

## Offshore Drilling, Production and Storage

# ALL IN A SINGLE FACILITY!

Azurite field development consists of a spread-moored FDPSO tied to a subsea drill center.

The oilfield is located in the Mer Profonde Sud block in approximately 1400 m water depth.

Two production flowlines/risers connect the MPP to the FDPSO.

The trees are tied to the subsea manifold using flexible well jumpers.

Drill center utilizes a 10-slot cluster manifold: six slots for production; four slots for water injection.

A third, water injection, flowline/riser connects directly to the subsea manifold.

Subsea manifold is tied to a Multi-Phase Pump Station (MPP) with two flowline production jumpers.



*Everyone said it couldn't be done. Murphy Oil Corporation never got the memo.*

For years, the industry has imagined a "Swiss Army knife" of offshore production: a fully operational drilling rig mounted atop a floating production, storage and offloading vessel. The world's first FDPSO was designed and built for Houston-based Murphy Exploration and Production Co., a subsidiary of Murphy Oil Corporation. William Jacob Management (WJM) was Murphy's drilling interface manager for the project, dubbed *Azurite*, and helped to turn this long-held industry dream into reality.

*This is truly a project in which*  
**ALL ELEMENTS HAVE COME TOGETHER**  
**WITH ABSOLUTE PRECISION.**

The most challenging aspects were the design, fabrication and installation of the drilling platform that was the structural interface between the vessel and the drilling rig. Achieving vessel stability was critical for the vessel's safety, as well as for drilling accuracy and productivity. The first-of-its-kind platform was fabricated and assembled in Indonesia, with WJM providing technical support and supervising completion.

Meanwhile, the FDPSO itself was dry docked in Keppel's yard in Singapore. Here, the internal structure of the vessel underwent substantial modifications to support the enormous new load to be added topside. Also completed during the outfitting were an upgrade to crew quarters, installation of new process modules

and modification of the existing production manifold.

"Our team was shuttling back and forth regularly between Singapore and Indonesia," says WJM's project manager Trevor Smith, who served as the Murphy team's drilling interface manager. "Their focus on bridging the gap between two distinct professional cultures – naval architects and drilling rig engineers – was, in the end, key to the project's success."

Since its deployment offshore in the Republic of Congo, Murphy Oil Corporation's FDPSO has been a game changing innovation whose impact continues across the industry. For William Jacob Management, the project was the embodiment of what it means to deliver **Vision, Value and Velocity.**





# VISION VALUE VELOCITY



Success today requires project organizations to make strategic choices in less time and with less certainty than ever before. It depends on fast access to specialized knowledge, experience, tools and resources. It calls for agility and poise to keep projects on course and to quickly find solutions for problems when they arise.

*Success demands vision, value, velocity...*  
and William Jacob Management delivers.

WJM is an accomplished strategic partner wholly dedicated to the success of clients and their projects. From Day One, the company's tightly knit teams can hit the ground running. Each professional arrives with a total package of knowledge, systems, processes and tools to navigate complex projects to completion.

As project organizations transform speed into Velocity, they consistently:

- » Reach milestones on or ahead of schedule
- » Achieve major technological breakthroughs
- » Deliver record-setting business results

Headquartered in Houston, Texas, William Jacob Management works both domestically and internationally in assisting companies, project organizations and teams in the following key areas:

- » Engineering
- » Project Management
- » Front End Design Studies
- » Project Planning, Budgeting and Scheduling
- » Technical Assistance and Coordination
- » Procurement
- » Contract Negotiations
- » Commissioning/Startup
- » Construction Management
- » Health, Safety and Environment
- » Quality Assurance/Quality Control
- » Procedure Development
- » Database Development and Management
- » Document Control System Development and Management
- » Computerized Labeling System for Equipment and Piping

## WILLIAM JACOB MANAGEMENT

*Ensuring success for  
high-stakes capital projects.*

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