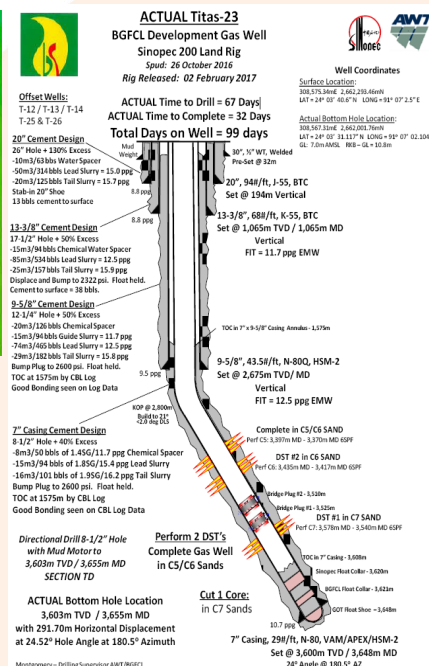
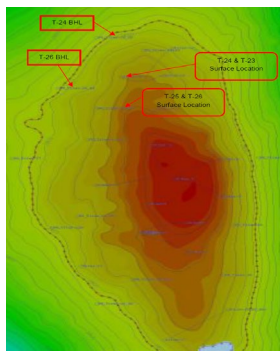


# DIRECTIONAL DEVELOPMENT DRILLING CASE STUDY

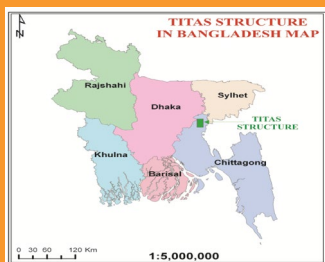
Bangladesh Gas Field Company Limited - Titas Gas Field  
Onshore Surma Basin, Bangladesh

## AWT DISCIPLINES

Well Control Specialist  
Petroleum Geology  
Drilling Engineering & Supervision  
Completion Engineering & Supervision  
Process Engineering



## PROJECT BACKGROUND



### Block History:

Bangladesh Gas Fields Company Limited (BGFCL), a company of Bangladesh Oil, Gas & Mineral Corporation (Petrobangla) operates six (6) gas fields and Titas is one of the largest gas fields. Production started in 1968 (Titas #1 & #2 were drilled by Shell Oil Company in 1962 and 1963). Between 1969 – 2006, fourteen (14) more wells were drilled. Daily gas production of 400 MMscf gas was being supplied to the national grid from 14 wells.

### Location:

The Titas structure in the south-central part of the Surma Basin, near the town of Brahmanbaria and approx. 100km east north-east of Dhaka.

### Infill Campaign:

Four new wells adjacent to the location of Titas #17 & #18 in the south-east of the Titas structure.

## AWT WORKSCOPE

The development drilling project (Phase III) commenced in Q4 2015 and consisted of the following activities:

- Drilling program and supervision of four (4) wells, namely Titas #23, #24, #25 & #26 at the Titas Gas Field.
- Submission of drilling completion reports for each well upon completion of drilling works.
- Facilities engineering design & supervision of process plant installation & commissioning including technical support to BGFCL
- AWT provided: Drilling Supervisor (Drilling & Completion), Petroleum Engineer (Drilling & Completion), Petroleum Geologist (Drilling & Completion) and Facilities Engineer (Process).

## AWT ADDED VALUE

The drilling of the four wells started in December 2015 with Titas #25 as the first well and Titas #23 was the last well to be drilled In February 2017. The Drilling Completion Report was issued in March 2017 with the following key results & recommendations.

- All wells were drilled with the Sinopec 200 land drilling rig and services
- The wells were drilled to a total depth ranging from 3560m – 3848m and were completed in 92 – 105 days.
- No lost time accidents
- No environmental incidents
- No lost returns and no fluid lost to objective sands
- Successfully ran and cemented the 7" liner with good cement bond
- DST was performed successfully to the tested sands
- All wells were successfully completed as 4-1/2" gas producers in the A sand (Titas #25), C5 sand (Titas #26), C6 sand (Titas #24) and C5/C6 sands (Titas #23).

In addition, AWT successfully reviewed the design and supervised the installation of 2 x 75 MMscfd TEG dehydration natural gas processing plants and provided recommendations for future work.

For more information contact:

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