



**2011 Citi Australian & New Zealand  
Conference**

**Crux Liquids Project**

**Sydney  
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Presented by

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Chief Operating Officer**

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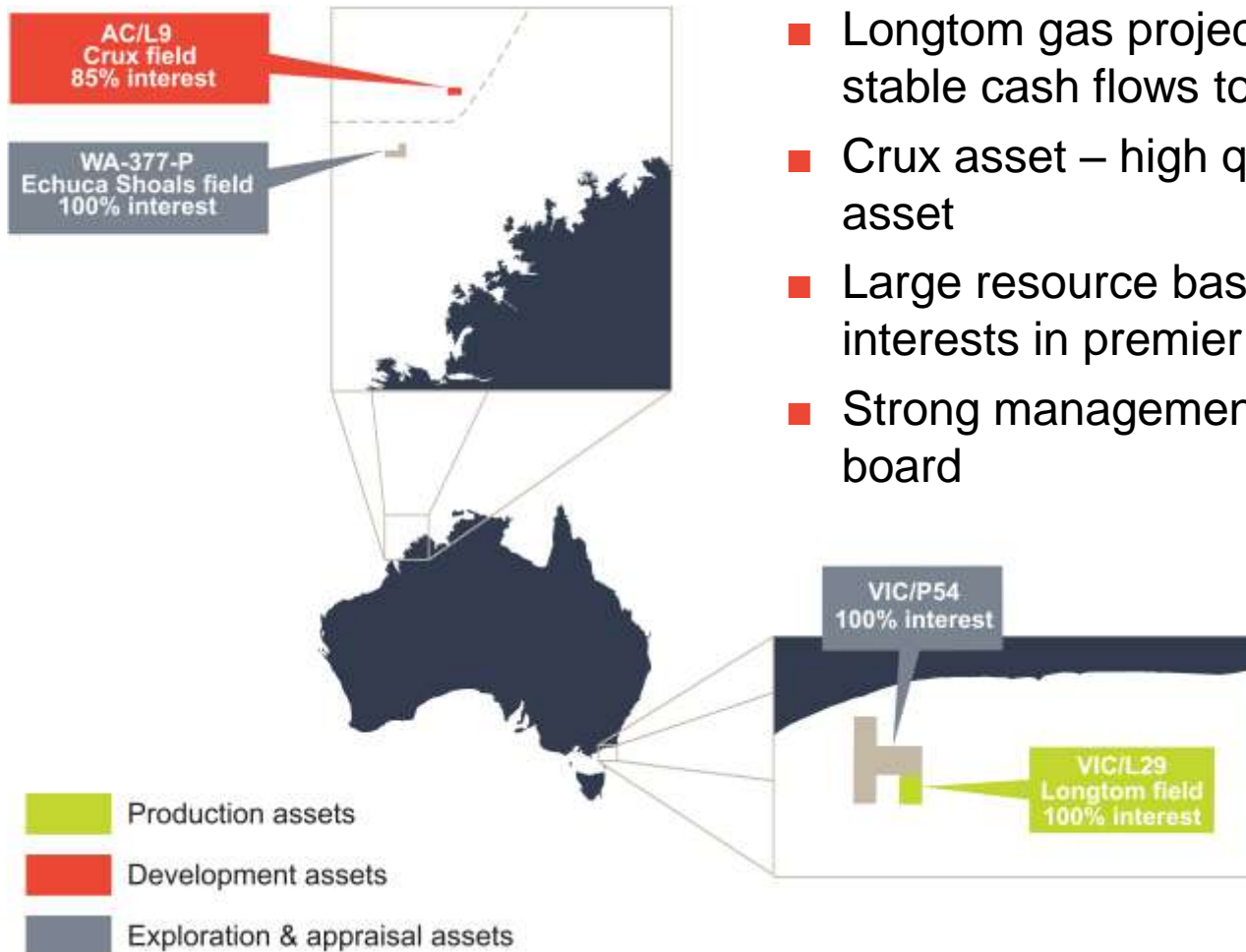
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- Longtom gas project – producing asset with stable cash flows to underwrite growth
- Crux asset – high quality Browse basin asset
- Large resource base and large equity interests in premier oil and gas basins
- Strong management team and experienced board

**Large reserves base and large equity interests in premier oil and gas basins**

**To achieve final investment decision (FID) targeting end 2011 CY we need:**

- Finance arrangements approved
- Farm-in partners secured
- Project execution

## 2012 FY YTD achievements

- FID targeted by 2011 CY end
- Nexus project management team (PMT) strengthened
- EPCI contract terms with McDermott nearing completion
- Seismic inversion completed – well locations being confirmed
- LOI for subsea flowlines and risers
- Completed schedule acceleration studies
- Commenced safety and risk studies
- Progressing engineering and procurement
- NOPSA has accepted Nexus as registered operator

## Financing

- Term sheets being finalised for up to US\$1 billion senior debt
- Leveraging Asian banking liquidity in conjunction with traditional bank finance (China)
- Independent technical expert to be appointed by banks
- Timeline is consistent with FID processes

