

CAMERON  
CONTROLS

Date 5/MAY/2010

## Daily Report Sheet

<b>Project Title:</b> SUBSEA POD INTERVENTION	<b>Client :</b> TRANSOCEAN	<b>Location:</b> GOM MC399	
<b>RIG NAME:</b> Horizon / BP	<b>Prepared By:</b> William Lenormand	<b>Contact No:</b> 713-422-5115	
<b>Worksite Contacts: (Name, Company, Tel &amp; Fax)</b>	<b>Cameron Field Representatives:</b> Carter Erwin, William Lenormand, Larry Silvia, Efrain Martinez, Eloy Martinez, Ryan Rahimzadehbates, Moises DelaHoz		
Ray Picard, Transocean			
<b>Summary of Service Performed and equipment</b>			
<b>Worked on:</b> (Including Description, Serial No and Part No.)	<b>Work Codes:</b> Electrical – E Hydraulic / Mech. – M	<b>Software – SW</b> Other / Admin – O	<b>Type</b> <b>Hrs</b>
3/MAY/2010 Travel			
4/MAY/2010 Team meeting held in Berwick to review Deck test procedure. Deck Test procedure was then sent to Houston (Jason Vanlue) for review and input from Engineering and BP.			
5/May/2010 <ul style="list-style-type: none"> <li>Departed Morgan City at 4:20 am for BP Heiloport.</li> <li>Arrived at BP Heiloport at 5:15 am for check in for the BOA Sub C.</li> <li>Departed BP Heiloport @ 3:00 pm for the Q4000 due to available space on the BOA sub C.</li> <li>Arrived Q4000 approx 4:15 pm and attended safety briefing and orientation until 7:00 pm.</li> <li>Located Cameron shipped equipment on deck and moved it to the designated work location. Cameron equipment (4 ea 100 ft hotline reels, Nitrogen boost pump, Job Box) (Transocean equipment – Hotline hose reel; NOTE the hotline is reeled onto a MUX reel therefore it does not have a hydraulic slip rig so we will have to determine how we will run the POD hot, MUX cable on reel, HPU)</li> <li>Meeting held with BP to discuss following days plans 9:00 – 10:00</li> <li>10:00 PM end of work day.</li> </ul>		O	18
6/May/2010 <ul style="list-style-type: none"> <li>8:00 located Horizon POD on deck and performed a visual with Ray Picard</li> <li>9:00 Discussions with Houston regarding the deck test procedure along with the level of detail required during the removal and repair of components from the POD.</li> <li>10:00 Remainder of Crew arrived.</li> <li>Received approval from Houston on Deck Test Procedure.</li> <li>13:51 Meeting with all personnel regarding POD work (Discussions were) <ol style="list-style-type: none"> <li>Document events and Photos</li> <li>Ensure inventory of parts is taken of parts added and removed</li> <li>Custodial issues</li> <li>Rig Manager Tim Williams w/Transocean –Single point of contact for owner of equipment</li> </ol> </li> <li>14:38 Began JSA for work on the POD</li> <li>15:13 Tape off cut lines for safety to prevent cuts from sharp edges due to ROV demolition.</li> </ul> <p><b><u>NOTE any number in parentheses () at this point forward in this document are in ref to the item number given to the components removed and secured from the POD. All components were immediately photo graphed by Chrystal Bodenhamer w/BP and Tim Williams with Transocean and placed in a Gator Box located adjacent to the POD on the forward deck.</u></b></p> <ol style="list-style-type: none"> <li>(1) S1 supply line</li> <li>(2) function # 24 (this function is labeled blank on SK-122108-21-05)</li> <li>(3) function # 49 (this is POD select on SK-122108-21-05)</li> <li>(4) function was not labeled. Hyd line will have to be traced to determine what this line</li> </ol>			

[APG] of [ANP]

4614

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was used for

- 15:18 Removal of (2) unknown pilot line by William Lenormand
- 15:20 Removal of (3) Function # 49 pilot line by William Lenormand
- 15:21 Removal of (4) unknown pilot line by William Lenormand
- 15:26 Removal of (1) S1. The code 62 flange was unbolted and the demolished portion of the supply line was removed by Carter Erwin
- 15:37 Removal of Flow meter assembly from POD and moved to workbench. This was done to allow the installation of the new pre bent pipe work to be assembled to the supply side of the flow-meter. In order to complete this step a section of pipe work that was not demolished had to be removed {(5) this section was on the supply side and was code 62 by CVP union that screws in to the flow-meter}
- 15:43 Dry fit up of Hydraulic supply adapter. (5) code 62 by CVP union was moved to lockbox
- 15:52 Building of scaffolding to allow removal of PBOF cables in the MUX section
- 15:57 Removal of Roughneck connector (6) by Carter Erwin. At the same time adjustments were made to the new supply adaptor at the workbench by Efrain Martinez and Larry Silva
- 15:58 (6) Roughneck connector was moved to lockbox
- 16:02 Qty. 2 O-rings were found to be in the connector for the face seal
- 16:16 Install 1" Hydraulic supply adapter – NOTE: it was noted at this time that the radial seal in the flow-meter was missing. Ray Picard
- 16:26 Drill hole to mount a 1" ball valve for ROV operations while subsea.
- 16:28 Install radial o-ring for flow-meter (7) and face seal for flow-meter. Installed made up Electrical connector for Flow-meter (Ray Picard)
- 16:50 Found 2 Stinger seal blown – unknown functions at this time (8) stinger seal, pn 111687-01 moved to lock box. At this time Carter Erwin entered the Mod section in order to obtain the function number that is stenciled on top of the riser stinger assy. Was able to determine that the function was directly behind # 41 a ½" port. Machine detail x-200030-01 was pulled to determine the function number behind #41. This was done due to the marine growth on the top of the stinger which covered up the stenciling. Due to the close proximity of the tubing buffing was not an option. Upon reviewing the drawing it was determined that the function was #46 (Conduit Flush) per SK-122108-21-05
- 16:57 (9) stinger seal removed and moved to lockbox
- 17:01 Installed 2 new stinger seals
- 17:21 Pressure balanced oil field cables removal. 2 new ones will be installed.
- 17:30 Suspend work while scaffolding was being completed. Eat supper
- 18:30 Began set up of PETU [Portable Electronic Test Unit]
- 18:46 Identified the two each stinger seal functions that were removed at 16:50
- 18:54 Installed pilot line on #4
- 18:56 Removed PBOF for STM II/B item (10)
- 18:57 Removed PBOF for STM1 item (11)
- 19:10 Number functions for valves to make it easier to identify. 111735-01 seal stinger puller
- 19:20 Removed PBOF cable from SEM (12)[subsea electronic module] to RCB [riser control box]
- 19:22 Installed pressure cap on SEM where the PBOF cable connects to the SEM. Remove o-ring from PBOF cable (13)
- 19:27 Removed o-ring (14) from STM I housing pn:619088-33-20-21 Ray Picard
- 19:28 Removed o-ring (15) from STM II housing pn:619088-20-21 Ray Picard
- 19:31 Installed pilot ¼" line to ROV valve (pilot supply to solenoid) STM II left side and STM I right side.
- 19:47 Connect new PBOF cable on STM I PN 2185879-22-05 by Ray Picard
- 19:53 Connect new PBOF cable on STM II PN 2185879-22-05 by Carter Erwin
- 19:55 Connect PBOF cable from STM I to SEM by Ray Picard
- 19:57 Connect PBOF cable from SM II to SEM by Carter Erwin
- 20:15 Pre Job Safety Meeting with Cameron , TOI, BP to complete JSA for PETU testing



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- 20:35 Power up PETU connected to SEM
  1. Verified .ini file was RBS8D
  2. Read back on the Yellow POD shows the SEM is BLUE A and BLUE B. It should be noted that the Distribution cabinets on surface designate which POD is Blue and which POD is Yellow.
- 20:43 Dead-man system was armed via the PETU
  1. Read-backs from the STMs were good, no faults were noted
- 21:00 Verify battery voltage in SEM (Rahim)
  1. 8.85 VDC on the 9VDC batteries was recorded
  2. 18.41 VDC on the 27VDC was recorded
- 21:28 Lockbox secured
- 21:40 simulated Dead-man test on solenoid. Electromagnetic pin was used but held next to the solenoid valve for the casing shears. This was the incorrect sol valve as during the Dead-man the High pressure blind shear, solenoid valve #103 is the solenoid valve that energizes
- 21:46 Simulated Dead-man test with the correct Solenoid valve #103. Electromagnetic pin was held against Solenoid Valve #103 and the Dead-man was fired. No indications of the valve firing. This valve was rebuilt in Feb 2010 by unknown person. It appears this was done on the rig as the date was written in paint pin.
- 21:48 Suspend operations for the night.

