SECTION B

OPERATIONS

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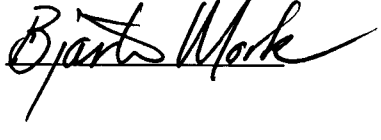
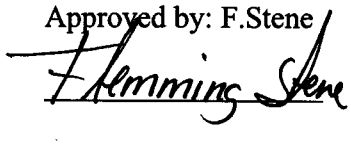


Approved by: F.Stene



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1 DRILLING SUMMARY AND EXPERIENCES

1.1 Summary

Total time drilling and P&A	1449 hours (60,4 days)	
Operational time	1189 hours (49,5 days)	82 %
Downtime (incl. WOW)	260 hours (10,8 days)	18 %
Rig on contract	10.03.2002 at 22:00 hours	
Rig off contract	02.06.2002 at 15:00 hours	
Water depth	1002 m at final spud location,	7051501,90 mN, 614148,30 mE

Rig Scarabeo 5

1.2 Mobilizing

Total time used:	54,5 h	
Operational time:	48,5 h	89 %
Downtime:	6 h	11 %

1.2.1 Experiences

Rig on contract 10.3.02 from BP Havsule (6404/11-1). Sailed with all pipe in derrick with 2 knots. Arrived location 11.March at 20:30 hrs. Performed DP tests for most of 12. March. Was delayed with boat offloading to the rig, as Saipem would not unload the boat while positioning the rig as planned. 8 LBL transponders were prelayed in December 2001. Positioning was done by equipping the ROV with a Simrad transducer communicating with the 8 transponders while setting 3 marker buoys close to the spud position. Final positioning of the well was done after setting of the 30" conductor while logging position of the ROV holding on to the four corners of the hydrate plate. The rig had to operate its DP system without the HiPap system while the ROV was communicating with the LBL transponders

1.3 36x42" hole section spud, first attempt.

Total time used:	47,5 h	
Operational time:	46,5 h	98 %
Downtime:	1 h	2 %

1.3.1 Drilling

This section was drilled with a 26" x 36" dual stage HO, 42" Hole Opener and a 17 ½" 10GMODPD rerun bit. An Anderdrift survey tool was used to provide inclination. Considering the wellhead and the BOP stack it was important to keep the inclination in the upper part of the section below 1.5deg. However, the Anderdrift indicated inclination around 3 deg at 1036m MD, and was increasing to 4-5 deg at 1047m MD. Inclination might have been higher since the Anderdrift could only measure inclination between 0 deg and 5 deg. A single shot survey was performed to confirm the Anderdrift results. The single shot inclination was measured to 5.5 deg.

The seabed was unexpected hard, which is the anticipated reason for building angle to such values.

The well bore was abandoned and respud was made using the 8½" BHA planned for the pilot hole.

1.3.2 Recommendations:

Using a BHA containing a PowerPulse MWD tool. The azimuth measurements would improve the ability to keep the BHA straight during spudding. However, combined with large hole openers, the azimuth might be affected by drill string magnetism, although this should still be usable in practice.

Issue spud guidelines beforehand based on experiences from this well (for hard formation on seabed).

Have back-up equipment available to achieve more flexibility if contingencies arise; motors, stabilizers, etc. for different BHAs if needed include steerable as well as rotary options.

1.4 8 ½" Pilot Hole Section (6305/4-U-3)

Water depth:	1001 m	
Total depth of section:	1751 m RKB	
Total time used:	95,5 h	
Operational time:	92 h	96 %
Downtime:	3,5 h	4 %

Spud Coordinates: 7051493,0 mN and 614154,0 mE. (Same coordinates as for the target of the well at 2760 m TVD.)

1.4.1 Drilling

Prepared 6 3/4" MWD/LWD for 8 1/2" BHA with a XS4G Security DBS bit. Failed to install radioactive source, and had to reinstall it in LWD tool. RIH to 968 m and performed a

shallow gas drill. Continued to run pipe in water and tagged bottom at approximate 1026 m. Verified position with ROV and adjusted the rig position. Spudded and started drilling 8 1/2" pilot hole with low weights from 1026 m. Drilled and surveyed 8 1/2" hole from 1028-1751 m. Aimed for an inclination less than 1,5 deg in the upper 80 m without success. Collected cuttings sample successfully with ROV during connections. Drilled with seawater and pumped HiVisc pills for hole cleaning. Displaced hole to 1.30 sg mud before pulling out of the hole. ROV installed marker buoys around well.

The section was drilled in 34 drilling hours with an average penetration rate of 51 m/hr to a total depth of 1751m MD. The focus was on detecting sand layers where gas potentially could accumulate and initiate a slide and hence all drilling parameters where adjusted to fit this purpose. A PowerPulse tool was used to provide directional control and survey data, and also to send real time data to surface. Formation data was also measured and stored by the GVR, Vision675 and ISONIC tools respectively. Due to the high inclination on the run, (around 3° in average), it was decided to do another respud for the 36”x42” hole section.

Drilling was completed in one bit run with 100% data acquisition, real time and memory.

1.5 17 ½” Pilot Hole, Re-spud

Water depth:	1002 m	
Total depth of section:	1105,5 m	
Total time used:	30,5	
Operational time:	30,5 h	100 %
Downtime:	0 h	0 %

1.5.1 Drilling

This was the third spud, and was performed using a rotary BHA assembly with the 10GMODPD rerun bit and PowerPulse MWD tool to control directional data and transmit surveys. The section was drilled in 10 drilling hours at an average ROP of 8 m/hr from 1026m MD to 1105m MD.

After the bit was spudded on bottom, the first few meters were jetted to be able to maintain low inclination at the top of the hole. Survey taken just above seabed to ensure verticality, then lowering very slowly with no weight and no rotation, high flow.

1.5.2 Recommendations:

Incorporate spud experience as “lesson learned”. Use this approach in the future if sea bed conditions are similar.

Use ROV and site surveys to help.

1.6 36”x42” Hole Section / 30” Conductor

Total depth of section:	1108 m	
Depth of 30” shoe:	1105 m	
Total time used:	81 h	
Operational time:	80 h	99 %
Downtime:	1 h	1 %

Final wellhead coordinates: 7051501,90 m North and 614148,30 m East.

1.6.1 Drilling

During the 42’ hole opening the Anderdrift used in the original spud BHA was replaced with a PowerPulse MWD tool. This BHA contained a 26” x 36” Hole Opener assembly combined with a 42” Hole Opener. The section was opened in 11.8 drilling hours at an average ROP of 6.7 m/hr.

The azimuth measurements of the PowerPulse were slightly affected by drill string magnetism caused by the large Hole Openers in the BHA, so only inclination was used during the check shots.

The Hole Openers were spaced out in order to make a 42” hole to 1050m MD and 36” hole to 1105.5m MD.

1.6.2 Casing

Ran 6 joints conductor including 36” housing joint and conductor shoe. Ran 2 joints 5” fibreglass pipe and 5 joints 5” S-135 DP cement stinger. Landed casing with 2 m stickup, and 1.5 deg on bulls eye. Sat down casing weight and got 4 deg on bulls eye. Picked up 0.8 m, and moved rig 30 m port. Observed 0.8 deg on bulls eye. A ROV removable inclinometer was attached to the 36” running tool and also showed 0.8 deg.

Prepared to mix 54 m3 1.47 SG cement, but aborted cement job after 52 m3 due to plugging in the mix water supply (plastic fallen into the mud pit). Dropped Titus dart and waited 20 min to let the dart seat. Opened ball valve on 30” tool, and tried to apply pressure. No go. Flow through ball valve on running tool, Titus dart not seated. Aborted Titus job and WOC for 18 hrs. Dart was later found stuck in lower kelly cock on cement stand. The valve was not in fully open position. Moved rig 30 m back and disconnected 30” running tool, bulls eye (and inclinometer) still showing 1 deg.

1.7 26” Hole Section / 20” Conductor

Total depth of section: 1756 m

Depth of 20" shoe:	1749,1 m	
Total time used:	288 h	
Operational time:	176 h	61 %
Downtime:	112 h	39 %

1.7.1 Drilling

A XT02 415 Security insert bit drilled first 10 m down to 1115 m. Had then to pull out of the hole and WOW due to yellow alert on the DP system. Stabbed back in after 31hours. Rig moved constantly inside a 5 m radius without intention.
Drilling was resumed with 20-25 tons WOB after getting the stabilisers out of the 30" conductor. RPM was held at 130, which is the maximum for the top drive in low gear. Low gear is needed when making connections with 6 5/8" drill pipe. 10 m3 Hi-Vis pills were pumped twice per stand.
Drilled and surveyed 26" hole to 1381 m before the weather condition caused yellow alert on the rigs DP system again. The open hole was then displaced to 1.3 sg mud prior to pulling out for WOW. At this time thruster no. 8 was taken out of service due to overheating. The cause was found to be in an electrical card making the thruster to continuously move in all directions. The DP system was still in yellow alert when thruster no. 8 was back in operation. A new period of 17 hours WOW took place before the bit again was stabbed back into the hole and drilling resumed.

At 1440 m the weather came up again causing yellow alert. Again, the open hole was displaced to 1.30 sg mud and the bit pulled 4 stands above seabed. Another period of 18 hours WOW took place before running back in hole. The hole was in good condition and the 26" hole was now drilled to TD of 1756 m with 20-25 tons WOB and 130 RPM.

Cuttings samples were taken with the ROV at the hydrate plate on every connection with special made sample cans.

A 30 m3 Hi-Vis pill was swept at TD and a 5 stands wiper trip performed prior to displacing the hole to 1.30 sg mud. Hole angle at TD was 0.1 deg. The bit was pulled out and the 26" BHA racked in the derrick. Every connection on the 6 5/8" landing string for the 20" casing was checked when POOH for the future left hand rotations when preloading the 18 ¾" wellhead.

This 26" section was drilled to 1756m MD in one bit run over 20.4 drilling hours and with an average ROP of 32 m/hr. A 9" PowerPulse MWD tool was used for real time directional measurements. The final inclination of the section was 0.14deg with an azimuth of 131.08deg and the highest inclination reached 2.00deg.

A CDR tool was also used to provide resistivity, gamma ray and APWD measurements both in real-time and in recorded memory.

1.7.2 Casing

The cement head, wellhead, rigid lockdown running tool and cement plugs were made up prior to the 26" BHA. Cement head had 2 pups on top and none below, so that it could not be made up with the iron roughneck hence manual pipe handling was performed. 2.5 m clearance is needed below the large OD of the cement head

When starting to run 20" casing it was discovered that both float collars taken onboard were welded onto the casing joints in the wrong direction. With a cutting torch the check valve was removed from one of the float collars. 2.5 hours were lost on this operation. DrilQuip FB60D connections were used and anti rotations keys installed on every joint. Two stops in running casing due to malfunction of the forward gantry crane caused another 2 hours lost time.

The rigid lock down tool with top wiper plug was made up and the casing run on 6 5/8" landing string. The rig was positioned (ca. 12 m away from center) and the casing stabbed into the well. No hole problems were encountered and the 20" casing was landed with the shoe at 1749 m.

Prior to starting the 20" cement job the remotely operated low torque valve on the cement head could not be opened (1 hour lost).

246 m3 of 1.60 sg rapid cement slurry (cement class A) was mixed and pumped at 1000-1200 lpm. The slurry was made gas tight with Micro block. The cement was displaced with seawater, the wiper plug bumped onto the float collar and the casing was pressure tested to 100 bar on top of seawater.
The 18 ¾" wellhead was then pre-loaded to 1000000 lbs with 40 tons over pull on the rigid lockdown tool. The 18 ¾" wellhead was then over pull tested with 50 tons over casing weight.

1.7.2.1 Recommendations

It took 1 hour to make up the rigid lockdown tool to the upper cementing running mandrel, and another 1.5 hrs to make up cement plugs, wellhead, fill this with water/glycol etc. The wellhead handling and make up of the cement plugs involved lots of manual pipe handling and took 2.5 hrs longer than if it had been pre-made. Altogether 3 hours could be saved and manual make up could have been avoided if the tools had been pre-made onshore. However, there is always a risk of damage to the rigid lockdown tool during transport if it is pre-made up to the 18 ¾" housing, but should be evaluated for future deepwater wells. In any case a long enough pup joint to have ca. 2.5 m stick out below the skirt of the rigid lockdown tool will eliminate manual pipe handling.

1.7.3 BOP running

A lot of time was spent on preparing for running the BOP in the water, 20 hours from rigging up until the BOP was in water. Since no pod wires are run in deep water, the attachment and securing of the pod cables to the BOP is very time consuming and primitive. In addition the

cabling between the BOP, Instrumented Riser Joint and back to the pods are very time consuming to connect and secure. It is recommended that Saipem make arrangement for easier hook up of the cables as soon as the Cameron BOP is back in Florø. Working platforms at different levels are recommended for easier access and increased safety of personnel.

3.5 hours were lost on function testing the BOP below rotary table due to slow functioning of BOP rams (especially Lower Shear Rams). This was found to be due to the accumulator for the subsea manifold regulator had been pre-charged to 1000 m water depth value prior to the final function testing. The pre-charging of this regulator has to be done after the final function testing.

After the BOP was run in the water, an alarm was received from the Subsea Electronic Module with failure on the Pod Selector solenoid valve. The valve was changed out.

The BOP was finally back in the water, 31.5 hours after starting rigging up for running the BOP. The kill/ choke lines were tested with BOP just below splash zone and then every 10 joints to 400 bar.
Running the riser on deepwater wells require the pod cables, instrumented riser joint cable and fill-up valve cable to be attached to the riser by two men in the riding belt. Recommendation is to have dedicated clamps made for attachment of cables to the riser in stead of seafastening strops. Also, the pressure testing of kill/ choke and conduit lines could be optimized by re-designing to a common test tool for two bores simultaneously with 2" inlet so that the cement pump could be used in stead of the subsea test pump.

1.7.3.1 Recommendations:

Saipem to come up with a plan for improving time for running BOP on deepwater wells: easier access onto the BOP/ working platforms, fixed arrangement for securing pod cables, IRJ cables etc, improved clamping system of cables to the riser, improved test tools for kill/ choke/ booster lines.

1.8 17" Contingency Section

Total depth of section:	1761 m	
Total time used:	31 h	
Operational time:	25,5 h	82 %
Downtime:	5,5 h	18 %

1.8.1 Drilling

20" casing was drilled out with a 17" Smith MSDGHC milled tooth bit. The cement and 3 m of new formation was drilled in 3,5 hours. (Had to pull string above BOP because of strong currents)

1.8.2 LOT

Performed the LOT by using 1,20 sg WBM. The test confirmed a formation strength of 1,40 sg EMW at 1761 m RKB. In this section LOT of minimum 1,40 sg EMW was needed to avoid drilling the 17" contingency section, which then was achieved.

1.9 12 ¼" Hole Section / 9 5/8" Casing

Total depth of section:	2725 m	
Depth of 9 5/8" shoe:	2719 m	
Total time used:	264 h	
Operational time:	221 h	84 %
Downtime:	43 h	16 %

1.9.1 Coring

An 8 ½" core was cut in the Ooze formation from 1761-1780m. A FCS (Full Closure System) was used successfully. The recovery was 94,3 % and this was the first core successfully retrieved from this type of formation on the Norwegian sector.

1.9.2 Drilling

This section was drilled from 1756m MD to 2725m MD in one run by using a Smith MRS 89 PX PDC bit at an average rate of 42m/hr. The section was lengthened from planned 2696 m to 2725m due to unstable borehole in the deeper part of the section. A PowerDrive Rotary Steerable tool was used to steer the well path from the re-spud location to a location directly below the original spud location and at the center of the geological target. Real-time logging while drilling was provided by a RAB-PowerPulse-CDR-ISONIC-ADN8 tool string.

The section was drilled by using 1.30 SG glydril mud, which is a water based KCL mud saturated with MEG for hydrate inhibition.
The hole cleaning was good, using a flow rate equal to 3750 LPM. Good LWD data achieved.

During pulling out of the hole a drag of 20 tons was experienced. Ran back to bottom and circulated hole with a flow rate of 4000 lpm. Pulled then out again without any drag.

A wiper trip included RAB, PowerPulse and CDR was performed later due to stuck wire line tools. There was an additional 29 meters drilled during the wiper trip making TD 2725m MD.

1.9.3 Logging

Wireline logging was performed and the logging tools got stuck. The wireline weak point broke when attempting to free the tools. The tools were successfully fished on drill pipe and a wiper trip was performed after this.

Run #	Tool string	Logged from	Logged to	Tot hrs	Comments
1A	PEX-HALS-SP	2692.0	996.0	9.5	
1A	DSI-VSP-GPIT-EMS	2674.0	1765.0	39.5	

1.9.4 Casing

Whilst running 9 5/8" casing, the ROV was connected to the BOP stack. In case of emergency the casing could be cut with 5000 psi pressure from the ROV pump. In the planning phase a shear test on 9 5/8" casing (53,5 lbs/ft, P110) was performed. In order to shear the casing a pressure of approximate 4500 psi was needed. (See separate report on the test)

During rig up of cement stand and remote control panel for cement head, BJ engineer expressed discomfort with the remote system and that there were technical problems with the system. After some trouble shooting, the equipment was declared to be in working order.

10 m3 of spacer were pumped with rig pumps. Remote control panel was operated to release ball. 14 m3 of cement was mixed and pumped with cement pumps. Remote control panel was operated to release dart. Dart was displaced with rig pumps and top wiper plug was sheared at correct number of strokes.

The cement was further displaced using rig pumps. However, the bottom plug sheared out in the float collar much to early. The top plug was bumped as normal. Volume difference between bottom and top plug was 30 m3. This should have been equal to the cement volume i. e. 14 m3. The most likely explanation to this is that the ball was accidentally released when trouble shooting the remote control panel prior to pumping spacer. The consequence of this would have been poor separation between spacer and cement.

During drill out, the cement in the shoe track was hard, and a sufficient (1.57 sg equivalent mud weight) leak off test obtained in the 9 5/8" shoe.

1.9.5 Recommendations:

Powerdrive900 – This tool worked very well on the 12 ¼" section, giving a very accurate position within the target. Consider using this tool again for similar vertical applications.

Optional Wireline – clarify acceptance criteria for LWD data, so that there is a clear understanding of requirements for any wireline run after drilling data is obtained.

Mobilize adequate fishing equipment prior to operation in case the weak point breaks in wire line and cut and thread is not an option.

BJ must improve their remote control for the cement head and improve the BJ operators knowledge of this equipment.

1.10 8 ½" Hole section / 7" liner

Total depth of section:	2975 m	
Depth of 7" shoe:	2974 m	
Total time used:	366 h	
Operational time:	309 h	84 %
Downtime:	57 h	16 %

1.10.1 LOT

After drilling the shoe track and 7 m of new formation, a LOT was performed at 2732 m. A leak off pressure of 72 bars was achieved which correspond to an EMW of 1,57 sg. This was sufficient to drill the section as planned.

1.10.2 Drilling

A 8 ½" PDC bit, type MA99PX, was run in hole, but failed to drill the float collar. When getting rough with the bit bouncing up and down, some rubber, both red and black, was circulated out of hole, but the bit was still not able to drill. Pulled out and changed to a milled tooth rock bit, type MHT13GK, IADC 1-3-7. Drilled float with no problems. The same bit drilled down to core point at 2767 m in 6 hours with controlled ROP of 7.5 m/hrs. The ROP was instructed to be limited to 10 m/hrs due to picking of core point.

After coring from 2767 m to 2818 m, the MA99PX was rerun and drilled to TD at 2975 m in 10 hours with average ROP of 16 m/hrs. The well was circulated at TD prior to pulling out for logging. On the first trip out of the hole, tight hole was experienced from the third stand pulled. Backreaming was necessary with full focus on pump pressure. The limit was set at 20 bar pressure increase when pulling into tight sections. A wiper trip was made back to bottom from the 9 5/8" shoe and a new bottoms up circulated with 120 RPM on the string. The hole was in very good condition on the final trip out.

The BHA contained GVR, Vision675 and PowerPulse tools. The coring point was picked using the At Bit Resistivity measurement from the GVR.

1.10.3 Coring

Core No	Top Interval	Bottom interval	Recovery (m)	Recovery (%)	BHA No
1	2769 m	2788 m	18,85	99,2	13
2	2788 m	2807 m	19,00	100	14
3	2807 m	2817,5 m	10,30	96,1	15

The reservoir was cored in three runs, all with 60 ft core barrel. Length of core barrel was decided in advance to secure good quality of the cores. The two first barrels were filled up, but the last core was aborted after 11 m due to slow ROP, and it proved to be shale in bottom of the core.

Use of self closing core system worked very well. The core bit used, was designed for unconsolidated formations, and therefore it had very slow progress in shale and cemented sandstone. In every core run, the ROP varied between 15 m/hrs and 0.5 m/hrs.

During the drilling and coring phase, the mud system proved stable. During the coring operations, the booster pump was run to circulate mud for treatment.

1.10.4 Logging

A total of 6 logging runs were made in 4.5 days and no hole problems were experienced. TD logger was identical to TD Driller on first runs. However, the last logging run held up 10-12 m off bottom. Extensive gas sampling was carried out with the MDT tool with the tool stationary connected to the formation for 13 hours. A total of 1 m3 formation fluid was pumped into the hole during the sampling period without seeing any gain on the trip tank. During the following Liner clean up trip, 16 % gas was measured in the mud returns.

Run #	Tool string	Logged from	Logged to	Tot hrs	Comments
2B	SP-HRLA-PEX	2975.0	2569.0	6.5	Good efficient log run
2A	CMR+ -HNGS	2900.0	2740.0	10.5	Good efficient log run. Sticky at one station with 45min sampling.
2A	VSP	2960.0	1100.0	12.5	2 x CSAT, 10m level spacing. Good data up to 2000m. Dubious quality checkshot data above 1749m.
2A	MSCT	2847,0	2755.5	8	Efficient run. Recovered 26 out of 27 cores.
2A	MDT	2854.3	2828.0	43	Pressure and fluid sampling. Some points needed repeating. Good pressure profile and good quality samples
2B	FMI-DSI	2964.0	2713.0	10.5	Some computer crashes due to FMI logging down. Very good quality FMI log. DSI log quality very good in open hole. Ringing effect in cased hole resulted in only a short useful log

1.10.5 Liner

(Formally this job was done in the testing phase of the well, ref separate report)

A clean up trip was made prior to running the 7" liner. A rotating, hydraulically set Liner hanger was run. The liner was set with shoe at 2974m (1 m off bottom) and with top of liner hanger at 2628.5m.

Some problems were encountered during the start up of the cement job with plugged bulk line from cement day tanks to the cement room. Some 700 litres of cement slurry was pumped into the landing string when both cement delivery lines were plugged. 2.5 hours were spent on unplugging one bulk line before the cement job again started. On the first attempt the cement mixer was run in automatic density control mode while the job was finally successfully carried out with manual weight control of the slurry. The cause for plugged lines on the first attempt is uncertain, either bad radio communication with the cement room or too much air pressure on the bulk silo for the cement supply.

A total of 9.2 m3 of 1.9 sg cement slurry was pumped. Having dropped the dart, it took a few minutes before displacement with the rig pumps was started. (Liner rotation was started in the meantime). The top plug bumped in the landing collar 3.6 m^3 too early. The liner and top plug was differentially pressure tested to 190 bar. The liner packer was set and pressure tested to 150 bar. When pulling out of the PBR with the Liner Hanger Running tool some 20 bar back pressure was obtained on the running string, indicating spacer and cement above the Liner top. During reverse circulation, cement returns were also dumped in addition to the 15 m3 spacer pumped ahead of the cement.

The well was displaced to 1.32 sg calcium chloride brine for testing operations and a CBL/ USIT log was run to check the quality of the cement. Good zonal isolation between water and gas was found and good quality cement covered the lower 50 m of a 90 m long liner lap.

A DST string was then run, see testing report.

1.11 Plug and Abandonment

Total time used:	194 h	100 %
Operational time:	164 h	85 %
Downtime:	30 h	15 %

1.11.1 Squeeze of reservoir

A BJ cement 9 5/8" cement retainer was set at 2750 m. Injection rate was established with 400 l/min at 82 bar SPP. 3 m3 of cement slurry was squeezed into the formation with a rate of 600 l/min at 70 bar. A cement plug was set from 2750 m to 2500 m.

1.11.2 Cutting and retrieving of 9 5/8" casing

The 9 5/8" casing was cut at 1345 m with upper annular closed on annular swivel sub. Got a drop of 60 bar in standpipe pressure indicating that casing was cut. When opening the annular mud losses to the formation was observed with a rate of 3 m3/hour. The calculated ECD at 20" shoe was 1.46 sg, and the leak off was 1.40 sg.

The wear bushing was retrieved and a spear and Multipurpose tool was run in hole. The seal assembly was pulled free, but it was not possible to pull the casing free, max over pull 130 tons. The assembly had a "weak" point in the cross over below the Dril Quip multi purpose tool. The MPT was laid out and the spear was rerun. After one hit with the jar, the casing came free and was pulled out.

When laying down the casing, a manual elevator was used, as a leak in the rotating head on the top drive made it impossible to use the BX- elevator.
Mud losses continued during pulling of the casing, a total of 26 m3 were lost.

1.11.3 Top cement plug

43 m3 cement slurry with "A" cement was set from 1320 m with a Parabow below (set at 1320 m). Observed 10 m3 of losses while pumping and displacing cement. The losses continued when pulling out, a total of 88 m3 were lost to the formation. Theoretical this leaves around 190 m of cement in the 9 5/8" x 20" casing annulus. A new top plug was set from 1290 m to 1050 m about 18 hours after first plug. No losses were observed during this second top plug job. The plug was tagged at 1063 m with 10 ton 18 hours after cement was in place. When pressure testing the plug, the pressure dropped with a constant rate of 20 bar in 10 minutes. The test was repeated a few hours later, but the same drop rate was observed. Pressure test was accepted as good enough as it was no indication of communication to the formation.

1.11.4 BOP pulling.

The BOP was pulled very efficiently, in approximate 37 hours. No problems with hydrates in the connector area, which was inspected by the ROV.

1.11.5 Cutting/retrieval of the wellhead.

A Weatherford MOST tool was used to be able to retrieve the wellhead in the same run as it was cut. The cutting operation was done in two hours, but it was not possible to land the MOST tool due to accumulation of steel cuttings inside the tool. The BHA was pulled and Dril Quip wellhead running and retrieving tool was run. After making attempts with straight pull and circulation with 4000 lpm, the wellhead came free when the rig was moved a little off the location.

Nipling down the hydrate plate was done without any special problems. From the retrieved 30" casing it was observed that TOC was 4 m below seabed.

The transponders were collected from seabed by the use of a dedicated transponder basket in this phase. Hence no rig time was to be spent on this. Due to problems with a ROV winch the rig had to wait some few hours before transit to Florø was initiated.

1.11.6 Recommendations:

Evaluate to reduce mud weight prior to cutting 9 5/8" casing. If so is done, be aware of risk of U-tubing.

When the leak off below the 20" shoe is low, like 1.40 sg, it should be evaluated to set a mechanical plug as seat for the cement plug to prevent losses.

On deepwater wells, the budget should include one run to cut wellhead and one to retrieve it.

Modify transponder basket to fit buoyancy elements.

