

**BM-C-8 Block
POLVO Development Project**

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BM-C-8 POLVO Development Presentation Overview

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

Development Location Campos Basin, Brazil



***POLVO
Development***

Development Location Detail Campos Basin, Brazil



BM-C-8 Project



Devon Energy Corporation
BM-C-8 Project, Campos Basin, Brazil
BC-M-6 Field Location

BM-C-8 POLVO Development Plan Overview

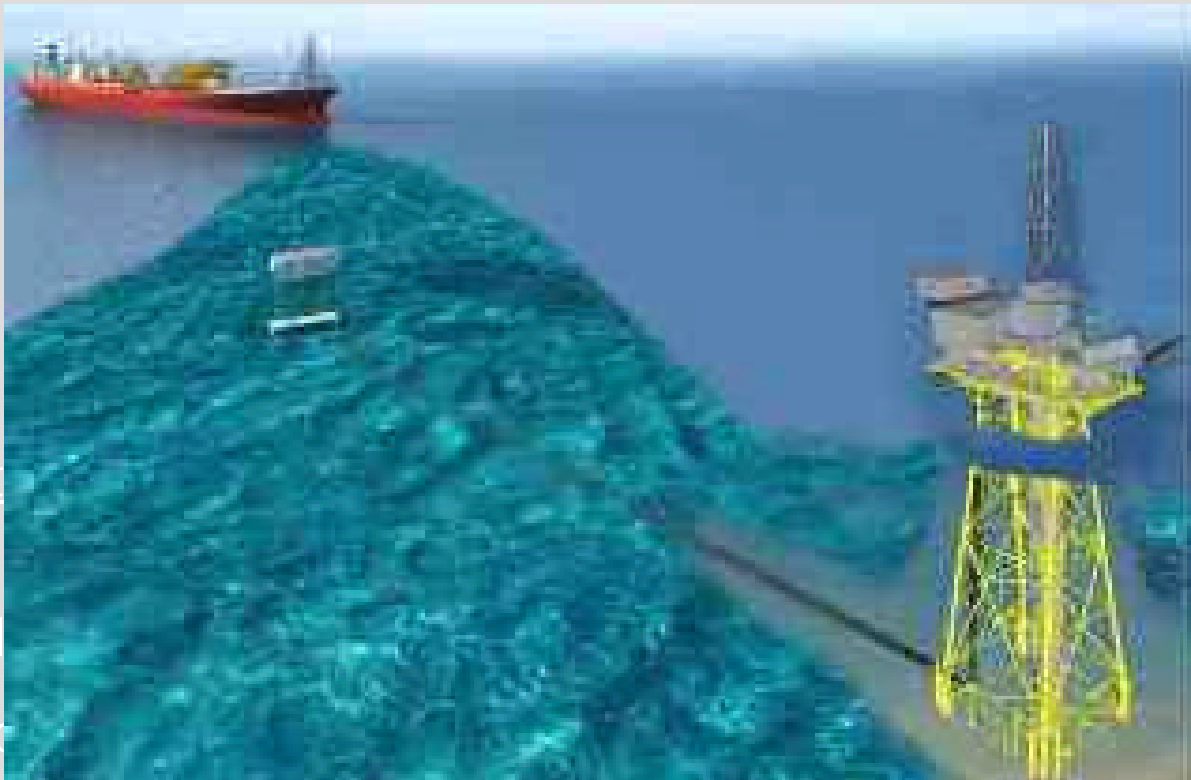
- Originally drilled in 1993 and 1994 by Petrobras
- Block was acquired by Devon (Santa Fe) in 2000
- Devon exploration wells drilled in 2001, 2004 and 2005
- Reserves - up to 50 million barrels of oil estimated
- 13 Development Wells Planned
 - All Platform Drilled
 - 10 Production
 - 3 Water Injection
- 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