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- Discussed Status of Fluid test unit coming from Berwick with Pedro Sotolongo. Was informed that the unit left Berwick at 2:25 with Joel (Cameron Service tech )
- Jumper Hose for HPU/ Hotline interconnect as been connected to the HPU. Waiting on Fluid test kit to proceed with the Hook-up to the Reel. Ray Picard ordered an additional 6 Totes from Geoff Boughton at around 9:00.
- HPU PLC seems to have lost its program. Helix Subsea is working with the manufacture of the HPU to re-program the PLC so the unit can be controlled on the 5K side of the system. The unit is currently set up to run in manual only on the 5K side
- 9:40 Cut and terminated 1" hose for S1 to Ball valve mounted on the Mux section for Solenoid supply. Waiting on pressure test from rig.
- 10:00 Rahim began terminating MUX cable to J-box on the reel
- 9:00 Discussion on layout of equipment for running the POD subsea. Oceaneering is providing a LARS (Landing and Recovery System) to run the Hotline and Mux cable on.
- 11:00 break for lunch
- 11:30 Discussions held with Service department regarding which functions to use to operate the mini-connectors that will latch onto the Choke and Kill lines. The plan will be to use gasket release for the LMRP and Wellhead connectors along with the solenoid valve for POD select and one of the unknown Solenoid valves that was going to the CVP (conduit valve package). Qty 4 Hoses will be connected directly to POD via JIC fitting.

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- 12:37 Began JSA for seal testing of PBOF cables.
  1. Downloaded Seal test procedure to perform test (x-200136-05)
- 13:30 Jumper hose from Ball valve to Supply completed test and installed.
- 14:30 Fluid kit arrived on Deck. Fluid testing underway
- Note: The HPU skid does not have a circulation pump to circulate the fluid in the Tank
- 1. First fluid sample from HPU skid was NAS Class 12. (this was taken from the discharge hose from the accumulators
- 2. 15:30 Second fluid sample taken from Tank. Testing in progress
- 15:30 Discussion with Ray Picard, Randy Skidmore regarding by passing the tank on the skid and pull straight from the Totes if NAS Class was not acceptable from the tank

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<ul style="list-style-type: none"> <li>15:12 PBOF cable from SEM to STM II began and ended at 3:22 by Efrain Martinez. Test was good per x-200136-05. Note both ends of the PBOF were tested at the same time.</li> <li>15:36 PBOF cable from SEM to STM I began and ended at 3:36 by Efrain Martinez. Test was good per x-200136-05. Note both ends of the PBOF were tested at the same time.</li> <li>This completes Seal testing of PBOF cables until we hook the MUX cable up to the POD prior to running subsea</li> <li>16:00 Megger of the MUX Reel through the Slip Ring Performed by Rahim. Test results were good on all wires. At 1 GHz all wires were greater than 500 MHz.</li> <li>16:00 Continue to Flushing accumulators / HPU system.</li> <li>21:00 Achieved NAS Class 8 on the HPU Skid</li> <li>21:09 Began Deck Test Procedure. See attached Document labelled [attachment 1, note this document is embedded so double click the attachment and it will open the entire file] at the end of the report of Pages 1-10 of Deck Test procedure for details.</li> <li><b>NOTE:</b> Function 103 would not fire using the PETU on SEM A or SEM B.</li> <li>22:00 Completed testing for the night. Will pick up testing on page 11 in the morning. Expected completion of the remainder of the test is approx 1 hour 30 min.</li> </ul>		
<p>8/May/2010</p> <ul style="list-style-type: none"> <li><b>NOTE:</b> Night Crew was established last night to allow for full coverage due to the fluid cleaning. Once fluid was determined to be a NAS 8 testing began. All Third parties remained on deck will testing was being done. At 22:00 Hours testing was suspended and it was determined by Carter Erwin to keep the night crew (Rahim, Eloy, Larry) down for the night as no Third party personnel would be available to witness due to the 16 hr. Max work hour.</li> <li><b>NOTE:</b> Word was received that the 11,000 ft Hotline has not left the Port Fourchon as it is waiting on equipment from Houston. ETA of boat is 9/May/10</li> <li>8:00 Began JSA to complete pages 11-22 of Deck test. Completed work Permit 30917 @</li> <li>8:45 Began testing remainder</li> <li>10:48 Completed pages 11-22 on SEM A. Upper annular regulator increase sol. Valve would not fire on SEM A so we moved on in the procedure.</li> <li>11:22 Completed pages 11-22 on SEM B. Upper annular regulator increase sol. Valve would not fire on SEM B so we moved on in the procedure.</li> <li>11:22 <u>Require Approval for the following from Transocean / Cameron</u> <ol style="list-style-type: none"> <li>Replace Upper annular regulator increase Solenoid Valve</li> <li>Replace HP Shear sol. valve if this is still a viable function after all of the ROV intervention if this is not a viable function then remove and Blank off High Pressure Blind Shear Solenoid Valve [function 103] and verify if any additional testing is required on the Deadman circuit. <ul style="list-style-type: none"> <li><b>NOTE:</b> Once these two items are completed we will be on standby</li> <li>Hotline hose reel is not expected to be on location until tomorrow night. Once it arrives then we have to connect the hoses via a 1" JIC x JIC fitting and spool the 5,000 ft of hose currently on hand onto the new reel. Then we can flush the hose.</li> <li>LARS [Landing and recovery system] from Oceaneering is being organized but don't have a clear idea of when to expect it. Based on conversations not until tomorrow as well</li> <li>Upper Deck where the equipment is to be staged is loaded down with equipment and needs to be cleared by rig crew in order to stage MUX cable on upper deck.</li> </ul> </li> </ol> </li> <li>12:50 measuring for jumper hose from HPU which will be on lower deck to the planned location of the Hotline reel on the upper Deck. Moses and Efrain.</li> <li>13:30 Phone call with Houston and BP rep Merrick Kelly has given approval to move forward on replacement of Solenoid Valves. <ul style="list-style-type: none"> <li><b>NOTE:</b> Solenoid Valve #103 was noted not to have a Cameron supplied E-connector installed. This E-connector is different than the Cameron issued. The plated pins are approx 1/16" shorter than the ground pin. Seacon identifications numbers were (35996) and (19164112)</li> </ul> </li> <li>13:35 Solenoid Valve for Upper annular increase and High pressure blind shear [#103] were replaced with spare solenoid valves from the Transocean Nautilus POD that was sent</li> </ul>		


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over as a spare.


- 13:53 Began testing of Upper Annular increase Sol. Valve and function testing of the corresponding POD valve. Along with Testing of the High Pressure Blind Shear [#103] Solenoid valve. Test was successful on both functions.
- 14:16 Deck test procedure has been completed with sign off by all parties
- 15:32 Hotline Jumper completed. 230 FT jumper was reeled off and Hose fittings were crimped. Moses, Eloy, Ray Picard. Unable to test as rig does not have test fitting, or charts. We have contacted Berwick and fittings and charts are being shipped to BP heliport for morning flight.
- 16:00 Hotline Jumper passed 5K test. Once fitting arrive we will test to 7500 psi.
- 16:00 Working with Transocean to make mounting bracket to bolt the Roughneck break way to on top of the POD.