GENERAL INFORMATION ON WELL 6305/4-1

Field : ORMEN LANGE **Country** : NORWAY
Licence : ORMEN LANGE UNIT **Installation** : SCARABEO 5
UTM zone : 31 **Central Median** : 3' E **Horiz. Datum:** ED50

Location coordinates:		**Surface**	**Target**
UTM	**North [m]:**	7051501,9	7051493,0
UTM	**East [m]:**	614148,3	614154,0
Geographical	**North :**	63 34'17.76"	63 34'17.00"
Geographical	**East :**	05 17'55.93"	05 18'25.29"

Water Depth: 1002,0 **m** **Reference Point Height:** 25,0 **m**
Formation at TD: KYRRE at 2880 m MD

Operators: NORSK HYDRO PRODUKSJON A/S **Share:** 17,96 **%**

Partners:		
DEN NORSKE STATS OLJESELSKAP A/S	**Share:**	46,77 **%**
A/S NORSKE SHELL		17,20 **%**
BRITISH PETROLEUM NORWAY LIMITED U.A		10,89 **%**
ESSO NORGE A/S		7,18 **%**

Total depth (RKB) : 2975,0 **m MD** 2974,0 **m TVD**

TIME SUMMARY
Start Time : 2002-03-10 22:00:00
Spudding date : 2002-03-16
Abandonment date : 2002-06-01

Main operation	**Hours**	**Days**	**%**
MOBILIZATION	47,5	2,0	2,4
DRILLING	678,5	28,3	33,8
FORMATION EVALUATION MWD	95,0	4,0	4,7
FORMATION EVALUATION LOGGING	103,0	4,3	5,1
FORMATION EVALUATION CORING	101,0	4,2	5,0
TESTING (PRODUCTION TEST)	354,0	14,8	17,6
PLUG AND ABANDONMENT	164,0	6,8	8,2
DOWNTIME MOBILIZATION	7,0	0,3	0,3
DOWNTIME DRILLING	152,5	6,4	7,6
DOWNTIME FORM. EVAL. MWD	3,5	0,1	0,2
DOWNTIME FORM. EVAL. LOGGING	38,0	1,6	1,9
DOWNTIME FORM. EVAL. CORING	29,0	1,2	1,4
DOWNTIME TESTING (PROD. TEST)	205,0	8,5	10,2
DOWNTIME PLUG AND ABANDONMENT	30,0	1,3	1,5
Sum:	**2008,0**	**83,7**	

Hole and casing record

Hole	**Track**	**Depth [m MD]**	**Casing/Tubing**	**Track**	**Depth [m MD]**
36"	T2	1108,0	30"	T2	1105,0
26"	T2	1756,0	20"	T2	1749,1
17"	T2	1761,0	9 5/8"	T2	2719,0
12 1/4"	T2	2725,0	7"	T2	2974,0
8 1/2"	T2	2975,0			

Well status: PERMANENTLY ABANDONED

CONTRACTORS:
Bit Supplier : SCHLUMBERGER OFFSHORE SERVICES LTD
Casing/Running Contractor : WEATHERFORD NORGE A/S

GENERAL INFORMATION ON WELL 6305/4-1

CONTRACTORS:

Cement Contractor :	SCHLUMBERGER DOWELL
Directional Drilling Contractor :	BAKER HUGHES INTEQ
Liner Hanger Supplier :	BAKER OIL TOOLS
Logg Contractor :	SCHLUMBERGER OFFSHORE SERVICES LTD
Mud Contractor :	MI NORGE
Mudlog Contractor :	GEOSERVICES
Rig Contractor :	SAIPEM S.P.A.
Rov Supplier :	OCEANEERING A/S
Slick Line Contractor :	MARITIME WELL SERVICE

ORMEN LANGE 6305/4-1	Drilling	Testing	DRILLING/T.	6305/4-U-3	Sitesurvey	Shell empl.	6305-04-02	TOTAL	TOTAL	TOTAL
OPPDATERT PR.10.9.2002	900191	900192	2016373	900228	2015536	2016624	2018057			
	INVOICE	INVOICE	INVOICE	INVOICE	INVOICE	INVOICE	INVOICE	INVOICE	AFE	DIFF
EMPLOYEE RELATED COSTS	622 412	429 700	28 743 382	12 718	862 804	1 007 902	44 432	31 723 350	23 688 175	-8 035 175
RIGCOSTS	73 126 408	27 159 703	954 498		-	-	-	101 240 609	102 435 450	1 194 841
RIG SUPPORT COSTS/REIMB.	2 599 279	264 574	470 527					3 334 380	4 747 378	1 412 998
			-	-	-	-	-	-	-	-
FUEL/LUB	20 598	33 000	3 235 086					3 288 684	5 775 000	2 486 316
BITS	1 587 480							1 587 480	2 290 399	702 919
CASING/CASING EQUIPMENT	6 107 710	929 265	-91 163					6 945 812	6 845 261	-100 551
WELLHEAD/X-MASTREE	2 775 284							2 775 284	2 110 090	-665 194
CEMENT/CEMENT ADDITIVES	2 383 500							2 383 500	2 246 697	-136 803
MUD	7 958 173	140 129	-167 152					7 931 150	1 962 616	-5 968 534
								-	-	-
CHARTERFLY								-	-	-
OTHER TRANSPORTATION	224 739	20 394	1 126					246 259	750 000	503 741
STANDBY VESSEL			5 040 850					5 040 850	5 035 275	-5 575
HELICOPTER TRANSPORT			5 081 887					5 081 887	3 150 000	-1 931 887
POOL VESSEL			16 181 031					16 181 031	19 250 000	3 068 969
								-	-	-
CORING	848 108							848 108	2 086 100	1 237 992
DRILLING TOOLS	2 394 862	600 806						2 995 668	1 424 602	-1 571 066
CUTTING OF CASING	713 754							713 754	800 000	86 246
COMPLETION SERVICES	1 054 902	475 551						1 530 453	-	-1 530 453
PERFORATION								-	818 663	818 663
MWD SERVICES	9 073 577							9 073 577	3 496 479	-5 577 098
CASING OPERATIONS	1 477 080	584 375	195 500					2 256 955	398 000	-1 858 955
MUD LOG/MUD SERVICES	1 900 559		82 450					1 983 009	905 100	-1 077 909
								-	-	-
CEMENTING SERVICES	3 236 960							3 236 960	697 894	-2 539 066
ELECTRICAL LOGGING	6 923 245	59 904	4 503					6 987 652	6 454 944	-532 708
VSP		-	-	-	-	-	-	-	700 544	700 544
PROD TESTING	568 365	14 599 912	834 144					16 002 421	23 918 233	7 915 812
DIVING/ROV	4 763 415	680 685	16 000					5 460 100	4 338 600	-1 121 500
MISC.RENTAL & OP.COSTS	761 491	3 413 434	5 262 706		77 816			9 515 447	6 325 000	-3 190 447
COILED TUBING			-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-
SITE SURVEY			2 420 751		5 250 799			7 671 550	6 000 000	-1 671 550
RIG POSITIONING	3 462 838	335 713						3 798 551	1 523 750	-2 274 801
DRILLING SITE CLEAN UP	-		-	-	-	-	-	-	350 000	350 000
			-	-	-	-	-	-	-	-
WAREHOUSE COSTS	47 250	102 976	3 811 533					3 961 759	2 625 000	-1 336 759
LAB COST			-	-	-	-	-	-	11 500 000	11 500 000
SUM	134 631 989	49 830 121	72 077 659	12 718	6 191 419	1 007 902	44 432	263 796 240	254 649 250	-9 146 990

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-03-13	2	6,0	Equipment failure	SAIPEM S.P.A.		Waiting on boat unloading while mixing mud and performing general maintenance.		RIG MOVE/SKIDDIN				
SCA5	6305/4-1	2002-03-13	1	1,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired hydraulic hose on iron roughneck.	DRILL FLOOR EQUIPMENT/SYSTE	DRILLING	DRILLING CONTRACTOR	317.00	Other Drill Floor Eq./Syst.	
SCA5	6305/4-1	2002-03-15	3	2,5	Equipment failure	ANADRILL	ANADRILL	Loading radio active sources in LWD, removed blank cap(designed to stop debris getting into source receptacle) and tried to load source, but source would not screw into tool. Pulled source back into shield to inspect thread. Threads were worn, replaced same with new thread cap, but source would still not screw in. fished source into shield with overshot on tugger. Source was pulled into shield.	SERVICE EQUIPMENT/SYSTE	DRILLING	MWD/LWD	374.15	Other logging equipment	0202B
SCA5	6305/4-1	2002-03-15	3.1	0,5	Equipment failure	ANADRILL	ANADRILL	Stopped work with LWD tool due to safety breefing of new arrived personnel.	DRILLSTRING/DOV EQUIPMENT	DRILLING	MWD/LWD	357.02	MWD/LWD	
SCA5	6305/4-1	2002-03-16	5	0,5	Equipment failure	SAIPEM S.P.A.	MARITIME HYDRAULICS A/S	Electrical failure on top drive and mud pump.	DRILL FLOOR EQUIPMENT/SYSTE	DRILLING	DRILLING CONTRACTOR	317.00	Other Drill Floor Eq./Syst.	
SCA5	6305/4-1	2002-03-20	6	1,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Troubleshot failure on upper racking arm.	PIPE HANDLING EQUIPMENT/SYSTE	DRILLING	DRILLING CONTRACTOR	341.00	Vertical Pipe Handling	

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Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-03-24	9	0,5	Equipment failure	ANADRILL	ANADRILL	Drilled 1 m and got erratic MWD readings. Stopped and troubleshot same.	DRILLSTRING/DOV EQUIPMENT	DRILLING	MWD/LWD	357.02	MWD/LWD	MDC37607+
SCA5	6305/4-1	2002-03-24	10	74,5	Waiting on weather			POOH due to yellow alarm due to bad weather. Secured derrick and drill floor equipment. Pulled further 3 stands.		DRILLING				
SCA5	6305/4-1	2002-03-28	11	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Changed worn out glide bearing on top drive auto kelly kock actuator.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOR	313.02	Top Drive	
SCA5	6305/4-1	2002-03-29	12	1,0	Equipment failure	SCHLUMBERGE OFFSHORE SERVICES LTD	SCHLUMBERGE OFFSHORE SERVICES LTD	Connection between steel drill collar and non magnetic drill collar was galled. Broke connection. Both pin and box connection was wrecked. Laid down steel drill collar and non magnetic drill collar.	DRILLSTRING/DOV EQUIPMENT	DRILLING	MWD/LWD	352.00	Drillcollar	
SCA5	6305/4-1	2002-03-29	13	2,5	Equipment failure	MITSUI	WEATHERFORD DRILLING & INTERVENTION SERVICES	Picked up float joint. Checked float. Float would not open. Laid down float and picked up back up float. Found that both float valves had been welded the wrong way onto the casing. Removed ball from primary float.	SERVICE EQUIPMENT/SYSTE	DRILLING	CASING/TUBIN RUNNING	376.06	Casing Auxilery	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-03-29	14	1,0	Equipment failure	SAIPEM S.P.A.	MARITIME HYDRAULICS A/S	Gantry crane was not able to lift the suplemental hang off joint. Troubleshooted on crane. Found that joint was too heavy for the magnets. Removed magnets and liftet joint with slings onto catwalk machine.	MATERIAL HANDLING SYSTEM	CASING	DRILLING CONTRACTOR	362.00	Overhead Cranes	
SCA5	6305/4-1	2002-03-30	15	1,0	Equipment failure	SAIPEM S.P.A.	MARITIME HYDRAULICS A/S	Could not release gantry crane magnets. Trouble shooted on problem. Found fuse for magnet power had blown. Changed fuse.	MATERIAL HANDLING SYSTEM	CASING	DRILLING CONTRACTOR	362.00	Overhead Cranes	
SCA5	6305/4-1	2002-03-30	16	1,0	Equipment failure	BJ SERVICES	BJ SERVICES	Was unable to operate remote operated low torque valve on the cement head. Trouble shot and found hydraulic coupling on low torque valve jammed closed. Decided to operate valve manually. Meanwhile circulated on hole with 2200 LPM.	SERVICE EQUIPMENT/SYSTE	CEMENTING	CEMENTING	371.02	Cement: Head	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-03-31	17	3,5	Equipment failure	SAIPEM S.P.A.	CAMERON NORGE	Too long function time for lower shear ram during function testing was due to the pod manifold regulator precharge pressure was set for 1000 m depth, so that surface function pressure would not overcome precharge pressure.	WELLCONTROL EQUIPMENT/SYSTE	BOP INSTALLATION AND TESTING	SUB-SEA EQUIPMENT	331.00	BOP Stack	
SCA5	6305/4-1	2002-04-01	18	9,0	Equipment failure	SAIPEM S.P.A.	CAMERON NORGE	Got alarm on yellow pod Sub sea Electroninc Module (SEM) Pulled BOP out of the splash zone and landed BOP on carrier. Troubleshot problem. Changed pod selector solenoid valve due to suspected solenoid coil failure. Selected redundant SEM and alarm disappeard. Changed to blue pod.	WELLCONTROL EQUIPMENT/SYSTE	BOP INSTALLATION AND TESTING	SUB-SEA EQUIPMENT	331.00	BOP Stack	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-04-03	19	4,5	Equipment failure	SAIPEM S.P.A.	CAMERON NORGE	Observed leak on allignement sub for yellow conduit line on slip joint. Disconnected jumper hose and alignement sub. Found that the stinger seal on the alignment sub was worn out, and that the stinger was galled.	WELLCONTROL EQUIPMENT/SYSTE	BOP INSTALLATION AND TESTING	SUB-SEA EQUIPMENT	335.00	Riser System (incl. K/C/B Lines)	
SCA5	6305/4-1	2002-04-04	20	10,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Attempted to leak test top drive remote operated kelly kock. Kelly kock would not hold pressure. Rigged down remote operated kelly kock actuator assembly.	HOISTING EQUIPMENT	BOP INSTALLATION AND TESTING	DRILLING CONTRACTOR	313.02	Top Drive	
SCA5	6305/4-1	2002-04-04	21	1,5	Other	NORSK HYDRO A/S		Laid down one one stand 6 5/8" drill pipe and one stand 9 1/2" drill collars, due to damaged connections.		DRILLING				
SCA5	6305/4-1	2002-04-05	22	5,5	Other	NORSK HYDRO A/S		Pulled out of the hole to 900 m MD, as the rig could not hold station due to strong current, and went into yellow mode.		DRILLING				

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Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-04-07	23	0,5	Other	ANADRILL		While picking up the MWD, the MWD slid down the catwalk and hit a 2" by 4" wooden box. Changed to back up MWD due to uncertainty if the primary MWD could have been damaged.		DRILLING				
SCA5	6305/4-1	2002-04-07	24	4,0	Equipment failure	SAIPEM S.P.A.	ANADRILL	Attempted to make up the CDN and ISONIC toll. No success due to broken threads on the CDN pin up spacer sub. Laid down CDN tool.	DRILLSTRING/DOV EQUIPMENT	DRILLING	MWD/LWD	357.02	MWD/LWD	
SCA5	6305/4-1	2002-04-08	25	1,0	Equipment failure	SAIPEM S.P.A.	CONTIENTAL EMSCO	Stopped drilling and circulated hole clean while changing liner on mudpump 2. Could not continue drilling, as signals from the LWD were lost due to too much noise when running two mud pumps on full speed.	MUD AND BULK SYSTEMS	DRILLING	DRILLING CONTRACTOR	325.00	Mud Supply(incl. HP mudpumps)	
SCA5	6305/4-1	2002-04-09	26	1,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Troubleshot high lube oil pressure alarm on top drive. Changed plugged lube oil filter.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOR	313.02	Top Drive	
SCA5	6305/4-1	2002-04-11	27	33,5	Other	SCHLUMBERGE WIRELINE & TESTING		POOH with logging cable and rigged down wire line equipment.		LOGGING				

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-04-14	28	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired broken bolt on upper racking arm.	PIPE HANDLING EQUIPMENT/SYSTI	CASING	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-04-16	29	2,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired lower racking arm chain anchor.	PIPE HANDLING EQUIPMENT/SYSTI	CASING	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-04-18	30	15,5	Other	BJ SERVICES		Pulled out of hole with 8 1/2" bottom hole assembly.		DRILLING				
SCA5	6305/4-1	2002-04-18	31	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Changed dies on iron roughneck.	PIPE HANDLING EQUIPMENT/SYSTI	DRILLING	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-04-19	32	2,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Removed damaged dolly wheel from dolly frame.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOR	303.00	Traveling Equipment	
SCA5	6305/4-1	2002-04-20	34	1,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Changed out two more dolly wheels. This was done based on inspecetion of wheels while installing a repaired wheel. Changed out wheels were not damaged, but this was done as preventive maintenance.	HOISTING EQUIPMENT	CORING	CORING	303.00	Traveling Equipment	
SCA5	6305/4-1	2002-04-21	33	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired broken coupling on elevator.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOR	305.00	Other Hoisting Equipment	
SCA5	6305/4-1	2002-04-21	35	26,0	Waiting on weather			Waited on weather. Meanwhile performed rig maintenance.		CORING				
SCA5	6305/4-1	2002-04-24	36	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired upper racking arm.	PIPE HANDLING EQUIPMENT/SYSTI	CORING	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	

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Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-04-25	37	2,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	One shear pin on upper racking arm broke. One of the two retaining caps fell down on forward setback area since its safety chain had a fresh cut. Installed new shear pin and rearranged safety chain for retainer cap to avoid reoccurence	PIPE HANDLING EQUIPMENT/SYSTI	DRILLING	DRILLING CONTRACTOR	341.00	Vertical Pipe Handling	
SCA5	6305/4-1	2002-04-25	37	2,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	One shear pin on upper racking arm broke. One of the two retaining caps fell down on forward setback area since its safety chain had a fresh cut. Installed new shear pin and rearranged safety chain for retainer cap to avoid reoccurence	PIPE HANDLING EQUIPMENT/SYSTI	DRILLING	DRILLING CONTRACTOR	341.00	Vertical Pipe Handling	
SCA5	6305/4-1	2002-04-26	38	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Broke hydraulic hose fitting on drill pipe elevator. Repaired same	PIPE HANDLING EQUIPMENT/SYSTI	DRILLING	DRILLING CONTRACTOR	345.00	Elevator	
SCA5	6305/4-1	2002-04-26	38	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Broke hydraulic hose fitting on drill pipe elevator. Repaired same	PIPE HANDLING EQUIPMENT/SYSTI	DRILLING	DRILLING CONTRACTOR	345.00	Elevator	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-04-27	39	2,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Iron roughneck failed - supporting shaft to roughneck frame broken. Investigated problem. Assesed risk and SJA and continued with rig tongs	PIPE HANDLING EQUIPMENT/SYSTE	DRILLING	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-04-29	41	5,0	Equipment failure	SCHLUMBERGE WIRELINE & TESTING	SCHLUMBERGE WIRELINE & TESTING	Failure on MDT tool during surface test. Removed one Multisample unit from the MDT	SERVICE EQUIPMENT/SYSTE	LOGGING	ELECTRIC LOGGING	374.02	Formation Tester (RFT)	
SCA5	6305/4-1	2002-04-29	41	5,0	Equipment failure	SCHLUMBERGE WIRELINE & TESTING	SCHLUMBERGE WIRELINE & TESTING	Failure on MDT tool during surface test. Removed one Multisample unit from the MDT	SERVICE EQUIPMENT/SYSTE	LOGGING	ELECTRIC LOGGING	374.02	Formation Tester (RFT)	
SCA5	6305/4-1	2002-05-02	42	2,0	Equipment failure	SAIPEM S.P.A.	DRILCO	Laid down 2 joints of 6 1/2" drill collars due to crossed threads. Rearranged bottom hole assembly to get correct jar placement.	DRILLSTRING/DOV EQUIPMENT	DRILL STEM TEST	DRILLING CONTRACTOR	352.00	Drillcollar	
SCA5	6305/4-1	2002-05-03	43	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired spinner motor on iron roughneck.	PIPE HANDLING EQUIPMENT/SYSTE	DRILL STEM TEST	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-05-04	44	2,5	Equipment failure	SAIPEM S.P.A.	SAIPEM S.P.A.	Opened blocked bulk lines. Meanwhile flushed surface lines from cement unit to rig floor.	MUD AND BULK SYSTEMS	CEMENTING	CEMENTING	321.00	Bulk Storage/Tran	

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DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-05-07	45	1,0	Equipment failure	SAIPEM S.P.A.	MARITIME HYDRAULICS A/S	Trouble shot on loss of power on pipe rack crane magnets. Found two blown fuses. Was not able to determine cause of problem. Solution is pending information from crane vendor.	MATERIAL HANDLING SYSTEM	DRILL STEM TEST	PRODUCTION TESTING	361.00	Deck Cranes	
SCA5	6305/4-1	2002-05-09	46	3,0	Equipment failure	SCHLUMBERGE OFFSHORE SERVICES LTD	SCHLUMBERGE OFFSHORE SERVICES LTD	Lost contact with sub sea tree gauges. Pulled gauge carrier back to rig floor. Found gauge cable crushed.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	372.06	Downhole gauge/gauge carriers	
SCA5	6305/4-1	2002-05-09	47	29,0	Equipment failure	SCHLUMBERGE OFFSHORE SERVICES LTD	SCHLUMBERGE OFFSHORE SERVICES LTD	Investigated the reason for getting closed end displacement volumes back. Filled string and pressured up to 450 bar. Found from pumped volumes that the sub sea tree was closed. Attempted to open tree. No success. Bled down pressure above the sub sea tree.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	372.20	Testing subsea tools	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-05-10	48	120,0	Equipment failure	NORSK HYDRO A/S	SCHLUMBERGE OFFSHORE SERVICES LTD	Investigated reason for getting closed end displacement volumes back while running in hole. Closed upper annular in the BOP. Pressured up down annulus to attempt to reverse circulate. Pumped up to 20 bar pressure. Pressure did not bleed down through the screens. Found after troubleshooting that the problem is related to a partially blocked screen or faulty tester valve, hindering passage of fluid. 12/05/02: Found that the screens were packed with solids and gelled substance when they were pulled	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	372.04	Testing downhole tools	
SCA5	6305/4-1	2002-05-15	49	1,0	Equipment failure	BJ SERVICES	BJ SERVICES	Chicksan gasket came loose and blew into the bleed off choke on the cement unit. Disconnected between choke and bleed off valve. Routed bleed off line into the displacement tank.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	371.01	Cement: Unit/pipe	

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DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-05-15	50	16,5	Other	SAIPEM S.P.A.		Observed three solid steel parts from fillup line chicksan lost into test string.		DRILL STEM TEST				
SCA5	6305/4-1	2002-05-17	51	0,5	Equipment failure	SCHLUMBERGE WIRELINE & TESTING	SCHLUMBERGE WIRELINE & TESTING	Trouble shot plugged chemical injection line.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	372.03	Surface test tree equipment	
SCA5	6305/4-1	2002-05-17	53	2,0	Equipment failure	SCHLUMBERGE DOWELL	SCHLUMBERGE DOWELL	Trouble shot tilt cylinder on coil tubing lift frame.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	370.00	Other Service Equipment/Sy	
SCA5	6305/4-1	2002-05-17	52	4,0	Equipment failure	SCHLUMBERGE DOWELL	SCHLUMBERGE DOWELL	Attempted to to install flowhead without success. This due to missing part og coil tubing lift frame. Made new bolts for coil tubing lift frame connector.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	COILED TUBING	370.00	Other Service Equipment/Sy	
SCA5	6305/4-1	2002-05-18	54	2,0	Other	NORSK HYDRO A/S		Searched for leak in surface equipment. Pressure tested cement unit - OK.		DRILL STEM TEST				
SCA5	6305/4-1	2002-05-18	55	8,5	Equipment failure	SAIPEM S.P.A.	GENERAL ELECTRIC	Yellow status on rig positioning system due to partial blackout in engine control room. Activated emergency shutdown 2 which closed valves in sub sea test tree and disconnected latch in sub sea test tree.	MISCELLANEOUS EQUIPMENT/SYSTI	DRILL STEM TEST	DRILLING CONTRACTOR	650.00	Rig Power Supply	

DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-05-21	56	7,5	Equipment failure	SCHLUMBERGE DOWELL	SCHLUMBERGE DOWELL	Attempted to pressure test test string several times without success. Observed that brine level inside tubing had dropped during buildup. Lost 5.5 m3 of brine into tubing while attempting to pressure test.	SERVICE EQUIPMENT/SYSTE	DRILL STEM TEST	PRODUCTION TESTING	372.04	Testing downhole tools	
SCA5	6305/4-1	2002-05-23	57	3,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired hydraulic ioil leak og top drive system.	HOISTING EQUIPMENT	DRILL STEM TEST	DRILLING CONTRACTOR	313.02	Top Drive	
SCA5	6305/4-1	2002-05-24	65	2,0	Equipment failure	SCHLUMBERGE WIRELINE & TESTING	SCHLUMBERGE WIRELINE & TESTING	Picked up flowhead from deck and serviced same.	MISCELLANEOUS EQUIPMENT/SYSTI	DRILL STEM TEST	PRODUCTION TESTING	380.00	Miscellaneous equipment, systems and services	
SCA5	6305/4-1	2002-05-26	58	2,0	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Attempted to repair top drive to be able to use BX elevator when pulling 9 5/8" casing. No success.	HOISTING EQUIPMENT	PLUG AND ABANDONMEN	DRILLING CONTRACTOR	313.02	Top Drive	
SCA5	6305/4-1	2002-05-27	59	0,5	Equipment failure	SAIPEM S.P.A.	VARCO BJ OIL TOOLS	Repaired iron roughneck.	PIPE HANDLING EQUIPMENT/SYSTE	PLUG AND ABANDONMEN	DRILLING CONTRACTOR	342.00	Drillfloor Tubular Handling	
SCA5	6305/4-1	2002-05-27	60	1,0	Other	NORSK HYDRO A/S		Engaged spear and attempted to pull free 9 5/8" casing cut at 1345 m. Maximum overpull 130 tons. No success.		PLUG AND ABANDONMEN				
SCA5	6305/4-1	2002-05-28	61	5,5	Other	NORSK HYDRO A/S		Mud losses to open hole below 20" shoe at 1749 m caused P&A top cement plug to slide down 9 5/8"/20" annulus.		PLUG AND ABANDONMEN				

Norsk Hydro

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DOWNTIME REPORT SCARABEO 5

Last 163 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
SCA5	6305/4-1	2002-05-28	63	11,0	Equipment failure	NORSK HYDRO A/S	BJ SERVICES	Pulled out of hole due to washout in string. Later proved to be body of parabow running tool that was washed out.	SERVICE EQUIPMENT/SYSTE	PLUG AND ABANDONMEN	CEMENTING	371.03	Cement: Other	
SCA5	6305/4-1	2002-05-30	66	0,5	Equipment failure	SAIPEM S.P.A.	CAMERON NORGE	Repaired yellow pod winch.	WELLCONTROL EQUIPMENT/SYSTE	PLUG AND ABANDONMEN	RIG UTILITIES	337.05	Other Well Control Related Equipment	MPT 0130-01
SCA5	6305/4-1	2002-06-01	67	9,5	Equipment failure	WEATHERFORD DRILLING & INTERVENTION SERVICES	WEATHERFORD DRILLING & INTERVENTION SERVICES	Unable to latch MOST tool to wellhead. Probably due to metal cuttings. RIH with wellhead tool to retrieve wellhead.	SERVICE EQUIPMENT/SYSTE	PLUG AND ABANDONMEN	CASING CUTTING	372.38	Equipment for cutting tbg/csg with explos. mill	
SCA5	6305/4-1	2002-06-02	68	1,0	Equipment failure	OCEANEERING A/S	OCEANEERING A/S	Continued to troubleshoot ROV winch failure.	SERVICE EQUIPMENT/SYSTE	ROV OPERATIONS	ROV	375.02	ROV	
			Sum:	471,0										
			Total Sum:	471,0										

DAILY REPORT ON WELL 6305/4-1

Daily report no : 1 **Date:** 2002-03-10
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
22:00	Took over rig from BP, Halvsule, at 22:00 hrs. Starting to prepare rig to move.
23:30	Picked up slip joint and installed in rotary for maintenance of same.
23:59	In transit to location of well 6305/4-1. Meanwhile worked on slip joint and BOP.

Daily report no : 2 **Date:** 2002-03-11
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
20:30	In transit to location of well 6305/4-1.Ballasted rig to operational draft prior to arriving well 6305/4-1 location. Meanwhile worked on BOP, slip joint and pipe handling equipment. Performed general rig maintenance.
23:59	Positioned rig and performed dynamic positioning verification test. Meanwhile continued work on BOP and pipe handling equipment.

Daily report no : 3 **Date:** 2002-03-12
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
15:00	Continued dynamic positioning verification test. Meanwhile worked on BOP and pipe handling equipment. Welded brackets on dolly frames.
19:00	Rigged up to make bottom hole assembly. Picked up 9 1/2" drill collars.
19:30	callibrated tong load cell - OK.
22:00	Slipped and cut drill line.
23:00	Removed tar from crown- and travelling block.
23:59	Checked and greased top drive and travelling assembly.

Daily report no : 4 **Date:** 2002-03-13
Midnight depth : 1028 m MD **Estimated PP:** 1,03 sg **Mud weight:** 0,00 sg

Stop time	Description
02:00	General maintenance and tidying while waiting on boat.
02:30	Laid down 2 stands 6 5/8" drill pipe due to damaged threads.
04:30	Waiting on boat while performing maintenance.
05:30	Made up cement stand. Drifted to 2.75". Installed Titus dart and secured same.
07:30	Waiting on boat unloading while mixing mud and performing general maintenance.
08:30	Picked up 30" running tool. Installed swivel sub and racked same.
10:00	Prepared handling equipment from BHA and tidyed rig floor.
12:00	Spaced out from 36" to 42" hole opener to 70,58 m.
13:00	Repaired hydraulic hose on iron roughneck.
17:30	Continued to RIH with BHA and picked up 42" hole opener and jar.
18:00	Changed to 6 5/8" handling equipment and autoslips.
19:00	RIH 36" x 42" BHA from 141-500 m. Filled pipe every 500 m.
19:30	Tested Anderdrift tool at 500 m with 2000 lpm showing 2.5 deg at 500 m.
20:00	Continued to RIH.
23:59	Stopped RIH due to positioning and ROV operations. Checked chains on draw works and other general maintenance.

Daily report no : 5 **Date:** 2002-03-14
Midnight depth : 1051 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Continued to fine tune positioning equipment.
03:00	Checked ROV tether up to 225 m. Deployed ROV back to seabed.
04:00	Continued to RIH. Filled pipe and tested Anderdrift on 1000 m.
05:00	Tagged bottom at 04:15 hrs at 1028 m. Positioned rig on target. Verified exact position with ROV.
06:00	Spudded well and drilled from 1028-1030 m. Observed bit slided off location. POOH and checked position with ROV.
09:00	Continued drilling and surveying 36" hole from 1030-1045 m. Anderdrift showed 3 deg at 1029 m, 3.5 deg at 1036 m.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 5 **Date:** 2002-03-14

Midnight depth : 1051 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
11:00	Pulled 36" hole opener to seabed. Moved rig several times and took surveys. 4 deg with tool on bottom, 2.5-3.5 deg at seabed.
12:00	POOH. Took new survey with same result (3.5 deg). Moved rig.
12:30	Repositioned rig. Tagged bottom at 1029 m, 5.9 m away from old hole. Checked same with ROV and moved marker buoy. Rechecked posistion with Fugro.
15:00	Drilled 1 m on new spot and performed survey at 4 deg. Moved rig to reduce inclination, first 20 m to port side, then 50 m to starbord side, no improvement. Positioned rig 4 m off original position.
16:00	Picked off bottom and moved rig to old location and stabbed in same.
18:00	Performed survey at bottom, 5 deg. Commenced drilling and surveying 36" hole from 1045-1053 m.
20:30	Continued drilling 36" hole from 1053-1062 m. Survey at 1061 m = 4.5 deg.
22:30	Took new survey at 1061 m = 4 deg. Displaced string to spud mud. Dropped single shot. Displaced 17 m3 spud mud in hole.
23:00	Inspected ROV bouys with ROV.
23:59	POOH. ROV on deck at 23:40 hrs.

Daily report no : 6 **Date:** 2002-03-15

Midnight depth : 1066 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	POOH. Retrieved single shot. 4 deg inclination.
04:30	Prepared to pick up 6 1/2" DCs.
09:00	Picked up 6 1/2" DCs. Drifted pipe to 2 1/2"
10:30	Prepared 6 3/4" MWD/LWD for 8 1/2" BHA on pipe deck. Meanwhile prepared handling equipment to pick up MWD.
12:00	Cleaned and tidyed rig floor and performed general rig maintenance while continuing preparing MWD/LWD.
15:30	Picked up MWD in sections, changed preinstalled bit.
17:00	Tested MWD, ok.Held safety meeting prior to installing radioactive sources. Installed sources and started testing same.
19:30	Failed to install radioactive source, troubleshot problem.
20:00	Stopped work with LWD tool due to safety breefing of new arrived personnel.
21:00	Reinstalled radio active sources in LWD tool and finalized testing the tool.
23:59	Ran in water with the bottom hole assembly.

