

Denne rapport
tilhører



UND DOK.SENTER

L.NR. 30082420021

KODE Well 15/9-12 nr.39

Returneres etter bruk

POST - WELL AUDIT

STATOIL

15/9-12. TESTING PROGRAM

MIND RECAP

REENTRY

DEEPSEA SAGA

**Norsk Petroleum
Services AIS**

MUD-RECAP

POST - WELL AUDIT

COMPANY: STATOIL

WELL NAME: 15/9-12 ^{REENTRY} ~~TESTING PROGRAM~~

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA

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- I. Cost summary
- II. Interval discussion
- III. Material consumption
- IV. Mud property recap
- V. Daily operations log

OIL COMPANY :	Statoil
CONTRACTOR	: ODCC
RIG	: Deep Sea Saga
WELL NAME/No.	: 15/9-12
LOCATION/BLOCK No.	: 15/9
ENGINEERS	: Craddock, Pomerleau, Tattersfield
T.D.	:
TOTAL DEVIATION	:

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OPERATING AREA

COST SUMMARY

OPERATOR	: Statoil
BLOCK No./LOCATION	: 15/9
WELL NAME/No.	: 12
TOTAL DEPTH	: Testing program
DEVIATION	:
SPUD DATE	:
DATE T.D. REACHED	:
TOTAL DRILLING DAYS	:
Cost Of Mud Materials Used On Well	: \$ 62.762.66
Cost Of Mud Materials Used For Drilling	:
MUD COST/Ft	:
MUD COST/DAY	:
MUD COST/ROTATING HOUR	:
DAYS ENGINEERING SERVICE	: 32
Cost Of Mud Materials & Engineering Service	: 76.552.66
END OF WELL INVENTORY ADJUSTMENT	:
Engineering Days Not Included In Total Cost	:

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OPERATING AREA :Statoil 15/9.12

INTERVAL DISCUSSION

TESTING PROGRAM DISCUSSION:

The Deep Sea Saga moved on to the location and re-entered the 15/9-12 and 180 meters of fill was found above the cement plug at 2605 meters. The mud also required additions biocide to kill the bacteria in the mud. Two zones were tested and the well abandonment program was carried out. The Deep Sea Saga then moved to location 15/9-14.

RECOMMENDATIONS:

On further temporary abandonments, it is recommended that a biocide be added to the mud to prevent bacteria growth and that the yield point be raised to prevent solids settling.

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OPERATING AREA : Statoil 15/9-12

MATERIALS USED PER CASING INTERVAL

<u>MATERIAL</u>	<u>UNIT</u>	<u>UNIT COST \$</u>	<u>QTY.</u>	<u>COST \$</u>
Aquagel	M/T	305,60	16 mt	4,889,60
Aquagel	1001b	15,20	50 sx	760,00
Baroid	M/T	122,50	146 mt	17,885,00
Baroid	50kg	6,90	72 sx	496,80
Caustic Soda	25kg	17,20	11 sx	189,20
CC-16	501b	21,50	70 sx	1,505,00
CMC	25kg	56,00	62 sx	3,472,00
Dextrid	501b	52,00	230 sx	11,960,00
HPD Polymer	25kg	68,00	1 sx	68,00
Lime	40kg	9,12	3 sx	27,36
Q-Broxin	25kg	19,68	85 sx	1,672,80
Soda Ash	50kg	20,50	9sx	184,50
Sod. Bicard	50kg	21,50	114 sx	2,451,00
Surflo B-21	50kg	386,00	14 dr	5,404,00
Surflo W-300	55gal	658,20	1 dr	658,20
XC Polymer	501b	314,80	14 sx	4.407.20
Total cost				<u>62.762.66</u>