## Farm-in

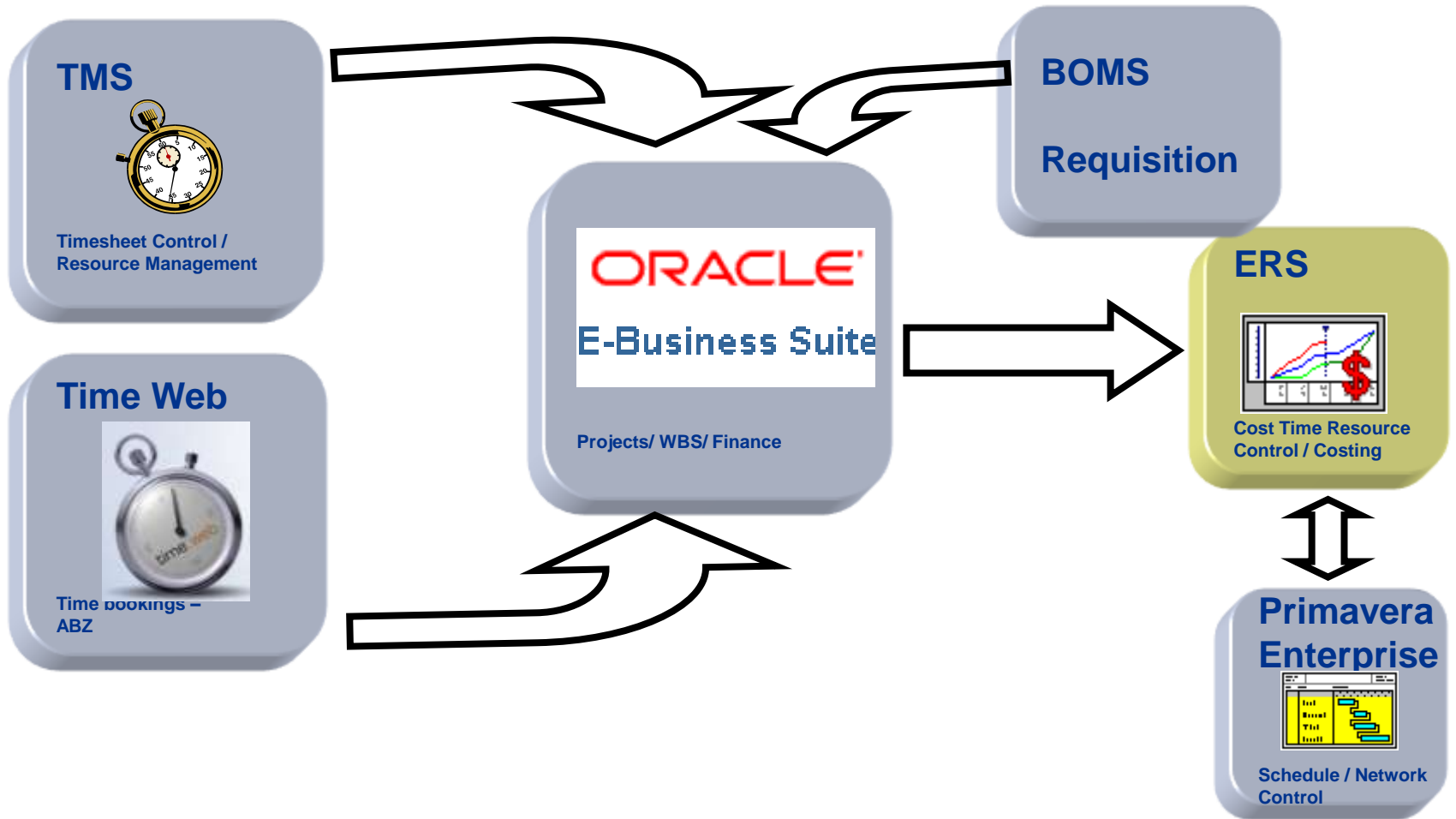
- Sell down of Nexus' Crux interest from 85% to 50%, expected to cover Nexus' base equity requirement
- Farm down negotiations advancing to schedule
- Strong project revenue supports early debt payout

## **Project management system (PMS) is in place**

- This defines the methods and controls needed to execute the project

### **PMS covers**

- Project integrity
- Change management
- Control of cost and schedule
- Management of procurement and construction
- Communications and reporting



- Nexus project management team (PMT) currently comprises >385 man years of relevant experience
- Nexus PMT will be augmented for execution phase, post FID
- McDermott is main FPSO contractor taking the project to FID
- Subcontractors – TMS (APL), Topsides fabrication and integration yard (QMW), tanker conversion yard (QWHI) and tanker conversion engineering (Six Tee)
- Wood Group is supporting the Subsea element of the project
- AGR Perth analysing existing well design

## **McDermott**

- Currently operating under early contractor involvement (ECI) reimbursable cost time resource (CTR) contract

## **Wood Group**

- Currently operating under reimbursable CTR

## **Cameron**

- Subsea trees and controls

## **Wellstream – LOI only**

- Subsea flowlines and risers

## **GE (Nuovo Pignone)**

- Reinjection compressors

## **APL**

- Mooring system

## **APL or Framo**

- Swivel system (515 bar @ 120°C)