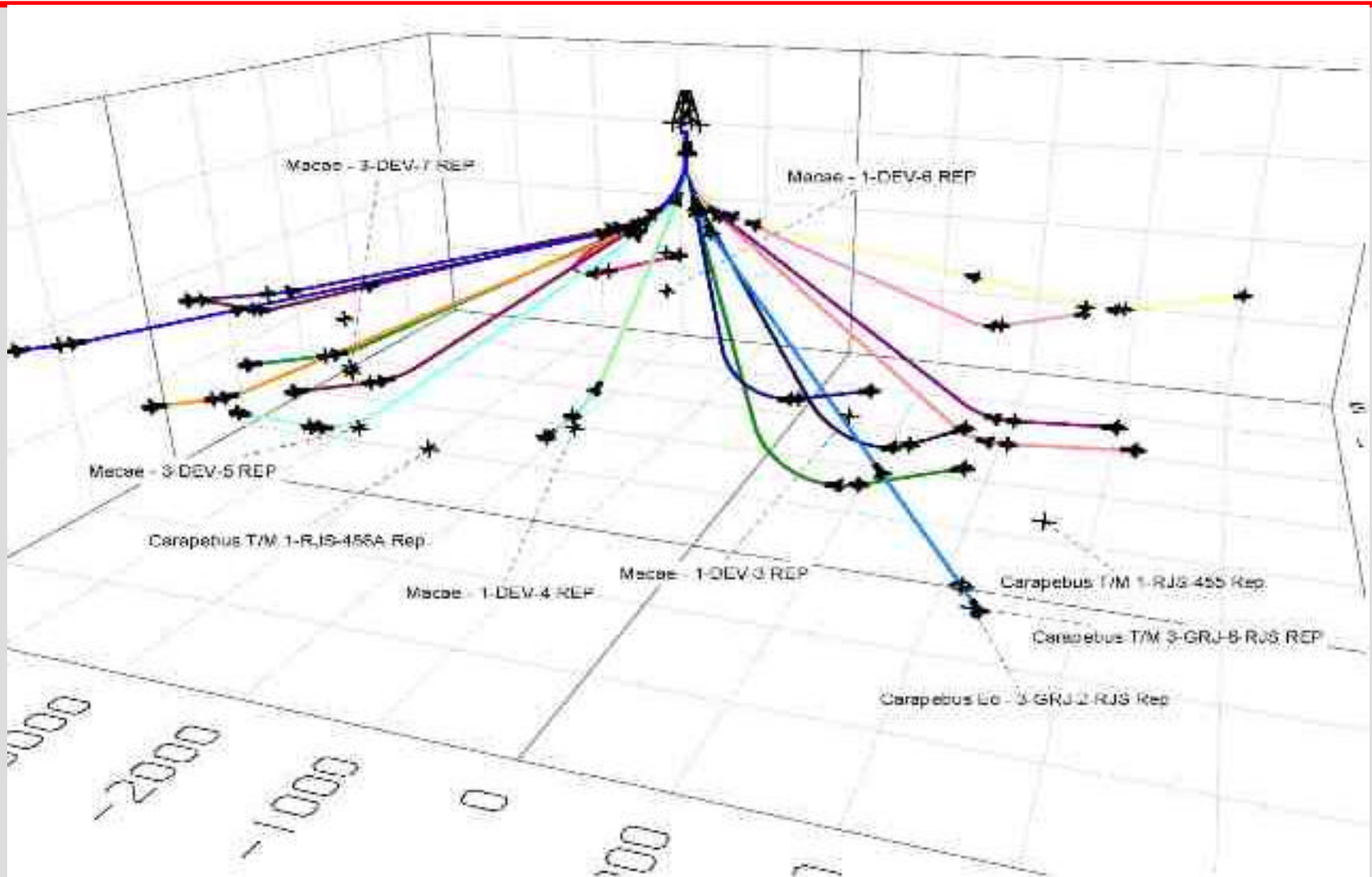
Drilling Plat

24-Slot Drill
refurbished

3-Phase Pro

Installation and Drilling Operations– December 2006

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



BM-C-8 POLVO Development Plan

Production Gathering System