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- 7:00 Spoke to dispatcher on ETA of fittings & 7,500 psi charge from beach
- 7:30 Disconnected PETU power and comms cable. Disconnected ½" supply line from HPU to POD
- 8:00 Assembled RS232 cable for communications between PC and PETU. Rahim
- 8:00 Reconfigured Test HPU provided by Helix in order to test 240 ft Hydraulic deck jumper
- 8:30 Hotline Hose Reel is in transit. Once on deck we will be able unspool the existing hose on to the new reel to achieved 11,000 FT of Hotline
- 9:00 Connected Hyd Jumper to HPU test unit. Bled out air w/inline needle valve. Isolated needle valve and pressurized Hyd. Jumper to 7,500 psi. Held pressure for 5 minutes per Ray Picard. Picture was taken of pressure gauge, no loss of pressure during test. Moses, Eloy, Ray.
- **NOTE:** On 5/7/10 made recommendation to fill hotline with Hydraulic fluid. Representatives onboard replied that it was not necessary. Waiting on 2<sup>nd</sup> hose reel to make transfer and it would be easier to make transfer without additional weight from hyd. fluid
- On 5/9/10 Representatives on site began filling of Hyd. Hotline before making transfer to second reel.
- 9:25 Received call from C-Port 1, Cameron Connex has arrived in Fourchon
- 9:45 Bled down pressure and connected air hose to one end of jumper in order to remove all Hyd. Fluid from jumper for easier handling.
- 9:30 Began running Hose to upper deck and securing it to the deck to prevent the hose from jumping when functioning the POD
- 11:00 Completed running of the Hotline hose to the upper deck and secured it to the deck. Moses, Eloy, Larry, Efrain, William, Rahim, Carter, Ray, Randy
- 11:01 Waiting for Hotline to arrive.
- 11:00 Received Confirmation from Geoff Boughton with Transocean that we can proceed with the Dead-man test. Cameron Houston is preparing the procedure and will forward on to Transocean for review at which time it will be issued to Transocean aboard the rig whom will then instruct Cameron to perform the test.
- 11:23 Break for Lunch
- 13:35 Hooked up Hotline from HPU to Solenoid Valve supply. Connected PETU cable to SEM and hung the end that connects to the PETU on the side of the POD to prevent damage from workers walking about. Waiting for Procedure from Houston for Dead-man test. Carter Erwin
- 16:00 Set up enerpac to put pressure on TP9 & TP10 (transducers) on STM 1. Performed leak test on enerpac before performing test. Moses, Eloy, Carter
- 16:30 Completed setting up for Deadman test

End of Day

- Continue waiting on Hotline reel to arrive
- Continue waiting on LARS System to arrive
- Both of the above items above are contingent on Deck space which is still full.
- **NOTE:** Fumes on location are quite strong and mild headaches are occurring amongst the Cameron hands. Carter Erwin has been given a Respirator Medical Release form to be

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fitted for a respirator.		
<p>10/May/2010</p> <ul style="list-style-type: none"> <li>• 11,000 ft Hotline Hose reel arrived on the rig and was set on forward deck.</li> <li>• 7:00 Familiarization w/Hose reel</li> <li>• 7:30 Connected hotline Hose reel to HPU. Connected drain valve on opposite end for discharge into tote tank. Filled hot line with hydraulic fluid and removed air from line. Connected additional hotline to 11,000 foot reel for pressure test of complete assembly.</li> <li>• 8:00 Disconnected empty Tote. Waiting on crane operator to move new Tote from Upper deck to main deck in order to proceed with pressure test.</li> <li>• 8:30 New Tote tank moved into position. Resume test of Hot line Hydraulic Hose. Pressurized hose to test pressure of 7,500 psi (5 min hold as per instructed by Transocean.) After completion of test, pressure was bled off to 0 psi. Residual fluid was bled off into Tote Tank</li> <li>• 9:30 Disconnected all test fittings and hoses from Hotline. Re-connected Hotline hose to main inlet supply of reel spool</li> <li>• 10:30 Spooling of 5000 ft additional Hotline onto Main umbilical Hotline.</li> <li>• 11:30 Completed transfer of 5000 ft to Main umbilical.</li> </ul> <p>NOON</p> <ul style="list-style-type: none"> <li>• 12:30 Prepped equipment to be moved to Upper Deck</li> <li>• 12:40 On Standby as Upper Deck is still full of equipment.</li> <li>• 1:00 Received update that the LARS system along with the Cameron Connex was 1 hour out.</li> <li>• 1:01 Standby waiting Crew to clear Deck space to move equipment into location.</li> <li>• 16:13 Prep to Move Mux Cable to Upper Deck.</li> <li>• 18:12 MUX Reel, Hotline Reel, Cameron Connex, along with Oceaneering LARS system were set on the Upper Deck. Waiting on stress analysis from Helix (Q4000) before welding equipment to Deck. Once the gear is welded to the deck we can complete interconnect of system.</li> <li>• 18:13 Awaiting Rig Crew to move Connex away from spill rail so that the electrician can wire the connex with 230VAC. The position of the Connex does not allow access to the work area in the rear of the Connex where the circuit breaker is located. Waiting for crew to move tool box to the Upper deck so tools can be moved into the connex</li> <li>• 21:00 Standby waiting on the above Connex to be moved for access.</li> <li>• 21:30 Tool box was moved to the Upper Deck and box tools were transferred to the Connex</li> <li>• 22:00 Work completed for the evening</li> </ul>		
<p>11/May/2010</p> <ul style="list-style-type: none"> <li>• Connex was wired with 208V by the night ET.</li> <li>• 8:00 Began JSA and Work Permit Paper work to for Interconnect of PETU. Moses, Eloy, Rahim, Efrain</li> <li>• 9:00 Waiting in Queue to be fit test for Respirator. William/Carter</li> <li>• 10:00 Installed Jumper Hose from HPU to Hotline hose on Upper deck. Moses, Eloy, William</li> <li>• 11:00 Completed Fit test for respirator. William/Carter</li> <li>• 11:15 Discussed Phone and ROV feed to Connex with Rig ETO. William/Rahim</li> <li>• 11:15 Began installation of Bend restrictors on MUX cable. Eloy/Efrain.</li> <li>• 13:00 Moved PETU to connex and began running wires to the outer J-Box on the Mux reel. Charged Spare Laptop and install RSB8D.ini file on the laptop.</li> <li>• 13:00 Rig Supplied UPS was moved to the Upper deck. Awaiting Rig ET to move it into the Conex and wire it up. Once this is done we will charge the batteries and test the system. (Note: We will perform a test on the UPS with the SEM powered up once the POD is moved to the Upper deck.</li> <li>• 16:00 Bled off pilot pressure in order to check accumulator pre-charge. Pre-charge value were presented to Ray Picard for approval. All values were accepted.</li> </ul>		



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## Upper Annular Regulator

Bottle 0	Bottle 1	Bottle 2	Bottle 4
1000	1200	1400	3100

## Lower Annular Regulator

Bottle 0	Bottle 1	Bottle 2	Bottle 4
1000	1400	2050	3100

## LMRP Connector

Bottle 0	Bottle 1	Bottle 2	Bottle 4
1000	1350	2100	3200

## POD Manifold

Bottle 0	Bottle 1	Bottle 2	Bottle 4
1000	1400	2100	3250

## Wellhead Connector

Bottle 0	Bottle 1	Bottle 2	Bottle 4
1000	1600	2100	3050

- 16:15 Set up for Deadman test.
- 17:00 Adjusted Level wind as to allow the appropriate payout to make up with the LARS system per Oceaneerings request.
- 17:30 Moved UPS into main cabin of Conex to maintain visuals on power readings of UPS
- 20:00 Worked on UPS output voltage. Was able to configure output voltage to 235VAC. Connected PETU to UPS and selected 250VAC on front of PETU. Took Voltage reading at connector on front of PETU and recorded 270VAC. It was noted during this that the UPS was displaying a fault. Upon investigation the fault indication was a phase issue. Rahim informed the Rig ET who will correct the issue.

## Completed Work for the Evening

- Tomorrow task will include
  1. Perform Deadman test
  2. Move POD to Upper Deck once welding has been completed
    - A. Connect PETU to MUX cable and Check voltage at the end of the MUX cable
    - B. Perform Load test on UPS
    - C. Perform and verify UPS switch over
    - D. Verify Battery Life through UPS with SEM powered up.



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- 9:00 Performed JHA for Deadman test on the forward deck #0012. Received work permit 30219 from the bridge at 10:00
- 10:00 Began setting up for Deadman test
- 10:55 Began Deadman test on Yellow POD per X-065449-05-03. It should be noted that solenoid 103, which did not fire during the initial test on the 6<sup>th</sup> of May, was replaced with a solenoid from the Nautilus spare POD.
- 12:03 Completed test of X-065449-05-03 See [Attachment 2]

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- 13:00 Team participated in weekly Fire Drill
- 14:00 Fire Drill concluded
- 16:00 Began wiring PETU from Conex to Outer J-Box on MUX reel. Rahim
- 17:50 Completed wiring of PETU to J-Box along with checking Voltage at end of MUX cable

230 VAC selected on PETU and tested at Seacon Connector

Pin 1-2	237.5 VAC
Pin 3-4	237.5 VAC

250 VAC selected on PETU and tested at Seacon Connector

Pin 1-2	270.4 VAC
Pin 3-4	270.4 VAC

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**NOTE:** Prior day addition. Upon completion of a Successful Deadman test per x-065449-05-03 it was determined to do additional trouble shooting to confirm voltage on circuit. This was done By firing the deadman and checking the voltage on the pie connector for Solenoid valve 103. Voltage was 26VDC

Voltage results at pie connector

- 2:30 Began JSA to run MUX and Hotlines through the sheaves on the LARs system.
- 5:16 Completed the following task
  1. Ran Mux cable through sheave on LARS System. Stabbed Roughneck connector on top of POD and bolted to pin.
  2. Feed PBOF connector into MUX section, installed new o-rings on connector and made up connection. Placed block between SEM and PBOF connector and tightened ratchet strap.
  3. Ran Hotline through sheave on LARS system and made connection to supply fitting on the POD.
  4. Powered up SEM via PETUs in the conex.
  5. Monitored UPS again after the Rig ET ran new power cable for the UPS. UPS is still switching showing a ground fault when A/C kicks on. Will work with Rig ET to fix this issue
  6. ETO completed installation of Loud Speaker and Rig phone extension. ETO outstanding work is to run internet and outside line. This must be done before running the POD as to maintain constant communication with Houston at the worksite.

