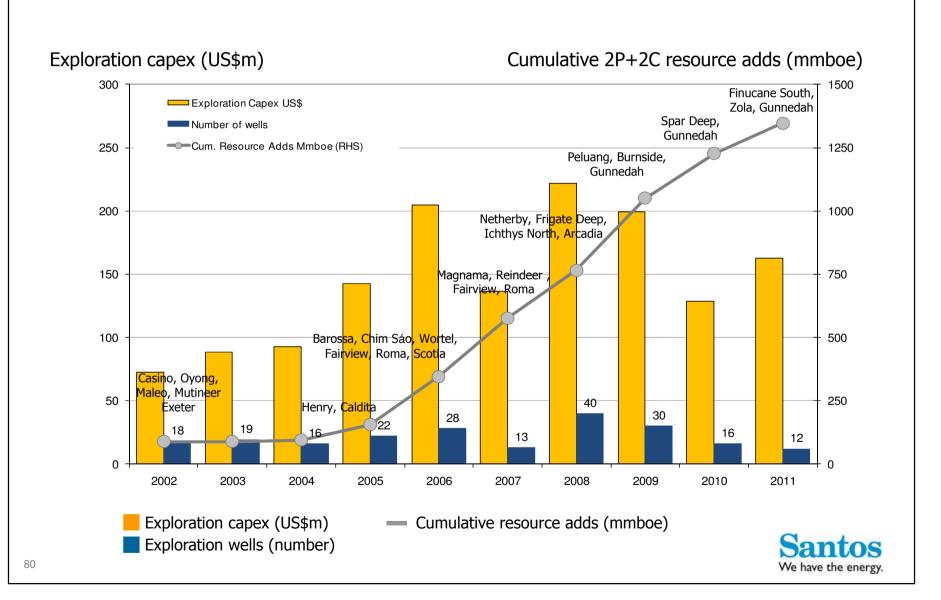
- Applying our expertise to CSG and shale gas
- Building a material, long-life opportunity set

Forward program

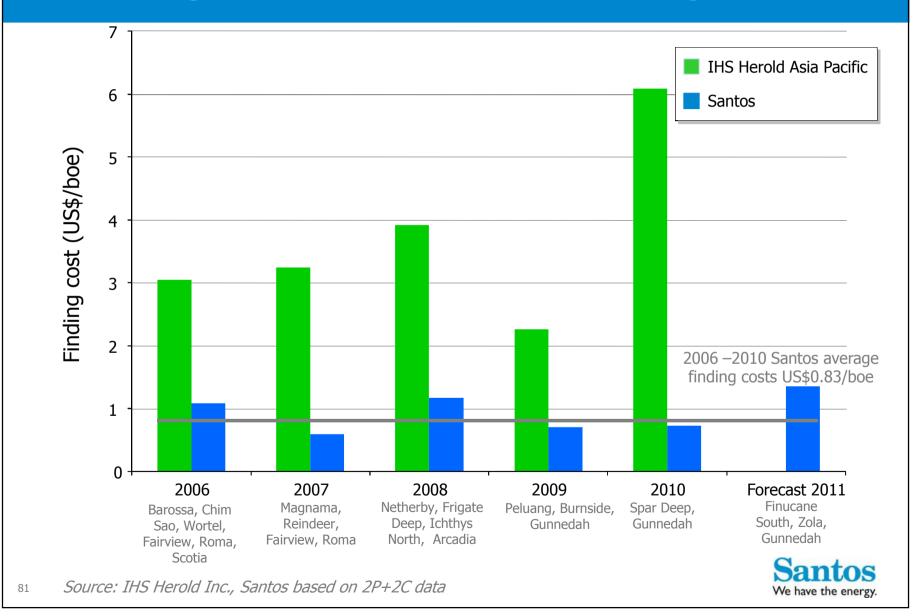
Exciting program of material prospects in 2012