Daily report no : 7 **Date:** 2002-03-16

Midnight depth : 1309 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Changed to 6 5/8" equipment.
01:00	Continued to RIH to 968 m.
01:30	Held safety meeting prior to spud.
03:00	Filled pipe and performed shallow gas drill. Continued RIH and tagget bottom at 1026 m. Verified position with ROV and adjusted rig position.
06:00	Spudded and started drilling 8 1/2" pilot hole with low weights from 1026 m. Survey at 1136 m = 2.5 deg. Reamed twice, new survey = 2.2 deg. Survey at 1053 m = 4.2 deg. Took cuttings sample with ROV.
09:30	Continued drilling from 1051-1096 m.
10:00	Electrical failure on top drive and mud pump.
20:00	Drilled and surveyed 8 1/2" hole from 1096-1250 m.
23:59	Drilled and surveyed 8 1/2" hole from 1250-1309 m with controlled ROP at max 30 mph. Boulders at 1293 m.

Daily report no : 8 **Date:** 2002-03-17

Midnight depth : 1508 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,07 sg

Stop time	Description
15:00	Drilled and surveyed 8 1/2" hole from 1309-1508 m.
16:00	Pumped 10 m3 HiVis pill. Displaced same OOH. Made survey and ROV sampling.
17:00	POOH from 1508-1250 m.
23:59	Reamed and logged 8 1/2" hole from 1250-1389 m.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 9 **Date:** 2002-03-18

Midnight depth : 1751 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,07 sg

Stop time	Description
05:30	Reamed / logged 8 1/2" hole from 1389-1460 m. Washed to TD. Took survey.
18:30	Drilled 8 1/2" hole from 1508-1751 m
19:30	Pumped 10 m3 HiVis pill. Displaced same with 10 m3 seawater. Pumped 30 m3 1.30 SG mud.
21:00	POOH to 1315 m. Pumped 13 m3 1.30 SG mud and displaced same with 5 m3 seawater.
22:00	ROV installed marker buoys around well. POOH above seabed.
23:00	Changed to 5" handling equipment and continued to POOH.
23:59	Held safety meeting and pulled BHA to rig floor.

Daily report no : 10 **Date:** 2002-03-19

Midnight depth : 1084 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,10 sg

Stop time	Description
00:30	Removed radioactive source from LWD tool.
02:30	Laid down 8 1/2" BHA.
09:00	Cleaned rig floor and held safety meeting. Picked and made up 17 1/2" BHA.
11:00	RIH and tagged bottom at 1028 m. Took survey = 1.18 deg.
13:00	Spudded with 4900 lpm and washed down without rotation from 1028-1036 m.
13:30	Intstalled marker buoys around location with ROV.
23:59	Drilled and surveyed 17 1/2" hole from 1036-1084 m.

Daily report no : 11 **Date:** 2002-03-20

Midnight depth : 1055 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,05 sg

Stop time	Description
03:30	Drilled and surveyed 17 1/2" pilot hole from 1084-1105 m.
04:00	Reamed last stand twice, took final survey at 2.0 deg.
04:30	Pumped HiVis pill and displaced same. Displaced hole to 1.30 SG mud.
06:00	POOH 17 1/2" BHA.
09:00	POOH and laid down 17 1/2" BHA.
14:00	Made up 42" x 36" BHA.
14:30	Changed to 6 5/8" handling equipment.
15:00	RIH BHA no 4.
16:00	Troubleshot failure on upper racking arm.
17:00	Continued to RIH BHA no 4. Laid down one single.
17:30	Filled pipe and atached Anadrill/Geoservice depth lines.
18:30	Moved rig and stabbed into 17 1/2" hole.
23:59	Opened 36" hole to 1055 m.

Daily report no : 12 **Date:** 2002-03-21

Midnight depth : 1106 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
11:00	Opened hole from 1055-1086 m with 0-1 ton. Increased weight to 3-4 ton from 1086-1094 m. Observed increase in inclination from 1.88-2.5 deg. Reamed hole to 2.36 deg. Drilled to 1104 m = 2.29 deg. Continued drilling to 1108.5 m. Pumped 10 m3 HiVis pills as required.
11:30	Pumped 27 m3 HiVis while reaming and circulated same out.
13:00	Performed wiper trip to seabed with 36" hole opener. RIH to bottom. 3 m fill. Rotated and pumped to TD.
13:30	Displaced well to 1.30 SG mud, i.e. 68 m3.
14:30	POOH. Inspected well marker buoys with ROV prior to pulling bit OOH.
15:00	Checked block and top drive for irregularities due to drilling of boulders.
16:00	Continued POOH.
18:00	Pulled BHA. Laid down 42" hole opener.
18:30	Held prejob meeting/SJA and cleared rig floor.
19:30	Rigged up to run 36" x 30" conductor.
20:00	Held prejob meeting/SJA with oncoming crew.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 12 **Date:** 2002-03-21
Midnight depth : 1106 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
23:30	Picked up shoe joint and tested float. Picked up and ran 4 singles of conductor. Made up housing and landed same in rotary.
23:59	Rigged up to run cement stinger.

Daily report no : 13 **Date:** 2002-03-22
Midnight depth : 1106 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Ran cement stinger and made up to housing running tool.
04:30	Made up running tool to conductor housing. Installed Titus hose in moon pool. Mounted hydrate plate on 36" housing and made up Titus hose to running tool.
08:00	RIH with conductor on 6 5/8" landing string. Filled every 2. stand. Laid down one single and stabbed into hole.
09:00	Continued to run casing in well and tagged bottom at 1105.7 m.
09:30	Observed 2.1 m stick up with ROV. Checked bullseye=1.5 deg. Set down to neutral weight and observed 4 deg on bulls eye, 1.2 deg on ROV inclinometer. Picked up 0.8 m.
11:00	Prepared for cement job. Pumped 30 m3 seawater with 1850 lpm = 950 psi. Held prejob meeting while circulating. Moved rig 10 m port. Observed 1.1 deg on bulls eye. Tested surface lines to 200 bar. Moved rig another 20 m port and observe 0.8 deg on bulls eye.
13:00	Mixed and pumped 52 m3 1.47 SG slurry. Aborted cement job 2 m3 early due to pressure build up in mixing fluid supply. Displaced cement with 400 ltr from cement unit, and displaced cement with 20 m3 seawater at 1950 lpm using rig pumps.
13:30	Checked for backflow, negative. Set down 6 ton. Dropped Titus dart and opened ball valve after 20 min. Attempted to apply pressure, no go. Leakage through ball valve on running tool.
23:59	WOC while working on pod cables.

Daily report no : 14 **Date:** 2002-03-23
Midnight depth : 1106 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
07:00	WOC
08:30	Inspected stick up with ROV = 3 m above seabed. Moved rig to well center (30 m). Observed wellhead inclination = 1 deg. Disconnected Titus hose. Disconnected running tool. Inclination still 1 deg. Racked cement stand.
11:00	POOH. Strapped pipe on the way out. 30" wellhead 1024 m MSL.
14:00	Laid down 30" running tool. Removed Titus hose. Laid down cement stinger.
16:30	Broke out bit. Laid down 36" hole opener, MWD and NMDCs.
17:00	Rearranged derrick to reach 6 1/2" jar.
17:30	Laid down 6 1/2" jar and 2 x 6 1/2" DCs.
18:30	Changed to 6 5/8" handling equipment and laid down cement stand. Found Titus dart stuck in lower kelly cock.
21:00	Made up cement stand for 20" casing. Drifted to 3 1/4".
22:30	Prepared and picked up 18 3/4" wellhead and landed same in rotary.
23:30	Made up upper running mandrel for cement plug on rigid lockdown tool.
23:59	Filled up wellhead with glycol/water and made up rigid lockdown tool to same.

Daily report no : 15 **Date:** 2002-03-24
Midnight depth : 1115 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Made up 2 singles to rigid lockdown tool and racked wellhead assy.
06:30	Made up 26" BHA.
07:00	Changed to 6 5/8" equipment.
07:30	Checked block and travelling assy.
08:30	RIH with 26" BHA. Dove ROV at 08:05 hrs.
09:00	Filled pipe at 1006 m. Prepared to stab in wellhead. Checked inclination with ROV < 1 deg.
10:30	Positioned rig and stabbed in wellhead at 09:45 hrs. RIH and tagged top of cement at 1100 m with 3200 lpm pumprate.
11:00	Drilled 1 m and got erratic MWD readings. Stopped and troubleshot same.
13:00	Drilled cement from 1101-1104 m. Tagged shoe at 1105 m. Continued drilling to 1115 m.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 15 **Date:** 2002-03-24
Midnight depth : 1115 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
23:59	POOH due to yellow alert due to bad weather. Secured derrick and drill floor equipment. Pulled further 3 stands. WOW.

Daily report no : 16 **Date:** 2002-03-25
Midnight depth : 1125 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
20:00	WOW. Performed general maintenance. Pumped 1500 lpm to avoid cooling of MWD batteries.
22:00	Prepared to RIH with 26" BHA. Moved rig and stabbed in wellhead.
23:59	Drilled and survey 26" hole from 1115-1125 m.

Daily report no : 17 **Date:** 2002-03-26
Midnight depth : 1381 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
15:30	Continued drilling and surveying from 1125-1381 m. Pumped 10 m3 HiVis pills every 15 m. Took cuttings samples with ROV on every connection from 1250 m.
16:00	Displaced well with 106 m3 1.30 Sg mud. Yellow alert at 15:50 hrs due to bad weather conditions.
17:00	POOH to 860 m due to bad weather.
23:59	WOW. Performed general maintenance.

Daily report no : 18 **Date:** 2002-03-27
Midnight depth : 1440 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
10:00	Waited on weather to resume drilling of 26" hole. Circulated string with 2600 LPM seawater to avoid premature discharge of LWD batteries.
12:30	Ran in the hole with the 26" drilling assembly. Moved rig 50 meters to find 36" conductor housing. Stabbed into well and ran in hole to 1381 m MD. No fill on bottom.
16:00	Continued to drill 26" hole from 1381 m MD to 1440 m MD. Took cuttings samples every stand drilled, with ROV. Pumped 10 m3 hivisc pill twice on every stand drilled. At 15:45 hrs, the rig went into yellow alert status due to deteriorating weather conditions.
17:00	Displaced hole to 1.30 SG mud.
18:00	Pulled out of the hole from 1440 m MD, to 860 m MD. Circulated string with 2000 LPM seawater to avoid premature discharge of LWD batteries, due to low ambient temperature.
23:59	Waited on weather to resume drilling operations. Meanwhile, circulated string with 2000 LPM seawater to avoid premature discharge of LWD batteries due to low ambient temperature.

Daily report no : 19 **Date:** 2002-03-28
Midnight depth : 1606 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
12:00	Waited on weather to resume drilling operations. Meanwhile circulated through string with 2000 LPM seawater, to avoid premature discharge of LWD batteries.
14:30	Ran in hole with the string to seabed. Moved rig 50 meters to find conductor housing. Stabbed into the well and ran in hole with the 26" drilling assembly to 1440 m MD. Found 2 meters fill on bottom.
18:00	Drilled 26" hole from 1440 m MD to 1500 m MD with 20-25 ton WOB and 130 RPM. Took cuttings samples with ROV every connection. Swept hole with 7 m3 hivisc pills twice every stand.
20:30	Continued to drill 26" hole from 1500 m MD to 1548 m MD with 20-25 ton WOB and 130 RPM. Swept hole with 7m3 hivisc pills twice every stand.
21:00	Changed worn out glide bearing on top drive auto kelly kock actuator.
23:59	Continued to drill 26" hole from 1548 m MD to 1606 m MD with 20-25 ton WOB and 130 RPM. Swept hole with 7 m3 hivisc pills twice every stand.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 20 **Date:** 2002-03-29

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
06:00	Drilled 26" hole from 1606 m MD to 1756 m MD with 20-25 ton WOB and 130 RPM. Swept hole with 7 m3 hivisc pills twice every stand. Took cuttings sample with ROV at 1683 m MD.
08:00	Pumped 30 m3 hivisc pill. Circulated pill out of the hole.
09:00	Pulled out of the hole to 1605 m MD. No overpull. Ran back to bottom at 1756 m MD. No fill on bottom.
11:00	Displaced well to 1.30 SG mud.
14:00	Pulled out of the hole with the 26" assembly. Checked torque on each connection in the landing string.
14:30	Changed to 5" handling equipment.
15:00	Pulled out of the hole with the bottom hole assembly. Racked assembly in derrick.
16:00	Connection between steel drill collar and non magnetic drill collar was galled. Broke connection. Both pin and box connection was wrecked. Laid down steel drill collar and non magnetic drill collar.
17:30	Dumped MWD memory. Racked bit and MWD in derrick.
19:00	Rigged up to run 20" casing.
19:30	Held pre job safety meeting with involved personnel. Picked up shoe joint. Checked that shoe was working properly.
22:00	Picked up float joint. Checked float. Float would not open. Laid down float and picked up back up float. Found that both float valves had been welded the wrong way onto the casing. Removed ball from primary float.
23:00	Ran in hole with 20" casing according to tally to 49 m.
23:59	Gantry crane was not able to lift the suplemental hang off joint. Troubleshot on crane. Found that joint was too heavy for the magnets. Removed magnets and liftet joint with slings onto catwalk machine.

Daily report no : 21 **Date:** 2002-03-30

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	Ran in hole with 20" casing according to tally, from 49 m to 314 m.
04:00	Could not release gantry crane magnets. Trouble shot on problem. Found fuse for power to magnets blown. Changed fuse.
09:00	Continued to run in hole with 20" casing according to tally, to 718 m.
09:30	Changed to 6 5/8" handling equipment.
10:30	Made up 18 3/4" wellhead to casing string. Total weight of casing string 165 tonnes weight indicator reading. Removed hydraulic casing slips. Installed rotary bushings and air operated drill pipe slips.
12:30	Ran in hole with the 20" casing string on 6 5/8" drill pipe. Adjusted rig and stabbed 20" casing into the well. Filled each stand of drill pipe with sea water while running in hole.
15:00	Continued to run in hole with the 20" casing string on 6 5/8" drill pipe. Filled every stand with sea water. Spaced out landing string with 6 m pup joint.
15:30	Broke circulation. Circulated with 400 LPM. Weight of casing and landing string was 165 tonnes weight indicator reading. Ran in hole and landed 20" casing. Slacked off 85 tonnes weight. Took 20 tonnes overpull test on casing. Wellhead was locked to 36" housing.
16:30	Increased pump rate to 2200 LPM. Circulated one casing volume.
17:30	Was unable to operate remote operated low torque valve on the cement head. Trouble shot and found hydraulic coupling on low torque valve jammed closed. Decided to operate valve manually. Meanwhile circulated on hole with 2200 LPM.
22:00	Tested cement surface line to 200 bar. Pumped 10 m3 fresh water spacer. Mixed and pumped 246 m3 of 1.60 SG gastight cement slurry.
22:30	Released dart. Displaced dart down landing string with cement pump. Sheared top plug with 130 bar.
23:59	Displaced cement with 2200 LPM with rig pumps. Bumped cement plug with 69 bar after 7748 strokes displacement. (97.7 % pump efficiency). ROV observed full returns on seabed during the whole displacement.

Daily report no : 22 **Date:** 2002-03-31

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Bled off pressure and checked that casing shoe was holding back pressure. Leak tested casing to 100 bar for 10 minutes. Pumped 1033 litres. Bled off 950 litres. Checked for backflow for ten minutes. No backflow detected.
01:00	Preloaded wellhead to 1000000 lbs as per dril-quip procedure. Overpull tested wellhead with 50 tonnes overpull. Released casing running tool with 4.5 right hand turns.
01:30	Cleaned wellhead area and hydrate plate by pumping through landing string.
02:00	Racked back cement head in derrick. Pulled out of the hole with the casing running tool.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 22 **Date:** 2002-03-31

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	At 02:00 hrs, the clock was adjusted one hour forward, to 03:00 due to commencement of european summer time.
05:00	Continued to pull out of the hole with the casing running tool. Checked landing string connections for cement while pulling out. Laid down casing running tool.
07:30	Laid down 26" bottom hole assembly.
11:00	Cleared rig floor. Rearranged derrick. Rigged down drilling bails and top drive torque aqssembly.
13:30	Held safety meeting with involved personnel. Went through SJA and prompt card for BOP and riser running. Rigged up and function tested riser running equipment.
17:30	Picked up instrumented riser joint and fin joint. Skidded BOP in under rotary table. Connected electrical cables on instrumented riser joint.
20:00	Connected instrumented riser joint and fin joint to lower marine riser package. Connected cables.
23:30	Installed mux cables and beacon on BOP stack. Function tested BOP on blue pod and yellow pod. Got too slow reaction time on lower shear ram on yellow pod.
23:59	Trouble shot too long function time on lower shear ram.

Daily report no : 23 **Date:** 2002-04-01

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	Continued to troubleshoot on too long reaction time on the lower shear ram. Found the problem to be that the pod manifold regulator pressure was set for 1000 m water depth, making it difficult for surface function pressure to overcome precharge pressure, due to little pressure differential. Function tested ram and precharged pod manifold regulator bottle.
06:30	Lifted BOP stack. Cleaned BOP connector. Lowered BOP stack. Installed bulls eye and beacon on lower flex joint.
07:00	Lowered BOP through splash zone.
07:30	Performed safety meeting with new crew. Went through SJA and prompt card for running BOP and riser.
09:30	Filled kill, choke and conduit line. Leak tested conduit line to 207 bar. (3000 psi). Installed test plugs in kill and choke lines.
16:30	Got alarm on yellow pod Sub sea Electroninc Module (SEM) Pulled BOP out of the splash zone and landed BOP on carrier. Troubleshot problem. Changed pod selector solenoid valve due to suspected solenoid coil failure. Selected redundant SEM and alarm disappeard. Changed to blue pod.
18:30	Lifted BOP off carrier. Installed bulls eye and beacon on lower flex joint. Installed MUX cable clamps. Lowered BOP through splash zone.
23:59	Leak tested conduit line to 207 bar (3000 psi). Leak tested kill and choke lines to 345 bar. Ran BOP to 179 m.

Daily report no : 24 **Date:** 2002-04-02

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
05:00	Ran BOP from 179 m to 236 m. Leak tested conduit line, kill and choke line to 207 bar. (3000 psi).
19:00	Ran BOP to 677 m. Leak tested conduit lines to 207 bar and kill and choke line to 400 bar every 10 joints run.
21:00	Held safety meeting with new crew. Went through SJA and prompt card for running riser and BOP. Continued to run BOP to 739 m.
22:00	Installed riser fill up valve. Hooked up hydraulic umbilical for fill up valve. Function tested valve.
23:59	Continued to run BOP to 796 m.

Daily report no : 25 **Date:** 2002-04-03

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
09:00	Ran BOP from 796 m to 993 m. Leak tested conduit lines to 207 bar and kill and choke lines to 400 bar every 10 joints run.
12:30	Picked up and installed slip joint and slick landing joint. Installed support ring.
13:30	Leak tested kill and choke lines to 400 bar. Leak tested conduit lines to 207 bar.
17:00	Observed leak on allignement sub for yellow conduit line on slip joint. Disconnected jumper hose and alignement sub. Found that the stinger seal on the alignment sub was worn out, and that the stinger was galled.
19:00	Positioned rig over wellhead. Ran in and landed BOP. Locked wellhead connector and performed 20 tonnes overpull test on wellhead connector.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 25 **Date:** 2002-04-03

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
20:00	Leak tested wellhead connector against shear ram and casing to 60 bar. Stroked out innerbarrel and pulled back to rig floor. Laid down landing joint.
21:00	Picked up and made up diverter housing. Landed diverter housing in bell nipple. Latched and overpull tested diverter housing with 15 tonnes overpull.
23:59	Rigged down riser running equipment. Changed bails and installed BX elevator.

Daily report no : 26 **Date:** 2002-04-04

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Installed torque wrench assembly and remote operated kelly kock actuator.
02:30	Installed top drive torque assembly. Checked and greased travelling assembly.
04:00	Rigged up and leak tested rotary hose and top drive manual kelly kock to 35/ 345 bar. Meanwhile, installed goose neck and jumper hose on yellow pod conduit line on riser.
11:00	Attempted to leak test top drive remote operated kelly kock. Kelly kock would not hold pressure. Rigged down remote operated kelly kock actuator assembly and torque wrench assembly. Changed both manual and remote operated kelly kock.
12:00	Leak tested manual and remote operated kelly kocks to 35/345 bar.
14:30	Installed bails and BX elevator.
16:00	Laid down one stand 6 5/8" drill pipe and one stand 9 1/2" drill collars, due to damaged connections.
17:30	Made up 17" drilling assembly.
20:30	Ran in hole with the 17" drilling assembly on 6 5/8" drill pipe to 1578 m MD.
21:00	Function tested the BOP.
22:00	Continued to run in hole with the 17" drilling assembly to 1718 m MD.
23:00	Performed choke drill. Practiced constant casing pressure start up, and drillers kill method.
23:30	Displaced kill and choke lines to 1.20 SG mud.
23:59	Drilled soft cement from 17 18 m MD to 1730 m MD with 3700 LPM, 70 RPM and 5 tonnes WOB.

Daily report no : 27 **Date:** 2002-04-05

Midnight depth : 1756 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,25 sg

Stop time	Description
02:30	Drilled soft cement from 1730 m MD to 1735 m MD. Tagged float at 1735 m MD. Drilled float and shoetrack to 1748 m MD with 3900 LPM, 70 RPM and 5 to 10 tonnes WOB. At 01:30 the rig went into advisory position.
03:30	Pulled out of the hole to 900 m MD, as the rig could not hold station due to strong current, and went into yellow mode.
05:30	Waited for current to reduce, to resume drilling operations.
08:00	At 05:40 hrs the rig was back in advisory status. At 06:00 hrs, the rig was back in green status. Ran in hole with the 17" drilling assembly to 1732 m MD. Washed down from 1732 m MD to 1748 m MD.
10:00	Pumped hivisc pill and displaced well to 1.20 SG mud according to pit plan.
11:00	Drilled out shoe at 1749 m MD. Cleaned out rathole to 1756 m MD.
11:30	Drilled 17" hole from 1756 m MD to 1761 m MD.
14:00	Pumped 15 m3 hivisc pill and circulated hole clean.
14:30	Performed leak off test. Got max pressure of 36 bar, corresponding to an equivalent mud weight of 1.40 SG. Pumped 559 litres. Bled back 300 litres.
18:00	Circulated and weighed up the mud from 1.20 SG to 1.25 SG.
22:00	Flowchecked well. Pumped slug. Pulled out of the hole with the 17" drilling assembly. Broke out bit.
22:30	Checked and greased travelling equipment.
23:00	Laid down cement head.
23:59	Picked 8 1/2" core barrel.

Daily report no : 28 **Date:** 2002-04-06

Midnight depth : 1780 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,25 sg

Stop time	Description
02:00	Made up 8 1/2" core head. Made up and installed innerbarrel with full closing core catcher. Adjusted catcher. Made up remaining bottom hole assembly.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 28 **Date:** 2002-04-06

Midnight depth : 1780 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,25 sg

Stop time	Description
03:00	Ran in hole with the 8 1/2" coring assembly on 6 5/8" drill pipe to 500 m MD.
03:30	Filled pipe with mud. Made up and racked back drilling stand with ball dropping sub for the full closing core barrel.
06:00	Ran in hole with the 8 1/2" coring assembly on 6 5/8" drill pipe to 1743 m MD. Filled pipe at 1000 m MD.
07:00	Filled pipe and washed down from 1743m MD to 1761 m MD.
07:30	Circulated mud diverter ball down with 300 LPM. Landed ball on top of the core barrel.
08:00	Cut core from 1761 m MD to 1780 m MD.
08:30	Dropped ball for the self closing innerbarrel. Circulated ball down with 300 LPM.
13:00	Pulled out of the hole with the 8 1/2" core barrel on 6 5/8" drill pipe to 90 m.
14:00	Racked drill collars in derrick. Laid down jar and stabiliser.
17:00	Held prejob meeting with involved personnel. Laid down core and core barrel.
19:00	Made up and ran in hole with multi purpose tool to 1023 m MD.
19:30	Washed wellhead. Latched onto bore protector. Pulled bore protector free with 15 tonnes overpull.
21:00	Pumped slug. Pulled out of the hole with the bore protector.
22:30	Redressed multi purpose tool. Installed 13 3/8" wear bushing. Ran in hole with 13 3/8" wear bushing to 1023 m MD.
23:59	Sat down 10 tonnes weight and latched wearbushing in wellhead. Released multi purpose tool with 13 tonnes overpull. Pumped slug and pulled out of the hole with the multi purpose tool to 300 m.

Daily report no : 29 **Date:** 2002-04-07

Midnight depth : 1884 m MD **Estimated PP:** 1,07 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Pulled out of the hole with the multi purpose tool from 300 m.
02:00	Made up 9 5/8" casing hanger. Racked hanger in derrick with 5" drill pipe on top.
03:00	Picked up power drive with premade up bit. Shallow tested power drive with 3000 LPM.
03:30	While picking up the MWD, the MWD slid down the catwalk and hit a 2" by 4" wooden box. Changed to back up MWD due to uncertainty if the primary MWD could have been damaged.
05:00	Continued to make up the 12 1/4" drilling assembly.
09:00	Attempted to make up the CDN and ISONIC toll. No success due to broken threads on the CDN pin up spacer sub. Laid down CDN tool and ISONIC tool. Picked up and made up spare ISONIC and spare CDN tool.
10:30	Picked up ADN tool. Installed radioactive source.
12:00	Made up 8" drill collars and heawy weight drill pipe.
13:30	Ran in hole with the 12 1/4" drilling assembly on 5" drill pipe to 711 m MD. Measured 5" drill pipe with laser while running in the hole.
16:00	Changed to 6 5/8" handling equipment. Continued to run in hole with the 12 1/4" drilling assembly on 6 5/8" drill pipe to 1745 m MD. Filled pipe and broke circulation at 1000 m.
18:00	Circulated and weighed up mud to 1.30 SG.
19:30	Reamed and logged from 1749 m MD to 1762 m MD. Opened cored interval from 1761 m MD to 1780 m MD, from 8 1/2" to 12 1/4".
23:59	Drilled and oriented 12 1/4" hole from 1780 m MD to 1884 m MD with 2 tonnes WOB, 66 RPM and 3700 LPM.

Daily report no : 30 **Date:** 2002-04-08

Midnight depth : 2445 m MD **Estimated PP:** 1,16 sg **Mud weight:** 1,30 sg

Stop time	Description
05:00	Drilled and oriented 12 1/4" hole from 1884 m MD to 1981 m MD with 2 tonnes WOB, 66 RPM and 3700 LPM.
06:00	Stopped drilling and circulated hole clean while changing liner on mudpump 2. Could not continue drilling, as signals from the LWD were masked by too much noise when running two mud pumps on full speed.
23:59	Drilled 12 1/4" hole from 1981 m MD to 2445 m MD with 1-7 tonnes WOB, 62-130 RPM and 3350-3750 LPM.

Daily report no : 31 **Date:** 2002-04-09

Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
08:30	Drilled 12 1/4" hole from 2445 m MD to 2647 m MD with 1-10 tonnes WOB, 130 RPM and 3500 LPM.
09:30	Troubleshot high lube oil pressure alarm on top drive. Changed plugged lube oil filter.
11:30	Drilled 12 1/4" hole from 2647 m MD to 2696 m MD with 1-10 tonnes WOB, 130 RPM and 3500 LPM.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 31 **Date:** 2002-04-09
Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
15:00	Pumped 15 m3 hivisc pill. Circulated hole clean while rotating and reciprocating pipe. Flowchecked well for 15 minutes. Well was static.
16:30	Pulled out of the hole with wet pipe from 2696 m MD to 2440 m MD. Had 15-20 tonnes overpull while pulling out.
21:00	Pumped slug. Pulled out of the hole and into the 20" casing at 1749 m MD. Had 15-20 tonnes overpull while pulling out to 2050 m MD. Had no overpull from 2050 m MD to 1749 m MD.
22:30	Flowchecked with bit inside casing. Well static. Circulated bottom up from 1749 m MD.
23:59	Ran in hole with the 12 1/4" drilling assembly from 1749 m MD to 2300 m MD.

Daily report no : 32 **Date:** 2002-04-10
Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Ran in hole with the 12 1/4" drilling assembly from 2300 m MD to 2670 m MD. Washed down from 2670 m MD to 2696 m MD. Found one meter fill on bottom.
04:30	Pumped 13 m3 hivisc pill. Circulated hole clean while rotating and reciprocating pipe. At 02:15 the rig went into advisory status, due to strong wind gusts up to 50 knots.
08:00	Flow checked well - negative. Pulled out of the hole wet to 2560 m MD. No overpull. Pumped slug. Continued to pull out of the hole to 2400 m MD. At 05:00 hrs, the rig went into yellow status, due to high DP power consumtion. Continued to pull out of hole to 1620 m.
08:30	Flow checked well - negative in shoe. Pumped slug.
10:00	Continued to pull out of hole to 710 m.
11:00	Changed to 5" handling equipment. Continued to pull out of hole with 5" drill pipe.
13:00	Pulled out of hole and laid down bottom hole assembly.
13:30	Removed and secured radioactive sourses.
16:30	Continued laying down bottom hole assembly. Cleaned and tidyed rigg floor.
19:00	Slipped and cut drill line. At 18:50 hrs rig went from yellow to advisory state due to improving weather.
19:30	Changed oil on top drive gear box.
20:00	Performed prejob meeting prior to rigging up for logging.
22:30	Rigged up for logging.
23:59	Run in hole with HALS-PEX-SP logging tools. At 23:30 hrs rig went from advisory to green status.

Daily report no : 33 **Date:** 2002-04-11
Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
04:30	Continued running in hole with HALS-PEX-SP logging tools to TD of well at 2696 m MD. Logged upwards. Resistivity tool not functioning.
06:00	Pulled out of hole with logging tools and rigged down same.
08:00	Rigged up DSI-GPIT-EMS-GR-VSP logging tools.
11:00	Ran in hole with logging tools. Hit restriction at 2674 m. Pulled to check if free and broke weak point at 8400 lbs.
13:00	POOH with logging cable and rigged down wire line equipment.
18:30	Waited on fishing equipment.
22:00	Picked up and made up 9 5/8" cement stand.
23:00	Waited on fishing equipment. Meanwhile serviced rig.
23:59	Picked up fishing equipment.

