Gomez Development
Lessons Learned

- Successful Fast Track Deepwater Project
- Sanction to Production in 16 months
- Ability to Expand to 6 Wells
- Currently Working on Increasing Capacity
- Current Deepwater Development favors Dry Trees
• Gross Proved Reserves: ~100 Bcfe
• Gross Probable Reserves: ~40 Bcfe
• ATP Working Interest: 100%
• Planned Wells: 3 - 4
Lack of Nearby Infrastructure

Multiple Pay Horizons

Short Field Life

Cost/Availability of Deepwater MODU’s

Presence of Satellite Discoveries
Mirage Development
MinDOC Platform

- Draft 430 ft
- Displacement: 61,300 ST
- Lightship: 17,900 ST
- Max Payload: 12,000 ST
- Heave – 100 yr: 8 ft
- Pitch/Roll – 100 yr: 9 deg
Mirage Development
MinDOC Design Advantages

- Three Columns vs One Column
  - Build in Shipyard or Fab Yard
  - Distributed Waterplane Area enhances Stability
  - Smaller Cylinders reduce VIM

- Excellent Motion Characteristics

- High Topsides Payload/Hull Weight Ratio

- Provides Dry Trees

- Can be Easily Relocated
Mirage Development
MinDOC Design Features

- Central Access Trunk for Piping & Pumps
- No Sea Chests/No Hull Penetrations
- “Fail Safe” Ballast System
- Dry Access for Critical Component Inspection
- Hydraulic Top Tension Risers supported by Hull
Mirage Development
MinDOC Design Features

- Central Access Trunk for Piping & Pumps
- No Sea Chests/No Hull Penetrations
- “Fail Safe” Ballast System
- Dry Access for Critical Component Inspection
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Mirage Development
MinDOC Platform Assembly

**STEP 1:**
Construct & pieces fit plates and weld on one side.

**STEP 2:**
Fit and weld longitudinal stiffeners.

**STEP 3:**
Flip plates, gouge and weld back sides.

**STEP 4:**
Flip plates and set into ¼ piece bending jig.

**STEP 5:**
Fit and weld ring frames and ¼ of bulkhead.

**STEP 6:**
Put two ½ pieces into the ½ jig.

NOTES:
Mirage Development
MinDOC Platform Assembly

NOTES:
1. 350 CYLINDER TO BE CONSTRUCTED AS PART OF 204 ACCESS TRUNK.
Mirage Development
MinDOC Hull - 20 ft Access Trunk
Mirage Development
MinDOC Hull – Half Can Assembly
Mirage Development
MinDOC Hull – Half Can Assembly
Mirage Development
MinDOC Hull - Half Can Assembly
Mirage Development
MinDOC Platform Assembly
Mirage Development
MinDOC Hull – Lower Pontoon
Mirage Development
MinDOC Platform Assembly

STEP 4:
SET PONTION JOINT PORT.
STEP 5:
SET PONTIION JOINT STABEBOARD.
STEP 9:
SET PONTOON STBORD.
STEP 11:
SET LOWER COLUMN FORWARD.
REMOVE TEMPORARIES.
STEP 13:
SET UPPER COLUMN BOTTOM SECTION STABILIZED.
STEP 16:
SET MECHANICAL TUBE AF.
PLACE RISER SUPPORT FRAME ON DECK FLOOR BELOW FINAL ASSEMBLY LOCATION.
Mirage Development
MinDOC Platform Assembly

STEP 21:
RAISE RISER SUPPORT FRAME INTO POSITION AGAINST FORWARD COLUMN.

SHEET RINE RETAINING WALL
Mirage Development
MinDOC Hull in Graving Dock
Mirage Development
MinDOC Hull in Graving Dock
Mirage Development
Mooring Design Considerations

• Polyester Taut Leg System
  Cheaper than all steel
  Reduced vertical mooring load
  Better offset performance
  Compact mooring radius

• Seabed Hazards – Faults & Escarpments

• Installation Considerations
  Use either Anchor Handler or Construction Vessel
  Use subsea connectors for phased installation
  Driven piles due to design loads
Mirage Development
Mooring Pattern
Mirage Development
Mooring Line Configuration
Mirage Development
Mooring Pile Padeye Castings
Mirage Development
SCR Flex Joint

Components:
- Flange
- Spherical thrust
- Body
- Basket
- Receptacle
- LEC
- Spacer
- Pup piece
Mirage Development
SCR Flex Joint
Mirage Development
SCR Flex Joint Components
Mirage Development
Comparison of Metocean Conditions

1 Hr Wind

- 100 YR Hurricane - All Months
- 100 YR Hurricane w/o Aug - Oct
- 100 YR Winter Storm

Max Wave
Mirage Development
21 in, 14 in, 10 ¾ in Stress Joints
Mirage Development
General Drilling Configuration
Mirage Development
Schedule

- Begin FEED: Sept 2006
- Begin Hull Fab: Jan 2007
- Hull Floatout: Aug 2008
- Topsides Installation: Oct 2008
- Commence Platform Rig Ops: Dec 2008
- First Production: 1Q 2009