#### Strong track record of resource adds

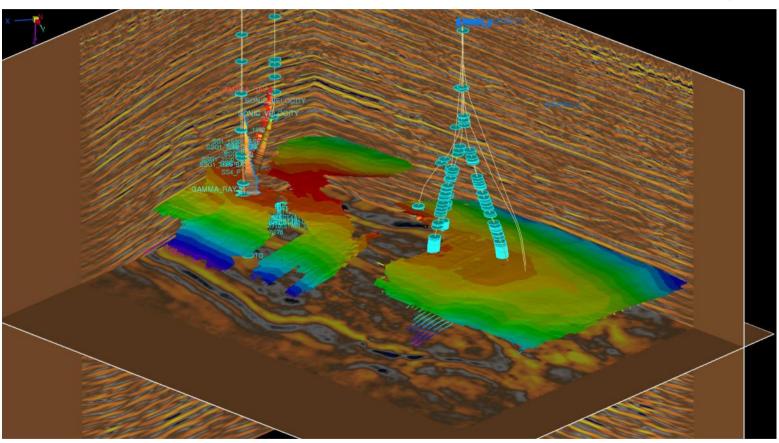


## Adding resource at low finding costs



## Conventional - Bangladesh

#### Application of 3D seismic has identified multiple targets



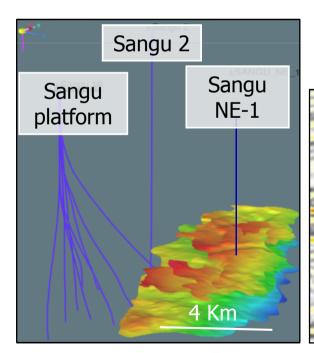
Sangu and South Sangu fields – Bay of Bengal, Bangladesh

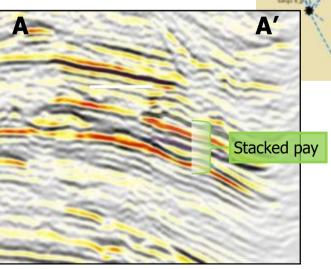


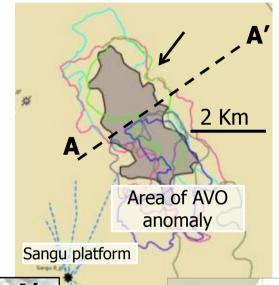
## Bangladesh - North East Sangu-1

#### Proven petroleum system

- Santos 100% and operator
- Water depth 10 metres
- NE Sangu prospect mapped on 3D seismic
- Rig secured and drilling planned for Q1 2012





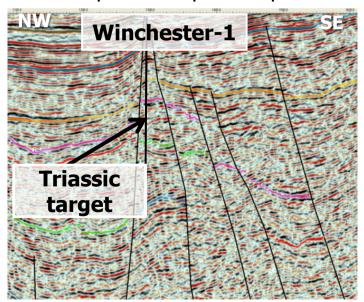


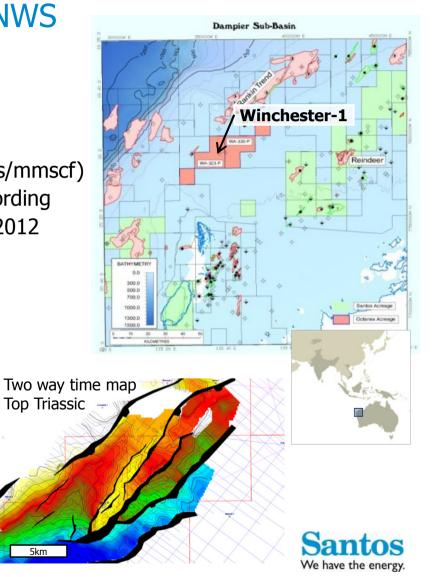


#### Carnarvon Basin – Winchester-1

## Winchester is on trend with NWS Rankin fields

- Santos 75% and operator
- Water depth 80 metres
- TD: 4,500 metres
- High condensate yield potential (>50bbls/mmscf)
- High resolution 3D seismic currently recording
- Rig secured and drilling planned for Q3 2012
- Multiple development options



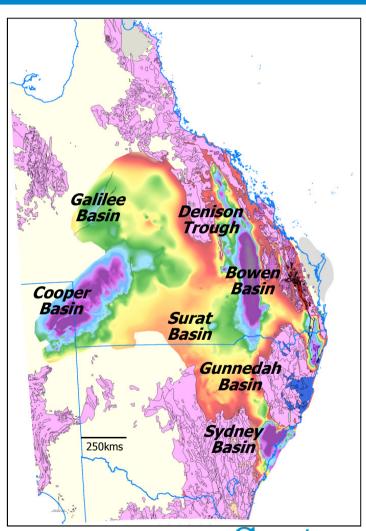


### CSG regional study

Santos' 50-year onshore history provides unique knowledge for assessing unconventional basins

Detailed regional mapping supports:

- Targeted exploration approach and high grading portfolio
- Integrated planning
- Opportunity capture



