BM-C-8 POLVO Development Introduction

BM-C-8 Block POLVO Development Project

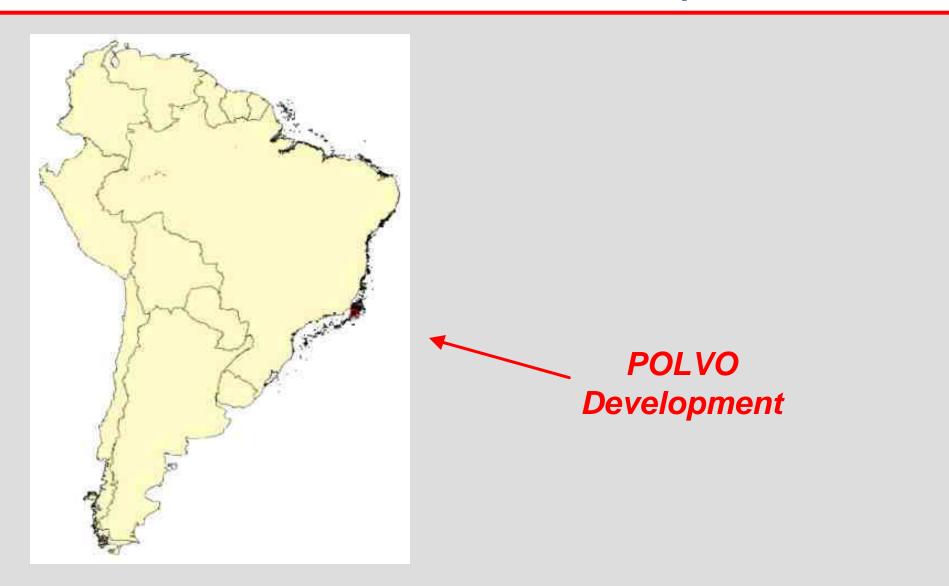
23 August 2006

Michael P. Duffy

Devon Deepwater Facilities Consultant

- Project Overview
 - Location
 - Block history
 - Development concept
- Project Schedule
- Review contracting / purchasing
- Progress Photos
- Open Discussion / Q&A

Development Location Campos Basin, Brazil



Development Location Detail Campos Basin, Brazil



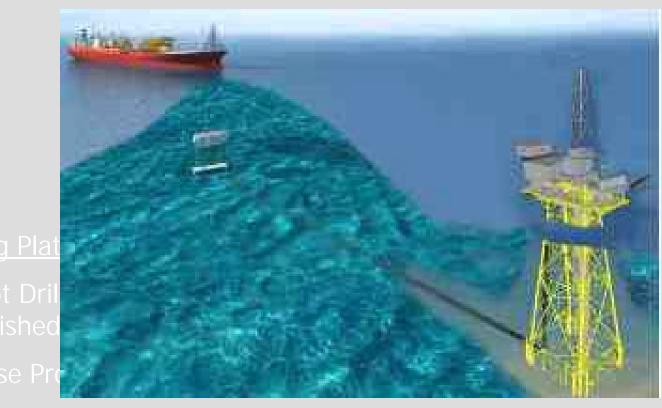
- Originally drilled in 1993 and 1994 by Petrobras
- Block was acquired by Devon (Santa Fe) in 2000
- Devon exploration wells drilled in 2001, 2004 and 2005
- Reserves up to 50 million barrels of oil estimated
- 13 Development Wells Planned
 - All Platform Drilled
 - 10 Production
 - > 3 Water Injection
- Investment of US\$200 300 MM
- Initial Production (First Oil): July 2007