Daily report no : 34 **Date:** 2002-04-12
Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
01:30	Continued picking up fishing tools.
05:00	Ran in hole with fishing tools on 5" drill pipe.
06:00	Changed to 6 5/8" handling equipment and picked up jar.
09:30	Ran in hole with fishing tools on 6 5/8" drill pipe. Broke circulation on 2150 m. Continued running in hole.
12:00	Took weight at 2383 m. Washed hole.
13:00	Attempted to fish from 2621 m. Entered fish at 2638.8 m. Freed fish with 50 tons overpull.

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Daily report no : 34 **Date:** 2002-04-12

Midnight depth : 2696 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
20:00	Pulled out of hole 2 stands. Dropped ball and opened circulating sub. Tight spot at 2585 m to 2578 m. Worked pipe while pumping 1200 l/min. Maximum overpull 100 tons. Pumped slug and pulled out of hole.
20:30	Laid down fishing tools
21:30	Laid down retrieved logging tools.
22:30	Released cable head from overshot and laid down same.
23:30	Picked up bumper sub and serviced same.
23:59	Tidyed rig floor.

Daily report no : 35 **Date:** 2002-04-13

Midnight depth : 2725 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
04:00	Picked up 12 1/4" bottom hole assembly.
06:00	Ran in hole with 12 1/4" bottom hole assembly. Tested measurement while drilling tool - OK.
09:30	Continued running in hole with 12 1/4" bottom hole assembly. Broke circulation at 2300 m. Continued running in hole. Took weight at 2588 m.
12:00	Washed and reamed 12 1/4" hole from 2588 m to 2695 m.
13:00	Worked junk from 2695 m to 2696 m.
17:30	Performed slow circulation rates. Drilled and surveyed 12 1/4" hole from 2696 m to 2725 m.
21:00	Increased mud weight from 1.30 sg to 1.33 sg while circulating hole clean.
23:59	Pulled out of hole with 12 1/4" bottom hole assembly to shoe.

Daily report no : 36 **Date:** 2002-04-14

Midnight depth : 2725 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
00:30	Flow checked - negative in shoe
04:30	Continued pulling out of hole with 12 1/4" bottom hole assembly.
05:30	Racked back 12 1/4" bottom hole assembly and tidyed rig floor.
06:30	Picked up jetting sub and wear bushing retrieval tool.
07:30	Ran in hole with wear bushing retrieval tool.
08:00	Repaired broken bolt on upper racking arm.
09:00	Continued running in hole to retrieve wear bushing.
10:00	Washed wellhead area while circulating through kill and choke line.
10:30	Latched on to wear bushing and released same with 30 tons overpull.
12:30	Pulled out of hole with wear bushing.
13:30	Laid down wear bushing and jetting sub.
16:30	Cleared rig floor. Held prejob safety meeting and rigged up to run casing.
17:00	Checked and greased travelling equipment.
23:59	Made up shoe joint and shoe track with bakerlocked connections. Checked float equipment - OK. RIH with 9 5/8" casing. Held prejob safety meeting with night crew at 18:45 hours.

Daily report no : 37 **Date:** 2002-04-15

Midnight depth : 2725 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
09:30	Continued running in hole with 9 5/8" casing. 03.00 hours held safety meeting with crew prior to entering BOP. Broke circulation at 1522 m.
12:00	Picked up hanger. Made up and serviced same.
17:30	Ran in hole with 9 5/8" casing on 6 5/8" drill pipe. Broke circulation at 1750 m and 2243 m. Washed down last four stands.
18:00	Landed casing with shoe at 2719 m and verified landing point with index line.
21:00	Held prejob meeting with crew. Pumped 10 m3 spacer at 2000 l/min, pumped 14 m3 cement at 800 - 1000 l/min, displaced cement and bumped plug.
22:00	Pressure tested casing to 400 bar/10 min - OK. Bled off pressure and observed no backflow. Set seal assembly.

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Daily report no : 37 **Date:** 2002-04-15
Midnight depth : 2725 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
23:59	Pressure tested BOP to 400 bar.

Daily report no : 38 **Date:** 2002-04-16
Midnight depth : 2725 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
02:00	Continued pressure testing BOP to 400 bar.
03:00	Pulled casing running tool free - observed no overpull. Circulated through pipe OK. Relanded running tool and set down 30 tons. Pressure tested seal assembly to 400 bar - OK. Pulled off with no overpull.
03:30	Pumped slug and displaced same.
06:00	Repaired lower racking arm chain anchor.
08:00	Racked cement stand and pulled out of hole with landing string.
08:30	Laid down casing running tool.
11:00	Picked up and ran in hole with wear bushing. Closed upper annular and pressured up to 170 bar to set wear bushing. Released running tool with 15 tons overpull.
13:30	Pulled out of hole with wear bushing running tool. Laid down wear bushing running tool.
15:30	Changed to drilling bails.
17:30	Laid down cement stand.
20:30	Laid down 12 1/4" bottom hole assembly.
21:00	Cleared rig floor.
23:00	Pressure tested top drive system and kelly hose.
23:59	Picked up 8 1/2" BHA.

Daily report no : 39 **Date:** 2002-04-17
Midnight depth : 2725 m MD **Estimated PP:** sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	Continued picking up 8 1/2" bottom hole assembly.
05:00	Changed to 5" equipment and ran in hole with 8 1/2" bottom hole assembly on 5" drill pipe.
06:00	Filled pipe and tested logging while drilling equipment - OK.
13:30	Continued running in hole vith 8 1/2" bottom hole assembly. Performed kick drill with crew.
18:00	Washed down from 2612 m to 2620 . Tagged cement at 2620 m. Drilled hard cement to 2682 m.
23:59	Attempted to drill through float collar at 2682 m without success.

Daily report no : 40 **Date:** 2002-04-18
Midnight depth : 2769 m MD **Estimated PP:** sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Continued attempt to drill through float collar at 2682 m without success.
03:30	Pulled out of hole with 8 1/2" bottom hole assembly.
04:00	Changed dies on iron roughneck.
08:00	Continued pulling out of hole with 8 1/2" bottom hole assembly.
09:30	Changed handling equipment and racked bottom hole assembly in derrick.
10:30	Changed bit and prepared to run in hole with 8 1/2" bottom hole assembly.
11:00	Checked travelling and racking equipment prior to running in hole.
17:00	RIH with 8 1/2" bottom hole assembly to 2682 m.
23:30	Drilled float collar and hard cement from 2682 m to float shoe at 2719 m
23:59	Performed slow circulating rates up riser, up kill line and up choke line.

Daily report no : 41 **Date:** 2002-04-19
Midnight depth : 2769 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Continued performing slow circulation rates.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 41 **Date:** 2002-04-19

Midnight depth : 2769 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Drilled through float shoe and cleaned out rathole to 2726 m.
02:30	Drilled 6 metres of new formation to 2732 m.
05:00	Pumped high viscosity pill and circulated hole clean prior to leak off test.
06:30	Performed leak off test to 1.57 sg equivalent mud weight.
12:30	Drilled and surveyed 8 1/2" hole from 2732m to 2767m.
14:30	Circulated bottoms up.
15:30	Flow checked - negative. Pulled out of hole to shoe. Flow checked - negative in shoe.
19:30	Continued pulling out of hole with 8 1/2" bottom hole assembly.
22:00	Racked 8 1/2" bottom hole assembly. Broke bit and laid down logging while drilling equipment for service.
23:30	Removed damaged dolly wheel from dolly frame.
23:59	Held prejob safety meeting. Picked up core barrels from deck.

Daily report no : 42 **Date:** 2002-04-20

Midnight depth : 2788 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Continued picking up and making up core barrels.
04:30	Rearranged stands in derrick. Ran in hole with coring bottom hole assembly. Changed to automatic slips.
05:00	Installed repaired dolly wheel on dolly.
06:00	Changed out two more dolly wheels.
07:30	Continued running in hole with coring assembly to 852 m.
08:00	Checked travelling equipment.
13:00	Continnued running in hole with coring assembly to 2745 m.
13:30	Washed down and tagged bottom at 2769 m.
14:00	Dropped ball and performed slow circulating rates up riser.
18:30	Cut core number 2 from 2769 m to 2788 m. Dropped ball and pumped down same to deactivate core catcher. At 16:00 hours went from green status to advisory status due to more than 50 % of full thruster pull.
21:00	Pulled out of hole with core number 2 to 2574 m. Changed to 5" handling equipment. Flow checked in shoe - negative.
21:30	Inspected upper racking arm and travelling assembly dollies.
23:59	Continued pulling out of hole with core number 2 to 1293 m. Flow checked under BOP - negative.

Daily report no : 43 **Date:** 2002-04-21

Midnight depth : 2788 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Continued pulling out of hole with core number 2 to 1027 m.
01:30	Repaired broken coupling on elevator.
05:00	Continued pulling out of hole with core number 2. Slowed down tripping speed close to surface to allow gas to evacuate corebarrel.
05:30	Changed inserts in automatic slips.
09:00	Broke safety joint, held prejob safety meeting and laid down core number 2.
10:00	Made up core assembly number 3.
12:00	Cleared rig floor and ran in hole with coring assembly number 3.
13:30	Ran in hole with coring assembly on 5" drill pipe to 1036 m. Dynamic positioning went from advisory to yellow status due to high thruster pull. Pulled out of hole with coring assembly to above BOP to prepare for disconnect.
15:00	Prepared to displace riser to seawater and did same. Prepared BOP for controlled disconnect.
23:59	Waited on weather. Meanwhile performed rig maintenance.

Daily report no : 44 **Date:** 2002-04-22

Midnight depth : 2788 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
17:00	Continued waiting on weather. Meanwhile performed general rig maintenance.
21:30	Displaced riser back to 1.30 sg mud. Opened kill and choke lines and displaced same to 1.30 sg mud.
22:00	Opened shear rams and flow checked - negative. Ran in hole to 1023 m.

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Daily report no : 44 **Date:** 2002-04-22

Midnight depth : 2788 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
23:30	Pulled string above BOP. Function tested BOP.
23:59	Continued running in hole with 8 1/2" coring assembly to 1200 m.

Daily report no : 45 **Date:** 2002-04-23

Midnight depth : 2807 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
03:00	Continued running in hole with 8 1/2" coring assembly to 2576 m. Filled pipe every 500 m.
03:30	Filled pipe while changing to 6 5/8" handling equipment.
04:00	Continued running in hole with 8 1/2" coring assembly.
05:00	Washed from 2750 m and tagged bottom at 2788 m. Took weight at 2755 m.
05:30	Dropped ball and pumped down same.
08:30	Cut core number 3 from 2788 m to 2807 m.
09:00	Dropped ball and circulated down same. Pulled off core with 5 tons overpull.
09:30	Pulled out of hole with core number 3 to shoe. Flow checked in shoe - negative.
18:00	Pulled out of hole with core number 3 according to recommended tripping speeds. Broke safety joint.
20:00	Held prejob safety meeting and recovered core.
20:30	Checked core bit - OK.
22:00	Picked up and installed core barrels for core number 4.
22:30	Changed to 6 1/2" inserts in automatic slips.
23:00	Checked travelling equipment, upper racking arm and derrick.
23:59	Ran in hole with coring assembly number 4.

Daily report no : 46 **Date:** 2002-04-24

Midnight depth : 2818 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
03:30	Continued running in hole with coring assembly no. 4. Filled pipe every 500 m
04:00	Changed broken hydraulic hose on upper racking arm
05:30	Continued running in hole with coring assembly no. 4
07:00	Washed down last stand. Tagged bottom at 2807m.
07:30	Dropped coring ball. Circulated down same with 300 lpm
19:30	Cut core no 4 from 2807 m to 2817.5 m. Consistent low ROP
20:30	Dropped ball for full closure system and chased same with 300 lpm. Flowchecked- OK.
21:00	Pulled core no 4 inside casing shoe
21:30	Flowchecked well- OK
22:00	Continued pulling core no 4 with 6 5/8" DP
22:30	Changed to 5" handling equipment
23:59	Continued pulling core no. 4. Pulling speed 2 min/ stand

Daily report no : 47 **Date:** 2002-04-25

Midnight depth : 2818 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Continued pulling core no. 4 until BHA below BOP.
02:00	Flowchecked well OK prior to pulling BHA through BOP. Meanwhile checked Top Drive gear box and electrical motor for irregularities- OK
07:30	Continued pulling core no. 4, 2 min/ stand to 350 m, 3 min/ stand from 350 m to 100 m and then 5 min/stand
08:00	Broke out corebit and safety joint.
08:30	Cleared rig floor and held safety meeting for core handling
10:00	Recovered core no 4; 10.3 m - 98.1 % recovery. Laid down core barrel
11:00	Laid down ball retainer and crossover for full closure system from drilling stand
12:00	Prepared drilling BHA and rearranged in derrick.
14:30	Shear pin on Upper Racking arm broke. Retaining cap fell down onto forward setback area. Investigated and replaced shear pin. Secured safety chain for retaining cap in a different manner to avoid reoccurence

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Daily report no : 47 **Date:** 2002-04-25
Midnight depth : 2818 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
16:30	Made up bit no. 12 and MWD with new RAB tool. Ran in hole to 220 m
20:00	Ran in hole with 8 1/2" bit on 5" DP. Tested MWD tool at 500 m. Filled pipe and broke circulation every 500 m.
20:30	Checked travelling assembly and upper racking arm for potential dropped objects- OK
22:00	Continued running in hole on 5" DP
22:30	Changed to 6 5/8" handling equipment
23:00	Continued running in hole on 6 5/8" DP
23:59	Logged with MWD tool from 2719 m to 2770 m

Daily report no : 48 **Date:** 2002-04-26
Midnight depth : 2975 m MD **Estimated PP:** 1,04 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Continued logging cored interval with MWD tool from 2770 m to bottom at 2817.5 m
15:00	Took slow circulating rates. Drilled and surveyed 8 1/2" hole from 2817.5 m to 2975 m
18:00	Pumped 10 m3 High Viscous pill. Circulated hole clean. Flowchecked 15 minutes- OK
19:00	Pumped slug and started pulling out of hole. Drag gradually increased to 20-25 tons
19:30	Repaired broken hydraulic hose fitting on drill pipe elevator. Meanwhile circulated with 1200 lpm and rotated string
22:30	Continued pulling out of hole to 2852 m- tight spot. Attempted to pump out of hole with 600 lpm without rotatation- increase in pump pressure and overpull. Had to backream out with 600 lpm and 130 RPM. Sensitive on torque and pump pressure
23:30	Continued pulling out of hole. Hole OK. Circulated 10 minutes with 2100 lpm and 130 RPM to clean stabilizers
23:59	Ran back in hole for wiper trip for logging

Daily report no : 49 **Date:** 2002-04-27
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Continued running in hole to TD at 2975 m. Hole in good condition
03:30	Circulated hole clean with 2000 lpm/ 130 RPM. Suddenly lost 30 bar pump pressure in the end. Flowchecked well 10 minutes- OK
05:00	Pulled out of hole. Hole in good condition
05:30	Flowchecked- OK. Pumped slug
07:30	Attempted to break off kelly valve from the drill string. Got malfunction on iron roughneck- supporting shaft to roughneck frame broken. Secured Iron Roughneck. Evaluated risk and performed SJA for use of manual slips and rig tongs.
09:30	Pulled out of hole using manual slips and rig tongs
11:30	Had time out for safety. Reviewed safety and risk with manual slips and rig tongs
16:00	Continued pulling out of hole using manual slips and rig tongs. Flowchecked with BHA below BOP. Laid down MWD tool and bit
16:30	Cleared drillfloor of unnecessary equipment
19:00	Held pre-job meeting and rigged up for wireline logging. Made up toolstring no. 1
23:00	Ran in hole and logged HLRA-PEX-SP. TD logger at 2975 m. Pulled out with logging string no. 1
23:59	Rigged down toolstring no. 1 and made up toolstring no. 2

Daily report no : 50 **Date:** 2002-04-28
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Continued making up toolstring no. 2.
10:00	Ran in hole and logged CMR plus-HNGS. Pulled out of hole with CMR plus-HNGS.
10:30	Rigged down toolstring no. 2
12:00	Made up toolstring no. 3- VSP
22:00	Ran in hole with VSP. Logged VSP from TD to 1100 m. Pulled out of hole
23:00	Rigged down VSP toolstring
23:59	Made up toolstring no. 4- MSCT. Function tested MSCT

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Daily report no : 51 **Date:** 2002-04-29

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
06:30	Ran in hole with MSCT and took 27 side wall cores. Pulled out of hole with MSCT
07:00	Rigged down MSCT
09:00	Rigged up MDT, toolstring no. 5
14:00	Detected failure on MDT tool. Troubleshot and removed multisample unit for water from MDT
23:59	Ran in hole with MDT. Took pressure measurements to establish gradients

Daily report no : 52 **Date:** 2002-04-30

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
17:00	Completed MDT pressure measurements, 50 in total. Performed gas sampling programme at 2788.8 m
23:59	Took water sample at 2811.1 m. Pulled out of hole with MDT

Daily report no : 53 **Date:** 2002-05-01

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Continued pulling out of hole with MDT
02:00	Rigged down MDT
04:00	Opened cable head and bled off gas. Rebuilt cable head and rigged up toolstring no. 6, FMI-DSI
10:30	Ran in hole with FMI-DSI to 2962 m MD. Logged upward pass.
12:00	Pulled out of the hole with the FMI-DSI toolstring. Laid down toolstring.
13:00	Rigged down logging equipment.
15:00	Held pre job meeting with crew. Cut and slipped 32 meters drill line.
15:30	Installed BX elevator.
18:00	Made up wellhead washing assembly. Ran in hole with washing assembly on 5 stands 5" HWDP. Made up BOP test tool. Ran in hole with wash assembly and BOP test tool to 1023 m.
19:00	Made up crossover and top drive to string. Washed wellhead.
20:30	Ran in hole and landed the test plug in the wellhead. Sat down 25 tonnes weight. Filled pipe with sea water. Flushed surface lines. Closed upper annular and pressured up to verify test tool in correct position.
23:59	Leak tested BOP according to test program, to 35 bar for 5 minutes per test, and 400 bar for 10 minutes per test. Used yellow pod to operate BOP.

Daily report no : 54 **Date:** 2002-05-02

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
00:30	Function tested BOP on blue pod.
03:00	Pulled out of hole with the BOP test plug and the washing assembly. Meanwhile function tested shear rams with the acoustic system.
05:00	RIgged up and leak tested top drive valves and rotary hose to 35 bar for 5 minutes and 345 bar for 10 minutes.
06:00	Made up 8 1/2" wiper trip assembly.
08:00	Laid down 2 joints of 6 1/2" drill collars due to crossed threads. Rearranged bottom hole assembly to get correct jar placement.
12:00	Ran in hole with the 8 1/2" wiper trip assembly on 5" drill pipe to 2354 m.
14:30	Held pre job meeting with crew. Ran in hole with the 8 1/2" wiper trip assembly to 2689 m by picking up 36 joints of 5" drill pipe from deck.
15:00	Changed to 6 5/8" handling equipment.
16:00	Ran in hole with the 8 1/2" wiper trip assembly on 6 5/8" drill pipe. Broke circulation in shoe. Ran in hole to 2915 m.
17:00	Observed 8% gas. Flowchecked well, well static. Ran in hole with the 8 1/2" wiper trip assembly to 2975 m. Had 3 meters of fill on bottom.
21:30	Circulated bottoms up. Observed max 16% gas. Continued to circulate until gas levels was down to background gas level of 1.4%. Parameters on bottom: 100 RPM, 9500 Nm, 1750 LPM, 180 bar. Flowchecked. Well static.
23:00	Slugged pipe. Pulled out of the hole with the 8 1/2" wiper trip assembly to 2689 m. Had no overpull in the open hole.
23:30	Flowchecked well, well static. Meanwhile changed to 5" handling equipment. Greased and inspected top drive and travelling equipment.

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Daily report no : 54 **Date:** 2002-05-02
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
23:59	Pulled out of the hole to 2628 m. Connected top drive to string.

Daily report no : 55 **Date:** 2002-05-03
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Recorded torque readings and weights according to liner running program. Pumped slug.
05:00	Pulled out of the hole with the 8 1/2" wiper trip assembly. Flowchecked prior to pulling bottom hole assembly through the BOP. Well static.
05:30	Laid down jar and two joints of drill collars on deck due to stuck drift in the jar.
07:00	Rigged up to run 7" liner. Held prejob safety meeting with involved personnel.
11:30	Picked up and function checked shoe and float. Bakerlocked shoetrack to above landing collar. Ran in hole with 7" 29 ppf, L-80, Vam Ace liner as per tally to 345 m.
13:00	Picked up and checked liner hanger. Made up hanger. Filled PBR with hivisc mud. Circulated one liner volume. Recorded weights. Up weight of string: 50 tonnes. Down weight 53 tonnes including travelling assembly. Installed pip tag on connection below hanger.
14:00	Changed saver sub in top drive to 4 1/2 IF connection.
16:00	Ran in hole with the 7" liner on 5" drill pipe to 1100 m. Filled pipe every 5 stands.
16:30	Repaired spinner motor on iron roughneck.
17:30	Continued to run in the hole with the 7" liner on 5" drill pipe to 1500 m. Filled pipe every 5 stands.
18:00	Circulated one string volume.
21:00	Continued to run in the hole with the 7" liner on 5" drill pipe to 2719 m. Filled pipe every 5 stands.
22:00	Circulated one string volume with 890 LPM, 50 bar.
23:59	Continued to run in the hole with the 7" liner on 5" drill pipe. Tagged bottom at 2975 m. Spaced out and made up cement head. Retagged bottom with 10 tonnes. Pulled up weight. Pulled out with liner 1 meter to position liner shoe at 2974 m.

Daily report no : 56 **Date:** 2002-05-04
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Circulated one string volume with 880 LPM and 60 bar pressure.
02:30	Dropped liner hanger setting ball. Circulated ball down with 300 LPM. Seated ball in ball seat and pressurised string to 112 bar. Held pressure for 10 minutes. Sat down 35 tonnes weight. Pressurised string to 210 bar and sheared ball seat. Circulated with 1500 LPM, 135 bar. Rotated liner with 10 RPM. Held cement prejob meeting with crew.
04:00	Flushed and pressure tested surface lines to 345 bar/ 10 minutes. Pumped 15 m3 spacer with rig pump. Dropped lower dart. Prepared to mix cement. No success due to plugged bulk lines.
06:30	Opened blocked bulk lines. Meanwhile flushed surface lines from cement unit to rig floor.
07:00	Mixed and pumped 9.2 m3 of 1.90 SG cement slurry. Rotated liner with 10 RPM. Displaced cement to rig floor with 300 litres of fresh water. Dropped dart. Chased dart and cement with rig pumps with 1500 LPM. Bumped plug prematurely after 1540 strokes displacement. (Theoretically number of strokes should have been 1766), hence the displacement volume was 3.6 m3 less than theoretically.
08:30	Pressure tested liner to 150 bar for 5 minutes. Bled off and observed that the floats were holding. Picked up on running tool and set packer. Pressure tested packer to 150 bar for 5 minutes.
09:00	Pressurised liner to 40 bar. Pulled running tool out of the liner. Pressure decreased down to 25 bar when running tool came free from PBR.
09:30	Reverse circulated string with 1450 LPM and 145 bar pressure. Dumped a total volume of 32.4 m3 consisting of mud, spacer and cement.
11:30	Laid down cement head. Lined up and circulated bottoms up the long way.
16:00	Flowchecked. Well static. Slugged pipe and pulled out of the hole with the liner running tool. Laid down liner running tool. Tidied rig floor.
19:00	Changed to 3 1/2" handling equipment. Held prejob safety meeting with the crew. Made up liner clean out assembly. Picked up 12 joints 4 3/4" drill collars from deck.
20:00	Rearranged tubulars in derrick to get access to 3 1/2" drill pipe stands. Meanwhile greased and checked top drive and travelling equipment.
23:00	Continued to make up and run in hole with the liner clean out assembly to 272 m. Changed to 5" handling equipment.
23:59	Ran in hole with the liner clean out assembly on 5" drill pipe to 1025 m.

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Daily report no : 57 **Date:** 2002-05-05

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Circulated one riser volume with 3600 LPM to clean the riser.
03:00	Continued to run in hole with the liner clean out assembly on 5" drill pipe to 2620 m. Filled pipe every 500 metres. Checked free torque on string prior to entering the 7" liner. 40 RPM/ 5000 ft-lbs. 80 RPM/ 5500 ft-lbs. 118 tonnes neutral weight, including the travelling assembly.
04:00	Continued to run in hole with the liner clean out assembly to 2700 m. Worked the 7" scraper from 2700 m to 2740 m. Continued to run in hole to 2789 m where the string took weight.
11:30	Drilled and cleaned cement from 2789 m to 2897 m with 80 RPM, 1900 LPM, 5-7 tonnes WOB. Observed increase in torque when top dress mill landed on top of the PBR at 2628 m. Rotated until torque was flat. Pulled out and reentered PBR twice. Pulled out of the PBR with the mill assembly. Laid down one singel drill pipe.
13:30	Circulated bottoms up. Meanwhile held prejob meeting for displacing the well to 1.32 SG CaCl2 brine.
17:30	Displaced kill, choke and booster line to 1.32 SG CaCl2 brine. Pumped 15 m3 hivisc mud followed by 35 m3 seawater. Displaced well to 1.32 SG CaCl2 brine. Dumped hivisc pill, water and interface, totally 52.2 m3. Flowchecked well, well static. Slugged pipe.
23:59	Pulled out of the hole with the liner clean out assembly. Laid down liner clean out assembly.

Daily report no : 58 **Date:** 2002-05-06

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
00:30	Continued to lay down liner clean out assembly.
02:00	Rigged up schlumberger wireline logging equipment.
05:00	Ran in hole with CBL-USIT logging string. String stood up at 2857 m. Attempted to pass obstruction without success. Logged CBL and USIT from 2857 m to 2385 m. Pulled out of the hole with the logging string.
06:00	Rigged down schlumberger wireline logging equipment.
07:30	Made up BOP test string with painted drill pipe joint for space out check. Ran in hole with BOP test string on 5" drill pipe to 1023 m.
13:00	Landed BOP test plug in wellhead with 30 tonnes down weight. Tested BOP according to test sheet to 35 and 400 bar. Meanwhile rigged up coflex kill hose.
15:30	Slugged pipe and pulled out of the hole. Laid down BOP test string. Meanwhile pressure tested shear ram, 9 5/8" casing and 7" liner to 400 bar for 15 minutes.
19:30	Changed to 5 1/2" tubing handling equipment. Made up 5 stands of 5 1/2" tubing. Racked tubing in derrick.
20:30	Rigged up to run drill stem test bottom hole assembly. Held safety meeting with crew. Went through SJA for handling of perforation guns.
22:00	Made up and ran in hole with perforation guns.
23:59	Held pre job safety meeting with new crew. Picked up and made up firing head. Made up bottom hole assembly according to program and ran in hole to 62 m.

Daily report no : 59 **Date:** 2002-05-07

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
03:30	Continued to make up bottom hole assembly according to program and ran in hole to 106 m.
05:30	Ran in hole with the drill stem test bottom hole assembly on 4 1/2" Hydril 563 tubing to 205 m. Made up crossover to 5 1/2" Vam Ace.
06:00	Rigged up to pressure test bottom hole assembly.
07:30	Pressure tested bottom hole assembly to 450 bar. Rigged down pressure test equipment.
11:00	Changed to 5 1/2" handling equipment. Ran in hole with 5 1/2" Vam Ace tubing to 546 m.
12:00	Trouble shot on loss of power on pipe rack crane magnets. Found two blown fuses. Was not able to determine cause of problem. Solution is pending information from crane vendor.
15:00	Performed SJA for lifting of tubulars with slings, from pipedeck to catwalk machine. Continued to run in hole with 5 1/2" Vam Ace tubing to 960 m.
16:30	Rigged up and pressure tested string to 450 bar. Rigged down pressure testing equipment.
22:30	Continued to run in hole with 5 1/2" Vam Ace tubing to 1771 m.
23:59	Rigged up to pressure test tubing string. Filled tubing. Pressure tested tubing to 450 bar.

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Daily report no : 60 **Date:** 2002-05-08

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Continued to pressure test tubing string to 450 bar. Rigged down pressure test equipment.
02:00	Changed to 5" handling equipment. Picked up dummy fluted hanger.
04:00	Ran in hole with the test string on 5" drill pipe to 2773 m.
05:00	Installed 45 feet bails.
05:30	Picked up two joints 5" drill pipe from deck. Ran in and landed fluted hanger in wellhead. Set down 30 tonnes weight.
06:30	Rigged up schlumberger wireline equipment.
09:00	Ran in hole with GR and CCL to 2719 m and correlated packer depth. Meanwhile closed lower annular, upper pipe ram and lower pipe ram around drillpipe string. Pulled out of the hole with the GR and CCL. Laid down toolstring.
10:00	Rigged down schlumberger wireline equipment.
15:00	Pulled out of hole to 2773 m. Changed to drilling bails. Continued to pull out of the hole. Strapped drillpipe while pulling out.
16:30	Laid down dummy hanger. Cleared rig floor. Prepared to pick up sub sea tree and fluted hanger assembly.
18:00	Picked up and made up sub sea tree and fluted hanger assembly. Picked up and made up retainer valve assembly.
20:00	Picked up and made up gauge carrier assembly.
21:30	Rigged up Weatherford tubing running equipment.
23:30	Made up junk catcher. Installed umbilical for sub sea tree.
23:59	Function tested sub sea tree. Unlatched tree.