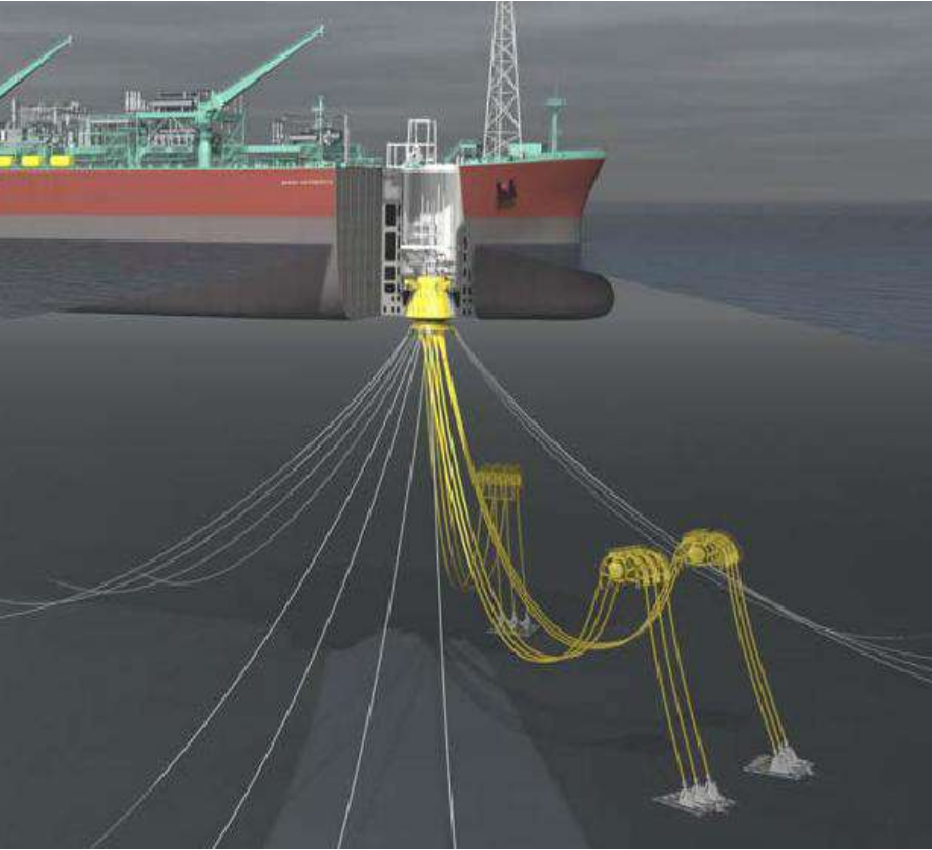
## **China shipyard**

- FPSO and Topsides



- Crux TMS based on APL STP concept
- Larger “5000” unit with full depth moonpool
- Buoy supports chains and risers
- Fully disconnectable design
- Pre-install prior to FPSO hook-up
- Swivel stack within moonpool
- 4 fully rated production swivels
- 1 fully rated re-injection swivel
- Simple re-injection manifolding downstream
- Emphasis on proven track record

# APL swivel stack within turret moonpool



- GE Compressors
  - Reinjection Compressors awarded to GE Florence
  - First (of 2) Compressor ready for testing late October 2011
- Cameron Subsea Trees
  - Factory Acceptance Test of first two subsea trees
- Flowlines & Umbilicals
  - LOI issued to Wellstream

## FPSO

- Revised mete-ocean analysis led to the decision for a disconnectable FPSO based on a converted Suezmax tanker
- SBM engineering has been validated
- Critical equipment has been identified and quotations have been obtained from suppliers
- Further definition of piping, flare, modules and structural supports and a new topsides general arrangement plan has been produced

## Tanker

- A set of tanker selection criteria has been developed
- 4 candidate vessels have been identified

## Subsea

- A new field layout has been produced to optimise FPSO location and flowline lengths based on current well locations
- Scopes of work and specifications have been updated and supplier quotations have been received for SURF components
- Regulatory Plan has been prepared

**Technical activities have focused on supporting RFQ for critical components**

# Subsurface: 1

## Confidence in G&G data base : WELLS



	Crux-1	Crux-2	Crux-2ST1	Crux-3	Crux-4	Libra-1	Octans-1
Date	Apr-00	Dec-06	Dec-06	Dec-07	Jan-08	Dec-08	Jun-09
Conventional Core	✓			✓			
Sidewall Core	✓	✓	✓	✓	✓	✓	✓
Production Test	✓✓			✓			
Pressure Tests	✓	✓	✓	✓	✓	✓	✓
Fluid Samples	✓	✓	✓	✓		✓	✓
Resistivity Logs	✓	✓	✓	✓	✓	✓	✓
Nuclear Logs	✓	✓	✓	✓	✓	✓	✓
Acoustic Logs	✓	✓	✓	✓	✓	✓	✓
NMR Logs	✓						
Spectral Gamma Logs	✓	✓	✓	✓	✓	✓	
Borehole Image Logs	✓	✓	✓	✓	✓		
Velocity seismic profile	✓	✓		✓	✓	✓	

