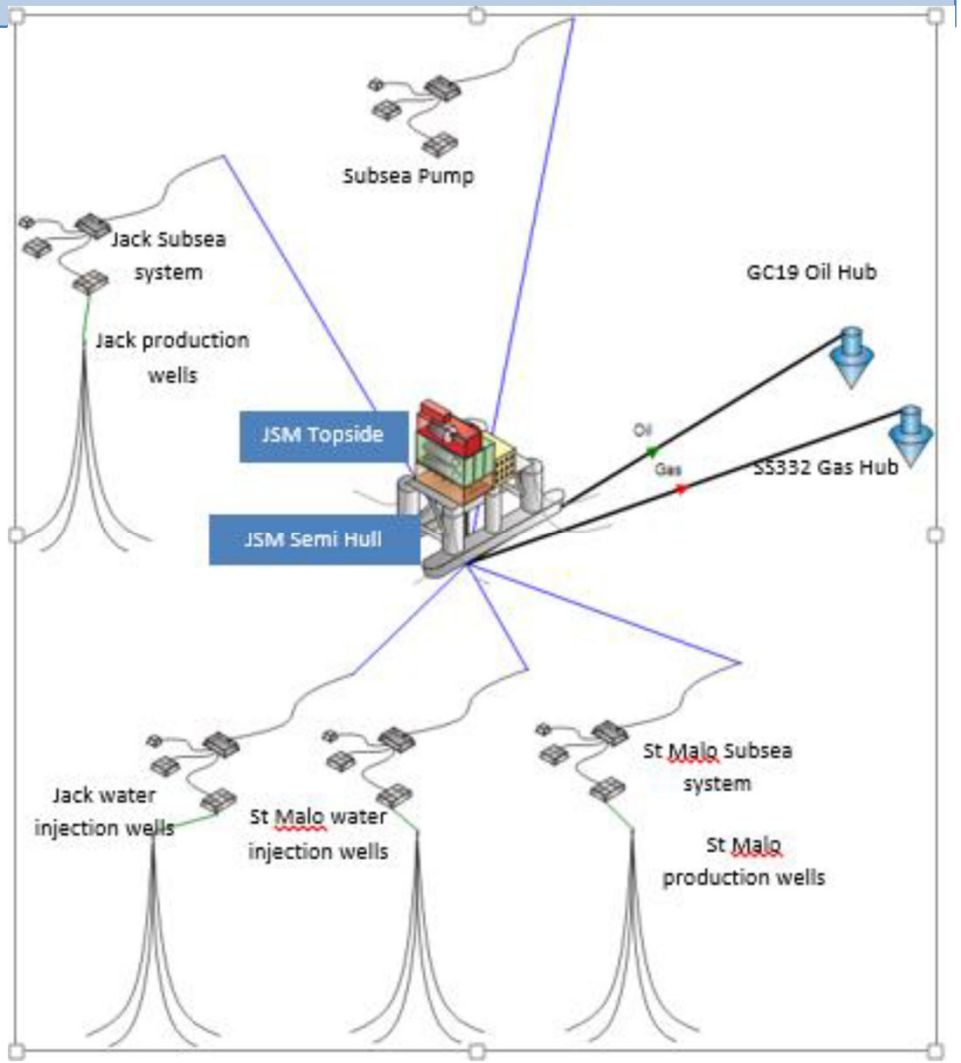
Key data for Jack St. Malo from EIA 2016 field dev. COSTS Study by IHS

Figure 9-19 shows the fields being co-developed with subsea completions flowing back to a single host floating production unit (semisubmersible) located between the fields. Electric seafloor pumps are used to assist production to the host. The Jack and St. Malo host facility has an initial capacity of 170,000 Bopd oil and 42.5 MMcfd of natural gas, with the capability for future expansion. The facility is the largest semi-submersible in the Gulf of Mexico (based on displacement) and has been designed to operate for at least 30 years. The hull was fabricated and constructed in South Korea, and topside facilities were fabricated and constructed in Ingleside, Texas. The semi platform acts as a hub for over 20 subsea wells, which are divided into one subsea cluster for the Jack field and four subsea clusters for St. Malo. Each cluster is comprised of subsea wells, manifolds, pumps and other equipment on the seafloor, and is tied back to the facility. Water injection wells and subsea booster system are also included.

Several new technologies were developed and applied to develop JSM:

- The industry's largest seafloor boosting system
- A single-trip multi-zone completion design able to capture more layers of reservoir in significantly less time, saving $25MM per well based on rig time operating costs.
- A 140-mile, 24-inch oil export pipeline marks the first large diameter, ultradeep water pipeline in the Walker Ridge area of Lower Tertiary trend.