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spcf/ SG	VISC- OSITY secs	FILTRATE		HY/HP filt ° 500psi 1"/mm ccs	pH	RHEOLOGY				FILTRATE ANALYSIS				RETORT ANALYSIS				CEC	OTHER								
				cake 1"/mm ccs	32"/mm ccs			PV cp	YP lbs/100ft ² -gms/cm ²	10" 100	10' 100	Ca x100 mg/litre	Pf	Mf	Pm	Oil %	Water %	Coef. Solids %	PPB		Bent. Eq.	Sand							
1982 Mar 28	PIT	1.33	48	3.2	1	12	3	8.5	20	11	4	10	9.2	300	0.5	3.2					88	12	15	15	1/2				
29	216	1.31	40	3.5	1	14	2	9.0	13	9	2	11	11.5	280	0.6	2.8					80	14	15	15	1/2				
30	390	1.32	45	7.2	1	22	5	11.5	15	14	1	10	10.0	480	1.2	1.65					90	10	15	15	1/2				
OUT	392	1.31	45	8.2	1	24	5	12.0	14	16	1	9	9.0	400	1.1	1.5					90	10	15	15	1/2				
31	PIT	1.31	40	7.2	2	24	5	10.5	15	6	1	5	9.0	40	0.7	1.7					88	12	15	15	1/2				
1. Apr.	PIT	1.32	40	4.7	1	18.3	4	11.0	10	4	1	13	10.5	60	1.1	2.3					89	11	17	17	1/2				
2.	2607	1.32	40	6.8	1	19.6	5	10.6	10	5	1	12	11.0	60	1.6	3.5					89	11	17	17	1/2				
OUT	2612	1.32	44	7.2	1	19.8	5	10.6	10	6	1	18	11.0	60	1.7	3.6					89	11	17	17	1/2				
3	PIT	1.33	48	8.2	2	25.8	5	10.7	11	6	2	24	11.5	50	2.4	4.9					88	12	17	17	1/2				
4	PIT	1.32	46	4.4	1	13.6	4	10.6	17	7	1	20	11.5	60	1.7	3.6					89	11	17	17	1/2				
5	PIT	1.32	44	5.5	1	15.6	4	10.5	11	6	1	18	12.0	75	1.7	3.5					89	11	16.5	16.5	1/2				
6	PIT	1.31+	45	6.0	1	16.2	4	10.5	14	6	1	13	12.0	70	1.8	3.8					89	11	16.5	16.5	1/2				
7	PIT	1.32	51	5.0	1	16.0	4	10.0	15	7	1	17	12.5	65	1.3	3.1					89	11	16	16	1/2				
8	PIT	1.32	58	3.2	1	10.0	4	10.2	20	14	2	28	11.0	40	1.0	2.8					88	12	17.5	17.5	1/4				
9	3600	1.32	65	3.4	1	9.4	3	10.8	17	13	2	32	12.5	60	1.2	3.0					89	11	17.5	17.5	1/4				
OUT	3600	1.35	64	3.8	1	10.2	3	10.3	19	13	1	25	11.5	40	1.2	3.2					85	15	17.5	17.5	1/4				
10	PIT	1.32	59	3.4	1	9.6	4	10.7	16	10	2	18	11.0	30	1.0	2.4					88	12	18	18	1/2				
11	PIT	1.33	72					10.7					10.5	40	1.1	2.7					88	12	16.5	16.5	1/4				
12	PIT	1.32	60	3.8	1	12	4	10.2	19	10	1	25	13.2	30	0.5	1.7					88	12	17.5	17.5	1/4				

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WELL NAME: Statoil 15/9-12

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE		HT/HP fill ° 500psi 32/mm	pH	RHEOLOGY			FILTRATE ANALYSIS			RETORT ANALYSIS			CEC	OTHER									
				secs 32/mm	ccs 32/mm			PV cp	YP lbs/100ft ² -gms/cm ²	10" 10'	10" 100'	Ca x1000 mg/litre ppm	Pf	Mf	Pm	Oil %		Water %	Corr. Solids %	PPB Bent. Eq.	SAND						
1982 Apr.																											
13	PIT	1.32	61	3.6	1	11.8	3	10.2	17	12	1	23	11.5	60	0.6	2.1				88	12	17.5	1/4				
14	PIT	1.33	80	4.0	1	12.2	1	12.2	16	12	1	25	12.3	80	0.4	1.5					88	12	17.5	1/4			
15	PIT	1.32	62	3.4	1	10.0	2	10.0	23	14	3	31	13.0	80	0.6	2.2					88	12	17.5	1/4			
16	3560	1.32	67	3.2	1	9.6	2	10.0	21	13	3	33	14.5	80	0.6	2.2					88	12	17.5	TR			
17	PIT	1.30	50	4.8	1	12.2	2	9.3	14	9	2	20	15.0		0.2	1.4					89	11	15.0	TR			
18	PIT	1.32	53	4.4	1	12.0	2	9.6	18	14	3	21	15.5	160	0.2	1.5					88	12	15.0	TR			
19	PIT	1.32	51	4.3	1	11.8	2	9.5	19	11	2	20	15.5	160	0.2	1.5					88	12	15.0	TR			
20	PIT	1.32	53	3.6	1	11.8	2	10.2	20	12	2	22	15.0	80	0.2	1.7					88	12	15.0	TR			
21	PIT	1.33	55	3.6	1			10.3	19	12	2	22	15.0	80	0.5	1.7					88	12	15.0	TR			
22	PIT	1.33	55	4.2	1			10.3	19	10	2	23	15.0	120	0.5	1.7					88	12	15.0	TR			
23	PIT	1.33	53	4.2	1			9.9	18	9	2	21	15.0	120	0.4	1.7					88	12	15.0	TR			
24	PIT	1.32	59	6.1	1			10.3	21	11	4	47	14.0	200	0.3	1.3					88	13	15.0	2 1/2			
25	PIT	1.31	52	6.1	1			10.3	16	10	3	45	14.5	200	0.3	1.1					88	12	15.0	1 1/2			
26	PIT	1.31	52	6.1	1			10.3	16	10	3	45	14.5	200	0.3	1.1					88	12	15.0	1 1/2			

NORSK PETROLEUM SERVICES A/S.

OPERATING AREA STATOIL
15/9-12

DAILY OPERATIONS LOG

March 28, 1982

Built 1100 barrels of Aquagel/Q-Broxin fluid.

March 29, 1982

Ran blow out preventors and riser.

March 30, 1982

Displaced riser with mud. Drilled surface plug and run in hole to second plug. Treating mud for mild cement contamination with bi-carb. Decreasing fluid loss with DEXTRID.

March 31, 1982

Run in hole and circulate old mud to the surface. 180 meters of fill above plug at 2605 meters. Circulate down through it. Drilled cement. Fluid requires biocide. Trip out of hole. Ran tubing.

April 1, 1982

Make up EZ tree and function test. Dummy run to stack. Pick up 3 1/2" tubing and run in hole. Test to 7,500 psi. Pull out of hole. Replace top shaker screens.

April 2, 1982

Pull out of hole. Run in hole with 6" bit. Pilot tested and added 1 ppb SURFLO B21 bacteriacide while circulating to change valve on the choke manifold. Drilled cement from 2605 to 2640 meters. Adding Sodium Bicarbonate.

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OPERATING AREA STATOIL
 15/9-12

DAILY OPERATIONS LOG

April 3, 1982

Drilled cement from 2640 to 2679 meters. Flow check - negative. Pick up 3 1/2" drill pipe and run in hole. Tag cement at 3560 meters. Pressure test casing to 5000 psi. Drilled cement from 3560 - 3588 meters. Dumped old mud as circulated out. Added B-21. Drilled bridge plug and cement to 3592 meters. Pull out of hole and picked up 6" mill and run in hole.

April 4, 1982

Run in hole with bit. Drilled cement from 3592 to 3607 meters. Adding bicarbonate and Q-Broxin for cement contamination. Flow check - negative. Pick up 3 1/2" drill pipe and run in hole to TD. Circulate and condition mud. Added 365 barrels of new mud to active system from reserve pit. Returned 325 barrels of old mud to reserve pits while circulating. Added 1 ppb CMC LV and 1 ppb DEXTRID to reduce filtrate to the required value. Checked filtrate and rheology every 1/2 hour while conditioning mud. Pull out of hole and wash wellhead. Test blowout preventors.

April 5, 1982

Pull out of hole with test plug. Run in hole with wear bushing and pull out of hole. Made up 6" bit and casing scraper and run in hole. Circulate and condition mud. Added 98 barrels of seawater to maintain weight to 1.32. Pull out of hole. Increased reserve volume by 165 barrels of new mud.

April 6, 1982

Run electric logs. Perforate from 3585 to 3595 meters. Rig up and run test tools.

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OPERATING AREA STATOIL
 15/9-12

DAILY OPERATIONS LOG

April 7, 1982

Tested testing equipment and repaired as required. Set RTTS packer. Could not open tool. Reset packer and opened tool. Flowed well for 2 hours. Closed tool and killed well. Reverse circulate out. Wait on weather. Circulate and condition mud. Adding CMC LV to lower filtrate and Q-Broxin and XC Polymer to raise Yield Point.

April 8, 1982

Circulated from above packer and waiting on weather. Conditioned fluid loss with DEXTRID and reduced pH with bicarbonate additions. Unlatched EZ Tree due to heave.

April 9, 1982

Waiting on weather. Circulating to reduce gas after latching on to tubing. Pulled 5 stands.

April 10, 1982

Circulate and condition fluid to remove gas. Pull out of hole. Test blowout preventors. Run in hole with bit for clean up.

April 11, 1982

Run in hole. Circulate bottoms up. Pull out of hole. Make up test tools and run in hole with test string.

April 12, 1982

Run in hole with test tool. Wait on weather. Test test string.

April 13, 1982

Pressure testing, setting packer, flow well and shut in.

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OPERATING AREA STATOIL
 15/9-12

DAILY OPERATIONS LOG

April 14, 1982

Shut in, flow well, repair leak and flow well.

April 15, 1982

Shut in, kill well, reverse circulate, circulate out, pull out of hole. Run in hole to 3580 meters and circulate bottoms up. Added DEXTRID to maintain filtrate, XC Polymer to raise the Yield Point and Baroid to maintain the weight to 1.32. Pull out of hole. Run in the hole with 6" bit and casing scraper.

April 16, 1982

Run in hole, circulate and pull out of hole. Ran gauge ring and junk basket on wire line. Set cement retainer at 3578 meters. Run in hole with stinger and squeezed cement. Reverse circulated and dumped cement. Circulate bottoms up.

April 17, 1982

Pull out of hole, test blowout preventors and perforate from 3512 to 3522 meters. Ran in hole with the test string. Due to a water leak to the active system, added prehydrated AQUAGEL and XC Polymer to raise the Yield Point, Caustic to raise the pH and BAROID to maintain the density.

April 18, 1982

Run in hole with test string and flow well.

April 19, 1982

Flow well, shut in well and flow well.

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OPERATING AREA STATOIL
15/9-12

DAILY OPERATIONS LOG

April 20, 1982

Flow well, kill well, reverse circulated and unset packer. Pull out of hole with test tree, run in hole and circulate out. Pull out of hole.

April 21, 1982

Run in hole with 6" bit and casing scraper to 3535 meters, circulate bottoms up and pull out of hole. Run gauge ring and junk basket on wire line. Set cement retainer and run in hole with stinger.

April 22, 1982

Squeezed cement, pull out to 3587 meters, reverse circulate and the circulate out. Pull out of hole, run in hole open ended and set cement plug from 2655 to 2540 meters. Pull out to 2520 meters, reverse circulate and pull out of hole. Run in hole with bit and casing scraper.

April 23, 1982

Tag cement at 2543 meters, pull out of hole laying down tubing, ran wire line casing pucher and perforated at 1000 meters. Pressured up on annulus with no drop. Casing puncher was run again with the same results. Run in hole with gauge ring and junk basket. Run in hole with cement retainer.

April 24, 1982

Set retainer at 993 meters and laid 25 meter cement plug on top of retainer. Reverse circulate, dumped cement and perforated under pressure at 200 meters. Cut 9 5/8" casing and pulled casing out of hole. Run in hole with 12 1/4" bit to top of 9 5/8" casing and

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OPERATING AREA STATOIL
15/9-12

DAILY OPERATIONS LOG

April 24, 1982 cont.

circulated bottoms up. Dumped 50 barrels of high viscosity oil mud with large pieces of cement. Pull out of hole.

April 25, 1982

Ran gauge ring to 220 meters. Run in hole with bit and casing scraper changed shaker screens to coarser mesh and circulated at 150 to 160 strokes per minute. Pull out of hole. Run in hole with gauge ring to 500 meters. Set cement retainer, set 25 meters cement plug, reverse circulated and pull out of hole. Perforate at 285 meters and run in hole to cut 13 3/8" casing.

April 26, 1982

Cut 13 3/8" casing, set 100 meter cement plug 340 to 240 meters. Set cement plug across 13 3/8" casing stump from 240 to 155 meters and displaced hole with seawater. Dumped mud.