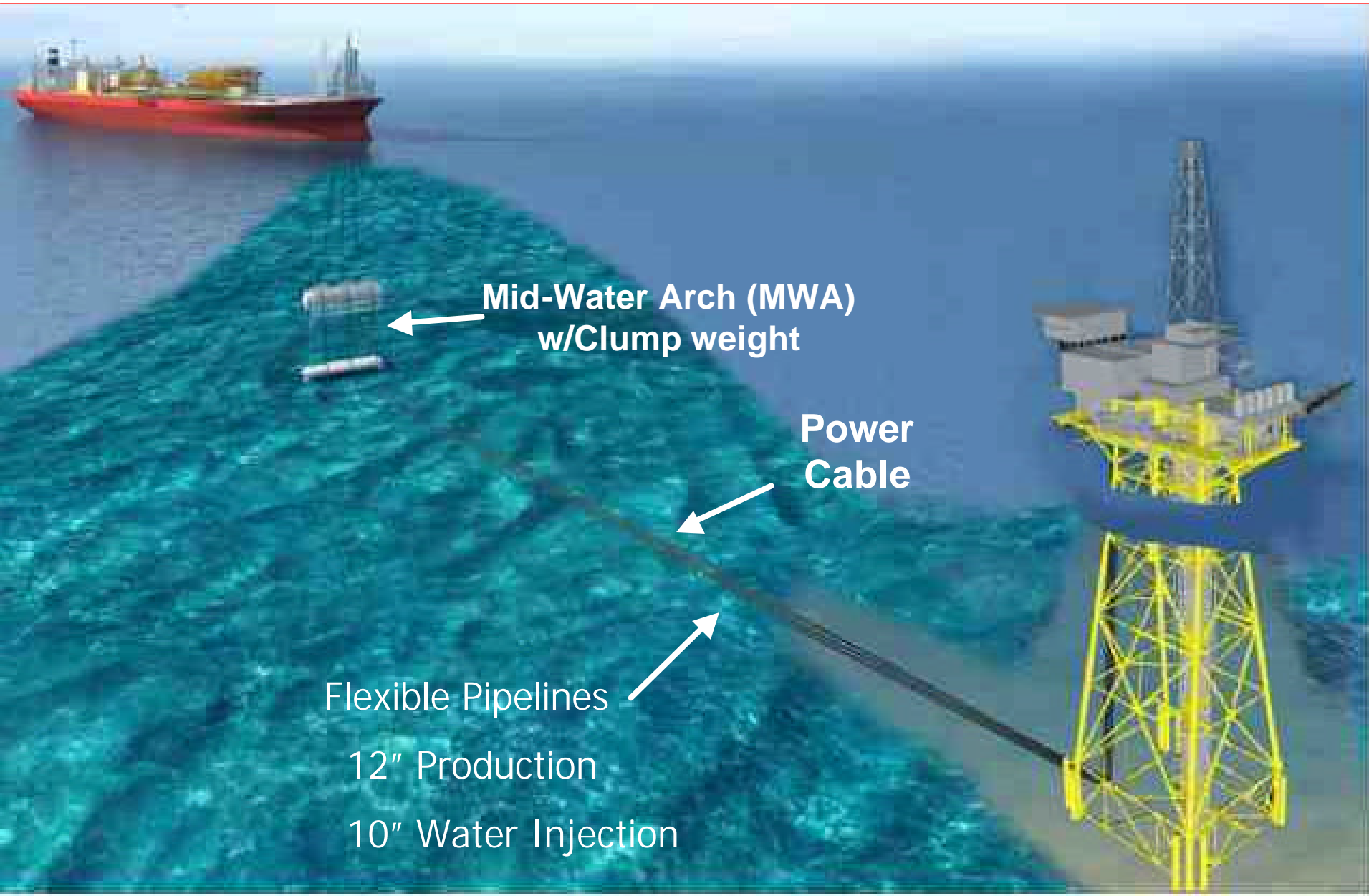
- All production wells are “Dry Tree” wells on a fixed platform
- The Production Gathering System is the Wellhead Platform
- All production (full wellstream) is sent to the FPSO in one 12” 3-phase flowline