### Locating the CSG sweet spots

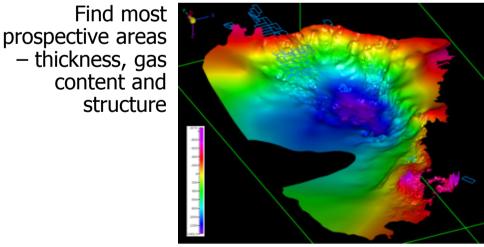


Characterise the reservoir in cores/logs e.g. coal cleats





Outcrop at a coal mine

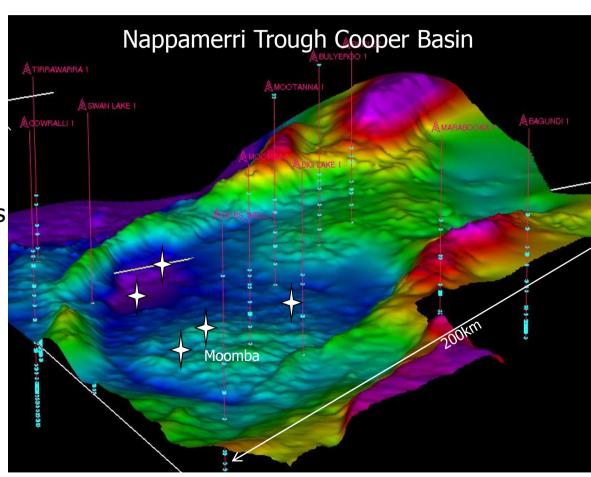




## Shale, tight gas sands and deep coal

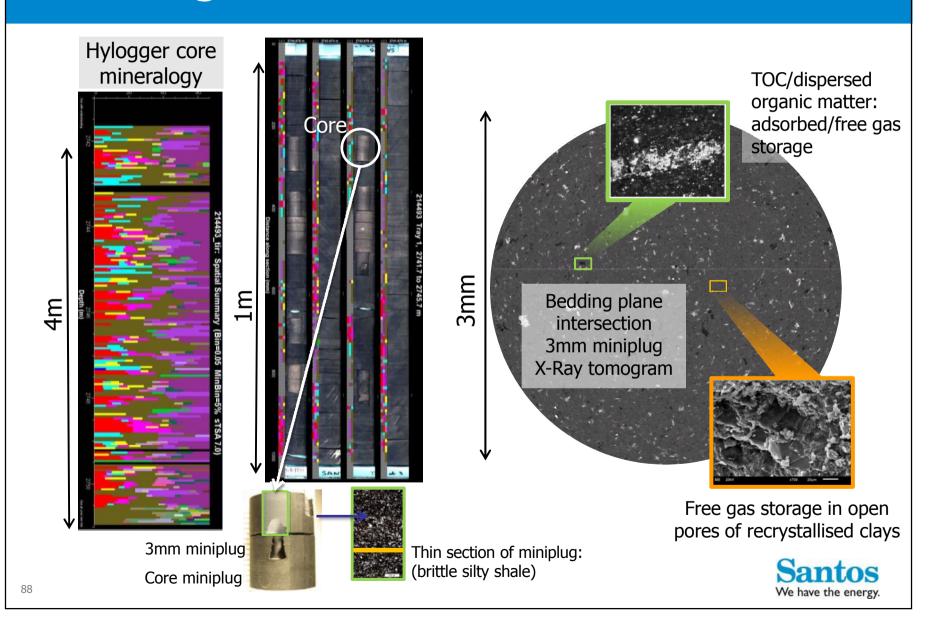
#### Cooper Basin prospects to be drilled in 2012

- One dedicated horizontal shale drilling trial and follow-up fracture stimulation
- Three key tight gas exploration wells
- One deep coal exploration well