Breakfast

- 6:30 Turn Supply and Powered up POD. Performed preliminary function test with Hyd supply. Carter, William, Efrain, Larry
- 7:43 Completed preliminary function test of POD.
- 8:00 Performed load test on PETUs with SEM fully loaded. Was able to hold 31 Solenoid valves in on SEM A and then Performed the test on SEM B
- 12:00 Performed Pre-deployment test on both SEMs per page 19 – 22 of the deck test procedure in order to verify Stinger seals and bleed pilot lines down. During this test it was




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noticed that Function 96, Lower Outer Choke Close on the B SEM would not fire and had a Fault displayed on the PETU. This function though would fire on SEM A. It was determined that due to the fault we would use one of the Solenoids on the MUX section that was not being used. Upon consulting with Ray Picard it was determined that we would use the POD Select Solenoid # 49 as this function is no longer available on the POD in its current state. Solenoids were swapped and function test performed with the new solenoid configuration.

- 14:00 Installed Two ROV handles on the front of the POD.
- 16:00 Concluded function testing
- 18:30 Attended Pre-Deployment meeting with BP, Transocean, Helix, and Oceaneering to review the running procedure for the POD. Plan is to begin moving to location at 6:30 am and begin running POD.

**14/May/2010**


- 6:57 Started UPS Test on the Yellow SEM A function 15 Solenoid valve and SEM B function 15 Solenoid valve Tested for 10 Min. With no problem the valve did not vent when power was shut off
- 7:00 hand over with Carter
- 9:16 Tested the mux cable PBOF connector from the mux cable to SEM Ray Picard
- 10:00 Worked on kill procedure with Ray and Randy on a all valve close
- 11:00 Read the top kill procedures manual
- 11:25 Carter Departed Rig going to BP Heiloport
- 12:00 Lunch
- 1:00 Working on the POD Deployment And Installation Procedure
- 2:00 POD Deployment And Installation Procedure verify the Visual Inspection, Accumulator Bottle Precharge, Pre-Deployment and Set the Regulator to 3000 PSI
- 3:00 checked on the pod and stand by
- 4:00 checked on the pod and stand by
- 5:00 Worked on the report and did reports for Houston

**15/May/2010**

- 7:00 stand by to run the POD
- 8:00 stand by to run the POD
- 9:00 stand by to run the POD
- 10:00 stand by to run the POD
- 11:00 Was ask by Randy if we wanted to run the Deadman what we would need to do. We will need to connect TP9 to the hotline
- 12:00 Attended meeting with BP on the rig to go through the running of the pod sub sea and job duties on a drive off BP will right a procedure for the drive off and post it at the Cameron Connex
- 1:00 Stand by to run POD
- 2:00 Stand by to run POD
- 3:00 Stand by to run POD
- 4:00 Stand by to run POD
- 5:00 did reports for Houston

**16/May/2010**

- 7:00 stand by to run the POD
- 8:00 stand by to run the POD
- 9:00 stand by to run the POD
- 10:00 stand by to run the POD
- 11:00 stand by to run the POD
- 12:00 stand by to run the POD

 <b>CAMERON CONTROLS</b>		<b>Date 5/MAY/2010</b>
<ul style="list-style-type: none"> <li>• 1:00 stand by to run the POD</li> <li>• 2:00 stand by to run the POD</li> <li>• 3:00 stand by to run the POD</li> <li>• 4:00 stand by to run the POD</li> <li>• 5:00 Reports for Houston</li> <li>• 6:00 stand by to run the POD</li> <li>• 7:00 stand by to run the POD</li> </ul>		
<b>17/May/2010</b> <ul style="list-style-type: none"> <li>• 6:00 Stand by to run POD</li> <li>• 7:00 stand by to run the POD</li> <li>• 8:00 stand by to run the POD</li> <li>• 9:00 stand by to run the POD</li> <li>• 10:00 stand by to run the POD</li> <li>• 11:00 JSA to run POD and started unspooling mux and hotline 200 feet tape every 10 feet And monkey fist every 50 feet</li> <li>• 12:00 stop for lunch and we will be on stand by</li> <li>• 13:00 stand by to run POD</li> <li>• 14:00 Stand by to run POD</li> <li>• 15:00 Stand by to run POD</li> <li>• 16:00 stand by to run POD</li> <li>• 17:00 Stand by to run POD</li> <li>• 18:00 Stand by to run POD</li> </ul>		
<b>18/May/2010</b> <ul style="list-style-type: none"> <li>• 2:40 Leak on 1in hose on LMRP side of the POD was found and S1 was turned off and leak was fixed</li> <li>• 2:49 S1 was opened back up the leak was fixed upper and lower ANN. placed in open, regulators set to 3000 psi, Flow count reading -27756</li> <li>• 3:00 Lifted the yellow POD</li> <li>• 3:18 POD in water, switched laptop to read minus Hydrostatic</li> <li>• 3:26 65ft lost sight of POD and turned over to ROV</li> <li>• 4:40 POD is at 700ft</li> <li>• 5:12 Getting set up to transfer to drill pipe</li> <li>• 6:00 Started day shift and did hand off</li> <li>• 7:00 Stand BY for the hand off to drill pipe</li> <li>• 8:13 Started running pod on drill pipe</li> <li>• 9:00 All stop Stand BY for ROV to fill with oil</li> <li>• 9:24 Starter to run pod south 50 ft and put clamps on every 50ft on the hot line</li> <li>• 10:00 Running pod we are at 250 feet POD with no problems on the pod</li> <li>• 11:00 Running pod we are at 1450 feet with the POD</li> <li>• 11:30 Running POD we are at 2000 feet</li> <li>• 12:00 Running POD we are at 2300</li> <li>• 13:00 Running POD we are at 2700 feet</li> <li>• 14:00 Running the POD we are at 3000 feet</li> <li>• 14:40 Worked with the rig ET to get ROV feed to connex to land out the POD</li> <li>• 15:00 Running the POD we are at 3600 feet</li> <li>• 16:00 Running the POD we are at 4000 feet</li> <li>• 16:21 All stop we are 215 feet from bottom and we need to move the rig to the stack</li> <li>• 17:00 Vented all REG. To land pod the dye in the BOP fluid would have caused a problem with the visibility</li> <li>• 18:00 to 23:00 Stand by for ROV and rig move to stack to land POD</li> <li>• 23:40 Began running POD down 150 ft above stack to move into place to land POD. Moses, Eloy on Reels, William in ROV shack.</li> <li>• 23:59 POD is at depth (4900 ft) and vessel is moving into position.</li> </ul>		



Date 5/MAY/2010

19/May/2010

- 00:17 ROV prepping ROV to blow debris off of LMRP in preparation to land the POD.
- 01:18 Landed POD on Stack
- 01:59 Disconnected POD from drillpipe and performed the following functions
  - POD Locks energize
  - Upper Annular Vent
  - Lower Annular Vent
  - LMRP Stingers De-energize
  - LMRP Stinger Vent
  - LMRP Stinger Extend
  - LMRP Stinger Seals Energize
  - Stack Stinger Seals De-energize
  - Stack Stinger Vent
  - Stack Stinger Extend
  - Stack Stinger Seals Energize

2,220

Psi Hydrostatic pressure

- Completed the above at 02:26
- 02:30 Identified leak on S1 downstream of the Isolation valve on the supply. ROV isolated ball valve. Bleed pressure and began working to tighten 1" JIC fitting. ROV operator was informed that the wrench required to tighten the fitting was 1-1/2".
- 05:00 ROV completed operations with tightening the 1" JIC
- 05:12 Vessel continuing to lay away from well center.
- 08:00 Preparation to Function Choke and Kill Isolation
- 08:07 Choke and Kill Isolation Valve functioned Open
- 08:15 Choke and Kill Isolation Valve functioned Closed (Raw Data: Start 2118, End - 30538. Gallon count 1.799)

20/May/2010


- Standby while coflexip hoses are being connected to the Q4000
- Established Function Protocol / Rotation  
Cameron has established the following Protocols to ensure Safe Operations and Coverage will on location which has been posted in the Conex
  - Conex must be manned at all times by at a min. 1 technician
  - When making a function the following applies
    - (a) Operators and Witness must be present and name logged on log sheet
    - (b) Operator and Witness log time and starting Raw value of Flowmeter
    - (c) Operators calls out name of function and Witness confirms the function name
    - (d) Operator Operators selects the function from WinTSim which brings up a POP window with the function selected, Witness then confirms that this is the function as stated.
    - (e) Operator Performs function
    - (f) Witness logs time and end flow count and makes the necessary calculations to convert to gallons.