Daily report no : 61 **Date:** 2002-05-09

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Function tested sub sea tree. Latched tree.
02:00	Made up 3 joints of 5 1/2" NSCC tubing to test string and ran in hole.
04:30	Filled string. Pressure tested string to 450 bar against tester valve. Closed sub sea test tree valve. Bled down pressure to 35 bar and inflow tested sub sea test tree valve. Equalised pressure over sub sea test tree valve and opened valve. Bled off pressure. Closed retainer valve and pressure tested valve to 450 bar from above. Pressure tested chemical injection line to sub sea tree to 450 bar.
07:30	Lost contact with sub sea test tree gauges. Pulled gauge carrier back to rig floor. Found gauge cable crushed. Changed gauge cable.
13:00	Ran in hole with test string on 5 1/2" NSCC tubing to 2324 m. Installed umbilical clamp on every third connection. Filled tubing every sixth joint.
17:30	Investigated the reason for getting closed end displacement volumes back. Filled string and pressured up to 450 bar. Found from pumped volumes that the sub sea test tree was closed. Attempted to open tree. No success. Bled down pressure above the sub sea test tree.
18:00	Rigged down pressure test equipment.
18:30	Rigged up Weatherford tong.
22:30	Pulled out of the hole with 5 1/2" NSCC tubing. Racked tubing in derrick.
23:59	Changed elevators. Pulled out of the hole with the sub sea pod, gauge carrier and sub sea test tree.

Daily report no : 62 **Date:** 2002-05-10

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
02:00	Drifted retainer valve assembly and sub sea test tree. Found retainer valve open and sub sea test tree flapper valve closed. Checked hydraulic supply to the sub sea test tree flapper valve. Hydraulic supply was functioning as intended.
04:00	Bled down pressure in the sub sea test tree accumulator. Laid down pod and accumulator assembly.
04:30	Broke out and laid down the retainer valve assembly.
05:30	Connected hose to the chemical injection line on the sub sea test tree. Pressurised line and found 469 bar pressure below sub sea test tree flapper valve.
06:00	Ran sub sea test tree below rotary. Rigged up pressure test equipment.
07:30	Pressurised string to 480 bar with cement unit. Opened sub sea test tree valve. Bled off pressure in string. Rigged down pressure test equipment. Laid down sub sea test tree and fluted hanger.
09:30	Troubleshot on the sub sea test tree control system. Could not find any apparent malfunctions in system.
10:30	Picked up and made up back up sub sea test tree and fluted hanger assembly.
11:00	Picked up and made up the back up gauge carrier assembly.

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Daily report no : 62 **Date:** 2002-05-10
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
16:30	Picked up and made up the back up sub sea pod. Installed umbilical. Function tested sub sea test tree assembly according to test procedure. Rigged up pressure test equipment and pressure tested string and sub sea tree assembly to 450 bar.
17:00	Rigged down pressure test equipment. Rigged up Weatherford tong.
18:00	Ran in hole with the test assembly on 5 1/2" NSCC tubing from the derrick, from 1808 m to 1880 m.
19:00	Investigated reason for getting closed end displacement volumes back while running in hole. Closed upper annular in the BOP. Pressured up down annulus to attempt to reverse circulate. Pumped up to 20 bar pressure. Pressure did not bleed down through the screens.
20:30	Rigged up Smedvig wireline equipment. Ran in hole and drifted the sub sea test tree. Found all valves in the sub sea test tree assembly open. Pulled out of the hole and rigged down the wireline equipment.
22:30	Filled test string with brine. Closed annular. Pressurised annulus in steps. Got slight flow through screens at 35 bar pressure. Increased pressure to 40 bar. Achieved a circulation rate of 80 LPM. Increased pressure to 45 bar. Achieved a circulation rate of 100 LPM. Held pump rate constant. Pressure was steady at 45 bar.
23:59	Prepared and cycled IRIS valve to open position.

Daily report no : 63 **Date:** 2002-05-11
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Pulled out of the hole with 5 1/2" NSCC tubing. Racked tubing in derrick.
03:00	Disconnected umbilical and gauge cable. Laid ddown sub sea pod and accumulator assembly.
04:30	Laid down retainer valve assembly and sub sea test tree and fluted hanger assembly.
15:00	Pulled out of the hole with 5 1/2" Vam Ace tubing to 194 m. Racked tubing in derrick.
15:30	Changed to 4 1/2" handling equipment. Pulled out of the hole and racked 4 1/2" tubing in the derrick.
20:30	Held prejob meeting with crew. Went through SJA for handling of drill stem test bottom hole assembly. Laid down drill stem test bottom hole assembly and firing head. Found heavy gelled mud/brine mix with a high content of solids, when the excluder screen was broken out.
21:30	Laid down TCP guns.
22:30	Greased and checked travelling assembly. Tidied rig floor.
23:59	Installed 5" handling equipment. Made up 9 5/8" BJ retrievable packer assembly to perform drawdown test of 7" liner lap.

Daily report no : 64 **Date:** 2002-05-12
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
05:00	Ran in hole with the 9 5/8" retrievable packer to 2600 m on 5" drill pipe.
06:00	Displaced drill pipe string to seawater. Final drill pipe shut in pressure 75 bar. Set 9 5/8" retrievable packer.
06:30	Attempted to bleed off drill pipe pressure. No success due to leakage in 9 5/8" retrievable packer. Reset packer.
07:00	Bled off drill pipe pressure and inflow tested liner lap for 30 minutes.
08:00	Pressurised drill pipe string to 75 bar. Unseated 9 5/8" packer. Closed annular and reverse circulated 26 m3 of brine into drill pipe string.
13:00	Pulled out of the hole with the 9 5/8" retrievable packer assembly. Laid down packer.
17:00	Made up clean out assembly.
18:30	Ran in hole with the clean out assembly to 1500 m.
22:30	Pumped 14 m3 hivisc brine pill. Displaced well to seawater from 1500 meters, as per program.
23:59	Ran in hole with the clean out assembly from 1500 m to 2856 m.

Daily report no : 65 **Date:** 2002-05-13
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	String took weight at 2856 m. Washed down to 2893 m.
03:00	Landed top dress mill nogo on top of the PBR. Pumped 14 m3 hivisc brine pill. Circulated pill above liner with 3000 LPM. Opened circulation sub. Pumped pill out of the hole with 3600 LPM down the string, and 1800 LPM down booster line.
05:00	Pumped 14 m3 hivisc seawater pill. Circulated pill out of the hole with 4500 LPM down the string through the circulation sub, and 1800 LPM down the boosterline.

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Daily report no : 65 **Date:** 2002-05-13

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
10:00	Pumped 14 m3 hivisc seawater pill. Circulated pill out of the hole with 3600 LPM down the string through the bit, and 2700 LPM down the booster line, while rotating and reciprocating the clean out string.
12:00	Pumped 10 m3 hivisc seawater pill. Circulated pill out of the hole with 3600 LPM through the circulation sub, and 2600 LPM down the booster and kill line.
15:00	Pumped 26 m3 hivisc brine pill. Displaced well to 1.32 SG CaCl2 brine.
20:30	Pulled out of the hole with the clean out assembly. Laid down scrapers and bit.
21:00	Cleared rig floor. Adjusted crown block saver.
23:00	Changed 3 damaged 5 1/2" tubing joints in the test string that was racked in the derrick.
23:59	Went through SJA for lifting perforation guns with pedestal crane. Changed to 3 1/2" handling equipment. Barrierd off cellar deck and drill floor.

Daily report no : 66 **Date:** 2002-05-14

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Picked up and made up perforation guns. Made up firing head.
03:30	Made up gauge carrier, excluder screen, Hi-pac packer, tester valve and IRIS valve assembly according to tally.
04:00	Pressure tested bottom hole assembly to 450 bar.
04:30	Manually locked open tester valve. Closed IRIS ball valve.
05:30	Made up radioactive marker sub and reversing valve assembly. Weight of bottom hole assembly = 4 tonnes. Changed to 4 1/2" handling equipment.
07:00	Ran in hole with the testing bottom hole assembly on 4 1/2" Hydril tubing to 193 m. Changed to 5 1/2" handling equipment.
09:30	Filled string. Rigged up pressure test equipment. Pressure tested string to 450 bar. Rigged down pressure test equipment.
13:30	Ran in hole with the testing assembly on 5 1/2" Vam Ace tubing to 962 m.
15:00	Filled string. Rigged up pressure testing equipment. Pressure tested string to 450 bar. Rigged down pressure testing equipment.
20:30	Continued to run in hole with the testing assembly on 5 1/2" Vam Ace tubing to 1771 m.
22:00	Filled string. Rigged up pressure testing equipment. Pressure tested string to 450 bar. Rigged down pressure testing equipment. Changed elevator.
23:59	Picked up and made up fluted hanger and sub sea test tree assembly. Picked up and made up retainer valve assembly.

Daily report no : 67 **Date:** 2002-05-15

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Picked up and made up gauge carrier and sub sea accumulator assembly.
03:30	Installed hydraulic umbilical and function tested sub sea test tree according to Schlumberger test procedure. Installed junk catcher.
05:00	Filled string with brine. Rigged up pressure testing equipment. Pressure tested string and sub sea test tree to 450 bar. Closed sub sea test tree valves. Bled down pressure above valves to 40 bar to inflow test valves. Observed leak. Retested valves - OK. Pressurised string to 450 bar and opened sub sea tree. Bled off string pressure.
06:00	Disconnected bleed off choke and rerouted bleed off line into the displacement tank on the cement unit.
07:30	Continued pressure testing sub sea test tree.
14:00	Observed no signal to sub sea test tree pressure and temperature sensors. Trouble shot same without success. Pressure tested sub sea test tree to 450 bar/10 min - OK.
19:00	Ran in hole with 14 stands 5 1/2" tubing from derrick. Picked up 5 1/2" tubing from deck and ran in hole to 2385 m. Observed three solid steel parts from fillup line chicksan lost into test string.
20:00	Rigged up slick line equipment and ran in hole with lead impression block. Block stood up at cross over at 578 m. POOH and inspected imprint on lead impression block. Closed retainer valve at 604 m.
22:30	Performed three fishing runs with magnets on slick line without success. Pushed fish down to retainer valve at 604 m on last magnet run. Rigged down slick line equipment.
23:00	Held prejob safety meeting with crew prior to pulling out of hole with test string.
23:59	Pulled out of hole with test string to 2313 m.

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Daily report no : 68 **Date:** 2002-05-16

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
04:00	Continued pulling out of hole with test string to 1808 m.
05:00	Pulled out of hole with sub sea test tree. Disconnected latch and retrieved all lost metal.
08:00	Connected latch and ran in hole with sub sea test tree. Pressure tested sub sea test tree to 450 bar/10 min - OK.
11:30	Ran in hole with 16 stands of 5 1/2" test tubing from derrick.
15:30	Picked up 5 1/2" test tubing from deck and ran in hole with same.
17:30	Ran in hole with 1 stand of 5" drill pipe. Installed slick line wheel. Ran in hole with 5" drill pipe and landed hanger in well head with 20 tons down weight. Hanger at 1023.85 m, bull nose at 2797.23 m.
20:30	Rigged up wire line equipment. Ran in hole and performed corrolation run. Confirmed perforation interval 2770 m to 2797 m.. Pulled out of hole and rigged down wire line equipment.
22:00	Laid down 1 single 5" drill pipe and changed bails. Pulled out of hole 1 stand 5" drill pipe.
23:59	Changed elevator and picked up flow head from deck. Connected hose to lubricator valve and function tested same.

Daily report no : 69 **Date:** 2002-05-17

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
02:30	Connected test hose and pressure tested lubricator valves according to programme.
03:30	Cut and slipped drill line.
04:00	Trouble shot plugged chemical injection line.
05:00	Ran in hole 2 joints of 5 1/2" test tubing.
10:00	Held prejob safety meeting with crew and installed coil tubing lift frame.
12:00	Trouble shot tilt cylinder on coil tubing lift frame.
13:00	Installed production coflex hose and kill coflex hose on flow head.
17:00	Attempted to to install flowhead without success. This due to missing bolts on coil tubing lift frame. Made new bolts for coil tubing lift frame connector.
17:30	Installed flow head under coil tubing lift frame.
18:00	Installed tubing tong and made up flow head to test tubing.
19:30	Installed protective cover on flow head hoses.
22:00	Connected hydraulic control hoses.
22:30	Landed hanger in well head.
23:59	Flushed surface lines with brine and commenced pressure testing surface lines according to programme.

Daily report no : 70 **Date:** 2002-05-18

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
02:00	Searched for leak in surface equipment. Pressure tested cement unit - OK.
03:00	Continued pressure testing surface equipment according to programme.
03:30	Pressure tested test string to 450 bar/10 min - OK.
04:00	Inflow tested master valve and kill valve - OK.
06:00	Set test packer, opened test valve and ensured packer was fully set.
06:30	Tested packer from above to 105 bar/10 min - OK.
08:30	Closed tester valve and opened reverse circulation valve. Pressure tested cement unit to 450 bar/10 min - OK.
09:00	Yellow status on rig positioning system due to partial blackout in engine control room. Activated emergency shutdown 2 which closed valves and disconnected latch in sub sea test tree.
14:00	Green status on rig positioning system. Attempted to latch onto test string several times without success. Moved rig 15 m north and latched onto test string. performed overpull test - OK.
15:00	Closed circulation valve and leak tested test string to 150 bar/10 min - OK.
17:00	Cycled upper tester valve closed. Pressure tested test string to 450 bar/10 min - OK. Cycled upper tester valve to locked open position.
19:30	Closed tester valve and opened reverse circulation ports. Displaced test string to diesel. Displaced surface lines to brine. Closed circulation valve and opened tester valve.
21:00	Performed prejob safety meeting and safety walk around prior to perforating. Pressured up and perforated well according to programme.
23:00	Flowed well. Flowrate 200 000 m3/day gas at a pressure of 181 bar.
23:59	Shut in well for initial build up.

DAILY REPORT ON WELL 6305/4-1

Daily report no : 71 **Date:** 2002-05-19

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
07:30	Well shut in for initial build up. Displaced test string to diesel to prepare for main flow.
23:59	Opened tester valve. Flowed well to starboard burners. Flowrate 1.87 million m3/day gas and 153 m3/day condensate at a pressure of 135 bar and a temperature of 10 degrees celcius. Choke size 80/64 ". At midnight produced a total of 1.28 million m3 gas and 105 m3 condensate.

Daily report no : 72 **Date:** 2002-05-20

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
09:00	Continued main flow to starboard burners. Flowrate 1.86 mill m3/day gas and 145 m3/day condensate at a pressure of 153 bar and a temperature of 10 degrees celsius. Choke size 80/64". Cummulative production of 1.69 mill m3 gas and 145 m3 condensate.
10:00	Observed sudden increase in annulus pressure, decrease in well pressure and flow rate from 1.85 mill m3/day to 1.40 mill m3/day. Bled off increasing annulus pressure, closed tester valve and bled off well pressure to zero.
11:30	Observed less than 4 bar pressure on sub sea test tree chemical injection line and no pressure on sub sea test tree control line.
20:30	Observed drop in fluid level in riser. Kept riser full. Total losses 21.5 m3.
23:59	Cycled sub sea test tree retainer valve to open position. Made several attempts to verify open retainer valve by measuring pump volumes. Increased pressure in 50 bar steps to 300 bar. Opened sub sea test tree valve. Bled of tubing pressure. Closed and inflow tested sub sea test tree valve - OK. Opened sub sea test tree valve. Bled off test string pressure. Monitored well at test choke.

Daily report no : 73 **Date:** 2002-05-21

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
16:30	Continued main pressure build up period. IRIS tester valve started leaking at 16:30.Prepared to disconnect and inflow test sub sea test tree.
21:00	Attempted to pressure test tubing several times without success. Observed that brine level inside tubing had dropped during buildup. Lost 5.5 m3 of brine into tubing while attempting to pressure test.
22:30	Cycled lower tester valve to closed position. Attempted pressure testing tubing without success.
23:59	Pressured up annulus and locked lower tester valve in open position. Enabled and closed upper tester valve. Pressure tested upper tester valve to 100 bar/10 min - OK. Bled off tubing pressure to testing tank and monitored for gas. Pressure tested upper tester valve to 100 bar/10 min - OK.

Daily report no : 74 **Date:** 2002-05-22

Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Prepared to kill well with mud.
04:30	Opened upper circulating valve. Reversed well to 1.30 sg mud while holding 20 bar back pressure on choke. First 2 m3 of returning brine to test choke to check for gas. Flow checked - negative.
05:30	Pumped mud down choke line and up kill line to remove any gas under closed middle pipe ram.
06:00	Closed upper circulating valve.
09:00	Displaced riser to 1.30 sg mud.
09:30	Opened upper tester valve and bullheaded 970 l mud at 50 bar.
10:30	LPSM upper IRIS tester valve. Pressured up annulus to 250 bar to rupture below packer circulating valve and to permanently open lower tester valve. Bullheaded down annulus.
11:00	Flow checked - negative.
11:30	Pumped mud down kill line and up choke line to remove any gas below middle pipe ram.
12:30	Unsat packer.
15:30	Circulated long way up kill line with middle pipe ram closed. Observed gas in mud. Flow checked well after pumping 1.5 times hole volume - observed 5 bar shut in pressure. Continued circulating out gas. Flow checked - negative.
16:30	Boosting of riser with MPR closed. Opened MPR and Flow checked - negative.
19:00	Prepared to lay down flow head. Held prejob safety meeting. Laid down flow head.
21:30	Held prejob safety meeting and laid down coil tubing lift frame.
23:59	Cleared rig floor and rigged up handling equipment for 5 1/2" test string.

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Daily report no : 75 **Date:** 2002-05-23
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,30 sg

Stop time	Description
08:30	Pulled out of hole and laid down in singles 5 1/2" landing string. Laid down master valve and lubricator valves. Continued pulling out of hole with 5 1/2" landing string.
10:30	Pulled out of hole with sub sea test tree and inspected same. Found leak in fitting on top of sub sea test tree.
13:30	Repaired hydraulic oil leak og top drive system.
16:00	Laid down sub sea test tree.
23:59	Continued pulling out and laying down in singles 5 1/2" test string.

Daily report no : 76 **Date:** 2002-05-24
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,31 sg

Stop time	Description
01:00	Continued pulling out of hole and laying down 5 1/2" test string.
01:30	Changed to 4 1/2" handling equipment.
02:00	Pulled out of hole and laid down 4 1/2" test string.
08:30	Pulled out of hole and laid down downhole valves and sensors.
09:30	Cleared rig floor and prepared to run in hole with blow out preventer test tool.
12:00	Made up blow out preventer test tool with jet sub 2 stands below. Ran in hole and cleaned well head. Continued to run in hole.
14:30	Landed test tool with 10 tons downweight. Pressure tested blow out preventer.
16:30	Pulled out of hole and laid down test tool and jet sub.
18:30	Picked up flowhead from deck and serviced same.
21:30	Pressure tested top drive and kelly hose.
23:00	Made up gauge carrier and bottom hole assembly for mini frac.
23:59	RIH with gauge carrier to 806 m.

Daily report no : 77 **Date:** 2002-05-25
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
02:30	Continued running in hole with gauge carrier.
03:00	Tagged top of liner at 2628 m and circulated one string volume.
05:00	Closed upper annular and performed mini frac according to programme.
09:00	Pulled out of hole with gauge carrier. Laid down casing scraper and gauge carrier.
12:00	Prepared and made up cement retainer.
15:30	Picked up 9 singles 3 1/2" drill pipe from deck. RIH with cement retainer on 12 stands 3 1/2" drill pipe. Changed to 5" handling equipment. Ran in hole with cement retainer on 5" drill pipe.
16:00	Made up cement stand and racked in derrick.
17:00	Continued running in hole with cement retainer on 5" drill pipe.
18:00	Picked up cement stand, dropped ball and sat retainer at 2750 m. sat down 10 tons for 10 minutes. Pulled up 5 m and circulated one string volume at 1000 l/min.
18:30	Established injection rates.
20:30	Pressure tested surface lines. Pumped 1 m3 fresh water spacer, 12 m3 1.90 sg cement and 0.5 m3 left over mix water spacer. Displaced cement, stung into retainer and squeezed 3 m3 cement into perforations. Pulled 3 m above retainer and set remainder of cement as a balanced plug. Estimated top of cement at 2500 m.
22:00	POOH slowly to 2300 m.
23:00	Reverse circulated string.
23:59	Circulated long way to clean string.

Daily report no : 78 **Date:** 2002-05-26
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
01:00	Continued circulating long way.
11:00	Pulled out of hole with 5" drill pipe and 3 1/2" cement stinger in singles from 2300 m to 344 m.. Laid down 5" drill pipe.
12:30	Ran in hole with 8 stands of 5" drill pipe and laid down same in singles.

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Daily report no : 78 **Date:** 2002-05-26
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,32 sg

Stop time	Description
16:00	Changed to 3 1/2" handling equipment. Continued pulling out from 344 m in singles, laid down 3 1/2" drill pipe.
18:00	Attempted to repair top drive. Meanwhile pressure tested cement plug to 143 bar/10 min - OK.
21:00	Rigged down flow and kill hoses.
23:59	Picked up cutting assembly and ran in hole on 5" drill pipe. Picked up swivels.

Daily report no : 79 **Date:** 2002-05-27
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
02:00	Cleared rig floor and ran in hole with cutting assembly on 6 5/8" drill pipe from 332 m to 1345 m.
03:00	Landed marine riser in well head and set down 5 tons. Closed upper annular preventer on annular swivel and cut 9 5/8" casing at 1345 m.
04:00	Flow checked - negative. Opened upper annular and observed mud losses to well.
05:30	Noticed improving trend in losses. Pulled out of hole with cutting assembly from 1345 m to 500 m.
06:00	Repaired iron roughneck.
07:30	Continued pulling out with cutting assembly from 500 m to surface .Laid down cutting assembly.
08:00	Changed to 6 5/8" handling equipment. Made up wear bushing retrieval tool.
10:00	Ran in hole with wear bushing retrieval tool on 6 5/8" drill pipe from surface to 1003 m.
10:30	Washed down last 20 metres with 1800 l/min. Landed wear bushing retrieval tool with 20 tons downweight. Released wear bushing with 25 tons overpull..
12:00	Pulled out of hole with wear bushing from 1023 m to surface.
14:00	Prepared and picked up casing retrieval assembly.
15:00	Ran in hole with casing retrieval assembly from surface to 1023 m.
16:00	Engaged seal assembly, closed annular preventer and pulled same free with 30 tons overpull. Flowchecked well - negative.
17:00	Engaged spear and attempted to pull casing free with 130 tons overpull. No success.
18:30	Released spear and pulled out of hole with casing retrieval assembly from 1023 m to surface.
21:00	Changed spear assembly, laid down Drill Quip multi purpose tool and installed jar and accellerator.
23:00	Ran in hole with casing retrieval assembly from surface to 1023 m.
23:30	Engaged spear, stroked jar once and casing came free.
23:59	Pulled out of hole with 9 5/8" casing on 6 5/8" drill pipe from 1345 m to 1172 m. Lost a total of 26 m3 mud last 24 hours.

Daily report no : 80 **Date:** 2002-05-28
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
01:30	Pulled out of hole with 9 5/8" casing on 6 5/8" drill pipe from 1172 m to 392 m
03:00	Laid down accellerator and jar. Released spear and laid down same.
04:30	Inspected hanger. Prepared to lay down 9 5/8" casing. Performed safe job analysis with crew prior to using manual elevator.
07:30	Pulled out of hole and laid down 9 5/8" casing from 322 m to 0 m. Held prejob safety meeting with new crew.
08:30	Rigged down casing handling equipment.
11:30	Picked up parabow and ran in hole with same on 18 stands of 5" drill pipe and 6 5/8" drill pipe from surface to 1320 m.
12:00	Circulated one string volume, dropped ball and set parabow at 1320 m.
14:00	Leak tested surface lines. Pumped 5 m3 fresh water spacer, 43 m3 1.90 sg Norcem "A" cement and 0,5 m3 left over mix water spacer. Displaced with 13.7 m3 mud. Noticed 10 m3 loss to formation while displacing cement.
15:30	Pulled out of hole slowly from 1320 m to 913 m. Observed 61 m3 loss to open hole. Maintained level in riser using 20 m3 mud and 41 m3 sea water.
16:00	Circulated the long way to clean string. Lost 17 m3 to hole.
18:00	Pulled out of hole from 913 m to 600 m. Laid down pipe.
19:30	Ran in hole from 600 m to 1036 m.
20:00	Held prejob safety meeting. Prepared pits for displacing riser to sea water.
22:00	Pumped 11 m3 of viscous spacer and displaced riser to sea water. After pumping 162 m3 sea water, the stand pipe pressure suddenly decreased from 150 bar to 30 bar. Stopped circulating and checked surface equipment. Completed displacing riser to sea water.

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Daily report no : 80 **Date:** 2002-05-28
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
23:00	Flow checked - negative. Pressure tested standpipe and top drive - OK. Circulated on the well with BJ pump to confirm low pressures.
23:59	Pulled out of hole from 1036 m to 551 m to check for wash out. Total loss to well 88 m3 last 24 hours.

Daily report no : 81 **Date:** 2002-05-29
Midnight depth : 2975 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
01:30	Continued pulling out of hole with cement string from 551 m to surface to check for washout. Found washout in body of parabow running tool and laid down same.
05:00	Laid down excess pipe.
07:30	Made up and ran in hole with diverter sub on 18 stands of 5" drill pipe and 6 5/8" drill pipe from surface to 627 m.
09:00	Pressure tested surface rig up to 200 bar and set balanced cement plug from 1290-1050 m according to programme. Reciprocated pipe during cement job.
10:00	POOH from 1290-1036 m.
12:30	Circulated out excess cement. Jetted BOP with 4000 lpm - 60 bar.
16:00	POOH from 1030 m while laying down pipe.
17:00	Greased travelling equipment while performing MOB exercise.
19:00	Continued laying down 6 5/8" pipe.
20:00	Held safety meeting with deck crew and handled arriving helicopter.
22:00	Laid down17 stands 5" pipe.
23:59	Laid down cement stand and hang off stands.

Daily report no : 82 **Date:** 2002-05-30
Midnight depth : 1063 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
02:30	Made up 12 1/4" bit and RIH to 1027 m.
03:00	Washed down from 1027 m and tagged TOC at 1063 m. Set down 10 ton OK.
03:30	POOH from 1063 m to 1000 m. Closed shear ram and pressure tested cement plug to 90 bar above leakoff pressure..
05:00	Continued pulling out of hole.
07:30	Checked top drive and drawworks. Meanwhile retesting cement plug to 90 bar, OK.
11:30	Rigged up riser handling equipment.
13:00	Picked up landing joint and prepared to disconnect BOP.
15:30	Disconnected BOP and hung off support ring.
16:00	Repaired yellow pod winch.
23:59	Pulled BOP and riser. Laid out 16 jnts plus slip joint.

Daily report no : 83 **Date:** 2002-05-31
Midnight depth : 1063 m MD **Estimated PP:** 1,10 sg **Mud weight:** 1,33 sg

Stop time	Description
12:00	Continued to pull BOP and riser.
16:00	Pulled BOP through splash zone and prepared to skid BOP to park area.
18:00	Skidded BOP to park area and laid down finned + instrumented riser jnt.
21:00	Rigged down riser equipment. Installed drilling equipment.
23:00	Prepared MOST tool and made up same. Adkjusted stop clamps. Laid down jar and picked up single 8" DC.
23:59	RIH cutting BHA and 6 5/8" pipe to 200 m.

Daily report no : 84 **Date:** 2002-06-01
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,33 sg

Stop time	Description
01:30	Continued RIH cutting assy from 200-1015 m. Installed drilling stand.
02:00	Guided bullnose with ROV and stabbed cutting assy in wellhead.

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Daily report no : 84 **Date:** 2002-06-01

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,33 sg

Stop time	Description
04:00	Cut 36" and 20" casings at 1031 m. Drop in wellhead and increased pump pressure to 200 bar.
07:00	Made up T-bars on MOST tool with ROV to lock down dogs. Attempted to latch and retrieve wellhead without success. Removed steel cuttings inside MOST toll with ROV.
08:30	Attempted to latch wellhead with MOST tool. No go. POOH.
11:00	Laid down MOST tool and picked up wellhead running/retrieving tool.
13:00	RIH with wellhead tool.
14:00	Moved rig and latched running tool.
15:00	Attempted to pull wellhead with 155 ton overpull. No go. Moved rig with 90 ton on wellhead and 4000 lpm. Pulled free same.
16:30	POOH with wellhead and hydrate plate.
18:00	Disconnected wellhead running tool on moonpool trolley.
19:00	Nippled down wellhead from hydrate plate and laid down same.
23:59	ROV collected transponders while laying down 8" DCs and 6 5/8" pipe.

Daily report no : 85 **Date:** 2002-06-02

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,33 sg

Stop time	Description
07:00	Continued to perform ROV operations while laying down 6 5/8" pipe.
11:00	Debalasted rig to transit draft.
12:00	Continued to troubleshoot ROV winch failure.
15:00	Picked up remaining transponders and bouys with ROV.
23:59	Finished Ormen Lange operations and commenced sailing to Florø yard.