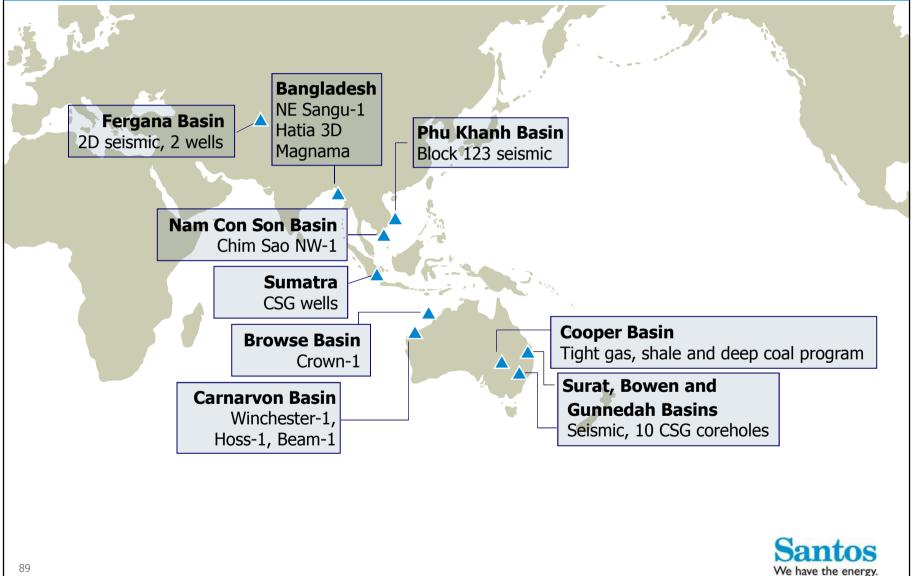




## Shale gas reservoir studies



### 2012 exploration program







Ocean Sovereign, Bay of Bengal, Bangladesh

# Technical and Engineering

Diana Hoff VP Technical & Engineering

### Technical and Engineering group

Strong integrated functional capability with focus on the fundamentals

- Strong HSE focus
- Safe, timely and cost effective delivery of wells and projects



#### Diverse drilling and completions capability

Australia Onshore conventional



Australia Vietnam Indonesia Bangladesh Offshore

Australia
Indonesia
Onshore
unconventional



#### New technology = better performance

#### **Onshore Cooper Basin**

- Three new, state-of-the-art drilling rigs
  - Improved rig moving and drilling efficiency
  - Automated systems mean safer operations
- Cost reduction through multi-well pad development
  - On-site simultaneous operations
  - Optimised fracturing process
  - Reduced surface disturbance
  - Implementing learnings from recent USA field trip









#### Leader in CSG D&C technology

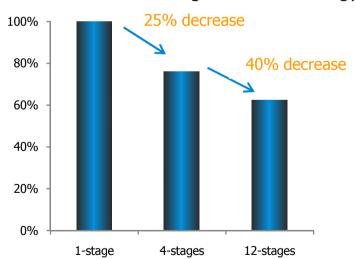
#### Onshore unconventional

- Two successful surface-to-inseam projects executed at Scotia
  - 50% improvement in time and cost between first and second program
- First in Australia and Asia:
   Fracture stimulation "Mongoose"
   (MZST) technology
  - Performing more fracs per day
  - Santos is the only operator in Australia and Asia licensed to use this patented technology
  - Major advantage over other operators in efficiency and cost





#### Time reduction through MZST technology





### Proven international operating capability

#### Offshore Asia Pacific

- 3 well jack-up drilling campaign in progress in Bay of Bengal
- Established supply base in Chittagong, Bangladesh
- Safe delivery of the 123-TH-1X well in Vietnam with 'best in class' drilling performance
- Three-well development jack-up drilling campaign has commenced offshore Madura Island, Indonesia



Offshore Asia Pacific



Chittagong supply base

**Bangladesh** 

**Vietnam** 

**Indonesia** 



COSL Boss



Ocean General

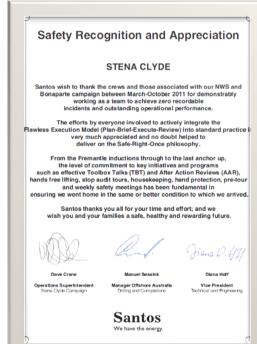


#### Proven proficiency, exciting growth

#### Offshore Australia

- Successfully completed fourwell drilling and workover campaign in 2011
  - Zero recordable incidents
  - Best historical performance
     Mutineer-Exeter workovers
  - Santos' largest offshore testing program conducted
- Followed by a very active 2012
  - 7-9 wells planned offshore WA and NT using three rigs











