

Early Production Facility in Southern Nigeria Fast Tracks Production

OPERATOR CASH FLOW INCREASES FROM REMOTE SWAMP IN THE NIGER DELTA

SOUTHERN NIGERIA

OVERVIEW

A Nigerian operator wanted to fasttrack production from two (dual string) existing wells, with multiple wells underway, located in a remote swamp in the Niger Delta.

A specialized Halliburton early production facility (EPF) engineering team was commissioned to understand the processing complexities



and recommend a customized EPF to meet the demand and expectations using the most available and suitable equipment for this application.

With no existing infrastructure in the area to support this supplementary production, setting up a standalone EPF on two barges (process and utility) to temporarily facilitate the increased capacity was the quickest way to maximize asset value.

CHALLENGE

The operator desired to generate quick production and cash flow for future field development and asset optimization from the remote area new to EPFs. With much at stake, this project required the expertise of the Halliburton EPF engineering team and exemplary communication between all parties involved.

SOLUTION

Halliburton constructed and is currently operating and maintaining its first EPF in the country—a standalone EPF on two barges (process and utility). Gas and oil are separated and conditioned and oil is produced into a storage vessel and then conveyed by vessel to pipelines. A portion of the produced gas is used in running the gas generator that powers the facility while the rest is flared. This project was designed to seamlessly facilitate 22,000 B/D of liquid (17,000 B/D oil and 5,000 B/D water) and 7.5 MMscf of gas production.

RESULT

Because design, simulation, procurement, and equipment integration on a floating barge were performed locally, the project was completed under budget. To date, more than a million man-hours and 1,000 days of LTI-free operation have been completed, producing more than 10 million barrels of oil, 1 million bbls of water, and 3.5 billion standard cubic feet of gas with 97% uptime.

With improved production processing capabilities, the operator was able to drill more wells while significantly increasing production. Highlighting the quality service delivered throughout the project, the operator commenced plans to develop and produce additional fields using the same EPF service.

CHALLENGE

» Generate quick production from a remote swamp in the Niger Delta new to EPF services

SOLUTION

» Construct, operate, and maintain a standalone EPF on two barges (process and utility) where gas and oil are separated, conditioned, and oil is produced into a storage vessel which is conveyed by vessel to pipelines

RESULT

- » Design, simulation, procurement, and equipment integration performed locally under budget
- » Up until December 2022, more than 10 million bbls of oil, one million bbls of water, and 3.5 billion standard cubic feet of gas were processed through the Halliburton Early Production Facility with 97% uptime
- Facilities are operating to date and expected to continue for the foreseeable future
- » Operator to develop and produce additional fields using the same EPF service



CASE STUDY

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