\* Red colour indicates data not acquired

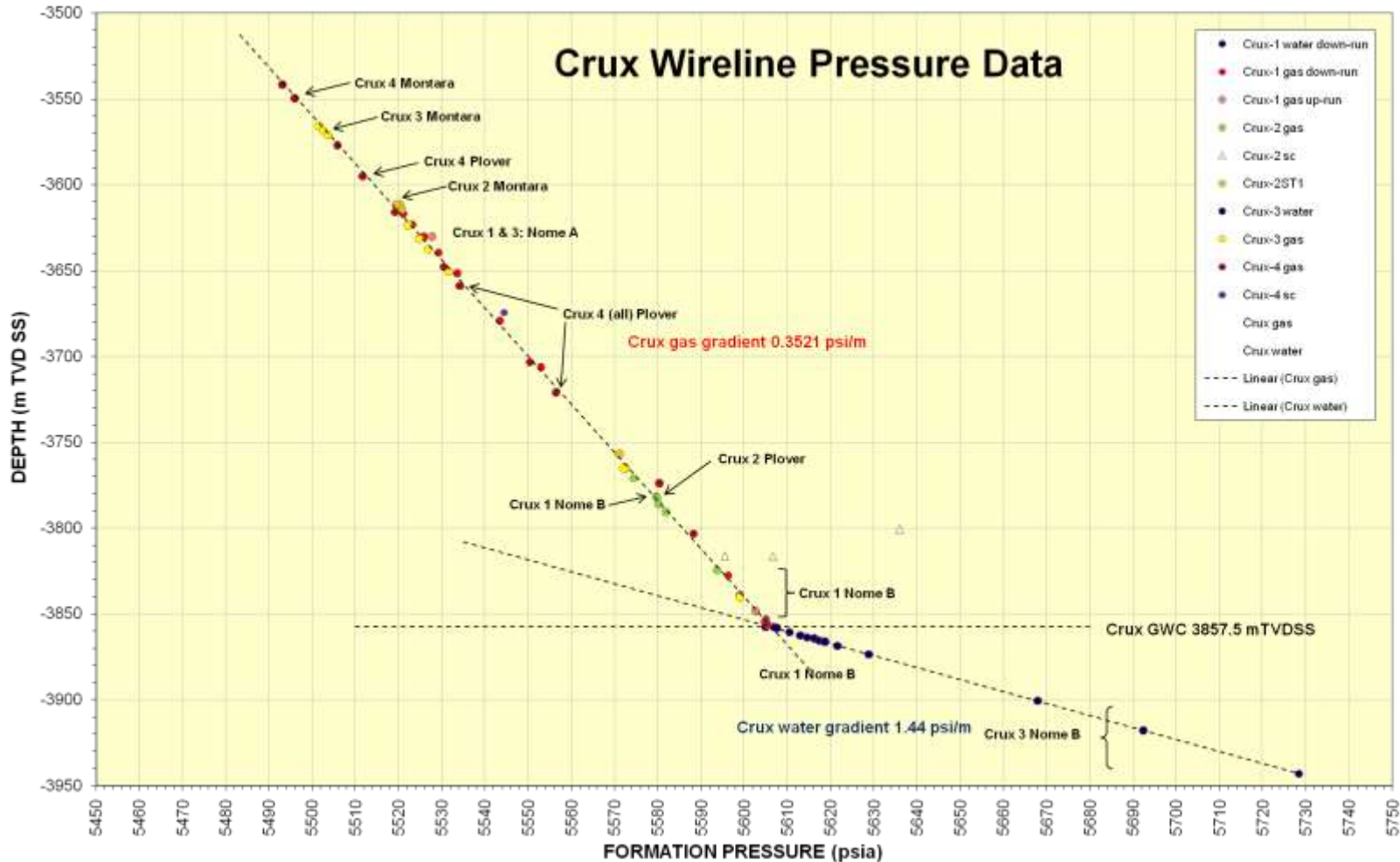
Seven modern boreholes with comprehensive data acquisition (logs, cores, test data)

- Petrophysical well evaluation is reliable
- Numerous well/seismic ties facilitates confident seismic interpretation