21/May/2010

- Standby
- LDIS was run through the rotatory table. Plan is to run through the night and be in a position late this evening to set the clump weight on bottom and run the Hotline and MUX cable through the guillotine.

22/May/2010

- Standby
- LDIS system having problems holding pressure test at approx 1,000 ft. FMC working to resolve issue. Ball valve has been pulled to the moonpool again.

 <b>CAMERON CONTROLS</b>		<b>Date 5/MAY/2010</b>
<ul style="list-style-type: none"> <li>Meeting with BP regarding naming convention of stack equipment in the procedure. It was noted that some of the function names were listed on the procedure differently than on the .ini file. Cameron has requested that the naming match the .ini file for clarity. Carter has given then a list of the function names for the rev. to the procedure.</li> </ul>		
<b>23/May/2010</b> <ul style="list-style-type: none"> <li>Standby</li> <li>LDIS has been run to depth and awaiting next move.</li> <li>NOTE: The two attachments have been removed from the report to decrease file size</li> </ul>		
<b>24/May/2010</b> <ul style="list-style-type: none"> <li>03:00 Paying out to land Clump weight.</li> <li>05:30 Clump weight was landed on bottom</li> <li>06:00 – 18:00 Standby</li> </ul>		
<b>25/May/2010</b> <ul style="list-style-type: none"> <li><u>Began Procedure 2200-T2-DO-PR-4044</u></li> <li>10:30 <u>Suspended Procedure 2200-T2-DO-PR-4044</u> due to gauge readback problems on the manifold side of the operation</li> <li>10:32 <u>Began Procedure 2200-T2-DO-PR-4105</u> will the ROV retrieves the acoustic gauge back to surface for interrogation. <ul style="list-style-type: none"> <li>Ray Picard (Transocean) located in the Venom ROV Conex to provide interface with ROV operators and provide command from his location</li> <li>Steve Carrson (subsea eng Helix) located at the HPU to monitor fluid level and accumulator charge pressure at the unit.</li> <li>Carter Erwin and William Lenormand (Cameron) Located in the Cameron van to make functions as outlined in the above procedure as directed by Ray Picard and Houston support team.</li> </ul> </li> <li>10:54 Started Procedure</li> <li>10:55 Functioned Autoshear to disarm</li> <li>10:56 Initiated Stack Accumulator Charge. Was unable to monitor flow rate as flow meter at HPU was not on the 5K output side of the accumulator. Estimated fluid used to charge the accumulators at min. of 120 gallons based on the fluid used in the fluid reservoir. Completed charging at 11:50. This is when the subsea pressure and subsea flow meter stabilized. POD supply pressure at 4600 psi</li> <li>11:21 Auto shear disarm function was vented</li> <li>11:20 Choke &amp; Kill mini connectors functioned to Latch. Flow meter recorded approx 1.7 Gallons of fluid. No visible movement observed from the ROV</li> <li>11:27 LMRP connector functioned to Latch. Valve was actuated and then regulator pressure increased at 500 psi increments until 1500 psi was reached. Flow meter read backs were 3.8 gallons, .23 gallons, and 1.4 gallons respectively. Total 5.43 gallons. No movement of the indicator rod was observed via ROV.</li> <li>11:39 Wellhead connector functioned to Latch. Valve was actuated and then regulator pressure increased at 500 psi increments until 1500 psi was reached. Flow meter read backs were .04 gallons, .0 gallons, and 0 gallons respectively. Total .04 gallons. No movement of the indicator rod was observed via ROV.</li> <li>12:15 Functioned Casing Shear Rams closed. Approximately 30 gallons was observed on the flowmeter.</li> <li>12:27 Reinitiated the Stack Accumulator Charge circuit. 6.02 Gallons recorded</li> <li>12:34 Isolated Stack Accumulator Charge</li> <li><u>Completed Procedure 2200-T2-DO-PR-4105.</u> All Functions were successful.</li> <li>02:00 Carter and William were fitted for a full face respirator.</li> <li>16:20 Began with Procedure <u>2200-T2-DO-PR-4068 – Wellbore Diagnostic Injections</u></li> <li>16:20 Functioned Choke and Kill Isolation Valves Open (37). ROV Completed visual inspection of indicator rod position and confirmed open position at 16:50</li> <li>16:53 Functioned Upper Outer Kill Valve Open (83). Flow count .89 Gallons. ROV</li> </ul>		


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confirmed position.

- 17:00 Operations of step 13 of the procedure
- 17:11 Operations of step 14 of the procedure
- 17:30 Functioned Upper Inner Kill Valve Open (84). Flow count 1.9 Gallons. ROV confirmed position.
- 18:00 Pumping stopped due to increased flow at the plume at the end of the riser.
- 19:07 Upper Inner Kill Valve Close. Flow count .94 gallons. Function count 16
- 19:08 Upper Outer Kill Valve Close. Flow count .64 gallons. Function count 16
- 19:29 Jumped ahead in procedure to page 25 per Ray Picard
- 19:29 Lower Outer Kill Valve Open. Flow count .93 gallons. Function count 17
- 19:34 Lower Inner Kill Valve Open. Flow count .73 gallons. Function count 18
- 20:19 Lower Inner Kill Valve Close. Flow count 1.05 gallons. Function count 18
- 20:21 Lower Outer Kill Valve Close. Flow count .86 gallons. Function count 18
- 20:21 Lower Inner Kill Valve Vent. Function count 17
- 20:22 Lower Outer Kill Valve Vent. Function count 16
- 20:27 Upper Inner Kill Valve Vent. Function count 15
- 20:27 Upper Outer Kill Valve Vent. Function count 14
- 20:56 Upper Outer Choke Valve open. Flow count 1.1 gallons. Function count 15
- 21:27 Upper Inner Choke Valve Open. Flow count .67 gallons. Function count 16
- 22:04 Upper Inner Choke Valve Close. Flow count .66 gallons. Function count 16
- 22:05 Upper Outer Choke Valve Close. Flow count .84 gallons. Function count 16
- 22:20 Lower Outer Choke Valve Open. Flow count .77 gallons. Function count 17
- 22:24 Lower Inner Choke Valve Open. Flow count .81 gallons. Function count 18
- 23:04 Lower Inner Choke Valve Close. Flow count .69 gallons. Function count 18
- 23:08 Lower Outer Choke Valve Close. Flow count .79 gallons. Function count 18
- 23:21 Outer Bleed Valve Open. Flow count 1.01 gallons. Function count 19
- 23:28 Inner Bleed Valve Open. Flow count .84 gallons. Function count 20

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- 00:21 Inner Bleed Valve Close. Flow count .89 gallons. Function count 20
- 00:22 Outer Bleed Valve Close. Flow count .88 gallons. Function count 20
- 00:25 Inner Bleed Valve Vent. Function count 19
- 00:25 Outer Bleed Valve Vent. Function count 18
- 00:28 Upper Inner Choke Valve Vent. Function count 17
- 00:28 Upper Outer Choke Valve Vent. Function count 16
- 00:29 Lower Inner Choke Valve Vent. Function count 15
- 00:29 Lower Outer Choke Valve Vent. Function count 14
- 10:00 Meeting held with all parties involve by Ricky T (BP Company Man) to discuss Procedure 2200-T2-DO-PR-4101 Macondo Top Kill Procedure for MC252-1.
- 10:30 Meeting held with Merrick Kelly, Ray Picard, and Carter Erwin to discuss operations of the Upper Pipe Rams Closed. Procedure discussed was as follows
  1. Close Upper Pipe Rams and observe flow count.
  2. Lock ST-Locks and observe flow count.
  3. Vent ST-Locks