BM-C-8 POLVO Development Plan Overview

FPSO - 1.5 mm bbl FPSO; 90,000 BOPD prod. capacity

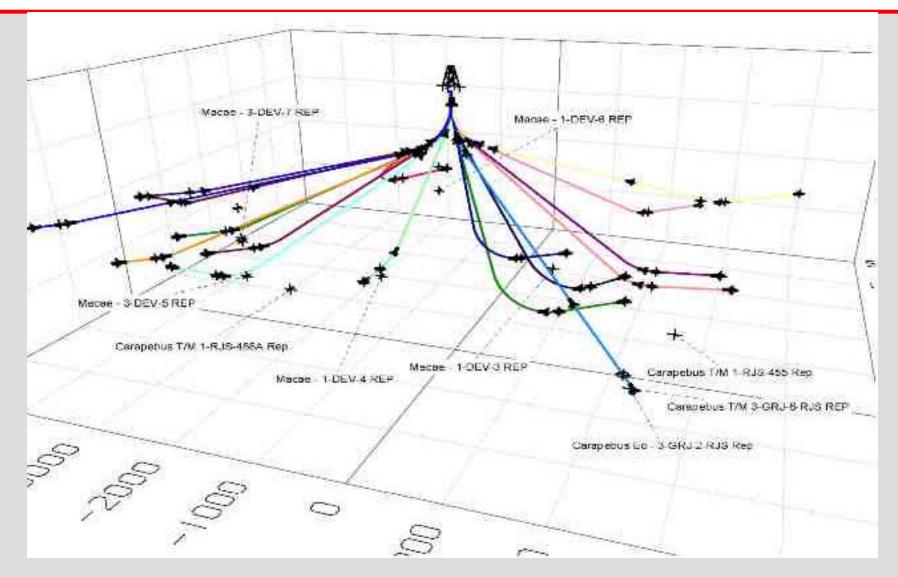
Installation – April/May 2007

1st Oil – by July 2007



Installation and Drilling Operations- December 200

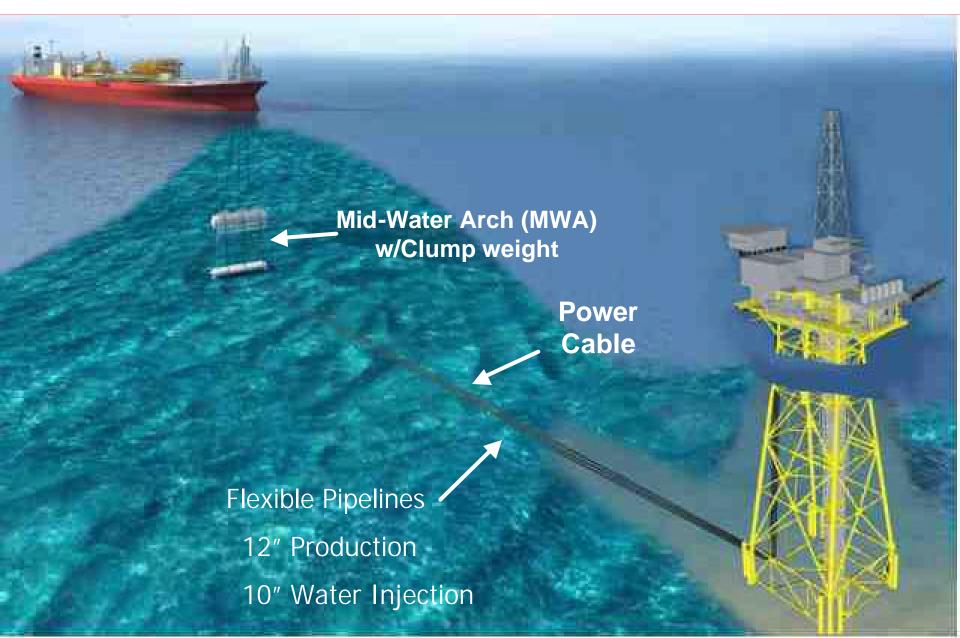
BM-C-8 POLVO Development Plan Well Planning - Trajectories



- All production wells are "Dry Tree" wells on a fixed platform
- The Production Gathering System is the Wellhead Platform
- All production (full wellstream) is sent to the FPSO in one 12" 3-phase flowline

- Injection water is sent from the FPSO to the platform in one 10" flexible flowline
- Submarine power cable connects the FPSO to the platform
 - 22kV cable
 - Includes fiber optics for communication

BM-C-8 POLVO Development Plan Production Gathering System



BM-C-8 POLVO Development Plan Production Unit

Wellhead Platform Description

- 105m (340 ft) water depth
- 6-leg Deck, 4-leg Jacket, 8 Skirt Piles
- 24 Well Slots on Platform
 - Up to 18 Production Wells on Platform
 - Up to 10 Water Injection Wells (with 4 Subsea)
- 3000 HP Self Contained Drilling Rig
- All production pumped to FPSO
- Multi-Phase Pumps and Test Meter
- All Water Injection supplied from FPSO
- Power generation on FPSO, power cable to Platform
- Flowline Coolers to cool produced fluids

BM-C-8 POLVO Development Plan Production Unit

FPSO Description

1.5MM bbl Crude Storage Capacity
90,000 BOPD Processing Capacity
150,000 BFPD Total Fluid Capacity
100,000 BWPD Water Injection Capacity
135,000 BWPD Produced Water Treating Capacity
36 MW Power Generation Capacity
Turret Moored 1.5 km from Platform
Produced Gas used as fuel gas (minimal flaring)
Supplemental Fuel from Crude Oil Topping Plant

Mid-Water Arch (MWA) w/Clump weight

BM-C-8 POLVO Development Plan Schedule of Activities

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BM-C-8 POLVO Development Plan Supplier Data



Worldwide Supplier Base

- 100 + contracting entities
- Suppliers located in 15 countries supporting the project
- Major contracts for
 - Project Management Lowe Offshore International
 - Engineering Excel Engineering, Inc.
 - Installation Heerema
 - Jacket / Deck Fabrication Kiewit Offshore Services
 - FPSO Prosafe
 - Drill Rig Purchase Ensco
 - Drill Rig Refurbishment Management William Jacob Management, Inc.
 - Pipelines Wellstream
 - Pipeline Installation Technip
 - Pile Fabrication EBSE

BM-C-8 POLVO Development Plan Brazilian Suppliers

Brazilian Suppliers:

- Intec do Brazil: Engineering Support
- CDS Consutloria: Regulatory
- EBSE: Pile fabrication
- ENAVAL: Manifolds and Pig Launcher Skids
- ConFab: Conductor Pipe
- Akzo Nobel: Paint supplier for the entire project
- MS Logistics: Importation
- Technip: Pipeline Installations
- Brastech: Fast Rescue boat and liferafts
- Edison Chouest: Supply Vessels
- Brasco: Shore Base
- Superpesa: Mid-Water Arch installation
- Petroserve: Drill Rig Operations
- Most major drilling equipment and services

BM-C-8 POLVO Development Plan Photos - Platform



Jacket fabrication – Kiewit, Ingleside, TX Platform fabrication -Kiewit, Ingleside, TX



BM-C-8 POLVO Development Plan Photos – Brazilian Fabrication



BM-C-8 POLVO Development Plan Photos – Piles & Drilling Rig



Drill rig refurbishment -Kiewit, Ingleside, TX

BM-C-8 POLVO Development Plan Photos – FPSO



FPSO main deck work (view astern, from the bow)

BM-C-8 POLVO Development Plan Photos – FPSO



FPSO turret fabrication

FPSO - internal work