**Well data is extensive – known reservoir**

# Subsurface: 2

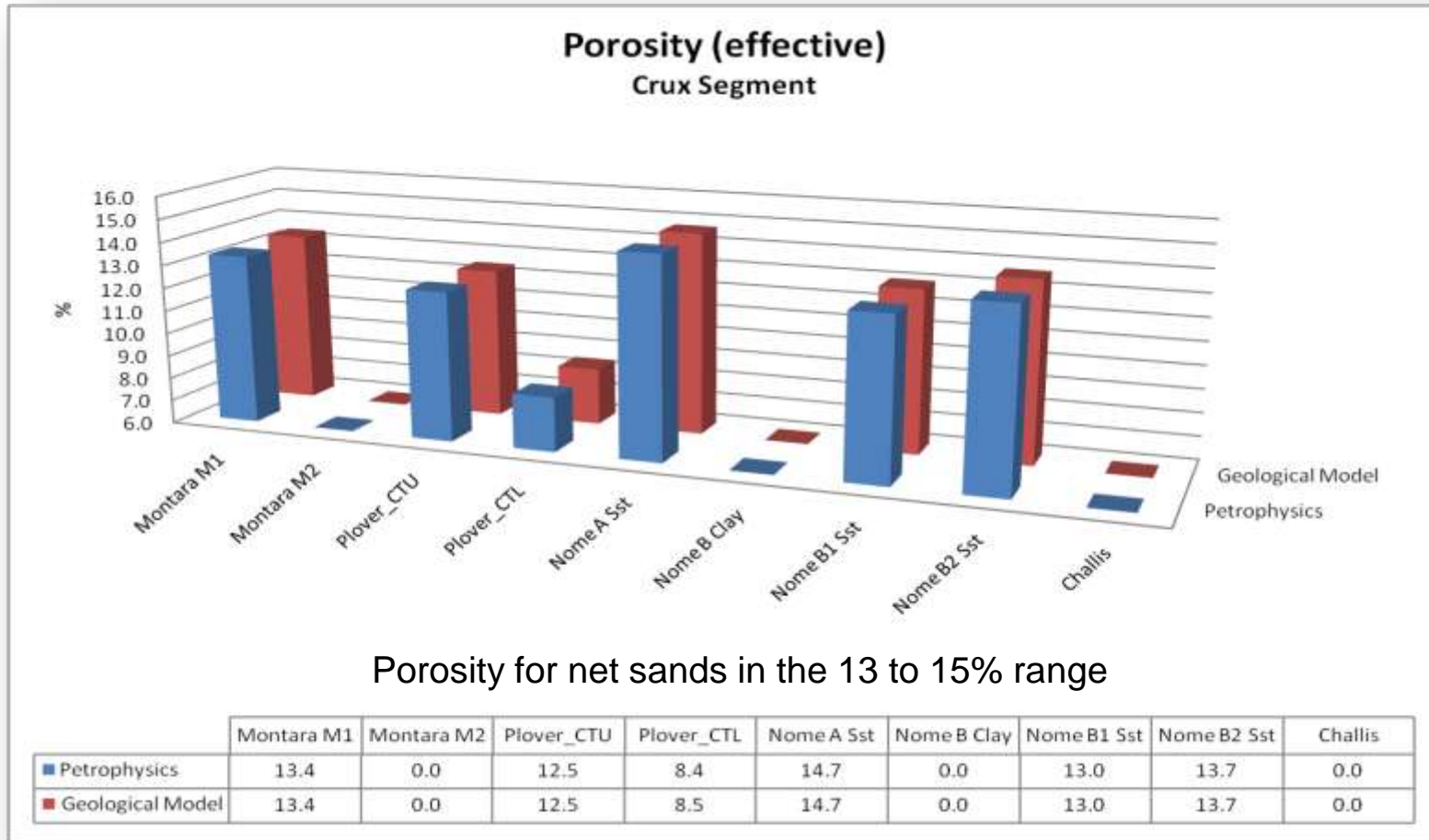
## Confidence in G&G data base : Well pressure data



**Pressure data indicates a single gas column greater than 300m**

**Connected sands – no vertical segregation**

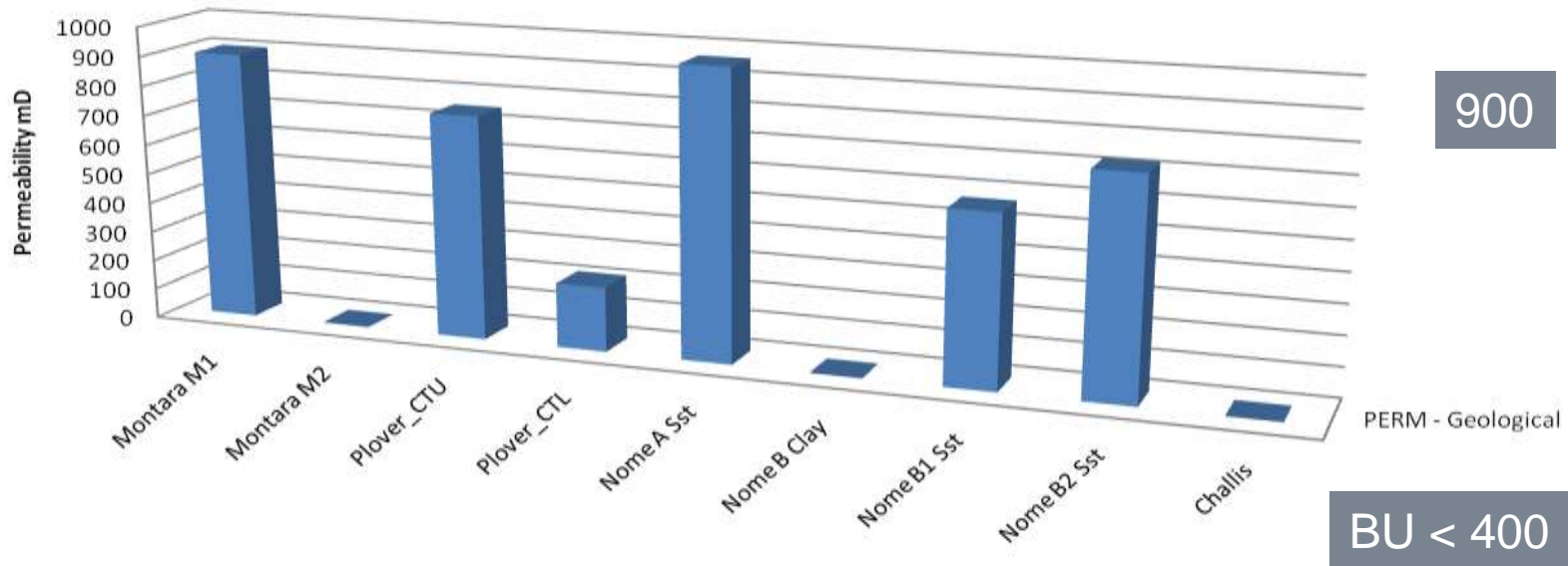
**Lower Montara, B Clay and Challis zones are treated as non-net**