Maintain Close pressure on Upper Pipe Rams at all times
- 11:00 Ray Picard located at Command Center on Q4000, Steve (subsea Q4K) located at HPU, Carter Erwin and William LeNormand
- 11:10 Upper Pipe Rams functioned Closed then vented by call of Ray Picard. Flow count was .4 gallons. Function count 15
- 11:14 Repeated Upper Pipe Rams Closed. Flow Count 1.1 (Total between both functions 1.5) Function count 15



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- 11:17 ST-Locks lock. No observed flow count. Function count 16
  - 11:18 ST-Locks Vent. Function count 15
  - 12:34 Lower Outer Kill Valve Open. Flow counts .9 gal. Function count 16
  - 12:42 Lower Outer Choke Valve Open. Flow count .84. Function count 17
  - 12:54 Lower Inner Choke Valve Open. Flow count .81. Function count 18
  - 12:57 Lower Inner Kill Valve Open. Flow count .73. Function count 19
  - 13:03 Confirmed Choke/Kill Valves were in the Open state via the PETU.
  - 13:10 Choke/Kill Isolation Valves Close. Flow count 1.7. Function count 19
  - 13:11 Choke/Kill Isolation valves Open. Flow count 1.4. Function count 19
  - 13:28 Lower Outer Kill valve Close. Flow count .98. Function count 19
  - 13:31 Lower Outer Choke Valve Close. Flow count .91. Function count 19
  - 13:34 Upper Outer Choke Valve Open. Flow count .97. Function count 20
  - 13:37 Upper Inner Choke Valve Open. Flow count 1.2. Function count 21
  - 13:44 Upper Inner Choke Valve Close. Flow count .82. Function count 21
  - 13:46 Upper Outer Choke Valve Close. Flow count .87. Function count 21
  - 13:48 Upper Inner Choke valve Vent. Function count 19
  - 13:49 Upper Outer Choke valve Vent. Function count 18
  - 13:51 Lower Outer Choke Valve Open. Flow count .87. Function count 18
  - 13:55 Lower Inner Kill Valve Open. Flow count .9 gal. Function count 18
  - 13:59 Lower Pipe Rams Open. Flow count 24 gallons. Function count 19
  - 13:59 Pumping Operations down hole
  - 17:35 Pumps were stopped to monitor wellbore activity.
  - 18:35 Pumps turned back on.
  - 20:05 Lining up for Junk shot
  - 20:05 Lower Outer Choke Close. Flow Count 1.2 gal. Function count 19
  - 20:06 Lower Outer Kill Valve Close. Flow Count .97 gal. Function count 19
  - 20:09 Upper Outer Kill Valve Open. Flow Count .90 gal. Function count 20
  - 20:09 Upper Inner Kill Valve Open. Flow Count .85 gal. Function count 21
  - 20:35 Launched 1<sup>st</sup> ball shot
  - 21:00 Launched Item 5 from Wild Well Manifold
  - 21:14 Launched #2 from Wild Well Manifold
  - 21:32 Launched #3 from Halliburton Manifold
  - 21:43 Launched #4 from Halliburton Manifold
  - 22:03 Upper Inner Kill Valve Close. Flow Count 1 gal
  - 22:04 Upper Outer Kill Valve Close. Flow Count 1.6 gal
  - 22:06 Lower Outer Kill Valve Open. Flow Count .41 gal
  - 22:18 Lower Outer Kill Valve Close. Flow Count .70 gal Function Count 21
  - 22:28 Balls did not launch from the Halliburton Frack Boat
  - 23:33 Lower Outer Kill Valve Close. Flow Count .74 gal.
  - 23:35 Lower Inner Kill Valve Close. Flow Count .91 gal
  - 23:36 Lower Outer Choke Close – Confirm No Flow – 15088 (count)
  - 23:37 Upper Inner Choke Close – Confirm No Flow – 15088 (count)
  - 23:38 Upper Outer Choke Close – Confirm No Flow – 15088 (count)
  - 23:39 Lower Inner Choke Close – Confirm No Flow – 15088 (count)
  - 00:05 UIK, UOK, LIK, LOK, UIC, UOC, LIC, and LOC are in vent position
- 27/05/2010
- 8:54am Upper Inner Kill Open Flow Count .83
  - 9:00am Upper Outer Kill Open Flow Count .98
  - 9:02am Upper Inner Kill Close Flow Count .90
  - 9:02am Upper Outer Kill Close Flow Count .88
  - 9:03am Upper Outer Kill and Upper Inner Kill Vent
  - 9:06am Inner Bleed Valve Open. Flow Count .80 Function Count 14
  - 9:06am Outer Bleed Valve Open. Flow Count .80 Function Count 15
  - 9:16am Inner Bleed Valve Close. Flow Count .66 Function Count 15


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- 9:16am Outer Bleed Valve Close. Flow Count .76 Function Count 15
- 9:16am Inner Bleed Valve and Outer Bleed Valve – Vent Function Count 13
- 9:19am Upper Inner Choke Open Flow Count .96 Function Count 14
- 9:19am Upper Outer Choke Open Flow Count .86 Function Count 15
- 9:21am Upper Inner Choke Close Flow Count .92 Function Count 15
- 9:22 Upper Outer Choke Valve Close. Flow Count .76. Function Count 15
- 9:23 Upper Inner/Outer Choke Valve Vent. Function Count 13
- 9:25 Lower Outer Choke Valve Open. Flow count .76. Function Count 14
- 9:28 Lower Inner Choke Valve Open. Flow count .96. Function Count 15
- 9:28 Lower Inner Kill Valve Open. Flow count .86. Function Count 16
- 9:29 Lower Outer Kill Valve Open. Flow count .89. Function Count 17
- 9:33 Lower Inner Kill Valve Close. Flow count .69. Function Count 17
- 9:33 Lower Outer Kill Valve Close. Flow Count .66. Function Count 17
- 9:33 Lower Inner/Outer Kill Valves Vent. Function count 15
- 9:34 Lower Inner Choke Valve Close. Flow count .73. Function Count 15
- 9:35 Lower Outer Choke Valve Close. Flow count .73. Function Count 15
- 9:36 Lower Outer/Inner Kill Valve Vent. Function Count 13
- Standby
- 2:00 Upper Inner Kill valve Open. Flow count .86. Function Count 14
- 2:05 Lower Inner Kill Valve Open. Flow count 90. Function Count 15
- 2:07 Lower Inner Choke Valve Open. Flow count .82. Function Count 16
- 4:39 Upper Outer Kill Valve Open. Flow count.80. Function Count 17
- 4:48 Lower Outer Choke Valve Open. Flow count .76. Function Count 18
- 5:15 Junk shoot on Header B launched
- 5:20 Platelets on line 3 shoot
- 5:34 Platelets on Line 2 shoot
- 5:47 Platelets on line 1 shoot
- 5:51 Lower Outer Choke Valve Close. Flow count .93. Function Count 18
- 6:00 Halliburton Balls shoot
- 6:10 BJ balls
- 6:39 Breaker Material Fired
- 7:04 Upper Inner Kill Valve Close. Function Count 18
- 7:30 Upper Outer Kill Valve Open. Function Count 18
- 8:30 Upper Inner Kill Valve Open. Flow count .77. Function Count 18
- 8:30 Upper Outer Kill Valve Close. Flow Count .79. Function Count 18
- 8:50 Upper Inner Kill Valve Close. Flow Count .83. Function Count 18
- 8:51 Upper Outer Kill Valve Open. Flow Count .76. Function Count 18
- 9:35 Lower Outer Kill Valve Open. Flow count .95. Function Count 18
- 9:35 Lower Outer Choke Valve Open. Flow count .61 Function Count 18
- 9:40 Upper Inner Kill Valve Vent. Function Count 17
- 9:40 Upper Outer Kill Valve Vent. Function Count 16
- 9:59 Launch Shot 7 8 Crack Balls