TIME DISTRIBUTION

Well: 6305/4-1 **PO:** 1 **Start date:** 1980-01-01 **Rig:** SCARABEO 5 **Depth:** 2817,0 **m MD**

All sections **Stop date:** 2002-08-20

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	45,5	2,27			
TRIPPING IN CASED HOLE	0,5	0,02			
BOP HANDLING	1,5	0,07			
Sum.			47,5	2,37	47,5
DRILLING					
BHA HANDLING/TESTING	81,0	4,03			
EQUIPMENT TEST	3,5	0,17			
MWD HANDLING/TESTING/SURVEYING	0,5	0,02			
TRIPPING IN CASED HOLE	68,5	3,41			
TRIPPING IN OPEN HOLE	49,5	2,47			
DRILLING	142,5	7,10			
OTHER	15,0	0,75			
WELLHEAD EQUIPMENT INSTALLATION	7,5	0,37			
REAMING	8,0	0,40			
CIRC. AND COND. MUD/HOLE	33,0	1,64			
WIPER TRIP	8,0	0,40			
SURVEYING	7,5	0,37			
TRIPPING/CIRC. FOR PRESSURE DETECTION	1,0	0,05			
CASING HANDLING/TESTING	38,0	1,89			
RUNNING CASING IN CASED HOLE	24,5	1,22			
RUNNING CASING IN OPEN HOLE	5,5	0,27			
DRILLING OUT OF CASING	4,0	0,20			
PRIMARY CEMENTING	42,5	2,12			
TRIPPING FOR CEMENT JOB	3,5	0,17			
DRILLING OUT CEMENT PLUG	19,5	0,97			
FORMATION STRENGTH TESTING	7,0	0,35			
BOP HANDLING	19,0	0,95			
BOP RUNNING/RETRIEVING	50,0	2,49			
BOP TESTING	19,5	0,97			
WELLHEAD EQUIPMENT HANDLING	12,0	0,60			
SLIP AND CUT DRILLING LINE	8,0	0,40			
Sum.			678,5	33,79	726,0
FORMATION EVALUATION MWD					
BHA HANDLING/TESTING	10,0	0,50			
MWD HANDLING/TESTING/SURVEYING	8,5	0,42			
TRIPPING IN OPEN HOLE	9,0	0,45			
LOGGING WITH MWD	64,0	3,19			
CIRC. AND COND. MUD/HOLE	3,5	0,17			
Sum.			95,0	4,73	821,0
FORMATION EVALUATION LOGGING					
LOGGING	30,5	1,52			
LOGGING EQUIPMENT HANDLING/TESTING	21,0	1,05			
FORMATION TESTER	35,0	1,74			
SIDEWALL CORING	6,5	0,32			
VERTICAL SEISMIC	10,0	0,50			
Sum.			103,0	5,13	924,0
FORMATION EVALUATION CORING					
BHA HANDLING/TESTING	9,5	0,47			
TRIPPING IN CASED HOLE	47,5	2,37			
CORING EQUIPMENT/CORE HANDLING	10,0	0,50			
TRIPPING IN OPEN HOLE	1,0	0,05			
OTHER	1,5	0,07			
CORING	19,5	0,97			
CIRC. AND COND. MUD/HOLE	12,0	0,60			
Sum.			101,0	5,03	1025,0

TIME DISTRIBUTION

Well: 6305/4-1 **PO:** 1 **Start date:** 1980-01-01 **Rig:** SCARABEO 5 **Depth:** 2817,0 **m MD**

All sections **Stop date:** 2002-08-20

Operations	Hours	%	Hours	%	Acc. total
TESTING (PRODUCTION TEST)					
INFLOW TEST	0,5	0,02			
PERFORATE	1,5	0,07			
RUN LOGS FOR CORRELATION	5,5	0,27			
BHA HANDLING/TESTING	7,5	0,37			
RIGGING UP/DOWN COILED TUBING EQUIPMENT	2,5	0,12			
TRIPPING IN CASED HOLE	23,0	1,15			
OTHER	5,5	0,27			
CIRC. AND COND. MUD/HOLE	19,0	0,95			
WIPER TRIP	18,0	0,90			
CASING HANDLING/TESTING	2,5	0,12			
RUNNING CASING IN CASED HOLE	12,0	0,60			
RUNNING CASING IN OPEN HOLE	2,0	0,10			
PERFORM SCRAPER RUN/CASING CLEANING	7,5	0,37			
PRIMARY CEMENTING	4,5	0,22			
SET PRODUCTION PACKER	2,0	0,10			
CEMENT EVALUATION	3,0	0,15			
BOP TESTING	20,5	1,02			
PULLING OUT OF HOLE W/PRODUCTION STRING	41,5	2,07			
PRESSURE TESTING OF DOWNHOLE EQUIPMENT	16,5	0,82			
INSTALLATION OF PRODUCTION STRING	67,0	3,34			
SLIP AND CUT DRILLING LINE	1,0	0,05			
RIG UP OR DOWN WIRELINE EQUIPMENT	5,5	0,27			
FLOW PERIOD	28,5	1,42			
KILL WELL/MINIFRAC	18,0	0,90			
SHUT IN PERIOD	39,0	1,94			
Sum.			354,0	17,63	1379,0
PLUG AND ABANDONMENT					
TRIPPING IN CASED HOLE	4,5	0,22			
TRIPPING IN OPEN HOLE	12,0	0,60			
OTHER	14,5	0,72			
WELLHEAD EQUIPMENT INSTALLATION	6,5	0,32			
CIRC. AND COND. MUD/HOLE	2,5	0,12			
TRIPPING FOR CEMENT JOB	41,0	2,04			
BOP HANDLING	9,0	0,45			
BOP RUNNING/RETRIEVING	28,0	1,39			
WELLHEAD EQUIPMENT HANDLING	5,5	0,27			
SET CEMENT PLUG	6,0	0,30			
TRIPPING OF CASING CUTTING EQUIPMENT	12,5	0,62			
CUT CASING/WELLHEAD	9,5	0,47			
CASING RETRIEVING	12,5	0,62			
Sum.			164,0	8,17	1543,0
DOWNTIME MOBILIZATION					
EQUIPMENT FAILURE AND REPAIR	1,0	0,05			
WAITING	6,0	0,30			
Sum.			7,0	0,35	1550,0
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	53,0	2,64			
WAITING	80,0	3,98			
OTHER	19,5	0,97			
Sum.			152,5	7,59	1702,5
DOWNTIME FORM. EVAL. MWD					
EQUIPMENT FAILURE AND REPAIR	3,5	0,17			
Sum.			3,5	0,17	1706,0
DOWNTIME FORM. EVAL. LOGGING					
EQUIPMENT FAILURE AND REPAIR	5,0	0,25			

TIME DISTRIBUTION

Well: 6305/4-1 **PO:** 1 **Start date:** 1980-01-01 **Rig:** SCARABEO 5 **Depth:** 2817,0 **m MD**
All sections **Stop date:** 2002-08-20

Operations	Hours	%	Hours	%	Acc. total
DOWNTIME FORM. EVAL. LOGGING					
FISHING	33,0	1,64			
Sum.			38,0	1,89	1744,0
DOWNTIME FORM. EVAL. CORING					
EQUIPMENT FAILURE AND REPAIR	2,5	0,12			
WAITING	26,0	1,29			
FISHING	0,5	0,02			
Sum.			29,0	1,44	1773,0
DOWNTIME TESTING (PROD. TEST)					
EQUIPMENT FAILURE AND REPAIR	186,5	9,29			
FISHING	16,5	0,82			
OTHER	2,0	0,10			
Sum.			205,0	10,21	1978,0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	23,5	1,17			
LOST CIRCULATION	5,5	0,27			
OTHER	1,0	0,05			
Sum.			30,0	1,49	2008,0
Reported time (100,0 % of well total 2008,0 hours) :					2008,0

Norsk Hydro

2002-08-20

HOLE DEVIATION

Well: 6305/4-1 **Reference point:** RKB ; 25,0 **m** ABOVE MSL

Waterdepth: 1 002, **m** **Vertical to:** 999,9 **m** **Total Depth:** 2975,0 **m MD**

Utm zone: 31 **Central Median:** 3° E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** **m,** **East :** **m**

Wellhead Coordinates, UTM: **North :** 7051501,90 **m,** **East :** 614148,30 **m**

Official Surveys: Y **Track :** T2

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
1028,00	0,00	0,00	MWD	5	1028,00	0,00	0,00	0,00	0,00	0,00	0,00
1030,67	1,94	136,80	MWD	5	1030,67	-0,03	0,03	0,05	21,80	21,80	999,99
1061,45	1,78	93,20	MWD	5	1061,43	-0,44	0,86	0,97	1,35	-0,16	-42,50
1090,89	1,97	95,20	MWD	5	1090,86	-0,51	1,83	1,90	0,20	0,19	2,04
1092,16	2,00	95,80	MWD	5	1092,13	-0,52	1,87	1,94	0,84	0,71	14,17
1101,12	2,00	95,30	MWD	5	1101,08	-0,55	2,18	2,25	0,05	0,00	-1,67
1129,02	1,93	101,90	MWD	5	1128,97	-0,69	3,12	3,20	0,25	-0,08	7,10
1157,46	1,92	101,10	MWD	5	1157,39	-0,88	4,06	4,15	0,03	-0,01	-0,84
1187,27	1,76	105,70	MWD	5	1187,18	-1,10	4,99	5,11	0,22	-0,16	4,63
1215,66	1,64	104,30	MWD	5	1215,56	-1,32	5,81	5,95	0,13	-0,13	-1,48
1244,46	1,49	105,90	MWD	5	1244,35	-1,52	6,56	6,74	0,16	-0,16	1,67
1272,63	1,33	109,30	MWD	5	1272,51	-1,73	7,23	7,43	0,19	-0,17	3,62
1300,02	1,25	108,50	MWD	5	1299,90	-1,93	7,81	8,04	0,09	-0,09	-0,88
1328,59	1,12	100,20	MWD	5	1328,46	-2,08	8,38	8,63	0,23	-0,14	-8,72
1357,57	1,09	106,50	MWD	5	1357,43	-2,21	8,92	9,19	0,13	-0,03	6,52
1385,54	1,23	95,70	MWD	5	1385,40	-2,31	9,48	9,75	0,28	0,15	-11,58
1413,98	1,22	97,50	MWD	5	1413,83	-2,38	10,08	10,36	0,04	-0,01	1,90
1442,01	1,11	98,00	MWD	5	1441,86	-2,46	10,64	10,92	0,12	-0,12	0,54
1469,81	1,20	100,00	MWD	5	1469,65	-2,55	11,20	11,48	0,11	0,10	2,16
1498,31	1,11	99,80	MWD	5	1498,15	-2,64	11,76	12,06	0,09	-0,09	-0,21
1526,80	1,14	102,20	MWD	5	1526,63	-2,75	12,31	12,62	0,06	0,03	2,53
1555,92	1,10	110,90	MWD	5	1555,74	-2,91	12,86	13,18	0,18	-0,04	8,96
1584,69	0,97	109,20	MWD	5	1584,51	-3,09	13,34	13,70	0,14	-0,14	-1,77
1612,80	0,81	110,60	MWD	5	1612,62	-3,24	13,76	14,13	0,17	-0,17	1,49
1641,78	0,56	98,50	MWD	5	1641,59	-3,33	14,09	14,48	0,30	-0,26	-12,53
1669,90	0,42	105,10	MWD	5	1669,71	-3,38	14,32	14,72	0,16	-0,15	7,04
1698,71	0,43	96,60	MWD	5	1698,52	-3,42	14,53	14,93	0,07	0,01	-8,85
1727,28	0,27	119,20	MWD	5	1727,09	-3,46	14,70	15,10	0,22	-0,17	23,73
1737,61	0,14	131,10	MWD	5	1737,42	-3,48	14,73	15,13	0,39	-0,38	34,56
1773,23	1,67	116,10	MWD	5	1773,04	-3,74	15,23	15,68	1,29	1,29	-12,63
1799,83	3,64	162,80	MWD	5	1799,61	-4,72	15,82	16,51	3,13	2,22	52,67
1829,03	5,47	197,30	MWD	5	1828,72	-6,93	15,69	17,15	3,30	1,88	35,45
1857,78	5,75	228,80	MWD	5	1857,34	-9,19	14,19	16,91	3,19	0,29	32,87
1885,91	5,59	253,60	MWD	5	1885,34	-10,51	11,82	15,81	2,60	-0,17	26,45
1915,92	5,59	283,50	MWD	5	1915,21	-10,58	8,99	13,88	2,88	0,00	29,89
1943,77	4,86	302,00	MWD	5	1942,95	-9,64	6,68	11,72	1,97	-0,79	19,93

Norsk Hydro

2002-08-20

HOLE DEVIATION

Well: 6305/4-1 **Reference point:** RKB ; 25,0 **m** ABOVE MSL

Waterdepth: 1 002, **m** **Vertical to:** 999,9 **m** **Total Depth:** 2975,0 **m MD**

Utm zone: 31 **Central Median:** 3° E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** **m,** **East :** **m**

Wellhead Coordinates, UTM: **North :** 7051501,90 **m,** **East :** 614148,30 **m**

Official Surveys: Y **Track :** T2

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
1973,25	2,55	299,40	MWD	5	1972,36	-8,65	5,04	10,01	2,36	-2,35	-2,65
2000,53	0,35	172,40	MWD	5	1999,63	-8,44	4,53	9,57	3,05	-2,42	-139,66
2029,52	0,36	255,40	MWD	5	2028,62	-8,55	4,45	9,64	0,49	0,01	85,89
2057,76	0,25	357,60	MWD	5	2056,86	-8,51	4,36	9,56	0,51	-0,12	108,57
2087,15	0,27	73,00	MWD	5	2086,25	-8,42	4,43	9,52	0,32	0,02	76,96
2115,74	0,29	0,50	MWD	5	2114,84	-8,33	4,49	9,46	0,35	0,02	-76,08
2144,49	0,38	269,10	MWD	5	2143,59	-8,26	4,40	9,36	0,50	0,09	-95,37
2230,01	0,29	143,00	MWD	5	2229,11	-8,44	4,24	9,44	0,21	-0,03	-44,24
2313,80	0,36	77,10	MWD	5	2312,90	-8,55	4,63	9,72	0,13	0,03	-23,59
2400,45	0,25	40,10	MWD	5	2399,55	-8,34	5,01	9,73	0,08	-0,04	-12,81
2486,51	0,24	84,70	MWD	5	2485,61	-8,18	5,31	9,76	0,06	-0,00	15,55
2572,51	0,33	227,90	MWD	5	2571,61	-8,33	5,31	9,88	0,19	0,03	49,95
2677,07	0,31	125,90	MWD	5	2676,17	-8,70	5,32	10,19	0,14	-0,01	-29,27
2715,39	0,80	10,30	MWD	5	2714,49	-8,50	5,45	10,09	0,76	0,38	-90,50
2754,87	0,80	15,10	MWD	5	2753,96	-7,96	5,57	9,71	0,05	0,00	3,65
2820,99	0,92	23,30	MWD	5	2820,07	-7,03	5,90	9,17	0,08	0,05	3,72
2905,65	1,55	5,90	MWD	5	2904,71	-5,26	6,29	8,20	0,26	0,22	-6,17
2961,48	1,70	10,20	MWD	5	2960,52	-3,70	6,51	7,49	0,10	0,08	2,31

Norsk Hydro

2002-08-20

MAIN CONSUMPTION OF CASING/TUBING ON WELL 6305/4-1 PO: 1

Size	Casing string	Grade	Weight [kg/m]	Weight [lb/ft]	Threads type	Length [m]	No. of joints
30"	CONDUCTOR	X-52	460,86	309,70	SL-60	80,0	6
20"	SURFACE	X-56	197,92	133,00	FB-60 D	726,1	60
9 5/8"	PRODUCTION	P-110	79,61	53,50	NS-CC	1695,0	144
7"	PRODUCTION LINER	L-80	43,15	29,00	VAM ACE	346,0	32

BITRECORD FOR WELL 6305/4-1 PO: 1

Bit No		RR	Type	Size (in)	Manu-fact-urer	Trade name	Serial no.	IADC code	Nozzles diameter (../32in)	Flow area (in2)	BHA no.	Depth out (m MD)	Bit meter (m)	Rot. hours (hrs)	ROP (m/hr)	Rotation min/max) (rpm)	Total bit revol.	Weight min/max (kN)	Flow min/max (l/min)	Pump min/max (bar)	Cutting Structure I - O -DC- L - B	Gauge 1/16 (in)	Other Remarks	Pull Cause
1		1	ISRT	17,50	SMIT	10GMODPD	LW8944	435	13,14,16,22	0,848	1	1066	38	8,42	4,5	18/67	19000	0/110	1033/2644	18/40				BHA
2			MITO	8,50	SDBS	XS4G	744545	217S	13,13,13	0,389	2	1751	723	34,32	21,1	46/130	204	0/9	1560/2360	95/211	3 - 2 - NO - A - E	1	NO	TD
1		1	ISRT	17,50	SMIT	10GMODPD	LW8944	435	13,14,16,22	0,848	3	1105	78	6,93	11,3	36/66	23000	0/70	3430/4910	102/199	2 - 2 - NO - A - E	2	NO	TD
1		2	ISRT	17,50	SMIT	10GMODPD	LW8944	435	13,14,16,22	0,848	4	1105	77	11,82	6,5	4/70	45000	0/30	3600/4900	121/204	2 - 2 - NO - A - E	2	NO	TD
0			HO	36,00	IOSO		21481		12,12,12,12,12,12	0,663	4	1105	77	11,82	6,5	4/70	45	0/30	3600/4900	121/204	- - - -			
0			HO	42,00	SMIT	11000	21465		32,32,32,32,32,32	4,712	4	1105	77		0,0	4/70	45	0/30	3600/4900	121/204	1 - 1 - NO - A - E	I	NO	
3			ISRT	26,00	SDBS	XT02C	737582	415M	14,18,20,20	1,012	5	1756	648	20,10	32,2	34/132	166000	27/245	2950/4700	75/168	2 - 2 - NO - A - E	I	NO	TD
4			MITO	17,00	SMIT	MSDGHC	NN1	135S	16,18,18,18	0,942	6	1761	5	1,00	5,0		5000				1 - 1 - NO - A - E	I	NO	CP
5			CORE	8,50	SDBS	FC264RILI	LA8PV	M233		0,000	7	1780	19	1,00	19,0	90/114	5000	3/6	442/558	25/33	0 - 0 - NO - A - X	I	NO	NC
6			PDC	12,25	SMIT	MRS89PX	NA		15,15,15,16,16,16	1,107	8	2696	916	22,30	41,1	58/132	159000	10/69	3300/3750	171/207	1 - 1 - CT - N - X	I	WT	TD
7			BIT	12,25	SMIT	MGGH+ODC	LW2700	135	22,22,22	1,114	10	2725	29	5,66	5,1	30/94	27000	4/23	1950/2400	90/114	2 - 1 - BT - A - E	1	WT	TD
8			PDC	8,50	SMIT	MA99PX	JS3781	M223	10,10,10,10,10,10	0,460	11	2725	0		0,0						1 - 1 - WT - A - X	I	NO	PR
9			MITO	8,50	SCHO	MHT13G	NN3598	137	13,13,13	0,389	12	2769	44	5,90	7,5	50/54	38000	1/9	1500/2150	147/255	1 - 1 - WT - A - E	1	BT	CP
10		5	CORE	8,50	SDBS	FC264RILI	7000702	M233	17,17,17,17,17,17	1,330	13	2788	19	4,17	4,6	56/130	27000	4/9	550/600	48/60	1 - 1 - NO - A - X	I	PN	NC
11		10	CORE	8,50	SDBS	FC264RILI	7000702	M233	17,17,17,17,17,17	1,330	14	2807	19	3,06	6,2	77/130	18000	5/17	409/561	47/54	1 - 1 - OC - A - X	I	NO	NC
12		11	CORE	8,50	SDBS	FC264RILI	7000702	M233	17,17,17,17,17,17	1,330	15	2818	11	12,00	0,9	82/122	76000	78/137	600/650	48/66	1 - 2 - CT - N - X	I	BU	PR
13		8	PDC	8,50	SMIT	MA99PX	JS3781	M223	10,10,10,10,10,10	0,460	16	2975	158	9,81	16,1	126/132	94000	29/108	1850/2150	207/261	1 - 1 - CT - T - X	I	NO	TD
9		2	MITO	8,50	SCHO	MHT13G	NN3598	137	13,13,13	0,389	17	2975	0		0,0									
14			ISRT	6,00	SMIT	XP+	ER5763	117	16,16,16	0,589	18	2889	0		0,0						1 - 2 - NR - A - 5	I	NO	DP
14		1	ISRT	6,00	SMIT	XP+	ER5763	117		0,000	19	2887	0		0,0									

BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/4-1 PO: 1

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 1028 m MD Out: 1066 m MD

1	10GMODPD	17,5	0,43	2	X-OVER	9,5	0,69
3	HOLE OPENER	36,0	3,95	4	FLOAT SUB	9,5	0,77
5	OTHER	9,5	2,86	6	DRILL COLLAR STEEL	9,5	63,94
7	X-OVER	9,0	0,63	9	X-OVER	9,5	1,20
10	DRILL COLLAR STEEL	8,0	27,28	11	JAR	8,0	9,51
12	DRILL COLLAR STEEL	8,0	28,31	13	X-OVER	8,0	0,34
14	DRILL PIPE	6,625					

Reason pulled: CHANGE BOTTOMHOLE ASSEM Sum: 139,91

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 1028 m MD Out: 1751 m MD

1	XS4G	8,5	0,25	2	LOGGING WHILE DRILLING TOOL	8,375	3,07
3	LOGGING WHILE DRILLING TOOL	6,75	5,58	4	NON MAG. STAB	8,375	1,49
5	MWD	6,75	8,28	6	LOGGING WHILE DRILLING TOOL	6,75	7,20
7	LOGGING WHILE DRILLING TOOL	8,25	6,21	8	NON MAG. COLLAR	6,25	8,90
9	DRILL COLLAR STEEL	6,5	70,87	10	JAR	6,5	9,58
11	DRILL COLLAR STEEL	6,5	26,64	12	HWDP	5,0	137,68
13	DRILL PIPE	5,0	455,34	14	X-OVER	6,5	0,91

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 742,00

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 1027 m MD Out: 1105 m MD

1	10GMODPD	17,5	0,43	2	BIT SUB	9,0	0,67
3	NON MAG. COLLAR	9,0	2,84	4	NON MAG. STAB	17,25	2,23
5	MWD	9,0	8,97	6	NON MAG. STAB	9,0	1,97
7	NON MAG. COLLAR	9,0	9,03	8	DRILL COLLAR STEEL	9,0	27,37
9	X-OVER	8,0	0,98	10	DRILL COLLAR STEEL	8,0	18,29
11	JAR	8,0	9,51	12	DRILL COLLAR STEEL	8,0	27,11
13	X-OVER	8,0	0,34				

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 109,74

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 1028 m MD Out: 1105 m MD

1	10GMODPD	17,5	0,43	2	X-OVER	6,5	0,69
3	HOLE OPENER	36,0	3,95	4	BIT SUB	9,5	0,77
5	MWD	9,5	8,97	6	NON MAG. STAB	25,75	2,26
7	NON MAG. COLLAR	9,0	4,20	8	DRILL COLLAR STEEL	9,0	36,53
9	X-OVER	9,0	0,63	11	X-OVER	9,5	1,20
12	DRILL COLLAR STEEL	8,0	27,28	13	JAR	8,0	9,51
14	DRILL COLLAR STEEL	8,0	28,31	15	X-OVER	8,0	0,34

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 125,07

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 1109 m MD Out: 1756 m MD

1	XT02C	26,0	0,55	2	BIT SUB	9,0	0,86
3	X-OVER	9,5	0,66	4	NON MAG. STAB	25,0	2,50
5	LOGGING WHILE DRILLING TOOL	9,5	7,30	6	MWD	9,5	8,47
7	NON MAG. STAB	25,0	2,11	8	NON MAG. COLLAR	9,5	8,93
9	DRILL COLLAR STEEL	9,5	27,37	10	X-OVER	9,5	0,98
11	DRILL COLLAR STEEL	8,0	55,59	12	JAR	8,0	9,51
13	DRILL COLLAR STEEL	8,0	27,16	14	X-OVER	8,0	0,34

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 152,33

BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/4-1 PO: 1

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 1756 m MD Out: 1761 m MD

1	MSDGHC	17,0	0,43	2	BIT SUB	8,0	0,80
3	DRILL COLLAR STEEL	8,0	55,59	4	JAR	8,0	9,51
5	DRILL COLLAR STEEL	8,0	27,16	6	X-OVER	8,0	0,34

Reason pulled: CORE POINT Sum: 93,83

BHA no. 7: No. / Element / OD(in) / Length(m) Depth In: 1761 m MD Out: 1780 m MD

1	FC264RILI	8,5	0,36	2	CORE BARREL	8,5	20,95
3	FLOAT SUB	6,75	1,00	4	X-OVER	8,0	1,20
5	STEEL STAB	17,0	1,40	6	DRILL COLLAR STEEL	8,0	27,28
7	JAR	8,0	9,51	8	DRILL COLLAR STEEL	8,0	28,31
9	X-OVER	8,0	0,34				

Reason pulled: NEW CORE/FULL BARREL Sum: 90,35

BHA no. 8: No. / Element / OD(in) / Length(m) Depth In: 1780 m MD Out: 2696 m MD

1	MRS89PX	12,25	0,34	2	POWER DRIVE	12,25	8,91
3	X-OVER	9,0	0,30	4	LOGGING WHILE DRILLING TOOL	8,0	3,88
5	MWD	8,25	8,45	6	CDR	8,25	6,49
7	NON MAG. STAB	12,25	1,47	8	LOGGING WHILE DRILLING TOOL	8,25	7,32
9	ADN	8,0	6,47	10	NON MAG. COLLAR	8,0	9,11
11	DRILL COLLAR STEEL	8,0	55,59	12	JAR	8,0	9,65
13	DRILL COLLAR STEEL	8,0	27,27	14	X-OVER	8,0	1,09
15	HWDP	5,0	128,51	16	DART SUB	6,0	0,50
17	HWDP	5,0	9,17				

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 284,52

BHA no. 9: No. / Element / OD(in) / Length(m) Depth In: 2696 m MD Out: 2696 m MD

1	OVER SHOT	11,5	2,31	2	HWDP	5,0	8,74
3	BUMPER SUB	6,5	6,77	4	CIRCULATING SUB	6,5	0,77
5	DRILL PIPE	5,0	937,84	6	X-OVER	6,625	0,47
7	DRILL PIPE	6,625	27,58	8	X-OVER	6,625	0,96
9	X-OVER	8,0	0,43	10	JAR	8,0	9,65
11	X-OVER	6,5	0,34				

Reason pulled: Sum: 995,86

BHA no. 10: No. / Element / OD(in) / Length(m) Depth In: 2696 m MD Out: 2725 m MD

1	MGGH+ODC	12,25	0,33	2	LOGGING WHILE DRILLING TOOL	8,0	3,88
3	MWD	8,25	8,45	4	CDR	8,25	6,49
5	NON MAG. STAB	12,25	1,47	6	DRILL COLLAR STEEL	8,0	55,59
7	JAR	8,0	9,65	8	DRILL COLLAR STEEL	8,0	27,27
9	X-OVER	8,0	1,10	10	HWDP	5,0	128,51
11	DART SUB	6,0	0,50	12	HWDP	5,0	9,17
13	DRILL PIPE	5,0	852,28	14	X-OVER	7,875	0,47

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 1105,16

BHA no. 11: No. / Element / OD(in) / Length(m) Depth In: 2725 m MD Out: 2725 m MD

1	MA99PX	8,5	0,29	2	LOGGING WHILE DRILLING TOOL	8,375	3,08
3	LOGGING WHILE DRILLING TOOL	6,75	5,64	4	LOGGING WHILE DRILLING TOOL	6,75	8,30
5	NON MAG. STAB	8,375	1,77	6	NON MAG. COLLAR	6,5	8,78
7	DRILL COLLAR STEEL	6,5	18,50	8	JAR	8,125	9,68
9	DRILL COLLAR STEEL	6,5	18,50	10	HWDP	5,0	128,51
11	DART SUB	5,0	0,50	12	HWDP	5,0	9,17

Reason pulled: PENETRATION RATE Sum: 212,72

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BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/4-1 PO: 1

BHA no. 12: No. / Element / OD(in) / Length(m) Depth In: 2725 m MD Out: 2769 m MD

1	MHT13G	8,5	0,26	2	LOGGING WHILE DRILLING TOOL	8,375	3,08
3	LOGGING WHILE DRILLING TOOL	6,75	5,64	4	LOGGING WHILE DRILLING TOOL	6,75	8,30
5	NON MAG. STAB	8,375	1,77	6	NON MAG. COLLAR	6,5	8,78
7	DRILL COLLAR STEEL	6,5	18,50	8	JAR	8,125	9,68
9	DRILL COLLAR STEEL	6,5	18,50	10	HWDP	5,0	128,51
11	DART SUB	5,0	0,50	12	HWDP	5,0	9,17

Reason pulled: CORE POINT Sum: 212,69

BHA no. 13: No. / Element / OD(in) / Length(m) Depth In: 2769 m MD Out: 2788 m MD

1	FC264RILI	8,5	0,36	2	CORE BARREL	6,75	21,84
3	FLOAT SUB	6,5	0,91	4	DRILL COLLAR STEEL	6,5	17,52
5	STEEL STAB	8,375	1,55	6	DRILL COLLAR STEEL	6,5	79,97
7	JAR	6,5	9,68	8	HWDP	5,0	128,51
9	DART SUB	6,0	0,50	10	HWDP	5,0	9,17

Reason pulled: NEW CORE/FULL BARREL Sum: 270,01

BHA no. 14: No. / Element / OD(in) / Length(m) Depth In: 2788 m MD Out: 2807 m MD

1	FC264RILI	8,5	0,36	2	CORE BARREL	6,75	21,84
3	FLOAT SUB	6,5	0,91	4	DRILL COLLAR STEEL	6,5	17,52
5	STEEL STAB	8,375	1,55	6	DRILL COLLAR STEEL	6,5	79,97
7	JAR	6,5	9,68	8	HWDP	5,0	128,51
9	DART SUB	6,0	0,50	10	HWDP	5,0	9,17

Reason pulled: NEW CORE/FULL BARREL Sum: 270,01

BHA no. 15: No. / Element / OD(in) / Length(m) Depth In: 2807 m MD Out: 2818 m MD

1	FC264RILI	8,5	0,36	2	CORE BARREL	6,75	21,84
3	FLOAT SUB	6,5	0,91	4	DRILL COLLAR STEEL	6,5	17,52
5	STEEL STAB	8,375	1,55	6	DRILL COLLAR STEEL	6,5	79,97
7	JAR	6,5	9,68	8	HWDP	5,0	128,51
9	DART SUB	6,0	0,50	10	HWDP	5,0	9,17

Reason pulled: PENETRATION RATE Sum: 270,01

BHA no. 16: No. / Element / OD(in) / Length(m) Depth In: 2818 m MD Out: 2975 m MD

1	MA99PX	8,5	0,29	2	LOGGING WHILE DRILLING TOOL	8,375	3,06
3	LOGGING WHILE DRILLING TOOL	6,75	5,64	4	LOGGING WHILE DRILLING TOOL	6,75	8,30
5	NON MAG. STAB	8,375	1,77	6	NON MAG. COLLAR	6,5	8,78
7	DRILL COLLAR STEEL	6,5	18,05	8	JAR	8,125	9,68
9	DRILL COLLAR STEEL	6,5	26,88	10	HWDP	5,0	128,51
11	DART SUB	5,0	0,50	12	HWDP	5,0	9,17