**Log evaluations have been supported by conventional core analysis**

**Volume of void space as percentage of total volume**

### Permeability Net in Crux segment



Permeability up to 1 Darcy

	Montara M1	Montara M2	Plover_CTU	Plover_CTL	Nome A Sst	Nome B Clay	Nome B1 Sst	Nome B2 Sst	Challis
■ PERM - Geological	903	0	752	216	965	0	571	725	0

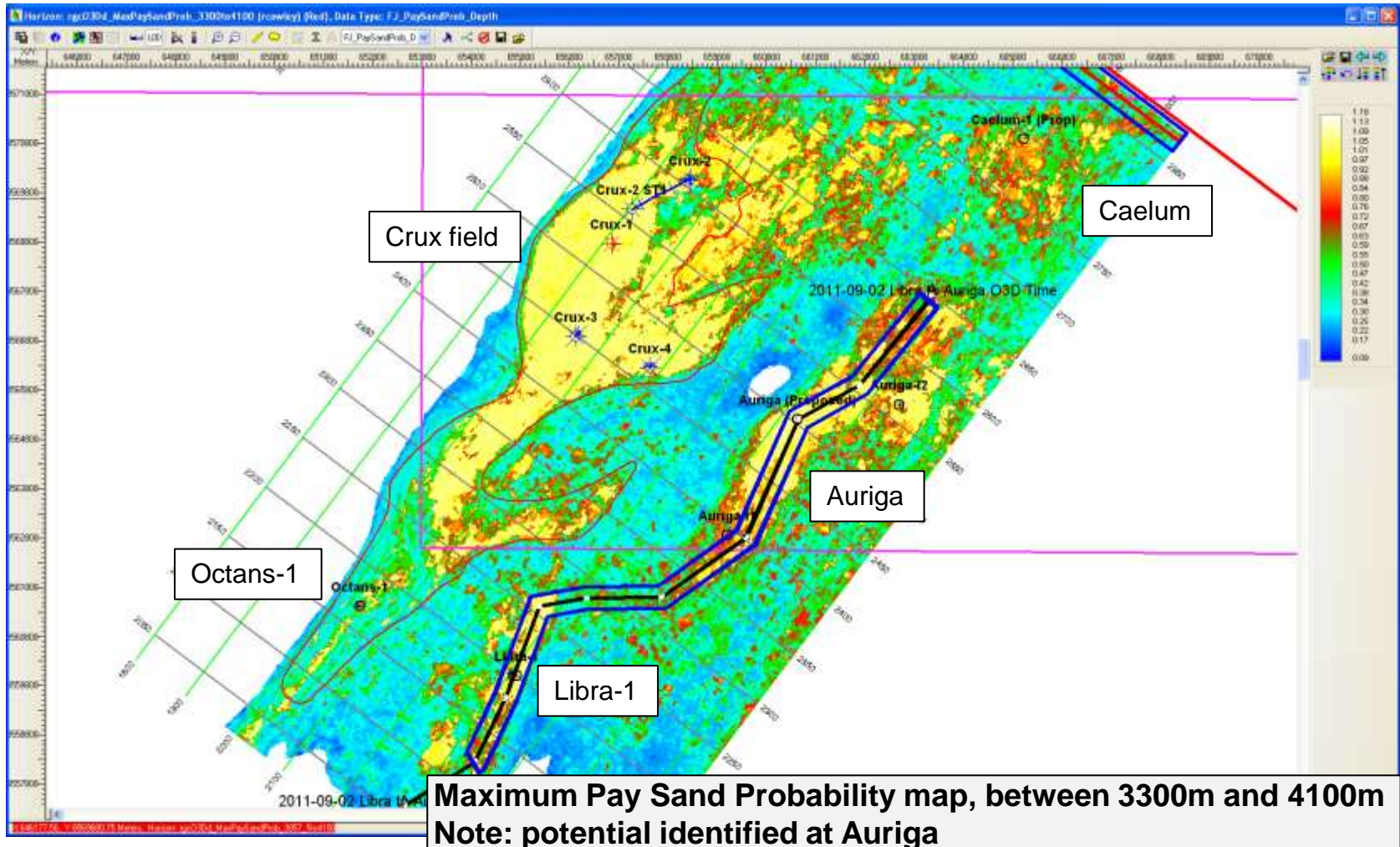
**Lower Montara, B Clay and Challis zones are treated as non-net**