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- 12:30 Lower Inner Choke Valve Close. Flow count 1.04. Function Count 16
- 12:31 Lower Outer Choke Valve Close. Flow count .86. Function Count 16
- 12:32 Lower Inner Choke Valve Vent. Function Count 15
- 12:33 Lower Outer Choke Valve Vent. Function Count 14
- 12:50 Lower Inner Kill Valve Close. Flow count .67. Function Count 14
- 12:51 Lower Outer Kill Valve Close. Flow count .88. Function Count 14
- 12:55 Lower Inner Kill Valve Vent. Function count 13
- 12:56 Lower Outer Kill Valve Vent. Function count 13
- 13:00 Shutting Down and will resume in the morning as directed per BP and Transocean
- 06:00 Handover.
- 09:20 Upper Inner Kill Valve Open. Flow count .70. Function Count 14
- 09:47 Lower Inner Kill Valve Open. Flow count .68. Function Count 15
- Standby
- 10:48 Upper Outer Kill Valve Open. Flow count .82. Function Count 16
- 10:59 Upper Inner Kill Valve Close. Flow count .87 Function Count 16
- 11:00 Upper Outer Kill Valve Close. Flow count .70. Function Count 15
- 11:00 Upper Inner Kill Valve Close Vent. Function Count 14
- 11:00 Upper Outer Kill Valve Close Vent. Function Count 13
- 11:01 Lower Outer Kill Valve Open. Flow count .89. Function count 14
- 11:04 Lower Inner Kill Valve Close. Flow count 1.2. Function Count 15
- 11:05 Lower Outer Kill Valve Close. Flow count .66. Function Count 16
- 11:05 Lower Outer/Inner Kill Valves Close Vent. Function count 13
- 11:06 Inner Bleed Valve Open. Flow count .74. Function Count 14
- 11:07 Outer Bleed Valve Open. Flow count 1.2. Function Count 15
- 11:15 Inner Bleed Valve Close Vent. Flow count 1.0. Function Count 14
- 11:15 Outer Bleed Valve Close Vent. Flow count .74. Function Count 13
- 11:18 Upper Inner Choke Valve Open. Flow count .74. Function Count 14
- 11:20 Upper Outer Choke Valve Open. Flow count .74. Function Count 15
- 11:21 Upper Inner Choke Valve Close vent. Flow count .73. Function Count 14
- 11:22 Upper Outer Choke Valve Close Vent. Flow count .71. Function Count 13
- 11:23 Lower Inner Choke Valve Open. Flow count .76. Function Count 14
- 11:24 Lower Outer Choke Valve Open. Flow count .87. Function Count 15
- 11:27 Lower Outer Choke Valve Close. Flow count .97. Function Count 15
- 11:27 Lower Inner Kill Valve Open. Flow count .78. Function Count 16
- 13:01 Lower Outer Choke Valve Open. Flow count .76. Function Count 16
- 13:02 Started pumping 10 bpm min.
- 13:17 Lower Outer Kill Valve Open. Flow count .98. Function Count 17
- 14:40 Pumping down both lines at 106 bpm
- 16:50 Call from Ray to be Ready to close Lower Outer Choke/Kill Valves on his command as Frack boats were running low on mud.
- Close Lower Outer Choke and Kill Valves back to back. Flow count 1.5 Total. Function Count 17
- 18:20 Lower Inner Choke Valve Close. Flow count 1.02. Function 17
- 18:20 Lower Inner Kill Valve Close. Flow count .79. Function 17
- 19:08 Lower Inner Kill Valve Close Vent. Function 16
- 19:08 Lower Inner Choke Valve Vent. Function 15
- Hand Over
- 20:02 Upper Inner Kill Valve Open. Flow Count 1.5 (Function 14)
- 20:03 Lower Inner Kill Valve Open. Flow Count .61 (Function 15)
- 20:03 Inner Bleed Valve Open. Flow Count .63 (Function 16)
- 20:04 Upper Inner Choke Open. Flow Count .63 (Function 17)
- 20:07 Lower Inner Choke Open. Flow Count .76 (Function 18)
- 20:13 Upper Outer Kill Valve Open. Flow Count .71 (Function 19)




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- 20:18 Upper Inner Kill Valve Close. Flow Count .53 (Function 19)
- 20:19 Upper Outer Kill Valve Close. Flow Count .99 (Function 19)
- 20:19 Upper Inner Kill Valve Vent. (Function 18)
- 20:20 Upper Outer Kill Valve Vent. (Function 17)
- 20:20 Lower Outer Kill Valve Open. Flow Count .87 (Function 18)
- 20:24 Lower Inner Kill Valve Close. Flow Count .94 (Function 18)
- 20:25 Lower Outer Kill Valve Close. Flow Count 1.02 (Function 18)
- 20:25 Lower Inner Kill Valve Vent (Function 17)
- 20:25 Lower Outer Kill Valve Vent (Function 16)
- 20:26 Outer Bleed Valve Open. Flow Count .79 (Function 17)
- 20:45 Inner Bleed Valve Close. Flow Count .64 (Function 17)
- 20:46 Outer Bleed Valve Close. Flow Count .63 (Function 17)
- 20:47 Inner Bleed Valve Vent. (Function 16)
- 20:47 Outer Bleed Valve Vent. (Function 15)
- 20:47 Upper Outer Choke Valve Open. Flow Count .62 (Function 16)
- 20:54 Upper Inner Choke Valve Close. Flow Count .62 (Function 17)
- 20:55 Upper Outer Choke Valve Close. Flow Count .65 (Function 17)
- 20:56 Upper Inner Choke Valve Vent. (Function 16)
- 20:56 Upper Outer Choke Valve Vent. (Function 15)
- 21:42 Inner Bleed Valve Open. Flow Count .80 (Function 16)
- 21:42 Outer Bleed Valve Open. Flow Count .80 (Function 17)
- 21:47 Inner Bleed Valve Close. Flow Count .65 (Function 17)
- 21:47 Outer Bleed Valve Close. Flow Count .77 (Function 17)
- 21:48 Upper Inner Choke Valve Open. Flow Count .70 (Function 18)
- 21:49 Upper Outer Choke Valve Open. Flow Count .86 (Function 19)
- 21:53 Upper Inner Choke Valve Close. Flow Count .79 (Function 19)
- 21:53 Upper Outer Choke Valve Close. Flow Count .57 (Function 19)
- 21:54 Inner Bleed Valve Vent. (Function 18)
- 21:54 Outer Bleed Valve Vent. (Function 17)
- 21:57 Upper Inner Kill Valve Open. Flow Count .68 (Function 18)
- 21:57 Upper Outer Kill Valve Open. Flow Count .74 (Function 19)
- 22:03 Upper Inner Kill Valve Close. Flow Count .82 (Function 19)
- 22:04 Upper Outer Kill Valve Close. Flow Count .60 (Function 19)
- 22:04 Upper Inner Kill Valve Vent. (Function 18)
- 22:04 Upper Outer Kill Valve Vent. (Function 17)
- 22:05 Lower Outer Choke Valve Open. Flow Count .75 (Function 18)
- 22:06 Upper Inner Choke Valve Vent. (Function 17)
- 22:06 Upper Outer Choke Valve Vent. (Function 16)
- 22:14 Lower Test Rams Close. Flow Count 18 gallons (Function 17)
- 22:25 Lower Test Rams Open. Flow Count 21.25 gallons (Function 17)
- 22:31 Lower Inner Choke Valve Close. Flow Count .78 (Function )
- 22:31 Lower Outer Choke Valve Close. Flow Count .81 (Function )
- 22:33 Lower Inner Choke Valve Vent. (Function )
- 22:33 Lower Outer Choke Valve Vent. (Function )

**29/05/2010**

- Standby waiting further direction from Houston
- Afternoon was informed TOP Kill has been abandoned.

**30/05/2010**

- 01:58 Lower Inner Choke Valve Open. Flow Count .91
- 01:58 Lower Outer Choke Valve Open. Flow Cont .76

