TIMOR LESTE DRILLING
Project Consultation
23 February 2010
Purpose

- To provide information about planned drilling activity
- Discuss Potential Environmental Risks and mitigation strategies
- Provide Eni contact details for further information
Location
Cova Details

- Start date: July 2010
- Drill Rig: Saipem 10,000
- Duration of drilling campaign: 45 days
- Water Depth: 1930m
- Target Depth: 4204m
- Support vessels
- Water Based Drilling Muds
- Drill cuttings discharged at sea bed and from rig
**Well Schematic: Cova Vertical Exploration Well (Wildcat)**

**Preliminary**

- **Hole Sizes, Casing, Mud, Cement**
- **All depths in mRT MD**
- **RT- MSL=** 25m est
- **Water Depth =** -1930m
- **RT-Seabed =** -1985m
- **Ref Datum = LAT**

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**42" Hole To ~ 2000m**
- Length= 45m
- Mud: SW=Sweeps
- MW: 1.03-1.05 SG
- No returns
- 1.89 SG Tall Cement to Seabed

**2000m**
- **36" Conductor**
- 4 Jts of conductor
- WT 1 1/2" RI 4

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**26" Hole To ~ 2200m**
- Length= 500m
- Mud: SW=Sweeps
- MW: 1.03-1.05 SG
- No returns
- 1.89 SG Tall Cement to Seabed

**2200m**
- **Surface Casing**
- 20" 133 pff RL4S

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**17-1/2" Hole to ~ 3685m**
- Length= 1275m
- Mud: PHB/Polymer
- MW: 1.03-1.05 SG
- 1.89 SG Tall Cement to 3375m
- DRILLING WITH BOP & RISER

**3375m**
- **Intermediate Casing**
- 13-3/8" 72 pff P110
-ream usable hole push
- LOT: expected XX SG, req'd = 1.3 SG

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**12-1/4" Hole to ~ 4204m**
- Length= 430m
- DRILLING WITH BOP & RISER
- Mud: PHPA-KCI
- MW= 1.15 SG (9.6ppg)

**4204mRT / 4180mSS**
- **VERTICAL WELL**
- **TD= 4204mRT / 4180mSS**
- **Laminaria / Plover contingent core**

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**" Contingent 9-5/8" 53.5ppf Q125**
- **Tenaris Blue Near Flush**

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Notes:
- 1) In the successful case (presence of H2), a 2Ph core will be cut and a full vintage formation evaluation performed. The well will then be abandoned.
SAIPEM 10,000

- Built 2000
- Ultra deep water Drillship
- Dimensions
  - Length – 227.6m
  - Breadth – 42m
  - Height – 19m
- Accommodation - 172 People
- Dynamic Position Fixing
Primary Support Vessels

- Transport consumables, fuel and drilling tool
- Operate from Darwin Port
- 1 vessel will be with the Saipem 10000 at all times during drilling
- Sea Witch
  - Contractor: Deep Sea Supply
  - Current Contract: Eni Indonesia
  - Maximum Speed
  - Cargo: 1600t
DUAL ACTIVITY RIG – RISERLESS PHASE

- Rig A: Drill 42” hole and Run 36” Conductor
- Rig B: Deploying Beacons
DUAL ACTIVITY RIG – RISERLESS PHASE

- Rig A: Cementing 36” Conductor
- Rig B: Running 26” BHA
DUAL ACTIVITY RIG – RISERLESS PHASE

- Rig A: Running BOP
- Rig B: Drilling 26” Hole
DUAL ACTIVITY RIG – RISERLESS PHASE

- **Rig A:** Running BOP
- **Rig B:** Run & Cement 20” Casing
DUAL ACTIVITY RIG – CONNECTED PHASE

- **Rig A:**
  - BOP latched on wellhead
  - 17-1/2” hole section
  - 12-1/4” hole section

- **Rig B:**
  - No direct activity on the well

After latching the BOP, the rig operates like a single activity rig with off-line capability.
Saipem 10000 - "Dual Activity" Drill Ship

Dual Derrick Side View

Dual Derrick Front View

exploration & production
Finger Boards - Derrick Racking System Views

exploration & production
$6^{3/8}$" DP = Dual Activity
Remotely Operated Vehicle

Aft Starboard ROV

Aft Port ROV
Existing Environment

- Deep water environment
- Marine fauna includes:
  - Whales;
  - Dolphins
  - Turtles
  - Birds
  - Fish
  - Other species
- Several of these species are protected by international treaties or legislation.
Existing Environment: Marine Mammals

- Bryde’s Whale
- Blue Whale
- Sperm Whale
- Dolphin species
- Humpback Whale
- Killer Whale

exploration & production
Emissions and Discharges

- Drilling discharges:
  - Drilling fluids
  - Cuttings

- Atmospheric emissions
- Cooling water
- Desalination brine
- Sewage
- Domestic waste water
- Putrescible wastes
Drill Cuttings Discharge
Other Environmental Hazards

- Accidental hydrocarbon discharges
  - Well blowout
  - Vessel Collision
  - Fuel or chemical Transfer
- Solid and hazardous wastes
- Marine pests
- Physical disturbance to marine biota
Further Information

Documents submitted
• Draft Framework of Reference

Documentation to be submitted to DNMA
• Environmental Impact Statement
• Environmental Management Plan
• Environmental Monitoring Plan
• Oil Spill Contingency Plan

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