**Measure of resistance to flow**

# Subsurface: 5

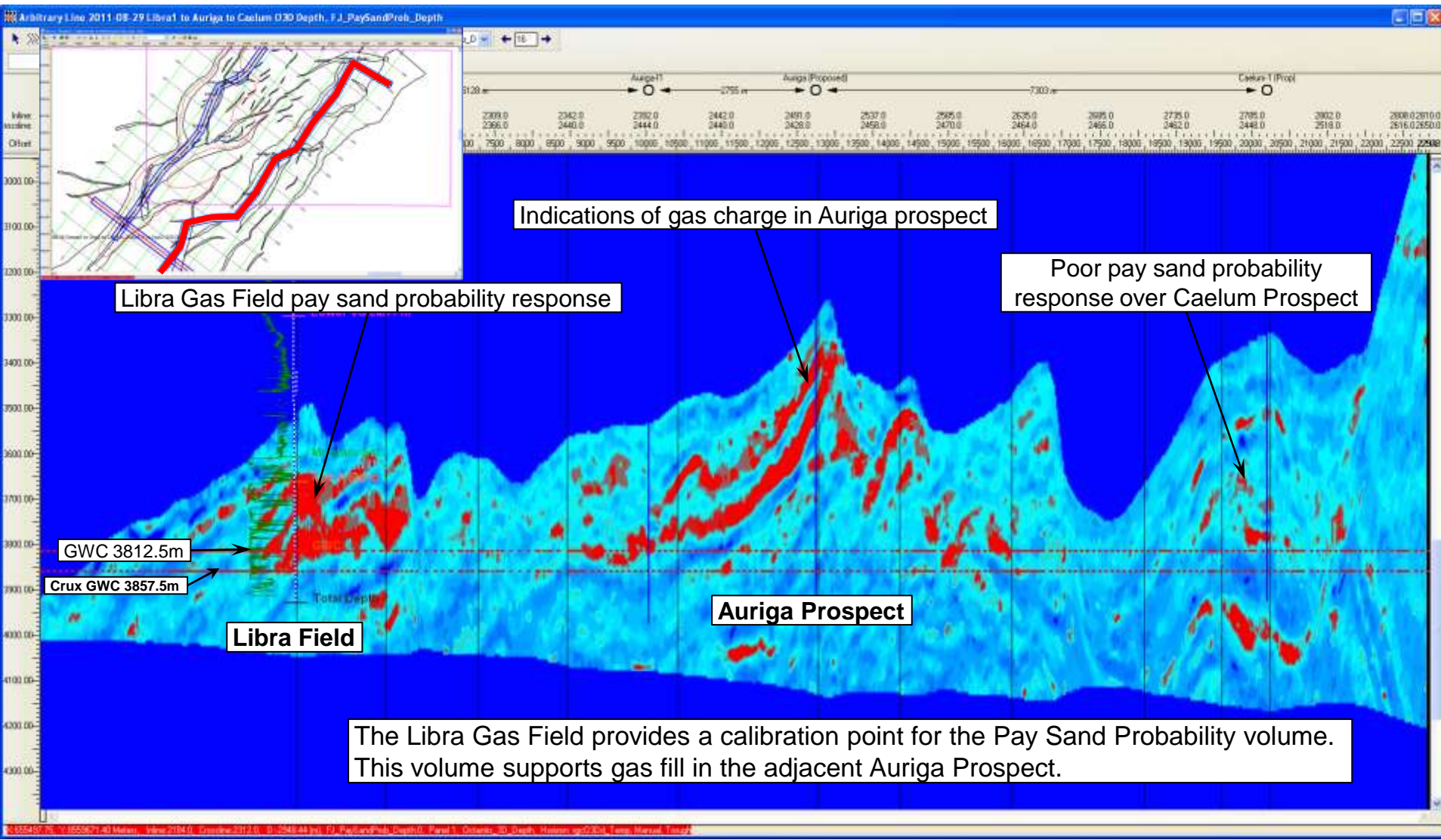
## Reservoir quality : Pay prediction

2011 inversion data proved effective in identifying/mapping sand distribution & pay probability  
Confirmed Nome as the primary reservoir across the field