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Production Gathering System

- 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



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

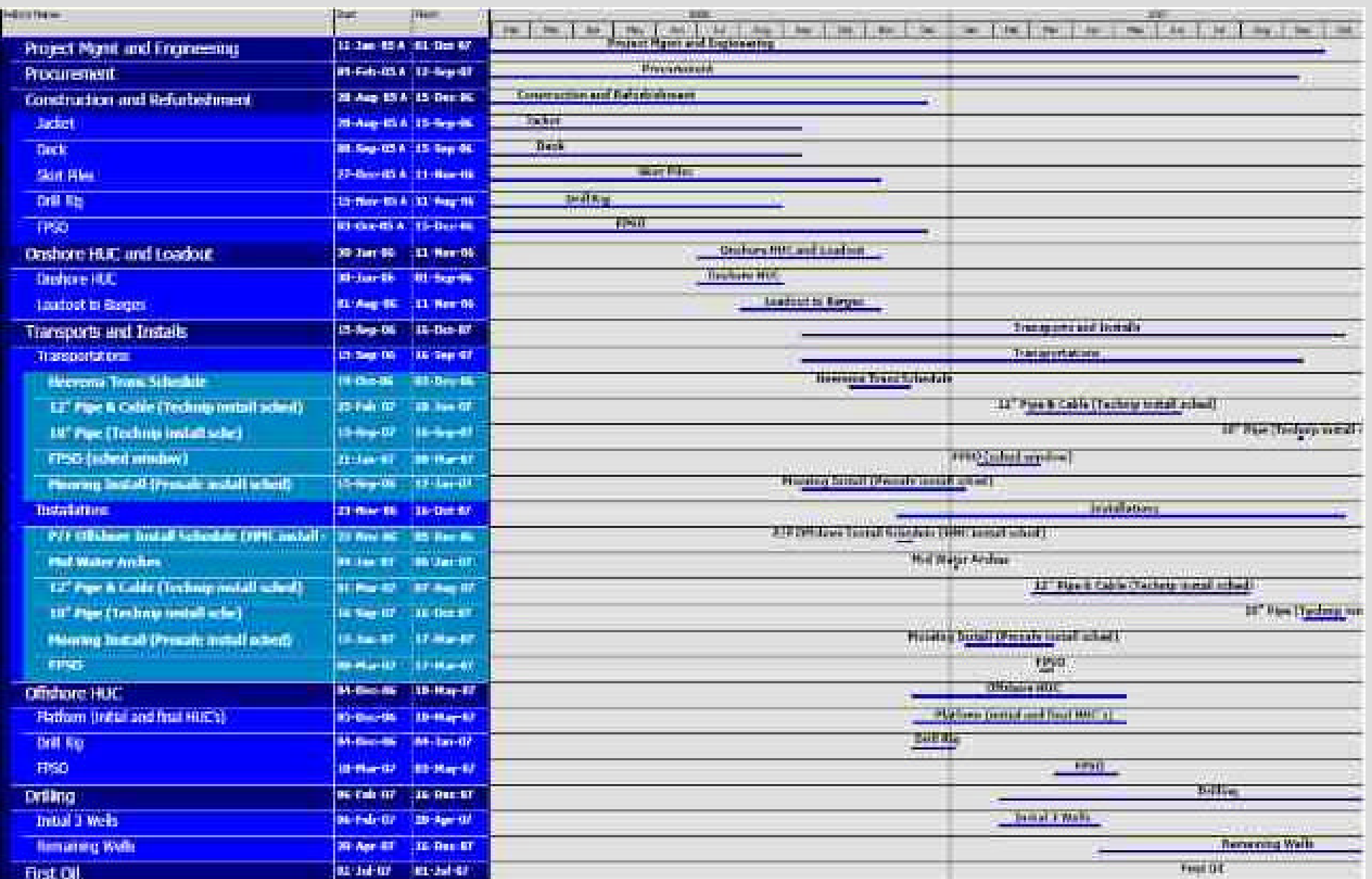


FPSO Description

- 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



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

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Brazilian Suppliers

Brazilian Suppliers:

- Intec do Brazil: Engineering Support
- CDS Consultoria: 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



**Platform fabrication -
Kiewit, Ingleside, TX**



**Jacket fabrication –
Kiewit, Ingleside, TX**

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



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Photos – Piles & Drilling Rig



Piles – Final assembly at
Porto do Forno,
Cabo Frio, Brazil



Drill rig refurbishment -
Kiewit, Ingleside, TX

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Photos – FPSO



FPSO POLVO lying quayside -
after initial dry-dock work:
Keppel Shipyard, Singapore



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

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Photos – FPSO



FPSO turret fabrication

FPSO - internal work