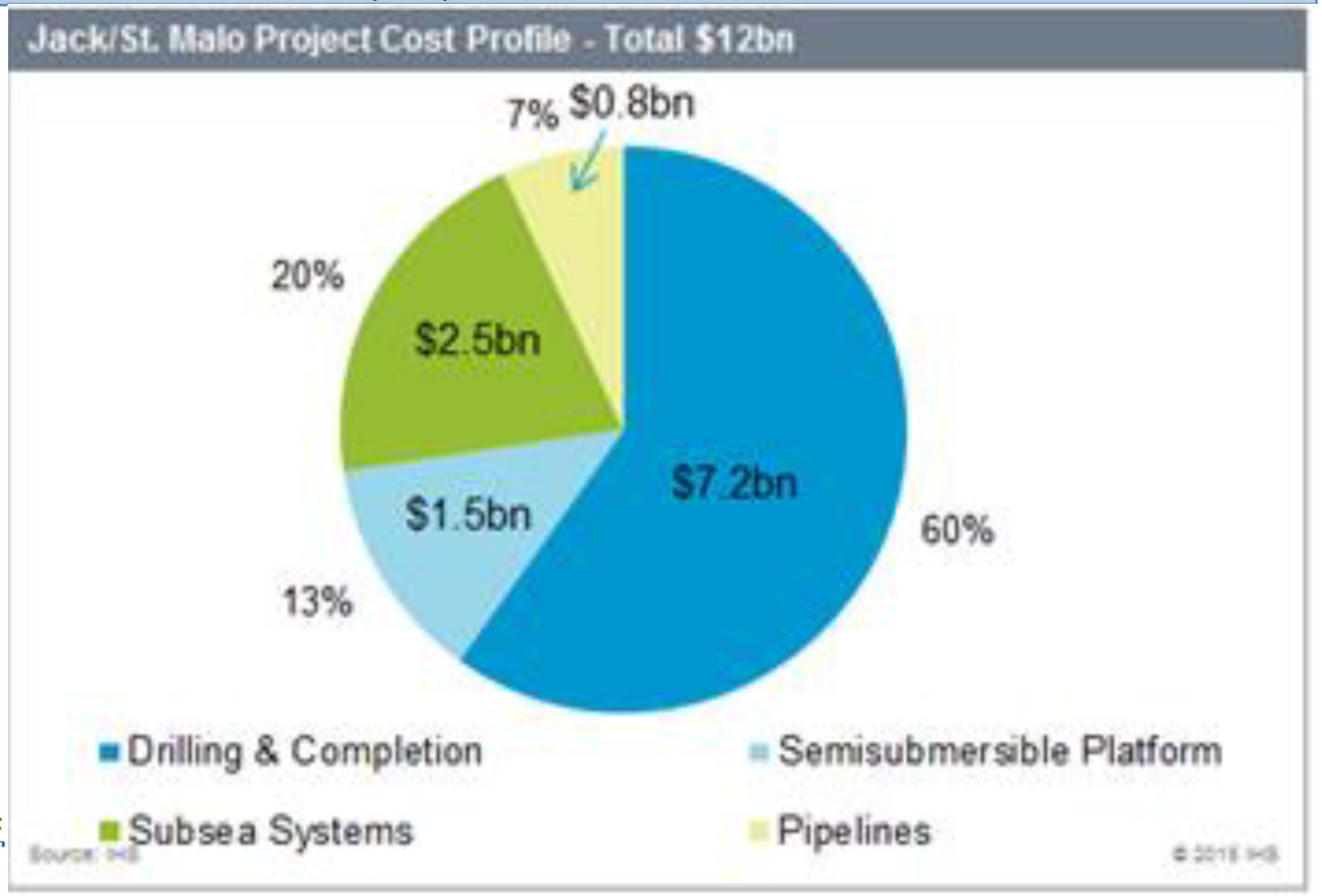


Key data for Jack St. Malo from EIA 2016 field dev. COSTS Study by IHS

Figure 9-20 shows that of the total **$12 billion estimated project cost**, 60% will be spent on drilling and completion of subsea wells (each costing about $240MM per well, which is a typical well cost for Lower Tertiary HPHT wells).

- $1.5 billion is estimated for the semisubmersible platform.
- $2.5 billion for subsea system comprised of
- 4 subsea clusters,
- 3 flowlines connecting clusters to risers,
- 2 flexible risers reaching the platform,
- 6 water injection subsea manifolds, and
- 1 subsea pump.

A HPHT resistant subsea pump costs around $300MM.



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Chevron Sanctions St. Malo Waterflood Project

19 September 2019

Topics

Enhanced recovery Offshore

Gulf of Mexico Chevron deepwater GOM

Hoping to increase recovery and maximize its assets in the US Gulf of Mexico (GOM), Chevron has sanctioned the Stage 4 waterflood project at the St. Malo field. The project, Chevron's first in the deepwater Wilcox trend, is expected to contribute an estimated ultimate recovery of more than 175 MMboe from one of its larger GOM deepwater projects.

"The St. Malo field is a world-class asset that is positioned for highly economic brownfield development," Steve Green, president of Chevron North America Exploration and Production, said in a statement.

The project will include two new production wells, three injector wells, and topsides injection equipment for the Jack/St. Malo floating production unit (FPU), which Chevron said would help extend the life of the field.

Located in 7,000-ft water depth approximately 280 mi south of New Orleans, the St. Malo field has an estimated remaining production life of 30 years. Chevron first began producing from Jack/St. Malo in December 2014. The fields generated 130,000 total B/D of liquids and 21 MMcf/D of natural gas in 2018.

Jack and St. Malo were co-developed with subsea completions flowing back to a floating semi-submersible production facility that acts as a hub for 43 subsea wells. Stage 2 was completed at the end of 2018, and drilling has progressed on Stage 3 development. Chevron holds a 51% working interest in St. Malo, with Equinor, Exxon Mobil, Eni, Murphy Oil, and Petrobras own the remainder.

After spending the past few years focused on its US onshore operations, particularly in the Permian Basin, Chevron is showing more interest in the GOM. The company said in its 2Q 2019 earnings conference call that it would take final investment decision on its Anchor discovery early next year. Last month, Chevron wrapped up a second appraisal well at its Ballymore discovery in Mississippi Canyon.