

Mad Dog 2 production pipeline end terminal

Field Information

The Mad Dog field is located approximately 190 miles offshore in the Southern Green Canyon area of the Gulf of Mexico (GOM). Mad Dog is a deep-water field in a water depth ranging from approximately 1,370m - 2,200m. Oil reserves have been discovered within the existing Mad Dog field that are outside the reach of the existing Spar drilling rig and therefore new subsea and surface facilities are required to exploit the new reserves.

Source: Modified from BP.com



OUR VALUES



Safety



Integrity



Sustainability



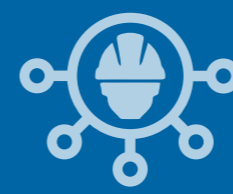
Performance



Collaboration



Innovation



PROJECT CLIENT

BP

BP Mad Dog 2

Project at a glance

The contract scope awarded to Subsea 7 covers engineering, procurement, construction and installation (EPCI) of the subsea umbilicals, risers and flowlines (SURF) and associated subsea architecture.

Schlumberger OneSubsea, Subsea 7's Subsea Integration Alliance partner, has been awarded the Subsea Production Systems contract.

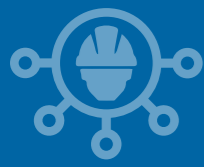
Full project information overleaf

Highlights

- First substantial project in the US to use Subsea 7's Swagelining polymer lining technology.
- First project to install in-house designed steel lazy wave riser systems.
- The lazy wave risers will be wet stored onto the seabed and then recovered and hung off onto the FPU following tow-out and mooring.
- Multi-centre project with project management and engineering taking place in Houston, Texas with support from Subsea 7's Global Project Centres in London and Paris. Pipeline fabrication and Liner support supplied from Glasgow, Scotland.
- Delivered in close collaboration with Schlumberger OneSubsea, Subsea 7's Subsea Integration Alliance partner.

Our Differentiators





BP Mad Dog 2

Project

Mad Dog 2

Location

Green Canyon,
Gulf of Mexico.
Approximately
190 miles south of
New Orleans

Water depth

1,370m to 2,200m

Project Type

EPCI

Date Awarded

March 2017

Completion Date

Ongoing

Scope of Work

- The full EPCI scope includes:
 - 4x 9-inch outside diameter (OD) rigid reeled production flowline and lazy wave riser systems, with associated pipeline end terminations (PLET), in line sleds (ILSs) and rigid jumpers
 - 1x 16-inch OD rigid reeled Oil Export flowline and lazy wave riser system, PLET and rigid jumper
 - 1x 8-inch OD rigid reeled Gas Export flowline and lazy wave riser system, PLET and rigid jumper
 - 2x 12-inch OD rigid reeled, high density polyethylene (HDPE) lined water injection flowlines
 - 1x 1-inch OD rigid reeled, HDPE lined water injection flowline
 - Water injection structures (1x ILS, 1x PLET, 1x Pipeline end manifold)
 - 2x 7.5-inch internal diameter (ID) flexible water injection risers
 - 1x 5-inch ID flexible gas injection riser and associated flexible jumpers
 - 12x mooring suction piles.
- Transport and installation of the following:
 - 1x Floating production unit
 - 2x Production manifolds and suction pile bases
 - 1x Gas lift distribution unit
 - 6x Rigid riser flex joints
 - 9x Topside closing spools
 - 5x Control umbilicals and associated flying leads.
- Pre-commissioning.
- Survey.
- Diving support for top side closing spools installation.

Technology and Innovation

- First project to install in-house designed steel lazy wave riser system.
- First substantial project in the US to use Subsea 7's Swagelining polymer lining technology.
- Swagelining provide integrated lining systems that offer the most cost effective life cycle cost by providing a design life around four times longer than an unlined carbon steel pipe at a comparable price.
- Development of mechanised welding processes for offshore riser tie-in welding.
- Design of an ROV removeable flexjoint anti-rotation collar in collaboration with BP.

Collaboration

- Combined engineering teams from Subsea 7 offices in London, Paris, Houston and Glasgow.
- Collaboration with Subsea 7's Pipeline Group to manufacture joints for pipeline walking mitigation, ultimately reducing fabrication costs.
- An internal project charter has been initiated, fostering strong collaboration and effective working relationships between multiple, international worksites.
- Collaboration with Swagelining on polymer lining design and installation.
- i-Tech Services have been involved in the design of an ROV removable flexjoint anti-rotation collar.
- The collaboration between Subsea 7 and alliance partners, OneSubsea, has provided additional areas of cost improvement whilst providing greater cost certainty and reduced risk.

Assets and Worksites

- Ingleside Spoolbase and fabrication base located on the Intercoastal Waterway in Texas.
- Subsea 7's Global Pipeline Welding Development Centre, Glasgow.