Reason pulled: TOTAL DEPTH/CASING DEPTH Sum: 220,63

BHA no. 17: No. / Element / OD(in) / Length(m) Depth In: 2975 m MD Out: 2975 m MD

1	MHT13G	8,5	0,26	2	BIT SUB	6,5	0,92
3	DRILL COLLAR STEEL	6,5	43,79	4	JAR	6,5	9,68
5	DRILL COLLAR STEEL	6,5	26,88	6	HWDP	5,0	128,51
7	DART SUB	6,0	0,50	8	HWDP	5,0	9,17

Reason pulled: Sum: 219,71

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BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/4-1 PO: 1

BHA no. 18: No. / Element / OD(in) / Length(m) Depth In: 2889 m MD Out: 2889 m MD

1	XP+	6,0	0,19	2	CASING SCRAPER	6,5	1,02
3	BIT SUB	4,75	0,59	4	DRILL COLLAR STEEL	4,75	110,97
5	DRILL PIPE	3,5	151,76	6	TOP DRESS MILL	8,0	4,84
7	X-OVER	6,5	0,44	8	CASING SCRAPER	9,0	1,34
9	BIT SUB	6,25	0,92	10	HWDP	5,0	110,14
11	JAR	6,5	9,68	12	HWDP	5,0	27,54

Reason pulled: DRILL PLUG Sum: 419,43

BHA no. 19: No. / Element / OD(in) / Length(m) Depth In: 2887 m MD Out: 2887 m MD

1	XP+	6,0	0,19	2	CASING SCRAPER	7,0	0,81
3	BIT SUB	4,75	0,92	4	DRILL PIPE	3,5	262,21
5	X-OVER	6,5	0,64	6	TOP DRESS MILL	6,25	0,60
7	X-OVER	6,25	0,92	8	CIRCULATING SUB	6,5	2,29
9	X-OVER	6,25	0,41	10	CASING SCRAPER	9,625	1,35
11	X-OVER	6,5	0,92				

Reason pulled: Sum: 271,26

BHA no. 20: No. / Element / OD(in) / Length(m) Depth In: 1050 m MD Out: 1063 m MD

1	MGGH+ODC	12,25	0,33	2	BIT SUB	8,0	1,00
3	X-OVER	8,0	1,01	4	DRILL PIPE	6,625	

Reason pulled: Sum: 2,34

CEMENT SLURRY REPORT ON WELL 6305/4-1 PO: 1

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2002-03-22	30"	CASING CEMENTING	SALTWATER	30,00	1,03	2,00					
			TAIL SLURRY	52,00	1,47	2,00	170,76	W-6	kg	10,00	
								A-7L	l	5,00	
								CD-33L	l	5,00	
								A-3L	l	3,50	
								FP-14L	l	0,20	
								MICRO	l	25,00	
								BA-10	l		
			SALTWATER	20,00	1,03	2,00					
			DISPLACEMENT			2,00					
2002-03-30	20"	CASING CEMENTING	SALTWATER		1,03	17,00					
			TAIL SLURRY	246,00	1,60	17,00	127,97	R-12L	l	1,25	
								CD-31L	l	0,65	
								MICRO	l	20,00	
								FL-63L	l	4,00	
								FP-14L	l	0,20	
			SALTWATER	17,00	1,03	17,00					
			SALTWATER	126,80	1,03	17,00					
			DISPLACEMENT			17,00					
2002-04-15	9 5/8"	CASING CEMENTING	SPACER		1,03	70,00					
			TAIL SLURRY	13,40	1,90	70,00	80,60	FP-14L	l	0,20	
								CD-31L	l	0,50	
								FL-45L	l	5,00	
								MICRO	l	8,00	
								R-12L	l	0,90	
			WATER BASED MUD SPACER (WEIGHTED)	63,00	1,33	70,00					
			DISPLACEMENT			70,00					
2002-04-26	9 5/8"	CASING CEMENTING	TAIL SLURRY	13,40	1,90	60,00	80,60				
2002-05-04	7"	LINER CEMENTING	SPACER		1,60	70,00		FP-14L	l		10,00
								G-21R	kg		2,00
								MCS-G	l		48,00
								NAOH	kg		8,00

CEMENT SLURRY REPORT ON WELL 6305/4-1 PO: 1

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2002-05-04	7"	LINER CEMENTING	TAIL SLURRY	9,22	1,90	70,00	81,67	CD-31L	l	0,70	
								FL-45L	l	7,00	
								FP-14L	l	0,20	
								MICRO	l	10,00	
								R-12L	l	1,30	
			WATER BASED MUD SPACER (WEIGHTED)	23,10	1,30	70,00					
			DISPLACEMENT			70,00					
2002-05-25	7"	PLUG	DRILL WATER	1,00	1,00	84,00					
			TAIL SLURRY	11,50	1,90	84,00	81,66	CD-31L	l	0,70	
								FL-45L	l	7,00	
								FP-14L	l	0,20	
								MICRO	l	10,00	
								R-12L	l	1,25	
			DRILL WATER	0,50	1,00	84,00					
			WATER BASED MUD SPACER (WEIGHTED)	23,00	1,30	84,00					
			DISPLACEMENT			84,00					
2002-05-28	20"	PLUG	DRILL WATER	5,00	1,00	15,00					
			TAIL SLURRY	43,00	1,75	15,00	90,69	FP-14L	l	0,20	
								R-12L	l	0,40	
			DRILL WATER	0,50	1,00	15,00					
			WATER BASED MUD SPACER (WEIGHTED)	13,70	1,30	15,00					
			DISPLACEMENT			15,00					
2002-05-29	20"	PLUG	DRILL WATER	5,00	1,00	15,00					
			LEAD	30,00	1,75	15,00	90,69	FP-14L	l	0,20	
								R-12L	l	0,40	
			TAIL SLURRY	13,00	1,90	15,00	77,90	FP-14L	l	0,20	
			WATER BASED MUD SPACER (WEIGHTED)	13,20	1,30	15,00					
			DISPLACEMENT			15,00					

CEMENT CONSUMPTION PER JOB ON WELL 6305/4-1 PO: 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2002-03-22	30"	CASING CEMENTING	A	API CLASS A	MT	28
			A-3L	EXTENDER: LIQUID LODENSE	l	1434
			A-7L	ACCELERATOR: LIQUID CACL2	l	2049
			BA-10	EXTENDER: MATRIX FLOW CONTROL AGENT	l	0
			CD-33L	DISPERSANT: CD-33L LIQUID	l	2049
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	474
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRAT	l	10248
			W-6	EXTENDER	kg	4
2002-03-30	20"	CASING CEMENTING	A	API CLASS A	MT	179
			CD-31L	DISPERSANT: CD-31L LIQUID	l	1200
			FL-63L	FL-63L	l	7904
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	634
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRAT	l	40000
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	2546
2002-04-15	9 5/8"	CASING CEMENTING	CD-31L	DISPERSANT: CD-31L LIQUID	l	1710
			FL-45L	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	900
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	35
			G	API CLASS G	MT	20
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRAT	l	1452
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	165
2002-05-04	7"	LINER CEMENTING	CD-31L	DISPERSANT: CD-31L LIQUID	l	100
			FL-45L	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	1000
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	250
			G	API CLASS G	MT	12
			G-21R	SPACER ADDITIVE: G-21R viscosifier	kg	50
			MCS-G	SPACER ADDITIVE: MCS-G	l	800
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRAT	l	1330
			NAOH	SPACER ADDITIVE: CAUSTIC SODA POWDER	kg	125
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	175
2002-05-25	7"	PLUG	CD-31L	DISPERSANT: CD-31L LIQUID	l	135
			FL-45L	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	1000
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	40
			G	API CLASS G	MT	14
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRAT	l	1570
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	201
2002-05-28	20"	PLUG	A	API CLASS A	MT	45
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	208
2002-05-29	20"	PLUG	A	API CLASS A	MT	33
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100
			G	API CLASS G	MT	24
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	145

TOTAL CONSUMPTION OF CEMENT ADDITIVES ON WELL 6305/4-1 PO: 1

Section	Cement/Additive	Unit	Total Amount Used
36"	EXTENDER: MATRIX FLOW CONTROL AGENT	l	0,37
	EXTENDER	kg	4,10
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	474,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	10248,00
	DISPERSANT: CD-33L LIQUID	l	2049,00
	ACCELERATOR: LIQUID CACL2	l	2049,00
	API CLASS A	MT	28,00
	EXTENDER: LIQUID LODENSE	l	1434,00
26"	DISPERSANT: CD-31L LIQUID	l	1200,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	634,00
	FL-63L	l	7904,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	2546,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	40000,00
	API CLASS A	MT	179,00
12 1/4"	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	165,00
	DISPERSANT: CD-31L LIQUID	l	1710,00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	900,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	35,00
	API CLASS G	MT	20,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	1452,00
8 1/2"	SPACER ADDITIVE: G-21R viscosifier	kg	50,00
	SPACER ADDITIVE: MCS-G	l	800,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	175,00
	SPACER ADDITIVE: CAUSTIC SODA POWDER	kg	125,00
	API CLASS G	MT	12,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	1330,00
	DISPERSANT: CD-31L LIQUID	l	100,00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	1000,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	250,00
0.0	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	1570,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	554,00
	API CLASS A	MT	78,00
	DISPERSANT: CD-31L LIQUID	l	135,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	240,00
	API CLASS G	MT	38,00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	1000,00

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 36" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-03-14	1066	1066	SPUD MUD	0,0	1,30		0	0	0	0	0	0	0	0					
2002-03-15	1022	1022	SPUD MUD	120,0	1,30		0	0	0	0	0	0	0	0					

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-03-16	1309	1309	SPUD MUD	120,0	1,30		0	0	0	0	0	0	0	0					
2002-03-17	1508	1507	SPUD MUD	110,0	1,07		86	72	67	59	0	0	32	26	12,0	14,0	29,0	14,0	24,0
2002-03-18	1751	1750	SPUD MUD	115,0	1,07		88	75	69	60	0	0	34	27	15,0	13,0	31,0	15,0	25,0
2002-03-19	1083	1083	SPUD MUD	1,2	1,10		86	72	67	59	0	0	32	26	12,0	14,0	29,0	15,0	26,0

Hole section : 36" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-03-20	1054	1054	SPUD MUD	115,0	1,05		85	70	66	58	0	0	32	26	15,0	15,0	27,5	15,0	26,0
2002-03-21	1108	1108	SPUD MUD	70,0	1,30		69	49	40	30	0	0	10	9	50,0	20,0	14,5	5,0	12,0
2002-03-22	1108	1108	SPUD MUD	60,0	1,30		65	45	38	27	0	0	9	8	50,0	20,0	12,5	5,0	10,0
2002-03-23	1106	1106	SPUD MUD	65,0	1,30		69	50	40	30	0	0	11	10	50,0	19,0	15,5		

Hole section : 26" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-03-24	1115	1115	SPUD MUD	65,0	1,30		69	50	40	30	0	0	11	1	50,0	19,0	15,5	5,0	8,0
2002-03-25	1125	1125	SPUD MUD	110,0	1,03		84	70	65	56	0	0	31	26	50,0	14,0	28,0	15,0	24,0
2002-03-26	1380	1380	SPUD MUD	110,0	1,03		84	70	65	56	0	0	31	26	50,0	14,0	28,0	14,0	18,0
2002-03-27	1440	1440	SPUD MUD	110,0	1,03		84	70	85	56	0	0	31	26	50,0	14,0	28,0	14,0	18,0
2002-03-28	1607	1607	SPUD MUD	110,0	1,03	13,0	85	70	65	56	0	0	31	26	50,0	15,0	27,5	14,0	18,0
2002-03-29	1756	1756	SPUD MUD	65,0	1,30	10,0	68	50	40	30	0	0	11	10	50,0	18,0	16,0		
2002-03-30	1756	1756	SPUD MUD				0	0	0	0	0	0	0	0					
2002-03-31	1749	1749	SPUD MUD				0	0	0	0	0	0	0	0					
2002-04-01	1756	1756	SPUD MUD				0	0	0	0	0	0	0	0					

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 26" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-04-02	1756	1756	SPUD MUD				0	0	0	0	0	0	0	0					
2002-04-03	1756	1756	SPUD MUD				0	0	0	0	0	0	0	0					
2002-04-04	1756	1756	SPUD MUD				0	0	0	0	0	0	0	0					

Hole section : 17" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-04-05	1749	1749	KCL/POLYMER	68,0	1,25	12,0	40	28	23	17	0	0	6	5	50,0	12,0	8,0	3,0	4,0

Hole section : 12 1/4" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-04-06	1749	1749	KCL/POLYMER	68,0	1,25	12,0	39	27	22	17	0	0	6	5	50,0	12,0	7,5	3,0	4,0
2002-04-07	1902	1901	KCL/POLYMER	69,0	1,30	10,5	47	33	27	20	0	0	7	6	50,0	14,0	9,8	3,5	4,0
2002-04-08	2444	2443	KCL/POLYMER	93,0	1,30	10,6	60	44	37	28	0	0	11	9	50,0	16,0	14,0	5,0	6,0
2002-04-09	2680	2679	KCL/POLYMER	90,0	1,30	11,0	60	43	37	28	0	0	11	10	50,0	17,0	13,0	5,0	7,0
2002-04-10	2696	2695	BRINE	92,0	1,30	12,0	61	44	36	27	0	0	11	9	50,0	17,0	13,5	5,0	6,0
2002-04-11	2696	2695	BRINE	92,0	1,30	14,0	60	43	37	27	0	0	11	9	50,0	17,0	13,0	5,0	6,0
2002-04-12	2696	2695	BRINE	92,0	1,31	14,0	66	48	40	31	0	0	12	10	50,0	18,0	15,0	5,5	7,0
2002-04-13	2698	2697	BRINE	98,0	1,33	12,0	64	47	40	30	0	0	12	10	50,0	17,0	15,0	5,5	7,5
2002-04-14	2725	2724	BRINE	99,0	1,33	12,0	66	48	41	31	0	0	12	10	50,0	18,0	15,0	5,5	8,0
2002-04-15	2725	2724	BRINE	99,0	1,33	12,0	65	47	40	31	0	0	12	10	50,0	18,0	14,5	5,5	8,0
2002-04-16	2725	2724	BRINE	83,0	1,33	12,0	50	36	29	22	0	0	9	7	50,0	14,0	11,0	4,0	5,0

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2002-04-17	2725	2724	BRINE	99,0	1,30	13,0	57	42	35	27	0	0	11	9	50,0	15,0	13,5	5,0	6,5
2002-04-18	2725	2724	BRINE	98,0	1,30	13,0	56	41	34	26	0	0	11	9	50,0	15,0	13,0	5,0	6,5
2002-04-19	2769	2768	BRINE	97,0	1,30	13,0	62	44	37	27	0	0	11	9	50,0	18,0	13,0	5,0	6,5
2002-04-20	2788	2787	BRINE	99,0	1,30	13,0	65	47	40	31	0	0	11	9	50,0	18,0	14,5	5,0	6,5

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2002-04-21	2788	2787	BRINE	99,0	1,30	13,0	66	47	40	31	0	0	11	9	50,0	19,0	14,0	5,0	6,5
2002-04-22	2788	2787	BRINE	104,0	1,30	10,0	58	42	34	25	0	0	10	8	50,0	16,0	13,0	4,5	6,0
2002-04-23	2807	2806	BRINE	100,0	1,30	12,0	62	44	36	28	0	0	10	8	50,0	18,0	13,0	4,5	6,0
2002-04-24	2817	2816	KCL/POLYMER	110,0	1,30	8,0	60	44	36	27	0	0	10	8	50,0	16,0	14,0	4,0	6,0
2002-04-25	2817	2816	KCL/POLYMER	106,0	1,30	10,0	57	41	34	25	0	0	9	8	50,0	16,0	12,5	4,0	5,0
2002-04-26	2975	2974	KCL/POLYMER	100,0	1,30	9,0	60	43	36	28	0	0	10	8	50,0	17,0	13,0	4,0	5,0
2002-04-27	2975	2974	KCL/POLYMER	108,0	1,30	9,0	64	45	38	38	0	0	10	8	50,0	19,0	13,0	4,0	5,0
2002-04-28	2975	2974	KCL/POLYMER	107,0	1,30	9,0	64	45	38	28	0	0	10	8	50,0	19,0	13,0	4,0	5,0
2002-04-29	2975	2974	KCL/POLYMER	110,0	1,30	9,0	65	46	38	28	0	0	10	8	50,0	19,0	13,5	4,0	5,0
2002-04-30	2975	2974	KCL/POLYMER	108,0	1,30	10,0	65	46	38	28	0	0	10	8	50,0	19,0	13,5	4,0	5,0
2002-05-01	2975	2974	KCL/POLYMER	108,0	1,30	10,0	65	46	38	28	0	0	10	8	50,0	19,0	13,5	4,0	5,0
2002-05-02	2975	2974	KCL/POLYMER	143,0	1,31	8,0	62	44	37	28	0	0	9	7	50,0	18,0	13,0	4,0	5,0

Hole section : P&A **WATER BASED SYSTEM**

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2002-05-03	2975	2974	KCL/POLYMER	140,0	1,30	10,0	63	44	37	28	0	0	9	8	50,0	19,0	12,5	4,0	5,0
2002-05-04	2975	2974	KCL/POLYMER	140,0	1,30	10,0	63	45	38	28	0	0	10	7	50,0	18,0	13,5	4,0	5,0
2002-05-05	2897	2896	KCL/POLYMER	140,0	1,30	10,0	63	45	38	28	0	0	10	8	50,0	18,0	13,5	4,0	5,0
2002-05-06	2925	2924	CACL2 BRINE		1,32						0	0							
2002-05-07	2925	2924	BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-08	2925	2924	BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-09	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-10	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-11	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-12	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-13	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-14	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-15	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-16	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-17	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-18	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-19	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					
2002-05-20	2925	2924	CACL2 BRINE		1,32		0	0	0	0	0	0	0	0					

Norsk Hydro

2002-08-20

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : P&A

WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2002-05-21	2925	2924	CACL2 BRINE		1,31		0	0	0	0	0	0	0	0					
2002-05-22	2974	2973	BRINE		1,30		53	39	32	24	0	0	9	7	50,0	14,0	12,5	4,0	5,0
2002-05-23	2974	2973	BRINE	132,0	1,30	16,0	54	39	33	24	0	0	9	7	50,0	15,0	12,0	4,0	5,0
2002-05-24	2974	2973	BRINE	129,0	1,31	15,0	54	39	33	24	0	0	8	7	50,0	15,0	12,0	4,0	5,0
2002-05-25	2974	2973	BRINE	126,0	1,32	15,0	55	39	34	24	0	0	8	7	50,0	16,0	11,5	4,0	5,0
2002-05-26	2974	2973	BRINE	124,0	1,32	15,0	54	38	33	24	0	0	8	7	50,0	16,0	11,0	4,0	5,0
2002-05-27	2974	2973	BRINE	129,0	1,33	15,0	52	38	32	24	0	0	8	7	50,0	14,0	12,0	4,0	5,0
2002-05-28	2974	2973	BRINE	136,0	1,33	15,0	56	42	34	25	0	0	9	7	50,0	14,0	14,0	3,5	5,0
2002-05-29	2974	2973	BRINE	136,0	1,33	15,0	57	43	34	25	0	0	9	7	50,0	14,0	14,5	3,5	5,0
2002-05-30	0	0	BRINE				0	0	0	0	0	0	0	0					

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 36" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]		pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-03-14	1066	1066	SPUD MUD	1,30					/		9,5															
2002-03-15	1022	1022	SPUD MUD	1,30					/		9,5															

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]		pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-03-16	1309	1309	SPUD MUD	1,30					/		9,5															
2002-03-17	1508	1507	SPUD MUD	1,07	0,0				/		9,5						160	200		200						
2002-03-18	1751	1750	SPUD MUD	1,07	20,0				/		9,5						160	200		200						
2002-03-19	1083	1083	SPUD MUD	1,10	20,0				/		9,5						160	200		200						

Hole section : 36" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]		pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-03-20	1054	1054	SPUD MUD	1,05	20,0				/		9,5						160	200		200						
2002-03-21	1108	1108	SPUD MUD	1,30					/		8,8															
2002-03-22	1108	1108	SPUD MUD	1,30					/		8,5															
2002-03-23	1106	1106	SPUD MUD	1,30					/		8,5															

Hole section : 26" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]		pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-03-24	1115	1115	SPUD MUD	1,30					/																	
2002-03-25	1125	1125	SPUD MUD	1,03					/		8,8															
2002-03-26	1380	1380	SPUD MUD	1,03					/		8,5															
2002-03-27	1440	1440	SPUD MUD	1,03					/		8,5															
2002-03-28	1607	1607	SPUD MUD	1,03					/		8,5															
2002-03-29	1756	1756	SPUD MUD	1,30					/		8,5															
2002-03-30	1756	1756	SPUD MUD						/																	
2002-03-31	1749	1749	SPUD MUD						/																	
2002-04-01	1756	1756	SPUD MUD						/																	
2002-04-02	1756	1756	SPUD MUD						/																	

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 26" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-04-03	1756	1756	SPUD MUD						/																
2002-04-04	1756	1756	SPUD MUD						/																

Hole section : 17" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-04-05	1749	1749	KCL/POLYMER	1,25	5,0		1		/	7,5	0,0	0,0	0,6	38041	135000	900	0	900	10,0	15,0	0,2		4,2	1

Hole section : 12 1/4" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-04-06	1749	1749	KCL/POLYMER	1,25	2,0	9,0	1	1	500 / 150	8,2	0,0	0,2	1,3	38041	136000	950		950	11,0	15,0	0,2		3,5	54
2002-04-07	1902	1901	KCL/POLYMER	1,30	1,5	8,0	1	2	500 / 150	8,6	0,2	0,2	1,8	38041	131000	1600		1600	12,5	17,0	0,2	2	3,6	68
2002-04-08	2444	2443	KCL/POLYMER	1,30	1,6	7,0	1	2	500 / 150	8,6		0,2	1,6	44047	133000	720		720	13,0	16,0	0,3	6	3,4	85
2002-04-09	2680	2679	KCL/POLYMER	1,30	1,5	10,0	1	2	500 / 150	8,6	0,2	0,2	1,8	36165	140000	600		600	14,0	15,0	0,4	7	3,1	130
2002-04-10	2696	2695	BRINE	1,30	1,6	10,0	1	2	500 / 150	8,7	0,2	0,2	1,8	36165	140000	600		600	14,0	15,0	0,3	7	3,1	130
2002-04-11	2696	2695	BRINE	1,30	1,5	8,0	1	2	500 / 150	8,5	0,2	0,1	1,7	36165	140000	640		640	14,0	15,0	0,3	10	3,1	130
2002-04-12	2696	2695	BRINE	1,31	1,5	8,0	1	2	500 / 150	8,4	0,2	0,3	1,5	36165	140000	640		640	14,0	16,0	0,4	11	3,3	108
2002-04-13	2698	2697	BRINE	1,33	1,5	6,0	1	2	500 / 150	8,4	0,2	0,2	1,5	45599	148000	720		720	13,0	17,0	0,4	15	3,8	44
2002-04-14	2725	2724	BRINE	1,33	1,4	6,0	1	2	500 / 150	8,4	0,2	0,2	1,5	40873	147000	720		720	15,0	16,0	0,4	15	3,3	119
2002-04-15	2725	2724	BRINE	1,33	1,4	7,0	1	2	500 / 150	8,4	0,2	0,2	1,6	40873	147000	720		720	14,0	16,0	0,4	15	3,7	65
2002-04-16	2725	2724	BRINE	1,33	1,8	8,0	1	2	500 / 150	8,3	0,2	0,2	1,5	41870	148000	640		640	11,0	16,0	0,0	8	3,5	47

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-04-17	2725	2724	BRINE	1,30	1,9	10,0	1	2	500 / 150	8,4	0,3	0,4	2,0	40882	145000	660		660	12,5	16,0	0,4	8	3,8	35
2002-04-18	2725	2724	BRINE	1,30	1,8	9,0	1	2	500 / 150	8,6	0,3	0,4	2,0	40882	146000	620		620	12,5	16,0	0,4	8	3,8	34
2002-04-19	2769	2768	BRINE	1,30	1,6	8,0	1	2	500 / 122	8,6	0,3	0,4	2,0	41930	146000	640		640	13,0	15,0	0,4	10	3,6	57
2002-04-20	2788	2787	BRINE	1,30	1,6	8,0	1	2	500 / 122	8,7	0,3	0,4	2,0	41930	145000	640		640	13,0	16,0	0,4	10	3,6	62
2002-04-21	2788	2787	BRINE	1,30	1,6	8,0	1	2	500 / 122	8,7	0,3	0,4	2,0	41930	145000	640		640	13,5	15,5	0,4	10	3,4	87
2002-04-22	2788	2787	BRINE	1,30	1,5	8,0	1	2	500 / 122	8,9	0,6	0,2	1,0	42979	147000	720		720	14,0	15,0	0,3	10	3,3	109

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-04-23	2807	2806	BRINE	1,30	1,5	8,0	1	2	500 / 122	8,9	0,6	0,2	1,0		42000	148000	720		720	14,0	14,5	0,3	10	3,3	106
2002-04-24	2817	2816	KCL/POLYMER	1,30	1,6	8,0	1	2	/ 122	8,9	0,6	0,2	2,1		42000	148000	720		720	14,0	16,0	0,3	8	3,2	112
2002-04-25	2817	2816	KCL/POLYMER	1,30	1,6	8,0	1	2	/ 121	8,9	0,6	0,2	2,0		46000	148000	720		720	13,2	16,6	0,3	8	3,5	69
2002-04-26	2975	2974	KCL/POLYMER	1,30	1,5	8,0	1	2	/ 121	8,9	0,8	0,1	0,3		43000	146000	720		720	13,0	16,5	0,3	14	3,6	62
2002-04-27	2975	2974	KCL/POLYMER	1,30	1,0	7,0	1	2	/ 121	8,9	0,8	0,1	0,5		43000	145000	720		720	13,9	15,5	0,3	14	3,3	108
2002-04-28	2975	2974	KCL/POLYMER	1,30	1,0	7,0	1	2	/ 121	8,8	0,7	0,1	0,5		43000	145000	720		720	13,5	15,5	0,3	14	3,4	86
2002-04-29	2975	2974	KCL/POLYMER	1,30	1,0	7,0	1	2	/ 121	8,8	0,7	0,1	0,5		43000	145000	720		720	13,5	15,5	0,2	14	3,4	86
2002-04-30	2975	2974	KCL/POLYMER	1,30	1,0	7,0	1	2	/ 121	8,8	0,7	0,1	0,5		43000	145000	720		720	13,5	15,5	0,2	14	3,4	86
2002-05-01	2975	2974	KCL/POLYMER	1,30	1,0	7,0	1	2	/ 122	8,8	0,7	0,1	0,5		43000	145000	720		720	13,5	16,0	0,2	14	3,4	88
2002-05-02	2975	2974	KCL/POLYMER	1,31	1,6	9,0	1	1	500 / 122	8,9	0,7	0,1	0,6		43000	143000	520		520	14,6	15,4	0,2	14	3,2	131

Hole section : P&A **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-05-03	2975	2974	KCL/POLYMER	1,30	1,5	9,0	1	1	500 / 122	8,9	0,7	0,1	0,6		43000	143000	520		520	14,5	15,5	0,2	14	3,1	143
2002-05-04	2975	2974	KCL/POLYMER	1,30	1,3	8,0	1	1	500 / 122	8,9	0,7	0,1	0,6		43000	141000	520		520	14,6	15,4	0,2	14	3,1	150
2002-05-05	2897	2896	KCL/POLYMER	1,30	1,8	9,0	1	1	500 / 122	8,0	0,0	0,0	0,5		43000	135000	880		880	14,6	15,4	0,2	14	3,1	157
2002-05-06	2925	2924	CACL2 BRINE	1,32					/																
2002-05-07	2925	2924	BRINE	1,32					/																
2002-05-08	2925	2924	BRINE	1,32					/																
2002-05-09	2925	2924	CACL2 BRINE	1,32					/																
2002-05-10	2925	2924	CACL2 BRINE	1,32					/																
2002-05-11	2925	2924	CACL2 BRINE	1,32					/																
2002-05-12	2925	2924	CACL2 BRINE	1,32					/																
2002-05-13	2925	2924	CACL2 BRINE	1,32					/																
2002-05-14	2925	2924	CACL2 BRINE	1,32					/																
2002-05-15	2925	2924	CACL2 BRINE	1,32					/																
2002-05-16	2925	2924	CACL2 BRINE	1,32					/																
2002-05-17	2925	2924	CACL2 BRINE	1,32					/																
2002-05-18	2925	2924	CACL2 BRINE	1,32					/																
2002-05-19	2925	2924	CACL2 BRINE	1,32					/																
2002-05-20	2925	2924	CACL2 BRINE	1,32					/																
2002-05-21	2925	2924	CACL2 BRINE	1,31					/																

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/4-1 PO: 1

Hole section : P&A **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2002-05-22	2974	2973	BRINE	1,30	2,6		1		/	7,9	0,4	0,1	0,7		38000	142000	820		820	14,0	16,0	0,2	14	3,2	121
2002-05-23	2974	2973	BRINE	1,30	2,8		1		/	7,9	0,4	0,1	0,7		38000	142000	820		820	14,0	16,0	0,2	14	3,2	121
2002-05-24	2974	2973	BRINE	1,31	2,8		1		/	7,8	0,3	0,1	0,7		38000	142000	820		820	14,0	16,0	0,2	14	3,2	121
2002-05-25	2974	2973	BRINE	1,32	3,0		1		/	8,5	0,3	0,1	0,7		38000	143000	820		820	14,0	16,0	0,2	14	3,3	112
2002-05-26	2974	2973	BRINE	1,32	3,4		1		/	8,5	0,3	0,1	0,7		38000	142000	820		820	14,0	16,0	0,2	14	3,3	113
2002-05-27	2974	2973	BRINE	1,33	4,0		1		/	8,4	0,3	0,1	0,5		38000	141000	820		820	14,0	16,0	0,2	14	3,3	106
2002-05-28	2974	2973	BRINE	1,33	5,0		1		/	8,4	0,3	0,1	0,5		38000	141000	820		820	14,0	16,0	0,2	14	3,3	106
2002-05-29	2974	2973	BRINE	1,33	5,8		1		/	8,7	0,3	0,0	0,5		36000	139000	820		820	15,0	15,0	0,2	14	3,3	127
2002-05-30	0	0	BRINE						/																

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 6305/4-1 PO: 1

Section	Product/ Additive	Unit	Total Amount Used
36"	BENTONITE	kg	9000,00
	SODA ASH	kg	50,00
26"	BENTONITE	kg	33000,00
	CMC EHV	kg	3575,00
	M-I BAR	kg	191000,00
	SODA ASH	kg	350,00
17 1/2"	BENTONITE	kg	4000,00
	SODA ASH	kg	25,00
12 1/4"	CELPOL ESL	kg	5500,00
	CITRIC ACID	kg	725,00
	DUOTEC NS	kg	3575,00
	FLO-TROL	kg	2400,00
	GLYCOL	l	112000,00
	GLYDRIL MC	l	24100,00
	KCL BRINE	l	205500,00
	M-I BAR	kg	147000,00
	NACL BRINE	l	440000,00
	SODA ASH	kg	700,00
	SODIUM BICARBONATE	kg	325,00
	SODIUM CHLORIDE	kg	55000,00
8 1/2"	BENTONITE	kg	9000,00
	CELPOL ESL	kg	2750,00
	CITRIC ACID	kg	1025,00
	CMC EHV	kg	850,00
	DUOTEC NS	kg	800,00
	FLO-TROL	kg	900,00
	GLYCOL	l	30180,00
	GLYDRIL MC	l	11229,00
	KCL BRINE	l	48000,00
	M-I BAR	kg	73000,00
	NACL BRINE	l	103000,00
	SODA ASH	kg	75,00
	SODIUM BICARBONATE	kg	825,00
	SODIUM CHLORIDE	kg	11250,00
6"	AMMONIUM BISULPHITE	kg	50,00
	BARITE	kg	45000,00
	CACL2 BRINE 1.36 SG	l	753001,00
	CALCIUM CHLORIDE	kg	825,00
	CELPOL ESL	kg	125,00
	CITRIC ACID	kg	1400,00
	DUOTEC NS	kg	900,00
	KCL	kg	2000,00
	M-I BAR	kg	12000,00
	SODA ASH	kg	750,00
	SODIUM BICARBONATE	kg	850,00
	SODIUM CHLORIDE	kg	2500,00
0.0	BARITE	kg	39000,00
	BENTONITE	kg	22680,00

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 6305/4-1 PO: 1

Section	Product/ Additive	Unit	Total Amount Used
0.0	CMC EHV	kg	1275,00
	SODA ASH	kg	100,00

LOGGING INFORMATION ON WELL 6305/4-1

Hole size: 12 1/4"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
1	1A	SCHLUMBERGER OFFSHORE SERVIC	2692	1027	HALS/PEX/SP
2	1A	SCHLUMBERGER OFFSHORE SERVIC	2674	1765	DSI/VSP/GPIT/GR

Hole size: 8 1/2"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
3	2B	SCHLUMBERGER OFFSHORE SERVIC	2963	1719	HALS/PEX/SP
4	2A	SCHLUMBERGER OFFSHORE SERVIC	2900	2740	CMR/HGNS
5	2A	SCHLUMBERGER OFFSHORE SERVIC	2960	1100	VSP
6	2A	SCHLUMBERGER OFFSHORE SERVIC	2847	2755,5	MSCT

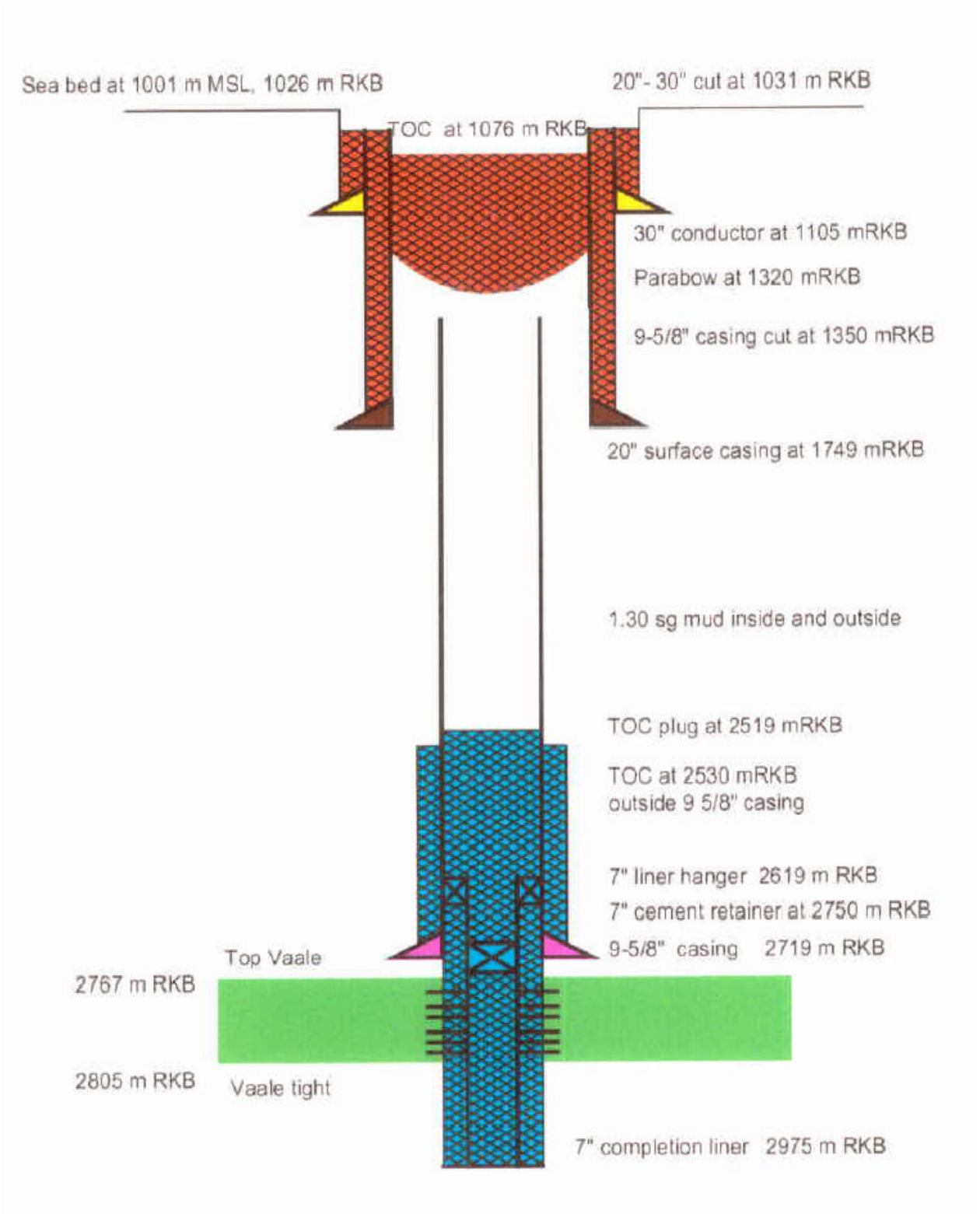


Figure B.1	**Well Status After Permanent P&A Well 6305/4-1**	**HYDRO**

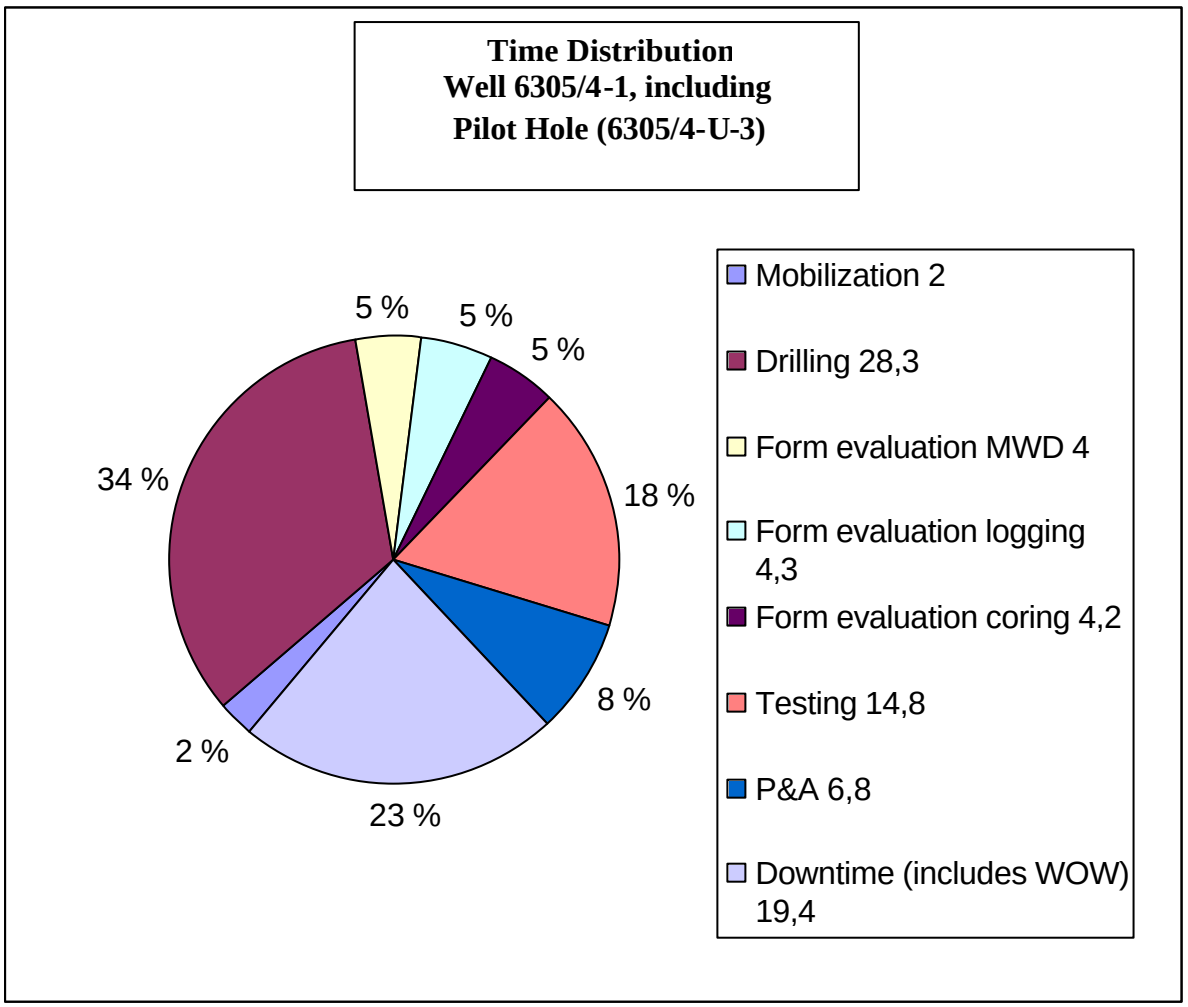
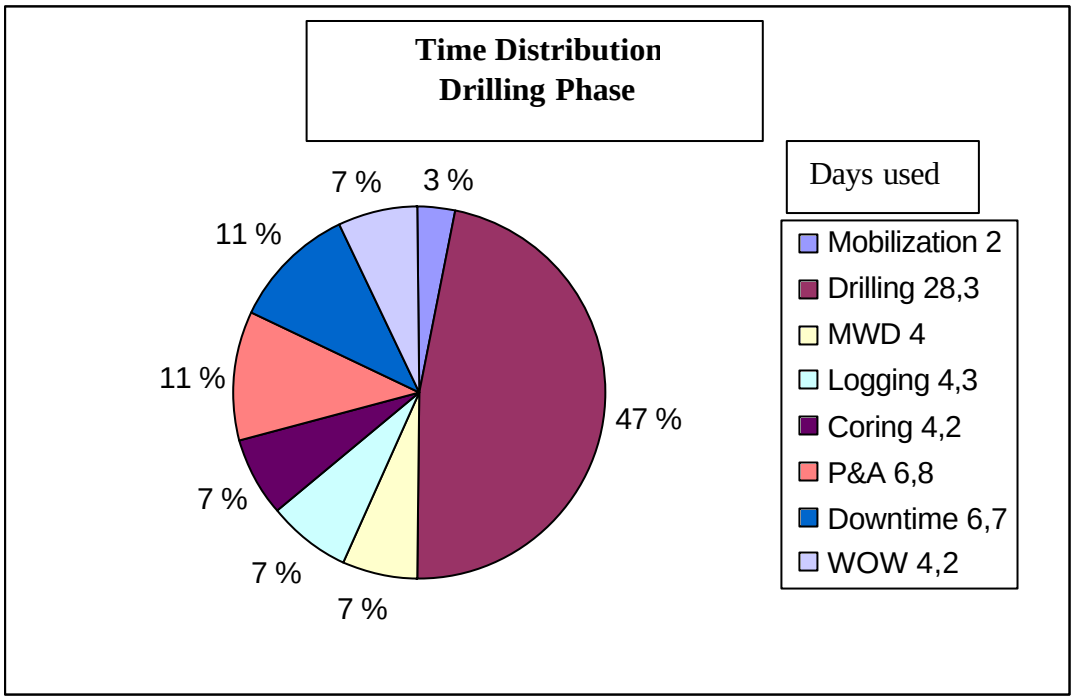


Figure B.2	**Time distribution 6305/4-1**	HYDRO



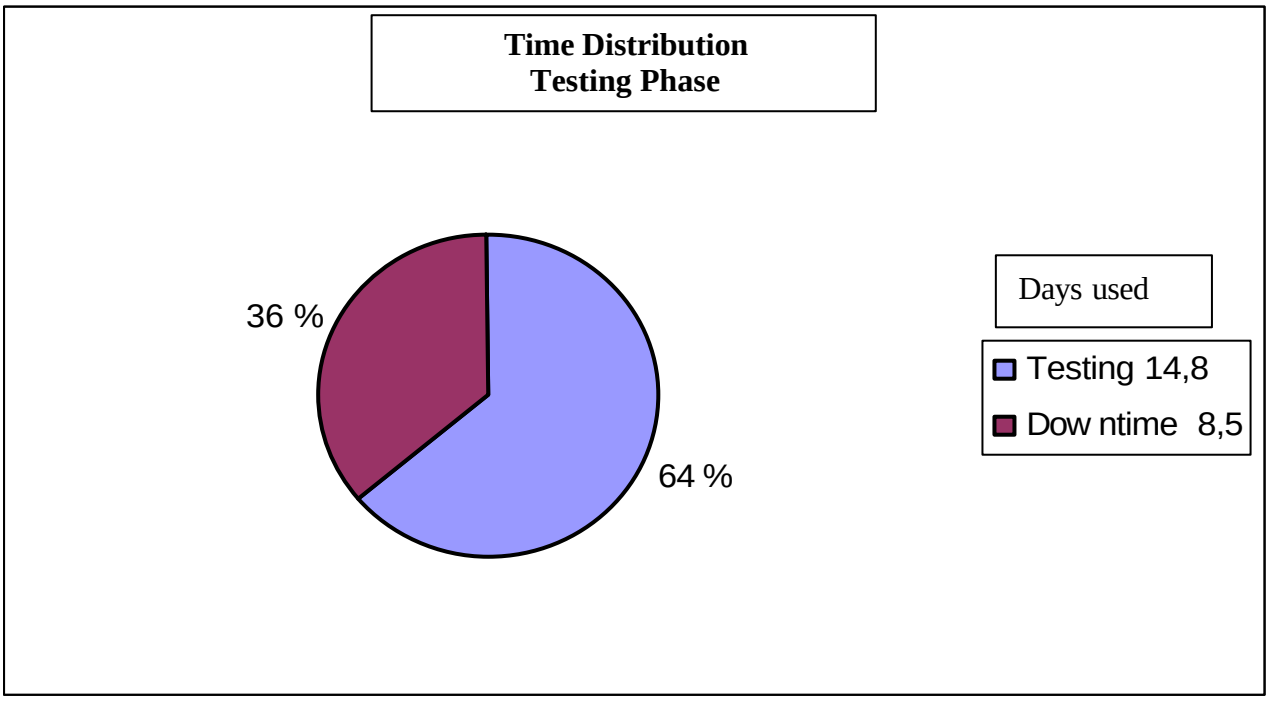


Figure B.3	**Time distribution, split between drilling – and testing phase. 6305/4-1**	HYDRO

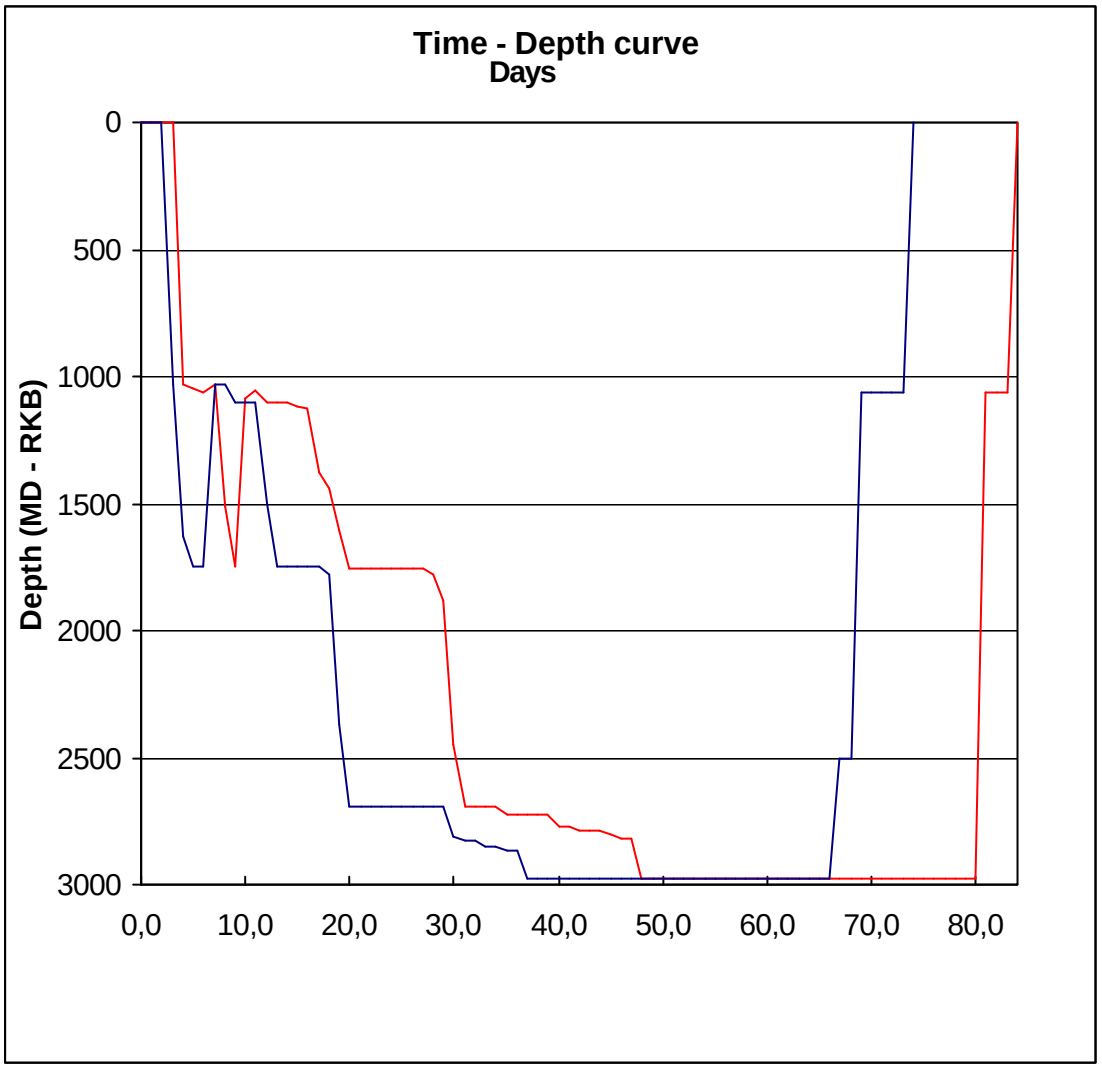
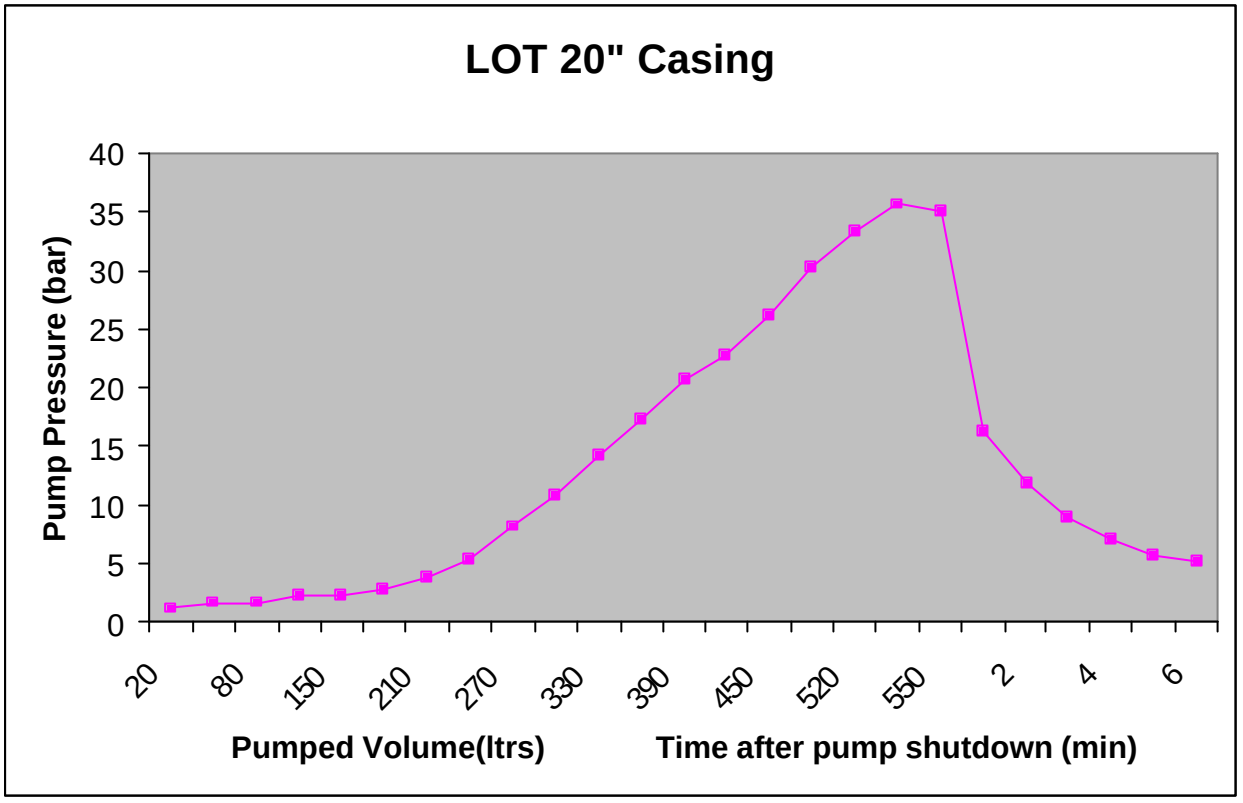


Figure B.4	**Drilling Curve, Actual Versus Planned 6305/4-1**	HYDRO



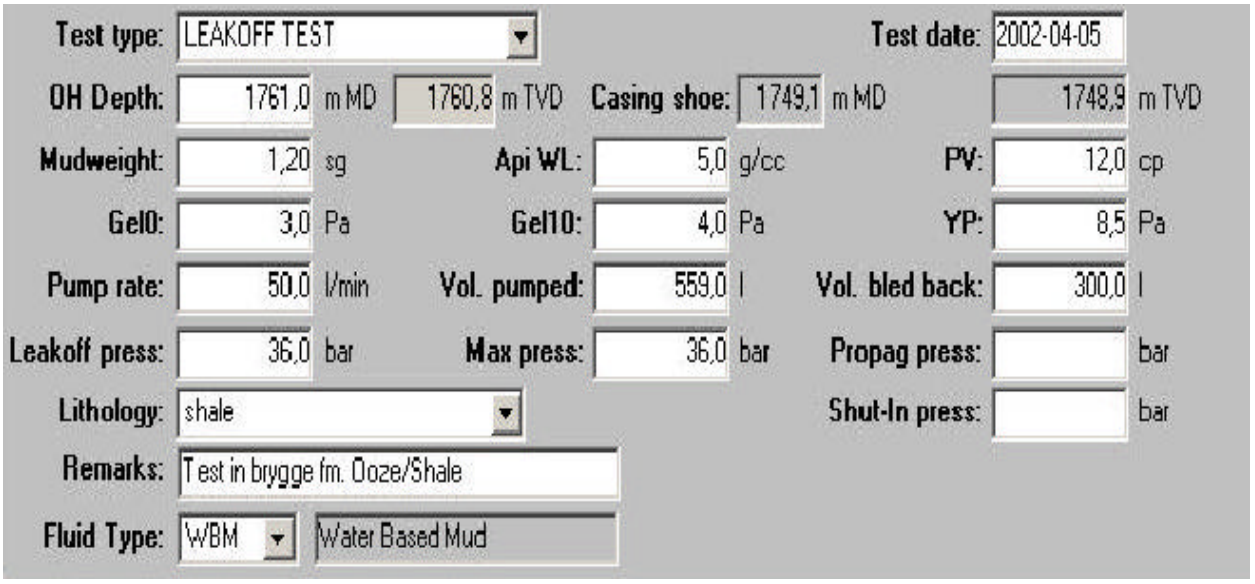
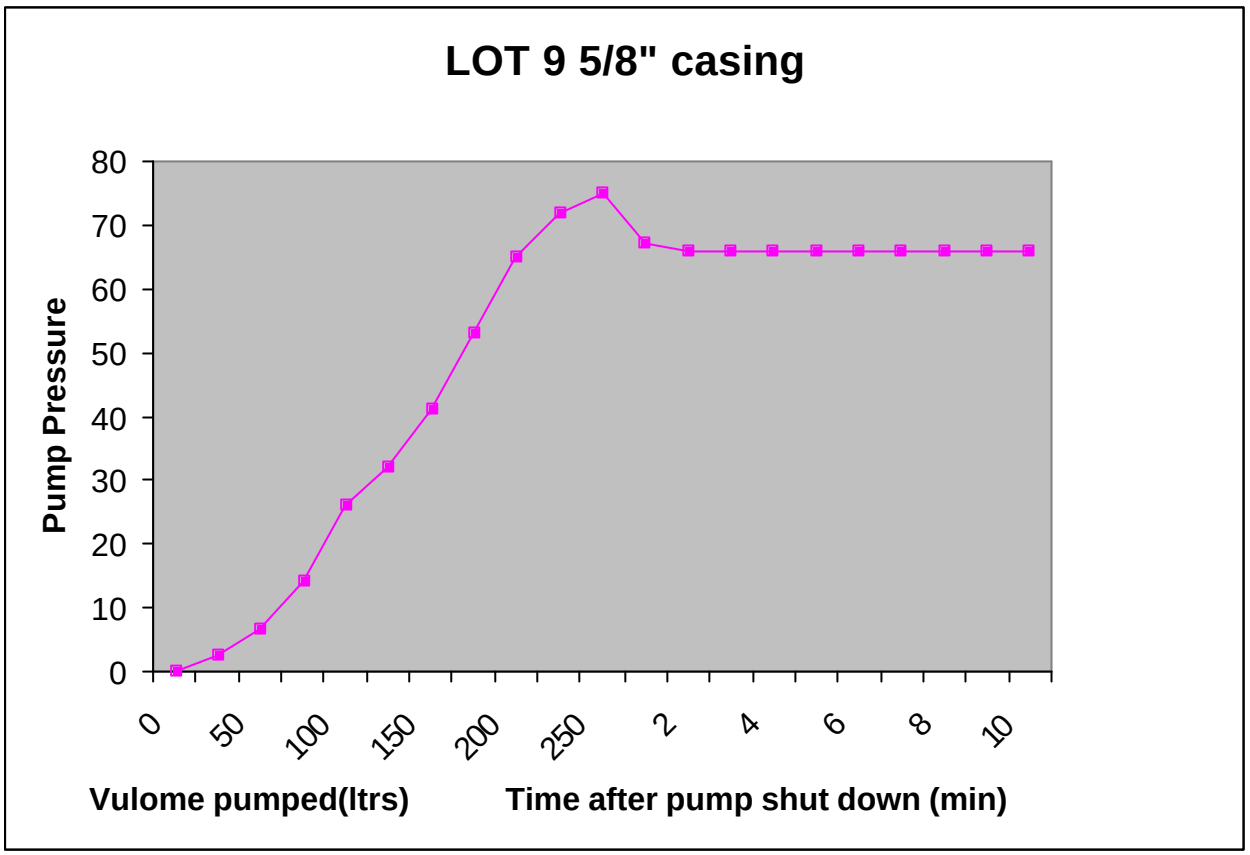


Figure B.5	**LOT performed below 20” shoe**	**HYDRO**



Test type:	LEAKOFF TEST					Test date:	2002-04-18
OH Depth:	2732,0	m MD	2731,1	m TVD	Casing shoe:	2719,0 m MD	2718,1 m TVD
Mudweight:	1,30	sg	Api WL:	1,8	g/cc	PV:	16,0 cp
Gel0:	5,0	Pa	Gel10:	7,0	Pa	YP:	13,5 Pa
Pump rate:	50,0	l/min	Vol. pumped:	250,0	l	Vol. bled back:	250,0 l
Leakoff press:	72,0	bar	Max press:	76,0	bar	Propag press:	66,0 bar
Lithology:	claystone					Shut-In press:	66,0 bar
Remarks:							
Fluid Type:	WBM	Water Based Mud					

Figure B.6	**LOT performed below 9 5/8" shoe.**	**HYDRO**