



Blow Out Preventer (BOP) Installation ROV DIVE PLAN

ROV Scope of Work

This scenario is designed to practice installing the Blow Out Preventer (BOP) on one of the wellheads located in the field after it has been cleaned and the gasket has been replaced.

The scenario requires the use of a single ROV with attached tooling skid.

Field Layout

The field consists of the template with the TFL installed, 3 trees with flow lines running from the template and 3 wellheads located around the field. The BOP, attached to a drill string, is located near the template.

ROV tools and equipment required in the scenario

ROV tools required for this dive:

- 1 18³/₄ inch cleaning tool
- 1 Gasket retrieval tool with associated dual port hot stab

Equipment and models required for this dive:

- 1 Subsea basket
- 1 BOP (Blow Out Preventer) with bull's eye level indicator
- 1 Wellhead cover
- 1 Used gasket (rusty)
- 1 New gasket

ROV Set Up	
<p>ROV 1</p> <ul style="list-style-type: none"> • ROV starboard manipulator (Titan 4 - 7 function arm) • ROV port manipulator (Rigmaster 5 function arm) • Sediment displacement tool • ROV tooling skid 	<p>TMS</p> <ul style="list-style-type: none"> • Top hat TMS
<p>ROV 2</p> <ul style="list-style-type: none"> • ROV starboard manipulator (Gauntlet - 4 function arm) 	<p>TMS</p> <ul style="list-style-type: none"> • Cage TMS

Pre Job Tasks

None

ROV Operations

BOP Installation

1. Using the VSONAR, locate one of the wellheads in the field and fly the ROV to its location.
2. Remove the wellhead cover from the wellhead.
3. Locate the subsea basket in the field and fly the ROV to its location.
4. Retrieve the gasket retrieval tool from the basket, but do not take the new gasket that has been previously attached to the tool. The gasket should remain in the basket.
5. Fly back to the wellhead and retrieve the used gasket using the gasket retrieval tool.
6. Inspect the wellhead using the camera's pan and tilt control.
7. Return to the subsea basket and place the used gasket inside.
8. Return the gasket retrieval tool to its original receptacle, reattaching it to the new gasket.

If there was detriment on the wellhead when you inspected it, continue with step 9. If not, continue with step 14.

9. Retrieve the 18 ¾ inch cleaning tool located in the basket and clean the internal portion of the wellhead
10. Place the cleaning tool on the ocean floor.
11. Retrieve the sediment displacement tool from its receptacle on the ROV skid and clean the external portion of the wellhead.
12. Place the sediment displacement tool back in its receptacle.
13. Retrieve the 18³/₄ inch cleaning tool from the ocean floor and return it to the subsea basket.
14. Retrieve the gasket retrieval tool with the attached clean gasket from the basket.
15. Fly the ROV, with the gasket retrieval tool and gasket, back to the wellhead and place the new gasket into the wellhead, the previous location of the used gasket.
16. Return the gasket retrieval tool to the subsea basket.
17. Locate the BOP in the field and fly the ROV to its location.
18. Signal the surface ship and instruct them how to lower the BOP to the prepared wellhead as you follow along to make adjustments. Use the bull's eye level indicator to make sure the BOP has landed properly.
19. Locate the BOP lock indicator and signal the surface ship to lock the BOP to the wellhead.
20. Using the camera's pan and tilt control, watch the BOP locking mechanism and inform the surface ship when the BOP is locked to the wellhead.

Return to the subsea basket and signal the surface ship to retrieve it. Follow the basket to ensure that it does not tangle with any equipment.

ROV Supervisor Name:

Date:

Comments:

