

Denne rapport
tilhører



UND DOK.SENTER

DRESSER NORWAY

MAGCOBAR

L.NR. 92058088

KODE well 302-1 nr 41

Returneres etter bruk

Norske Stats Oljeselskap A/S
Statoil
P.O. Box 10, CCB Basen
63 ÅGOTNES

PHONE
(04) 69 60 33
TELEX
33 1 68 -DRENO-N

TANANGER

En: Mr. T

Dear Sirs,

Please find at
cent well 30
to your op
portunity to

Please do not h
s summary, o:

Yours faithfully

F. H. Retz
Manager Sales and

cc: N. Blomberg,

DRESSER NORWAY A.S.

MAGCOBAR

Den Norske Stats Oljeselskap A/S
Statoil
P.O. Box 10, CCB Basen

5363 ÅGOTNES

Attn: Mr. T. Brinch/O. Øren

NORSCO OIL BASE
N-4056 TANANGER
PHONE
(04) 69 60 33
TELEX
33 1 68 "DRENO" N

TANANGER, 21.01.83

DRNG/26/83/RHR/sk

Dear Sirs,

Please find attached Dresser Norway A/S' Drilling Fluid Recap for your recent well 30/2-1. We hope that the information presented is of benefit to your operation. At the same time we want to thank you for the opportunity to be of service to Statoil.

Please do not hesitate to contact us if there are any questions regarding this summary, or any other matter.

Yours faithfully,



Rolf H. Retz
Manager Sales and Engineering

Copy: N. Blomberg, Dusaviken



WELL SUMMARY

DATE 17th November 1982

COMPANY DEN NORSKE STATS OLJESELSKAP A/S - STATOIL

ADDRESS P.O. BOX 10 - COAST CENTER BASE

5363 ÅGOTNES

WELL 30/2-1

LOCATION NORWEGIAN NORTH SEA

PREPARED BY H. Yttri

F. Smith



WELL SUMMARY

I N D E X

STATOIL WELL 30/2-1

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WELL SUMMARY

STATOIL, 30/2-1

W E L L S U M M A R Y



WELL SUMMARY

SUMMARY STATOIL WELL 30/2-1

The well was spudded on the 17th May 1982. Bentonite was prehydrated prior to spudding using Magcogel, Caustic Soda, Lime and Soda Ash. The well was drilled to 216 meters R.K.B. and 30" casing was run with no problems.

The existing mud was used to drill from 216 meters to 1035 meters. The specific gravity of the fluid was kept at 1.05-1.07. A pilot hole 12-1/4" was used and then opened to 26". No adverse problems were encountered except by using a large amount of dilution. 20" casing was run and cemented with no problems at 1020.5 meters.

The 17-1/2" hole was drilled to 2656 meters using an excess Gypsum system. The excess Gypsum was carried at between 4 lbs per bbl to 3.2 lbs per bbl. The pH was carried at 9.0-9.5 preferably below 9.5. Hole conditions were very good at all times.

At 1765 meters a short trip was made and the trip gas increased to 48% as per the Ex-log monitoring unit. The mud density was increased to 1.24. The pore pressure increased as drilling was resumed and the specific gravity was increased to 1.52 by 1932 meters. The fluid loss was controlled at 10.0 cc or less using CMC Low Viscosity and CMC Hi Viscosity. All Magcogel and Gypsum was prehydrated prior to adding into system.

At 2125 meters the pore pressure increased and the fluid density was raised to 1.60 specific gravity. The well was drilled to 2156 meters and electric logs were run. The 13-3/8" casing was run and became stuck at 1998 meters. Circulation was established and a 100 bbl Oilfaze/Pipe-lax pill was mixed up with a weight of 1.60 and spotted around the casing to soak. Another pill

cont'd.....



WELL SUMMARY

consisting of Imco spot and Pipe-lax was mixed and the Oilfaze pill was returned and stored. The Pipe-lax Imco spot pill was pumped down and followed by the original Oilfaze/Pipe-lax pill. The Pipe-lax Imco spot pill was circulated out and another Pipe-lax Imco spot pill was spotted. This was followed by the previous pills and the pill was left to soak. The casing came free and was run to 2150.5 meters. The casing was cemented.

After the cement was drilled out and a leak off test run to 1.85 specific gravity the system was changed to an XP-20/Resinex mud using the existing Gypsum mud and the Calcium was reduced gradually. The mud density was increased to 1.66 specific gravity prior to drilling any further. At 2227 the density was raised to 1.70 specific gravity. A diamond bit and turbine was run into the hole. At 2433 the pore pressure increased and the density was raised to 1.77 while drilling ahead. At 2794 meters, the drill solids content was increasing and the centrifuge was run. This had to be run taking mud from the active and centrifuging the Barite into the slug pit, to a weight of 1.77 or equal to the active system density. It was then strung into the system and the process repeated. This procedure works but with a few suggested changes the efficiency of the operation would be improved greatly. All Bentonite that was added to the system was prehydrated and coated with Spersene and XP-20.

At 3100 meters the Chloride content increased rapidly and the magnesium content increased also. The fluid density was increased to 1.80. The resistivity as per the Ex-log monitoring system decreased also at this point.

At 3470 meters the connection gas increased to 6.7% and the fluid density was increased to 1.82. The pipe was stuck for 15 minutes and worked free. The well was drilled to 3501 meters. A wiper trip was made and while circulating bottoms up the pipe stuck. A Pipe-lax Imco spot pill of the

cont'd.....



WELL SUMMARY

following was mixed up and spotted, 82 sacks of Imco spot, 46 bbls of Diesel, 18 bbls of water, 8 drums of Pipe-lax, and weighted up to 1.82 specific gravity. The pipe was free one hour after spotting. Electric logs were run and 9-5/8" casing was run and landed at 3491 meters.

The well was drilled to 3611 meters and the pore pressure increased. The specific gravity was raised to 1.85. As drilling resumed the background gas increased and the mud density was increased to 1.87 at 3678 meters.

Lost circulation was experienced at 3678.3 meters, and a Nut Plug/Mica pill was spotted. The well was drilled to 3696 meters. Losses were constantly experienced and L.C.M. pills were spotted. Electric logs and R.F.T. tests were made. The core bbl was run and coring resumed. The well was cored to 3794 meters. Losses continued and L.C.M. pills were spotted. The well was drilled to 3836 meters. The hole was conditioned for logging and the survey showed a very high angle build up. The dog-legged section was wiped and the hole was conditioned for logging and running 7" liner.

Prior to P.O.H. an 18m³ LCM pill was spotted on bottom. While pulling out to run casing, the hole was not taking the correct amount of fluid. Although periodic flow checks were made the well was not flowing. After ninety-nine stands had been pulled, it was decided to run back to bottom and circulate bottoms-up. At 3180m a flow check showed the well to be flowing. The well was then shut-in. A total of 12m³ pit gain was noted. The gas was circulated out using the choke with 1.91 S.G. mud. Running in to 3766m bottoms up was again circulated through the choke until casing pressure registered zero. The hole was again circulated through the riser. At this point it was noticed that the pipe was stuck. The well again started flowing. A 4m³ kick was taken. The kick was circulated through the choke. Two Diesel/Pipe Lax pills were pumped and spotted with the second one successful. The hole was then circulated and an LCM pill spotted on bottom. The bit was pulled and

cont'd.....



WELL SUMMARY

7" liner was run with the shoe at 3834m and the liner hanger at 2906m.

An 8-1/2" bit was run to drill out cement in 9-5/8" casing. Again the hole was not taking the correct amount of fluid. No flow was encountered, on the first flow check but the second one showed a small flow. The well was shut-in and a 3m³ kick was noted in pit levels. The hole was circulated with no significant gas show. While reaming to 2718m, the well started flowing again. After shutting-in the well a 12m³ gain was noted. The kick was circulated out with a 2.15 S.G. mud. The well was opened and observed to be static.

It was presumed that a leak was in the 7" liner hanger and it was tested for this. No leak was encountered.

The B.O.P. stack was pulled for repairs and re-run. The mud weight was cut back to 1.91 prior to drilling out the 7" shoe. The well was drilled to 4217 meters and the pipe was stuck. A pipe lax pill was spotted and the pipe was pulled out of the hole. Electric logs were run and also R.F.T. testing was tried.

Drilling resumed to 4230 meters and the drill pipe became stuck again. A pipe lax pill was again spotted and the pipe came free. The well was drilled to 4243 meters and because of continued stuck pipe drilling was not resumed and logs were run. The well was plugged back to 4040 meters. Then plugged to 3836 meters. The plug was dressed off to 3838 meters. The well was then prepared for testing.

Cement contamination was experienced while squeezing cement behind the 7" liner. This was heated with Sodium Bi-carbonate and Spersene. The solids build up from the cement needed water to disperse them. Contaminated mud was dumped and the mud was treated in the limited time allowed.

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WELL SUMMARY

The test string was run and tested and the mud treated accordingly.



WELL SUMMARY

STATOIL, 30/2-1

DAILY OPERATIONS LOG



DAILY OPERATIONS LOG

STATOIL, 30/2-1

May 16th 1982

Mix up 1020 bbls of spud mud, using 35 lbs/bbl Bentonite, Lime, Caustic and Soda Ash.

May 17th 1982

Mix up 750 bbls spud mud same as above. Drill 26" hole to 216 meters.

May 18th 1982

W.O.C. Mixed up 500 bbls of mud.

May 19th 1982

Mix up 600 bbls of mud 1.06 sp.gr.

May 20th 1982

Drill 12-1/4" hole. Mixed up 800 bbls of mud, 1.06 sp.gr. Drill to 268 meters.

May 21st 1982

Drill to 748 meters using sea water for dilution.

May 22nd 1982

Drill 12-1/4" pilot hole to 1034 meters. Built 868 bbls of new mud. Diluting with sea water to maintain weight at 1.06 sp.gr.

May 23rd 1982

Open 12-1/4" hole to 26". Pump high viscosity pill when necessary for hole cleaning.



DAILY OPERATIONS LOG

May 24th 1982

Reaming to 26". Pump high viscosity pills to clean hole. Dumping mud and diluting with fresh mud to maintain weight at 1.06 sp.gr.

May 25th 1982

Continue opening 12-1/4" hole to 26". Pumping high viscosity pills to clean the hole.

May 26th 1982

Open hole to 1035 meters and run 20" casing.

May 27th 1982

Premix mud slowly as a strike may be called. Mixing up Gypsum system.

May 28th 1982

Continue mixing mud as strike has been called off. Rig to run B.O.P. and riser. Test same.

May 29th 1982

Continue mixing mud - Displace riser with new mud. Drill float collar and shoe. Drill to 1037 meters. Run leak off test. (1.70 sp.gr.) - Drill ahead. Run mud cleaners as per Statoil orders. Dilute with premix as necessary.

May 30th 1982

Drilling ahead. Diluting with Gypsum, Gel, premix. Losing mud over shakers and all other solids control equipment. Cuttings are not sticky at all and no problems on connections.



DAILY OPERATIONS LOG

May 31st 1982

Trip at 1450 meters, no drilling. R.I.H. with new bit and no fill on bottom. Adding cone to lower and control fluid loss. Adding Caustic to control pH.

June 1st 1982

Diluting heavily as per Statoil orders plus lowering fluid loss. Drilling ahead with no problems.

June 2nd 1982

Increase mud weight to 1.20 as per orders. Increase mud weight to 1.27 as per orders. Gas has increased, 48% on wiper trip at 1858 meters.

June 3rd 1982

Increase mud weight to 1.30, 1.35 and start increasing to 1.40. Raise to 1.45 and lower fluid loss with CMC. Adding Spersene to maintain rheology.

June 4th 1982

Raise mud weight to 1.52. P.O.H. 8½" bit. Added Spersene and Caustic to control rheology. Drill rat hole for core bbl 20 meters. P.O.H.

June 5th 1982

R.I.H. with core barrel to cut core no. 1. Bit would not drill. P.O.H. Check core head - recovery 2 meters. R.I.H. with core barrel to cut core no. 2.

June 6th 1982

Cut core no. 2 - 91% recovery. Test B.O.P. R.I.H. with 8½" bit. Drill to 2020 meters. P.O.H. to run electric logs.



DAILY OPERATIONS LOG

June 7th 1982

Run logs and R.I.H. with 17½" bit.

June 8th 1982

Open up 8½" in rat hole to 17½". Drill ahead from 2020 meters. Adding Caustic, Spersene and CMC Low Vis to maintain rheology.

June 9th 1982

Drill to 2125 meters. Gas increase. Circulate. Raise mud weight to 1.57. Circulate bottoms up. Raise mud weight to 1.60. Adding Spersene and Caustic to control rheology.

June 10th 1982

Continue raising mud weight to 1.60. Adding Gypsum to maintain concentration. Cuttings are firm and not sticky over the shaker. Drilled to 2156m. Circulate bottoms up. Made wiper trip to shoe. R.I.H. Circulate bottoms up. P.O.H. to log.
Added 20m³ seawater to reduce viscosity lost 10m³ mud.

June 11th 1982

Continue logging. R.I.H. Circulate to condition mud. Added Spersene, XP-20, Caustic to reduce Y.P. and gels.

June 12th 1982

P.O.H. Rigged up and ran 13-3/8" casing. Casing stuck at 1998 meters. Maintained full circulation. Added 11m³ seawater for dilution.



DAILY OPERATIONS LOG

June 13th 1982

Pumped 100 bbl Oilfaze/Pipelax pill 1.60 and spotted. Started mixing 100 bbl imco spot pill.

June 14th 1982

Circulate out Oilfaze/Pipelax pill. Mixed & pumped 14m^3 Imco spot pill. (1.60 S.G.). Followed with 25m^3 of previous pill.

June 15th 1982

Pumped pill no. 2 out of hole and returned to no. 3. Mix pill no. 3 Imco spot/Pipe Lax. Added easy spot and Pipe lax to used pill. Pumped 25m^3 used pill, follow with 32m^3 new pill. Follow with 6m^3 used pill.

June 16th 1982

Continue to soak casing with Imco spot/Pipe-lax. Casing free. Ran casing to 2151m. Circulate out solution. Cemented 13-3/8" casing with full returns.

June 17th 1982

Ran packer, tested casing.

Dumped 5m^3 mud. Added 7m^3 seawater to lower viscosity.

June 18th 1982

R.I.H. tagged cement at 2141 meters. Drilled cement and 3m new hole. Ran leak off test.

Treated cement contamination with Soda Ash/Sodium Bicarbonate. Treated mud with Spersene/XP-20/Resinex. Added 18m^3 seawater. Lost 8m^3 mud. Weighted up reserve mud to 1.66 and active.



DAILY OPERATIONS LOG

June 19th 1982

Increased mud weight to 1.70 sg. Diluting with 10m^3 sea water and adding Spersene/XP20 to control rheology. R.I.H. with Turbine. Drilled to 2227 meters.

June 20th 1982

Drilled 12-1/4" hole from 2227m to 2357 m.

Added 22m^3 sea water for dilution, Spersene/XP-20 for rheology. Added Barite to maintain weight. Volume added 25m^3 , lost 5m^3 .

June 21st 1982

Drilled 12-1/4, from 2357 to 2497 meters.

Added 20m^3 sea water, Spersene/XP-20/Caustic to maintain properties. Started to weight up active to 1.75 sg.

June 22nd 1982

Drilled 2497 to 2600 meters. Diluted with 18m^3 sea water. Added Spersene, Caustic and Lime to maintain properties. Weight active system to 1.77 sg.

June 23rd 1982

Drilled 2600-2706 meters. Made wiper trip at m. Added 15m^3 water for dilution, Spersene/Caustic/XP20 to maintain properties. Formation keeping MBT high difficult to control viscosity.

June 24th 1982

Drilling ahead 12-1/4" hole. High build-up of drill solids is causing a rheology problem. Running the centrifuge and using the slug pit as best we can is not the most efficient way of utilizing this equipment.

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DAILY OPERATIONS LOG

The centrifuge underflow is 1.15 sp.gr. We are having to add large amounts of sea water to help reduce the amount of drill solids, and are also adding Caustic and Lignite to help control rheology. A trip was made to test BOP's and check the turbine.

June 25th 1982

Test B.O.P. R.I.H. Lost 40m^3 over shakers on bottoms up. Very high solids content. Increased viscosity while out of the hole. Added 18m^3 of new mud to system. Added 24m^3 of sea water to system. Added Spersene, Caustic and XP-20 to system to control rheology.

June 26th 1982

Survey. Lost part of survey tool. Trip to retrieve. Adding water and Barite to control solids and density. One pump down for a while. Safety valve.

June 27th 1982

Drilling ahead. Adding prehydrated gel, wet with Spersene and XP-20. Running sea water at all times. Adding Barite to maintain density. Trip for bit at 2930 meters.

June 28th 1982

Diamond bit completely watered. R.I.H. with conventional bit. Drill to 2936 meters. P.O.H. Treated mud with Spersene/XP-20/Caustic. Adding prehydrated gel from pit no. 3. Adding sea water while drilling. Maximum gas on bottoms up 26-45%. Mud weight cut to 1.68.



DAILY OPERATIONS LOG

June 29th 1982

Finish running in the hole with turbine and diamond bit. Circulate and drill ahead. 5.3% gas on bottoms up. Large splintered shale coming over shaker. Adding water while drilling.

June 30th 1982

Drill ahead. At 3069 chloride content increased to 15,500 ppm. Started raising mud density to 1.80 sp.gr. Have run the centrifuge for 12 hrs.

July 1st 1982

Drill ahead. Ran centrifuge for 3 hrs. Make wiper trip, no drag. Running sea water and prehydrated gel.

July 2nd 1982

Increase in Calcium and Chlorides after short trip. Ran centrifuge for 6 hrs.

July 3rd 1982

Properties were out of line due to Chloride and Calcium increase. Treated with Caustic Soda, Spersene and XP-20. Lowered HP.HT fluid loss with premix.

July 4th 1982

Make a wiper trip at 3376m, 2.1% gas after connection. Make short trip. Check Chlorides on bottoms up. No change. Ran centrifuge for 9 hrs. Treat with Caustic, Spersene and XP-20.



DAILY OPERATIONS LOG

July 5th 1982

Drill ahead. Raise density to 1.82. Drill ahead, background gas of 3-4%. Maximum 6.7%. Stuck pipe at 3501 meters while drilling. Adding water and Caustic Soda to reduce solids and get properties in line.

July 6th 1982

Make trip, lay down turbo drill and diamond bit. R.I.H. with conventional bit. Circulate bottoms up. Stuck in the hole.

July 7th 1982

Mix up pipe lax pill and spot. Work pipe one hour, pipe free. Circulate out pill. P.O.H. for logs.

July 8th 1982

Run logs. Wiper trip. Reduce yield point to 10. P.O.H.

July 9th 1982

Run 9-5/8" casing.

July 10th 1982

Cement 9-5/8" casing. Test seal assembly.

11th July 1982

R.I.H. with RTTS tool. Displace mud in riser with seawater.

12th July 1982

Set cement plug after packer failure. Disconnect riser.



DAILY OPERATIONS LOG

July 13th 1982

Change subsea stacks.

July 14th 1982

Change subsea stacks.

July 15th 1982

Lower and test subsea stack:

July 16th 1982

R.I.H. Drill cement plug at 1420m. P.O.H. Test subsea stack. R.I.H.
Drill cement plug and float collar.

July 17th 1982

Drill shoe. Leak-off test (1.99 s.g.) Drill to 3513m. Trip for bit.
Drill to 3517m.

July 18th 1982

Drill to 3548m. Trip for bit. Started seawater additions to dilute
solids increase.

July 19th 1982

R.I.H. Drill to 3601m. Diluting mud system with 27m³ seawater.

July 20th 1982

Drill to 3611m. Weighted mud to 1.85 s.g. Drill to 3624m. Circulate
bottoms up. P.O.H. Change bit. R.I.H. Drill to 3630m.



DAILY OPERATIONS LOG

July 21st 1982

Drill to 3638m. Circulate out 5% gas. Drill to 3676m. Circulate bottoms up for gas. Weighted mud to 1.87 s.g. Drill to 3678m. Circulate bottoms up. Weighted mud to 1.89 s.g.

July 22nd 1982

Lost circulation at 3687.3m. Mixed up slug pit with 20 lb/bbl of Mica Fine. 20 lb/bbl of Nut Plug Fine. Spotted pill over loss zone. Pull eight stands. Let loss zone heal. Run in the hole 2 stands at a time, circulate until well stabilized. Start drilling and add 3-5 lb/bbl of Mica Fine and Nut Plug Fine constantly. Losing 1-3 m³ per hour while drilling. Increased pump strokes. Make swab tests and gas peaks experienced on each one. Make short trip to shoe. Swabbed 6 bbls into well. Circulate bottoms up. Maximum gas 10.6%, background gas while circulating and drilling 0.8%. Mixed up L.C.M. pill with 25 lb/bbl Fine Mica, 25 lb/bbl Fine Nut Plug. Spot on bottom and P.O.H.

July 23rd 1982

P.O.H. to run logs and R.F.T. with Schlumberger. R.F.T. shows pore pressure of 1.86 sp.gr. Bottom hole temp. recordings were at 233, 244, 254^oF. Time from circulation to last run, 20 hrs. R.I.H. open ended drill pipe.

July 24th 1982

Finish running in hole open ended. Circulate to establish losses, up to 4m³ per hour at 90 strokes per minute. Mix up L.C.M. pill with 50 lb/bbl Nut Plug, Mica. Spot on bottom over loss zones. P.O.H. Test BOP's. Pick up core bbl to cut core no. 3.



DAILY OPERATIONS LOG

25th July 1982

R.I.H. with core barrel. Circulate at shoe to set L.C.M. pill in loss zone. Establish rate of 80 strokes per minute. Core to 3701 meters. P.O.H. with jammed barrel. Will treat mud for fluid loss high temp. and add gel to system to increase yield point. Prehydrated gel in pit no. 3 and coat with Spersene and XP-20. Add slowly to system to build volume. Add Resinex to reduce HT.HP fluid loss. R.I.H. with core barrel to cut core no. 4.

26th July 1982

P.O.H. with core no. 4. R.I.H. with core bbl to cut core no. 5. Cut core no. 5.

27th July 1982

Finish cutting core no. 5. P.O.H. R.I.H. cut core no. 6. Adding sea water to mud. Add Barite to control weight at 1.91.

28th July 1982

Finish cutting core number 6. P.O.H. R.I.H. with core barrel. Adding sea water at all times while coring. Running mud cleaners.

29th July 1982

Cut cores no. 7, no. 8 and R.I.H. to cut core no. 9. Recovery from 20% to 100%.

30th July 1982

P.O.H. with core no. 9. Dumped sand trap. Build volume by adding pre-hydrated gel, Spersene, XP-20, Resinex, Caustic and Barite.



DAILY OPERATIONS LOG

31st July 1982

P.O.H. Test B.O.P. R.I.H. with new bit. Drill to 3836 meters. Lost circulation. Build up L.C.M. pill, 48 lb/bbl Mica Coarse, Nut Plug Coarse. Spot in hole. (18m^3). Added Mica Coarse and Nut Plug Coarse while circulating.

1st July 1982

P.O.H. to shoe. Squeeze L.C.M. to formation. R.I.H. 2 stands at a time. Circulate until well is stable or for 10 minutes. R.I.H. to bottom.

2nd August 1982

Circulate bottoms up. P.O.H. to log. Run electric logs. R.I.H. with bit. Survey $7-3/4^\circ$. Built $3\frac{1}{2}^\circ$ angle in 42 meters. Will R.I.H. and ream dogs leg Loss zone. 3814 - 3826 meters, Caliper log showed build up across loss zone.

3rd August 1982

R.I.H. with bit. Ream through dog-legged section. Spot 18m^3 of L.C.M. pill on bottom. P.O.H. to run dipmeter and R.F.T's.

4th August 1982

Run R.F.T. Finish all logging. R.I.H. Break circulation at shoe. R.I.H. to condition mud for running 7" liner.

Mixed up 40m^3 of 1.91 mud. Added 45 lb/bbl of L.C.M., Mica Coarse and Nut Plug Coarse.



DAILY OPERATIONS LOG

5th August 1982

Ream from 3810 to 3836. Circulate bottoms-up. Spot 18m³ LCM pill. POH 90 stands. Lost 36m³ while reaming and circulating. Hole not taking fluid during POH. RIH to 3166. Gain 4.5m³. Circulate through choke. Losing mud to formation.

6th August 1982

Circulate out gas.

7th August 1982

Circulate out gas. Work stuck pipe. Circulate.

8th August 1982

Circulate out gas at various pump rates.

9th August 1982

Circulate out gas at various pump rates.

10th August 1982

Spot 13m³ Pipe-lax/Imco-spot pill. Work pipe.

11th August 1982

Soak and work pipe. Circulate out Pipe-lax/Imco-spot pill. Spot second Pipe-Lax/Imco-spot pill. Soak and work pipe.

12th August 1982

Soak and work pipe. Pipe free. Circulate out pill. Wash and ream from 3767 to 3836. POH to 9-5/8" casing shoe. RIH to 3836. Circulate out gas.



DAILY OPERATIONS LOG

13th August 1982

Continue circulating. Spot 17m³ LCM pill, 1.91 S.G., 54 lb/bbl LCM. POH. RIH with 7" liner.

14th August 1982

Continue RIH with 7" liner. Circulate. Cement liner. POH. RIH with new 8-1/2" bit to 1542, well flowing. Shut-in. Circulate. Pump 3.5 bbls mud with shut-in (4600 psi). No leak-off. Strip to bottom.

15th August 1982

Continue strip-in hole. Tag cement at 2705. Ream to 2718. Circulate out gas. Raise mud weight to 2.15 S.G. Circulate out gas.

16th August 1982

Circulate out gas. Displace riser with 2.15 S.G. mud. Wash and ream cement from 2718 to 2878. Circulate bottoms-up. Fifty stand wiper trip. Circulate bottoms-up. POH twenty-five stands. Observe well. No chemicals or water to be added as per Statoil instructions.

17th August 1982

Cont. observe well. RIH to bottom. Observe well, static. Circulate bottoms up. POH. RIH with bit. Drill cement from 2889 to 2906. Circulate bottoms up. POH. Treat cement contaminated mud. Also add seawater as mud is pre-hydrated. No further treatment required as per Statoil instructions.

18th August 1982

Cont. POH. RIH with mill. Mill 7" liner, tie back sleeve to 2908. Circulate bottoms-up. Test liner. Circulate bottoms-up. POH. RIH with 6" bit. No chemical treatment or water to be added as per Statoil instructions.



DAILY OPERATIONS LOG

19th August 1982

Checking for leak in casing by setting packer and displacing drill pipe with water. Checking for flow back. Reverse out and check for gas.

20th August 1982

Same as above. POH for cement bond log.

21st August 1982

Drop fish in hole, RIH to retrieve fish. Circulate bottoms up. Added sea water to heavy spots to maintain mud density at 1.91.

22nd August 1982

RIH. Second attempt to retrieve fish. POH with fish. Lay cement plug. POH. Lay down 5" D.P.

23rd August 1982

Pick up 3½" drill pipe. RIH. Tag cement plug. Displace riser with sea water. Rig to pull riser and BOP.

24th August 1982

Pull riser and BOP. Reduce mud density to 1.95 as per orders. Clean all pits on surface.

25th August 1982

Repair BOP. Reduce mud density to 1.91.



DAILY OPERATIONS LOG

26th August 1982

Run riser and BOP stack. Reduce mud density to 1.91. Test BOP. Adding only sea water to reduce mud density.

27th August 1982

RIH. Displace riser with 1.91 mud. Drill cement plug. Reduce hole mud from 2.15 to 1.91. Treat mud for contamination. Barite used for trips.

28th August 1982

POH. Pick up 6" bit. RIH to bottom. Could not circulate 2.15 mud from bottom. Pull up 10 singles. Circulate bottoms up. Work mud back to 1.91. RIH to bottom and circulate bottoms up. Large amount of cement to mud from bottom of hole. Dumped 4m³. Treat mud for rheology.

29th August 1982

Drill cement plug and shoe. Drill 3 meters for formation. Make leak off test. (2.05). Drill ahead to 3843. POH to pick up turbine and diamond bit.

30th August 1982

RIH with turbine and diamond bit. Adding prehydrated Bentonite to mud. Losing mud to firmation periodically. Running riser boost pump.

31st August 1982

Drilling ahead and adding prehydrated Bentonite to system.



DAILY OPERATIONS LOG

1st September 1982

Drilling ahead, adding prehydrated Bentonite to system to increase CFL.
Adding Spersene + XP-20 to control rheology.

2nd September 1982

Drill to 4152m. Wiper trip to shoe. Circulate bottoms up. POH.

3rd September 1982

Continue POH. Test BOP's. RIH. Wash and ream to 4152m. Drill to 4172m.
Add prehydrated Bentonite to system.

4th September 1982

Drill to 4190m. Flow check. Drill to 4217m. Pipe stuck on connection
at 4211m. Spot 8m³ Pipe Lax/Imco-spot pill. Pipe free in one hour. Cir-
culate out pill. POH. Mix 32m³ prehydrated Bentonite.

5th September 1982

Continue POH. RIH with new bit. Wash and ream from 4174m to 4217m. Cir-
culate bottoms up and reduce fluid loss. POH.

6th September 1982

Continue POH. Run logs. Wiper trip. POH. Added prehydrated Bentonite to
system.

7th September 1982

Continue POH. Run RFT tool. Tool failed to seal. RIH with turbine. Drill
to 4223m. POH.



DAILY OPERATIONS LOG

8th September 1982

Drill to 4237m. Flow check. Pipe stuck during flow check, at 4230m. Work pipe free. Drill to 4240m. Lost 20m³ mud due to stuck float in trip tank while filling. Drill to 4243m. Leak in BOP's detected. POH to casing. Displace riser with seawater. Pull top section BOP's.

9th September 1982

Continue repair BOP's. Displace seawater in riser with mud. RIH to 4200m. Ream to 4343m. No fill. Circulated bottoms up.

10th September 1982

POH. Test BOP's. Run logs.

11th September 1982

Continue logging. Logging tool protector sleeve dropped in hole. RIH with 8½" bit to wellhead. POH. RIH with 6" bit and push fish to bottom. Stuck at 4200m. Pull free. Circulate bottoms-up. POH.

12th September 1982

Continue POH. No drag. Run logs. RFT failed to seal.

13th September 1982

Continue logging. RIH to 4243m open-ended. Pipe-sticking. Lay out one single. Circulate. Pipe stuck at 4230m. spot 6m³ Pipe-Lax/Imco-spot pill. Pipe free (14 minutes) Pull two stands. Circulate bottoms-up.



DAILY OPERATIONS LOG

14th September 1982

Pump and displace 3 cement plugs, circulating long way after each. POH. RIH with 6" bit and scrapper. Tag cement at 3836m. Dress off to 3838m. Circulate bottoms up. Treated cement contaminated mud.

15th September 1982

Continue circulating. POH. RIH with gauge ring and junk sub. Close rams. Pump down kill line. Formation breaks down with 800 PSI. RIH with cement retainer. Set at 3820m. Pump and squeeze cement plug. Reverse circulate and POH. Treat cement contaminated mud.

16th September 1982

The 7" liner was perforated and squeezed with cement to isolate the test zone.

17th September 1982

The testing string was run into the hole and tested.

18th September 1982

Finish running test string. P.O.H. for C.B.L.

19th September 1982

Mud was treated for 2 circulations. HP-HT fluid loss was reduced to 25 cc, as per orders. 40 m³ of new volume was built as per orders. Drispac to perforate test zone.

20th September 1982

All testing equipment was rigged up and tested.



DAILY OPERATIONS LOG

21st September 1982

Wait on weather.

22nd September 1982

Finish rigging up to test.

23rd September 1982

The well was tested. Gas was circulated out and well shut in for final build up.

24th September 1982

Well shut in for pressure test.

No mud treatment.

25th September 1982

Testing.

No mud treatment.

26th September 1982

R.I.H. with Schlumberger and perforated at 3758 meters. R.I.H. to 3745 meters. Squeeze cement. Circulate bottoms up. P.O.O.H.

Added Drispac to maintain Y.P. Dumped 8m³ cement contaminated mud.

27th September 1982

R.I.H. with bit and scraper to tag cement. No cement. Circulate bottoms up. P.O.O.H. Ran CBL.



DAILY OPERATIONS LOG

28th September 1982

Ran junk basket and gauge ring to 3750 meters. R.I.H. with Schlumberger.
Perforated 3761-3771 meters. R.I.H. with 3½" tubing.

29th September 1982

Continue running 3½" tubing. Pressure tested lines.
No mud Treatment.

30th September 1982

Wait on daylight. Open D.S.T. tool. Flow well to burner. Close well in.
Reverse circulate. Circulate the long way.

1st October 1982

Continue circulating. Shut well in and observe.

2nd October 1982

Circulate bottoms-up. P.O.H. with tubing. Service drill collars. Lay
down testing assembly.

3rd October 1982

RIH with drill pipe and stinger. Circulate bottoms up. Pump and squeeze
cement. Reverse out. Dump 3m³ cement contaminated mud. P.O.H. R.I.H.
and perforate. R.I.H. and set cement retainer at 3730m. R.I.H. with
drill pipe and stinger.

4th October 1982

Pump and squeeze cement . Reverse out. Circulate long way. Dump 1m³ cement
contaminated mud. P.O.H. Test BOP's. Run CBL log.



DAILY OPERATIONS LOG

5th October 1982

R.I.H. and perforate. R.I.H. and set packer at 3684m. P.O.H. R.I.H. with D.S.T. tool and tubing. Mix 5m³ hi-vis Bentonite and water pill for test.

6th October 1982

Cont. R.I.H. with D.S.T. tool and tubing. Open D.S.T. tool and flow well.

7th October 1982

Cont. flow well. Shut well in. Reverse out. Circulate the long way. Shut well in and observe.

8th October 1982

Cont. observe well. Circulate bottoms up. Flow check. Well flowing. Shut-in. No pressure. Continue circulating. P.O.H. with drill pipe and tag packer at 3684m. Circulate bottoms up.

9th October 1982

Pump and squeeze cement plug. Reverse out. P.O.H. to 2955m. Pump and squeeze cement plug. P.O.H. to 2746m. Reverse out. Dump 2m³ cement contaminated mud. P.O.H. Lay down tubing.

10th October 1982

Cont. laying down tubing. R.I.H. with 8-1/2" bit and casing scraper. Tag cement plu- at 2823m. Pressure test casing. Circulate bottoms up. P.O.H. R.I.H. with gauge ring and junk basket. P.O.H. R.I.H. with open-ended drill pipe. Pump cement plug. Reverse out. Dumped 5m³ cement contaminated mud. P.O.H. laying down drill pipe.



DAILY OPERATIONS LOG

11th October 1982

Cont. laying down drill pipe. R.I.H. and tag cement plug at 2120m. P.O.H. to 910. Pump cement plug. Lay down drill pipe. R.I.H. and tag cement at 987. Lay down drill pipe. Displace riser with seawater. Dump mud in pits. Pull riser.

12th October 1982

Install corrosion cap on well head. Pull anchors.

13th October 1982

Pull anchors.



WELL SUMMARY

STATOIL, 30/2-1

M A T E R I A L C O N S U M P T I O N

B Y I N T E R V A L



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

36" hole section

R.K.B. - 216 meters

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcogel	Metric ton	26	\$ 389.97	\$ 10139.20
Caustic Soda	25 kg/sx	27	\$ 21.41	\$ 578.07
Lime	20 kg/sx	22	\$ 4.35	\$ 95.70
Soda Ash	50 kg/sx	21	\$ 21.73	\$ 456.33

Total cost: \$ 11269.30

Estimated cost: \$ 8921.87

Difference: \$ 2347.43

Meters drilled: 216m

Cost per meter: \$ 52.20



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

12-1/4" pilot hole, open to 26"

216 - 1035 meters

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcogel	Metric ton	39	\$ 389.97	\$ 15208.80
Magcobar	Metric ton	48	\$ 141.96	\$ 6814.08
Caustic Soda	25 kg/sx	78	\$ 21.41	\$ 1669.98
Soda Ash	50 kg/sx	28	\$ 21.73	\$ 608.44
Lime	20 kg/sx	29	\$ 4.35	\$ 126.15
Total cost:				\$ 24427.50
Estimated cost:				\$ 42809.18
Difference:				- \$ 18381.68
Meters drilled:				819m
Cost per meter:				\$ 29.80

Less Magcogel was used while preparing hi-viscosity pills.



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

17-1/2" Hole

1020 - 2156 meters

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcobar	Metric ton	824	\$ 141.96	\$ 116975.04
Magcogel	Metric ton	81	\$ 389.97	\$ 31587.57
Caustic Soda	25 kg/sx	282	\$ 21.41	\$ 6037.62
CMC H.V.	25 kg/sx	65	\$ 66.78	\$ 4340.70
CMC L.V.	25 kg/sx	227	\$ 64.24	\$ 14582.48
Gypsum	40 kg/sx	1095	\$ 10.39	\$ 11377.05
Spersene	25 kg/sx	581	\$ 19.56	\$ 11364.36
XP-20	50 lb/sx	95	\$ 31.85	\$ 3025.75
Pipe Lax	55 gal/dr	29	\$ 998.52	\$ 28957.08
Oilfaze	50 lb/sx	55	\$ 57.12	\$ 3141.60
SE-11	55 gal/dr	1	\$ 1082.40	\$ 1082.40
Total cost:				\$ 232471.65
Estimated cost:				\$ 127529.70
Difference:				\$ 104941.95
Less stuck pipe solutions:				\$ 33181.08
Actual drilling cost:				\$ 199290.57
Drilling costs per day:				\$ 9964.52
Cost per meter:				\$ 175.43

The additional cost on this section was due to an increase in density due to higher pore pressures and additional Bentonite used for this. This hole was trouble free during drilling and the Gypsum mud was very easy to control. The dilution rate was high due to solids control equipment being inefficient.



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

12-1/4" hole section.

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Barite	Metric ton	917	\$ 141.96	\$ 130177.32
Bentonite	Metric ton	16	\$ 389.97	\$ 6239.52
Caustic Soda	25 kg/sx	312	\$ 21.41	\$ 6679.92
Spersene	25 kg/sx	840	\$ 19.56	\$ 16430.40
XP-20	50 lb/sx	382	\$ 31.85	\$ 12166.70
Resinex	50 lb/sx	220	\$ 75.54	\$ 16618.80
Soda Ash	50 kg/sx	3	\$ 21.73	\$ 65.19
Sodium Bicarb.	50 kg/sx	8	\$ 25.32	\$ 202.56
Lime	40 kg/sx	9	\$ 8.20	\$ 73.80
Pipe Lax	55 gal/dr	8	\$ 998.52	\$ 7988.16
Imco Spot	(not charged)	82	-	-
Total cost:				\$ 196642.37
Estimated cost:				\$ 162290.94
Difference				\$ 34351.43
Meters drilled:				1345m
Cost per meter:				\$ 146.20

The excess cost was due to the higher density required to overcome pore pressures and the additional days used to drill the well.



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

8-1/2" hole section

3491 - 3836 meters

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcobar	Metric ton	868	\$ 141.96	\$ 123221.28
Magcogel	Metric ton	65	\$ 389.97	\$ 25348.05
Spersene	25 kg/sx	273	\$ 19.56	\$ 5339.88
XP-20	50 lb/sx	136	\$ 31.85	\$ 4331.60
Resinex	50 lb/sx	299	\$ 75.54	\$ 22586.46
Caustic Soda	25 kg/sx	190	\$ 21.41	\$ 4067.90
Pipe Lax	55 gal/dr	12	\$ 998.52	\$ 11982.24
Soda Ash	50 kg/sx	2	\$ 21.73	\$ 43.46
Mica	25 kg/sx	477	\$ 20.54	\$ 9797.58
Nut Plug	25 kg/sx	371	\$ 18.90	\$ 7011.90
Lime	20 kg/sx	2	\$ 4.35	\$ 8.70

Total cost:	\$ 213739.05
Cost per day:	\$ 7370.31
Cost of material used to kill well:	\$ 93617.31
Drilling cost:	\$ 120121.70
Cost per day:	\$ 4142.12
Estimated cost:	\$ 169401.22
Difference:	\$ 44337.83

The additional costs were accumulated during the control of the well kicking. The time consumed to drill the section was also a factor. Without the cost of killing the well the cost was considerably below the estimated cost.



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

6" hole section

3836 - 4243 meters

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcobar	Metric ton	707	\$ 141.96	\$ 100365.72
Magcogel	Metric ton	33	\$ 389.97	\$ 12869.01
Spersene	25 kg/sx	319	\$ 19.56	\$ 6239.64
XP-20	50 lb/sx	145	\$ 31.85	\$ 4618.25
Caustic Soda	25 kg/sx	67	\$ 21.41	\$ 1434.47
Resinex	50 lb/sx	152	\$ 75.54	\$ 11482.08
Pipe Lax	55 gal/dr	6	\$ 998.52	\$ 5991.12
Drispac	50 lb/sx	3	\$ 191.90	\$ 575.70

Total cost: \$ 143575.99

Cost per day: \$ 4631.48

Cost per meter: \$ 352.76

There was no estimate on this section of the well, but stuck pipe increased costs plus the weighting up of the fluid to 2.05 sp.gr. greatly increased the consumption of Barite.



WELL SUMMARY

STATOIL, 30/2-1

MATERIAL COSTS PER INTERVAL

Interval: Testing, plug and abandon

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Barite	Metric ton	226	\$ 141.96	\$ 32082.96
Bentonite	Metric ton	15	\$ 389.97	\$ 5849.55
Spersene	25 kg/sx	32	\$ 19.56	\$ 625.92
XP-20	50 lb/sx	10	\$ 31.85	\$ 318.50
Resinex	50 lb/sx	57	\$ 75.54	\$ 4305.78
Caustic Soda	25 kg/sx	26	\$ 21.41	\$ 556.66
Sodium Bicarb.	50 kg/sx	4	\$ 25.32	\$ 101.28
Drispac	50 lb/sx	8	\$ 191.90	\$ 1535.20
CMC H.V.	25 kg/sx	6	\$ 66.78	\$ 400.68

Total cost for interval: \$ 45776.53



WELL SUMMARY

STATOIL, 30/2-1

TOTAL MATERIALS CONSUMPTION



WELL SUMMARY

TOTAL MATERIAL CONSUMPTION

<u>PRODUCT</u>	<u>UNIT SIZE</u>	<u>UNITS</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
Magcobar	Metric ton	3590	\$ 141.96	\$ 509636.40
Magcogel	M/T	275	\$ 389.97	\$ 107241.75
Caustic Soda	25 kg/sx	982	\$ 21.41	\$ 21024.62
Gypsum	40 kg/sx	1095	\$ 10.39	\$ 11377.05
CMC H.V.	25 kg/sx	71	\$ 66.78	\$ 4741.38
CMC L.V.	25 kg/sx	227	\$ 64.24	\$ 14582.48
Lime	40 kg/sx	9	\$ 8.20	\$ 73.80
Lime	20 kg/sx	53	\$ 4.35	\$ 230.55
Spersene	25 kg/sx	2045	\$ 19.56	\$ 40000.20
XP-20	50 lb/sx	768	\$ 31.85	\$ 24460.80
Resinex	50 lb/sx	728	\$ 75.54	\$ 54993.12
Soda Ash	50 kg/sx	54	\$ 21.73	\$ 1173.42
Drispac	50 lb/sx	11	\$ 191.90	\$ 2110.90
Pipe Lax	55 gal/dr	55	\$ 998.52	\$ 54918.60
Oilfaze	50 lb/sx	55	\$ 57.12	\$ 3141.60
SE-11	55 gal/dr	1	\$ 1082.40	\$ 1082.40
Sodium Bicarb.	50 kg/sx	12	\$ 25.32	\$ 303.84
Mica	25 kg/sx	477	\$ 20.54	\$ 9797.58
Nut Plug	25 kg/sx	371	\$ 18.90	\$ 7011.90
Imco Spot	(not charged)	82	-	-
			Total cost:	<u>\$ 867902.39</u>



WELL SUMMARY

STATOIL, 30/2-1

DAILY MATERIALS

CONSUMPTION

DAILY MATERIALS CONSUMPTION

WELL STATOIL, 30/2-1

PAGE 1

DATE 1982	DEPTH M	BARITE	GEL	CAUSTIC	SODA ASH	LIME	GYP	CMC HV	CMC LV	SPERSENE	XP-20	PIPE LAX	OILPAZE	SE-11	DAILY MUD COST USD	REMARKS
16/5	-		17	12	15	14									7327.46	Building spud mud.
17/5	216		6	9	3	4									2630.40	Spudded in 36" hole.
18/5	216		3	6	3	4									1396.36	Drlg 36" hole. Set & cmt 30" csg.
19/5	216	2	2	6	3	4									1289.71	Drlg cmt with sea-water.
20/5	268	18	9	9	4	1									6352.82	Drlg 12-1/4" hole (pilot)
21/5	748			2	2										86.40	Drlg 12-1/4" hole (pilot)
22/5	1034	11	2	13	6	1									2758.08	Drlg 12-1/4" hole & logging.
23/5	277	17	7	9	3	2									5417.39	Drlg 26" hole.
24/5	750		2	6	2	6									1001.06	Drlg 26" hole.
25/5	1035		10	18	3	9									4424.07	Drlg 26" hole.
26/5	1035		7	15	5	6									3208.79	Running csg & cementing 20"
27/5	1035		2	6	2		60								1574.26	
28/5	1035	20	12	9			260								10412.93	Built gyp mud - Ran riser.
29/5	1104		6	3			110	30							5550.35	Drlg 17 1/2" hole.
30/5	1370		34	9			120	20	30						16034.07	Drlg 17 1/2" hole.
31/5	1495	10	3	11			140		30						8134.02	Drlg 17 1/2" hole.
1/6	1695			20					30						2355.17	Drlg.
2/6	1860	88	16	30			110	15	57						25180.58	Circ. gas 48% out of mud.
																Increased mud weight to 1.27.
3/6	1932	147	5	33			90		50	60					28845.20	Circ. incr. MW to 1.40 Dispersing.
4/6	1932	193		30			30			100					30308.28	" " " 1.52 - Trip -
																RIH with 8 1/2" bit.
5/6	1954	65	4	12			70			40					12553.90	Coring.
6/6	1990						60								623.40	2nd core/circ./Test BOP/Drilling to 2020m.
7/6	2020			5			45			25					1063.60	POOH. Logging.
8/6	2060	22	1	25				30	41						6777.50	Reaming 8 1/2" rathole/Repair Kelly hole/Drilling ahead.
9/6	2125	104		45						130					18270.09	Incr. MW to 1.57, then 1.60.
10/6	2156	66					60		10						10635.16	Circ out gas 8.7% - POOH to log.

DAILY MATERIALS CONSUMPTION

WELL STATOIL, 30/2-1

PAGE 2

DATE 1982	DEPTH M	BARITE	GEL	CAUSTIC	SODA ASH	LIME	GYP	CMC HV	CMC LV	SPERSENE	XP-20	PIPE LAX	OILFAZE	RESINEX	SE-11	S. BICARB	DAILY MUD COST USD	REMARKS
11/6	2156	23		30						125	60						8424.43	Prep. to run 13-3/8" casing.
12/6	2156			10						15	10						826.00	Circ. Csg stuck at 1998m.
13/6	2156	49		10						45	20	10	55	1			22896.54	Csg stuck (Mixing free pipe pills)
14/6	2156	20															2839.20	" " " " " "
15/6	2156											19					27915.36	" " " " " "
16/6	2156																0	Cemented 13-3/8" casing.
17/6	2156																0	Running packer, testing BOP's
18/6	2188	39		5	3					90	45		70	4			14291.41	Drilling 12-1/4" hole.
19/6	2227	125								30	20		10				19724.20	Drlg 12-1/4", Incr. MW to 1.70.
20/6	2357	50								90	45			4			10392.93	Drlg 12-1/4" hole.
21/6	2497	30		7		2				70	40						7068.27	Drlg 12-1/4", Incr. MW to 1.75.
22/6	2600	72		17		6				70	40						13277.49	" " " " " "
23/6	2706	56		17						90	15						10560.08	Drlg 12-1/4" hole.
24/6	2794	35		15						20	10						5999.45	" " " " Reduce D.S.
25/6	2814	30		30						40	20						6320.50	Test BOP. Drill ahead.
26/6	2851	38															5394.48	Drill ahead.
27/6	2930	48	2														7594.02	" " " " "
28/6	2948	17	1	12						45	22						4641.11	Drill and trip.
29/6	3028	11		10						30	15						2366.66	Drill ahead. Add prehydr. gel.
30/6	3115	117		44						80	60		40				24048.76	Drill ahead. CL. increase.
1/7	3204		10														3899.70	Drill ahead. Add prehydr. gel.
2/7	3286	73															10363.08	Drill ahead. CL. up.
3/7	3363	15		30						40	20		80				10234.30	Treat mud.
4/7	3432			45						20	10		10				2428.55	Gas, treat for CL content.
5/7	3501	3		45						20	10		10				2854.43	Raise MW. Gas. High solids.
6/7	3501	81	1	30						20							12922.23	Trip. Wiper trip. Circ.
7/7	3501	19										8					10685.40	Stuck, mix pill free. Run logs.
8/7	3501	15								50							3425.90	Log. Wiper trip. Circulate.
9/7	3501	16			NO MATERIALS USED												0	Run 9-5/8" casing
10/7	3501				NO MATERIALS USED					35							2955.96	Cement 9-5/8, Test seal assem.
11/7	3501				NO MATERIALS USED												0	Test casing & seal assembly.

DAILY MATERIALS CONSUMPTION

WELL STATOIL, 30/2-1

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DATE 1982	DEPTH M	BARITE	GEL	CAUSTIC	SODA ASH	SPERSENE	XP - 20	RESINEX	MICA	NUT PLUG	LIME	PIPE LAX	IMCO SPOT (NO CHARGE)	DAILY MUD COST USD	REMARKS
12/7	3501	27		5										3939.97	Test seal assembly.
13/7	3501		2											779.94	Change sub-sea stack.
14/7	3501				NO MATERIALS USED									0	Prepare sub-sea stack.
15/7	3501				NO MATERIALS USED									0	Test sub-sea stack.
16/7	3501	2	2	1										348.47	Drill cement, test stack.
17/7	3517	7	14					10						6453.30	Drill shoe, leak-off test, Drl.
18/7	3548	7												1749.12	Drill ahead, trip.
19/7	3601	36				15	5	35						8207.11	Drill ahead.
20/7	3630	41		3		15	10	10						7251.89	Drill, raise MW, drill.
21/7	3678	38		3		20	15	55						10452.36	Drill, raise MW, drill.
22/7	3696	25		20					49	42				5777.46	Lost circ. Circ. & pump pills.
23/7	3696				NO ADDITIVES									0	Logging + R.F.T.
24/7	3696	26							51	52				5721.30	RIH to core no. 3
25/7	3710	15	3	10		30	15	40						7599.56	Coring.
26/7	3717	32	3	2										5755.45	Coring - prehydrate Bentonite.
27/7	3735	2												283.92	Coring.
28/7	3758	16												2271.36	Coring. Run sea water.
29/7	3776	40		5		15	7	30						8568.00	Dump sand trap. Build volume.
30/7	3794				NO ADDITIVES									0	Coring.
31/7	3836	120	9	29		15	7	10	67	67				24963.06	Lost circulation.
1/8	3836	63	6	2		18	7	10	40	40				14234.15	Losing circulation.
2/8	3836								50	50				1972.00	Losing circulation.
3/8	3836	23	5	2		20	10	10	120	120				11455.65	Logging.
4/8	3836	36												5110.56	Finish logging. Circ. to run liner.
5/8	3836	44	4	13		35	15	23	100					13038.22	Ream, spot ICM pill, POH, kick.
6/8	3836	51	6	15		30	15	20			2			12492.68	Circulate out gas.
7/8	3836	182	17	20		60	30	21						36609.85	Circulate out gas, stuck pipe.
8/8	3836	23	2	15								4	82	8360.25	Circulate out gas.
9/8	3836			30										642.30	Circulate out gas.
10/8	3836				NO MATERIALS USED									0	Pipe stuck, circ. out gas.
11/8	3836	28										8	118	11963.04	Work stuck pipe.

DAILY MATERIALS CONSUMPTION

WELL STATOIL, 30/2-1

PAGE 4

DATE 1982	DEPTH M	BARITE	GEL	CAUSTIC	SODA ASH	SPERSENE	XP-20	RESINEX	MICA	NUT PLUG	LIME	PIPE LAX	IMCO SPOT (NO CHARGE)	DAILY MUD COST USD	REMARKS
12/8	3836	9	3					25						4336.05	Pipe free, POH to shoe, Circ out gas
13/8	3836	2	2											1063.86	Circ out gas. Spot L.C.M. RIH with 7" liner.
14/8	3836		2											779.94	RIH w/liner, cmt, well flowing.
15/8	3836	110		12										15872.52	Wt up mud to 2.15, circ out gas.
16/8	3836	101												14337.96	Circ out gas, wiper trip.
17/8	3836	60		10		33	5	55						13691.13	Observe well, Drl cmt, Circ out gas.
18/8	3836	7												993.72	Mill on cement. Circ out gas. RIH with 6" bit.
19/8	3836				NO ADDITIVES									0	Looking for leak in casing.
20/8	3836				NO ADDITIVES									0	" " " "
21/8	3836	40												5678.40	Fishing for pump joint (slugs).
22/8	3836	7												993.72	Lay cmt plug, Pull BOP.
23/8	3836		2			10	5							1134.79	Reduce mud wt to 1.95.
24/8														0	Pull BOP stack, clean top pits.
25/8														0	Repair BOP.
26/8														0	Run BOP+Riser, Reduce mud to 1.95
27/8	2900	17												4358.07	Treat mud in hole. Reduce wt to 1.95
28/8	3824	3	3	13		70	35							1595.79	Drill ahead.
29/8	3843	3	3											4791.53	Drill ahead with diamond bit.
30/8	3897	23		5		40	20							7948.09	Drill ahead.
31/8	4001	34	5	5		30	15							16929.38	Drill ahead.
1/9	4108	99	2	15		50	25							6811.13	Drill to 4152m. POH.
2/9	4152	12	4	8		10	5	40						3300.77	Test BOP's. RIH. Drill to 4172m.
3/9	4172	10	2	1		5		13						10959.60	Drl. stuck at 4211m. Spot Pipe
4/9	4217	31	1			40	20	10			4	63			Lax. POH.
5/9	4217			1										1305.59	Log. wiper trip. POH.
6/9	4217	48		1										6835.49	Log. wiper trip. POH.
7/9	4223	24									2	38		5404.08	Log. RIH. Drill to 4223m. POH.
8/9	4243	62	6											11896.74	Drl to 4237. Work stuck pipe free.

DAILY MATERIALS CONSUMPTION

WELL STATOIL, 30/2-1

PAGE 5

DATE	DEPTH M	BARITE	BENTONITE	CAUSTIC	SODA ASH	LIME	GYP	CMC HV	CMC LV	SPERSENE	XP-20	PIPE LAX	OILFAZE	SE-11	DAILY MUD COST	REMARKS
8/9					CONTINUED										11896.74	Drill to 4243m.
9/9					NO MATERIALS ADDED										0	Work on BOP's. RIH. Wiper trip.
10/9	4243	9	3			1		2							2852.76	Circulate.
11/9	4243	5		1		2	7	1							1492.86	POH. Test BOP's. Log.
12/9	4243														0	Log. RIH. Drill fish. Work stuck pipe free. POH.
13/9	4243	2			NO MATERIALS USED										283.92	Log
14/9	3838														81.94	Log, RIH, pipe stuck. Spot pipe lax, POH.
15/9	3820	16		5			6		2						2548.26	Spot cement plugs.
16/9	3834								1						25.32	Cmt.squrize Treat for contamination.
17/9	3797	16	1	3			1								2741.42	perforate, + squeeze cmt. Build 14m new mud.
18/9	3797			NO ADDITIVES											0	Rig to test.
19/9	3797		7	10	5	6	50								6990.10	Condition mud. Build 40m vol.
20/9	3797	74		10	5						6				11260.57	Wt up new mud. CMC-pill- Halliburton.
21/9	3797				NO ADDITIVES										0	Rig to test.
22/9	3797				NO ADDITIVES										0	Rig to test. Test well.
23/9	3797				NO ADDITIVES										0	Ran DST on formation.
24/9	3797				NO ADDITIVES										0	Shut in well for pressure test.
25/9	3797	13													1845.48	Squeezed cmt, 3797m.
26/9	3745	10						3							1995.30	Perforated & squeezed cmt 3745m
27/9	3770	3													425.88	Running CBL.
28/9	3770	2				1									801.35	Running 3 1/2" tubing.
29/9	3730				NO ADDITIVES										0	Pressure testing lines.
30/9	3730					1									21.41	Flow well.
1/10	3730	4						1							759.74	Shut-in well.
2/10	3730	10													1419.60	Circulate POH.
3/10	3730	12													1703.52	Set cmt plug, Perforate. Set retainer.



WELL SUMMARY

STATOIL, 30/2-1

DAILY MUD PROPERTIES



DAILY MUD PROPERTIES

Well: Statoil, 30/2-1

1982	M	DEPTH	WT	VIS	CORR. 115°F		GELS	pH	FLUID LOSS		CL	ALKALINITY			RETORT			V.G. METER READING @ 115°						Bbl	TOTAL MUD COST						
					PV	YP			100 PSI API	500 PSI 300°F HT-HP		PF	PM	MF	CA ppm	% OIL	% SOL	% WATER	600 R.P.M.	300 R.P.M.	200 R.P.M.	100 R.P.M.	6 R.P.M.			3 R.P.M.					
13/6		2156	1.60	56	19	11	5	15	10.0	7.4	-	13000	.3	1.1	.8	560	0	21	79												246358.25
14/6		2156	1.60	57	21	10	3	24	9.6	6.0	-	13000	.18	.75	2.0	390	1	21	78												249197.45
15/6		2156	1.60	57	21	10	3	24	9.3	6.0	-	13000	.18	.75	2.0	390	1	21	78												277112.81
16/6		2156	1.60	65	24	10	3	26	9.5	5.6	-	13000	.18	.75	2.0	560	3	21	76												277112.81
17/6		2156	1.60	58	23	10	3	26	9.5	5.6	-	13000	.18	.75	2.0	560	3	21	76												277112.81
18/6		2158	1.60	57	24	12	7	44	10.5	6.0	12.5	13000	.5	1.5	1.6	450	3	21	76												291404.22
19/6		2227	1.70	58	23	10	5	38	10.4	6.5	15	13000	.5	2.4	1.8	490	3	24	73												311128.42
20/6		2357	1.70	55	23	9	5	37	10.3	6.5	15	13100	.4	2.3	1.7	480	3	24	73												321521.35
21/6		2497	1.71	59	24	10	5	38	10.0	4.9	16	13200	.4	1.5	1.8	470	3	24	78												328589.62
22/6		2600	1.77	63	25	13	5	41	9.4	4.9	16.5	13200	.3	1.4	1.7	420	3	26	71												341867.11
23/6		2706	1.77	63	26	13	5	41	9.6	4.9	17	13300	.2	1.4	1.8	390	2.5	26	71												352427.19
24/6		2794	1.77	65	27	13	6	42	9.8	4.6	17	13300	.3	1.6	1.6	360	2	27	71												358426.64
25/6		2814	1.77	61	29	13	7	38	10.5	6.8	20	13500	.6	2.8	2.2	360	2	26	72												364747.14
26/6		2851	1.77	56	20	12	4	28	9.5	6.2	16	13500	.5	2.3	1.9	380	1.5	26	71												370141.62
27/6		2930	1.77	54	26	12	4	32	9.6	6.6	16.2	13500	.2	1.4	2.0	380	1	26	73												377735.64
28/6		2948	1.77	55	26	15	4	41	9.8	6.8	16.8	13500	.2	1.8	2.1	360	1	26	73												382376.75
29/6		3028	1.77	57	26	13	4	40	9.6	6.8	16.6	13500	.3	1.9	2.2	340	.5	26	73												384743.41
30/6		3115	1.80	48	25	17	4	34	9.9	8.0	17.6	17200	.4	2.5	2.2	450	.5	27	72												408792.17
1/7		3204	1.80	49	26	14	4	44	8.9	8.9	20	18000	.2	2.0	1.8	460	.5	28	72												412691.87
2/7		3286	1.80	59	25	18	5	48	9.4	10.2	36	20000	.15	1.4	2.2	500	.5	29	70												423054.95
3/7		3363	1.80	54	27	15	5	45	9.2	7.4	22	20000	.15	1.7	1.9	500	TR	28	72												433289.25
4/7		3432	1.80	52	25	15	4	34	9.2	6.6	16	21000	.2	2.0	1.9	500	TR	28	72												435717.80
5/7		3501.82	1.80	82	52	26	18	5	44	9.8	6.2	15	23000	.4	2.6	1.8	490	-	30	70											438572.23
6/7		3501	1.82	47	24	16	4	48	10.0	6.2	14.4	23000	.4	2.8	1.6	480	-	29	71												451494.46
7/7		3501	1.82	50	24	15	4	47	9.7	6.2	14.0	21000	.3	2.5	1.6	480	-	29	71												462179.86
8/7		3501	1.82	48	23	10	4	32	10.2	5.6	14.0	21000	.6	2.6	2.0	380	TR	30	70												465605.76
9/7		3501	1.82	62	24	12	5	34	10.0	5.8	14.0	21000	.5	2.6	2.0	380	TR	30	70												465605.76
10/7		3501	1.82	58	24	12	5	38	9.6	4.8	13.5	21000	.15	1.4	1.0	360	TR	30	70												468561.72

DATE SPUD: 17th May 1982

DATE I.D.:

COST:



DAILY MUD PROPERTIES

Well: Statoil, 30/2-1

1982	M	DATE	DEPTH	S.G.		VIS		CORR.		GELS	PH	FLUID LOSS		ALKALINITY		RETORT			V.G. METER READING @ 115°							Bbl	\$
				WT.	WT.	SEC	PV	YP	115°F			0	10	100 PSI API	500 PSI 300°F HT-HP	CA	PF	PM	MF	% OIL	% SOL	% WATER	300 R.P.M.	200 R.P.M.	100 R.P.M.		
8/8		3836	1.91	50	29	13	10	34	9.8	5.8	16	17000	2.8	1.3	-	240	0	31	69	71	42	36	25	7	4	27.5	671673.43
9/8		3836	1.91	55	25	11	5	29	10.8	5.4	16	17000	.92	3.2	-	320	0	31	69	61	36	27	18	5	3	27.5	672315.73
10/8		3836	1.91	61	24	12	6	32	10.5	5.6	-	18000	.87	3.35	4.87	200	0	31	69	60	36	31	21	6	5	27.5	672315.73
11/8		3836	1.91	59	27	10	3	30	11.0	6.0	18	16000	.95	3.5	3.7	200	1	30	69	64	37	27	16	4	3	20.0	684278.77
12/8		3836	1.91	61	31	7	4	14	11.5	6.6	18.5	16000	1.2	3.5	3.1	160	6	26	68	69	38	26	14	4	3	27.5	688614.82
13/8		3836	1.91	66	36	6	5	24	11.0	4.6	16	17000	.75	3.0	4.15	200	4	31	65	78	42	30	12	4	3	30.0	689678.68
14/8		3836	1.91	80	40	8	4	32	10.5	6.6	17	16000	.55	3.75	3.54	160	3	31	66	88	48	34	19	4	3	30.0	690458.62
15/8		3836	1.91	100	47	10	7	54	11.0	6.8	22	18000	1.0	3.6	3.5	160	4	32	64	104	57	44	25	8	5	30.0	706331.14
16/8		3836	2.15	75	44	13	14	86	12.5	13.2	24.5	18000	.68	8.0	3.2	240	2	38	60	101	57	43	24	8	5	21.25	720669.10
17/8		3836	2.15	94	56	9	23	73	11.5	8.0	17	19000	2.0	5.2	3.8	280	5	38	57	138	79	56	33	13	10	22.5	734360.23
18/8		3836	2.15	84	50	13	17	73	12.0	10.0	19.5	17000	1.9	8.4	3.9	200	3	38	59	113	63	47	29	8	6	21.25	735353.95
19/8		3836	2.15	85	44	22	17	70	12.0	10.6	20	19000	1.9	7.2	2.7	320	3	38	59	108	64	48	38	9	6	21.0	735353.95
20/8		3836	2.15	86	44	20	17	70	11.4	10.6	20	19000	1.9	7.0	2.6	320	3	38	59	108	64	45	35	8	6	21.0	735353.95
21/8		3836	2.15	79	45	18	16	64	11.6	10.4	20	19000	1.7	6.9	2.6	320	3	38	59	108	63	42	14	8	6	20.0	741032.35
22/8		3836	2.15	73	44	16	14	62	11.4	10.4	-	19000	1.8	6.9	2.7	320	3	38	59	104	60	40	14	8	6	20.0	742026.09
23/8		3836	1.95	53	26	12	5	26	11.0	12.6	-	19000	0.6	4.3	2.9	380	2	34	64	64	38	28	18	11	5	27.5	743160.86
24/8		3836	1.95	53	26	12	5	26	11.0	12.6	-	19000	0.6	4.3	2.9	380	2	34	64	64	38	28	18	11	5	27.5	743160.86
25/8		3836	1.91	50	25	11	5	24	10.8	12.8	-	19000	0.5	4.0	2.3	380	2	31	67	64	-	-	-	-	-	25.0	743160.86
26/8		3836	1.91	50	25	11	5	24	10.8	12.8	-	19000	0.5	4.0	2.3	380	2	31	67	-	-	-	-	-	-	25.0	743160.86
27/8		2900	1.91	52	27	14	12	48	10.6	13.2	27	19000	1.4	6.0	3.8	420	2	32	66	68	41	31	20	9	7	24.0	746745.78
28/8		3824	1.91	46	30	8	4	28	11.6	13.2	28	20000	1.3	6.8	3.6	450	2	32	66	68	38	28	18	4	3	25.0	751103.85
29/8		3843	1.91	46	24	9	5	38	11.0	12.2	26	20000	1.0	6.0	2.9	420	2	32	66	57	33	22	13	4	3	27.5	752699.64
30/8		3897	1.91	47	26	8	6	34	11.0	11.6	28	20000	1.0	5.2	3.2	400	2	31	67	60	34	24	14	3	2	27.5	757491.17
31/8		4001	1.91	52	27	9	6	47	11.0	13.0	29	20000	0.7	4.8	3.5	360	2	31	67	63	36	25	15	4	3	24.0	765439.26
1/9		4108	1.91	57	27	10	8	48	11.0	11.2	-	19000	0.4	4.0	2.5	350	2	31	67	64	37	27	15	4	3	25.0	782368.64
2/9		4152	1.91	58	28	6	3	26	11.2	8.8	18.5	19000	1.0	4.4	5.15	320	1	31	68	62	34	24	14	3	2	25.0	789179.77
3/9		4172	1.91	57	30	8	4	29	10.9	9.0	20	19000	0.8	3.0	4.8	320	1	31	68	68	38	26	16	4	2	25.0	792480.54
4/9		4217	1.91	59	30	9	7	32	10.9	9.8	22	17000	.62	3.5	1.34	320	1	31	68	69	39	28	15	4	2	25.0	803440.14

COST:

DATE I.D.

DATE SPUD:

17th May 1982



DAILY MUD PROPERTIES

Well: STATOIL, 30/2-1

PAGE 5

1982	M	DEPTH	WT	VIS		CORR 115°F		GELS	pH	FLUID LOSS		Cl	ALKALINITY			RETORT			V.G. METER READING @ 115°						Bbl	\$ TOTAL MUD COST
				SEC	PV	YP	100 PSI API			500 PSI 300°F HT-HP	PF		PM	MF	CA dpm	% OIL	% SOL	% WATER	600 R.P.M.	300 R.P.M.	200 R.P.M.	100 R.P.M.	6 R.P.M.	3 R.P.M.		
5/9	4217	1.91	65	33	9	7	42	1.0	8.8	21	17000	1.2	3.25	4.6	320	1	31	68	75	42	30	19	4	3	25.0	804745.73
6/9	4217	1.91	63	30	10	5	38	1.2	9.0	25	16000	0.8	4.2	4.0	440	1	31	68	70	40	29	18	4	3	31.25	811581.22
7/9	4223	1.91	64	33	9	4	34	1.1	8.0	30.5	18000	.75	3.1	2.8	400	1	31	68	75	42	31	18	4	3	25.0	816985.30
8/9	4243	1.91	58	29	9	6	34	1.2	9.8	24	16000	.65	3.6	3.15	320	1	31	68	67	38	28	17	3	2	25.0	828882.04
9/9	4243	1.91	75	36	13	7	52	1.0	8.4	22	15000	0.4	2.5	2.2	400	1	31	68	85	49	37	23	5	3	25.0	828882.04
10/9	4243	1.91	71	34	11	8	42	1.1	8.8	22	18000	0.6	2.8	2.4	320	1	31	68	84	48	36	23	5	4	25.0	831734.80
11/9	4243	1.91	78	36	10	5	34	1.1	8.6	22.5	18000	.75	2.4	2.15	360	1	31	68	82	46	35	21	4	3	25.0	833227.66
12/9	4243	1.91	75	37	9	6	38	1.0	8.4	22	18000	0.6	2.4	2.2	380	1	31	68	83	46	34	21	5	4	25.0	833227.66
13/9	4243	1.91	62	33	9	5	33	1.1	10.8	31	17000	.65	3.0	2.65	410	2	31	67	75	42	30	19	4	3	25.0	833511.58
14/9	3838	1.91	68	37	12	6	43	1.4	11.6	44	18000	1.4	4.5	3.8	320	2	30	68	86	49	37	23	5	4	22.5	833593.52
15/9	3820	1.91	68	32	12	7	44	1.4	11.0	42	18000	0.8	4.2	3.3	360	2	30	68	76	44	34	21	5	4	22.5	836141.78
16/9	3834	1.91	64	35	13	10	52	1.0	10.1	40	18000	0.7	4.0	3.2	360	2	30	68	83	48	35	22	5	4	20.5	836167.10
17/9	3797	1.91	60	34	11	8	48	1.0	10.2	41	18000	0.6	4.0	3.0	360	2	30	68	80	46	34	22	4	3	20.0	838908.52
18/9	3797	1.91	60	34	12	4	50	1.0	10.1	41	18000	0.6	3.8	3.0	360	2	30	68	80	46	35	24	5	4	20.0	838908.52
19/9	3797	1.91	54	26	11	11	38	1.0	9.8	26	18000	1.1	4.4	3.4	350	2	30	68	63	37	25	17	3	2	21.0	845899.62
20/9	3797	1.91	52	26	11	11	40	1.0	9.8	26	18000	1.0	4.5	3.4	350	2	30	68	63	37	25	17	3	2	21.0	857159.19
21/9	3797	1.91	54	27	12	11	42	1.0	8.5	26	18000	0.8	4.0	3.2	350	2	30	68	63	37	25	17	3	2	21.0	857159.19
22/9	3797	1.91	55	26	12	12	44	1.0	8.5	26	18000	0.8	4.0	3.2	350	2	30	68	64	38	26	18	4	3	21.0	857159.19
23/9	3797	1.91	55	34	12	14	54	1.0	8.6	27	18000	0.6	3.8	2.8	350	2	30	68	64	38	26	18	4	3	21.0	857159.19
24/9	3797	1.91	55	34	12	14	54	1.0	8.6	26	18000	0.6	3.8	2.8	350	2	30	68	64	38	26	18	4	3	21.0	857159.19
25/9	3797	1.91	52	31	11	10	48	1.0	9.6	27.5	18000	0.8	3.8	2.9	360	2	30	68	-	-	-	-	-	-	-	859004.67
26/9	3745	1.91	58	32	10	10	47	1.0	9.8	28	18000	0.8	3.8	2.9	360	2	30	68	-	-	-	-	-	-	-	860999.97
27/9	3770	1.91	60	32	12	11	46	1.0	9.9	28	18000	0.7	3.9	2.8	370	2	30	68	-	-	-	-	-	-	-	861425.85
28/9	3770	1.91	60	32	12	11	46	1.0	9.9	28	18000	0.7	3.9	2.8	-	2	30	68	-	-	-	-	-	-	-	862227.20
29/9	3770	1.91	61	32	11	11	48	1.0	9.5	28	18000	0.8	3.5	2.7	370	2	30	68	-	-	-	-	-	-	-	862227.20
30/9	3730	1.91	56	28	10	8	47	1.0	10.0	30	18000	0.6	3.1	2.6	400	2	30	68	66	38	26	18	3	2	20.0	862248.61
1/10	3730	1.91	61	31	12	11	52	1.0	10.0	30	18000	0.5	3.0	2.8	380	2	30	68	74	43	32	21	5	4	20.0	863008.35
2/10	3730	1.91	55	28	9	8	46	1.1	10.4	32	17000	0.4	2.9	2.7	400	2	30	68	65	37	28	18	4	3	20.0	864427.95

COST

DATE D.

DATE SPUD

17th May 1982



WELL SUMMARY

STATOIL, 30/2-1

M U D V O L U M E D A T A



DRESSER NORWAY A.S.

MUD VOLUME DATA

COMPANY: STATOIL

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RIG: DYVI DELTA

WELL: 30/2-1

DATE	HOLE SIZE INCHES	DEPTH METERS	MUD WT.	VISC.	BBL'S OF HOLE DRLD	1. HOLE VOLUME	2. ACTIVE PIT VOL.	1+2-3. TOTAL CIRC.	5. VOLUME ADDED	6. MUD LOSSES			7. CUM. LOSS	8. MUD IN STORAGE	3+8. TOTAL VOL.	DAILY COST US \$	TOTAL COST US \$
										DUMP	HOLE LOSS	TOTAL LOSS					
1982	36"	-	1.03	100+									1020	1020	7327.46	7327.46	
16/5	36"	216	1.03	100+					750			828	942	942	2630.40	9957.86	
17/5	36"	216	1.03	100+					700			642	1000	1000	1396.36	11354.22	
18/5	12-1/4"	216	1.06	100+					700			1470	1700	1700	1289.71	12643.93	
19/5	pilot	268	1.06	100+		341	1010	1351	800	188		1658	961	2312	6352.82	18996.75	
20/5	"	748	1.06	40		489	1048	1529	300 bbls seawater	118		1776	965	2494	86.40	19053.15	
21/5	12-1/4"	1034	1.06	39		682	1103	1785	868	759		2535	818	2603	2758.08	21811.23	
22/5	26"	277	DRLG WITH SEA WATER			(LOSSES MUD LEFT IN HOLE AND WHEN RISER LIFTED)			954	559	600	3894	2198	2198	5417.39	27228.62	
23/5	26"	750	1.05	104					520			5033	1578	1578	1001.06	28229.68	
24/5	26"	976	1.05	101		"	"		2101			6464	2248	2248	4424.07	32653.75	
25/5	26"	1035	1.05	44		"	"		1800			9844	668	668	3208.79	35862.54	
26/5	17-1/2"	1035	1.10	40								9844	668	668	1574.26	37436.80	
27/5	17-1/2"	1035	1.10	42		154	88	242	180				170	412	10412.93	47849.73	
28/5	17-1/2"	1104	1.10	33		193	72	265	-			29	106	371	5550.35	53400.08	
29/5	17-1/2"	1370	1.10	38		230	68	298	260			159	154	452	16034.07	69434.15	
30/5	17-1/2"	1495	1.11	43		249	85	334	35			25	108	442	8134.02	77568.17	
31/5	17-1/2"	1695	1.11	41		279	75	354	-			-	88	442	2355.40	79923.57	
1/6	17-1/2"	1860	1.27	65		304	69	373	140			85	129	502	25180.58	105104.15	
2/6	17-1/2"	1932	1.40	52		311	68	379	135			138	115	494	28845.20	133949.35	
3/6	17-1/2"	1932	1.52	56		313	72	385	95			78	126	511	30308.28	164257.63	
4/6	17-1/2"	1954	1.52	52		314	81	395	80			36	160	555	12553.90	176811.53	
5/6	8 1/2" core	1990	1.52	68		315	71	386	-			18	151	537	623.40	177434.93	
6/6	8 1/2"	2020	1.52	65		326	74	400	10			-	147	547	1063.60	178498.53	
7/6	17-1/2"	2060	1.52	58		331	95	426	30			32	119	545	6777.50	185306.03	
8/6	17-1/2"	2125	1.60	60		340	85	425	65			45	140	565	18270.09	203576.12	
9/6	17-1/2"	2156	1.60	64		357	97	454	20			1	117	571	10635.16	214211.28	



DRESSER NORWAY A.S.

MUD VOLUME DATA

COMPANY: STATOIL

WELL: 30/2-1

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IG: DYVI DELTA

DATE	HOLE SIZE INCHES	DEPTH METERS	MUD WT.	VISC.	BBL'S OF HOLE DRLD	1. HOLE VOLUME	2. ACTIVE PIT VOL.	1+2=3. TOTAL CIRC.	5. VOLUME ADDED	6. MUD LOSSES			7. CUM. LOSS	8. MUD IN STORAGE	3+8. TOTAL VOL.	DAILY COST US \$	TOTAL COST US \$
										DUMP	HOLE	TOTAL LOSS					
1982																	
11/6	17-1/2	2156	1.60	60		357	158	515	Oilfaze 51			648	117	632	8424.43	222635.71	
12/6	17-1/2	2156	1.60	62		330	182	512	Oilfaze 16			29	107	619	826.00	223461.71	
13/6	17-1/2	2156	1.60	54		330	188	518	Oilfaze 16 5 s./water			122	108	640	22896.54	246358.25	
14/6	17-1/2	2156	1.60	57		330	302	532	Imco spot 14			108	108	640	2839.20	249197.45	
15/6	17-1/2	2156	1.60	57		330	173	503	Imco spot 25	3		20	142	645	27915.36	277112.81	
16/6	17-1/2	2156	1.60	65		166	178	344		129m left behind casing.		826	172	516	0	277112.81	
17/6	12-1/4	2156	1.60	58		185	174	359		14		840	143	502	0	277112.81	
18/6	12-1/4	2180	1.60	57		185	187	372	24	9		849	145	517	14291.41	291404.22	
19/6	12-1/4	2227	1.70	60		189	180	369	seawater	8		857	145	509	19724.20	311128.42	
20/6	12-1/4	2357	1.70	55		195	173	368	seawater 22	5		862	155	526	10392.93	321521.35	
21/6	12-1/4	2497	1.70	56		208	179	387	seawater 15	9		871	145	532	7068.27	328589.62	
22/6	12-1/4	2600	1.77	63		218	173	391	seawater 28m3	24		895	145	536	13277.49	341867.11	
23/6	12-1/4	2706	1.77	63		226	174	400	seawater 15m3	10		915	131	531	10560.08	352427.19	
24/6	12-1/4	2794	1.77	65		238	170	408	26m3			947	121	529	5999.45	358426.64	
25/6	12-1/4	2814	1.77	61		215	120	335	35	40		987	125	460	6320.50	364747.14	
26/6	12-1/4	2851	1.77	56		218	110	328	12			1000	90	418	5394.48	370141.62	
27/6	12-1/4	2930	1.77	54		220	127	347	23			1003	152	499	7594.02	377735.64	
28/6	12-1/4	2948	1.77	55		245	145	390	25			1012	104	494	4641.11	382376.75	
29/6	12-1/4	3028	1.77	57		255	130	385	15			1018	142	527	2366.66	384743.41	
30/6	12-1/4	3115	1.80	48		262	166	428	40			1035	124	552	24048.76	408792.17	
1/7	12-1/4	3204	1.80	49		222	160	382	26			1051	132	514	3899.70	412691.87	
2/7	12-1/4	3286	1.80	59		225	164	389	26			1068	126	515	10363.08	423054.95	
3/7	12-1/4	3363	1.80	54		230	166	396	16			1077	145	541	10234.30	433289.25	
4/7	12-1/4	3432	1.80	52		226	160	386	16			1097	142	528	2428.55	435717.80	
5/7	12-1/4	3501	1.82	52		231	158	389	8			1209	145	534	2854.43	438572.23	
6/7	12-1/4	3501	1.82	47		231	180	411	24			1211	100	511	12922.23	451494.46	



DRESSER NORWAY A.S.

MUD VOLUME DATA

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RIG: DYVI DELTA

WELL: 30/2-1

DATE	HOLE SIZE INCHES	DEPTH METERS	MUD WT.	VISC.	BBL'S OF HOLE DRLD	1. HOLE VOLUME	2. ACTIVE PIT VOL VOL.	1+2=3. TOTAL CIRC.	6. MUD LOSSES			5. VOLUME ADDED	7. CUM. LOSS	8. MUD IN STORAGE VOL.	3+8. TOTAL VOL.	DAILY COST US \$	TOTAL COST US \$
									DUMP	HOLE	TOTAL LOSS						
7/7	12-1/4	3501	1.82	50		287	136	423			14	16	100	523	10685.40	462179.86	
8/7	12-1/4	3501	1.82	48		287	136	423			0	0	100	523	3425.90	465605.76	
9/7	Run csg 9-5/8	3501	1.82	62		246	135	381			0	2	160	541	0	465605.76	
10/7	Cmt csg 9-5/8"	3501	1.82	58		149	179	328		51	0	51	133	461	2955.96	468561.72	
11/7	9-5/8	3501	1.82	73		123	196	319		2	0	2	140	459	0	468561.72	
12/7	9-5/8	3501	1.82	48		120	190	310		4	2	4	147	457	3939.97	472501.69	
13/7	9-5/8	3501	1.82	52		120	190	310			0	0	147	457	779.94	473281.63	
14/7	9-5/8	3501	1.82	51		120	190	310			0	0	147	457	0	473281.63	
15/7	9-5/8	3501	1.82	50		120	190	310			0	0	147	457	0	473281.63	
16/7	8-1/2	3501	1.82	48		124	150	274		33	0	33	150	424	348.47	473630.10	
17/7	8-1/2	3517	1.82	60		124	158	282		1	0	1	141	423	6453.30	480083.40	
18/7	8-1/2	3548	1.82	61		141	140	281		1	2	1	141	422	1749.12	481832.52	
19/7	8-1/2	3601	1.82	58		127	175	302		2	27	2	145	447	8207.11	490039.63	
20/7	8-1/2	3630	1.85	60		131	178	309		0	8	0	146	455	7251.89	497291.52	
21/7	8-1/2	3678	1.89	58		132	174	306		41	15	41	123	429	10452.36	507743.88	
22/7	8-1/2	3696	1.91	55		148	136	284			11	18	101	385	5777.46	513521.54	
23/7	8-1/2	3696	1.91	52		148	136	284			12	12	89	373	0	513521.34	
24/7	8-1/2	3696	1.91	57		148	136	284			0	0	89	373	5721.30	519242.64	
25/7	8-1/2	3710	1.91	47		149	158	307			34	11	89	396	7599.56	526842.20	
26/7	8-1/2	3717	1.91	51		149	160	309			6	2	125	434	5755.45	532597.65	
27/7	8-1/2	3735	1.91	54		149	158	307			4	1	125	432	283.92	532881.57	
28/7	8-1/2	3758	1.91	55		150	169	319			6	1	121	440	2271.36	534869.01	
29/7	8-1/2	3776	1.91	48		151	170	321			17	10	112	433	8568.00	543437.01	
30/7	8-1/2	3794	1.91	53		150	150	300			2	4	105	405	0	543437.01	
31/7	8-1/2	3836	1.91	44		155	159	314			58	44	131	445	24963.06	568400.07	
1/8	8-1/2	3836	1.91	46		155	184	339			53	28	122	461	14234.15	582634.22	



DRESSER NORWAY A.S.

MUD VOLUME DATA

COMPANY: STATOIL

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SIG: DYVI DELTA

DATE	HOLE SIZE INCHES	DEPTH METERS	MUD WT.	VISC.	BBL'S OF HOLE DRLLD	1. HOLE VOLUME	2. ACTIVE PIT VOL.	1+2=3. TOTAL CIRC.	6. MUD LOSSES			7. CUM. LOSS	8. MUD IN STORAGE	3+8. TOTAL VOL.	DAILY COST US \$	TOTAL COST US \$
									DUMP	HOLE LOSS	TOTAL LOSS					
1982																
2/8	8-1/2	3836	1.91	45		155	179	334	29		34	1516	89	423	1972.00	584606.22
3/8	8-1/2	3836	1.91	44		155	183	338	4		0	1516	124	462	11455.65	596061.87
4/8	8-1/2	3836	1.91	49		155	178	333	0		15	1531	126	459	5110.56	601172.43
5/8	8-1/2	3836	1.91	48		155	168	323	38	68	68	1599	106	429	13038.22	614210.65
6/8	8-1/2	3836	1.91	45		155	189	344	38/37	0	0	1599	160	504	12492.68	626703.33
7/8	8-1/2	3836	1.91	47		155	179	334	76	90	0	1689	156	490	36609.85	663313.18
8/8	8-1/2	3836	1.91	50		155	176	331	13	3	3	1692	169	550	8360.75	671673.43
9/8	8-1/2	3836	1.91	55		155	179	334	3	0	0	1692	169	503	642.30	672315.73
10/8	8-1/2	3836	1.91	61		155	190	345	13	76	76	1768	82	427	0	672315.73
11/8	8-1/2	3836	1.91	59		155	188	343	27	0	0	1768	111	454	11963.04	684278.77
12/8	8-1/2	3836	1.91	61		155	165	320	0	4	4	1772	130	450	4336.05	688614.82
13/8	8-1/2	3836	1.91	66		140	163	303	0	11	11	1783	136	439	1063.86	689678.68
14/8	8-1/2	3836	1.91	80		93	172	265	0	31	0	1814	143	408	779.94	690458.62
15/8	8-1/2	3836	1.91	100		93	144	237	26	46	46	1860	151	388	15872.52	706331.14
16/8	8-1/2	3836	2.15	75		106	148	253	15	0	0	1860	150	403	14337.96	720669.10
17/8	8-1/2	3836	2.15	94		102	162	264	31	0	0	1860	170	434	13691.13	734360.23
18/8	8-1/2	3836	2.15	84		121	126	247	0	0	25	1885	162	409	993.72	735353.95
19/8	8-1/2	3836	2.15	85		121	124	245	0	0	2	1887	162	407	0	735353.95
20/8	8-1/2	3836	2.15	86		121	120	241	0	0	4	1891	162	403	0	735353.95
21/8	8-1/2	3836	2.15	79		121	120	241	2	0	20	1911	144	385	5678.40	741032.35
22/8	8-1/2	3836	2.15	73		121	123	244	1	0	1	1912	144	388	993.72	742026.07
23/8	8-1/2	3836	1.95	53		107	94	201	32	0	42	1954	151	352	1134.79	743160.86
24/8	8-1/2	3836	1.95	52		107	84	191	0	0	0	1954	151	342	0	743160.86
25/8	8-1/2	3836	1.95	52		107	84	191	0	0	0	1954	751	342	0	743160.86
26/8	8-1/2	3836	1.91	50		107	96	203	12	0	0	1954	751	354	0	743160.86
27/8	8-1/2	3836	1.91	52		136	100	236	35	8	0				3589.92	746745.78