 <b>CAMERON CONTROLS</b>		<b>Date 5/MAY/2010</b>
<ul style="list-style-type: none"> <li>• 02:08 Lower Inner Choke Valve Close. Flow Count .74</li> <li>• 02:09 Lower Outer Choke Valve Close. Flow Count .99</li> <li>• 02:13 Lower Inner Choke Valve Open. Flow Count .94</li> <li>• 02:14 Lower Outer Choke Valve Open. Flow Count .99</li> <li>• 02:37 Lower Outer Choke Valve Close. Flow Count .71</li> <li>• 02:38 Lower Inner Choke Valve Close. Flow Count .84</li> <li>• 02:39 Lower Inner Choke Valve Vent.</li> <li>• 02:39 Lower Outer Choke Valve Vent.</li> <li>• 02:57 Lower Inner Kill Valve Open. Flow Count .80</li> <li>• 02:57 Lower Outer Kill Valve Open. Flow Count .93</li> <li>• 03:01 Lower Outer Kill Valve Close. Flow Count .96</li> <li>• 03:01 Lower Inner Kill Valve Close. Flow Count .67</li> <li>• 03:01 Lower Inner Kill Valve Vent.</li> <li>• 03:01 Lower Outer Kill Valve Vent.</li> <li>• 03:16 Upper Inner Choke Valve Open. Flow Count .60</li> <li>• 03:17 Upper Outer Choke Valve Open. Flow Count .58</li> <li>• 03:18 Upper Outer Choke Valve Close. Flow Count .85</li> <li>• 03:18 Upper Inner Choke Valve Close. Flow Count .63</li> <li>• 03:20 Upper Inner Choke Valve Vent.</li> <li>• 03:20 Upper Outer Choke Valve Vent.</li> <li>• 03:24 Inner Bleed Valve Open. Flow Count .80</li> <li>• 03:24 Outer Bleed Valve Open. Flow Count 1.06</li> <li>• 03:25 Outer Bleed Valve Close. Flow Count .62</li> <li>• 03:25 Inner Bleed Valve Close. Flow Count .69</li> <li>• 03:27 Inner Bleed Valve Vent.</li> <li>• 03:27 Outer Bleed Valve Vent.</li> <li>• 03:56 Upper Inner Kill Valve Open. Flow Count .52</li> <li>• 03:56 Upper Outer Kill Valve Open. Flow Count .59</li> <li>• 04:00 Upper Outer Kill Valve Close. Flow Count 1.01</li> <li>• 04:00 Upper Inner Kill Valve Close. Flow Count .62</li> <li>• 04:05 Choke and Kill Valve Close. Flow Count 1.4</li> <li>• 04:06 Upper Inner Kill Valve Vent.</li> <li>• 04:06 Upper Outer Kill Valve Vent.</li> <li>• 04:08 Lower Pipe Ram Close. 21.50</li> <li>• 08:30 Meeting held with Rig Crew to walk through next step of the operation. Pull clump weight up 100' off mud line and disconnect jumpers from manifold.</li> <li>• 09:34 Began operations to lift clump weight.</li> <li>• 09:50 Completed lifting of clump weight off bottom. Rig moving in prep of removing the jumpers to the manifold. Frack head has been disassembled and laid down on the deck.</li> <li>• 17:30 Received call from Johnny Windburg and Gary Ellis (BP Reps) to meet in the Venom Rov Connex to witness disconnect of the Mini connectors on the Junk Shoot Manifold. Sling was connected to the Kill Side (Header B) connector first. Crane Op applied approx 1000 lbs over pull. 500 psi pressure was applied via the ROV stab and the two valves were moved to the open position. Pressure was increased to 1000 psi and indicator rods began to move. Observed connector rod move to the fully open position (indicator line on the override rod was visible). Connector was then lifted up and off of the hub. No concerns/issues observed. ROV then connected to the Choke Side (Header A) Mini Connector. 1000 lbs of over pull applied to the load. ROV applied 1000 psi via hot-stab and rotated the valve to the open position. Observed connector rod move to the fully open position (indicator line on the override was visible.) Connector was then lifted up and off of the hub. ROV then flew down to inspect the hubs. NOTE: The AX gasket on the Choke/A Header was left in the Hub. It was determined that operations to retrieve the co-flex lines off bottom would continue and we would come back later to inspect the Kill/B side. Plans are to keep the gasket in place to protect the seal area in the hub.</li> <li>• 18:40 Retrieval of the LDIS to surface underway</li> </ul>		



Date 5/MAY/2010

- 19:00 ROV inspected Kill/B side Hub connection. NOTE: The AX gasket was left in the hub as on the Choke/A header. Geary Ellis and I (carter) agreed it would be best to leave the gaskets in place at this time to protect the preps until the connectors are sent back down.
- 19:30 Began operations to move the Q4000 over 2000 ft. LARS system work underway to pay out MUX and hotline. No additional clamps were available so duct tape and tie wraps will be used to secure the MUX and hotline to the tugger line.
- 18:30 Signed JSA and work permit for paying out 2000 ft of hot-line and mux cable
- 18:45 Payer out 2000 ft of hot-line and mux cable in order for the Q4000 to be in the safe zone.
- 03:40 Q4000 made a directional change. Monitored mux cable and hot-line at the LARS location and @ the ROV feed. Also monitored the PETU for pressure and comms check. No change all readings are good.
- 18:00 Monitoring PETU, power, comms and pressures throughout the night. All readings good.
- 23:30 Supply boats thruster causing hotline and mux cable to rub up against tugger cable. Spoke to company rep, boat changed direction of thruster allowing hotline and mux real to settle.
- 24:00 Readings indicate normal on PETU.
- 06:00 Checked power, comms, and pressures all readings indicate normal.
- 06:30 Handover with day shift.

31/05/2010

- Monitor Control System status.

01/06/2010

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 06:30 Handover with day shift.

02/06/2010

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 06:00 Handover with day shift.

03/06/2010

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 18:30 Adjusted Level Wind on Mux Reel (repositioned guide).
- 06:00 Handover with day shift.

04/06/2010

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 05:30 Handover with day shift Eloy Martinez and Efrain Martinez.

05/06/2010

- Monitor Control System Status.
- 05:30 Monitoring Control System status.
- 09:45 Started Oceaneering air compressor to pressure up the Air Tugger, MUX Reel and the Hot Line Reel for a quick check to ensure that the equipment is still in good working order.


**CAMERON  
CONTROLS**
**Date 5/MAY/2010**

- 10:30 Continued monitoring the Control System Status.
- 12:15 Started with Safety meeting, reviewing and signing of JSA and permit to start the pay out on the Air Tugger MUX Reel and the Hot Line Reel.
- 16:15 Payed in up to the clump weight.
- 18:00 Worked on untangling the Mux cable and Hotline. 1<sup>st</sup> shift and 2<sup>nd</sup> shift working together on task.
- 20:00 Paying out 1400 ft of hotline and mux cable to safe zone as per instructed by BP and Transocean.
- 21:00 Checked power and comms, no change all readings are good.


**CAMERON  
CONTROLS**
**Date 5/MAY/2010**

- 19:00 ROV inspected Kill/B side Hub connection. NOTE: The AX gasket was left in the hub as on the Choke/A header. Geary Ellis and I (carter) agreed it would be best to leave the gaskets in place at this time to protect the preps until the connectors are sent back down.
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**31/05/2010**

- Monitor Control System status.

**01/06/2010**

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 06:30 Handover with day shift.

**02/06/2010**

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 06:00 Handover with day shift.

**03/06/2010**

- Monitor Control System Status.
- 18:00 Monitoring Control System status throughout the night.
- 18:30 Adjusted Level Wind on Mux Reel (repositioned guide).
- 06:00 Handover with day shift.

**04/06/2010**

- Monitor Control System Status.
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- 05:30 Handover with day shift Eloy Martinez and Efrain Martinez.

**05/06/2010**

- Monitor Control System Status.
- 05:30 Monitoring Control System status.
- 09:45 Started Oceaneering air compressor to pressure up the Air Tugger, MUX Reel and the Hot Line Reel for a quick check to ensure that the equipment is still in good working order.

[AF]

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**Material Request Register (MR)**

Material Request No	Date Raised	Raised By	Submitted To	Airway bill no.	Parts Shipped	Partial Delivery Rec'd

**Engineering Change Notification Register (ECN)**

ECN No	ECN Description	Work Completed by.	Date closed out

**Job List. (Details of Work scope to be carried out.)**

Item	Description.	Action By	Date Completed
1	Locate Job BOX	CE/WL	5/5/10
2	Locate Nitrogen Boost Pump	CE/WL	5/5/10
3	Locate Hot line (qty 4, 100')	CE/WL	5/5/10
4	Locate PBOF cables (qty 2)	CE/WL	5/6/10
5	Verify qty. and type of Fluid sent in by Transocean (notify Geoff and Jason)	RP	5/6/10
6	Seal Test STM I and STM II PBOF cables	EM	5/7/10
7	Seal Test Roughneck connector prior to running POD subsea		
8	Locate 1" crimp fittings sent by Houston	EM	5/8/10
9	Check precharge on accumulator bottles	LS	5/9/10
10	Rig ET to wire up Conex and set UPS		
11	Perform Deadman test	CE	5/12/10
12	Move POD to Upper Work Platform once welding and load test of LARs is complete	CE, WL, LS	5/13/10
13	Continue working with RIG ET/ETO on Power for UPS, Intercom, Phone, Internet connection in connex	Helix	5/13/10
14	Slip Mux / Hotline in Sheave once load test of LARs is complete	CE/WL	5/13/10
15	Perform Pre-deployment Function test of POD once on Upper deck	Team	5/13/10
16	Install ROV handles on POD (Qty: 2)	RP	5/13/10

[APG] of [ANP]

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