

CASE STUDY

Time and cost-savings during SIMOPs

CUSTOMER CONCERN

A drilling contractor was looking for a way to save time and money to carry out simultaneous operations (SIMOPs) on standpipe manifold and choke manifold while drilling without shutting down rig operations.

SOLUTION

Two StopForce™ safety curtains were installed on the drill floor to isolate the standpipe manifold and the choke manifold. It allowed high-pressure testing on those two manifolds while work is performed on the drill floor, ultimately leading to a time and cost saving whilst keeping operations safe.

BENEFITS

Why Does It Save Time?

The BOP test is divided into two main components:

- The test of the BOP itself, the rams, and the valves
- The test of the Standpipe Manifold and the Choke Manifold



There are more tests to perform on the manifolds than on the BOP itself. If tests on the BOP and manifolds could be performed in parallel, these tests would be performed during live operations.

The manifolds are on the drill floor and under high pressure next to the rotary table where drill crews work; therefore, work around the rotary table is typically stopped during a choke manifold test (i.e. no tripping pipe)

The safety curtains allow operations to resume as soon as the BOP itself is entirely tested and the test string is out of the hole. This is because the choke manifold tests are performed behind the safety curtains which protect the crew on the drill floor.

BENEFITS

How was the money saved determined?

During 6 BOP tests performed on the Rowan Gorilla V, the time taken for the manifold tests performed behind the safety curtains whilst performing other online activity (i.e. tripping pipe) was recorded to measure the time saved by the curtain.

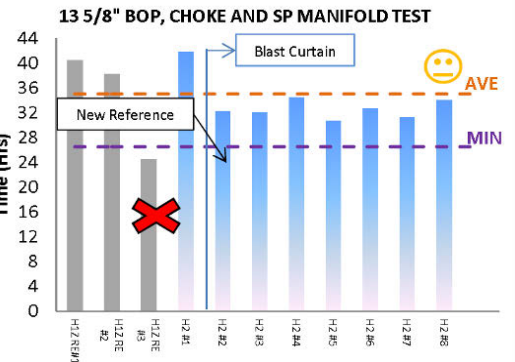
Those tests would otherwise have been performed with the operations stopped, and at full rig rate. Time saved was linked to rig daily cost:

$$M = T * RC / (24*60)$$

With *M* = money saved, *T* = time saved in minutes and *RC* = rig daily cost.

RESULTS

TEST DATE	TIME SAVED*	MONEY SAVED
2-11-2015	16.00 Hrs	197,000£
3-01-2015	12.25 Hrs	159,000£
3-19-2015	8.25 Hrs	96,000£
4-07-2015	13.50 Hrs	155,000£
4-27-2015	6.50 Hrs	30,000£
5-18-2015	5.75 Hrs	65,000£



* The average time for a BOP test before was 40 hours

* duration of offline tests that would have otherwise been performed in live rig time

SUMMARY

StopForce™ Safety Curtains having been installed on the Rowan Gorilla V around the 15K Choke Manifold and Standpipe Manifold achieved the following:

- 1.) The addition of the safety curtain provided increased protection of personnel during high-pressure testing through isolation of the equipment during the tests.
- 2.) Protection of the drill floor area while simultaneous productive operations (tripping pipe) and pressure testing of the Manifolds offline took place.
- 3.) An average cost savings of 117,000£ per pressure test on the RGV BOP tests (6 tests) giving a potential savings of 900,000£ on the current well (WFD) that could be realized, assuming 8 tests.