Santos

Drilling rig, Cooper Basin, Australia

## Funding and Guidance

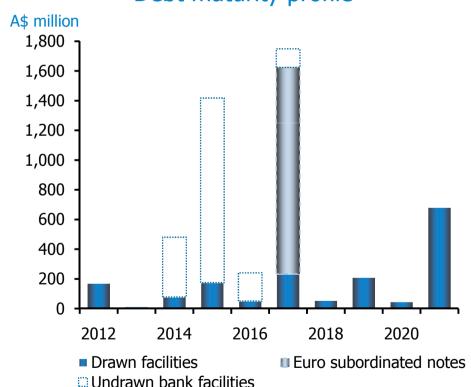
Andrew Seaton Chief Financial Officer

## Strong balance sheet

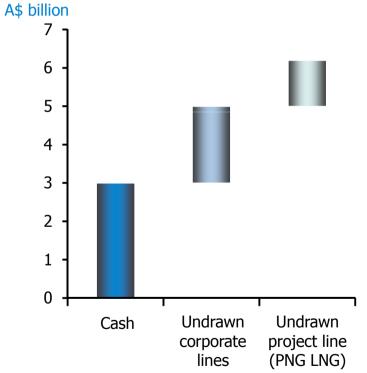
#### Balance sheet capacity to:

- fund execution of business strategy
- minimise refinancing risk





\$6.2 billion of funding capacity



The Euro subordinated notes mature in 2070. Santos has the option to redeem the notes in 2017.

Charts as at 30 September 2011.

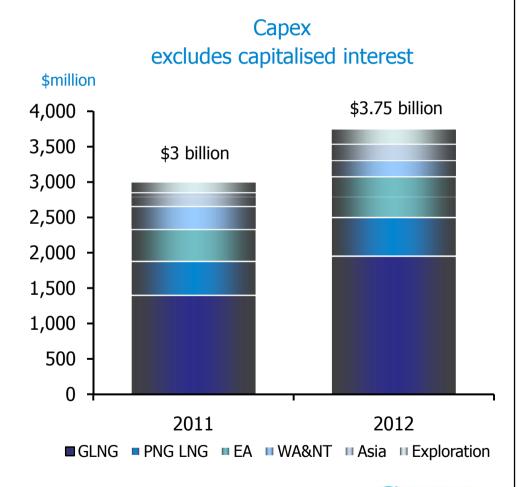


### Capex program fully funded

#### Base business and sanctioned project capex fully funded

- Existing \$6.2 billion committed undrawn debt and cash at 30 September 2011
- Strong free cash flow from base business (\$1.3 billion in YE2010)
- Underwritten DRP (2 dividends)

Potential ECA financing provides further funding optionality



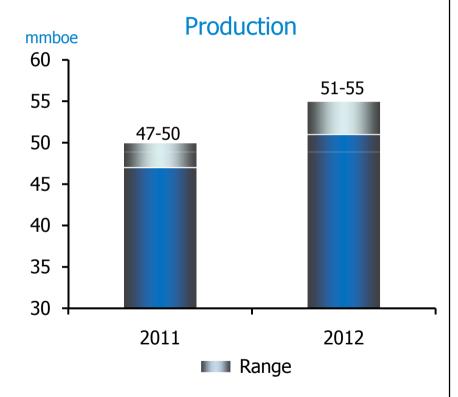


#### Production guidance

#### 2011 guidance unchanged 2012 guidance of 51–55 mmboe

#### 2012 production influenced by:

- New projects: Chim Sao, Reindeer, Halyard, Wortel
- Higher Cooper production as operations recover from flooding
- DLNG 35-day planned shutdown
- Delayed take-up of Reindeer gas by foundation customer
- Higher gas price at Maleo reduces PSC production entitlement combined with planned shutdown for booster compression installation



2012 guidance on financial items will be provided with the Fourth Quarter Activities Report in January 2012.

We have the energy.





## Wrap-up

David Knox Managing Director & CEO



# Questions





### 2011 Investor Seminar

10 November 2011



## 2012 exploration schedule

Well Name	Basin / Area	Target	Santos Interest %	Timing
NE Sangu-1	Bay of Bengal	Gas	100	Q1 2012
Indonesia CSG	Sumatra	Gas	60	Q1 2012
Central Asia 2 Wells	Fergana	Gas	70	Q2 2012
Beam-1	Carnarvon	Gas	45	Q2 2012
Hoss-1	Carnarvon	Oil	37.3	Q2 2012
Cooper tight gas	Cooper	Gas	66	Q2 2012
Winchester-1	Carnarvon	Gas	75	Q3 2012
Crown-1	Browse	Gas	30	Q3 2012
Chim Sao NW-1	Block 12	Oil	31.875	Q3 2012
Cooper Shale & Deep Coal	Cooper	Gas	66	Q4 2012
Magnama-2	Bay of Bengal	Gas	100	Q4 2012
EA CSG	Gunnedah/Bowen/Surat	Gas	Various	2012

The exploration portfolio is continuously being optimised therefore the above program may vary as a result of rig availability, drilling outcomes and maturation of new prospects



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