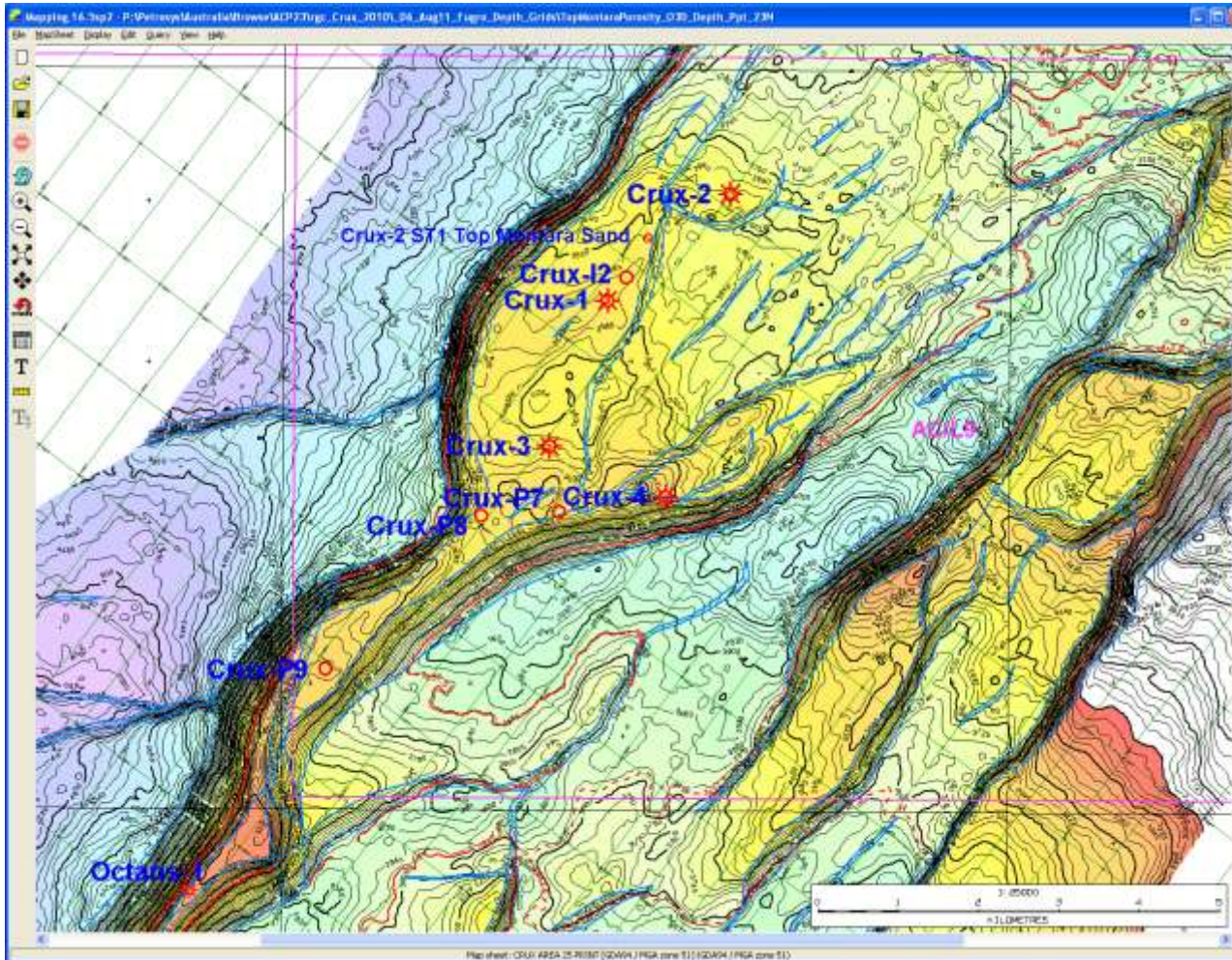
# Subsurface: 6

## Auriga potential confirmed



# Subsurface: 7

## Well locations confirmed



- Four producers/four injectors planned. Well locations (except for P9) accepted
- P9 well location under review due to uncertainty of South Crux connectivity to main horst
- Based on 2011 seismic inversion data and correlations across the Crux Field, conclude the following:
  - P9 well will intersect Nome 'B' sands
  - with connectivity into the Crux Main Horst
  - with a high pay sand probability
  - Confidence in P9 location increased

**South Crux well connected to main body**

- Capital Raising in April 2011 allocated \$20 million to pre-FID process
- Cost projections track within budget

- CAPEX

FPSO current estimates	\$675 million
Subsea current estimates	\$250 million
Drilling estimates	\$350 million
Total*	\$1275 million

\* Excludes financing costs and project contingencies

- Annual Opex Estimate US\$54 million including:
  - FPSO Manning
  - Maintenance
  - Includes 1 workover rig mob/demob
  - Support & consumables
  - Logistics (Supply base, Marine & Aviation Support)

## Operations

- Nexus is committed to give priority to Health, Safety and Protection of the Environment in the operation of the Crux development
- Operations & Maintenance Management
  - Disconnectable FPSO remains under ships classification rules
  - Manned to “Australian disconnectable FPSO Model”

## Schedule

- Project scheduled to produce liquids in 2014
- Converted tanker option saves 6 months (vs new-build option)
- Critical Path runs through tanker identification and conversion, topsides fabrication and integration, offshore installation and commissioning

## To achieve final investment decision (FID) by 2011 CY end we need:

- Finance arrangements approved
- Farm-in partners secured
- Project execution



“Ambitions shaped by a passion for growth and technical innovation  
with a foundation of business and operational integrity”

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